CITY OF PORTLAND
ENVIRONMENTAL SERVICES

1120 SW Fifth Avenue., Room 1000, Portland, Oregon 97204-1912 Dean Marriott, Director Dan Saltzman, Commissioner

October 31, 2001

Elliot Zais
Portland MS4 Project Manager
Oregon Department of Environmental Quality
Northwest Region
2020 SW Fourth Avenue, Suite 400
Portland, OR 97201-4987

Dear Mr. Zais:

On behalf of the City of Portland and its co-permittees, I am pleased to submit the enclosed *Annual Compliance Report No. Six*. This report fulfills reporting requirements for the City of Portland's NPDES Municipal Separate Storm Sewer System (MS4) Discharge Permit. It covers the work accomplished during the sixth fiscal year of the permit program (July 1, 2000 through June 30, 2001).

The report demonstrates the co-permittees' progress toward meeting the permit requirements and stormwater program goals this past year. A major activity during permit year six was implementation of the revised BMPs as described in the February 2000 permit renewal package submitted to DEQ. Each co-permittee's section of the report details the activities implemented, program status, and any initiated or proposed program changes. An overview of each co-permittee's section is provided in the Executive Summary.

The Monitoring Compliance Report has been greatly condensed from previous monitoring report submittals. It is included in Section II of the report, as part of Portland's BMP OA1.

Please call me at 823-5275 if you have any questions concerning this report.

Sincerely,

Patrice Mango

Patrice Mango
Portland Stormwater Program Manager
cc: Dave Kliewer (BES); co-permittees
Enclosure

City of Portland

National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System Discharge Permit

Permit Number: 101314

ANNUAL COMPLIANCE REPORT NO. SIX

Fiscal Year 2000-2001
(July 1, 2000 - June 30, 2001)

Prepared for:

Oregon Department of Environmental Quality

October 31, 2001

Submitted by:

City of Portland, Oregon
Multnomah County
Port of Portland
Multnomah County Drainage District No. 1
Peninsula Drainage District No. 1
Peninsula Drainage District No. 2

City of Portland
National Pollutant Discharge Elimination System
Municipal Separate Storm Sewer System Discharge Permit
Permit Number: 101314

ANNUAL COMPLIANCE REPORT
Fiscal Year 2000-01
(July 1, 2000 - June 30, 2001)

We, the undersigned, hereby submit this annual compliance report for the Municipal Separate Storm Water System Discharge Permit No. 101314, in accordance with Schedule B, Section 7 (System-Wide Report) of that permit. We certify, as required by 40 CFR Section 122.22, under penalty of law, that this document was prepared under our direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on our inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of our knowledge and belief, true, accurate, and complete. We are aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Dean Marriott
Director, Bureau of Environmental Services
City of Portland

Kathy Busse
Director of Land Use Planning Division
Department of Sustainable Community Development
Multnomah County

Bill Wyatt
Executive Director
Port of Portland

Robert P. Groncznack
Director, Multnomah County Drainage District No. 1
Peninsula Drainage District No. 1
Peninsula Drainage District No. 2

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

INTRODUCTION

This sixth Annual Compliance Report is submitted to the Oregon Department of Environmental Quality (DEQ) to fulfill reporting requirements for the City of Portland's National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System Discharge Permit (hereinafter referred to as the stormwater permit or permit). It covers the work accomplished during the sixth fiscal year (July 1, 2000 through June 30, 2001) of the permit program.

The report is submitted by the City of Portland and its five co-permittees: Multnomah County, the Port of Portland, Multnomah County Drainage District No. 1, Peninsula Drainage District No. 1, and Peninsula Drainage District No. 2. (The Oregon Department of Transportation has obtained a statewide NPDES stormwater permit and is no longer a co-permittee.)

The management and implementation of the permit program is a cooperative effort among the City of Portland's Bureau of Environmental Services (BES), other City bureaus, the co-permittees, DEQ, Metro, the Oregon Association of Clean Water Agencies (ACWA), other agencies, and the public.

PERMIT RENEWAL

DEQ issued the five-year stormwater permit on September 7, 1995. In February 2000, the City of Portland, Multnomah County, and Port of Portland submitted the permit renewal package to DEQ for the second permit term (September 1, 2000 through August 31, 2005). The best management practices (BMPs) were improved, adapted, or reorganized as needed to achieve a program that collectively reduces pollutants discharged from the MS4 system in Portland to the maximum extent practicable. During permit year six, the co-permittees began implementing the revised BMPs described in the permit renewal, pending DEQ's formal approval of the renewal.

BMP CATEGORIES

As described in the permit renewal, the second-term BMPs are organized under the eight general categories shown below. These common categories serve as an overall framework and promote consistency and coordination among the co-permittees. Each co-permittee then identifies its own specific BMPs under each of the common categories.

- PI: Public Involvement/Education
- OM: Operations and Maintenance
- IND: Industrial/Commercial Controls
- ILL: Illicit Discharges Controls
- ND: New Development Standards
- STR: Structural Controls
- PS: Planning/System Preservation and Development
- OA: Other Activities

The Annual Compliance Report includes individual reports prepared by each co-permittee. Each report describes the activities implemented, program status, and any initiated or proposed program changes. An overview of each co-permittee's report is provided below.

CITY OF PORTLAND

During permit year six, the City of Portland began implementing the BMP activities identified in the permit renewal for the second five-year permit term. To ensure consistency with City policies and programs that promote resource conservation and environmental protection, the City continues to coordinate Stormwater Program activities with other City actions and programs, such as the Sustainable Portland Commission and Office of Sustainable Development, Willamette River Predesign Project, Columbia Slough Watershed Program, watershed programs, and Endangered Species Act Program. Key activities and accomplishments are summarized below.

- Developed and implemented citywide parking lot stormwater management standards that require the use of landscaping for stormwater management, and revised the City Code.

- Revised the City Code, developed criteria, and implemented floor area bonus for eco-roofs installed on buildings within the Central City Plan District.

- Began development of an eco-roof program to provide technical assistance and minimize barriers to implementation.

- Implemented a memorandum of agreement with DEQ to administer all industrial stormwater NPDES permits, including direct waterway dischargers, within the City of Portland urban services boundary.

- Completed construction of stormwater pollution reduction facilities in Johnson Creek, the Columbia Slough, and Willamette watersheds. These include stormwater runoff treatment facilities at major outfalls, as well as retrofit/revegetation projects.

Continued public involvement/education activities as a significant element of the Stormwater Program. Key activities included the Naturescaping for Clean Rivers program; continued distribution of the *Clean Rivers: Why Should I Care?* videos; a variety of stormwater education activities; stewardship grant projects; ongoing participation in the Regional Coalition for Clean Rivers and Streams; and distribution of educational publications and materials.

MULTNOMAH COUNTY

Multnomah County implements a comprehensive stormwater management program countywide. The goal of the program is to reduce pollutants in stormwater runoff to the maximum extent practicable. During permit year six, the County began implementing the BMPs identified in the permit renewal package submitted to DEQ for the second permit cycle. The review and evaluation of County BMPs and implementation of new ones reflects the County's commitment to adaptive management to improve stormwater quality.

Multnomah County implements and applies the entire group of BMPs throughout the County as a comprehensive Stormwater Management Program. The BMPs reported in this Annual Report apply only to the unincorporated land and County-owned roadways and associated storm drainage system (road ditches) within the Portland permit area.

The County currently has limited land use planning responsibility for approximately 2 percent of the permit area. Planning jurisdiction is spread out among several small unincorporated pocket areas distributed throughout the permit area. (See Figure 1 in Section I.) County permitting is focused on hillside development (HD) and grading and erosion control (GEC). During permit year six, the Multnomah County Land Use Planning Division issued a small number of HD and GEC permits to ensure that water quality is protected to the maximum extent practicable. Zoning and planning responsibility for these unincorporated urban pocket areas will end during permit year seven, when Multnomah County relinquishes authority to the City of Portland as part of the Multnomah County-Portland Compliance Project to achieve the goals of and comply with Metro's Urban Growth Management Functional Plan.

Through an intergovernmental agreement (IGA), the City of Portland operates and maintains all 18.76 miles of County dedicated roads and drainage within the permit area. The County retains responsibility to perform emergency repairs resulting from flooding and landslides. The County Transportation Division also retains authority to review stormwater management plans, granting a handful of permits every year to access County road ditches for limited stormwater discharge.

PORT OF PORTLAND

The Port of Portland (Port) owns and manages approximately 6,646 acres within the City of Portland urban services boundary. Port properties include the Portland International Airport (PDX), five marine terminals, including Terminal 6 (T-6), five industrial parks, and various undeveloped properties, including several wetland mitigation sites. At these facilities, the Port implemented several new BMPs related to stormwater management during permit year six. The Port also continued to improve and expand many of the existing stormwater programs established in its Municipal Storm Water Management Plan (MSWMP). A summary of the Port's stormwater activities and BMP progress for permit year six is provided below. Further details can be found in Section IV of this annual report.

In addition to the Municipal Permit, the Port also complied with several other NPDES stormwater permits during permit year six. These permits include both 1200-Z and 1200-COLS Industrial Permits for T-6, a 1200-COLS Industrial Permit and Anti-icing/Deicing Waste Discharge Permit for PDX, and a 1200-CA Construction Discharges Permit for all Port properties. The Port also complied with a Construction Dewatering Discharge Permit for PDX and the Portland International Center. Monitoring for these permits is performed in accordance with the conditions of each permit, and data are submitted to DEQ according to the permit reporting requirements.

Data obtained under the 1200-Z and 1200-COLS Industrial Permits for PDX and T-6 are included in this report, as discharge from outfalls associated with these permits is representative of industrial activity occurring on Port property. In addition, dry season monitoring was performed for all Port properties at the priority outfalls identified in the Port's MSWMP. Voluntary stormwater monitoring was also performed on selected wetland mitigation sites. Land use characterization monitoring required by the municipal permit continued to be collected by the City of Portland, with the Port providing financial support for this effort. The BMP effectiveness monitoring performed in past years was concluded at the end of the first permit term, and was not conducted during permit year six.

As part of the permit renewal for the second permit term, the MSWMD was reorganized to include eight general BMP categories applicable to all of the co-permittees. Under this new framework, 15 new Port-specific BMPs were developed and incorporated into the Port's MSWMP.

During permit year six, Port participation in public programs focused on increasing public awareness of the importance of stormwater management and water quality protection. Port involvement included providing and staffing informational booths at the Big Pipe Party & Fish Friendly Fair, co-sponsoring the Columbia Slough Regatta,

sponsoring SOLV cleanup events, and working with the Multnomah Youth Council and students from Roosevelt High School on riverbank management projects. The Port was also active in events sponsored by organizations such as Headwater to Oceans, the Willamette Riverkeepers, the Audubon Society, and the Columbia Slough Watershed Council (CSWC).

Port employee and tenant education during permit year six consisted of in-house training, including general and procedural training on the Port's Environmental Management System (EMS); environmental conferences; information exchanges; and presentations. Topics covered included stormwater management, erosion and sediment control, spill prevention and response, and deicing/anti-icing procedures. Refresher courses were provided for all Port personnel with previous Occupational Safety and Health Administration 24-hour and 40-hour hazardous waste operator training, and licensed pesticide applicators in the PDX and properties maintenance departments received the required continuing education. Conferences attended by Port staff included events sponsored by ACWA, the American Association of Airport Executives (AAAE), and the Environmental Law Education Center. Port facilities also continued to conduct regular staff and tenant meetings that included discussion of stormwater and water quality issues.

Each Port operating area performed routine maintenance of stormwater facilities during the permit year and continued to develop and implement specific stormwater operations and maintenance procedures. Maintenance included catch basin and oil/water separator cleaning, outfall repair, and inlet filter replacement. New maintenance procedures introduced during the permit year included the expansion of the T-6 sweeping program and the implementation of a building and grounds maintenance BMP under the Marine Tenant Program. PDX revised its spill response procedures, and T-6 developed a new Spill Prevention Control and Countermeasures (SPCC) plan. Existing landscaping practices of the PDX and properties maintenance crews were evaluated, and efforts to reduce the use of pesticides, fertilizers, and irrigation were implemented.

Developments with the anti-icing/deicing program at PDX included limiting pavement deicing to areas outside the PDX security fence and continuing the Deicing and Anti-Icing Runoff Control Program for aircraft and airside pavements. Implementation of the fully integrated anti-icing and deicing control system continued, with the near completion of a 30-million-gallon detention basin, a 2-million-gallon containment tank, and an associated pump station. Work also commenced on the piping and other pumping stations for this system. Additional progress included the compilation of the data from the 2000-2001 deicing season activities and projects for submission to DEQ.

The Port made advancements under the Industrial/Commercial Controls BMP category through the implementation of procedures to develop and select environmental

language for Port tenant agreements. These procedures, developed under the Environmental Tenant Management Program, provide the Port with more ability to manage tenant activities and facilitate the incorporation of such requirements as stormwater use agreements into tenant leases. Other procedures implemented under this program include a process for tenant inspections and audits, which allows the Port to review a tenant's activities on Port-owned property. Marine also introduced several new BMPs to its tenant program, addressing such issues as underground and above-ground storage tanks, asbestos, and air quality.

The Port continued several established programs under the Illicit Discharges Controls BMP category, including the Illicit Discharge Detection and Removal Program that establishes the procedures for dry-season monitoring and inspections. Employee and tenant education on the proper handling and disposal of hazardous materials continued, as did efforts to reduce and prevent illegal dumping on Port-owned properties.

Under the New Development Standards BMP, the Port issued a revised construction specification that addresses DEQ revisions to the 1200-CA NPDES general permit for construction activities and incorporates the City of Portland erosion control requirements. This specification is incorporated into all construction contracts and provides the Port with an avenue to enforce both City and NPDES permit requirements to ensure that sediment, sediment-laden water, and other construction-related pollutants do not leave the site. The specification also includes inspection requirements.

The Port also continued its involvement with a variety of environmental projects and agencies during permit year six, including the Lower Willamette Project, the CSWC, ACWA, U.S. Department of Agriculture, Oregon Department of Transportation, AAAE, Metro Water Resources Policy Advisory Committee, Portland Water Bureau, Willamette Restoration Initiative, Willamette Urban Endangered Species Act Coordination Group, and DEQ technical advisory committees. In coordination with the City, the Port also participated in the Regional Coalition for Clean Rivers and Streams. Several Port wetland mitigation and restoration projects also involved coordination with the U.S. Army Corps of Engineers, Oregon Division of State Lands, and BES.

The Port Environmental Services Division (ESD) continued to provide stormwater policy and program direction to the Port operating areas throughout the permit year. Programs such as the EMS and the Commitments Database continued to be developed and expanded. Stormwater-related procedures were added to the environmental water resources, planning, and tenant management policies, and several projects were performed under the Riverbank Management Program. New programs implemented by ESD during permit year six include initiation of the Natural Resource Assessment and Management Plan (NRAMP), which involves an inventory and assessment of natural resources on Port property to identify desired future conditions, develop

resource and land management strategies, and develop protection, enhancement, and restoration opportunities. The Mitigation Management Program was also continued and expanded.

MULTNOMAH DRAINAGE DISTRICT NO. 1 (MCDD#1)
PENINSULA DRAINAGE DISTRICT NO. 1 (PENN1)
PENINSULA DRAINAGE DISTRICT NO. 2 (PENN2)

During permit year five, the drainage districts examined their role under the permit and determined they could fulfill this role effectively through memoranda of agreement (MOAs) among all the parties. As a result, they have proposed taking that approach, rather than continuing as a co-permittee, in the second five-year permit term. DEQ has not formally accepted this status change, pending review of the permit renewal; however, the drainage districts expect that DEQ will support the MOA concept as the appropriate vehicle for their participation. The districts are devoting considerable effort toward complying with the BMPs in the permit and are investing resources in new initiatives to improve water quality and habitat inside their jurisdictional boundaries. Progress on these programs is continuing on the track described in the 1998-99 Annual Compliance Report. With this in mind, the drainage districts' report for this year is the same as their 1998-99 report.

Section I

GENERAL INTRODUCTION

Section I
GENERAL INTRODUCTION

This sixth Annual Compliance Report is submitted to the Oregon Department of Environmental Quality (DEQ) to fulfill reporting requirements for the City of Portland's National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System Discharge Permit (hereinafter referred to as the stormwater permit or permit). It covers the work accomplished during the sixth fiscal year (July 1, 2000 through June 30, 2001) of the permit program. Figure 1 is a map of the NPDES stormwater permit area.

The report is submitted by the City of Portland and its five co-permittees: Multnomah County, the Port of Portland, Multnomah County Drainage District No. 1, Peninsula Drainage District No. 1, and Peninsula Drainage District No. 2.

During permit year five, the drainage districts examined their role under the permit and determined they could fulfill this role effectively through memoranda of agreement (MOAs) among all the parties. As a result, they have proposed taking that approach, rather than continuing as a co-permittee, in the second five-year permit term. DEQ has not formally accepted this status change, pending review of the permit renewal; however, the drainage districts expect that DEQ will support the MOA concept as the appropriate vehicle for their participation. The districts are devoting considerable effort toward complying with the BMPs in the permit and are investing resources in new initiatives to improve water quality and habitat inside their jurisdictional boundaries. Progress on these programs is continuing on the track described in the 1998-99 Annual Compliance Report. With this in mind, the drainage districts' report for this year is the same as their 1998-99 report.

PERMIT BACKGROUND

The stormwater permit application process started in 1990. In compliance with the NPDES timeline for stormwater permitting, the co-applicants submitted Parts 1 and 2 of the application to DEQ in November 1991 and May 1993, respectively. In accordance with Section 402(p) of the Clean Water Act, DEQ issued the permit on September 7, 1995.

PERMIT RENEWAL

In February 2000, the City of Portland, Multnomah County, and Port of Portland submitted to DEQ the permit renewal for the second five-year permit term. In accordance with EPA policy guidance, the co-permittees used a streamlined "adaptive management" approach. The BMPs were improved, adapted, or

reorganized as needed to achieve a program that collectively reduces pollutants discharged from the MS4 system in Portland to the maximum extent practicable. While many of the first-term BMPs focused on planning and development, the second-term program has a greater emphasis on implementation activities. Because the stormwater monitoring program was modified during the first permit term, no further modifications were included for the second permit term.

During permit year six, the co-permittees began implementing the revised BMPs as described in the permit renewal.

BMP CATEGORIES

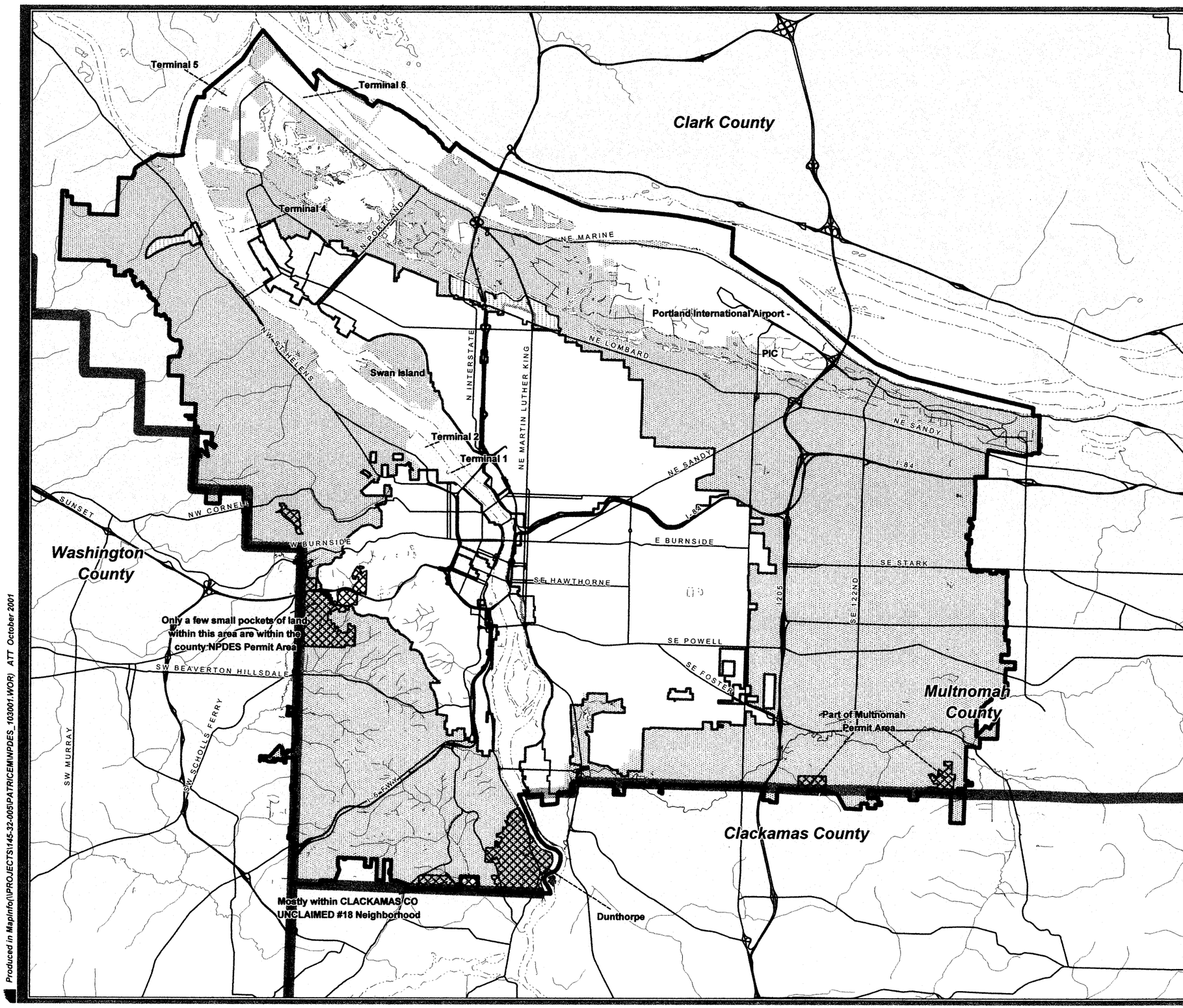
As described in the permit renewal, the City of Portland, Multnomah County, and Port of Portland have organized their second-term BMPs under eight general categories, as shown below. These common categories serve as an overall framework and promote consistency and coordination among the co-permittees. Each co-permittee then identifies its own specific BMPs under each of the common categories.

- PI: Public Involvement/Education
- OM: Operations and Maintenance
- IND: Industrial/Commercial Controls
- ILL: Illicit Discharges Controls
- ND: New Development Standards
- STR: Structural Controls
- PS: Planning/System Preservation and Development
- OA: Other Activities

Figure 1

NPDES Stormwater Permit Areas

CITY OF PORTLAND
Bureau of Environmental Services



Legend

- Urban Services Boundary
- City of Portland Permit Area
- Combined Sewer Basin Boundary
- Port of Portland Property
- Storm Separated Area part of City of Portland Permit Area (Since Initial Permit)
- County Boundary
- Major Arterial Streets
- Streams / Creeks
- River and other Water Features
- Multnomah County Permit Area

Description	ApproxAcres
Multnomah Permit Area	1,712
Port of Portland Property	10,180
Storm Separated Areas	2,243
Combined Sewer Area	26,502
City oi Portland Permit Area	35,161

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SHEET NO: 1 OF 1

PRINTED: October 30, 2001

WORKSPACE: \\PROJECTS\145-32-005\PATRICEM\NPDES_103001.WOR

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PROGRAM COORDINATION

The management and implementation of the permit program is a cooperative effort among the City of Portland's Bureau of Environmental Services (BES), other City bureaus, the co-permittees, DEQ, Metro, the Oregon Association of Clean Water Agencies (ACWA), other agencies, and the public.

Co-Permittee Coordination

The City of Portland (as lead co-permittee) and the other co-permittees actively participated in the 3-year planning process (1990-1993) to develop the NPDES permit application and individual Stormwater Management Plans, which became the basis for the permit conditions. After submitting Part II of the application to DEQ in May 1993, the co-permittees began meeting monthly (or more often as needed) to share information about program implementation and coordination, BMP effectiveness, monitoring, and other issues related to the permit. The co-permittees discussed and coordinated the permit renewal process at a number of their monthly meetings prior to submitting the permit renewal to DEQ in February 2000.

These regular meetings have helped the co-permittees implement their Stormwater Management Programs and coordinate projects such as the City's Industrial Discharge and Illicit Connection BMP efforts and participation in the Regional Coalition for Clean Rivers and Streams public awareness and education activities.

Coordination with Others

The co-permittees coordinated closely with other local agencies to develop the NPDES permit application and individual Stormwater Management Plans, and continue to rely on regional cooperative efforts to successfully fulfill some of the permit requirements. The co-permittees work closely with the regional government, Metro, to support programs that have a positive water quality benefit. Examples include the household hazardous waste disposal program and development of the 2040 Plan, a plan related to regional growth that will have significant effects on the Stormwater Program as a whole.

Representatives from the City and the Port of Portland continue to actively participate in the Oregon ACWA Stormwater Committee to provide statewide coordination of stormwater permit implementation issues. Most Oregon agencies with NPDES stormwater permits are represented on this committee.

REPORT PREPARATION AND ORGANIZATION

The BES stormwater management team has coordinated preparation of this Annual Compliance Report on behalf of the City and its co-permittees. In addition to the co-permittees, all affected City bureaus participated in the report preparation, most notably Water, Transportation/Maintenance, Parks, Office of Planning and Development Review, Planning, and Fire. The individual reports prepared by these other City bureaus have been compiled into a single City of Portland report. For submittal to DEQ, the co-permittee reports have been combined into a single package with the City of Portland report.

This sixth annual report covers the period from July 1, 2000 through June 30, 2001. It includes activities that are a continuation of fifth-year activities. It does not repeat activities that were completed in year five (i.e., it is not cumulative).

The report is organized as follows:

- **Executive Summary**--A summary of significant program activities and program status for all of the co-permittees.

- **Section I: General Introduction**--An overview of the overall permit background and regulatory information, BMP categories, program coordination, and report organization, relevant to all of the co-permittees.

- **Sections II through V**--The individual compliance reports of the co-permittees, describing implementation actions taken, program status, and any initiated or proposed program changes.

- **Appendix: City of Portland NPDES Stormwater Permit**

The report's goal is to convey clear, succinct program information that complies with the annual reporting requirements of the NPDES permit. The report will also provide Portland City Council and other interested parties with a Stormwater Program status overview. Detailed supporting information, such as inspection reports, logs, and individual correspondence, are archived at each permitted agency and are available to DEQ upon request.

Section II

CITY OF PORTLAND

Section II: City of Portland
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Section II
CITY OF PORTLAND

INTRODUCTION

This sixth Annual Compliance Report for the City of Portland documents activities that occurred during the sixth fiscal year (July 1, 2000 through June 30, 2001) of the permit program and evaluates the status of the Stormwater Program. Key accomplishments for FY 00-01 include:

- Implemented the revised NPDES municipal permit BMPs described in the February 2000 renewal submittal for the second permit cycle. The revised BMPs incorporate activities previously categorized as Existing Management Practices (EMPs) and Required Management Practices (RMPs).

- Developed and implemented citywide parking lot stormwater management standards that require the use of landscaping for stormwater management, and revised the City Code.

- Revised the City Code, developed criteria, and implemented floor area bonus for eco-roofs installed on buildings within the Central City Plan District.

- Began development of an eco-roof program to provide technical assistance and minimize barriers to implementation.

- Implemented a memorandum of agreement with DEQ to administer all industrial stormwater NPDES permits, including direct waterway dischargers, within the City of Portland urban services boundary.

- Completed construction of stormwater pollution reduction facilities in Johnson Creek, the Columbia Slough, and Willamette watersheds. These include stormwater runoff treatment facilities at major outfalls, as well as retrofit/revegetation projects.

- Continued public involvement/education activities as a significant element of the Stormwater Program. Key activities included the Naturescaping for Clean Rivers program; continued distribution of the *Clean Rivers: Why Should I Care?* videos; a variety of stormwater education activities; stewardship grant projects; ongoing participation in the Regional Coalition for Clean Rivers and Streams; and distribution of educational publications and materials.

This introduction provides background information about the City's program organization and coordination, the relationship of the Stormwater Program to other water quality programs, and relevant City budget and funding considerations. Individual activity reports for each BMP then follow.

PROGRAM ORGANIZATION AND COORDINATION

Program Authorization

The Portland City Council passed a resolution supporting the final National Pollutant Discharge Elimination System (NPDES) stormwater permit application in June 1995. In that resolution, the Council designated the Bureau of Environmental Services (BES) as the lead for the City's implementation of the Stormwater Program. In accordance with Section 402(p) of the Clean Water Act, the Oregon Department of Environmental Quality (DEQ) issued the permit on September 7, 1995. In February 2000, the City and its co-permittees submitted the permit renewal application to DEQ for the second permit cycle (September 1, 2000 through August 31, 2005). The City has begun to implement elements of the proposed renewal, pending DEQ's formal approval of the application.

Organization/Coordination within the City

BES's Stormwater Program Manager is responsible for overall project management, compliance reporting, policy development, and coordination within the City of Portland. All BES project planning is centralized within the Planning Group and organized by watershed to enhance project coordination.

Stormwater Program activities within the City are coordinated through BMP-specific teams that include representatives from appropriate bureaus. In addition, Stormwater Program activities are coordinated with the City's Sustainable Portland Commission and Office of Sustainable Development. The Mayor appointed the commission to evaluate the City's internal environmental management practices and ensure consistency with policies and programs that promote resource conservation and environmental protection. During permit year six, the City continued implementing the Green Building Initiative as part of Sustainable Portland Commission activities. The initiative is a two-year action plan that promotes resource-efficient and healthy building practices.

RELATIONSHIP TO OTHER WATER QUALITY PROGRAMS

Although not all the following activities are specifically required as part of the NPDES permit, they are closely associated with the Stormwater Program and related to stormwater quality.

Combined Sewer Overflow Reduction

The City is actively implementing activities to eliminate combined sewage overflows (CSOs) to the Willamette River and Columbia Slough. Formerly under a separate CSO Program, these activities were integrated in permit year four into the Willamette River Predesign Project and Columbia Slough Watershed Program through the Integrated Watershed Plan (IWP). These activities include a combination of roof drain disconnects, sump installation, hard-piped structural control solutions, and wet-weather treatment plant facility construction. Part of the CSO abatement strategy includes separating combined flows in some areas and evaluating water quality treatment alternatives for the resultant separated stormwater flows. In addition, the City is integrating approaches to address combined sewer overflows with other programs. During permit year five, the City developed the Clean River Plan, which integrates the stormwater management and watershed/fish habitat enhancement efforts addressed under the IWP with basement flooding relief and CSO abatement.

Since 1990, Portland has reduced CSOs from 6.0 billion gallons per year to 2.8 billion gallons per year. CSO discharges to the Columbia Slough have been reduced by over 99 percent, while discharges to the Willamette River have been reduced by 42 percent.

Several projects that focus on controlling the 16 CSO outfalls on the westside Willamette are currently in the late stages of design, including:

California Pump Station Upgrade

Initiated design to upgrade this facility to control CSOs from California Outfall #01.

Carolina Stream Diversion Project

Initiated design to separate stream and stormwater from the Carolina Basin (OF#03 & 04), including stormwater treatment and conveyance of both the stream flows and the treated stormwater to the river.

SW Parallel Interceptor

Finished design and initiated bidding process to begin building a parallel interceptor sewer from SW Taylors Ferry Road to the Marquam Bridge to control CSO overflows from OF #03 through #07.

West Side CSO Tunnel, Pump Station and Force Main

Initiated design of this integrated system, which will include 20,000 feet of soft ground tunnel of 14-diameter pipe at depths from 70 to 120 feet below the ground surface. The project starts north of the Marquam Bridge and terminates

at the proposed Swan Island Pump Station. The pump station will have a future capacity of 220 million gallons per day (mgd), but will initially only require 100 mgd capacity to pump the westside CSO flows to the existing Peninsular Tunnel interceptor.

An additional set of projects are in the predesign phase and focus on reducing stormwater inflows to the combined system using natural processes such as surface infiltration of disconnected roof and parking lot runoff. The major basin predesign projects include:

- Sullivan/Stark/Holladay Basin Relief Predesign
- Tanner B/Fremont/Nicolai/Balch Basin Relief Predesign
- Sellwood Basin Relief and CSO Design and Construction Projects

BES is evaluating the possibility of sending separated urban stormwater into the CSO collection and treatment system to cost-effectively treat stormwater runoff from areas that would otherwise receive little treatment. Specifically, BES is looking at capturing small-storm runoff from the separated downtown areas and diverting that flow into the westside CSO tunnel. Additional areas being considered include parts of the separated industrial areas in northwest Portland and small sections of state highways that have outfalls near the proposed westside CSO facilities that will be constructed by December 2006.

For each of these areas, BES is considering installing drop shafts and flow control gates that will divert stormwater runoff up to a maximum rate established from the BES water quality design storm. The water quality design storm has 0.83 inches of rainfall over a 24-hour period and represents approximately 80 percent of Portland's typical rainfall patterns. Stormwater runoff in excess of this amount would continue to flow into the river.

Willamette River Predesign (Inflow Control) Project

The Willamette River Predesign Project was initiated during permit year two to explore the cost feasibility of onsite flow control to help reduce the size of the CSO collector pipe. This project is designed to remove flow and to consider surface management options that also provide stormwater treatment. It is evaluating innovative "green" technologies, such as infiltration ponds, rooftop stormwater detention, bio-infiltration swales, and vegetated buffer strips, to reduce stormwater runoff to the City's piped system and improve overall water quality. The planning and cost-effectiveness analyses for the green solutions and inflow control, as well as the development, calibration, and execution of hydraulic and pollutant models for existing conditions, were completed during permit year three. Using these data, 48 potential sites were identified in permit year four for green solution implementation. These 48 sites will be evaluated as part of the sewer basin predesign.

In permit year six, the City initiated an areawide assessment of the potential for green solutions and inflow controls in the Holladay, Stark, and Sullivan basins. This assessment included evaluating the 12 projects (part of the original 48) previously identified in these basins. A refined sewer system model has allowed improved simulation of the projects. The new model indicates that in the Holladay, Stark, and Sullivan sewer basins, these types of projects can provide cost-effective alternatives to pipe solutions for the relief of local basement flooding problems. This evaluation, including field investigations of the highest-priority sites, will be completed in permit year seven.

In permit year six, the City initiated a series of stormwater pilot projects called the Willamette Stormwater Control Program. The program involves partnering with commercial property owners to retrofit existing properties with stormwater controls, reducing stormwater runoff that would otherwise reach the combined sewers. The goal is to contribute funding for up to 15 individual pilot projects, which will provide needed information about the technical feasibility, cost, performance, and acceptability of these types of stormwater retrofits. In permit year six, the program recruited project proposals from the commercial community. Most of the projects will be implemented during permit years seven and eight.

Downspout Disconnection Program

The Downspout Disconnection Program focuses on disconnecting downspouts at residential properties in targeted areas of the City. By removing stormwater runoff to the combined sewer system, it helps reduce CSOs and improves overall water quality. In FY 00-01, 6,923 downspouts were disconnected at 3,431 homes. The program also began evaluating expansion of the program to multi-family residential or commercial sites with less than 5,000 square feet of roof.

Watershed Programs

During FY 00-01, the City of Portland continued implementing watershed programs in the Columbia Slough, Johnson Creek, Fanno Creek, Tryon Creek, and Willamette River Watersheds. The Willamette River Watershed focuses on Balch Creek, streams draining to the Willamette that are not currently addressed under a separate program (i.e., Stephens Creek), and areas affected by the Willamette River Predesign Project. During permit year six, BES continued implementing integrated watershed planning to stress comprehensive, multi-objective watershed management along geographical boundaries, coordinating the various jurisdictional and public interests within those areas.

Because of high public interest in the health of Portland's watersheds, public participation is an important element of watershed planning and implementation. During permit year six, the City actively participated on watershed councils for the Columbia Slough, Johnson

Creek, and Tryon Creek. In addition, the City fosters citizen stewardship through its Community Watershed Stewardship Program. In permit year six, this program provided eight grants totaling $33,353 to citizen groups to conduct water shed stewardship projects in their watersheds.

Endangered Species Act

Water quality improvement and protection are critical objectives in establishing watershed priorities. These objectives have been heightened by the National Marine Fisheries Service's (NMFS) March 1998 listing of steelhead trout as a threatened species under the Endangered Species Act (ESA), the listing of chinook salmon as a threatened species in March 1999, the passage of Metro's Stream and Floodplain Protection Plan (Title 3), and the compliance requirements of Goal 5 of Metro's Functional Plan.

The ESA listings apply to the Lower Columbia River evolutionary significant unit. The affected area includes the Willamette River and its tributaries, upstream to Willamette Falls. Within the NPDES permit area, the main problems include water quality and habitat degradation, habitat loss, and fish passage blockage by structures such as culverts. Flows that alter stream configurations, the loss of spawning gravels, and sedimentation all negatively affect spawning habitat. Decreased water oxygen, increased temperatures, bacteria, nutrients, pH, and toxic contaminants are all water quality parameters that can also negatively impact fish. In 1996, DEQ listed the Willamette River, Johnson Creek, and Tryon Creek as "water quality limited" for these parameters. Many of these parameters can be linked to increased stormwater runoff from urbanization and related decrease in water quality. This, in turn, results in increased sediments and associated contaminants of concern (bacteria, toxics, nutrients, and biochemical oxygen demand). The Stormwater Program activities closely relate to ESA goals. Implementation of BMPs will mitigate stormwater quantity impacts and improve water quality. In permit year six, the Stormwater Program continued coordination with City ESA staff on program activities related to fish impacts and participated on ESA program advisory committees. The City's River Renaissance effort along the Willamette River is providing an excellent opportunity to coordinate various environmental protection efforts with desired uses of the Willamette River.

Pretreatment Programs and Publicly Owned Treatment Works (POTWs)

Many of the City's more traditional operations and infrastructure support water quality goals. Sanitary sewage is collected for treatment at the Columbia Boulevard and Tryon Creek publicly owned treatment works (POTWs). Existing pretreatment programs protect the sanitary system infrastructure, reduce pollutant releases to surface waters during combined sewer overflows, and prevent discharges that could cause treatment upsets or result in pollutant pass-through to surface waters.

The South Airport Basin Project in the Columbia Slough Watershed will provide sanitary sewer service to unsewered areas in the area of Columbia Boulevard from NE 42nd to NE Colwood. Phases 2 and 3 of the design will be completed in permit year seven. These phases include a pump station and force main in the area of NE 59th and Whitaker and collection lines in the area of Columbia Boulevard and NE 47th.

CITY BUDGET AND FUNDING

The annual City of Portland costs for program administration, planning, development, program monitoring, public education and outreach, and demonstration project implementation (Parkrose Pilot Project) have averaged approximately $670,000 annually through year six of the permit. For the same time period, related City Stormwater Program activities have averaged $1 million per year for watershed planning and $3 million per year for implementation of capital stormwater-related pollution reduction facilities (e.g., completed construction of the Buffalo Slough Water Quality Facility and Phase II [wetland restoration] of the NE 158th/162nd Avenue facility).

Because of the integral nature of the Stormwater Program with the City's normal operating functions, other costs related to implementation of the program are very difficult to quantify. Stormwater programs are primarily financed by City stormwater management charges. Utility revenue bonds and stormwater system development charges are used to financed stormwater capital projects.

Stormwater Management Charges

City Council approves revised stormwater monthly fees and stormwater system development charges (SDC) at the start of each fiscal year. Monthly fees are adjusted to reflect operating, maintenance, and capital costs of the City's sanitary sewer and drainage system. The rate adjustments are based upon cost of service principles, ensuring equity by charging ratepayers according to the amount of sewer and drainage service they use.

The following table reports the monthly single family stormwater management charge and the monthly stormwater rate per 1,000 square feet of impervious area for all six permit years:

	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
Single-Family Residential Charge	$5.26	$6.07	$6.89	$7.82	$8.78	$10.01
Residential Rate per 1,000 SF of Impervious Area	$2.19	$2.53	$2.87	$3.26	$3.66	$4.17
Non-Residential Rate per 1,000 SF of Impervious Area	$2.46	$2.92	$3.24	$3.65	$4.01	$4.63

At the end of FY 2000-2001, City Council increased the monthly charge for single-family residences from $10.01 to $10.97. The residential rate increased from $4.17 to $4.57 per 1,000 square feet of impervious surface per month, and the commercial rate increased from $4.63 to $5.00 per 1000 square feet of impervious area per month.

In December 2000, City Council authorized the development of a discount program for ratepayers who manage the quantity and quality of stormwater on their property. The program will provide a discount of up to 100 percent of the property component of the monthly stormwater management charge. BES is developing program criteria that will set the highest financial incentive for facilities that manage the strictest standards for quality, volume, and flow controls. BES proposes to give particular value to facilities that use vegetated surface infiltration. The program will be implemented as soon as the City's utility billing system is capable of providing data processing support.

Stormwater System Development Charges

Formerly based on impervious area, the methodology for assessing system development charges for new development and significant redevelopment was revised in FY1997-1998 (permit year three) to include two components. One component represents the charge for stormwater facilities that handle runoff from individual properties. For FY 2000-2001 (permit year six), this onsite portion was assessed based on $96.43 per 1,000 square feet of impervious area. Riparian properties that drain directly to the Columbia Slough, Columbia River, or Willamette River are exempt from this portion of the SDC. The other portion represents the cost of stormwater facilities that handle runoff from public rights-of-way. This portion was assessed based on the use of the transportation system, using road frontage and vehicle trips to allocate the costs. For FY 2000-2001, the rates were $2.50 per linear foot and $0.97 per vehicle trip. At the end of FY 2000-2001, the City Council revised these rates to $102.00 per 1,000 square feet of impervious area, $2.77 per linear foot of frontage, and $1.10 per vehicle trip.

Discounts may be granted only for the "onsite" part of the charge for facilities constructed as part of new development. Discounts range from 80 percent for retention of the 100-year event to no discount for control of the 10-year storm.

Federal and State Funding

A few stormwater projects are funded by federal programs. The Columbia Slough Watershed Program has implemented a number of stormwater-related measures using funds from an EPA Slough revitalization grant of $10 million. Fiscal year 2001-2002 (permit year seven) is expected to be the last year of that grant. The City has also used other EPA and Federal Highway Administration funding to implement stormwater and fish-related projects. State Governor Enhancement Board grants have also helped implement watershed projects.

ACTIVITY REPORTS

The following pages summarize the status of the City of Portland BMPs. The following information is provided for each BMP:

- The BMP identifier (e.g., PI1) and title
- The BMP description
- Key accomplishments for permit year 6
- Status of the BMP in relation to schedules identified in the Stormwater Management Plan
- Challenges and solutions
- Changes made, initiated, or proposed to the Stormwater Management Plan
- Projected major accomplishments for next permit year (permit year seven—2001 to 2002)

PI1	**Implement a comprehensive stormwater/watershed Public Participation Program that includes information, education, involvement, and stewardship; evaluate and update the program annually.**

KEY BMP ACCOMPLISHMENTS, PERMIT YEAR SIX (FY 00-01)

Naturescaping for Clean Rivers

Continued *Naturescaping for Clean Rivers* residential program, in partnership with the East Multnomah Soil and Water Conservation district (EMSWCD). Activities included:

- Conducted ten 4-hour workshops, with 265 participants, within the City of Portland. An additional four workshops, with 59 participants, were held in nearby communities, with some participants who live in Portland. Three site planning workshops, with 45 participants, were also held in Portland and one, with 18 participants., in Gresham.

- Co-sponsored with Metro the "Gardens of Natural Delights" tour of natural gardening techniques. Fourteen of the 16 participating yards were within Portland, and many of the estimated 100 volunteers and 1,200 visitors were Portland residents. Most participants visited three to six homes during the six-hour event.

- Sent a Naturescaping program survey to 1,726 workshop attendees, with 17 percent (291) returned.

- Disseminated information and messages through a wide variety of venues, reaching thousands of citizens. Twenty-five staffed booths and/or presentations reached 4,000 individuals. These included: 1) presentations at community meetings (neighborhood associations, watershed councils, friends groups, garden clubs), 2) presentations at regional conferences, and 3) display booths at fairs and community events. Approximately 14,000 households were reached through dissemination of brochures, flyers, and e-mail messages. Thirty thousand were reached through local radio announcements, news stories, a bill stuffer, presentations to community organizations, and staffed informational booths at local events.

Downspout Disconnection Program

Disseminated Naturescaping and stormwater information as part of the outreach and education efforts of the Downspout Disconnection Program, which included the following activities:

- Mailed 23,000 brochures, had conversations with 5,500 homeowners through door-to-door canvassing, and left 6,500 door hangers.

- Provided information through community events and newsletters:
  - Distributed almost 600 t-shirts to local community activists
  - Placed 500 posters in local businesses and community centers
  - Made 44 presentations to neighborhood associations and other community organizations, with a particular focus on non-traditional organizations
  - Printed articles at least 45 times in local community newsletters
  - Distributed information at community events, resulting in exposure to 16,450 people

- Held 32 community disconnection events, using almost 600 volunteers to help disconnect more than 2,000 downspouts and earning over $31,000 for community projects. Added 27 new community groups to a partnership list of over 140 organizations. New groups include new neighborhoods, six new schools, and many new religious and ethnic groups.

- Held a downspout disconnection/Naturescaping workshop with 25 attendees.

Education Videos

- Continued distribution of the *Clean Rivers: Why Should I Care?* (Volumes I and II) video project and the "Discovery Packets" of related educational activities. This year, distribution was to seven teachers and public information/ outreach coordinators.

Stormwater Education Activities

- Reached 8,840 students (grades K-12) with classroom programs that provide hands-on, interactive science education about stormwater and other environmental issues.

- Reached 9,055 students through school assembly programs.

- Involved 5,317 participants in education field programs.

- Involved 5,317 participants in stewardship field programs.

- Participated in 62 community events, with a total of 5,209 event participants.

- Provided checkout of storm drain stenciling materials to the community, resulting in 387volunteers stenciling 2,584 storm drains.

- Checked out curriculum kits to 14 Portland elementary and middle school teachers, reaching 419 students.

- Provided teacher training workshops, involving 201 participants.

- Sponsored monthly Watershed Speakers Series, aimed at general public.

- Conducted a half-day "Rains, Drains, and City Streams" workshop concerning stormwater and the Columbia Slough. The 60 participants sampled surface water, viewed an in-street stormwater treatment system, and evaluated revegetation efforts. Written materials included the Portland " Stormwater Tidbits".

- Conducted eight "Soup on the Slough" events, where participants ranging from community activists to business owners and operators were introduced to stormwater and hydrology issues in the urban slough waterway.

Stewardship Grant Projects

- Provided stewardship grants totaling $33,353 to the following organizations:

  - Bridlemile Elementary Nature Garden
  - Friends of Trees at Oaks Bottom
  - Glencoe Elementary Naturescape Garden
  - Madison High School Courtyard Naturescape Phase II
  - Open Meadow CRUE Vegetation Monitoring Project
  - Rose City Park Elementary Naturescape Garden
  - Southwest Neighborhoods, Inc. and Bridlemile Stream Stewards
  - St. Andrew's Presbyterian Church Fanno Creek Restoration Project

Education Advisory Committee

- Continued monthly Education Advisory Committee meetings to review and advise on public participation approaches and activities.

Regional Coalition for Clean Rivers and Streams

Continued participation in the Regional Coalition for Clean Rivers and Streams, with the following activities:

- The Coalition renegotiated the second 5-year Intergovernmental Agreement (IGA) to continue an annual public awareness and media campaign. The Coalition added three new members this year and broadened the message to include fish recovery messages. The program is now partially funded out of Endangered Species Act

program budgets. Membership includes: City of Portland/Environmental Services, Clean Water Services (formerly Unified Sewerage Agency), Water Environment Services/Clackamas County, City of Gresham, Metro, City of Vancouver, and Clark County, Washington.

- The Coalition developed a new mission statement that includes fish recovery messages and developed a logo and tag line: Good for Fish, Good for Us.

- The Coalition agreed to jointly fund the public awareness and media campaign at $60,000 annually. The group received an additional $55,000 from the Oregon Department of Environmental Quality and the U.S. Environmental Protection Agency to assist with the media buy. The campaign message is "The River Starts Here," with an arrow pointing to a photo of a stormdrain. The program was launched on June 6, 2001.

Eco-logical Business Program Promotional Campaign

- The Eco-logical Business Program implemented a promotional campaign from May to July 2001 to raise awareness and communicate the importance of supporting auto shops that operate responsible environmentally conscious business practices. The campaign used a combination of radio and newspaper advertising, along with news media coverage, and other tactics.

Bulky Waste Curbside Pickup

- Provided bulky waste curbside pickup service to 15 neighborhood associations within three district coalitions. A total of 7,594 households participated; 576 tons of materials were picked up; and 55% of the materials were reused or recycled.

Publications

- Began developing a series of 14 fact sheets about onsite stormwater control techniques for distribution to the general public.

- Began developing an eco-roof question-and-answer fact sheet for distribution to interested persons.

- Distributed a variety of educational materials at community meetings and events.

Coordination with Other City and BES Programs

- Coordinated with other City projects and programs (e.g., Endangered Species Act Program, Willamette Stormwater Control Program, watershed programs) to integrate stormwater activities and messages.

Other BMPs

Public education and involvement activities conducted as part of other BMPs are identified under those BMPs, including IND1, ILL2, ND1, ND2, PS1, PS2, and PS3.

COMPLIANCE STATUS

In compliance with the proposed Stormwater Management Plan.

CHALLENGES AND SOLUTIONS

None

CHANGES MADE, INITIATED, OR PROPOSED TO THE STORMWATER MANAGEMENT PLAN

The permit renewal for the second permit cycle (submitted to DEQ in February 2000) includes proposed BMP modifications. During the first permit cycle, the City found that activities covered under BMPs PI1, ED1, and ND2 had numerous overlapping elements. Since those BMPs all included activities related to various aspects of public participation, they were combined into one BMP (PI1) for the second permit term.

PROJECTED MAJOR ACCOMPLISHMENTS FOR PERMIT YEAR SEVEN (FY 01-02)

The PI1 activities that have proved successful will continue in FY 01-02, including the Naturescaping for Clean Rivers program; Downspout Disconnection Program outreach and education; stormwater education activities; community stewardship grants; participation in the Regional Coalition for Clean Rivers and Streams and Eco-logical Business Program; and coordination with other BES and City programs. Specific projected activities include:

- Complete and distribute the onsite stormwater control fact sheets; eco-roof Q&A fact sheet; and parking lot fact sheet.

- Work on developing the non-residential element of the *Naturescaping for Clean Rivers* Program.

- Continue dissemination of Naturescaping and stormwater information through the Downspout Disconnection Program, with a planned target of 17,400 homeowners. Evaluate expansion of the program to multi-family residences and commercial sites.

OM1	**Develop and implement a Stormwater Maintenance Program that includes elements needed to successfully maintain and enhance performance of MS4 conveyance and treatment facilities within the City's urban services boundary.**

KEY BMP ACCOMPLISHMENTS, PERMIT YEAR SIX (FY 00-01)

- Prepared 14 O&M plans for public, capitally funded hazardous spill containment and water quality facilities (12 in the Columbia Slough Watershed and two in the Willamette River Watershed). Plan preparation included site visits, identification of immediate maintenance needs and long-term structural upgrades to improve function and ease of maintenance.

- Developed a task outline and implementation strategy for preparing a Stormwater Facilities Maintenance Plan.

- Made substantial progress on developing a Stormwater Residuals Management Plan, which will improve efficiency and effectiveness of sump cleaning and residuals treatment.

- Inspected 2,750 sumps and sedimentation manholes to note the need for repairs, document the condition of each facility, and measure sediment depth.

- Repaired or constructed 170 inlets, 2,400 feet of inlet lead, 70 sumps, and 4,550 lineal feet of culvert.

- Cleaned approximately 1,800 sumps and sedimentation manholes, 14,400 catch basins, and 24,000 feet of ditch; removed 100 cubic yards of material from detention ponds; and made 12,000 maintenance visits to various locations (multiple visits to some locations after major rain events).

- Contributed to completion of the ODOT-sponsored Roadwaste Research Project, in cooperation with Oregon DEQ and Multnomah County Public Works; provided operational participation, resources and venues for BMP testing, written reporting and issues analyses. Products include stormwater residuals management; BMP identification from field trials research; and publication of the field trials report, as well as a guide for developing district plans relevant to the Portland area and local jurisdictions.

- Made additional progress on the Older Sump Core Sampling project, in which contaminant levels in old and recent deposits of stormwater residuals are compared.

- Improved both throughput and decant treatment effectiveness at the Inverness stormwater residuals dewatering facility by improving coordination with service providers, improving operating processes, and optimizing the use of existing facilities.

- Converted to a batch discharge process for stormwater residuals decant in order to capture exact discharge volume data; conducted additional pollutant testing to clarify contribution of decant to Columbia Blvd. Wastewater Treatment Plant biosolids PBT loading.

- Improved communication, coordination, and vendor utilization in our response to both spills and unknown contaminants in public right-of-ways.

- Approved repair of three existing cesspools within the urban services boundary.

- Multnomah County Health permitted 23 new specified animal permits and responded to 118 complaints on those permits, as well as 116 animal waste/odor control calls.

COMPLIANCE STATUS

In compliance with proposed Stormwater Management Plan.

CHALLENGES AND SOLUTIONS

As budgets shrink and new facilities are added, the challenge is to provide increased and improved maintenance to support water quality goals in an environment where competition for funding is very intense. New funding mechanisms and/or reprioritizing existing funding sources will be needed to adequately maintain all existing and new water quality and quantity control facilities and other parts of the sewer collection system. One solution the City is using is condition assessment to identify region- or facility-specific maintenance schedules. The newly upgraded database will enable more comprehensive planning and scheduling of all maintenance work.

CHANGES MADE, INITIATED, OR PROPOSED TO THE STORMWATER MANAGEMENT PLAN

The permit renewal for the second permit cycle (submitted to DEQ in February 2000) includes proposed BMP modifications. During the first permit cycle, the City inventoried stormwater facilities within the urban services boundary and reviewed

maintenance practices for these facilities (OM1). This BMP has been revised to focus on improvement and effectiveness testing of public facility maintenance practices.

PROJECTED MAJOR ACCOMPLISHMENTS FOR PERMIT YEAR SEVEN (FY 01-02)

- Complete Stormwater Facilities Maintenance Plan to request further funding and staffing for condition assessment and water quality efforts.

- Begin to analyze the data obtained from measurements of sediment and sump manholes to predict accumulation rates and provide a basis for future maintenance schedules.

- Establish a demonstration project monitoring program to collect data on ditches converted to infiltration swales.

- Continue materials and product research and monitor at least two products, facilities, or activities per year, as budget allows.

- Complete identification of a methodology to create and maintain watershed-specific operations and maintenance plans.

- Continue research on new and improved practices to include in the Stormwater Maintenance Management Manual.

- Complete the Stormwater Residuals Management Plan and determine optimal methods for increasing sediment-processing capacity, including evaluating the need for a third facility sediment dewatering facility.

- If the evaluation determines a third sediment dewatering facility is needed, complete a draft stormwater facility maintenance plan.

OM2	**Continue ongoing evaluation and pilot testing of improvements to operations and maintenance practices for public rights-of-way to limit pollutant discharges to the MS4 to the maximum extent practicable.**

KEY BMP ACCOMPLISHMENTS, PERMIT YEAR SIX (FY 00-01)

- Pollution prevention teams at the Bureau of Maintenance (BOM) continued to evaluate and track maintenance procedures, work processes, and other bureau activities, including:

  - Team members participated in ongoing monitoring, evaluation, and revision of activities, and presented the results to respective work groups for implementation.

  - Continued pilot testing of alternative methods, products, and practices to minimize impacts from street system maintenance.

- Evaluated and implemented pollution prevention techniques. Examples include:

  - A slurry recovery system for handheld cutting saws is used, which includes a chainsaw, hydraulic power unit, and pump-vacuum system to provide water for cooling and lubricating while vacuuming slurry and sediment-laden water.

  - "Rock socks" (heavier than bio-bags and 100% biodegradable) are used as check dams and to filter runoff where appropriate. Unlike bio-bags, rock socks (which contain ¾-inch round, washed rocks) may be used in trench backfill. Because of supply problems, however, BOM is evaluating changing from burlap casing to a cotton or denim bag.

  - City crews now use catch basin inserts to capture grindings from washed grinding machines. (A grinder is cleaned several times a week.)

  - When crews are working in the right-of-way and runoff is anticipated, filter fabric is placed on top of inlets to filter sediments and other pollutants. The use of filter fabric depends on the weather, the presence of rain, and the type of work being performed.

- To reduce and contain the amount of hazardous waste BOM disposes of, an aerosol can recycling facility was set up and employees were trained in appropriate techniques to puncture and empty aerosol cans.

- BOM has reduced its use of magnesium chloride (MagCl) as a de-icing agent and is now using calcium magnesium acetate (CMA). With participation from the Oregon Department of Transportation (ODOT), BOM held a summit last summer that included a number of vendors representing various de-icing products.

- After evaluating its port-a-potty waste disposal practices, BOM had a sanitary dump station constructed in its yard, which crews now use to dispose of waste.

- BOM continued work with experimental plantings, using Portland Parks and Recreation Integrated Vegetation Management (IVM) approaches. The IVM, approved by the National Marine Fisheries Services under the ESA 4(d) rule to protect salmonids, requires certification of pesticide applicators. This approach is designed to minimize the need for fertilizers, pesticides, and irrigation while developing and maintaining viable landscapes.

- Selected employees attended various training activities, including a three-day Erosion Control conference organized by the Pacific Northwest Chapter of the International Erosion Control Association.

- BOM employees attended the Regional Northwest Fish Passage programs sponsored by Clackamas and Washington counties, which include both technical and field-based education about ESA, erosion control, and fish protection. As a result of networking at these programs, the entire stormwater maintenance crew toured a Clackamas County culvert replacement project as an educational opportunity.

- BOM developed an awareness-training outline to train bureau employees in the protection of endangered species and water quality. This “skill training" concept also included technical support for field activities.

- Clean-up kits containing a variety of products to clean and control leaks and spills were implemented as standard equipment on bureau vehicles. The accessibility of these materials allows crews to respond to leaks quickly. Kits are routinely replenished as supplies are used.

- BOM is now providing secondary containment for some chemicals that are stored outside. This added level of protection prevents accidental leakage or spillage. CMA is stored in plastic while a secondary concrete containment system will be built for BOM’s supply of magnesium chloride.

- BOM continues to coordinate elements of the ESA, NPDES MS4, and other environmental initiatives into a broader environmental vision, as part of the bureau’ core vision and mission of environmental stewardship.

- BOM's Crew Leader Preparation manual now includes a section that summarizes the environmental mandates, laws, and requirements that affect how BOM conducts its day-to-day operations. This gives crew leaders an understanding of the environmental issues facing the bureau.

COMPLIANCE STATUS

In compliance with proposed Stormwater Management Plan.

CHALLENGES AND SOLUTIONS

The City continues to work with experimental plantings, using IVM approaches that require certification of pesticide applicators.

Over time, the increasing number of environmental initiatives and requirements has affected how BOM conducts its business. The amount of available resources to support these changes in maintenance practices has been limited. BOM has been addressing these environmental initiatives creatively and without additional resources. Another challenge has been to integrate the sometimes-competing environmental requirements and initiatives into an overarching workplan and training program. Field crews will more ably interpret and implement a single, but all-encompassing, work program.

ESA and funding issues continue to impact sometimes-competing objectives within maintenance programs. The City continues to work with ODOT, the Federal Highway Administration, BES, regulatory agencies, and other operating bureaus to balance environmental needs with community priorities.

CHANGES MADE, INITIATED, OR PROPOSED TO THE STORMWATER MANAGEMENT PLAN

The permit renewal for the second permit cycle (submitted to DEQ in February 2000) includes proposed BMP modifications. During the first permit cycle, the City evaluated operations and maintenance in public rights-of–way (OM2). This BMP has been revised to focus on improvement and effectiveness testing of O&M practices.

PROJECTED MAJOR ACCOMPLISHMENTS FOR PERMIT YEAR SEVEN (FY 01-02)

- Continue to evaluate new materials and processes, pilot test tools and techniques, and monitor developments in related fields.

- Continue ongoing crew-level skill-training for ESA and PDOT's routine maintenance practices and water quality guidelines. Educational opportunities will include outside speakers, in-house training, and attendance at various workshops and conferences and Northwest Fish Passage programs. A three-day bioengineering class for selected bureau employees is also scheduled for permit year seven.

- Continue to promote a shift in bureau culture to support environmental awareness and skills in BOM's day-to-day activities, furthering the bureau's efforts towards environmental stewardship.

- Continue efforts to coordinate elements of the implementation plan to meet ESA, NPDES MS4, and other environmental mandates, and to work with PDOT to integrate these environmental needs and programs into work plans.

- Develop quarterly "environmental consultations" in which members of the pollution prevention field team meet with BOM employees in their place of work or job site and help generate ideas to promote more environmentally protective work practices.

- Review and update the OM2 workplan, incorporating additional collected data. Develop an ESA/water quality guidance document that will eventually replace the OM2 workplan.

- Continue improving housekeeping skills to keep worksites and maintenance yards clean.

- Test a waterless dry-saw system for sidewalk maintenance that would reduce water use and minimize environmental impacts.

OM3	**Evaluate materials storage, handling, and transportation activities at City-operated facilities to determine whether there are any adverse impacts. Where practical, implement enhancements or alterations to limit identified adverse effects.**

KEY BMP ACCOMPLISHMENTS, PERMIT YEAR SIX (FY 00-01)

Water Bureau

- Met with BES to set up a process and determine team roles for discharges evaluation.

Parks and Recreation Bureau

- Improved, standardized, and installed compliant pesticide storage units at all district maintenance sites.

- Adopted a policy prohibiting satellite location of gasoline containers in small storage facilities at districts maintenance sites.

- Developed a program to test nutrient levels and the presence of pesticides in surface waters for all golf courses. Based on analyses of collected data, developed an action plan that addresses nutrient and pesticide levels that exceed standards.

- Implemented the use of special equipment for precise application amounts, timing, and distribution of fertilizer on golf course fairways and greens.

- Installed a capture system for oil-based products, consisting of double-walled, above-ground tank that holds all waste until it is retrieved by a vendor for recycling. Because no in-house transfer is needed, this reduces potential risk and exposure to workers and the environment.

- Used a specially formulated slow-release fertilizer on park turf, which possesses an ideal formulation of components that reduces leaching and wasted elements in runoff.

- Eliminated the use of copper-based herbicides for algae control in Westmoreland Park casting pond by using beneficial bacteria treatments. This practice eliminates the need to test for excess copper levels for water quality.

- Created a hard-surface pad for storing mulch and other organic materials at park facilities. Runoff from these areas is directed into biofiltration areas.

COMPLIANCE STATUS

In compliance with the proposed Stormwater Management Plan.

CHALLENGES AND SOLUTIONS

It has been very challenging to develop evaluation criteria and rank multiple hundreds of City-owned sites. In addition to stormwater-related criteria, other environmental regulation issues must be considered in the ranking criteria. In addition, there are specific criteria related to age, size, location, and long-range plans for the various facilities. Some City bureaus are already in a master planning process for their facilities, with dedicated staff and budgets to evaluate sites, while others are simply managing their site activities. As a result, there is uneven level of effort in the City's various bureaus toward implementing this task.

CHANGES MADE, INITIATED, OR PROPOSED TO THE STORMWATER MANAGEMENT PLAN

The permit renewal for the second permit cycle (submitted to DEQ in February 2000) includes proposed BMP modifications. This is a new BMP, established to respond to needs identified during the first permit cycle.

PROJECTED MAJOR ACCOMPLISHMENTS FOR PERMIT YEAR SEVEN (FY 01-02)

- Develop plans to evaluate the stormwater impacts of every bureau facility. The plans will prioritize which activities to evaluate first. City bureaus are working on these plans and expect to meet the December 2001 deadline.

- Establish protocols and action plans for surface water testing through a comprehensive program. Surface water testing for pesticides and nutrient levels will be conducted at multiple state parks.

- Review BOM onsite vehicle and equipment washing facilities.

Parks and Recreation Bureau

- Evaluate paint storage practices at all yards and district maintenance sites for possible improvements.

- Examine the policy for satellite location of fertilizer containers in small storage facilities at district maintenance sites.

- Continue installing hard-surface pads for mulch and organic material storage at additional park facility locations, with runoff directed into biofiltration areas.

- Conduct a pilot program in certain park locations to test the efficacy of organic-based fertilizers.

OM4	**Evaluate various City discharges to the MS4, including NPDES permit identified non-stormwater discharges not addressed by BMP OM1, OM2, or OM3. Many of these discharges can be associated with operations and maintenance activities of various City bureaus. Where practical, implement enhancements or alterations to these activities to limit identified adverse effects.**

KEY BMP ACCOMPLISHMENTS, PERMIT YEAR SIX (FY 00-01)

- Formed a multi-bureau team (Parks, Fire, Water, BES) to develop a process and identify team roles for discharges evaluation.

- The Water Bureau implemented a program that requires it to submit requests for discharges of potable water from flow tests of hydrants and tank and reservoir drains. Discharges are approved on a case-by-case basis with a letter of authorization. The authorization requires BMPs to reduce the impacts of flow rate, volume, and suspended solids from these activities, in addition to the state-required BMPs for chlorinated discharges. A report is required for each discharge in order to track volume and respond to any complaints.

- The Water Bureau continued to inventory discharges at various facilities, in conjunction with sumps registration and NPDES permit application work for direct discharges.

- BES, the Fire Bureau, and General Services worked together on the City's fire station seismic upgrade to incorporate environmental issues. Specifically, all upgrades will include washing areas that discharge to the sanitary system, with appropriate pretreatment. This will eliminate discharges of washwater to City storm or ground disposal systems. Two new stations were built with correct disposal areas, and six stations were remodeled this permit year.

- BES and the Fire Bureau developed a site at the Columbia Blvd. Wastewater Treatment Plant where excess water with foam can be discharged to the sanitary system instead of the storm system.

- The Parks Bureau initiated plans to evaluate transportation practices and procedures for container fuels and other hazardous materials, in consultation with OSHA.

- The Parks Bureau began a program to evaluate O&M practices for certification and compliance within the “Salmon Safe” program. Maintenance activities are examined for their effect on water quality and aquatic system health.

COMPLIANCE STATUS

In compliance with the proposed Stormwater Management Plan.

CHALLENGES AND SOLUTIONS

It has been very challenging to develop evaluation criteria and rank a large group of City activities. It has sometimes been difficult to identify what types of discharges enter the MS4, especially for non-routine, incremental, and emergency activity discharges. In addition to stormwater-related evaluation criteria, other environmental regulation issues must be considered in the ranking criteria. In addition, specific criteria related to other regulations apply to the type and location of discharge. Economics is also a major factor driving current activities. These combined factors complicate the evaluation of various City activities for impacts to the MS4.

CHANGES MADE, INITIATED, OR PROPOSED TO THE STORMWATER MANAGEMENT PLAN

The permit renewal for the second permit cycle (submitted to DEQ in February 2000) includes proposed BMP modifications. This is a new BMP, established to respond to needs identified during the first permit cycle.

PROJECTED MAJOR ACCOMPLISHMENTS FOR PERMIT YEAR SEVEN (FY 01-02)

- Expand the process of requesting and approving discharges to the storm sewer system to other Water Bureau discharges of potable water as they are identified.
- Develop a plan for evaluating each bureau's facilities for stormwater impacts. The plan will prioritize which activities to evaluate first.
- Continue discharges inventory work at various City facilities.
- Review onsite vehicle and equipment washing at City facilities.
- Evaluate the hazardous material spill response policy and training process. Develop a plan for a new training schedule.
- Develop a policy for disposal of waste oil and petroleum products generated at park satellite locations, and identify opportunities for reuse of recycled materials

- Continue to examine all park maintenance activities and practices for compliance and certification with the "Salmon Safe" program. Evaluate the impact of these activities on water quality and aquatic system health.

IND1	**Implement the City's Industrial Stormwater Management Program to control the discharge of pollutants to the MS4 from existing and developing industries; continue to provide educational materials; and continue to develop and implement permitting or policies for identified non-stormwater discharges that are creating negative impacts.**

The Industrial Source Control Division (ISCD) in BES is conducting most of the activities related to this BMP.

KEY BMP ACCOMPLISHMENTS, PERMIT YEAR SIX (FY 00-01)

- Inspected, sampled, and administered the permits for 146 industries (and associated tenants) with stormwater discharge to the MS4. Continued to perform annual compliance inspections and additional inspections, if warranted, to provide technical assistance or assess BMP implementation.

- Continued to perform inspections and evaluate the need for stormwater permits for non-permitted industries in the MS4. Performed 85 inspections during permit year six. Identified BMPs at these industries to minimize or remove exposure of industrial activities to stormwater. Required 22 facilities to apply for a stormwater permit.

- Collected and analyzed 127 samples from 94 permitted industries. In addition, conducted a monitoring and sampling program at select outfall basins to evaluate the long-term impact of the Industrial Stormwater Program. Three storm events were monitored during permit year six. (See BMP OA1.)

- Reviewed 533 industrial files and evaluated impacts on the storm sewer system. Based on the file review, 226 facilities had no identified impact on the storm sewer system, 82 had gone out of business, 49 were issued stormwater permits (which included an additional 25 tenants), 12 have permits pending, and 50 were issued "no exposure certifications." Information in the database was updated, and inspections performed as needed. Ninety-one facilities remain under review.

- Updated all industrial files on a continual basis as information is received. The Aquarius database continues to receive improvements to track inspections, permits, stormwater drainage issues, monitoring results, and industrial information. The database modifications will enhance inclusion of pertinent information and improve reporting capabilities. Reporting capabilities have been developed for each industry that will accurately display up-to-date monitoring results for all samples taken by

both the industry and the City, and will provide an annual report for all sampling results.

- Continued to use GPS to map outfalls to receiving streams from permitted industries.

- Continued to reinspect industries that were previously identified as having no exposure and were not required to apply for a permit. The inspections are conducted on a five-year cycle. Industries are now being issued a no exposure certification in lieu of a permit; this certification was previously not available. The program will allow the City to effectively track these facilities. It also requires facilities to notify the City and/or DEQ if site conditions change, resulting in exposure of industrial activities to rainfall and stormwater runoff. The facilities would then be required to apply for a permit. During permit year six, issued 50 no exposure certifications.

- The City's industrial survey identified 106 industries that are participating in stormwater-related activities. The City also identified 89 other industries through information from food service surveys, the machine industry telephone update survey, file searches, and other incidental sources. All 195 sites were referred to the Industrial Stormwater Permit section for further evaluation.

- Completed the outline and agency research for the stormwater enforcement response plan that will implement City Code provisions for industrial stormwater inspections and pollution complaints.

- Performed 93 inspections and evaluated the need for stormwater permits for non-permitted industries outside the MS4. Identified BMPs at these industries to minimize or remove exposure of industrial activities to stormwater. Required 27 industries outside the MS4 to obtain stormwater permits.

- The City administered 99 additional permits for facilities not located in the MS4. Most of these new permits are for direct dischargers, although some of the new permits were issued for discharge to the Port's system.

- Implemented a memorandum of agreement with DEQ that provides for revenue sharing of permit fees to fund and staff City permit and inspection responsibility for direct dischargers.

- The City's BEST Program assisted industries with "green practices" that save water and energy and deal with stormwater and solid waste. In permit year six, six businesses were recognized for their efforts in these areas. Since the program started in 1992, 61 area businesses have won awards for projects/ practices that are

saving them over $11.7 million per year. In all, these businesses have made the following reductions:

- 39.7 million kWh of electricity saved
- 6.7 million therms of natural gas saved
- 692,000 gallons of gasoline saved
- 857 million gallons of water saved
- 65,600 tons of solid waste reduced
- 9.5 million miles (VMT) avoided
- 103,000 tons of CO_2 emissions eliminated

- Under the Eco-logical Business Program, continued to work with the Pollution Prevention Team and Automotive Advisory group for the Portland Metro Region to certify automotive repair and service shops. By the end of permit year six, a total of 26 shops had been certified, with another 12 to 15 shops in the process of certification.

  During fiscal year six, also began developing an Eco-logical Business Program for the landscape contractor sector. The program will look at design, installation and maintenance practices.

  The Eco-logical Business Program implemented a promotional campaign from May to July 2001 to raise awareness and communicate the importance of supporting auto shops that operate environmentally responsible business practices. The campaign used radio and newspaper advertising, news media coverage, and other tactics to promote the Eco-logical Business message.

- Developed one additional BMP handout about preventing stormwater pollution, focusing on mobile fueling operations. The City has developed a total of 16 BMP handouts for use during inspections of industrial facilities. Pollution prevention videos are also available for loan to industries conducting staff training.

- The Industrial Stormwater Program continues to meet met with Multnomah County sanitarians annually to review the flyer and poster that address best management practices for reducing stormwater pollution from restaurants. These materials are handed out by the sanitarians during their restaurant inspections.

- The City is evaluating the development of an education and outreach program to address washwater and the mobile washer industry as part of Industrial Stormwater Program technical assistance. During permit year six, implemented interim enforcement in conjunction with DEQ to cite mobile washers and washing activities. During the next permit year, the City will identify other classes of industry that may

be impacting the storm sewer system and will develop materials, if needed, to limit the discharge of pollutants to the storm sewer system.

- Continued to implement activities in the following categories of industrial controls: wastewater discharge permits, accidental spill prevention plans, Pollution Complaint Program, Buildings Plan Review Section, and Fire Bureau's SARA Title III facility review. Actions included:

  - Continuing review of SARA Title III facility plans.

  - Continuing remediation in the East Multnomah County Project area, including hydraulic controls in TGA, TSA, and SGA. Plume movement controls are in place for the east wellfield. Characterization and remedial efforts in the west wellfield continue.

COMPLIANCE STATUS

In compliance, except for final completion of all signed intergovernmental agreement with the various co-permittees.

CHALLENGES AND SOLUTIONS

For years, the City has struggled with providing consistent treatment for industries with stormwater discharges. The City first expanded stormwater considerations into pretreatment program permits and inspections, then addressed businesses below CSO outfall diversions for stormwater permit coverage. The Industrial Stormwater Program has taken on a significantly larger portion of stormwater work from DEQ for industries throughout the City. This increased responsibility has proven to be very effective at providing citywide consistency among similar industrial properties. Challenges may arise in improving regulatory authority over facilities that, because of their SIC code, are not required to obtain an industrial stormwater permit, but pose a threat to the storm sewer system.

CHANGES MADE, INITIATED, OR PROPOSED TO THE STORMWATER MANAGEMENT PLAN

The permit renewal for the second permit cycle (submitted to DEQ in February 2000) includes proposed BMP modifications. During the first permit cycle, the City implemented all elements to establish the City's Industrial Stormwater Management Program. The City also added significant pollution control requirements for industrial and commercial facilities. In the second permit cycle, the City will continue to identify new sites with commercial/industrial type discharges for permits, coordinate with other jurisdictions and agencies, provide educational information for these dischargers,

and continue to develop and implement permitting or policies for identified non-stormwater discharges that are negatively impacting the MS4.

PROJECTED MAJOR ACCOMPLISHMENTS FOR PERMIT YEAR SEVEN (FY 01-02)

- Continue to inspect all permitted industries discharging to the MS4 once per year, and conduct sampling as needed.

- Continue to inspect non-permitted industries discharging to the MS4 to evaluate the need for permits (approximately 200- 250 per year).

- Continue certifications in the Eco-Logical Business Program with the Pollution Prevention Team and Automotive Advisory Group. The goal is to have 40 shops certified per year for the next two to three years. Complete development and begin implementation of the landscape contractors program.

- Complete the stormwater enforcement response plan, and change code provisions for industrial stormwater inspections and pollution complaints.

ILL1	Continue spill prevention and response programs and activities to reduce the frequency and impact of spills to the MS4.

KEY BMP ACCOMPLISHMENTS, PERMIT YEAR SIX (FY 00-01)

- Continued to meet quarterly with the Regional Spill Committee. Expanded the original committee to include more agencies with stormwater spill concerns in the Portland region.

- Completed installing a simple spill training area adjacent to the Fire Bureau Training Center on NE 122nd.

- Compiled and submitted an initial sump inventory/registration to DEQ. Continued work on developing a Sump Management Plan.

- Partnered with the Oregon Association of Clean Water Agencies (ACWA) and other municipalities to begin developing a BMP manual for injection systems that are protective of groundwater. The manual will provide technical information on siting criteria, design considerations, and O&M requirements for injection wells. Siting criteria and design recommendations will emphasize spill prevention through segregating areas that train to injection wells from areas where spills may occur (e.g., loading docks, materials storage/use areas).

- Placed spill kits at five water quality protection facilities along NE Airport Way. The kits are all-weather 55-gallon drums that contain spill cleanup absorbent materials. The kits are placed within fenced facilities and are clearly marked "Spill Kit."

- Held quarterly duty officer training meetings to provided updated information and discuss issues. Recent upgrades to the duty officer program include use of a laptop computer loaded with maps of the City's sewer and storm drainage system. This resource provides immediate map information about spill-site sewer and storm piping, and enables a quick response for mitigation efforts at the discharge point.

- Continued oversight of remediation at contaminated industrial sites with the Columbia South Shore area.

- Continued working with the Columbia South Shore Wellhead Protection Committee. The cities of Fairview, Gresham, and Portland, the community of Interlachen, and other interested parties have formed this committee to implement complementary wellhead protection area designations and regulations.

- Continued activities related to the Spill Response Program, Accidental Spill Prevention Program, tank farm policy, Hazardous Materials Response Team, Columbia South Shore, hazardous substances, and Buildings Plan Review Section. Accomplishments included:

  - Proposed new structures in the Columbia South Shore Plan District (COSS) that require building permits and will use chemicals on the site must receive Water Bureau approval before a building permit is issued. In permit year six, approximately 50 permit applications were reviewed, including two hazardous materials use reviews. All new buildings in the COSS have sealed floors and secondary containment, where necessary. Storm drains and discharge lines in loading and storage areas have valves to contain spills onsite.

  - The Fire Bureau's Hazardous Materials Response Team responded to approximately 125 hazardous materials calls. The Fire Bureau's Marine Division Fire Boars responded to approximately 30 marine hazardous materials/oil incidents.

COMPLIANCE STATUS

In compliance with the proposed Stormwater Management Plan.

CHALLENGES AND SOLUTIONS

The balance of priorities between groundwater, stormwater, and drainage continues to be a significant citywide concern. Protection of groundwater is universally supported, however, and the development of the Sump Management Plan will assist in this effort.

CHANGES MADE, INITIATED, OR PROPOSED TO THE STORMWATER MANAGEMENT PLAN

The permit renewal for the second permit cycle (submitted to DEQ in February 2000) includes proposed BMP modifications. In the second permit cycle, this BMP will continue activities established to address NPDES stormwater permit requirements related to spill prevention, containment, and response. These include implementation of all elements of the spill prevention and response program. Some evaluation of non-stormwater and bureau-specific discharges will be evaluated in OM3 and OM4.

PROJECTED MAJOR ACCOMPLISHMENTS FOR PERMIT YEAR SEVEN (FY 01-02)

- Complete the spill training curriculum and host a training session.

- Continue Regional Spill Committee quarterly meetings.
- Complete and implement the sump sampling plan.
- Continue working with the Wellhead Protection Committee to implement coordinated actions to protect the Columbia South Shore wellfield.
- Continue COSS reviews for appropriate control of hazardous materials.
- In cooperation with ACWA's Groundwater Committee, develop a BMP manual for injection systems.
- Complete UIC registration, and draft the Sump Management Plan.
- Evaluate and revise, as needed, industrial and spill control BMPs as part of the 2002 Stormwater Management Manual update. The BMPs provide stormwater quality and quantity management requirements for new and redevelopment. These BMPs incorporate aspects of the Groundwater Issues white paper to protect both surface water and groundwater resources. The hazardous materials BMP in the Stormwater Management Manual (Section 9.5) replaces the Columbia South Shore Hazardous Containment Handbook.

ILL2	**Implement all elements of the Illicit Discharge Elimination Program to prevent, search for, detect, and control illicit discharges to the MS4; continue to evaluate existing properties and non-stormwater discharges.**

The Illicit Discharges Elimination Program (IDEP) is being conducted by the Spill Protection and Citizen Response Section within BES's Environmental Compliance Division (ECD) and the Industrial Source Control Division (ISCD).

KEY BMP ACCOMPLISHMENTS, PERMIT YEAR SIX (FY 00-01)

- Conducted 350 outfall inspections.

- Identified and corrected one illicit connection.

- Continued revising priority outfall list; currently tracking 106outfalls.

- Continued dry-weather monitoring at all major outfalls and three CSO (below the diversion structure) outfalls during the summer sampling period; sampled all priority outfalls at least twice.

- Identified one new outfall on Hayden Island.

- Continued sampling the 19 non-stormwater discharges identified in the NPDES permit to determine their impact on the MS4. As of permit year six, completed monitoring work on 7 of the 19 activities, including water line flushing, potable water sources, fire fighting activities, lawn watering, air conditioning condensate, rising groundwaters, and flows from riparian habitats. Sampling from summer and fall of 2000 and winter and spring of 2001 included:
    - Irrigation water
    - Foundation drains, footing drains and crawl spaces
    - Uncontaminated groundwater
    - Springs
    - Flows from riparian habitats

  (Also see BMP OA1.)

- Developed policy and a decision matrix for allowing pumped groundwater discharges to the MS4.

- Continued to implement measures to limit impacts from non-stormwater discharges related to City operations.

- Reviewed approximately 291 commercial and industrial building plans, and implemented a new permit tracking database system. This system is still being improved to provide more accurate tracking in the future.

- Developed procedures to allow foundation drains for subgrade structures in brownfields (from new development) to be connected to the MS4. Groundwater monitoring data must be provided to DEQ for evaluation of NPDES permit requirements. If the discharge does not require a permit, the City still requires a sampling location to ascertain any impacts on the system identified through the IDEP program.

- Continued to administer wastewater discharge permits; accidental spill prevention plans; the Pollution Complaint Program; the Buildings Plan Review Section; the Fire Bureau's SARA Title III facility review; the Spill Response Program; the tank farm policy and Hazardous Materials Response Team; SOLV events; Metro's Recycling Information Center line; BES's Solid Waste and Recycling Programs; and development controls, including plans review. Related actions included:

  - The BES hotline number (823-7180) receives about 1,500 calls per year regarding pollution complaints, industry information, spills, seepage discharges, and agency referrals. This hotline is staffed 24 hours a day. During the past year, 280 after-hours complaint calls were registered. The duty officer responded on-scene to 80 complaint sites during after-hours actions.

  - The City continues to comply with the intent of the State Toxic Materials Reduction Act by evaluating all new chemicals used in various City facilities.

- The City's Green Team of concerned employees implemented a number of new activities to make internal environmentally friendly changes at the City of Portland. These included promoting alternative transportation to employees; promoting the recycling of difficult items such as electronics, batteries, and styrofoam; and working on a surplus supply project (including a website) where people can exchange unwanted but still reusable office equipment and supplies. The Green Team also sponsored its third Green Fair, with over 300 employees attending and 60 vendors exhibiting environmentally friendly products.

- Stop Oregon Litter and Vandalism (SOLV), a statewide non-profit group, retrieved approximately 750,000 pounds of debris, including: 400,000 pounds of mixed waste, 183,359 pounds of woody debris, 1,000 illegally dumped tires, dozens of appliances, 25 abandoned vehicles, and other scrap metal totaling an estimated 145,000 pounds. In addition, SOLV planted 1,000 trees, shrubs, and native plants in parks and natural areas.

COMPLIANCE STATUS

In compliance with the proposed Stormwater Management Plan.

CHALLENGES AND SOLUTIONS

Consistent citywide program coverage to control illicit discharges continues to be a challenge, but the effort will be moving forward with the Integrated Watershed Approach planning effort.

CHANGES MADE, INITIATED, OR PROPOSED TO THE STORMWATER MANAGEMENT PLAN

The permit renewal for the second permit cycle (submitted to DEQ in February 2000) includes proposed BMP modifications. In the second permit cycle, this BMP will continue activities established to address NPDES stormwater permit requirements related to spill prevention, containment, and response. These include implementation of all elements of the Illicit Discharge Elimination Program.

PROJECTED MAJOR ACCOMPLISHMENTS FOR PERMIT YEAR SEVEN (FY 01-02)

- Continue to implement the IDEP and develop a workplan and schedule; integrate results into the BES mapping system.

- Expand IDEP activities consistent with the September 2000 agreement with the Multnomah County Drainage District No. 1 (MCDD). This agreement expands IDEP work to additional outfalls in the Columbia Slough that were previously under MCDD's jurisdiction.

- Continue to evaluate natural area and groundwater-related non-stormwater discharges. Continue to identify sampling locations and methodologies. Continue non-stormwater sampling for remaining categories.

- Continue to remove illicit discharges to the storm sewer system as they are identified during spill response, pretreatment, or stormwater permit inspections.

- Formalize in policy the acceptance of groundwater from foundation drains for subgrade structures in brownfields.

ND1	**Implement City Code Title 10: Erosion Control, which provides for a comprehensive, citywide erosion and construction site pollutant control program; provide training and other support as needed.**

KEY BMP ACCOMPLISHMENTS, PERMIT YEAR SIX (FY 00-01)

- Continued implementing the new erosion control code (Title 10: Erosion and Sediment Control), effective March 1, 2000.

- Continued developing and implementing procedures and processes to coordinate and implement Title 10 across the City, including implementing the modified administrative structure for erosion control review, inspection, and enforcement. The Office of Planning and Development Review (OPDR) reviews, inspects, and enforces erosion control permits on private property. Public works bureaus review, inspect, and enforce erosion control on their contract and permit projects. OPDR takes the lead for responding to complaints through a recently established complaint hotline phone number, with the assistance of BES for non-permit activity complaints and spill pollution incidents.

- Continued modifying OPDR's administrative structure for erosion control review, inspection, and enforcement.

- The Parks Bureau continued its commitment to erosion control education by training new employees.

- Provided design expertise to Parks and other bureaus on correct plants and techniques for erosion control.

- Implemented a formal methodology to ensure that erosion control is successful on Parks Bureau projects.

- Working with a variety of jurisdictions in the Portland region, began to develop an interagency environmental award program for building contractors. Awards will be based on the ability to prevent erosion and control sediment.

- OPDR conducted a total of 3,085 erosion control-related inspections in the following categories:
  - 2,048 pre-construction inspections
  - 115 interim compliance inspections (during construction)
  - 821 permanent erosion control measures inspections (at building final)
  - 101 final erosion control inspections (6 months after building final)

- Issued 2,445 erosion control permits, providing revenues of $382,695

- Received and resolved 301 complaint calls through the erosion control hotline.

- Continued the inspection supervisors team to address outstanding issues generated by Title 10. Issues include continued training of staff and customers, enforcement, complaint resolution, and coordination of work in progress.

- Continued coordination meetings with City inspectors for public works projects and building permits. These meetings coordinate grading, utility, and street construction inspection activities on subdivision sites for the various public works permits and private property permits.

- Integrated the Interactive Voice Response (IVR) system (for calling in inspection requests and posting inspection results) with the permit tracking system (TRACS) to provide more seamless processing of building permits.

- Continued operation of the Soil Trader, which aided the beneficial reuse of over 250,000 yards of material. Other construction commodities, such as asphalt (crushed and rubble), concrete (crushed and rubble), woody debris, and fencing are also part of this recycling effort.

- City of Portland solid waste staff continued to mail out Pre-Construction Recycling Plan forms to projects with a permit value over $50,000. For calendar year 2000, over 1,900 forms were distributed. Eight-five percent of the forms were returned, stating that their projects were recycling construction debris. In addition, field staff continued to make site visits to projects to ensure they are in compliance with the recycling ordinance.

COMPLIANCE STATUS

In compliance with the proposed Stormwater Management Plan.

CHALLENGES AND SOLUTIONS

With a comprehensive program instituted, the biggest challenge is integrating enhanced erosion control efforts into the existing City design, review, and inspection systems. This integration has been aided by developing and implementing new computer tracking programs and complaint response systems and by refining interbureau roles and procedures. The Erosion Control Manual and the Code Advisory Committee (comprising members from OPDR, BES, the Water Bureau, builders and citizens) will also help facilitate coordination, as well as recommend modifications to the manual.

CHANGES MADE, INITIATED, OR PROPOSED TO THE STORMWATER MANAGEMENT PLAN

The permit renewal for the second permit cycle (submitted to DEQ in February 2000) includes proposed BMP modifications. In the course of implementing the new development (ND) BMPs during the first permit term, it became evident that many of the activities in these BMPs related closely to, or were partially covered by, other BMPs. In the second permit term, the City has combined the duplicative BMPs. BMP ND4 has been updated to focus on implementation and refinement of erosion control standards and is now ND1.

PROJECTED MAJOR ACCOMPLISHMENTS FOR PERMIT YEAR SEVEN (FY 01-02)

- Continue educating new employees on erosion control and pollution prevention.

- Rework Parks and Recreation's contracting specifications to incorporate erosion control plan requirements and reference to Title 10.

- Set up an experimental/prototype site at the Natural Resources Operating Offices on SE Foster for hard-surface water reduction into the storm sewer. The site will use plant material to reduce erosion as well as encourage water infiltration.

- Initiate meetings of the Erosion Control Manual and Code Advisory Committee to recommend modifications to the City's Erosion Control Manual and Title 10. Complete public review of the revision proposal.

- Create methodologies to evaluate the effectiveness of the new Title 10 regulations, the Erosion Control Manual, and their implementation. Methodologies may include site checks, customer surveys, review of hotline complaint logs, and/or visual and other types of monitoring.

- Evaluate the development of a citation-based enforcement program by OPDR. The program would augment the current system of correction notices and stop work notices (for more serious violations). Currently, violations in environmental zones are subject to environmental violation review by OPDR land use review planners, a costly and lengthy process.

- Continue to modify inspection processes for more effective erosion control enforcement.

- Evaluate consolidating Title 10 into Title 24.

- Implement a City-based awards program to reward outstanding erosion control efforts by builders and contractors. The first regional award will be presented to the top residential and top "other category" builder or contractor in fall 2001. Participation includes local jurisdictions and sponsors such as the Association of General Contractors (AGC).

- Continue to work on contract language and permit requirements for the appropriate control of construction site dewatering activities.

- Continue to evaluate the need for continuing education for contractors and City staff, and modify or develop curricula as needed. Evaluate the viability of creating an environmental builder program that would offer incentives for trained erosion control professionals.

ND2	**Implement and refine stormwater management requirements for all new and redevelopment projects to minimize pollutant discharges and erosive stormwater flows. Evaluate and develop stormwater management requirements for existing development.**

KEY BMP ACCOMPLISHMENTS, PERMIT YEAR SIX (FY 00-01)

- Continued meetings of the Stormwater Advisory Committee (SAC) to develop and refine stormwater management policies and review and revise the Stormwater Management Manual.

- Began implementing the revised Stormwater Management Manual in September 2000. Some of the major revisions include:

  - A mitigation requirement, which mandates all development projects to reduce overall impervious surface areas before managing stormwater runoff from those areas.

  - Revised pollution reduction requirements. Development projects must now treat the entire post-development runoff, rather than post-development runoff minus pre-development runoff.

  - Broadened criteria for implementing the "simplified approach, " allowing more low-impact development (LID) techniques.

- Amended Title 33 parking lot and landscaping requirements. Parking lot landscaping must now treat stormwater runoff to the maximum extent practicable. The amendment provides consistency between the stormwater management requirements for parking lots and parking lot landscaping requirements.

- Conducted numerous public workshops to train developers, public agency personnel, and architectural and design professionals in the use of the revised Stormwater Management Manual.

- Formed a joint work team between BES and PDOT to research and develop strategies to implement "water quality friendly" transportation-related projects. As a result of this team effort, water quality friendly street projects have been implemented, which include porous pavement, depressed planter strips, and vegetated swales designed to collect, treat, and infiltrate stormwater. (See BMP STR2)

COMPLIANCE STATUS

In compliance with the proposed Stormwater Management Plan.

CHALLENGES AND SOLUTIONS

New and redevelopment issues continue to be the most controversial and difficult to implement of all the NPDES tasks.

CHANGES MADE, INITIATED, OR PROPOSED TO THE STORMWATER MANAGEMENT PLAN

The permit renewal for the second permit cycle (submitted to DEQ in February 2000) includes proposed BMP modifications. In the course of implementing the new development BMPs during the first permit term, it became evident that many of the activities in these BMPs related closely to, or were partially covered by, other BMPs. In the second permit term, the City has combined the duplicative BMPs. BMPs ND5 has been updated to focus on implementation and refinement of stormwater management standards and is now ND2.

PROJECTED MAJOR ACCOMPLISHMENTS FOR PERMIT YEAR SEVEN (FY 01-02)

- Continue to work with the SAC to develop and refine stormwater management policies.

- Continue to modify City codes as needed to implement Stormwater Management Manual requirements and support/facilitate innovation and resource protection in stormwater planning, design, and management.

- Complete code changes and guidance specifications for building-related systems (e.g., gutterless, downspout disconnect, chain drip).

- Work on the next Stormwater Management Manual revisions, scheduled for implementation in September 2002. Hold public workshops to discuss proposed changes and collect feedback

- Continue to monitor water quality friendly street projects for hydraulic effectiveness, pollution reduction, maintenance needs, and aesthetics.

STR1	**Structurally modify existing outfalls and the stormwater system to reduce pollutant discharges; modify on a selected basis, or as O&M occurs, or where failures occur.**

KEY BMP ACCOMPLISHMENTS, PERMIT YEAR SIX (FY 00-01)

- To address erosion problems with roadside conveyance ditches, converted 300 linear feet of incised roadside ditch segments in southwest Portland into side stormwater treatment swales. These pilot projects will evaluate water quality effectiveness and assess maintenance needs.

- Completed design of the Fanno Creek enhancement project at SW 45th Ave to Shattuck Road. The goal is to improve water quality in Fanno Creek by stabilizing the streambed and banks to prevent erosion.

- In conjunction with Clean Water Services, completed design of the Tower Site project in Fanno Creek. The project focuses on bank stabilization and instream restoration.

- Initiated the Fanno Creek stream enhancement project on the main stem of Fanno Creek between SW Shattuck and 45th Avenue. The project includes 650 feet of streambank enhancement and stabilization. The approximately one-acre site includes City property and private property partially in the floodplain.

- BES and the Bureau of Parks and Recreation began construction of the Willamette Park riparian restoration and stormwater management project. The project involves establishing a 0.5-acre functioning riparian area (with controlled river access, picnic area, and viewpoints) and revegetating/stabilizing a portion of the Willamette riverbank. The project will also involve capturing stormwater (water quality design storm) from the two-acre parking lot and diverting it to a bioswale for treatment before discharging to the river. Bioswale construction was completed in permit year six.

- Continued discussions with the Bureau of Planning to update the Willamette River Greenway code. BES is participating to ensure that stormwater outfalls are addressed.

- Constructed a stormwater bioswale project at Heron Pointe Wetland. This project includes riverbank and riparian area enhancement by removing invasive species and planting native trees, shrubs, and herbaceous plants at the 1.2-acre project site.

- Completed a stormwater facility to treat runoff from the SE 45th Avenue outfall on Johnson Creek just downstream from the 45th Avenue bridge. Although construction was finished in January 2000 (permit year five) operation of the facility was delayed until November 2000 to allow for planting and plant establishment of native vegetation.

- Completed the Johnson Creek Restoration Plan, which addresses mitigating the stormwater impacts of major Johnson Creek outfalls as part of a comprehensive reach-by-reach approach. The plan identifies four high-priority project areas within the City for restoring the natural functions of Johnson Creek by managing flooding, improving water quality, and improving fish and wildlife habitat. Several of these areas include priority stormwater outfalls identified and inventoried in the 1995 Johnson Creek Resources Management Plan. Mitigation efforts at each outfall will be site specific and implemented in conjunction with planned restoration projects.

- Completed predesign and initiated design of the Alsop-Brownwood flood mitigation and restoration project. Among other benefits, this project will reconnect and restore wetland functions on 60 acres of degraded wetlands to improve water quality on Johnson Creek.

- Completed Phase II predesign of the NE 162nd (wetland restoration) stormwater outfall treatment facility. This project includes a funding partnership with the Corps of Engineers under the 1135 program.

- Completed construction of Phase II of the Whitaker Pond stormwater outfall treatment facility in November 2000.

- Completed construction of the Buffalo Slough water quality facility in November 2000. This facility treats storm runoff that drains to the Buffalo Slough through outfall #72, near the intersection of NE 33rd Drive and Argyle Street.

- As part of a widening project on N Marine Dr., completed design of Stormfilter stormwater treatment facilities at two outfalls to the Columbia Slough and four outfalls to Smith and Bybee Lakes.

- As part of the Interstate MAX lightrail project, completed design for stormwater treatment of several catchments along the MAX alignment.

COMPLIANCE STATUS

In compliance with the proposed Stormwater Management Plan.

CHALLENGES AND SOLUTIONS

An ongoing challenge is coordination among various City programs (e.g., watershed, Public Facilities Plan, and CSO) to ensure that structural water quality facilities are evaluated and prioritized in a consistent manner and that water quality impacts are addressed in the design/construction of new and retrofitted flood control facilities. The integration of this BMP into the Clean River Plan will assist in this effort.

CHANGES MADE, INITIATED, OR PROPOSED TO THE STORMWATER MANAGEMENT PLAN

The permit renewal for the second permit cycle (submitted to DEQ in February 2000) includes proposed BMP modifications. NPDES regulations require integration of flood control and water quality issues to be considered when designing new facilities and improving existing facilities. During the first permit term, two BMPs were established to address new facilities (STR1) and facility retrofits (STR2). Because the activities under both BMPs focus on MS4-related water quality improvements, the City has combined these two BMPs into the new STR1.

PROJECTED MAJOR ACCOMPLISHMENTS FOR PERMIT YEAR SEVEN (FY 01-02)

- Continue to implement watershed facilities/resource plans that evaluate the NPDES listed major outfalls in the Fanno, Tryon, Columbia Slough, and Willamette watersheds.

- Complete final plantings and site construction for Willamette Park. The project includes riverbank and riparian area enhancement by removing invasive species and planting native trees, shrubs, and herbaceous plants.

- Implement Johnson Creek Restoration Plan recommendations to mitigate priority major outfalls in the four identified primary project areas, in conjunction with the planned restoration work. As subsequent phases of the Restoration Plan are implemented, additional outfalls will be included in the restoration work.

- Continue design work on the Alsop Brownwood enhancement project along the mainstem of Johnson Creek. The current schedule is for design to be final in fiscal year 2003 and phased construction efforts to be completed in fiscal year 2009.

- Complete design of Phase II (wetland restoration) of the NE 162nd Avenue facility.

- Complete the Wapato wetland water quality facility (Columbia Slough). BES initiated this study to require the manufacturers of the structural water quality

facilities to prove the removal rates they have claimed. The data and analysis are to be completed and submitted to BES by July 1, 2002. Because the Wapato design incorporates a manufactured treatment facility, monitoring is being conducted to assess the water quality flow parameters to use for design.

- Continue work on CSO stream separation diversion predesign, which includes evaluating pollutant loading and modeling storm systems to determine the feasibility of capturing the water quality storm event in the combined system. This evaluation will assess stormwater treatment options for areas where regional stormwater facilities are impractical because of steep slopes and clay soils.

- Design a passive stormwater treatment facility in the Tryon Creek Watershed at SW Taylor's Ferry and 17th Avenue.

STR2	**Review and modify existing design standards for drainage/flood control and water quality facilities to improve water quality. Implement and evaluate effectiveness of pilot projects demonstrating innovative technologies.**

KEY BMP ACCOMPLISHMENTS, PERMIT YEAR SIX (FY00-01)

- Revised some of the design criteria for new stormwater management practices in the Stormwater Management Manual. (See BMP ND2)

- Modified City parking lot design standards to provide integrated landscape and stormwater management. (See BMP PS1)

- BES and PDOT convened a "water quality friendly streets" work committee to develop right-of-way design standards that will provide improved stormwater management, especially water quality. The committee developed preliminary design options for testing. Current pilot projects include:

  - Lodi Lane Subdivision: Lower planters for a cul de sac, comprising 300 lineal feet and 150 planters. The drainage area includes about 10,000 square feet of impervious surface.

  - Ledbetter Street Jail Development: Infiltration planters for about 1.5 acres of impervious area.

  - Modification of existing incised roadside ditches to provide water quality. Locations and lengths are:

    SW 62nd Avenue & Pomona Street—86 feet of swale
    SW 47th Avenue & Pomona Street—157 feet of swale
    SW 45th Ave & Multnomah Blvd.—110 feet of swale
    1524 SW Spring Garden Street—150 feet of swale
    SW 53rd Ave & Taylors Ferry Road--50 feet of swale

  Several additional pilot projects are in the design phase.

- Participated on Metro's "Green Streets Committee" to help prepare better regional approaches to street design for stormwater quality and other livability issues.

- Constructed three pilot projects to modify deep roadside ditches and rebuild them as compost infiltration swales.

- Implemented the Parkrose sand filter project to test the water quality benefits of retrofitting an existing conveyance facility with a large sand filter. Retrofitted the site's temporary wildflower landscape with permanent native vegetation.

- Constructed the Russell Pond retrofit project, which added a daylighted portion of pipe into a swale planted with native vegetation.

- Modified design of the new Eco-trust Building to incorporate a variety of sustainable features, including an eco-roof and permeable parking lot surfaces.

- Retrofitted the Multnomah Art Center parking lot with porous pavement.

- Began working with the Portland Public School District to evaluate school site retrofits for water quality facilities, including eco-roofs.

- In partnership with OSD, continued developing an eco-roof program.

- Continued to research the benefits of eco-roofs, in cooperation with the Office of Sustainable Development (OSD) and others.

- Began flow and water quality monitoring of the Hamilton Building eco-roof. (See BMP OA1)

- Continued to investigate "building green" and other stormwater research in North America.

- Tested and monitored pilot projects to evaluate their effectiveness. (See BMP OA1.)

COMPLIANCE STATUS

In compliance with the proposed Stormwater Management Plan.

CHALLENGES AND SOLUTIONS

It has been a challenge to change public perception of stormwater management facilities. Another challenge with retrofits is the minimal space available to place systems, or other infrastructure limitations (such as roof loadings). It is hoped that pilot projects and public buildings and facilities will help educate property owners about the many benefits to be achieved from retrofitting with stormwater management facilities.

CHANGES MADE, INITIATED, OR PROPOSED TO THE STORMWATER MANAGEMENT PLAN

The permit renewal for the second permit cycle (submitted to DEQ in February 2000) includes proposed BMP modifications. BMP STR4 has been renumbered as STR2 and updated to include implementation and evaluation of demonstration projects.

PROJECTED MAJOR ACCOMPLISHMENTS FOR PERMIT YEAR SEVEN (FY 01-02)

- Form a committee to determine if stormwater quality facility design standards should be revised to address spill containment. This activity will be coordinated with ILL1.

- Discuss with OMSI the potential to structurally correct portions of the swales to improve performance and correct design flaws caused by Water Avenue.

- Continue monitoring and potentially modify aspects of BES's Water Pollution Control Laboratory facilities to improve water quality.

- Identify, evaluate, and prioritize monitoring needs for innovative landscape/ stormwater management approaches.

PS1	**Continue to review and modify City codes to minimize or mitigate impervious surfaces, maximize self-sustaining landscapes and vegetative cover, and minimize the need for pesticides and irrigation.**

KEY BMP ACCOMPLISHMENTS, PERMIT YEAR SIX (FY 00-01)

- Completed additional technical review of stormwater water quality impacts related to parking lot landscape code requirements. Based on this evaluation, finalized and adopted revisions to City Code Chapter 33 in February 2001. The revisions include parking and landscaping requirements that support integration of stormwater management into parking area design and help reduce impervious surfaces in parking lots. The code revisions will increase shading of parking lot impervious surfaces and, in conjunction with revisions to the Stormwater Management Manual, require more flow of stormwater, especially small storms, into vegetated areas. The revisions also call for the use of native plants near environmentally sensitive areas and identify native trees that are likely to survive with minimal pesticide and fertilizer use in parking areas.

- Revised and implemented changes to Title 33 that provide floor area ratio (FAR) bonus incentives for the use of eco-roofs in the downtown area (Central City Plan District). Eco-roofs provide detention, evaporation, and transpiration of precipitation, as well as cool air and runoff.

- Adopted Stormwater Management Manual revisions that require stormwater management in parking lot landscaped areas. These standards provide stormwater management as a component of Title 33 landscape requirements. (See BMP ND2.)

- Implemented Stormwater Management Manual revisions that require use of mitigation measures, such as vegetative filters and trees, to reduce effective impervious area and address stormwater impacts. (See BMP ND2.)

- OPDR completed and released code guidance for rainwater harvesting systems. The guide is predominantly for single-family and two-family homes, but the basic principles could also be used for multi-family, commercial, and industrial properties. In general, collected stormwater can be used for irrigation and internal water closet related uses. The guide is available on OPDR's website.

- Under BES's Watershed Revegetation Program, many businesses and other private landowners participated in and helped fund revegetation projects on their properties and neighboring properties. (See BMP PS3.)

- Drafted tree planting requirements for certain types of development not covered by the tree preservation code implemented in permit year five.

COMPLIANCE STATUS

In compliance with proposed Stormwater Management Plan.

CHALLENGES AND SOLUTIONS

Conflicting or overlapping code requirements administered by different bureaus have sometimes impeded integrated landscape-based stormwater management approaches. Parks, OPDR, Planning, and BES worked cooperatively to develop parking lot landscape standards that are consistent with the landscape and design requirements for vegetated stormwater management facilities. This approach allows applicants to meet Planning Code parking lot landscape requirements and BES stormwater management requirements with one set of standards.

CHANGES MADE, INITIATED, OR PROPOSED TO THE STORMWATER MANAGEMENT PLAN

The permit renewal for the second permit cycle (submitted to DEQ in February 2000) includes proposed BMP modifications. PS1 activities in the second permit term focus on reviewing and modifying City codes to mitigate impervious surfaces and maximizing self-sustaining landscapes and vegetative cover.

PROJECTED MAJOR ACCOMPLISHMENTS FOR PERMIT YEAR SEVEN (FY 01-02)

- Continue technical review of zoning, special district, urban renewal area, and other City codes to identify opportunities to improve water quality. Coordinate with evaluation of landscape/tree stormwater monitoring results, and develop code revisions as necessary.

PS2	**Continue to develop a means of encouraging landowners to protect and preserve natural areas on their land and control or eliminate erosion. Continue to purchase property with high water quality or natural resource value.**

KEY BMP ACCOMPLISHMENTS, PERMIT YEAR SIX (FY 00-01)

- The City initiated House Bill 3057: Riparian Tax Credit, during the 2001 Oregon state legislative session. The bill provides a tax exemption for portions of property that are adjacent to a waterway and meet the Division of State Lands designation as riparian land. When enacted, the legislation will offer an incentive to property owners to restore or preserve privately owned riparian areas.

- Developed agreements with some of the property owners participating in the Revegetation Program and other watershed-specific projects, where the owners will ensure that plantings are preserved and maintained.

- Took the following actions under watershed programs:

  Johnson Creek:

  - Purchased 15.95 acres (0.58 acres in the Lents area and 15.37 acres in the Powell Butte area). These properties are located within or near the Johnson Creek floodplain. Planted 17,559 trees and 19,730 shrubs on 19.73 riparian acres.

  - Total plantings: 44,884 trees, 34,729 shrubs, 4,150 cuttings on 44.15 total acres.

  Willamette River:

  - Planted 23,969 plants on 1,310 feet of riverbank and 18.7 acres.

  - Total plantings: 15,616 trees, 13,329 shrubs, and 1,150 cuttings on 20.5 total acres.

  Columbia Slough:

  - Total plantings: 191,700 trees, 111,251 shrubs, and 28,500 cuttings on 195.6 total acres.

Tryon Creek and Fanno Creek:

- Purchased 0.25 acres in Tryon Creek and 0.5 acres in the Fanno Creek floodplain.

- Planted approximately 7,000 trees and shrubs on 2,500 feet of the Fanno mainstream. Planted an additional 8,000 trees and shrubs in upland areas in Gabriel Park and Tryon Creek State Park.

- Total plantings (Tryon/Fanno): 3,510 trees, 1,987 shrubs, and 700 cuttings on 8.3 total acres.

- Metro Open Spaces and the City purchased 23 and 105 acres, respectively, during permit year six. Since the beginning of the permit, a total of 2,244 acres have been purchased.

- Developed and began implementing a tree protection and planting ordinance.

- In conjunction with revisions to the Stormwater Management Manual (see BMP ND2), began implementing a stormwater mitigation credit system to protect existing trees when properties are redeveloped or newly developed.

- Continued review of the environmental zone code and maps in City Code Chapter 33.430: Environmental Zones. The review encompasses water quality, resource, and Endangered Species Act issues. The e-zone code minimizes resource loss in mapped areas with significant resources such as streams, trees, and other vegetation. The revisions will significantly expand these protections to include currently unprotected areas. The revised code will provide more stringent resource protection during development in protected areas.

- Continued work on revising the City's land division code (Chapter 34). These revisions will significantly increase protection and preservation for floodplains, steep slopes, streams, seeps, springs, and trees in areas of the City that are not currently protected by environmental zoning. The code revisions allow for more clustered land development in order to limit the amount of resource loss when land is divided and developed.

COMPLIANCE STATUS

In compliance with proposed Stormwater Management Plan.

CHALLENGES AND SOLUTIONS

Land use issues are highly charged in Portland at this time. There is a perceived conflict of this BMP with Metro 2040 and City development density goals.

CHANGES MADE, INITIATED, OR PROPOSED TO THE STORMWATER MANAGEMENT PLAN

The permit renewal for the second permit cycle (submitted to DEQ in February 2000) includes proposed BMP modifications. PS2 activities in the second permit term focus on implementing incentives for protecting and preserving privately owned natural areas.

PROJECTED MAJOR ACCOMPLISHMENTS FOR PERMIT YEAR SEVEN (FY 01-02)

- Adopt major changes to City Code Chapter 33.430, Environmental Zones. The revisions are expected to be adopted by the end of 2002.

- Enact state riparian tax credit into law, and develop criteria and policies for citywide implementation.

- Develop a plan to work with riparian and floodplain property owners within the Johnson Creek Watershed.

- Johnson Creek Pleasant Valley Urban Reserve Planning Effort: Work with other jurisdictions to develop a plan to meet transportation, natural resource, and land use goals within the urban reserve area.

- Coordinate with Metro and other City bureaus to address conflicting land use goals.

- Continue to purchase land for stormwater management and natural resource protection, and work with property owners to protect existing natural areas.

- Implement Stormwater Management Manual requirements to use mitigation measures (including tree planting and protection) for stormwater management.

- Continue Watershed Program activities:

  - Plant 20 acres and 2,100 feet of riverbank in the Willamette River Watershed.

  - Purchase an estimated 9.5 acres of property in the Johnson Creek Watershed.

- Plant an estimated 11,347 trees and 12,750 shrubs on 12.75 riparian acres within the Portland city limits in the Johnson Creek Watershed.

- Adopt revisions to the Land Division Code (combine into Title 33).

- Through the Multnomah County Compliance Project, the City will assume authority for land use planning and implementation within 1,500 acres of unincorporated Multnomah County that are within the City of Portland urban services boundary. The City will apply and administer base zones, overlay zones, and plan districts, including substantial environmental overlay zones. The City's Title 10: Erosion Control, and the new land division code will also apply in these areas. Multnomah County has approved the transfer, and City of Portland implementation will begin on January 1, 2002.

PS3	Implement the Urban Forest Management Plan to provide maximum mitigation of stormwater impacts.

KEY BMP ACCOMPLISHMENTS, PERMIT YEAR SIX (FY 00-01)

- The types of urban forestry activities have remained much the same as in 1993, including tree maintenance, preservation, and education. The Bureau of Parks and Recreation's Urban Forestry Division continues to implement the Urban Forest Management Plan and update it as funding allows.

- The Urban Forestry Division continued implementing the neighborhood Tree Liaison Program. Over 100 volunteers have been trained in the last five years. In permit year six, 20 volunteers were trained, and tree liaisons contributed over 1,000 hours of their time to promote proper tree care throughout the City. Some of the many successful projects include neighborhood pruning workshops, school ground cleanups, and tree plantings. Urban Forestry is expanding the program by partnering with OSU Extension and Multnomah County 4-H to start a Junior Neighborhood Tree Liaison program for high school students.

- The Urban Forestry Division continued promoting street tree plantings to provide shade and water quality benefits. During permit year six, 31,886 trees were planted in natural areas, and 604 trees were planted in City parks and City rights-of-way.

- Researched and documented water quality (interception) functions of trees. (See BMP OA1.)

- Continued the City tree inventory and identified tree-deficient areas.

- Continued to identify, prioritize, and fund projects to correct tree-deficient areas.

- Implemented a Willamette Watershed Paired-Area Tree Canopy Assessment and Thermal Load Assessment Framework (citywide).

- Began implementing the City's new tree protection and replacement regulations.

- BES and the Parks Bureau reviewed and revised the City's "Approved Street Tree List" and parking lot tree list to include more native trees. Urban Forestry revised the list by dividing it into sections for trees that are and are not under high-voltage electrical wires. Some trees were removed from the list because they are incompatible with the size of the right-of-way strip, and other species were added.

- Friends of Trees (FOT) uses City donations to fund a portion of its community tree-planting program, including natural area restoration projects and Youth Tree Corps program. During permit year six, FOT planted 2,149 trees in neighborhoods, 23,998 tree seedlings and shrubs in natural areas, and 1,157 trees on Portland Public Schools properties. FOT distributed an additional 250 trees at a downspout disconnection program event.

- Completed design and initiated work on numerous stream revegetation projects. (See BMP PS2.)

- Began implementing revised City Code Title 33 (Planning and Zoning) for parking lots to provide increased vegetation and trees. The code revision also allows stormwater runoff to be managed in interior and perimeter landscaped areas. (Also see BMP ND2.)

- The CSO downspout disconnection program provides some plant material to homes that disconnect. During permit year six, 3,431homes were disconnected.

- The Forest Park Natural Resource Management Plan is being implemented to restore old-growth forest and remove invasive species, such as English ivy.

(Note: BMP PS2 includes additional land protection and revegetation actions.)

COMPLIANCE STATUS

In compliance with proposed Stormwater Management Plan.

CHALLENGES AND SOLUTIONS

Financing is always a challenge. One of the responsibilities of the Urban Forestry Coordinator is to secure grants and other funding. Funding for research may prove difficult to obtain, but potential agency partners are being sought.

CHANGES MADE, INITIATED, OR PROPOSED TO THE STORMWATER MANAGEMENT PLAN

The permit renewal for the second permit cycle (submitted to DEQ in February 2000) includes proposed BMP modifications. In the first permit term program, STR3 focused on mitigating stormwater impacts through implementing tree planting programs. That BMP has been refocused on implementation of the Urban Forest Management Plan to provide maximum mitigation of stormwater impacts on riparian areas and to reduce urban heat effects on receiving waters. Because those elements fit more closely in the Planning Standards (PS) category, the City has moved and renamed STR3 as PS3.

PROJECTED MAJOR ACCOMPLISHMENTS FOR PERMIT YEAR SEVEN (FY 01-02)

- Continue research and documentation of water quality benefits of trees, and provide information to others.

- Review BES and other bureau specifications and standards to identify how bureaus can provide more tree planting on various types of City projects. This is especially important in light of the many temperature issues in most Portland waterways.

- Continue participating with other bureaus to implement the multiple facets of the Urban Forestry Management Plan.

- Continue the City tree inventory, and identify tree-deficient areas.

- Continue to identify, prioritize, and fund projects to correct tree-deficient areas.

- Continue the Willamette Watershed Paired-Area Tree Canopy Assessment and Thermal Load Assessment Framework (citywide).

- Continue implementing the new tree protection and replacement regulations.

- Continue working with the Parks Bureau to review and revise the City's Approved Street Tree List to include more native trees. Implement demonstration projects that incorporate these trees, and evaluate survivability and stormwater benefits.

OA1:	Continue to implement the Stormwater Monitoring Plan.

KEY BMP ACCOMPLISHMENTS, PERMIT YEAR SIX (FY 00-01)

- Continued to implement monitoring activities in accordance with the Stormwater Monitoring Plan.
- Evaluated and streamlined monitoring reporting.
- Prepared annual monitoring report. (The monitoring report follows OA2, below.)

COMPLIANCE STATUS

In compliance with the proposed Stormwater Management Plan.

CHALLENGES AND SOLUTIONS

Because of the numerous anthropogenic influences on stormwater quality, it is difficult to identify and quantify trends from the existing data set. However, the data for structural BMPs (such as swales) is extensive enough to develop BMP-specific data evaluation and associated recommendations for BMP design modifications.

CHANGES MADE, INITIATED, OR PROPOSED TO THE STORMWATER MANAGEMENT PLAN

The permit renewal for the second permit cycle (submitted to DEQ in February 2000) includes proposed BMP modifications. During the first permit cycle, stormwater monitoring was included as a required management practice (RMP).
In the second permit cycle, RMPs have been incorporated into the BMPs, and OA1 replaces the previous RMP.

PROJECTED MAJOR ACCOMPLISHMENTS FOR PERMIT YEAR SEVEN (FY 01-02)

- Continue to implement and evaluate the Stormwater Monitoring Plan.
- Develop BMP-specific summaries of monitoring results from demonstration projects.
- Continue to work with co-permittees, ACWA members, and other jurisdictions to coordinate and share stormwater monitoring data.

OA2:	Continue program management, evaluation, and reporting activities.

KEY BMP ACCOMPLISHMENTS, PERMIT YEAR SIX (FY 00-01)

- Conducted overall review and evaluation of program activities as part of the permit renewal process; began implementing revised BMPs, pending DEQ's formal approval of the permit renewal application.

- Coordinated with other bureaus to develop code revisions beneficial to water quality. These include the parking lot code revisions and land division code rewrite (with the Bureau of Planning—see BMP PS1 and PS2) and code guidance for rainwater harvesting systems (with OPDR—see BMP PS1).

- OPDR completed and released code guidance for rainwater harvesting systems. The guide is predominantly for single-family and two-family homes, but the basic principles could also be used for multi-family, commercial, and industrial properties. In general, collected stormwater can be used for irrigation and internal water closet related uses. The guide is available on OPDR's website.

- Met regularly (generally monthly) with co-permittees to coordinate permit activities.

- Coordinated with other jurisdictions statewide through the Oregon Association of Clean Water Agencies (ACWA); participated as board member and on water quality, stormwater, and groundwater committees.

- Coordinated with numerous other City bureaus and jurisdictions to implement BMPs (as reported under the individual BMPs).

COMPLIANCE STATUS

In compliance with the proposed Stormwater Management Plan.

CHALLENGES AND SOLUTIONS

Managing and evaluating the stormwater program is challenging because of the numerous programs and jurisdictions involved, as well as the many external influences on stormwater quality.

CHANGES MADE, INITIATED, OR PROPOSED TO THE STORMWATER MANAGEMENT PLAN

The permit renewal for the second permit cycle (submitted to DEQ in February 2000) includes proposed BMP modifications. During the first permit cycle, reporting was included as a required management practice (RMP). In the second permit cycle, RMPs have been incorporated into the BMPs, and OA2 replaces the previous RMP.

PROJECTED MAJOR ACCOMPLISHMENTS FOR PERMIT YEAR SEVEN (FY 01-02)

- Develop an intergovernmental agreement with the U.S. Geological Service to share costs of monitoring in Johnson Creek.

- Continue to work with co-permittees, City bureaus, and other jurisdictions and organizations to implement BMPs.

- Use monitoring data and other BMP effectiveness indicators to implement adaptive management and refine BMPs.

MONITORING COMPLIANCE REPORT
(BMP OA1)

INTRODUCTION

The purpose of this monitoring report is to comply with Schedule B of Portland's National Pollutant Discharge Elimination System (NPDES)) municipal stormwater permit. The information documents stormwater quality monitoring activities conducted by the City of Portland and its co-permittees (hereinafter referred to as Portland) during permit year (PY) six.

Prior annual monitoring reports submitted to the Oregon Department of Environmental Quality (DEQ) have included comprehensive quantitative and qualitative evaluations of the data gathered, including statistical analyses of several years of monitoring data. This sixth annual monitoring report has been condensed to provide only a summary of the monitoring activities conducted by Portland in the past year, a brief results section discussing additional data review in progress, and the compiled data (Appendix B of the Annual Report). Data evaluation is being included in BMP-specific technical information sheets that will serve as guidance for the design of future BMPs. (See Tasks 1 and 3, below.)

The monitoring report is organized into seven sections. This first section provides an introduction, background, and outline of the monitoring plan. The following six sections briefly summarize the objectives of each task of the monitoring plan and the respective monitoring activities completed during the past year and in previous years to address the task objectives.

BACKGROUND

In 1996, the Oregon Association of Clean Water Agencies (ACWA), a consortium of cities and agencies, prepared a report called Analysis of Oregon Urban Runoff Water Quality Monitoring Data Collected From 1991 to 1996, which was a compilation and statistical analysis of available land use-based stormwater monitoring data for the state. The findings of that report indicate that stormwater quality for different land uses is reasonably well characterized by the existing data set, and that additional monitoring is not likely to significantly improve current knowledge in this area.

Based on these findings, and in an effort to answer new questions and increase the cost effectiveness of monitoring efforts, ACWA petitioned DEQ to allow modifications to the monitoring programs. A new monitoring program was subsequently developed and proposed by Portland. DEQ approved the new program on February 4, 1998.

Implementation of the new monitoring program builds upon previous monitoring efforts and more effectively directs resources toward acquiring new information to improve stormwater management activities. To this end, monitoring objectives were established and organized into six specific tasks that make up the stormwater monitoring program:

Task 1: Program Planning/ Annual Report/ Review of Existing Water Quality Data
Task 2: Construction Site Sampling
Task 3: Structural BMP Monitoring
Task 4: Comprehensive Stream Monitoring to Assess Stormwater Impacts
Task 5: Continued Stormwater Monitoring at Existing Land Use Stations
Task 6: Collaboration with Oregon DEQ and ACWA

The following sections list the respective tasks and their objectives and summarize the monitoring activities of the past year and previous years in a table for each task. Additionally, Table 1 summarizes the parameters analyzed at all monitoring locations during permit year six. Appendix B of the Annual Report contains the data Portland collected during permit year six, in table form.

Table 1 - Summary of Parameters Analyzed During Permit Year 6

		Task 1: Program Planning/ Annual Report/Review of Existing WQ Data			Task 2: Construction Site Sampling	Task 3: Structural BMP Monitoring								Task 4: Comprehensive Stream Monitoring	Task 5: Continued Monitoring at Land Use Stations			
		IDEP Program	Non-Stormwater Discharge Monitoring	Industrial Stormwater Monitoring	Lexington Hills[2]	WPCL Bioswales Monitoring	Walnut Park BMP Monitoring	Brookside Wetland Monitoring	Lexington Hills Pond Monitoring[2]	Buffalo Slough PRF[3]	Hamilton Ecoroof Monitoring	Russell Pond Bioswale Monitoring[4]	Sedimentation Manhole	*PENDING INPUT FROM BES*	R1--Fanno Creek at SW 56th	OP1--Balch Creek at Lower Macleay Park	MI--NE 122nd Ave. at Columbia Slough	R3--Lexington Hills Pond Monitoring[2]
	Rainfall Data			▤	▤	▤		▤	▤	▤	▤	▤	▤		▤	▤	▤	▤
	Flow Data			▤	▤	▤			▤	▤		▤	▤		▤	▤	▤	▤
	Continuous Temperature Data				▤				▤									▤
Type of Sample	Grab	▤	▤			▤				▤	▤	▤						
	First Flush Grab				▤			▤	▤				▤		▤	▤	▤	▤
	Time Paced Composite					▤		▤										
	Flow Paced Composite			▤	▤				▤	▤		▤	▤		▤	▤	▤	▤
Parameters for Analysis																		
CONVENTIONALS	Biochemical oxygen demand (BOD5)		X[1]	O[1]	O	O			O		X	O			O	O	O	O
	Chemical Oxygen Demand (COD)			O	O	O			O		X	O			O	O	O	O
	Color										X							
	Conductivity	X	X	O	X	X		X	X	X	X	X	X		X	X	X	X
	Dissolved Oxygen (DO)				X			X	X		X				X	X	X	X
	Hardness		X	O	O	O		O	O		X	O, x			O	O	O	O
	Particle Size Distribution				O		X		O	O, x			O					O
	pH	X	X		X	X	X	X	X	X	X	X	X		X	X	X	X
	Temperature	X	X		X	X		X	X	X	X	X			X	X	X	X
	Total Dissolved Solids (TDS)		X	O	O	O			O		X	O			O	O	O	O
	Total Solids (TS)		X	O	O	O			O	O, x	X	O	X, O		O	O	O	O
	Total Suspended Solids (TSS)		X	O	O	O		O	O	O	X	O	X, O		O	O	O	O
	Total Volatile Suspended Solids (TVSS)																	
	Turbidity																	
OIL AND GREASE	Diesel						X			x								
	Gasoline									x								
	Heavy oil						X			x								
	Non-Polar hydrocarbons																	
	Polar hydrocarbons																	
	Total Petroleum Hydrocarbons									x								
	Non-Polar oil and grease				X	X			X			X	X		X	X	X	X
	Total oil and grease		X		X	X		X	X		X	X			X	X	X	X
TOTAL METALS	Aluminum (Al)																	
	Antimony (Sb)																	
	Arsenic (As)		X		O	O			O	O	X	O, x			O	O	O	O
	Barium (Ba)																	
	Beryllium (Be)									O								
	Boron (B)																	
	Cadmium (Cd)		X	O	O	O	X		O	x	X	O, x	X, O		O	O	O	O
	Calcium (Ca)																	
	Chromium (Cr)		X	O						O, x		O, x						
	Cobalt (Co)																	
	Copper (Cu)	X	X	O	O	O	X	O	O	O, x	X	O, x	X, O		O	O	O	O
	Iron (Fe)	X																
	Lead (Pb)		X	O	O	O	X	O	O	O, x	X	O, x	X, O		O	O	O	O
	Magnesium (Mg)																	
	Manganese (Mn)																	
	Mercury (Hg)				O		X		O	O, x	X	O, x			O	O	O	O
	Molybdenum (Mo)																	
	Nickel (Ni)		X							O, x								
	Potassium (K)																	
	Selenium (Se)																	
	Sodium (Na)																	
	Silver (Ag)			O	O	O			O		X				O	O	O	O
	Vanadium (V)																	
	Zinc (Zn)	X	X	O	O	O	X	O	O	O, x	X	O, x	X, O		O	O	O	O
DISSOLVED METALS	Arsenic (As)		X		O	O			O	O	X	O, x			O	O	O	O
	Beryllium (Be)									O								
	Cadmium (Cd)		X	O	O	O			O		X	O, x	X, O		O	O	O	O
	Chromium (Cr)		X	O						O		O, x						
	Copper (Cu)		X	O	O	O		O	O	O	X	O, x	X, O		O	O	O	O
	Lead (Pb)		X	O	O	O		O	O	O	X	O, x	X, O		O	O	O	O
	Mercury (Hg)									O		O, x						
	Nickel (Ni)		X							O								
	Silver (Ag)			O	O	O			O		X				O	O	O	O
	Zinc (Zn)		X	O	O	O		O	O	O	X	O, x	X, O		O	O	O	O
NUTRIENTS	Nitrite-Nitrogen (NO2)																	
	Nitrate-Nitrogen (NO3)		X	O	O	O		O	O		X	O, x			O	O	O	O
	Ammonia-Nitrogen (NH3)			O	O	O			O			O			O	O	O	O
	Total Kjeldahl Nitrogen (TKN)		X	O	O	O	X		O		X	O, x			O	O	O	O
	o-phosphate Phosphorus			O	O	O			O		X	O, x			O	O	O	O
	Soluble Phosphorus (S-PO4)																	
	Total Phosphorus (T-PO4)		X	O	O	O			O		X	O, x			O	O	O	O
	Sulfate											x						
	Total Organic Carbon (TOC)									x								
BIOLOGICAL	Fecal Coliform	X			X	X	X		X		X	X, x			X	X	X	X
	E. Coli		X		X	X	X	X	X		X	X, x			X	X	X	X
	Salmonella																	
TOXICS	Volatile Organic Compounds (VOC's)											x						
	Semi-VOC's											x						
	Herbicides																	
	Pesticides/PCB's							O		x								
	Methylene chloride																	
	Residual chlorine	X																
	VPP																	
	Acid Volatile Sulfide																	
	Fluoride										X							
	Base/Neutrals																	
	Acidics																	

[1] X = Grab Samples; O = Composite Samples

[2] The Lexington Hills subdivision is nearing completion; however, some construction activity is continuing. As such, the pond continues to serve as a construction monitoring site in addition to its status as a structural BMP and a residential land use m

[3] Lower case indicates sediment samples.

[4] Lower case indicates bioswale infiltrate samples.

TASK 1 PROGRAM PLANNING/ANNUAL REPORT/REVIEW OF EXISTING WATER QUALITY DATA

Objectives

Task 1 has several objectives. The first objective is to compile and interpret stormwater data collected as part of watershed monitoring efforts and other monitoring studies such as the Illicit Discharges Elimination Program and the monitoring of non-stormwater discharges. The second objective is to prepare reports to evaluate data results with respect to stormwater management. The third objective is to review the monitoring program annually and prepare the annual monitoring report.

Accomplishments

To address the first objective described above, Table 2 summarizes the monitoring activities Portland completed under this task during permit year six.

Table 2
TASK 1 SAMPLING ACTIVITIES FOR PERMIT YEAR SIX

Sampling Program [1]	Number of Sampling Locations	Type of Samples	Sampling Frequency	Sampling Dates	Follow-up Investigations
Illicit Discharges Elimination Program (IDEP) [2]	109	Grab	One time	July 2000 August 2000 June 2001	12
Non-Stormwater Discharges [3]	6	Grab	One time	8/4/2000 8/23/2000 12/21/2000 2/28/2001 (3)	N/A
Industrial Monitoring [4]	1	Composite	Composite samples from 3 events	9/30/00 [1/18/01-1/19/01] 4/6/01	N/A

[1] See Table 1 for parameters analyzed.
[2] IDEP has maintained a similar level of monitoring each year since 1994.
[3] The types of non-stormwater discharges that were monitored included irrigation water, foundation drains, footing drains, crawl space pumps, uncontaminated groundwater, springs, and flows from riparian/wetland habitat. Types of non-stormwater discharges that were monitored in past years include fire-fighting activities, lawn watering, landscape irrigation, irrigation water, foundation drains, crawl spaces, diverted stream flows, and flows from riparian habitats and wetlands.
[4] The Industrial Stormwater Program has maintained a similar level of monitoring in each of the previous two years.

To address the second objective described above, monitoring-related technical brochures are being developed to evaluate how effectively various BMPs reduce pollutants in stormwater discharges.

Preparation of this sixth annual monitoring compliance report addresses the third objective listed above.

TASK 2 CONSTRUCTION SITE SAMPLING

Objective

The objective of Task 2 is to conduct construction site monitoring to evaluate the impact of local construction sites on stormwater quality and evaluate the effectiveness of construction site BMPs.

Accomplishments

Table 3 summarizes the monitoring activities completed under this task.

Table 3
SUMMARY OF CONSTRUCTION SITE SAMPLING ACTIVITIES

Sampling Sites[1]	PY 1-5 Number of Events Monitored	PY 6 Number of Events Monitored	PY 6 Sampling Dates	PY 6 Range of Event Rainfall Volumes (inches)	PY 6 Type of Samples Collected
Lexington Hills Detention Pond	3	4	[10/9/00-10/10/00] [3/1/01-3/2/01] 5/14/01 [5/15/01-5/16/01]	0.19 – 0.62	Grab, Composite & Temperature

[1] See Table 1 for parameters analyzed.

Results

The Lexington Hills subdivision has been in various stages of construction for several years. All streets and utilities have now been constructed, and many of the lots have been built out. However, a number of lots remain vacant and there continues to be periodic construction activity. Therefore, the Lexington Hills detention pond continues to serve as a construction monitoring site. Flow and pollutant concentrations are also monitored at the outlet, which allows the pond to be used as a BMP monitoring site as well. Finally, the pond inlet monitoring station serves as a residential land use monitoring site, noting that some mixed land use characteristics will be present until all lots are built out.

TASK 3 STRUCTURAL BEST MANAGEMENT PRACTICE (BMP) MONITORING

Objective

The objective of Task 3 is to conduct monitoring to evaluate the effectiveness of existing and new BMPs to reduce pollutants in discharges and better manage stormwater.

Accomplishments

Table 4 summarizes the monitoring activities completed under this task.

Table 4
SUMMARY OF STRUCTURAL BMP SAMPLING ACTIVITIES

BMP Sampled[1]	Number of Sampling Locations	PY 1-5 Number of Events Monitored	PY 6 Number of Events Monitored	PY 6 Sampling Dates	PY 6 Range of Event Rainfall Volumes (inches)	PY 6 Type of Samples Collected
Test Swales	3	6	2	3/15/01 4/30/01	0.09 – 0.17	Grab & Composite
Walnut Park	1	3 soil cores, 2 storm-water samples	1[2]	7/5/00	N/A[2]	Soil Core
Russell Pond Bioswale	3	N/A	1	4/30/01	0.68	Grab[3,4] & Composite[3]
Brookside Stormcep-tors and Swales	4	20	2	11/29/00 3/15/01	0.24 – 0.26	Grab[5] & Composite[6]
Hamilton Eco-Roof	2	N/A	4	2/2/01 [3/24/01-3/25/01] 4/23/01 5/14/01	0.08 – 0.46	Grab
Buffalo Slough Pollution Reduction Facility (PRF)	3	N/A	4	3/15/01 3/24/01 3/31/01 5/28/01	0.26 – 0.47	Grab, Composite & Sediment[7]

BMP Sampled[1]	Number of Sampling Locations	PY 1-5 Number of Events Monitored	PY 6 Number of Events Monitored	PY 6 Sampling Dates	PY 6 Range of Event Rainfall Volumes (inches)	PY 6 Type of Samples Collected
Lexington Hills Detention Pond[8]	2	9	4	[10/9/00-10/10/00] [3/1/01-3/02/01] 5/14/01 [5/15/01-5/16/01]	0.19 – 0.62	Grab & Composite
Sediment-ation Manhole	5	4	2	3/15/01 4/16/01	0.21 – 0.28	Grab, Composite & Sediment

[1] See Table 1 for parameters analyzed.
[2] One set of soil samples was collected (not during a storm event).
[3] Stormwater sample.
[4] Infiltrate sample.
[5] Stormwater sample collected from swale.
[6] Stormwater sample collected from Stormceptor™ unit.
[7] Sample collected from Vortechnics™ unit.
[8] The Lexington Hills detention pond is also functioning as a construction monitoring site as the subdivision continues to be built out, and it is also considered to be a residential land use monitoring site (R3).

Results

Technical brochures will be prepared for each BMP category (including swales, ponds, and eco-roofs) to summarize, discuss, and evaluate all data collected to date. These brochures will help developers and engineers select and design the most appropriate BMP for site-specific stormwater problems.

TASK 4 COMPREHENSIVE STREAM MONITORING TO ASSESS STORMWATER IMPACTS

Objective

The objective of Task 4 is to conduct comprehensive in-stream stormwater monitoring to evaluate stormwater impacts associated with the chemical, biological, and physical characteristics of receiving waters.

Accomplishments

Table 5 summarizes the monitoring activities completed under this task.

Table 5
SUMMARY OF STREAM MONITORING ACTIVITIES

Sampling Locations[1]	PY 6 Number of Events Monitored	PY 6 Sampling Frequency	PY 6 Type of Samples Collected
Willamette River	26	Bi-weekly	Grab & Composite; Continuous
Balch Creek Same as OP-1	3	Storm events	Grab & Composite
Columbia Slough	12	Monthly	Grab & Composite; Continuous
Johnson Creek	4	Monthly from July to October	Grab, Composite
Fanno Creek	12	Monthly	Grab, Composite
Tryon Creek	12	Monthly	Grab, Composite

[1] See Table 1 for parameters analyzed.

Results

An evaluation of data from permit year six and previous years is currently being conducted for most of the watersheds. The impact of stormwater on water quality and quantity is being evaluated in addition to the overall analysis of water quality trends. Results of this evaluation will be available by the end of FY 01-02.

TASK 5 CONTINUED STORMWATER MONITORING AT EXISTING LAND USE STATIONS

Objective

The objective of Task 5 is to continue to conduct land use characterization monitoring at four existing stations in order to assess trends.

Accomplishments

Table 6 summarizes the monitoring activities completed under this task.

Table 6
SUMMARY OF LAND USE SAMPLING ACTIVITIES

Land Use Stations[1]	PY 1 – 5 Number of Events Monitored	PY 6 Number of Events Monitored	PY 6 Sampling Dates	PY 6 Range of Event Rainfall Volumes (inches)	PY 6 Type of Samples Collected
R1 – Fanno Creek (Residential)	24	3	[9/2/00-9/3/00] 9/30/00 4/30/01	0.25 - 0.37 0.27 – 0.35 0.30 – 0.52	Grab & Composite
OP1 – Balch Creek (Open Space)	24	3	[9/2/00-9/3/00] 9/30/00 4/30/01	0.25 - 0.37 0.27 – 0.35 0.30 – 0.52	Grab & Composite
M1 – NE 122nd Street (Mixed Land Use)	24	3	[9/2/00-9/3/00] 9/30/00 4/30/01	0.25 - 0.37 0.27 – 0.35 0.30 – 0.52	Grab & Composite
R3 – Lexington Hills (Residential)[2]	3	4	[10/9/00-10/10/00] [3/1/01-3/2/01] 5/14/01 [5/15/01-5/16/01]	0.19 – 0.62	Grab, Composite & Temperature

[1] See Table 1 for parameters analyzed.

[2] The Lexington Hills detention pond is considered to be a residential land use monitoring site, but the drainage area will exhibit some mixed land use characteristics until the subdivision is fully built out. The pond is also functioning as a construction monitoring site until build-out occurs, and it is also a detention pond BMP monitoring site.

TASK 6 COLLABORATION WITH OREGON DEQ AND ACWA

Objective
The objective of Task 6 is to continue to coordinate/collaborate with state and local jurisdictions (e.g., DEQ, ACWA) to share information, minimize duplication of efforts, and try to determine if benchmarks can be recommended.

Accomplishments
The City of Portland attended and participated in ACWA's stormwater subcommittee. This included preparation of a slide show ("Tell the Story") regarding what has been learned by NPDES Phase 1 communities. The slide show will be posted on the ACWA website for public access. Portland presented this slide show at the April annual stormwater summit that was attended by DEQ.

MONITORING COMPLIANCE REPORT PREPARATION

For more information regarding Portland's stormwater monitoring program or the results that are provided in this report, contact either:

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Section III

MULTNOMAH COUNTY

Multnomah County
Municipal NPDES Annual Report for Permit Year 6
City of Portland and Co-Permittees
Permit #101314
November 1, 2001

MULTNOMAH COUNTY STORMWATER MANAGEMENT PROGRAM

Summary

Multnomah County implements a comprehensive stormwater management program countywide. The goal of the program is to reduce pollutants in stormwater runoff to the maximum extent practicable. The program is maintained and prioritized in response to federal Clean Water Act requirements and the County's responsibility to protect the health and welfare of its citizens.

Multnomah County is a Co-Permittee to the Portland Municipal National Discharge Elimination System (NPDES) Permit number 101314. This permit expired in August 2000. On February 29, 2000, the co-permittees submitted a permit renewal package to the Oregon Department of Environmental Quality (DEQ) for a second permit period covering September 1, 2000 through August 31, 2005. However, DEQ has not yet issued a new permit for the second five-year permit period. Consequently, Multnomah County submits this Permit Year Six (PY6) Annual Report (Annual Report) during the interim period when the 1995 permit is still in effect. This report fulfills the reporting requirements of this original permit.

In the February 2000, permit renewal application, Multnomah County revised the Best Management Practices (BMPs) descriptions to more closely match what implementation activities are accomplished by the County. In so doing, the County developed a single set of BMPs, replacing the two different sets used previously, one for the Portland Municipal NPDES Permit and another for the Gresham Municipal NPDES Permit.

Multnomah County implements and applies the entire group of BMPs throughout the County as a comprehensive Stormwater Management Program. The BMPs reported here apply only to the unincorporated land and County owned roadways and associated storm drainage system (road ditches) within the Portland permit area.

The County currently has limited land use planning responsibility for 1% to 2% of the permit area. Planning jurisdiction is spread out among several small unincorporated pocket areas distributed throughout the permit area (See figure 1). County permitting

is focused on Hillside Development (HD) and Grading and Erosion Control (GEC). During this permit year, the Multnomah County Land Use Planning Division has issued a small number of HD and GEC permits to ensure that water quality is protected to the maximum extent practicable. Zoning and planning responsibility for these unincorporated urban pocket areas will end during the following permit year, Permit Year 7, when Multnomah County relinquishes authority to the City of Portland as part of the Multnomah County-Portland Compliance Project to achieve the goals of and comply with METRO's Urban Growth Management Functional Plan.

The County Transportation Division retains authority to review stormwater management plans, granting a handful of permits every year to access County road ditches for limited stormwater discharge. Staff reviews plans that detail the stormwater runoff effects of development and redevelopment. Discharge from the undeveloped parcel is calculated and only that volume is permitted for access to County road drainage, which are operated and maintained by the city of Portland to Portland NPDES BMP standards under the Intergovernmental Agreement (IGA) known as the Westside Maintenance Agreement. Excess stormwater must be managed on-site and approved by the County. Through the IGA, the City of Portland operates and maintains all 18.76 miles of County dedicated roads and drainage within the permit area. The County retains responsibility to perform emergency repairs resulting from flooding and landslides.

Background

The Portland Stormwater Program was initiated to comply with federal municipal NPDES regulations for municipal stormwater discharges (40 CFR 122.26(d)), issued by U.S. EPA in November 1990. These regulations required submittal by May 1993 of a two-part application for a NPDES municipal stormwater permit for discharges to waters of the U.S. from the Municipal Separate Storm Sewer System (MS4). Following acceptance of the permit application, the Oregon DEQ issued a municipal NPDES permit to all co-permittees on September 7, 1995. The initial term of the permit is five years, with expected renewal every five years thereafter. As mentioned earlier, the Portland NPDES Co-permittees have submitted a permit renewal package that, upon approval, will extend through August 31, 2005.

Prior to issuance of the municipal NPDES permit, Multnomah County recognized the importance of educating County personnel who would collectively be responsible for ensuring permit compliance. In the Fall of 1993, the County's Stormwater Implementation Team was formed, consisting of technical and policy consultants and lead County staff. County Implementation Team members represent necessary 'functional groups' (See Functional Groups section, below) responsible for specific BMP implementation tasks, and are almost entirely from the County Department of Sustainable

Community Development (DSCD), Transportation Division, and Land Use Planning Division.

This Team produced a Five-Year NPDES Stormwater Management Implementation Plan (1995) to provide guidance for program implementation. The plan describes the BMPs and activities, defines roles and responsibilities for the County and other co-permittees, presents the schedule and budget, describes reporting requirements, and suggests measures for evaluating the BMPs. An important component of the implementation plan is a series of reporting forms created for use by County field staff and supervisors to track program compliance and to measure success.

Following completion of the Implementation Plan, a series of work sessions were held with the entire Implementation Team to introduce and describe the use of the plan, as well as to complete quarterly reports where feasible. These reports, now semi-annual, along with the compilation of data from 14 other reporting forms/logs are organized into individual BMP files and are primarily used to prepare the accomplishments section of this Annual Report and to evaluate and monitor the progress to date of the program.

In February 2000, permit renewal applications were submitted, as required by the Clean Water Act, 180 days prior to the permit expiration date. Both co-permittee groups (Portland and Gresham) submitted renewal packages to Oregon DEQ, outlining the continuation of the first permit term BMPs with minor changes. Multnomah County revised the BMP descriptions to more closely match what implementation activities are accomplished throughout the County. The new set of BMPs suffices for both the Portland and the Gresham co-permits. There are no longer two different sets of BMP descriptions. The new categories for both permits utilized the original Portland categories and are now:

Second Permit Term BMP Categories Used in Permit Year 6[1]:

(1) Public Involvement and Education (PI),
(2) Operations and Maintenance (OM),
(3) Illicit Discharges Control (ILL),
(4) New Development Standards (ND),
(5) Structural Controls (STR),
(6) Planning/System Preservation and Development (PS), and
(7) Other Activities (OA).

Public Involvement and Education (PI). These activities are designed to support a comprehensive stormwater management and watershed wide public participation

[1] Permit Year 6 is the first year of the Second Permit Term, a term of 5 years.

program. The Best Management Practices (BMPs) in this category include: Regional Coalition for Clean Rivers and Streams, Watershed Councils, Education Materials, Staff Training and Education, Adopt-A-Road Program, Storm Drain Stenciling, Ensure Public Involvement-Capitol Improvement Plan and Program, and Report Illegal Dumping.

Operations and Maintenance (OM). These activities provide pollution reduction controls for County Operations and Maintenance. The BMPs in this category include: Inspect and Maintain Storm Conveyance System, Street Sweeping Program, Disposal of Road Waste Materials, Minimize Use of Sanding Materials, County Truck Hauling Practices, Culvert Maintenance Program, Maintain Road Shoulders, and Ditch Cleaning/Ditch Maintenance.

Illicit Discharges Control (ILL). These activities reduce the frequency and impact of accidental nonstormwater discharges and controls illicit discharges and improper waste disposal. The BMPs in this category include: Work with Regional HAZMAT Teams, Private Truck Hauling Practices, County Contractors' Truck Hauling Practices, Require Detention Systems with Proper Connection, Identify and Investigate Illicit Connections, Spill Prevention and Response Program, Ensure Contractors' Damages Are Addressed, and Discharges of Construction Wastes.

New Development Standards (ND). These activities provide standards to reduce pollution from new and redevelopment. The BMPs in this category include: Transfer of Urban Land Use Planning Authority, Grading Permits and Hillside Development Permits, Enforcement of Setback Requirements, and Drainage Standards for New Development.

Structural Controls (STR). These activities reduce pollution in Multnomah County drainage and flood control facilities. The BMPs in this category include: Design of Capitol Improvement Project Stormwater Quality Treatment Facilities, Retrofit of Existing Drainage and Flood Control Facilities, Facilities Design in Road Construction Projects, Review Existing Design Standards for Drainage, Inventory and Map of the Municipal Stormwater Separate Sewer System, and Constructed Wetlands.

Planning/System Preservation and Development (PS). These activities are designed to reduce pesticide use and encourage use of self-sustaining vegetation to help improve water quality. The BMPs in this category include: Selectively Use Herbicides/Pesticides, Use of Self-Sustaining and Native Vegetation/Tree Planting Programs, and Landscape in Right-of-Way Projects.

Other Activities (OA). Other Activities include other ongoing program activities and reporting that ensure pollution reduction to the maximum extent practicable. The BMPs in this category include: Develop and Manage the Stormwater Program, Assess and Evaluate the BMP Program, and Record-Keeping & NPDES Field Records.

Co-Permittee Role of Multnomah County

The County joined the City of Portland (lead applicant) and five other co-applicants in 1991 to begin the 3-year process to prepare and submit the two-part NPDES permit application. This permit application was accepted by Oregon DEQ and a permit to discharge municipal stormwater was issued September 7, 1995. The five other co-permittees are the Port of Portland, Oregon Department of Transportation (ODOT), Multnomah Drainage District No. 1 (MDD #1), Peninsula Drainage District no. 1 (PEN 1), and Peninsula Drainage District No. 2 (PEN 2). In PY4 ODOT requested review by DEQ of a new statewide permit for ODOT, effectively removing that agency as a co-permittee to the six municipal NDPES permits. During permit year five, the drainage districts proposed fulfilling their role through a Memorandum of Agreement, rather than continuing as a co-permittee. While approval is expected, DEQ has yet to approve this option pending review of the permit renewal.

Each of the participating agencies owns and/or operates a portion of the MS4 within the Portland Urban Services Boundary. Additionally each of the agencies discharges stormwater into another agency's system, and/or receives discharges from another agency's system into its own. Multnomah County is a co-permittee to the Portland Municipal NPDES Permit No. 101314 due to a small percentage (about 1-2% of total permit area) of unincorporated land within the Portland Urban Services Boundary, and the fact that it owns or operates minor portions of the MS4 (road ditches).

Diminished County Jurisdiction Within the Portland Permit Area

When the Part 2 co-application was submitted in May 1993, unincorporated County lands within the Portland NPDES permit boundary were much larger, and covered several thousand residents, mostly in SE Portland. Since then, most of these lands have been annexed to the City of Portland (December 1994). Since 1997, Multnomah County and the City of Portland's Department of Transportation (PDOT) have operated under an IGA known as the Westside Maintenance Agreement. This contractual arrangement provides for road maintenance activities by PDOT in unincorporated Multnomah County, primarily the area known as "Dunthorpe." The City agrees to maintain the County-owned road system to the same level of NPDES implementation as that used by PDOT throughout the rest of the Portland permit area.

The County continues to implement an active Stormwater Management Program throughout its jurisdiction, including those areas outside of NPDES permit areas. However, due to the consistent loss of jurisdiction and land use planning authority, the County no longer applies the bulk of the stormwater BMPs within the Portland permit area.

An internal review has determined that Multnomah County applies specific BMPs within the New Development Standards, Illicit Discharge Control, and Operations and Maintenance BMP categories to the Portland permit area. The County currently has limited land use planning responsibility, having reviewed less than 10 Hillside Development (HD) and Grading and Erosion Control (GEC) permits in the Portland permit area in this permit year. The County currently reviews stormwater management and discharge plans to County road ditches in the unincorporated pockets. Discharge from the undeveloped parcel is calculated and only that volume is permitted for discharge: all other stormwater must be retained on site. Permitted discharge is released into ditches operated and maintained by Portland and to Portland NPDES BMP standards under the IGA with Portland. The County reviews and grants approximately 3 to 5 of these permits within the Portland permit area in a given year, incorporating one Illicit Discharge Control BMP and one New Development and Standards BMP (see BMP matrix).

The County does not apply any of the remaining BMP categories in the Portland permit area, although Public Involvement and Education efforts and Other Activities are applied in the permit area by virtue of their regional application.

Zoning and planning responsibility for these unincorporated urban pocket areas will end during the following permit year, when Multnomah County relinquishes authority to the City of Portland as part of the Multnomah County-City of Portland Compliance Project to achieve the goals of and comply with METRO's Urban Growth Management Functional Plan. Therefore, in Permit Year 7 Multnomah County jurisdiction in the Portland Permit area will further diminish.

Program Activities and County Accomplishments: Best Management Practices (BMPs) Applied in the Portland Permit Area

- **Public Involvement and Education (PI)**

  The County's participation in public involvement and education activities is limited due to the small amount of unincorporated land and associated residents within the Portland NPDES permit area. During Permit Year Six (PY6), the County actively participated in the "Regional Coalition for Clean Rivers and Streams." For the most part, the residents in the permit area are informed of impacts to the storm drainage system through the Coalition's educational efforts via mass media (radio, movie ads, newspaper) and direct mailing. County staff are encouraged to attend and participate in stormwater workshops and meetings sponsored by the City and other local agencies. County representatives attend Watershed Council meetings and actively participate on several regional committees as part of the public involvement element.

- **Operations and Maintenance (OM)**

  The County contracts with the City of Portland for operation and maintenance of storm drainage facilities associated with roadways in the unincorporated pockets of land within the Portland Urban permit area. Computerized inventories of drainage and road appurtenances are maintained by both organizations. The County remains responsible for emergency flooding and landslide road repairs.

- **New Development Standards (ND)**

  The County reviews plans for new private development/redevelopment in the unincorporated portions of the Portland permit area, which are largely residential (e.g., Dunthorpe area in Southwest Portland). The County utilizes the same stormwater design guidance used area-wide by design professionals. The County currently reviews stormwater management and discharge plans in the unincorporated pockets. Discharge from the undeveloped parcel is calculated and only that volume is permitted for discharge to County road ditches: all other stormwater must be retained on site. The County continues to implement its construction bond program, which ensures financial recovery for damage to County right of way or associated drainage facilities, including erosion damage.

- **Other Activities (OAs)**

  The County implemented several other activities (OAs) required by the NPDES regulations to ensure the proper management and success of the program. In general, they include:

  - Participating in the development and negotiation of the NPDES Permit conditions;
  - Developing and executing intergovernmental agreements (IGAs) with the other permittees;
  - Overseeing modifications to the stormwater management plan and NPDES permit conditions on behalf of the County;
  - Compiling and reviewing internal reports;
  - Writing and submitting the annual compliance report;
  - Coordinating and communicating with the other permittees and the City;
  - Attending and facilitating meetings;
  - Liaison with DEQ;
  - Overall budget and schedule tracking; and

- ♦ Conducting Stormwater Implementation Team workshops at the County at least two times per year.

Functional Groups

Managers and staff in the Multnomah County Department of Sustainable Community Development, Transportation and Land Use Planning Divisions, implement the Stormwater Management Program. The Team includes Transportation Division Managers, Road Maintenance District Supervisors, the County Engineer, the County Emergency Management Administrator, the Planning Director, other County staff, and the technical and policy consultants. To ensure efficient implementation, each team member belongs to a 'functional group' responsible for specific BMPs, as described below.

Functional Group assignments were given to the Implementation Team to ensure active participation by the necessary staff. Assignments were made by matching appropriate staff to the BMPs directly relating to their duties. For example, the staff Engineer responsible for reviewing stormwater facility design is in the DESIGN functional group, while the staff Engineer responsible for overseeing road building contracts is in the CONSTRUCTION functional group. The nine functional groups are:

- Road Maintenance
- Construction
- Design
- Education
- Emergency Response
- Land Use Planning
- Transportation Planning
- Right-of-Way Permits, and
- Compliance.

Functional Group Accomplishments: Permit Year 6

Road Maintenance

General NPDES Roles and Responsibilities for Permit Year 6:	***Key Accomplishments for Permit Year 6***
The Road Maintenance section of the County Transportation Division will utilize established road maintenance procedures specifically relating to stormwater quality management. Staff will document maintenance procedures through the Stormwater Maintenance Manual and field logs and ensure that problems found in the field relating to stormwater quality and stormwater facilities are addressed.	• The Road Maintenance functional group applied BMPs throughout the County, but did not apply any BMPs in the Portland permit area.

Construction

General NPDES Roles and Responsibilities for Permit Year 6:	***Key Accomplishments for Permit Year 6***
County Engineering/Construction Group ensures through plan checking, education of contractors, specification interpretation, pre-construction meetings, and rigorous inspection and monitoring, that stormwater controls are properly considered, installed, and maintained as part of all public Capital Improvement Projects. Stormwater controls include structural and non-structural techniques and practices, which will result in reduced pollution.	• The Construction functional group applied BMPs throughout the County, but did not apply any BMPs in the Portland permit area.

Design

General NPDES Roles and Responsibilities for Permit Year 6:	***Key Accomplishments for Permit Year 6***
County Engineering/Design Group ensures through design of new projects and review of contractors' plans that stormwater and Best Management Practice (BMP) structural	• Applied engineering criteria to private development plans under the Land Use Planning Division's Hillside Development (HD) and Grading/Erosion Control (GEC)

controls are considered and properly designed for Capital Improvement Program projects. They will promote a balance of stormwater quality and quantity (flood control) to the Maximum Extent Practicable in considering stormwater facility design.

permitting process, including considerations of stormwater quality facilities.

Education

General NPDES Roles and Responsibilities for Permit Year 6:

Multnomah County's responsibility for stormwater quality education is two-fold. Public education roles are important but are primarily the City of Portland's NPDES responsibilities for incorporated areas. This change occurred due to the accelerated annexation of SE Portland in 1995. Moreover, the County will lose additional jurisdictional responsibility with completion of the Multnomah County-Portland Compliance Project next year. Personnel training within the County Transportation and Land Use Divisions is still important, and is more extensive. Training includes initiating activities to educate and inform County staff about the sources and solutions to stormwater program issues.

Key Accomplishments for Permit Year 6

- County representative participated in meetings of the "Regional Coalition for Clean Rivers and Streams" and helped plan educational activities for the year.
- County representative actively participated in Tualatin Basin Public Awareness Committee (outside permit area) to enhance public education and public involvement activities.
- Multnomah County sponsored multiple division training and water policy review events for staff.
- The County Transportation Division has participated in extensive education activities throughout the permit year.

Emergency Response

General NPDES Roles and Responsibilities for Permit Year 6:

County Emergency response personnel will ensure water quality concerns are addressed during emergency procedures. In particular, staff consider how to prevent materials from reaching the Municipal Separate Storm Sewer System (MS4). Staff will continue to raise

Key Accomplishments for Permit Year 6

- The Emergency Response functional group applied BMPs throughout the County, but did not apply any BMPs in the Portland permit area.

awareness of emergency response personnel (in road maintenance group) to ensure general water quality concerns are addressed. Participate in regional Committees addressing these concerns to assure necessary coordination between agencies.

Land Use Planning and Transportation Planning

General NPDES Roles and Responsibilities for Permit Year 6:

County Planning staff will ensure stormwater quality management and maintenance practices are considered in land use zoning and permit requirements and applications. In particular, they will enforce land use zoning and permit requirements that may impact stormwater quality. Staff will determine whether land use planning procedures are in place to encourage sound environmental principles relating to water quality (SEC zones, etc.).

The County will lose land use planning jurisdictional responsibility with completion of the Multnomah County-Portland Compliance Project next year.

Key Accomplishments for Permit Year 6

- Implemented County Grading and Erosion Control (GEC) ordinance that requires the prevention of non-erosion pollution associated with construction such as pesticides, fertilizers, petrochemicals, solid wastes, construction chemicals, or wastewater.
- Continued inspection and enforcement activity to obtain compliance with permit conditions for erosion control and buffer zones around riparian areas.
- The County continues to coordinate transfer of land use planning authority in the Portland Permit Area.

Right-Of-Way Permits

General NPDES Roles and Responsibilities for Permit Year 6:

County Right-of-Way Permits Section will ensure stormwater pollution controls are considered and incorporated into permits for private and public construction projects that attach to and are in the County right-of-way. Staff will specify erosion control requirements through contractor bonding for public right-

Key Accomplishments for Permit Year 6

- The County permits stormwater drainage access to County stormwater conveyance systems (road ditches), ensuring that discharge from the undeveloped parcel is calculated and only that volume is permitted for discharge.

of-way projects. Staff will ensure that maintenance is conducted for life of project and immediate future.

- All other Right-Of-Way Permits functional group BMPs are applied outside of the Portland permit area.

Compliance

General NPDES Roles and Responsibilities for Permit Year 6:

The Consultant/Compliance Group is responsible for overall Program Development and Management, Program Assessment and Evaluation, and Program Compliance Reporting.

Key Accomplishments for Permit Year 6

- Conducted Stormwater Program management, including program implementation coordination with County staff.
- Attended all Co-Permittee Management Committee meetings (approximately monthly) and DEQ meetings relating to the Portland NPDES Co-Permit.
- Conducted training sessions with new Stormwater Implementation Team members.
- Organized and facilitated two Workshop Sessions with Stormwater Implementation Team to track progress, update reporting information, and train staff in erosion control BMPs.
- Coordinated reporting activities with City of Portland, as lead permittee.
- Conducted program assessment throughout the year, resulting in Annual Report to DEQ.
- Reorganized compliance group to bring coordinator in-house and improve program integration with County activities.

Best Management Practices (BMPs) and Other Activities (OAs): Accomplishments

Annual Compliance Reports for the Municipal NPDES Stormwater Permit are required to include information relating to each BMP task and schedule. The following matrices provide this information, in summary form, for each BMP. More detail is available upon request through documentation in the Multnomah County Transportation Division of the Department of Environmental Services. In general, all BMP tasks are on schedule without modification. Modifications occurring due to annexations and/or road transfers are noted and explained.

The following matrix provides the following information:

- √ A short description of the Best Management Practice, with BMP Number.
- √ The overall intent, goals and objectives of the Best Management Practice.
- √ The Multnomah County 'Functional Group(s)' designated as responsible for BMP Implementation.
- √ Key accomplishments for Permit Year 6.
- √ Assessment of Controls.
- √ Any proposed modifications or changes to the schedule or activities.

Best Management Practices (BMPs) Matrix for Permit Year 6

Best Management Practice	Overall Intent, Goals and Objectives	Functional Group(s) for BMP Implementation[1]	Key Accomplishments for Permit Year 6	Assessment of Controls	Proposed Modifications to Schedule or Activities
These activities are designed to support a comprehensive stormwater management and watershed wide public participation program. (PI)					
PI1. Participate in the Regional Coalition of Clean Rivers and Streams. Continue support and direct participation for public involvement and public education campaigns.	Participate with regional entities and cities in coordinating new and existing efforts to educate and inform the public about stormwater pollution problems, and to involve the public in developing stormwater pollution prevention programs. The County will provide support for the various public involvement and education activities provided by the Regional Coalition of Clean Rivers and Streams. The County will make staff and materials available as requested and practicable, and will grant volunteers and other clean-up groups access to the County right-of-way whenever feasible.	Land Use Planning Division; Transportation Division; Public Affairs Office	• Maintained membership in the Regional Coalition of Clean Rivers and Streams (RCCRS). • Continued support for RCCRS public education campaigns, including one intensive 4-week effort that focused on stormwater issues.	• Notes of meetings. • Participation in the coalition.	On schedule. No modifications.
PI2. Participate in local watershed councils and their activities. Present information to public regarding Multnomah County programs and regulation, particularly water quality program.	Educate the public about the County's role in protecting stormwater quality and the opportunities for public participation in pollution prevention as well as public involvement and education on stormwater pollution problems by working with the local watershed councils. In addition, educate the County staff about the public's role in protecting water quality on a watershed-wide basis.	Public Affairs Office, Transportation Division, or Land Use Planning Division.	• County representatives shared information and gave presentation as necessary regarding various County projects and actions. • County represented on the Johnson Creek, Fairview, and Beaver Creek Watershed Councils. County also attends meetings of the Sandy River Basin Agreement.	• Staff reports on attendance and actions.	On schedule. Modifications may include attending alternative watershed council meetings depending on County jurisdictional responsibilities.

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Best Management Practice	Overall Intent, Goals and Objectives	Functional Group(s) for BMP Implementation[1]	Key Accomplishments for Permit Year 6	Assessment of Controls	Proposed Modifications to Schedule or Activities
PI3. Promote public education and involvement in stormwater pollution prevention efforts through distribution of brochures and educational materials at County offices and public water quality meetings.	Provide information to educate and inform the public about stormwater pollution problems, and to encourage public involvement in stormwater pollution prevention programs.	Public Affairs Office, Transportation Division, and Land Use Planning Division.	• Maintained membership in the Regional Coalition of Clean Rivers and Streams (RCCRS). • Continued support for RCCRS public education campaigns, including one intensive 4-week effort that focused on stormwater issues. • Provides water pollution prevention materials for public access at the County office.	• The Regional Coalition for Clean Rivers and Streams evaluates its programs, and Multnomah County is represented in the Coalition.	On schedule. No modifications
PI4. Train and educate appropriate Multnomah County personnel about impacts of on-the-job activities to the MS4, and how to minimize impacts to receiving streams. Include erosion control seminars, stormwater maintenance activities, inspection practices, construction BMPs, and other activities for in-house and field personnel. Include training and education relating to water quality learned in conferences.	Through training of County staff, minimize/eliminate the impact of on-the-job activities to the MS4 and stormwater quality.	Land Use Planning Division, Transportation Division, Other functional groups	• Multiple County division training and water policy review events include: o In-house Multnomah County ESA workshop for Transportation Division put on by Water Quality Program Coordinator. o In-house Multnomah County 5 year NPDES Stormwater Program: Development and Implementation plan BMP Fact Sheets.	• Evaluation of training and County NPDES program ongoing. • Staff consulted to evaluate efforts. • County NPDES program designed for adaptive management to react and implement necessary changes.	On schedule. No modifications.

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Best Management Practice	Overall Intent, Goals and Objectives	Functional Group(s) for BMP Implementation[1]	Key Accomplishments for Permit Year 6	Assessment of Controls	Proposed Modifications to Schedule or Activities
PI4. (*BMP PI4 report continued*) Train and educate appropriate Multnomah County personnel about impacts of on-the-job activities to the MS4, and how to minimize impacts to receiving streams. Include erosion control seminars, stormwater maintenance activities, inspection practices, construction BMPs, and other activities for in-house and field personnel. Include training and education relating to water quality learned in conferences.	Through training of County staff, minimize/eliminate the impact of on-the-job activities to the MS4 and stormwater quality.	Land Use Planning Division, Transportation Division, Other functional groups	• The County Transportation Division has participated in extensive education activities throughout the permit year. Some of those events include: o Oregon Association of County Engineers and Surveyors (OACES) seminar on phase II stormwater permitting legislation. o National Marine Fisheries Service (NMFS) seminar on the Endangered Species Act (ESA) Tools and Local Rules. o Northwest Pavement Management Association (NWPMA) 2000 Conference. Reviewed ESA impacted pavement management to apply ESA changes to Transportation Division policies and activities. o Street Maintenance and Collection Systems Fall School. Reviewed road waste management, participation in salmon recovery. o Street Maintenance and Collection Systems Fall School. Reviewed road waste management, participation in salmon recovery. o OACES conference: Making County Government Work. Included new tools and innovations, with information relative to the Transportation Division's clean water responsibilities under the County's two NPDES permits. o Fish Passage Culvert Team in the Transportation Division met many times to develop the County prioritize culvert passage problems and review solutions. o Decant/Waste Recycling Tour: review decant station and recycling of street/Vactor materials to protect water quality.	• Evaluation of training and County NPDES program ongoing. • Staff consulted to evaluate efforts. • County NPDES program designed for adaptive management to react and implement necessary changes.	On schedule. No modifications.

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Best Management Practice	Overall Intent, Goals and Objectives	Functional Group(s) for BMP Implementation[1]	Key Accomplishments for Permit Year 6	Assessment of Controls	Proposed Modifications to Schedule or Activities
PI5. Continue to implement the Multnomah County Adopt-A-Road program to promote public awareness of litter control and impacts to roads and waterways. Increase use of volunteers and track work by volunteers, including County inmate work crews.	Educate the public regarding the storm water pollution that results from littering. Work with citizen action programs to facilitate efforts to reduce littering.	Road Maintenance (Transportation Division)	• BMP not implemented in the Portland permit area. • All County roads operated and maintained by IGA with Portland.	• Not applicable	On schedule. No modifications.
PI6. Participate in storm drain stenciling and other signage programs to promote public awareness of the importance of keeping pollutants out of storm drains.	Reduce/eliminate the illicit discharges into street storm drains to protect water quality by reducing illicit discharges and impact by the public. Educate the public about drainage ways, impacts to streams from storm sewer systems, and watershed awareness.	Road Maintenance (Transportation Division)	• BMP not implemented in the Portland permit area. The county does not have storm street drains in the Portland permit area.	• Not applicable.	On schedule. No modifications.
PI7. Ensure public involvement during two-year update process for Capital Improvement Plan and Program that addresses stormwater quality impacts and issues. Identify NPDES drainage issues and remedies on Capital Improvement Plan project scope sheets. Include in project atlas during public review process	Improve public awareness of properly designed stormwater facilities' ability to remove pollutants and protect water quality.	Transportation Planning (Transportation Division)	• BMP not implemented in the Portland permit area. County roads are "built out" in the permit area, thus no Capitol Improvement Projects are planned.	• Not applicable.	On schedule. No modifications.
PI8. Facilitate efforts to report illegal dumping of pollutants, trash, or illegal fill (dirt/soil). Work with citizen and neighborhood groups, and post signs at areas where illegal dumping may occur that encourage citizens to report incidents.	Control illicit discharges from illegal dumping to protect water quality.	Road Maintenance (Transportation Division)	• BMP not implemented in the Portland permit area. All County roads operated and maintained by IGA with Portland. County Road Maintenance crews are not available to not illegal dumping in the permit area.	• Not applicable.	On schedule. No modifications.

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Best Management Practice	Overall Intent, Goals and Objectives	Functional Group(s) for BMP Implementation[1]	Key Accomplishments for Permit Year 6	Assessment of Controls	Proposed Modifications to Schedule or Activities
Pollution reduction controls for County Operations and Maintenance (OM)					
OM1. Inspect and maintain inlets, catch basins, sumps and stormwater conveyance system on a regular basis. Identify any known non-stormwater discharges and follow up as necessary.	Ensure that inlets, catch basins, sumps and stormwater conveyance system are maintained in a manner that reduces pollutants to the maximum extent practicable. Continue to review and revise operations and maintenance procedures as appropriate.	Road Maintenance (Transportation Division)	• BMP not implemented in the Portland permit area. The County does not have stormwater inlets in the permit area. • All County roads operated and maintained by IGA with Portland.	• Not applicable.	On schedule. Integrate the Bridge Section into stormwater control reporting.
OM2. Continue to implement a street sweeping program to include scheduled sweeping, equipment review, and training on a regular basis. Revise and update schedule, equipment, and training as necessary.	The objective of the street sweeping program for county roads is to reduce materials on the roadway and impacts to the stormwater system. The County will continue to review and revise the program and schedule and make improvements as appropriate.	Road Maintenance (Transportation Division)	• BMP not implemented in the Portland permit area. • All County roads operated and maintained by IGA with Portland.	• Not applicable.	On schedule. No modifications.
OM3. Continue to investigate identification of proper sites for disposal of road waste materials. Record amounts and location of material disposed. Include street sweeping collection, catch basin cleaning, sump cleaning, etc. Test for disposal using an independent lab and record/file test results. Review different disposal procedures for street sweeping vs. Vactor pad materials. Continue to investigate feasibility of decant facility for County waste materials. Work cooperatively among County divisions to reduce water quality impacts of site handling, storage, and disposal areas for material collected during road maintenance activities. Review and, if appropriate, adopt DEQ/ODOT Road Waste Management Practices.	The objective of the road waste disposal operations for county roads is to reduce materials on the roadway and impacts to the stormwater system. The goal is to identify and implement practices for disposal of road waste materials that protect water quality. Determine if current outdoor storage activities are contributing sediments to stormwater runoff. Recommend practices to control discharges as needed.	Road Maintenance (Transportation Division)	• BMP not implemented in the Portland permit area. All County roads operated and maintained by IGA with Portland.	• Not applicable.	On schedule. No modifications.

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Best Management Practice	Overall Intent, Goals and Objectives	Functional Group(s) for BMP Implementation[1]	Key Accomplishments for Permit Year 6	Assessment of Controls	Proposed Modifications to Schedule or Activities
OM4. Investigate the potential to reduce use of sanding materials for seasonal and anti-icing operations. Continue testing of alternative anti-icing methods and materials (e.g., CMA). Prohibit the use of salt or glycol on the roadways. Collect sanding material distributed during anti-icing events as soon as feasible. Continue collection and recycling of sand (anti-icing material) throughout the County's portion of the permit area.	Reduce harmful effects of roadway anti-icing activities and materials on water quality by proper sand collection methods and by prohibiting the use of glycol and salt.	Road Maintenance (Transportation Division)	• BMP not implemented in the Portland permit area. All County roads operated and maintained by IGA with Portland.	• Not applicable.	On schedule. No modifications.
OM5. Review County truck hauling practices with field crews annually. Recommend revisions (if necessary) to limit occurrence of leaks, spills, or other releases. Revise operations and maintenance manual as necessary to reduce potential pollutants. Continue to test and evaluate asphalt release agents for truck and tool cleanup, which use "environmentally-friendly" products.	Control discharges from truck hauling activities to the extent that they are impacting County right-of-way (ROW) and/or the Municipal Separate Storm Sewer System (MS4).	Road Maintenance (Transportation Division)	• BMP not implemented in the Portland permit area. All County roads operated and maintained by IGA with Portland.	• Not applicable.	On schedule. No modifications.
OM6. Continue culvert maintenance program to inspect and maintain culverts in ways that minimize impacts to water quality. Consider opportunities to retrofit culverts to provide better water quality treatment. Continue to maintain culvert inventories. Make distinction as to whether culverts are fish passage culverts and adhere to appropriate maintenance procedure.	Determine if the frequency of current operation and maintenance practices allows for reduction of pollutants to the maximum extent practicable. Improve and retrofit as needed.	Road Maintenance (Transportation Division)	• BMP not implemented in the Portland permit area. All County roads operated and maintained by IGA with Portland.	• Not applicable.	On schedule. No modifications.
OM7. Maintain right-of-way and road shoulders in ways that avoid and prevent future adverse water quality impacts. Review slide repair procedures in the Multnomah County Road Maintenance Operations Manual (RMOM). Continue review of current maintenance practices.	The purpose of this BMP is to control and reduce the amount of sediments discharged to the receiving waters via the right-of-way. Sediments attract and adhere to other pollutants (heavy metals, oil/grease) and increased turbidity/sedimentation on channel bottoms impairs water quality and fish habitat.	Road Maintenance (Transportation Division)	• BMP not implemented in the Portland permit area. All County roads operated and maintained by IGA with Portland. • No records of emergency road repairs or cleaning in the permit area.	• Not applicable.	On schedule. No modifications.

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Best Management Practice	Overall Intent, Goals and Objectives	Functional Group(s) for BMP Implementation[1]	Key Accomplishments for Permit Year 6	Assessment of Controls	Proposed Modifications to Schedule or Activities
OM8. Review frequency and timing of ditch cleaning in areas where sediment and/or debris tend to accumulate. Determine if the frequency and timing of current ditch maintenance practices allows for reduction of pollutants and minimizes the impact on ditch surface. (If not, recommend and implement improved frequencies, timing, and/or type of equipment to minimize damage to ditch bottom.) Using records, determine where improvements are needed to reduce discharges to ditches.	Control/reduce amount of sediments and pollutants discharged to the receiving waters. Sediments attract and adhere to other pollutants (heavy metals, oil/grease) and increased turbidity/sedimentation on channel bottoms impairs water quality and fish habitat.	Road Maintenance (Transportation Division)	• BMP not implemented in the Portland permit area. All County roads operated and maintained by IGA with Portland.	• Not applicable.	On schedule. No modifications.

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Best Management Practice	Overall Intent, Goals and Objectives	Functional Group(s) for BMP Implementation[1]	Key Accomplishments for Permit Year 6	Assessment of Controls	Proposed Modifications to Schedule or Activities
Reduces the frequency and impact of accidental nonstormwater discharges and controls illicit discharges and Improper Waste Disposal (ILL)					
ILL1. Continue to work with regional HAZMAT teams on policy matters concerning water quality impacts. Continue cooperative agreements with other agencies to ensure spills are responded to and cleaned quickly. If necessary, clarify and/or improve procedures to ensure effective interagency coordination and rapid response.	Improve procedures to ensure effective interagency coordination and communication, and rapid response. Train staff about water quality impacts from spills. Currently most staff is aware of safety issues, but not necessarily environmental impacts.	Emergency Response (Transportation Division)	• BMP not implemented in the Portland permit area. The County does not respond to HAZMAT spills in the permit area.	• Not applicable.	On schedule. No modifications.
ILL2. Review reporting of and action for noticeable private truck hauling practices causing discharges to County roads and the stormwater conveyance system. Work with County inspection officers for immediate response.	Control discharges from truck hauling activities to the extent that they are impacting the County right-of-way.	Transportation Division	• BMP not implemented in the Portland permit areas. The County does not initiate Capitol Improvement Projects or Right-Of-Way work in the permit area. Therefore, the County does not have the jurisdiction to regulate private trucks for stormwater impacts.	• Not applicable	On schedule. No modifications.
ILL3. Implement requirements to control discharges from County contractors' truck hauling practices to ensure that materials do not leak, spill or otherwise release contaminants onto roadways or open space where they may be washed into storm drains or waterways. Continue to require erosion control measures in contract specifications. Review permit requirements with contractors for fueling, cleaning trucks, etc. during project. Develop a monitoring process to ensure control of discharges.	Control discharges from truck hauling and maintenance activities to the extent that they are impacting the County right-of-way (ROW). Enforce erosion control measures to reduce sediment discharge to County ROW. Monitor to ensure control over regulated contractors' activities.	Construction & Right-of-Way (Transportation Division)	• BMP not implemented in the Portland permit area. The County does not initiate Capitol Improvement Projects or Right-Of-Way work in the permit area. Therefore, the County does not have the jurisdiction to regulate private trucks for stormwater impacts.	• Not applicable.	On schedule. No modifications.

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Best Management Practice	Overall Intent, Goals and Objectives	Functional Group(s) for BMP Implementation[1]	Key Accomplishments for Permit Year 6	Assessment of Controls	Proposed Modifications to Schedule or Activities
ILL4. Continue to require detention systems with proper connection to the right-of-way and/or the MS4 and/or surface or subsurface infiltration. Review new development permit applications for sedimentation manholes, catch basins, etc., which reduce pollutants to the maximum extent practicable. Continue to require installation of pollution plates on new inlets.	Assure that the design standards in place adequately address water quality issues throughout the permit area.	Design Right of Way Permits (Transportation Division)	• County requires any new development requesting drainage into County right-of-way to limit drainage to that which would occur naturally without impervious surface. • Land Use Planning requires erosion and sediment controls as part of Grading and Erosion Control (GEC) permits.	• Records kept of GEC inspection activities. • Records kept of public utility inspection activities.	On schedule. No modifications. Land Use Planning loses Portland permit area jurisdiction for this BMP next year as part of the Multnomah County-Portland Compliance Project.
ILL5. Continue to implement a field program to identify and investigate illicit connections (from sanitary sewers and/or commercial wastewater sewers) to the storm sewer system. Develop procedures for inspection and follow-up solutions, and include in Operations Manual.	The objective of this BMP is to remove non-stormwater discharges to the MS4. By identifying, investigating, and solving cross-connections and other illicit discharges, waste can be sent to the appropriate system.	Road Maintenance (Transportation Division)	• BMP not implemented in the Portland permit area. • All County roads operated and maintained by IGA with Portland. Portland will identify illicit connections during road maintenance activities.	• Not applicable.	On schedule. No modifications.
ILL6. Continue to manage the spill prevention and response program that reduces the frequency and impact of accidental non-stormwater discharges to the MS4. Improve use of absorbent materials for quick response to minor spills of oil or fluid. Keep records of incidents and response. Continue to coordinate appropriate incidents with cities. Revise County Road Maintenance Operation Manual (RMOM), if necessary, to include clear instructions for field personnel in the event of a spill.	Prevent spills to the maximum extent practicable and improve response to accidental non-stormwater discharges to reduce the frequency and overall impact of spills to the stormwater system.	Road Maintenance & Emergency Response (Transportation Division)	• BMP not implemented in the Portland permit area. The County does not respond to spills in the permit area. The City of Portland responds to spills in the permit area.	• Not applicable.	On schedule. No modifications.

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Best Management Practice	Overall Intent, Goals and Objectives	Functional Group(s) for BMP Implementation[1]	Key Accomplishments for Permit Year 6	Assessment of Controls	Proposed Modifications to Schedule or Activities
ILL7. Continue to implement incentives or requirements for County contractors to ensure that damages (from erosion and sediment deposition) are addressed and paid for by dischargers. Continue to require cash deposits, performance-payment bonds, final inspections and other mechanisms to ensure compliance with permit requirements. Continue pre-construction meetings to disseminate information about requirements to prevent damages during road construction projects.	Continue to require those responsible for damage and water quality pollution to pay the clean-up costs. By implementing conditions that ensure damage will be reversed and paid for, the objective of this BMP is to promote practices that will not cause damage in the first place. This BMP is intended to apply to contractors hired to construct County projects, including road repair and construction, and associated projects.	Construction, Design, and Right of Way Permits (Transportation Division)	• BMP not implemented in the Portland permit area. County roads are "built out" in the permit area, thus no Capitol Improvement Projects are planned.	• Not applicable.	On schedule. No modifications.
ILL8. Implement a program to reduce/eliminate discharges of all other pollutants (other than sediment) from road construction and related sites (paints, solvents, metals, etc.). Establish or improve regulations or policy as necessary. Continue inspection as part of daily routine. Continue record-keeping system for reporting any incidents of pollutants or debris. Provide training program to staff to monitor for pollution control.	Eliminate/reduce discharge of all pollutants from construction sites which adversely impact stormwater and receiving water quality.	Construction & Land Use Planning (Transportation and Land Use Planning Divisions)	• BMP not implemented in the Portland permit area. County roads are "built out" in the permit area, thus no Capitol Improvement Projects are planned. • All County roads are operated and maintained by IGA with Portland.	• Not applicable.	On schedule. No Modifications.
Standards to reduce pollution from new and redevelopment (ND).					
ND1. Continue to coordinate transfer of urban land use planning authority from the County to the cities, which ensures continuous application of NPDES roles and responsibilities prior to transfer.	Much of the urban area is outside of County jurisdiction as it has been annexed to Portland or Gresham. As this area is transferred, the County will continue to coordinate to ensure continuous land use planning services including NPDES roles and responsibilities.	Land Use Planning (Land Use Planning Division)	• The County continues to coordinate transfer of land use planning authority in the Portland Permit Area. • Land use planning responsibility remained the same in the Portland Permit area as in PY5.	• Operations internally reviewed by staff for completeness and accuracy. • On-going training improves accuracy of Hillside Development and Grading and Erosion Control applications.	On schedule. No modifications.

[1] All functional groups are formed in the Multnomah County Department of Sustainable Community Development –Transportation and/or Land Use Planning Divisions.

Best Management Practice	Overall Intent, Goals and Objectives	Functional Group(s) for BMP Implementation[1]	Key Accomplishments for Permit Year 6	Assessment of Controls	Proposed Modifications to Schedule or Activities
ND2. Continue permitting grading permits and hillside development permits per County zoning code.	Control/reduce amount of erosion and sediments discharged to the receiving waters. Sediments attract and adhere to other pollutants (heavy metals, oil/grease) and increased turbidity/ sedimentation on channel bottoms impairs water quality and fish habitat.	Land Use Planning (Land Use Planning Division)	• Land use zoning and permit authority within the Portland permit area is primarily limited to the several small "urban pockets" (e.g. Dunthorpe). • During PY 6, a handful of GEC permits were issued for the Portland permit area. The permit applications were reviewed for compliance with County water quality and fish and wildlife habitat protection standards.	• Operations internally reviewed by staff for completeness and accuracy. • On-going training maintains accuracy of Hillside Development and Grading and Erosion Control applications. • Permitted operations inspected by LUP staff.	On schedule. No modifications. Land Use Planning loses Portland permit area jurisdiction for this BMP next year as part of the Multnomah County-Portland Compliance Project.
ND3. Continue to enforce land use zoning and permit requirements, which may impact stormwater quality. Continue to enforce setback requirements from Designated significant streams and identified waterways.	Preserve significant vegetated areas adjacent to water bodies to reduce stormwater runoff and the pollutants carried with it.	Land Use Planning (Land Use Planning Division)	• Land use zoning and permit authority within the Portland permit area is primarily limited to the several small "urban pockets" (e.g. Dunthorpe). • During PY 6, no GEC enforcement actions were necessary in the permit area.	• Operations internally reviewed by staff for completeness and accuracy. • On-going training maintains accuracy of Hillside Development and Grading and Erosion Control applications. • Enforcement actions are reviewed and documented.	On schedule. No modifications. Land Use Planning loses Portland permit area jurisdiction for this BMP next year as part of the Multnomah County-Portland Compliance Project.
ND4. Apply County drainage standards for all new development and redevelopment, both public and private. Revise drainage standards as needed to clarify requirements for stormwater facilities related to new private development and redevelopment.	Adequately control discharge of stormwater for both water quantity and quality purposes.	Land Use Planning (Land Use Planning Division)	• LUP continues to require detention systems with proper connection to the Right-Of-Way where applicable. • All planned connections to the County right of way reviewed by engineers in the Transportation Division. • Drainage standards have been reviewed in-house. No revisions made in PY6.	• Operations internally reviewed by staff for completeness and accuracy. • On-going training maintains accuracy of Hillside Development and Grading and Erosion Control applications.	On schedule. No modifications. Land Use Planning loses Portland permit area jurisdiction for this BMP next year as part of the Multnomah County-Portland Compliance Project.
Pollution reduction in Multnomah County drainage and flood control facilities (STR)					
STR1. Conduct plan checks of stormwater quality treatment facilities that are included in capital improvement projects to assure they follow standard design criteria that include stormwater quality considerations, and that the appropriate facility is selected for the intended purpose.	The goal of this BMP is to ensure that appropriate design standards are established to reduce the discharge of pollutants from sites to the maximum extent practicable.	Design (Engineering, Transportation Division)	• BMP not implemented in the Portland permit area. County roads are "built out" in the permit area, thus no Capitol Improvement Projects are planned.	• Not applicable.	On schedule. No modifications.
STR2. When major repair is needed, develop and implement retrofit of existing public drainage and flood	Continue sump replacement and retrofit of flood control facilities to improve pollutant	Design (Engineering, Transportation	• The County does not have flood control facilities in the Portland permit area.	• Not applicable.	On schedule. No modifications.

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Best Management Practice	Overall Intent, Goals and Objectives	Functional Group(s) for BMP Implementation[1]	Key Accomplishments for Permit Year 6	Assessment of Controls	Proposed Modifications to Schedule or Activities
control facilities (sumps, retention basins, drainage channels, bioswales, trash racks, sediment trap devices, etc.) where practicable to improve water quality. Install new systems using current standards.	reduction aspects of existing drainage and flood control facilities.	Division)			
STR3. Ensure that any facilities built in conjunction with road construction projects consider long-term water quality protection, where feasible.	Ensure that drainage/flood control and water quality facilities built as part of road construction projects protect stormwater quality beyond the construction period.	Design and Construction (Engineering, Transportation Division)	• BMP not implemented in the Portland permit area. County roads are "built out" in the permit area, thus no Capitol Improvement Projects are planned. • All County roads operated and maintained by IGA with Portland.	• Not applicable.	On schedule. No modifications.
STR4. Review existing design standards for drainage, flood control, and water quantity facilities for applicability to water quality. Review water quality criteria issued by the City of Portland and others and consider for use as guidance documents. Modify design standards if necessary.	Consider design standards used in the region to better address water quality issues when permitting drainage and water quantity facilities (other than road construction), both private and public.	Design (Engineering, Transportation Division)	• Design standards not reviewed during this permit year.	• Not applicable.	On schedule. Review function group responsibility and tasks. Consider timing for a design standards review.
STR5. Continue to inventory and map the municipal storm sewer system. Improve knowledge of the County system to facilitate identification of problem areas and implementation of control programs in strategic locations. Allocate staff resources to ensure continued map updates.	Ensure County storm sewer mapping is accurate. This BMP supports the MS4 by providing valuable information allowing the County to effectively accomplish other elements of the NPDES permit requirements.	Design (Engineering, Transportation Division)	• Inventory maps updated as projects are constructed. • Maintained accuracy of County stormwater system maps.	• Accuracy maintained via map updates as projects are constructed.	On schedule. No modifications.
STR6. Ensure through contract agreements that constructed wetlands and adjacent facilities built in conjunction with road projects are properly designed to reduce the effects of pollutants in stormwater and runoff, as well as impacts to the wetlands themselves.	Provide stormwater quality protection benefits through use of natural resource areas such as wetlands.	Design (Engineering, Transportation Division)	• BMP not implemented in the Portland permit area. County roads are "built out" in the permit area, thus no Capitol Improvement Projects are planned. • All County roads operated and maintained by IGA with Portland.	• Not applicable.	On schedule. No modifications.

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Best Management Practice	Overall Intent, Goals and Objectives	Functional Group(s) for BMP Implementation[1]	Key Accomplishments for Permit Year 6	Assessment of Controls	Proposed Modifications to Schedule or Activities
Designed to reduce pesticide use and encourage use of self-sustaining vegetation to help improve water quality (PS).					
PS1. Continue to implement vegetation management procedures as in the Road Maintenance and Operations Manual (RMOM) to assure that water quality impacts are addressed. Include annual Oregon Department of Agriculture and EPA certification for pesticide applicators. Selectively use pesticides wherever applicable. Continue to improve application practices and train personnel to reduce pollutants to the maximum extent practicable.	Reduce pesticide use as means of improving impacts to water quality. Implement existing/improved practices to ensure that pollutants discharged from and into County rights-of-way (roads, ditches) are reduced to the maximum extent practicable.	Road Maintenance, Vegetation Management (Transportation Division)	• BMP not implemented in the Portland permit area. All County roads operated and maintained by IGA with Portland.	• Not applicable.	On schedule. No modifications.
PS2. Promote use of native vegetation on public and private projects. Support government tree-planting programs that reduce pollutant impacts to receiving streams. Utilize existing native plant lists for development review.	Reduce pesticide use and encourage use of self-sustaining vegetation as means of improving water quality.	Land Use Planning Division, Transportation Division	• County Land Use Planning promotes use of native vegetation as GEC permit conditions.	• Reviewed and tracked current plans and requirements.	On schedule. No modifications.
PS3. Ensure specifications for landscape in right-of-way projects require the use of low-impact species. Encourage use of self-sustaining, non-invasive vegetation that reduces the need for pesticides, fertilizers, and water.	Reduce pesticide use and encourage use of self-sustaining, non-invasive vegetation as means of improving water quality. Implement existing/improved practices to ensure that pollutants discharged from and into County rights-of-way (roads, ditches) are reduced to the maximum extent practicable.	Transportation Planning (Transportation Division)	• BMP not implemented in the Portland permit area. • All County roads operated and maintained by IGA with Portland.	• Not applicable.	On schedule. No modifications.

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Best Management Practice	Overall Intent, Goals and Objectives	Functional Group(s) for BMP Implementation[1]	Key Accomplishments for Permit Year 6	Assessment of Controls	Proposed Modifications to Schedule or Activities
Other Activities include other ongoing program activities and reporting that ensure pollution reduction to the maximum extent practicable (OA).					
OA1. Develop and manage the Stormwater Program to ensure compliance with the NPDES permit. Implement cost-effective, practical BMPs and activities that are designed to reduce stormwater pollution to "the maximum extent practicable," given the County's unique conditions.	Develop and manage the County's stormwater program to ensure compliance with the NPDES permit. Develop and implement cost-effective, practical BMPs and activities that are designed to reduce stormwater pollution to the "maximum extent practicable."	Compliance	• Organized and presented updates regarding Endangered Species Act/Salmon recovery program to introduce key concepts to Stormwater Implementation team. • Facilitated work sessions with County staff related to program implementation and reporting. • Attended co-permittee meetings to represent the County's interests. • Attended any DEQ meetings to discuss implementation of County NPDES programs. • County Stormwater Implementation Team continued to implement BMPs on schedule.	• Conducted informal surveys of staff responsible for functional group's BMP tasks. • Conducted meeting of functional group representatives to review BMP implementation and accomplishments.	On schedule. No modifications.
OA2. On a continuous basis, and especially annually, assess and evaluate the BMP program to ensure use of available resources, and make recommendations for improvements in program implementation tasks. Designate County staff to compile/summarize records for each BMP. Utilize BMP record-keeping system for evaluation of progress at regular work sessions with Stormwater Implementation Team.	Assess and evaluate program to ensure the best use of available resources and make recommendations for continuous improvement.	Compliance	• Compiled and summarized the NPDES field records so that management could evaluate the results. • Managed record keeping system for use by the County staff to track work done in the field, meetings attended, etc. • Worked with County staff to compile individual BMP files for evaluation of progress at several work sessions with entire Stormwater Implementation Team. • Reviewed how to bring the Bridge Section into the County NPDES stormwater program.	• Conducted informal surveys of staff responsible for functional group's BMP tasks. • Conducted meeting of functional group representatives to review BMP implementation and accomplishments.	On schedule. No modifications.
OA3. Review annually and update as needed the Road Maintenance Operations Manual (RMOM), including procedures regarding water quality impacts to receiving streams. Continue to keep field records of maintenance activities.	Use record keeping to track performance of BMPs over-time and to determine level of water quality protection provided. Adjust Stormwater Program through adaptive management based on results reported in annual reports.	Transportation Division	• BMP not implemented in the Portland permit area. All County roads operated and maintained by IGA with Portland.	• Not applicable.	On schedule. No modifications.

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Section IV

PORT OF PORTLAND

ANNUAL REPORT
PORT OF PORTLAND
MUNICIPAL STORMWATER PERMIT NO. 101314
SUBMITTED NOVEMBER 1, 2001

INTRODUCTION

This document is submitted to the Oregon Department of Environmental Quality ("DEQ") by the Port of Portland ("Port") to satisfy the reporting requirements of National Pollutant Discharge Elimination System ("NPDES") Municipal Separate Storm Sewer System ("MS4") Discharge Permit No. 101314 ("Municipal Permit"). As one of the co-permittees authorized to operate under this permit, the Port is required to submit annual reports to DEQ for each permit year (July 1 to June 30) of the 5-year permit term. According to Schedule B, Sections 6 and 7 of the Municipal Permit, these reports are to include a description of the activities undertaken to implement the Municipal Stormwater Management Program ("SWMP"), a description of any changes made to the SWMP, a summary of the stormwater monitoring data collected during that year and any water quality improvements or degradation that have been identified.

This report represents the first monitoring year of the Second Permit Term and documents the stormwater monitoring efforts and the activities undertaken to implement the Best Management Practices ("BMPs") within the Port MSWMP during the 2000-2001 permit year ("permit year"). All tables referenced throughout this section of the report are compiled at the end of the section, unless otherwise stated.

Port of Portland Properties

The Port owns approximately 6,646 acres within the City of Portland ("City") Urban Services Boundary. This acreage includes three operating areas and various undeveloped properties, including wetland mitigation sites. Operating areas consist of the Portland International Airport ("PDX"), five Marine Terminals, and several industrial parks occupied by various commercial tenants. The Portland Ship Repair Yard ("PSY"), which was included as an additional operating area in last year's annual report, was sold to Cascade General at the beginning of the permit year. Consequently, it is not addressed in this report.

Portland International Airport

PDX is approximately 2,873 acres in size and is located in northeast Portland between the Columbia River and the Columbia Slough. The facility is owned and operated by the Port and includes numerous aviation-related tenants. Stormwater runoff from the PDX property discharges into the Columbia Slough through a series of nine outfalls, which are authorized under an NPDES General 1200-COLS Industrial Stormwater Discharge Permit. This permit is specifically structured to address the Columbia Slough Total Maximum Daily Loads ("TMDLs") including dissolved oxygen ("DO"), pH, nutrients, bacteria, and toxics. With the exception of the Oregon Air National Guard, PDX tenants requiring stormwater permits are co-permittees under the Port's 1200-COLS Permit (Table 1). PDX also holds an NPDES Construction Dewatering Permit and an NPDES Anti-icing/Deicing Waste Discharge Permit, both of which were issued by DEQ. Several PDX tenants are also co-permittees under the Anti-icing/Deicing Permit.

Marine Terminals

The Marine Terminals operating area consists of four active terminals and one inactive terminal that occupy approximately 1,098 acres. These areas are located along both the Willamette and Columbia Rivers and handle the shipping and receiving of finished goods, agricultural products, and raw materials. Terminals 2, 4, 5, and 6 ("T-2", "T-4", "T-5", and "T-6") are active shipping terminals managed by the Port's Marine Department, while Terminal 1 ("T-1") is currently managed as an industrial property by the Properties Department. T-1 does not support marine activities at this time. T-1 and T-2 are located on the left bank of the Willamette River, T-4 and T-5 on the right bank of the Willamette River, and T-6 on the left bank of the Columbia River. Stormwater runoff from these facilities drains into both the Willamette and Columbia Rivers and the Columbia Slough. The Port operates T-6 and holds both 1200-Z (Columbia River) and a recently issued 1200-COLS (Columbia Slough) NPDES Permit for this facility. The majority of the other terminals are leased to various tenants, many of which have their own NPDES permits (Table 1).

Industrial Parks

The industrial parks owned by the Port are managed by the Properties Department and include Swan Island, Port Center, Mocks Landing, Rivergate, Portland International Center ("PIC"), Troutdale Industrial Park, and Brookwood Corporate Park. The Troutdale (75 acres) and Brookwood (22 acres) properties are located outside of the Municipal Permit area and are not discussed further in this report. The remaining areas occupy approximately 1,730 acres. Swan Island, Port Center, and Mocks Landing are all located on Swan Island along the right bank of the Willamette River. Rivergate is located at the confluence of the Willamette and Columbia Rivers and PIC is located just east of PDX. Stormwater runoff from these facilities is discharged into the Willamette River, the Swan Island Lagoon, and the Columbia Slough. The Port has sold much of the property within these parks and the remaining areas are approximately 80% leased. The majority of the tenants within the industrial parks do not require NPDES permits for their commercial operations. However, any tenant that discharges stormwater into the Port's portion of the MS4 is responsible for obtaining and complying with all applicable stormwater permits independent of the Port (Table 1). Tenants are also required to obtain a 1200-C General NPDES Permit for any new construction and development on these parcels.

Undeveloped Properties

In addition to the three operating areas, the Port also owns approximately 945 acres of undeveloped properties within the Urban Services Boundary. These areas include West Hayden Island, Albina Dock, the area under the Broadway Bridge, and several wetland mitigation sites. These sites are under the management of the Port's Properties Department. The wetland mitigation sites cover approximately 650 acres. Habitats present include open water; emergent, scrub-shrub, and forested wetlands; and open meadow, scrub-shrub, and forested uplands. During the permit year there were eight sites under Agency permits, three sites, which had completed the permit requirements but continued to be actively managed and two sites in the process of being constructed. The mitigation program also includes twelve sites along the Columbia Slough, or in the slough watershed, which are being enhanced through an intergovernmental agreement ("IGA") with the City of Portland's Bureau of Environmental Services ("BES").

Organizational Structure

Each of the operating areas mentioned above is responsible for daily compliance with a variety of environmental permits, including their individual NPDES Stormwater Permits. Operating areas with NPDES Industrial Stormwater Discharge Permits are also required to prepare and maintain Stormwater Pollution Control Plans ("SWPCPs") for their facilities to provide guidance and procedures for controlling pollutant exposure to stormwater. Port-wide environmental issues are managed by the Environmental Services Division ("ESD"), a corporate branch in the Port's Policy and Planning Department. The ESD manages the Port's Municipal Permit, maintains the Municipal SWMP, and provides the operating areas with policy guidance and training on municipal stormwater issues.

STORMWATER MONITORING DATA

The completed Port Municipal Stormwater Monitoring Program was submitted to DEQ on April 8, 1998. Under this program, the monitoring components to be performed on Port property during the First Permit Term included industrial permit stormwater sampling, dry season monitoring, deicing monitoring, tenant monitoring, and BMP effectiveness monitoring. The BMP effectiveness monitoring was concluded during the First Permit Term and is therefore not included as part the Second Permit Term monitoring. Stormwater monitoring on selected mitigation sites was also performed on a voluntary basis during the permit year. Land-use characterization monitoring required by the Municipal Permit continues to be performed by the City, with the Port providing financial support for this effort. This arrangement is documented in an August 5, 1999 agreement signed with the City, which states that the Port will pay its percentage of the monitoring costs until 2005.

Monitoring results (data) included in this report include Industrial Permit compliance monitoring and dry season inspection monitoring. These results are briefly described in the following sections and are discussed in more detail under the Port-OA3 – Water Quality Monitoring BMP.

The Port also conducts monitoring under other stormwater permits including PDX's NPDES Anti-icing/Deicing Waste Discharge Permit, the PDX/PIC NPDES Construction Dewatering Permit, and the Port-wide NPDES Stormwater Discharge General Permit 1200-CA for construction activities. For each of these permits, monitoring data is collected and submitted to DEQ in accordance with specific reporting requirements. This data is available for review from the Port or DEQ upon request.

Industrial Permit Monitoring

Monitoring data collected during the permit year from industrial stormwater outfalls at PDX and T-6 are included in Tables 2a through 3. These samples are representative of the variety of activities, including transportation, industrial, and commercial uses, that occur on Port property. Although this data set was collected as part of the Port's Industrial Stormwater Permit compliance, it is included in this annual report because it effectively represents a portion of the Municipal Permit stormwater monitoring requirements. Pollutant load calculations for these outfalls were not performed for the permit year.

Dry Season Inspection Monitoring

The Port's dry season monitoring effort is part of the Illicit Discharge Detection and Removal Program ("IDDRP") and is designed to detect non-stormwater discharges from Port outfalls. Dry season monitoring of all Port-owned outfalls occurs on a 5-year rotating schedule with certain priority outfalls monitored every year. All PDX outfalls are also monitored annually. The current schedule is shown in Table 4. If a discharge is observed from an outfall, a sample is collected and sent to an independent laboratory for analysis. The results of this analysis and the conditions observed in the field are then used to help identify the source of the discharge and to determine whether potential pollutants are entering the stormwater system. Follow-up investigations and inspections are scheduled when necessary. Dry season monitoring data collected during the permit year is presented in Table 5.

MSWMP ACCOMPLISHMENTS FOR THE 2000-2001 PERMIT YEAR

During the First Permit Term of the Municipal Permit, a series of BMPs were developed for all co-permittees. However, due to the different activities of these entities, not all of these BMPs proved applicable, requiring each co-permittee to develop additional BMPs specific to their jurisdictions. As part of the Municipal Permit renewal process for the Second Permit Term, eight general categories of BMPs were developed to create an overall framework for the Municipal SWMP and to promote consistency and coordination among the three co-permittees. The eight new BMP categories include Public Involvement/Education ("PI"), Operation and Maintenance ("OM"), Industrial/Commercial Controls ("IND"), Illicit Discharges Controls ("ILL"), New Development Standards ("ND"), Structural Controls ("STR"), Planning/System Preservation and Development ("PS"), and Other Activities ("OA"). Under these categories, each co-permittee identified its own agency-specific BMPs. This allowed the BMPs to more closely reflect the activities of each co-permittee.

Under the new BMP framework, the Port has developed fifteen Port-specific BMPs, which are each identified by the word "Port" followed by the two letter general BMP category code and their respective BMP number (e.g., Port-PI1). Implementation activities and evaluation techniques have also been established for each of these BMPs. The remainder of this report describes the BMPs in the Municipal SWMP and briefly summarizes the Port's activities within these BMPs during the permit year. For the purposes of this annual report, only the Port-specific BMP descriptions, status, and implementation activities are discussed.

PUBLIC INVOLVEMENT AND EDUCATION (PI)

<u>Purpose:</u> To inform educate the public, business, industry, and government about the causes of stormwater pollution and its effects on local streams and rivers; to encourage active participation in pollution reduction efforts.

Port-PI1: Conduct public outreach and support programs that increase public awareness of the importance of water quality protection.

The Port continues to participate in and support a variety of public outreach programs and events focused on increasing public awareness of the importance of water quality protection. While some of these programs do not address stormwater directly, many of their goals and objectives

are closely related to the control of runoff and water pollution. Port support and participation ranges from large-scale public events to work with other agencies and organizations on specific projects or issues. Public participation in Port programs such the Marine Riverbank Management Program also continues.

Implemented Activities

A new Public Outreach Manager position was created during the permit year. This new position assigns half-time responsibility to environmental public outreach duties. Responsibilities include organization of educational exhibits and facilitation of the grants program. In addition, the new manager is responsible for producing a new publication called *Port Currents*. The newsletter serves to communicate and educate the public on Port environmental and community issues.

Public events that the Port participated in during the permit year included the Big Pipe Party & Friendly Fish Fair and the Columbia Slough Regatta. The Big Pipe Party & Friendly Fish Fair was a City-sponsored event at the Columbia Boulevard Wastewater Treatment Plant that celebrated the opening of the new Inverness sewer line, which was installed to eliminate a combined sewer overflow ("CSO") in North Portland. At this event, the Port provided a booth that included information on the deicing program at PDX as well as other stormwater and water quality-related issues. A similar informational booth was also provided at the Columbia Slough Regatta, an event that the Port co-sponsored with the City. The Columbia Slough Regatta is an annual small craft regatta designed to increase public awareness of environmental and water quality issues associated with the Columbia Slough. In addition to these events, the Port also sponsored and participated in several Stop Oregon Litter and Vandalism ("SOLV") clean-up events including one on West Hayden Island.

During the permit year Port staff continued to take part in various educational events sponsored by other agencies including the Columbia Slough Watershed Council ("CSWC"), Audubon Society, Willamette Riverkeepers, and the City. Port staff attended various open houses sponsored by these agencies and participated in such events as kayak tours of Whitaker Ponds and Ross Island, a boat tour of the working harbor, and a City-sponsored jet-boat tour of the lower Willamette River. Water-related issues including stormwater, CSOs, and the Lower Willamette clean-up project were often discussed during these tours. Marine Department also participated in public outreach projects sponsored by Headwaters to Oceans ("H2O") by performing several Willamette River tours during the summer of 2000.

Marine Department continued to perform beach and riverbank clean-ups and plantings through their Riverbank Management Plan, which in past years has included projects with Portland Public Schools, the Oregon Museum of Science and Industry ("OMSI"), and the Blazers Boys and Girls Club, as well as citizen and employee volunteers. Specific projects during the permit year included the Wheeler Bay re-vegetation project, which was performed with assistance of BES and students from Roosevelt High School, and several beach stabilization and maintenance projects at T-4. Marine Department also continued to contract with the Multnomah Youth Council ("MYC") for the management of a portion of the shoreline on West Hayden Island. At several of these areas, informational signs were installed that identified the sites as natural areas, described the restoration efforts being performed, and provided a Port phone number to contact if any cutting, digging, or spraying was to occur.

Properties Department continued to carry out habitat enhancement along drainages in the Columbia Slough watershed through an IGA with BES. Site visits to a number of the mitigation sites were arranged for both the public and the Agencies in order to explain the activities and practices taking place on the sites. Information about the mitigation program is being placed on the Port's web site so that a wider audience can be reached.

A procedure for evaluating and selecting Port participation in environmental improvement and education activities was developed and implemented during the permit year. This process was developed to address the frequent requests from both internal and external parties for the Port to support environmental improvement or education projects, programs, or activities. The new process addresses the development and maintenance of project evaluation criteria, the collection of background information on the request, and the procedures for evaluating, selecting, and implementing the request. It is also designed to track the labor, expenses and financial support directed to such activities by the Port. The goal of this procedure is to develop a consistent approach to determining Port participation with community groups and agencies that promote such projects.

Port-PI2: Inform employees and tenants of new stormwater pollution control efforts and activities in each Port operating area. Provide guidance for implementing the programs, where applicable. Participate with the City of Portland and community groups in promoting educational programs that relate to Port operations.

The Port continues to provide its employees and tenants with considerable environmental training and education, including courses directly concerning stormwater and water quality management. The training agendas, list of attendees, and summary of information presented during these sessions are maintained in either the operating area or ESD files. Table 6 lists the stormwater-related training accomplished and attended during the permit year. Efforts to disseminate stormwater and general environmental information to employees, tenants, community groups and other organizations have also continued.

Implementation Activities

Training, educational meetings, information exchanges and presentations during the permit year covered a variety of BMP topics ranging from deicing/anti-icing procedures to spill prevention and response to other environmental regulations. In-house training included instruction on both PDX spill response procedures and Marine Department's revised Spill Prevention Control and Countermeasures ("SPCC") plan. In accordance with job responsibilities, Port personnel attended training on the Port's Environmental Management System ("EMS"). Instruction included general awareness training to familiarize employees with the EMS framework and procedure-specific EMS training, which focused on procedure implementation. Other in-house training included an environmental workshop for Aviation tenants, training on stormwater quality policies and procedures for ESD personnel, and instruction on the Municipal Permit and its associated dry season monitoring procedures for Properties Department staff.

All Port staff with previous 24- and 40-Hour Occupational Safety and Health Administration ("OSHA") Hazardous Waste Operator ("HAZWOPER") training received annual refresher courses. Both the Properties and PDX Maintenance Departments attended continuing education courses on pesticide application licensing requirements, regulations, and techniques. Port staff

also received training from various local institutions including the Clackamas Community College (Wastewater Short School) and Portland Community College (Erosion Control Class) (Table 6). Several Port employees attended the Stormwater Management Manual training sponsored by the City.

Major conferences attended by Port personnel during the permit year included the Association of Clean Water Agencies' ("ACWA") Stormwater Conference 2000 and Stormwater Summit, the American Association of Airport Executives' ("AAAE") Environmental Deicing Conference, and the Seminar Group's Endangered Species Act Conference. Port staff also attended several conferences sponsored by the Environmental Law Education Center ("ELEC"), including the Northwest Conference on TMDLs and the Clean Water Act ("CWA"), and the Stormwater Management and the Erosion Control Annual Conference.

In addition to attending training and conferences, Port personnel also performed presentations and informational talks for various agencies and organizations during the permit year. Marine Department environmental staff gave a presentation on marine facility stormwater management and spill response for the Water Environment School at Clackamas Community College and PDX participated in a career talk related to stormwater BMPs for Apprentices in Science and Engineering's Saturday Academy. Properties Department staff taught a Wetlands 101 course offered by the CSWC, and PDX conducted a tour of the deicing project for CSWC and other agencies. ESD personnel were also active in the Columbia Corridor Association's ("CCA's") Water Committee, providing review and comment on new regulatory developments, information sharing, and a forum for water-related issues.

ESD and operating area managers continue to relay any relevant public information and materials related to stormwater to Port employees and tenants during regular staff meetings. Brochures, documents, and pamphlets related to stormwater and other environmental issues, such as Metro Haz-Waste information, are regularly reviewed and distributed to operating area personnel and other Port staff. Another major avenue for informational exchange is the Water Resource Coordination Group ("WRCG"). This group is made up of Port environmental staff from the corporate office and operating areas that have direct responsibility for matters relating to stormwater management. The Corporate Environmental Services Water Resource Program Manager (also the MS4 Permit Manger) serves as the lead for the WRCG, which meets monthly. The purpose of the group is to facilitate coordination on Port-wide policy issues, permit matters, training, and communication. It also serves as a forum for problem solving and information sharing.

Other BMP accomplishments during the permit year include the development of the Environmental Tenant Management Policy, under which a procedure for tenant communication and education was implemented. The purpose of this procedure is to establish and enhance communication with tenants to promote BMPs, pollution prevention, environmental education and information sharing. The procedure involved the designation of a tenant coordinator within each operating area who is responsible for selecting the appropriate tenant communication and education methods, introducing tenants to the selected outreach methods, and encouraging tenant participation. The overall program is directed by the ESD Tenant Environmental Manger, who is responsible for assisting the individual tenant coordinators in selecting and evaluating the selected outreach methods.

OPERATIONS AND MAINTENANCE (OM)

Purpose: To improve existing and/or implement new operation and maintenance practices for public streets, sewers, and other facilities that reduce the amount of pollutants entering the storm sewer system and waterways.

Port-OM1: Evaluate and update stormwater maintenance practices that affect water quality at stormwater quality facilities.

The Port currently complies with three NPDES General Industrial Stormwater Permits for its properties within the Portland Urban Services Boundary. These permits include a 1200-COLS permit issued to PDX and both a 1200-Z and 1200-COLS permit issued to T-6. In addition, all Port facilities comply with a Port-wide 1200-CA NPDES Permit for construction related activities. PDX/PIC has also been issued Anti-icing/Deicing Waste Discharge and Construction Excavation (Dewatering) Discharge NPDES Permits Under these permits, operating area personnel are responsible for evaluating stormwater maintenance practices at their respective facilities and updating their site specific SWPCPs and other environmental management plans as appropriate. Plan updates frequently include additional permit requirements and changes in stormwater practices implemented at the facility. General guidance on stormwater management is provided by ESD and included in the Port's MSWMP.

Implemented Activities

Each operating area has developed and implemented specific stormwater maintenance practices relevant to the Port and tenant operations occurring at the facility. Many of the maintenance practices have been established and implemented over the last few years of permit compliance or were in place prior to the regulations. Much of the work has already been accomplished, but there are a few new maintenance activities to report for the permit year.

PDX

During the permit year, PDX revised the Portland International Airport Spill Response Procedures and provided training on these new procedures to the appropriate staff members. PDX maintenance and environmental staff continued to perform stormwater BMP maintenance activities throughout the year according to the SWPCP schedules. Routine BMP maintenance completed includes boom deployment, maintenance, and replacement; inlet protection and replacement; inlet filter installation, maintenance, and replacement; detention/quiescent pond cleaning; vegetative swale maintenance; oil/water separator maintenance; outfall maintenance; and catch basin inspection and cleaning.

Marine Department

Marine Department Environmental staff updated the SPCC plan for T-6 and provided related training to Security and Gearlocker personnel. Changes in the plan include revisions to account for changes in staff and a re-routing of the 24-hour spill response hotline. Routine stormwater maintenance activities completed at T-6 during the permit year included catch basin inspection and cleaning, oil/water separator maintenance, inlet filter maintenance and replacement, and facility sweeping. Two degraded outfalls located upstream from Berth 607 at T-6 were also repaired and their associated riverbanks stabilized through the Riverbank Management Plan. Information on maintenance activities was entered into the Marine Maintenance computer

system, which tracks maintenance and environmental inspection information. All cleaning and waste disposal records continue to be maintained in the Waste Stream Management Book in the T-6 Environmental Office.

Under its Tenant Program, the Marine Department also implemented a BMP that addresses building and ground maintenance on leased Marine Terminal properties (BMP017 – Building and Grounds Maintenance). This BMP describes measures that can be used to prevent or reduce the discharge of pollutants to surface and ground water and to the air from both indoor and outdoor activities. Control measures discussed in the BMP that relate to stormwater pollution control include such maintenance practices as using "dry cleaning" techniques (e.g., sweeping) to clean outdoor surfaces such as docks and buildings; directing such discharges as used cleaning solutions, boiler blowdown, and indoor washdown water to sanitary sewers instead of storm sewers; incorporating landscaped areas into facility design; stenciling storm drains with "Storm Drain – No Dumping" or similar warnings; and the use of lead-free, water-based paints when painting asphalt or other ground features.

Industrial Parks

As in the past, Properties Maintenance staff remained responsible for maintaining all Port landscaping within the industrial parks and the majority of the Marine Terminals. The maintenance crew was also responsible for removing and properly disposing of various debris including vegetative materials, scrap metal, and miscellaneous garbage from these areas. Vegetative materials were typically composted or chipped to create mulch, scrap metal was taken to a local recycling center, and miscellaneous garbage was disposed of at appropriate facilities (e.g., recycling centers, landfills). Personnel were also responsible for managing the contracts to sweep the Port Center and Port Center II parking lots and the McCarthy Park Extension. Other maintenance activities included the annual cleaning of the Property Maintenance Department shop with backpack blowers, shovel clean up of debris from around storm drains and catch basins, and the maintenance of bio-bags and oil bags around shop catch basins. The Property Maintenance Department also manages the contract for annual catch basin cleaning at several of the Port's industrial parks.

Mitigation Sites

Properties Maintenance staff continued to update procedures for improving native species diversity and establishment success along watercourses. This included increasing plant densities along banks to increase soil stability and shade, mechanical methods of weed removal rather than chemical use in areas adjacent to water courses, fencing out cattle from wetland areas and mulching and plant protection against animal foraging to improve growth through the year. Inspections of conditions on the sites in order to implement adaptive management practices were made on a monthly basis.

Port-OM2: Evaluate operations and maintenance of Port roads and vehicle maneuvering areas to determine water quality impacts. Recommend procedures or practices to reduce the discharge of pollutants to the stormwater system.

PDX, Marine Department, and Properties Department are each responsible for the maintenance of road and vehicle maneuvering areas in their respective areas. The maintenance plans and site specific SWPCPs address many of the operating and maintenance issues associated with roads

and surfaces. Major maintenance tasks performed on Port roads and pavement areas include sweeping, deicing (PDX), and surface repairs and painting (PDX).

Implemented Activities

Operating Area Sweeping

The most intensive effort concerning road and surface maintenance on Port properties during the permit year continued to be pavement sweeping. All operating areas swept their facilities on a regular basis. PDX swept the airfield and any construction sites on a daily basis. T-6 increased its sweeping frequency from annually to bi-annually, with the option for additional sweeping on an as needed basis. Sweeping at the Industrial Parks was conducted regularly by outside contractors. Records of sweeping continue to be maintained by PDX and T-6 in their maintenance files. Sweeping records for the Industrial Parks are maintained by the Properties Maintenance Department.

The waste material handling procedures for swept material remained relatively unchanged during the permit year, with debris placed in storage bins or stockpiled in a manner that prevents contact with stormwater runoff. The collected material continued to be tested for hazardous waste content and appropriately disposed of at local landfills. The sampling and disposal tracking records continue to be maintained in the operating area maintenance files. In some cases, information was also maintained by operating area environmental staff as part of waste stream management.

PDX Deicing

Throughout the permit year, the Port continued to conduct limited deicing on non-airside pavements at PDX (e.g. streets, roads and parking areas outside the PDX security fence but within the airport boundaries). The Deicing and Anti-Icing Runoff Control Program for aircraft and airside pavements was also continued through the 2000-2001 deicing season. This program includes strategies to control, collect, and dispose of deicing and anti-icing materials. Compliance with the deicing permit is required for all co-permittees, including compliance with the schedule set forth in the TMDL for the Columbia Slough. This TMDL requires discharges to the Columbia Slough to comply with the numeric waste load allocations by October 31, 2003.

The schedule for implementation of the fully integrated anti-icing and deicing control system was modified effective March 8, 2001 in the stormwater discharge permit for deicing and anti-icing materials. Meanwhile, PDX deicing activities continued to be addressed by Port environmental staff, a consultant team, the PDX co-permittees, DEQ, and BES. The airside deicing materials used at PDX are Federal Aviation Administration ("FAA") approved and include sodium formate and potassium formate for pavements and propylene glycol- and ethylene glycol-based materials for aircraft. Magnesium chloride, a material that is not approved by the FAA, is used for non-airside pavement deicing only.

The results of the 2000-2001 deicing season management activities and pilot projects were compiled and submitted to DEQ in the *PDX 2000/2001 Annual Deicing/Anti-icing Management Report* on August 15, 2001. This report is available for review from the Port or Elliot Zais of DEQ.

The Port deicing team and consultant are developing deicing studies for the 2001-2002 season. The 2001-2002 PDX deicing program will be documented in the Annual Runoff Control Plan submitted to DEQ on October 1, 2001. Many projects previously initiated will be continued, including trench drain operation at concourses C and D for glycol collection, and deployment of two Glycol Recovery Vehicles ("GRVs"). Other deicing management efforts to be implemented include using forced air deicing methods for aircraft, employing a two step chemical application process for pavement deicers, varying aircraft deicing material mix ratios based on ambient temperatures (to be done by the airlines), and researching new deicing technologies.

Records of the deicing studies and projects continue to be maintained by Port environmental staff. Due to the extent of the projects, the amount of data, and the extensive coordination efforts required, the PDX deicing information is maintained independently of the PDX SWPCP and stormwater files.

PDX Surface Repairs

Throughout the permit year, roadway surface repairs and painting continued to be conducted by PDX Maintenance staff. Procedures for handling waste products and cleaning equipment related to pavement maintenance continued to improve through careful storage, application, and disposal. Features such as extended indoor equipment storage areas, equipment wash-bays, sweeper and catch basin clean-out debris unloading areas, and toluene recovery system continue to be used.

Port-OM3: Review landscape maintenance practices. Recommend the use of vegetation that reduces the need for pesticides, herbicides, fertilizers, and water, where practical.

The Port continues to review and improve landscape maintenance practices at its operating areas and other properties. The Port Properties Maintenance crew is responsible for the landscaping and maintenance of Port industrial parks, Marine Department properties, and mitigation sites. PDX has its own maintenance crew for its facility. The Port also coordinates with the City to provide landscaping plans for natural resource enhancement projects on Port-owned property in the Columbia Slough watershed.

Implemented Activities

Throughout the permit year both the PDX and Properties Maintenance crews developed additional BMPs for landscaping practices. PDX Maintenance initiated a BMP for fertilizer application in areas adjacent to pavements in which smaller spreaders are used around curbside areas. Properties Maintenance continued to work with a set of overall environmental goals that were previously prepared. Examples of these goals include minimizing the use of pesticides and fertilizers, recycling organic materials by using them in the landscape (e.g., mulch, compost), and protecting wetlands and areas of native vegetation. These goals and their associated BMPs are frequently discussed during regular staff meetings. Policies and procedures such as the prompt clean-up and removal of debris and granular residue from streets and sidewalks, the recycling of vegetative wastes into mulch and compost, the use of spot spraying instead of broadcast spraying for routine weed control, and the elimination of all organo-phosphorus pesticides were implemented to meet these goals During the permit year, progress toward these goals continued with the initial development of preferred pesticide and fertilizer lists that include products that are effective, but have lower impacts on water quality. Preliminary lists of native

plant species that require less pesticide, fertilizer, and irrigation have also been prepared and are being used for Port projects. PDX Maintenance is currently in the process of developing a similar set of goals and BMPs for their area.

PDX and Properties Maintenance crews continued to incorporate an integrated pest management approach to landscaping during the permit year. A variety of techniques, including biological controls, physical controls (e.g., mowing, burning, flooding, grazing) and cultural selection (i.e., the selection of the proper plant species for the area) were used to minimize chemical applications on Port property. Also, field surveys were conducted to accurately assess pest conditions and thus limit unnecessary chemical applications. Other implemented practices include the use of mechanical weed removal, aeration, slow-release fertilizers, mulch applications and drip irrigation where applicable. The Port also contracts with Multnomah County Vector Control ("MCVC") to use bio-control methods (i.e., *Bacillus thuringiensis var. israelensis*) to reduce mosquito populations in areas of standing water on its mitigation sites.

During the permit year, maintenance crews attended local agency meetings and worked with the U.S. Department of Agriculture ("USDA") on vegetation management and the Portland Parks and Recreation Department to stay current on pesticide application licensing requirements, regulations, and techniques. All chemical applications on Port property are conducted by licensed applicators that attend approximately eight hours of continuing education annually. All chemicals were used according to manufacturer instructions.

Throughout the permit year, the Properties Maintenance crew continued to play an active role in riverbank mitigation. The crew expanded its involvement in three riverbank mitigation projects in the Rivergate and Swan Island industrial parks, performing a variety of landscape planting and general maintenance duties.

Landscape maintenance for tenants on Marine Terminal properties was also addressed during the permit year through the implementation of two new BMPs under the Marine Tenant Program: BMP017 – Building & Grounds Maintenance, and BMP018 – Fumigation & Pesticide Use. As mentioned under Port-OM1, BMP017 describes measures that can be used to prevent or reduce the discharge of pollutants to surface and ground water and to the air from both indoor and outdoor building and ground maintenance activities. Recommended control measures for landscaping activities include incorporating landscaping into facility design to reduce impervious surfaces; using native vegetation in landscape designs to reduce pesticide, fertilizer, and irrigation needs; mulching grass clippings back into lawns; using drip irrigation systems; and recycling landscape wastes. BMP018 addresses steps that can be taken to reduce or prevent water and air pollution from the application of pesticides to marine cargo, cargo containers, dunnage, cargo handling and storage facilities, grounds, and buildings. Pollution control measures under this BMP include using pesticide according to the manufacturer's instructions; choosing less harmful/toxic products to replace those currently used; providing appropriate pesticide containment and storage areas; properly disposing of pesticide containers, dead vermin and pests, and other related wastes; using good housekeeping and preventative maintenance to discourage the presence of pests; and following guidance provide by such agencies as the USDA and Oregon Department of Agriculture.

INDUSTRIAL/COMMERCIAL CONTROLS (IND)

Purpose: To reduce and control industry and commercial discharges to the storm sewer system from runoff and production practices.

Port-IND1: Develop a program to reduce the discharge of pollutants to the stormwater system from existing and developing industries on Port property, particularly focused on those that are not already regulated by other NPDES requirements.

The Port operating areas have been complying with the NPDES industrial stormwater permits since they were issued by DEQ. Table 1 lists the Port tenants that have individual NPDES permits and those that are complying with the stormwater industrial regulations as co-permittees to the operating area permits. All new tenants with ground leases and those with lease updates are encouraged to enter into stormwater use agreements with the Port. New tenants are also required to sign Construction Dewatering Agreements for construction projects that require de-watering and Storage Tank Use Agreements for operation of above ground and underground tanks. During lease negotiations, property inspections are conducted and stormwater permits and BMPs are discussed. Additional control over tenants includes Port Ordinance No. 361, which authorizes the Port to conduct tenant inspections, eliminate illegal connections to the MS4 system, and enact penalties on known violators.

Implemented Activities

As part of the new Environmental Tenant Management Policy, the Port implemented several new procedures that allow the management of tenants in a manner that protects the Port's assets and the environment. These procedures address such topics as coordinating tenant environmental management activities, developing and selecting standard environmental language for tenant agreements (e.g., leases, permits, right-of-entry, easements), increasing communication with and education of tenants, and implementing inspections and audits of tenant facilities. Under these procedures, the Port has already begun adding specific language to new leases and lease renewals that require tenants to provide the Port with information on their stormwater discharge permit status and pollution control plans. Requested information includes permit documentation, DEQ correspondence, monitoring reports, and SWPCPs associated with the property.

Throughout the permit year, the Marine Department continued to conduct tenant inspections for those tenants with inspection requirements in their leases. Annual inspections of tenant facilities for environmental safety and facility maintenance and engineering compliance were performed. In addition several new BMPs related to industrial control were added to the Marine Tenant Program. These BMPs cover such topics as USTs and ASTs (BMP012), air quality (BMP013), asbestos (BMP014), and building and grounds maintenance (BMP017).

Under the Property Mitigation Program, a sediment and water quality monitoring program was implemented to establish baseline conditions on the mitigation sites and to monitor stormwater discharges onto these sites. In addition, the mitigation program initiated several BMPs for improving plant establishment and reducing the use of chemicals in weed control.

ILLICIT DISCHARGES CONTROLS (ILL)

Purpose: To develop a program to investigate, find, and eliminate illicit discharges to the stormwater system (illicit discharges include both illicit connections and illegal dumping).

Port-ILL1: Review required spill response procedures in each operating area. Refine procedures as necessary, including improving interagency coordination.

Spill prevention and response plans have been developed and implemented for PDX and T-6. These operating areas have completed the appropriate level of spill training for relevant personnel. Spill prevention and response training is conduced annually, or as needed (e.g., for new employees), and includes refresher courses to introduce new procedures and techniques. Spill training throughout the Port emphasizes employee responsibility for preventing releases to the storm system and receiving waters.

Emergency response actions have been established for PDX and T-6, and are currently being developed for Properties Department and Corporate headquarters. The Port has on-call environmental response contractors for clean up and containment. The operating areas, as well as ESD, have compiled spill response phone contact lists. ESD, PDX, and Marine Department also operate 24-hour hotlines in order to respond to Port property spills at any time. PDX and T-6 have developed both stationary and mobile spill kits in order to respond to spills occurring at any location on the site. Properties Maintenance personnel also carry similar kits on their vehicles and equipment.

Implemented Activities

Both PDX and Marine Department updated their respective spill response plans during the permit year and provided associated training to staff members. The PDX spill response plan included changing the plan from a more detailed, how-to manual to a plan focused on clean-up responsibilities and the roles of the PDX Maintenance, Fire, Environmental, and Operations Departments. Changes in the Marine Department spill response plan for T-6 reflect recent changes in staff and procedures at that facility and include a refined reporting structure for spill response. Marine Department also re-designed their 24-hour spill hotline so that calls now go directly to the T-6 Security Department, which is located on-site, rather than through the Port's corporate office in downtown Portland.

The Port continued to participate in City training events and attend the City's spill committee meetings during the permit year. Personnel from Marine Department also participated in spill response programs with Maritime Fire and Safety Association and the Clean Rivers Co-op. Written materials regarding spills distributed at these meetings were shared with operating area managers staff, and tenants.

Throughout the permit year, Port tenants continued to be encouraged to develop spill prevention and response plans for their individual facilities. Tenants with Stormwater Use Agreements included in their lease were required to comply with Port SWPCPs, which include BMPs related spill prevention and response procedures.

Port-ILL2: Provide information to employees and tenants on where and how to properly dispose of oil, antifreeze, pesticides, herbicides, paints, solvents, and other potentially harmful materials.

The Port distributes information on hazardous materials training to employees and tenants during regular staff and tenant meetings. Operating areas also provide hazardous waste handling training to their employees, when applicable. The Port's Risk Management group maintains a Port-wide inventory of all hazardous materials used throughout Port operated properties. Education on this BMP is further provided during the monthly BMP Committee meetings at PDX and the quarterly tenant meetings at T-6.

Implemented Activities

During the permit year, the Port continued to distribute relevant hazardous waste information obtained from the City and Metro to operating area staff and tenants. Operating area staff and maintenance groups worked together to improve staff awareness of proper handling, storage, and disposal of hazardous wastes and all Port staff with previous 24- and 40-Hour OSHA HAZWOPER training received refresher courses. Personnel from the Aviation Environmental Group at PDX also received training in field chemistry and attended a de-briefing presented by the Port's Aviation Fire Department for an actual fuel spill at PDX.

PDX continued to use the toluene recovery system that was completed during the previous permit year to separate hazardous waste constituents (toluene) from paint to allow for proper recycling and disposal. Marine Department implemented additional BMPs under its tenant program including policies that addressed underground and aboveground bulk liquid storage tanks (BMP012), asbestos (BMP014), and fumigation and pesticide management (BMP018).

Port-ILL3: Detect and control illicit connections and discharges to the stormwater system.

The written procedures for the IDDRP were finalized during the 1996-1997 permit year and remained in place during 2000-2001. The program is documented in the Port Municipal SWMP, as well as in operating area environmental programs. The program contains the Port's procedures for enforcement of Port Ordinance 361; dry season and wet season field screening; priority and schedule of major outfall inspections; and discharge sampling, tracking, and elimination. Port spill prevention and response procedures are addressed as part of the IDDRP as required by 40 CFR 122.26 (d)(2)(iv)(B); however, the spill response procedures are maintained in separate documents located in the operating areas. The program description also discusses how priority outfalls were identified.

Implemented Activities

The Port continued to compile and review all relevant monitoring data for influence of non-stormwater discharges during the permit year. The operating areas were responsible for conducting wet season runoff observations in accordance with SWPCPs, dry season inspections, and monthly inspections of potential significant material leakage or spillage areas. These inspections, along with stormwater sample collection and analysis, provided information to determine the presence of illicit discharges and their sources. Review of the previous years of inspection data indicates that most non-stormwater discharges were not illicit discharges, but rather permissible discharges, as defined by 40 CFR 122.26 (d)(2)(iv)(B)(1).

The data from the 1996 study and the results from previous inspections were initially used to determine the Port priority outfalls and the schedule for dry season inspections. Outfalls were added or removed from the priority list and inspection schedule throughout the First Permit Term based on new data or inspection results. This being the first year of the Second Permit Term, the dry season monitoring schedule was revised to include the inspection timetable for the next four years (Table 4). Only one new outfall, RG7.25PP at Berth 606 of T-6, was added to this revised schedule during the permit year. PDX requested that two of its outfalls, SS04PP and SS6300, be removed from the monitoring schedule because SS04PP only drains a small area and SS6300 could not be found. Outfalls SE53PP (Tanker Basin), WW77UN (T-1), SJ28PP (T-4), and RG04PP (T-5) were also not found during dry season inspections.

For the 2000-2001 dry season, the operating areas inspected all priority outfalls in their jurisdiction, plus several of the outfalls identified for inspection for the 2001 season. The dry season observation results for the permit year have been compiled and are included as Table 5. If a non-stormwater discharge was observed, the inspection team collected a sample, completed in field screening analysis, and conducted a follow-up investigation. Samples collected from a non-stormwater discharge were analyzed for a list of parameters developed to help identify the source of the possible illicit discharge. Details on non-stormwater discharges observed during the monitoring year are summarized under the Port-OA3 BMP.

Port-ILL4: Reduce the potential for illegal dumping through active property management.

Port operating areas have implemented procedures for dealing with illegal dumping and abandoned waste. Experience has shown that most illegal dumping is the result of tenants abandoning wastes after vacating Port-owned properties. Port methods of abandoned waste removal and property management continue to be effective in reducing this problem.

Implemented Activities

During the permit year, operating areas continued to remove any abandoned solid waste material from Port property and to work with Properties Department to track the potentially responsible parties. Waste materials were disposed of by an environmental contractor or by the regular disposal company, depending on whether the waste was characterized as hazardous or non-hazardous, respectively. Overall, Port facilities had only minor problems with illegal dumping and abandoned waste during the monitoring year.

Where possible, fences and locked gates continued to be used to prevent illegal dumping. In areas where it is not possible to block entrances to the Port property, signs and warnings against illegal dumping continue to be posted. The Properties and PDX Maintenance Departments, along with operating area personnel and other staff members, continue to look for abandoned wastes and respond to incidents as quickly as possible.

Other developments under this BMP include the implementation of the Tenant Environmental Audits and Inspections procedure under the Port's Environmental Tenant Management Policy. This procedure addresses the process for initiating and performing environmental audits and inspections of tenant facilities on Port-owned properties. A provision for exit audits and inspections is included in this procedure, allowing Port personnel to assess actual or potential environmental impacts resulting from tenant activities before a tenant vacates a property. This practice is expected to greatly reduce the problem of abandoned waste on leased properties.

NEW DEVELOPMENT STANDARDS (ND)

Purpose: To ensure that pollutant controls are applied in project planning, during construction phases, and for existing projects.

Port-ND1: Apply practical erosion and sediment controls to reduce pollutant discharges at construction sites on properties being developed by the Port.

Construction activities (i.e., clearing, grading, excavation, and stockpiling) performed by the Port on Port-owned property are covered under an agency-specific 1200-CA NPDES Permit (Permit No. 107018) for construction stormwater discharges. Tenants performing similar activities on Port-owned property are required to obtain individual 1200-C NPDES Permits for such work. These permits were both re-issued by DEQ in February 2001 and cover construction activities that disturb five or more acres of land, or a total of five or more acres of land as part of a phased project or common plan. Within the revised 1200-CA and 1200-C permits, DEQ has included a provision to extend the coverage of this permit to all construction activities that disturb one or more acres, or one or more acres as part of a phased project or common plan, by December 1, 2002. Other permit revisions include the addition of specific requirements for the preparation of Erosion and Sediment Control Plans ("ESCPs") and the performance of routine BMP inspections and maintenance. The erosion control specification for Port Construction projects also references the City of Portland's Erosion Control Manual (effective March 1, 2000).

The Port also holds a Construction Dewatering Discharge NPDES Permit (Permit No. 107220) for the discharge of excavation wastewater at the PDX and PIC facilities. This permit authorizes construction de-watering discharges into the PDX/PIC stormwater system, and eventually the Columbia Slough, and places effluent limitations and conditions on such discharges.

Implemented Activities

In order to enforce the requirements of the revised 1200-CA Permit and incorporate the City of Portland erosion control requirements, the Port developed and implemented a revised engineering specification to be included in all construction contracts. This specification requires contractors to accept and implement project-specific erosion and sediment control measures pre-approved by the Port and City. The control measures are incorporated into the contractors Erosion, Sediment and Pollution Control ("ESPC") plan along with the other required controls and practices that will be implemented during construction. The ESPC plans are upgraded as needed during construction to ensure that sediment, sediment-laden water, and other construction-related pollutants do not leave the site. This differs from the past permit year when the contractor was responsible for preparing the ESCP for Port approval. The specification also includes inspection requirements, which the contractor must follow when performing compliance assessments.

Operating areas continued to conduct erosion control training sessions with Port engineers and construction inspectors and several Port personnel attended the City's annual Erosion Control Manual Training. Erosion control compliance was also addressed in both operating area and Port-wide tenant meetings and in operating area pre-construction meetings, weekly construction meetings, and monthly site inspections with Port Contractors.

Other BMP developments during the permit year included the addition of an erosion prevention and sediment control BMP (BMP011) to the Marine Tenant Program. This BMP focuses on

methods to prevent erosion and reduce the export of sediments from development and construction sites. Emphasis is placed on careful planning and erosion prevention rather that after-the-fact sediment control. Control measures specified in this BMP include those required by the City's Erosion Control Manual and those recommended in the American Association of Port Authorities' ("AAPA") Environmental Management Handbook.

The Construction Dewatering Discharge NPDES Permit was issued to the Port during the 1998-1999 permit year. Throughout the current permit year, ESD and PDX environmental staff have continued to work together to develop permit compliance procedures. PDX environmental staff remained responsible for initial and monthly dewatering, sampling, data compilation, and report submission for PDX projects. ESD provided technical oversight and assistance. Tenant construction projects were also included in the dewatering permit compliance work and were managed by both PDX staff and Properties Department.

For Port projects, dewatering permit compliance procedures included submission of a de-watering plan from the contractor to PDX for review and approval. For tenant projects, a de-watering agreement is written and signed by the Port and the tenant. Dewatering samples are collected before any initial discharge occurs. The initial samples are analyzed for chemical oxygen demand ("COD"), total suspended solids ("TSS"), turbidity, volatile organic compounds ("VOCs"), total petroleum hydrocarbons, pH, and benzene, toluene, ethylbenzene, and xylene ("BETX") concentrations. PDX environmental staff reviewed sampling results, the discharge was treated or discharged to the system. For both Port and tenant projects, PDX environmental staff monitored the discharge monthly at the Port Outfall to the Columbia Slough. Data was submitted monthly to DEQ through January 2001 and semi annually thereafter (in accordance with Modification No.2) as required by the dewatering permit.

STRUCTURAL CONTROLS (STR)

Purpose: To incorporate onsite stormwater quality and transport systems into design standards for new and remodeled development; to evaluate, construct/retrofit, and monitor appropriate stormwater treatment and transport systems for both existing and new development.

Port-STR1: When warranted and appropriate based on available water quality monitoring data, develop procedures for construction, maintenance, and monitoring of water quality facilities.

The Port continues to participate in, and contribute to, projects designed to improve the water quality of the Port and urban jurisdiction stormwater runoff. Structural stormwater control facilities continue to be installed as part of all Port construction projects according to the guidelines set forth in the City's Stormwater Management Manual.

Implemented Activities

During the permit year, the majority of the work on structural stormwater controls on Port-owned properties occurred at PDX with the installation and re-routing of several stormwater control and conveyance structures for the airport's new deicing facility. During deicing events, this facility is designed to re-direct stormwater flows from the existing storm sewer system into a

13 million gallon detention pond or a 2 million gallon tank, depending on the location of the event, using diverters controlled by biological oxygen demand ("BOD") meters. Construction of this facility began in August 2000 and is expected to be complete in May 2002. Work during the permit year included the near completion of both the detention pond and tank and the construction of an associated pump station. Work on the remainder of the system began in June 2001. Other work during the permit year included the repair of two existing stormwater outfalls near Berth 607 at T-6 by encasing the existing corrugated metal pipes with plastic pipe.

Design work on future structural stormwater control facilities during the permit year included the Alderwood Extension Road Project at PIC and the future Toyota Motorsales, Inc. ("Toyota") facility at T-4. The plans for the PIC project, which will be constructed during the 2001-2002 permit year, involve the installation of several new catch basins and Downstream Defender® stormwater pollution control devices. Water quality treatment swales are also proposed for the project. The T-4 project is planned for 2002 and will involve the use of similar types of structural controls and the installation of oil/water separators. Two new stormwater outfalls are also proposed for this project.

PLANNING/SYSTEM PRESERVATION AND DEVELOPMENT (PS)

Purpose: To develop incentives and policies for preservation of natural areas; to modify zoning codes to improve water quality.

While the Port will be developing incentives and policies for the preservation of natural areas, it does not have that authority to modify zoning codes. As a result, the Port has yet to develop any BMPs for this category.

OTHER ACTIVITIES (OA)

Purpose: To ensure program coordination, management, evaluation, and monitoring.

Port-OA1: Coordinate with applicable agencies working on regulatory aspects of water quality protection, including watershed management, combined sewer overflows, solid waste and recycling, and industrial waste and source control. Cooperate with agencies to implement new source or non-point source control practices where water quality data indicate the need for stormwater quality improvement.

The Port is actively involved with a variety of environmental agencies and programs including the Lower Willamette Project, the Lower Columbia Estuary Program, the CSWC, Oregon ACWA, Department of Agriculture, Oregon Department of Transportation, AAAE, Metro Water Resources Policy Advisory Committee, BES Watershed Revegetation Program, Willamette Restoration Initiative, Willamette Urban Endangered Species Act Coordination Group, and DEQ technical advisory committees. The Port also contributes to the Clean River Coalition in coordination with the City and is a member of the Protection Coordinating Committee for the Portland Water Bureau's Columbia South Shore Wellfield Wellhead Protection Program.

Implemented Activities

During the permit year, the Port continued to coordinate with regulatory and other environmental agencies including the U.S. Army Corps of Engineers ("COE"), Oregon Division of State Lands ("DSL"), and BES as part of various wetland mitigation and property enhancement projects. Projects and accomplishments during the permit year are briefly listed below

Radio Towers Wetland Mitigation Site

- Worked with CSWC to finalize mitigation plan
- Worked with COE to obtain CWA Section 404 Permit amendment
- Coordinated with DSL to obtain a Removal-Fill Permit amendment
- Commented on Expo Center Conditional Use Master Plan including their proposed Stormwater Management plans
- Worked with Multnomah County Drainage District ("MCDD") to improve and maintain flood control and drainage ditches on site
- Worked with MCVC to control mosquito populations through bio-control techniques

T5 Mitigation

- Coordinated with COE to obtain CWA Section 404 Permit amendment
- Worked with DSL to obtain a Removal-Fill Permit amendment
- Worked with DEQ to obtain permission for the beneficial use of dredged material in its wetland mitigation sites

Columbia Slough Revegetation Project

- Completed revegetation under the BES-Port Intergovernmental Agreement for ten locations along the Columbia Slough
- Worked with BES and The Nature Conservancy to monitor effects of burning reed canary grass as a technique to improve native seed establishment

Jewett Lake Mitigation Site

- Worked with MCVC to control mosquito populations through bio-control techniques
- Worked with Oregon State Parks to address weed management on Government Island

PIC Mitigation Site

- Worked with MCDD to control vegetation along drainage ditches

Another avenue of inter-agency coordination is the Water Issues Group ("WIG"). The WIG is made up of key Port planning, engineering, environmental and operation staff involved in Port planning and development projects/activities in and around waterways. The group also includes participants from the Multnomah County Drainage District ("MCDD"), a key partner in management of waterways. The purpose of Water Issues meetings is to provide a venue for Port and MCDD information sharing, issue identification and follow-up on water quality issues. Meetings are monthly.

Port-OA2: Promulgate policy and practices to address stormwater pollution issues on all Port property.

The ESD continues to provide policy and program direction to the Port operating areas. Several existing programs including the EMS and Commitments Database, Environmental Water Resources Policy, and Riverbank Management Plan remain in effect and continue to be expanded. New policies such as the Natural Resource Assessment and Management Plan ("NRAMP") and the Environmental Tenant Management Program were also developed.

As in past permit years, the operating areas had the lead role in the development of on-site practices to ensure compliance with stormwater regulations and progress with stormwater pollution prevention goals during the permit year. The ESD provided guidance and motivation to continue stormwater practice development and implementation. New practices were documented and maintained in the operating area SWPCPs or other appropriate stormwater documents. New practices are further described in the appropriate BMP Section.

Implemented Activities

Environmental Management System

Significant elements of the EMS developed and implemented in the past year include: eighteen administrative environmental policies; fifty-six environmental procedures; an Environmental Aspects/Impacts Analysis; fiscal year 2001/2002 Environmental Objectives and Targets; and an Environmental Training Program, among other environmental management plans and guidance documents, studies and activities. Environmental procedures, or business processes that describe how the Port intends to carry out its policies, continue to be developed, implemented and refined.

Aspects/Impacts Analysis

An underlying cornerstone of the Port's EMS is the Environmental Aspects/Impacts Analysis used by Port staff and managers to analyze the organization's environmental aspects and impacts. In the past year, the Port has made an extensive effort to look at the full range of its activities and determine what significant environmental aspects and impacts, if any, can be associated with each activity. This information is used to establish Environmental Objectives and Targets for the organization and to prioritize where the Port will spend its resources. For example, this analysis is used to determine which Port activities significantly impact stormwater so appropriate management practices to control or eliminate these impacts can be identified and put in place.

Environmental Objectives and Targets

In May 2001, the Port formally adopted five Port-wide environmental objectives, and associated targets, for the fiscal year 2001/2002, including: (1) reduce greenhouse emissions, (2) minimize impacts to water quality (including stormwater discharge quality), (3) reduce waste generation and hazardous materials use, (4) minimize impacts to Natural Resources, and (5) implement the EMS. Each objective has between one and four associated quantitative targets, which will be monitored throughout the year as a means to measure the progress made toward meeting the objectives. Corporate and operating area managers have

the responsibility to set their priorities for the year to assure they contribute to meeting these Port-wide objectives and targets.

Environmental Training Program

The Port Environmental Policy commits to informing Port employees, contingent workers and contractors of the Port's EMS, the Port's environmental policies and procedures, its significant environmental aspects and impacts, and its most critical programs and projects. During the winter of 2000/2001, the Port completed an Environmental Training Needs Assessment, which has been adopted and used as the basis for development of the Port's Environmental Training Plan. The Training Plan provides Port managers and supervisors with guidance on how to identify and deliver the environmental training needed by their staff, contingency workers and contractors. Training courses fall into one of three categories: EMS, regulatory-required, or job competency training. During January through March of 2001, the Port provided EMS General Awareness Training to all Port employees and EMS Procedure-Specific Training to impacted employees. (The Port continues to provide EMS General Awareness Training and EMS Procedure-Specific Training to new employees.) Various job and task specific regulatory-required and technical training is continually offered to, and attended by, Port staff and managers.

Commitments Database

To support the EMS, an environmental commitment-tracking database was developed that lists each of the Port's environmental permits and clearly identifies the owner of these permits. The database also includes specific information about the requirements within each permit and tracks the parties responsible for ensuring that these permitting requirements are fulfilled. This database is intended to assist managers with tracking the permits they are responsible for and facilitating compliance with the permits. This past year, all of the Port's environmental and natural resource permits were entered into the database. In addition, Port personnel responsible for the permits and the specific requirements in the permits were trained on how to utilize the database's various search and reporting features.

Environmental Water Resources Policy

One new procedure was also developed under the Environmental Water Resources Policy during the permit year. This procedure addressed the development and use of BMPs in support of water resource programs The purpose of this BMP was to ensure consistency in BMP development, documentation, interpretation, implementation, and evaluation for Port activities that have a potential impact on water resources.

Environmental Planning Policy

Under the Environmental Planning Policy, a procedure for the management of environmental permits was implemented. This procedure was designed to ensure that the Port consistently manages the process of environmental permit acquisition, amendment, maintenance, renewal, expiration, termination, or transfer. The procedure applies to permits issued solely to the Port as well as those where the Port is a co-permittee with another party.

Environmental Tenant Management Policy

The Environmental Tenant Management Policy was also implemented during the permit year. This policy states that the Port will manage tenants in a manner that protects the Port's assets and

the environment, and encourages responsible environmental stewardship with respect to Tenant activities. Under this Policy five specific procedures were developed:

- Coordinating Tenant Environmental Management Activities
- Selecting Standard Environmental Language for Agreements
- Standard Environmental Language for Agreements
- Tenant Communication and Education
- Tenant Environmental Audits and Inspections

All five procedures are currently in use and provide guidance and consistency in how the Port manages tenant issues across all operating areas. A key process that helps accomplish this is the Coordinating Tenant Environmental Management Activities procedure. The purpose of this procedure is to develop a group to serve as a main forum for information exchange on operating area management of Tenant environmental issues. This information exchange encourages consistency for managing Tenant environmental issues including stormwater related issues. This group meets monthly and shares stormwater related information. Accomplishments of group members that were communicated and shared through this group over the past year include:

- Developing standard language for stormwater use agreements (in progress);
- Developing stormwater BMPs with tenants;
- Developing an annual tenant environmental excellence award;
- Developing a tenant lease environmental assessment guidance document (in progress); and
- Developing a stormwater coordination plan for properties at PIC (between operating areas).

Plans for next year include continuation of the coordination group meetings and completion of tasks previously identified. In addition, the group is developing a database of government, trade, and industry BMPs related to stormwater and other issues (e.g., USTs, ASTs). This database will be provided to tenants upon request as a BMP resource. As other issues/questions arise, the coordination team will be utilized to develop consistent Port policy for the tenant program.

Riverbank Management Plan

The Riverbank Management Plan implemented by the Port in 1998 remained in effect throughout the permit year. The purpose of this plan is to integrate environmental planning with land use planning in a new way and to take a more comprehensive view of Marine Terminal infrastructure. The plan includes a Riverbank Survey and Management Plan that includes ongoing monitoring. BMPs are also part of the management plan and provide guidelines and actions for planning, maintenance and construction on, and adjacent to, Marine Department riverbanks. Projects completed under this plan during the permit year included crib wall repair work at Berth 401 (T-4); dock maintenance and erosion repair at Berth 408 (T-4), blackberry removal and re-vegetation at Berth 409 and Wheeler Bay (T-4); and bank stabilization and outfall repairs near Berth 607 (T-6). Future projects include the improvement of Berth 413 at T-4 for the Toyota Project and various maintenance, clean-up, and re-vegetation projects at the other Marine Terminals.

Mitigation Management Program and Plan

The Port of Portland's Mitigation Management Program was initiated in late 1997 to respond to ongoing and proposed mitigation requirements and mandates from various regulatory agencies. By 1997, nine wetland mitigation sites were already in existence, and the three-year monitoring requirement had been completed for one site. During the 2000 calendar year, three new wetland mitigation sites were added (Radio Towers, PIC E-Zone and Northwest Swale) and one IGA for enhancement along the Columbia Slough was signed. The mitigation sites are designed to provide a number of wildlife and community benefits. These include increasing wildlife values by enhancing or creating nesting, foraging and resting habitat; improving connectivity between wildlife areas; improving or restoring wetland hydrological functions; reducing and controlling the spread of invasive weeds; and providing valuable 'greenspace' in a highly urbanized area. The mitigation plan is based on adaptive management techniques and includes a detailed maintenance and monitoring schedule.

Natural Resource Assessment and Management Plan

During 2001, the Port began preparing a Natural Resource Assessment and Management Plan ("NRAMP"). The NRAMP will include the following: an inventory and assessment of the Port's natural resources; an identification of desired future conditions; development of resource and land management strategies; and an identification of resource protection, enhancement, and restoration opportunities for Port properties. Information in the NRAMP will be used to facilitate sound project planning decisions. With regard to water quality and stormwater, the NRAMP will provide a project-planning tool that identifies sensitive resource areas and strategies for impact avoidance, minimization, mitigation, and project design. Information in the NRAMP will be stored in a Geographical Information System ("GIS") database that Port staff will be able to query to determine for example, the suitability of a particular site for a specific use, the likelihood of erosion, existing stormwater controls, adjacent/nearby sensitive resources, and the location of potential stormwater facility sites.

Port-OA3: Monitor stormwater to characterize typical discharges to the Port's municipal system.

The Port Stormwater Monitoring Program was updated and submitted to DEQ in April of 1998. As previously discussed, the completed program components for the Second Permit Term include Industrial Permit stormwater sampling and dry season monitoring. Voluntary stormwater monitoring on selected mitigation sites was also performed during the permit year. The BMP Effectiveness monitoring required during the First Permit Term was concluded during 1999-2000 and was not performed during the permit year. The City has assumed responsibility for collection of the land use characterization data required by the Municipal Permit, with the Port providing financial support for this effort.

Monitoring for the Port's other NPDES stormwater permits including the PDX NPDES Anti-icing/Deicing Discharge Permit, the PDX/PIC NPDES Construction Dewatering Permit, and the Port-wide NPDES Stormwater Discharge General Permit 1200-CA is conducted according to the requirements set forth in those permits. Monitoring information and data is submitted to DEQ in accordance with the specific reporting requirements for each permit and is not included in the Municipal Permit Annual Report.

Implemented Activities

Monitoring accomplished by the Port during the permit year included Industrial Permit compliance monitoring, dry season inspection monitoring, and site-specific monitoring of wetland mitigation sites.

Industrial Stormwater Monitoring

The industrial stormwater samples were collected from representative outfalls at PDX and T-6. The sample analysis represents runoff water quality from a wide range of industrial, commercial, and transportation activities on Port property. Sampling was performed by operating area staff trained in the sampling and data collection procedures of the Port's Municipal SWMP. The Port's stormwater Industrial Permit compliance data are presented in Tables 2a through 3.

Dry Season Monitoring

The Port's 2000-2001 dry season monitoring results are presented in Table 5. Operating area staff collected this information using procedures set forth in the Port's Municipal SWMP. As indicated, flows were observed from eight of the 32 outfalls sampled during dry season conditions. Two of these flows occurred from Industrial Park outfalls (RG15PP and RG18PP), two from PDX outfalls (MDD3 and SS03PP), and the remaining four from Marine Terminal outfalls (SJ25PP, RG13PP, RG10PP, and RG7.5PP). The investigation and follow-up results of these flows are briefly described for each outfall as follows:

RG15PP – A moderate flow observed moving from this outfall into an open channel entering Willamette River was determined to be from a wash water effluent disposal system on an adjacent, non-Port property. Effluent from the equipment washing facility on this adjacent property is sprayed out over an undeveloped field where it infiltrates into the ground. It then enters a ditch drained by outfall RG15PP via lateral seepage through the soil column. Port personnel collected samples from this discharge and had them analyzed at a local laboratory. No significant pollutants were detected The Port Properties Department is currently looking into this discharge and possible ways that it can be eliminated.

RG18PP – A minimal flow between this outfall and Columbia Slough was determined to be groundwater seepage from an adjacent wetland. Samples were collected and analyzed by local laboratory, but no significant pollutants were detected. No additional investigation was considered necessary.

MDD3 – Flow observed between outfall and west quiescent pond was determined to be groundwater inflow/infiltration. No further investigation was required.

SS03PP – Flow from outfall into Columbia Slough determined to be groundwater inflow/infiltration. No further investigation was required.

SJ25PP – The small amount of discharge discovered flowing out of the mouth of this outfall was sampled and the stormwater drainage system was inspected to determine possible sources of the discharge. The inspection led the monitoring team to the upper portion of a tenant's facility where flow was evident within the stormwater system near a carwash and vehicle service building. The carwash was ruled out as a source due to the

direction/location of the flow in the stormwater system. The tenant then conducted a dye test within the vehicle service building to ensure that drains in the building were not flowing into the stormwater sewer system. The test established that the drains were not connected to the stormwater system. Through further investigation, it was concluded that the air conditioning system on the roof of the vehicle service building was the probable source of the discharge. Evidence for this included observations of flow in the upper manholes and outfall mouth during extended periods of heat, while on cool days, no flow was observed at either location. No further action was determined to be necessary.

RG13PP - This outfall was inspected through a manhole because the mouth was partially under water. Within the manhole, flow, including a brown foam-like substance, was observed moving toward the outfall. Since the tenant on this property has a stormwater discharge permit, no sample was taken during the inspection. The tenant was contacted regarding the brown foam and responded that this substance had been sampled several times and found that it is an iron derivative foam common in wetland/filled wetland areas. No further action was found necessary.

RG10PP - Flow observed from outfall was determined to be from a hose from the paint processing room of a tenant's facility that was discharging directly into a Port-owned catch basin. The hose was being used to drain non-contact cooling water from a piece of equipment that recycles solvents for paints. A meeting was held with the tenant to discuss disposal options for this water and it was decided that the water would be reused with in the system rather than discharging it to the storm sewer. The tenant implemented the new system, which was inspected by Marine Department environmental staff and found to be in compliance with the Port's Municipal permit. A follow-up e-mail message documenting the success and approval of the system was later sent to tenant. No further action was deemed necessary.

RG7.5PP - The discharge observed flowing from this outfall was determined to be from a truck had been in the upper drainage area watering for dust suppression. The discharge was determined to be an isolated incident and no further action was taken.

Mitigation Site Stormwater Monitoring

As part of the Property mitigation program, a sediment and water quality monitoring program has been initiated at several mitigation sites to establish baseline conditions and monitor discharges onto the sites. On the Radio Towers site, which receives stormwater discharges from a number of non-Port properties, four sites are being monitored for water quality twice per year and seven sites were tested for sediment quality to establish baseline conditions. Results to date indicate that some oils and grease and DDT have historically entered the property, however stormwater discharges of these contaminants, with the exception of oil and grease, no longer occur onto the property. High levels of phosphorus and coliform bacteria are found in the winter months and this is indicative of the high bird populations that visit the site. Also on this site, the copper wire underground grid system, which was part of the operating infrastructure of the previous landowner, were removed in November 2000 in order to reduce possible leaching of copper into the groundwater. Other properties, including ponds along the rail corridor in southern Rivergate have been tested to establish baseline sediment conditions.

TABLE 1
PORT OF PORTLAND TENANT NPDES PERMIT STATUS

FACILITY	TENANT NAME	CO-PERMITTEE	PERMIT TYPE
Portland International Airport			
	533 MA L.L.C.	Yes	1200-COLS
	AirBC	Yes	1200-COLS, Deicing
	Air Pac	Yes	Deicing
	Airborne Express	Yes	1200-COLS, Deicing
	Aircraft Services International Group	Yes	1200-COLS
	Airport Terminal Services, Inc.	Yes	1200-COLS, Deicing
	Alaska Airlines	Yes	1200-COLS, Deicing
	America West Airlines	Yes	1200-COLS, Deicing
	American Airlines	Yes	1200-COLS, Deicing
	Ameriflight	Yes	1200-COLS, Deicing
	Avis Rent-A-Car	Yes	1200-COLS
	BAX Global	Yes	1200-COLS, Deicing
	Bonneville Power Association	Yes	1200-COLS
	Budget Rent-A-Car	Yes	1200-COLS
	Cargolux	Yes	1200-COLS, Deicing
	Casino Express	Yes	Deicing
	Continental Airlines	Yes	1200-COLS, Deicing
	Delta Airlines, Inc.	Yes	1200-COLS, Deicing
	Dobbs International Services	Yes	1200-COLS
	Emery Worldwide (Cargo)	Yes	1200-COLS, Deicing
	Emery Worldwide Airlines	Yes	1200-COLS, Deicing
	Empire Airlines	Yes	1200-COLS, Deicing
	Evergreen Aviation Ground Logistics, Inc.	Yes	1200-COLS, Deicing
	Evergreen International Airlines	Yes	Deicing
	Express One International	Yes	1200-COLS, Deicing
	Federal Express Corporation	Yes	1200-COLS, Deicing
	Flightcraft, Inc.	Yes	1200-COLS, Deicing
	Frontier Airlines	Yes	1200-COLS, Deicing
	Gategourmet	Yes	1200-COLS
	Harbor Air, Inc.	Yes	1200-COLS, Deicing
	Hawaiian Airlines	Yes	1200-COLS, Deicing
	Hertz Corporation	Yes	1200-COLS
	Horizon Air Industries, Inc.	Yes	1200-COLS, Deicing
	Jet Stream Northwest	Yes	1200-COLS, Deicing
	Kitty Hawk Aircargo, Inc.	Yes	1200-COLS, Deicing
	Korean Air	Yes	Deicing
	LSG/Sky Chefs	Yes	1200-COLS
	National Car Rental	Yes	1200-COLS
	Nippon Cargo Airlines	Yes	1200-COLS, Deicing
	Northwest Airlines	Yes	1200-COLS, Deicing
	Ogden Aviation	Yes	1200-COLS
	Oregon Air National Guard	No No Yes	1200-COLS 1700-A (engine washing) Deicing
	PacifiCorp Trans, Inc.	Yes	1200-COLS
	Portland Fueling Facilities Corp.	Yes	1200-COLS
	Reliant Air	Yes	Deicing
	RSG Forest Products	Yes	1200-COLS

TABLE 1
PORT OF PORTLAND TENANT NPDES PERMIT STATUS (CONT.)

FACILITY	TENANT NAME	CO-PERMITTEE	PERMIT TYPE
Portland International Airport (Cont.)			
	SkyWest Airlines Flight Operations	Yes	1200-COLS, Deicing
	Southwest Airlines	Yes	1200-COLS, Deicing
	Swissport	Yes	1200-COLS
	Trans World Airlines	Yes	1200-COLS, Deicing
	United Airlines	Yes	1200-COLS, Deicing
	United Parcel Service	Yes	1200-COLS, Deicing
	U.S. Postal Service	Yes	1200-COLS
Marine Terminals			
T-1	Bear Springs (Western Intl. Forest Products)	No	None
T-2	Stevedoring Services of America, Inc.	No	1200-Z
T-4	Kinder Morgan Bulk Terminals	No	1200-Z
	International Raw Materials	No	1200-Z
	Cargill	No	None
	Cereal Foods	No	None
	Foss Maritime	No	None
	Toyota Logistics Services, Inc.	No	1200-Z
	Port of Portland	No	1500A
T-5	Alcatel Submarine Networks, Inc.	No	GEN-01
	Portland Bulk Terminals	No	NPDES Permit #101377
	Columbia Grain	No	1200-Z
	Fort James d/b/a Waterways Terminals	No	None
T-6	Port of Portland	No	1200-Z, 1200-COLS, 1200-CA
	Auto Warehousing Company	No	1200-COLS
	Marine Terminals Corporation	No	None
	American Honda Motor Company	No	None
	Hyundai Motor America	No	1200-COLS
Industrial Parks			
Swan Island	Eastern Oregon Fast Freight Truck Line	No	1200-T
Port Center	Freightliner Corporation	No	1200-Z
Portland International Center	Bechtel Infrastructure Corporation	No	GEN-13
Tanker Basin	Chevron USA, Inc.	No	1200-H
	Tosco Corporation	No	GEN-05
	McCall Oil and Chemical Corporation	No	GEN-05

TABLE 2a
PDX 2000-2001 1200-COLS NPDES STORM WATER DISCHARGE PERMIT
SCHEDULE B MONITORING REPORT
Reporting Period: July 1, 2000 – June 30, 2001

Port of Portland
Portland International Airport, Portland, Oregon
File No. 107220

Monitoring Location: PDX Basin No. 1A

Monitoring Parameter	Analytical Method	Method Reporting Limit	Bench-mark	Fall Sampling Event [1] (10/20/00)	Spring Sampling Event [1] (3/16/01)
Concentrations in Milligrams per Liter (mg/L)					
General Chemistry:					
Total Suspended Solids (TSS)	EPA 160.2	5	50	27	19
Total Phosphorus	EPA 365.3	0.01	0.16	0.31	0.19
E. Coli	SM 9223B	1.1 Units: MPN/100ml	406 counts/ 100 ml	921	308
Biochemical Oxygen Demand 5 (BOD5)	EPA 405.1	4	33	7	ND
Oil and Grease	NWTPH-Dx[2]	0.25 Diesel Range	10	ND	0.250 Z
		0.50 Heavy Oil Range		ND	ND
pH	150.1	0 – 14 SU	6.5-8.5 SU	6.8[3]	7.1[3]
Metals:					
Copper, Total	EPA 200.7	0.010	0.036	ND	ND
Lead, Total	EPA 239.2	0.002	0.006	0.002	ND
Zinc, Total	EPA 200.7	0.010	0.24	0.030	0.056

[1] Chemical analyses performed by Columbia Analytical Services, Inc., Kelso, WA
[2] NWTPH-Dx analysis conducted without organic cleanup
[3] pH measured in field using a Oakton ® pHTestr 2 meter and is reported in standard pH units.

ND = Not detected at the method reporting limit
N/A = Not applicable or not established
Z = The chromatographic fingerprint does not resemble a petroleum product

TABLE 2b
PDX 2000-20011200-COLS NPDES STORM WATER DISCHARGE PERMIT
SCHEDULE B MONITORING REPORT
Reporting Period: July 1, 2000 – June 30, 2001

Port of Portland
Portland International Airport, Portland, Oregon
File No. 107220

Monitoring Location: PDX Basin No. 1B

Monitoring Parameter	Analytical Method	Method Reporting Limit	Bench-mark	Fall Sampling Event [1] (10/20/00)	Spring Sampling Event [1] (3/16/01)
Concentrations in Milligrams per Liter (mg/L)					
General Chemistry:					
Total Suspended Solids (TSS)	EPA 160.2	5	50	6	18
Total Phosphorus	EPA 365.3	0.01	0.16	0.14	0.38
E. Coli	SM 9223B	1.1 Units: MPN/100ml	406 counts/ 100 ml	1050	ND
Biochemical Oxygen Demand 5 (BOD5)	EPA 405.1	4	33	ND	ND
Oil and Grease	NWTPH-Dx[2]	0.25 Diesel Range	10	ND	ND
		0.50 Heavy Oil Range		ND	ND
pH	150.1	0 – 14 SU	6.5-8.5 SU	6.5[3]	7.1[3]
Metals:					
Copper, Total	EPA 200.7	0.010	0.036	ND	ND
Lead, Total	EPA 239.2	0.002	0.006	0.004	0.003
Zinc, Total	EPA 200.7	0.010	0.24	0.024	0.020

[1] Chemical analyses performed by Columbia Analytical Services, Inc., Kelso, WA
[2] NWTPH-Dx analysis conducted without organic cleanup
[3] pH measured in field using a Oakton ® pHTestr 2 meter and is reported in standard pH units.

ND = Not detected at the method reporting limit
N/A = Not applicable or not established

TABLE 2c
PDX 2000-20011200-COLS NPDES STORM WATER DISCHARGE PERMIT
SCHEDULE B MONITORING REPORT
Reporting Period: July 1, 2000 – June 30, 2001

Port of Portland
Portland International Airport, Portland, Oregon
File No. 107220

Monitoring Location: PDX Basin No. 2

Monitoring Parameter	Analytical Method	Method Reporting Limit	Bench-mark	Fall Sampling Event[1] (10/20/00)	Spring Sampling Event [1] (3/16/01)
Concentrations in Milligrams per Liter (mg/L)					
General Chemistry:					
Total Suspended Solids (TSS)	EPA 160.2	5	50	26	13
Total Phosphorus	EPA 365.3	0.01	0.16	1.18	0.28
E. Coli	SM 9223B	1.1 Units: MPN/100ml	406 counts/ 100 ml	165	120
Biochemical Oxygen Demand 5 (BOD5)	EPA 405.1	4	33	5	6
Oil and Grease	NWTPH-Dx[2]	0.25 Diesel Range	10	ND	1.20 Z
		0.50 Heavy Oil Range		ND	1.50 Y
pH	150.1	0 – 14 SU	6.5-8.5 SU	6.6[3]	7.4[3]
Metals:					
Copper, Total	EPA 200.7	0.010	0.036	ND	ND
Lead, Total	EPA 239.2	0.002	0.006	0.002	ND
Zinc, Total	EPA 200.7	0.010	0.24	0.043	0.068

[1] Chemical analyses performed by Columbia Analytical Services, Inc., Kelso, WA
[2] NWTPH-Dx analysis conducted without organic cleanup
[3] pH measured in field using a Oakton ® pHTestr 2 meter and is reported in standard pH units.

ND = Not detected at the method reporting limit
N/A = Not applicable or not established
Z = The chromatographic fingerprint does not resemble a petroleum product
Y = The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard

TABLE 2d
PDX 2000-20011200-COLS NPDES STORM WATER DISCHARGE PERMIT
SCHEDULE B MONITORING REPORT
Reporting Period: July 1, 2000 – June 30, 2001

Port of Portland
Portland International Airport, Portland, Oregon
File No. 107220

Monitoring Location: PDX Basin No. 4

Monitoring Parameter	Analytical Method	Method Reporting Limit	Bench-mark	Fall Sampling Event[1] (10/20/00)	Spring Sampling Event [1] (3/16/01)
Concentrations in Milligrams per Liter (mg/L)					
General Chemistry:					
Total Suspended Solids (TSS)	EPA 160.2	5	50	8	10
Total Phosphorus	EPA 365.3	0.01	0.16	0.08	0.10
E. Coli	SM 9223B	1.1 Units: MPN/100ml	406 counts/ 100 ml	179	4
Biochemical Oxygen Demand 5 (BOD5)	EPA 405.1	4	33	ND	5
Oil and Grease	NWTPH-Dx[2]	0.25 Diesel Range	10	0.310 Z	0.590 Z
		0.50 Heavy Oil Range		ND	ND
pH	150.1	0 – 14 SU	6.5-8.5 SU	7.2[3]	7.4[3]
Metals:					
Copper, Total	EPA 200.7	0.010	0.036	ND	0.012
Lead, Total	EPA 239.2	0.002	0.006	ND	0.002
Zinc, Total	EPA 200.7	0.010	0.24	0.032	0.064

[1] Chemical analyses performed by Columbia Analytical Services, Inc., Kelso, WA
[2] NWTPH-Dx analysis conducted without organic cleanup
[3] pH measured in field using a Oakton ® pHTestr 2 meter and is reported in standard pH units.

ND = Not detected at the method reporting limit
N/A = Not applicable or not established
Z = The chromatographic fingerprint does not resemble a petroleum product

TABLE 2e
PDX 2000-20011200-COLS NPDES STORM WATER DISCHARGE PERMIT
SCHEDULE B MONITORING REPORT
Reporting Period: July 1, 2000 – June 30, 2001

Port of Portland
Portland International Airport, Portland, Oregon
File No. 107220

Monitoring Location: PDX Basin No. 5

Monitoring Parameter	Analytical Method	Method Reporting Limit	Bench-mark	Fall Sampling Event[1] (10/20/00)	Spring Sampling Event [1] (3/16/01)
Concentrations in Milligrams per Liter (mg/L)					
General Chemistry:					
Total Suspended Solids (TSS)	EPA 160.2	5	50	32	8
Total Phosphorus	EPA 365.3	0.01	0.16	0.36	0.79
E. Coli	SM 9223B	1.1 Units: MPN/100ml	406 counts/ 100 ml	501	1
Biochemical Oxygen Demand 5 (BOD5)	EPA 405.1	4	33	ND	5
Oil and Grease	NWTPH-Dx[2]	0.25 Diesel Range	10	ND	0.500 Z 0.260[4] Y (05/16/01) 0.300[4] (12/22/00) ND[4] (09/21/01)
		0.50 Heavy Oil Range		ND	0.680 Z 0.570[4] (05/16/010) 0.630[4] (12/22/00) ND[4] (09/21/01)
pH	150.1	0 – 14 SU	6.5-8.5 SU	7.1[3]	7.4 [3]
Metals:					
Copper, Total	EPA 200.7	0.010	0.036	0.016	ND
Lead, Total	EPA 239.2	0.002	0.006	0.009	ND
Zinc, Total	EPA 200.7	0.010	0.24	0.074	0.044

[1] Chemical analyses performed by Columbia Analytical Services, Inc., Kelso, WA
[2] NWTPH-Dx analysis conducted without organic cleanup
[3] pH measured in field using a Oakton ® pHTestr 2 meter and is reported in standard pH units.
[4] Monitoring in response to sheen noted during routine monthly inspections

ND = Not detected at the method reporting limit
N/A = Not applicable or not established
Y = The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard
Z = The chromatographic fingerprint does not resemble a petroleum product

TABLE 2f
PDX 2000-20011200-COLS NPDES STORM WATER DISCHARGE PERMIT
SCHEDULE B MONITORING REPORT
Reporting Period: July 1, 2000 – June 30, 2001

Port of Portland
Portland International Airport, Portland, Oregon
File No. 107220

Monitoring Location: PDX Basin No. 6

Monitoring Parameter	Analytical Method	Method Reporting Limit	Bench-mark	Fall Sampling Event[1] (10/20/00)	Spring Sampling Event [1] (3/16/01)
Concentrations in Milligrams per Liter (mg/L)					
General Chemistry:					
Total Suspended Solids (TSS)	EPA 160.2	5	50	10	15
Total Phosphorus	EPA 365.3	0.01	0.16	0.13	0.32
E. Coli	SM 9223B	1.1 Units: MPN/100ml	406 counts/ 100 ml	214	6
Biochemical Oxygen Demand 5 (BOD5)	EPA 405.1	4	33	27	7
Oil and Grease	NWTPH-Dx[2]	0.25 Diesel Range	10	ND	0.560 Z
		0.50 Heavy Oil Range		ND	ND
pH	150.1	0 – 14 SU	6.5-8.5 SU	7.1[3]	7.3[3]
Metals:					
Copper, Total	EPA 200.7	0.010	0.036	ND	ND
Lead, Total	EPA 239.2	0.002	0.006	0.015	ND
Zinc, Total	EPA 200.7	0.010	0.24	0.051	0.047

[1] Chemical analyses performed by Columbia Analytical Services, Inc., Kelso, WA
[2] NWTPH-Dx analysis conducted without organic cleanup
[3] pH measured in field using a Oakton ® pHTestr 2 meter and is reported in standard pH units.

ND = Not detected at the method reporting limit
N/A = Not applicable or not established
Z = The chromatographic fingerprint does not resemble a petroleum product

TABLE 2g
PDX 2000-20011200-COLS NPDES STORM WATER DISCHARGE PERMIT
SCHEDULE B MONITORING REPORT
Reporting Period: July 1, 2000 – June 30, 2001

Port of Portland
Portland International Airport, Portland, Oregon
File No. 107220

Monitoring Location: PDX Basin No. 7

Monitoring Parameter	Analytical Method	Method Reporting Limit	Bench-mark	Fall Sampling Event[1] (10/20/00)	Spring Sampling Event [1] (3/16/01)
Concentrations in Milligrams per Liter (mg/L)					
General Chemistry:					
Total Suspended Solids (TSS)	EPA 160.2	5	50	16	13
Total Phosphorus	EPA 365.3	0.01	0.16	0.22	0.22
E. Coli	SM 9223B	1.1 Units: MPN/100ml	406 counts/ 100 ml	>2420	8
Biological Oxygen Demand 5 (BOD5)	EPA 405.1	4	33	ND	ND
Oil and Grease	NWTPH-Dx[2]	0.25 Diesel Range	10	ND	0.470 Z
		0.50 Heavy Oil Range		0.520 O	0.880 Z
pH	150.1	0 – 14 SU	6.5-8.5 SU	7.0[3]	7.2[3]
Metals:					
Copper, Total	EPA 200.7	0.010	0.036	ND	ND
Lead, Total	EPA 239.2	0.002	0.006	0.002	0.002
Zinc, Total	EPA 200.7	0.010	0.24	0.074	0.084

[1] Chemical analyses performed by Columbia Analytical Services, Inc., Kelso, WA
[2] NWTPH-Dx analysis conducted without organic cleanup
[3] pH measured in field using a Oakton ® pHTestr 2 meter and is reported in standard pH units.

ND = Not detected at the method reporting limit
N/A = Not applicable or not established
Z = The chromatographic fingerprint does not resemble a petroleum product
O = The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard

TABLE 2h
PDX 2000-20011200-COLS NPDES STORM WATER DISCHARGE PERMIT
SCHEDULE B MONITORING REPORT
Reporting Period: July 1, 2000 – June 30, 2001

Port of Portland
Portland International Airport, Portland, Oregon
File No. 107220

Monitoring Location: PDX Basin No. 8

Monitoring Parameter	Analytical Method	Method Reporting Limit	Bench-mark	Fall Sampling Event[1] (10/20/00)	Spring Sampling Event [1] (3/16/01)
Concentrations in Milligrams per Liter (mg/L)					
General Chemistry:					
Total Suspended Solids (TSS)	EPA 160.2	5	50	71	16
Total Phosphorus	EPA 365.3	0.01	0.16	0.26	0.13
E. Coli	SM 9223B	1.1 Units: MPN/100ml	406 counts/ 100 ml	228	76
Biochemical Oxygen Demand 5 (BOD5)	EPA 405.1	4	33	5	ND
Oil and Grease	NWTPH-Dx[2]	0.25 Diesel Range	10	ND	ND
		0.50 Heavy Oil Range		ND	ND
pH	150.1	0 – 14 SU	6.5-8.5 SU	7.2	7.5[3]
Metals:					
Copper, Total	EPA 200.7	0.010	0.036	ND	ND
Lead, Total	EPA 239.2	0.002	0.006	0.002	ND
Zinc, Total	EPA 200.7	0.010	0.24	0.022	0.018

[1] Chemical analyses performed by Columbia Analytical Services, Inc., Kelso, WA
[2] NWTPH-Dx analysis conducted without organic cleanup
[3] pH measured in field using a Oakton ® pHTestr 2 meter and is reported in standard pH units.

ND = Not detected at the method reporting limit
N/A = Not applicable or not established

TABLE 2i
PDX 2000-20011200-COLS NPDES STORM WATER DISCHARGE PERMIT
SCHEDULE B MONITORING REPORT
Reporting Period: July 1, 2000 – June 30, 2001

Port of Portland
Portland International Airport, Portland, Oregon
File No. 107220

Monthly Temperature Monitoring Data

Date	Sample Site	Sample Temp (F)	Qualifier
7/19/00	DB1A		No Flow
7/19/00	DB1B	73	
7/19/00	DB2	74	
7/19/00	DB4	70	
7/19/00	DB5	69	
7/19/00	DB7		No Flow
7/21/00	DB6	77	
7/21/00	DB8		No Flow
7/21/00	DB9A	65	
7/21/00	DB9B		No Flow
8/28/00	DB1A		No Flow
8/28/00	DB1B	62.6	
8/28/00	DB2	63.4	
8/28/00	DB4	62.2	
8/28/00	DB5		No Flow
8/28/00	DB6	65.3	
8/28/00	DB7		No Flow
8/28/00	DB8	64.6	
8/28/00	DB9A		No Flow
8/28/00	DB9B		No Flow
9/21/00	DB1A		No Flow
9/21/00	DB1B	62.2	
9/21/00	DB2		No Flow
9/21/00	DB4	64.5	
9/21/00	DB5	65.1	
9/21/00	DB6	64	
9/21/00	DB7		No Flow

TABLE 2j
PDX 2000-20011200-COLS NPDES STORM WATER DISCHARGE PERMIT
SCHEDULE B MONITORING REPORT
Reporting Period: July 1, 2000 – June 30, 2001

Port of Portland
Portland International Airport, Portland, Oregon
File No. 107220

Monthly Temperature Monitoring Data

Date	Sample Site	SampleTemp(F)	Qualifier
9/21/00	DB8	63.4	
9/21/00	DB9A		No Flow
9/21/00	DB9B		No Flow
10/18/00	DB1A	61.5	
10/18/00	DB1B	61.3	
10/18/00	DB2	61.2	
10/18/00	DB4	61.9	
10/18/00	DB5	60.8	
10/18/00	DB6	61.3	
10/18/00	DB8		No Flow
10/18/00	DB9A	61.7	
10/18/00	DB9B		No Flow
10/24/00	DB7	60.8	
11/18/00	DB2	42.1	
11/18/00	DB4	41	
11/18/00	DB5	52.7	
11/18/00	DB6	44.2	
11/18/00	DB7	56.3	
11/22/00	DB1A		No Flow
11/22/00	DB1B	40.6	
11/30/00	DB8	43.7	
11/30/00	DB9A	44.8	
11/30/00	DB9B		No Flow
12/6/00	DB1A	54.7	
12/6/00	DB1B	43.3	
12/6/00	DB2	44.2	
12/6/00	DB4	43.7	

TABLE 2k
PDX 2000-20011200-COLS NPDES STORM WATER DISCHARGE PERMIT
SCHEDULE B MONITORING REPORT
Reporting Period: July 1, 2000 – June 30, 2001

Port of Portland
Portland International Airport, Portland, Oregon
File No. 107220

Monthly Temperature Monitoring Data

Date	Sample Site	Sample Temp (F)	Qualifier
2/6/00	DB5		No Flow
12/6/00	DB6	47.7	
12/6/00	DB6	55.4	
12/19/00	DB8	57.6	
12/19/00	DB9A	42.1	
12/19/00	DB9B	42.1	
1/4/01	DB2	46.6	
1/4/01	DB4	44.4	
1/4/01	DB5	51.1	
1/4/01	DB6	57.6	
1/4/01	DB7	52.7	
1/4/01	DB8	46.8	
1/23/01	DB9B		No Flow
1/31/01	DB1A	50.9	
1/31/01	DB1B	46.9	
1/31/01	DB9A	45.5	
2/14/01	DB1A		No Flow
2/14/01	DB1B		No Flow
2/14/01	DB2	44.1	
2/14/01	DB4	42.6	
2/14/01	DB6	43.7	
2/14/01	DB7	51.6	
2/26/01	DB5		No Flow
2/26/01	DB8	46.6	
2/26/01	DB9A		No Flow
2/26/01	DB9B		No Flow
3/15/01	DB2	48.6	

TABLE 2l
PDX 2000-20011200-COLS NPDES STORM WATER DISCHARGE PERMIT
SCHEDULE B MONITORING REPORT
Reporting Period: July 1, 2000 – June 30, 2001

Port of Portland
Portland International Airport, Portland, Oregon
File No. 107220

Monthly Temperature Monitoring Data

Date	Sample Site	Sample Temp (F)	Qualifier
3/15/01	DB6	50.5	
3/15/01	DB7	48.4	
3/22/01	DB1A		No Flow
3/22/01	DB1B		No Flow
3/22/01	DB4	49.1	
3/22/01	DB5		No Flow
3/22/01	DB8	62.4	Other-stagnant
3/22/01	DB9A		No Flow
3/22/01	DB9B		No Flow
4/25/01	DB2	59.2	
4/25/01	DB4	62.6	
4/25/01	DB5	63.5	
4/25/01	DB6	65.3	
4/25/01	DB7	59.9	
4/26/01	DB8	58.6	
4/26/01	DB9A		No Flow
4/26/01	DB9B		No Flow
4/30/01	DB1A	54.1	
4/30/01	DB1B	57.9	
5/30/01	DB1A		No Flow
5/30/01	DB1B	57.9	
5/30/01	DB2	63.5	
5/30/01	DB4	65.3	
5/30/01	DB5		No Flow
5/31/01	DB6	68.9	
5/31/01	DB7		No Flow
5/31/01	DB8		No Flow
5/31/01	DB9A		No Flow

TABLE 2m
PDX 2000-20011200-COLS NPDES STORM WATER DISCHARGE PERMIT
SCHEDULE B MONITORING REPORT
Reporting Period: July 1, 2000 – June 30, 2001

Port of Portland
Portland International Airport, Portland, Oregon
File No. 107220

Monthly Temperature Monitoring Data

Date	Sample Site	SampleTemp (F)	Qualifier
5/31/01	DB9B		No Flow
6/12/01	DB1A	58.5	
6/12/01	DB1B	65.3	
6/12/01	DB2	61.5	
6/12/01	DB4	62.2	
6/12/01	DB5	59.9	
6/12/01	DB6	62.4	
6/14/01	DB6	61	
6/14/01	DB8	66.4	
6/14/01	DB9A	62.2	
6/14/01	DB9B		No Flow

TABLE 2n
PDX 2000-20011200-COLS NPDES STORM WATER DISCHARGE PERMIT
SCHEDULE B MONITORING REPORT
Reporting Period: July 1, 2000 – June 30, 2001

Port of Portland
Portland International Airport, Portland, Oregon
File No. 107220

Sampling Conducted under Permit. No. 101588 - Construction Dewatering

Basin	**Date**	**pH** (SU)	**TSS** (mg/L)	**Oil and Grease** (mg/L)
Analytical Method		Measured in field using Oakton pHTestr 2	EPA 160.2	(NWTPH-Dx)
Method Reporting Limit		N/A	5	0.75
5	7/31/00	7.5	9	ND
8	7/19/00	7.7	ND	ND
5	8/11/00	7.4	12	ND
5	8/14/00	N/A	14	N/A
5	9/28/00	7.4	31	ND
5	10/19/00	7.4	8	ND

ND = Analyte not detected at or above the reporting limit
N/A = Not applicable

TABLE 2o
PDX 2000-20011200-COLS NPDES STORMWATER DISCHARGE PERMIT
SCHEDULE B MONITORING REPORT
Reporting Period: July 1, 2000 – June 30, 2001

Port of Portland
Portland International Airport, Portland, Oregon
File No. 107220

Sampling Conducted under Permit. No. 101647 - Deicing

Basin No.	Sampling Date	Biochemical Oxygen Demand (mg/L)
002	11/08/00	8
004	11/08/00	8
006	11/08/00	22
002	11/22/00	4 U
004	11/22/00	6
006	11/22/00	8
002	12/6/00	4 U
004	12/6/00	5
006	12/6/00	4 U
002	12/19/00	33
004	12/19/00	40
006	12/19/00	8
002	1/4/01	34
004	1/4/01	13
006	1/4/01	19
002	1/19/01	95
004	1/19/01	55
006	1/19/01	281
002	1/31/01	29
004	1/31/01	8
006	1/31/01	137
002	2/14/01	4 U
004	2/14/01	4
006	2/14/01	4 U
002	2/28/01	4 U
004	2/28/01	11
006	2/28/01	9
002	03/15/01	10
004	03/15/01	5
006	03/15/01	9
002	03/26/01	4 U
004	03/26/01	5
006	03/26/01	11

U = analyte included in the analysis, but not detected J = estimated Value

TABLE 2p
PDX 2000-20011200-COLS NPDES STORMWATER DISCHARGE PERMIT
SCHEDULE B MONITORING REPORT
Reporting Period: July 1, 2000 – June 30, 2001

Port of Portland
Portland International Airport, Portland, Oregon
File No. 107220

Sampling Conducted under Permit. No. 101647 - Deicing

	Sample ID: Day: Date: Sample Type:	**Bioassay 2** **Day 4** **12/18/2000** **Grab**	**Bioassay 3** **Day 6** **12/20/2000** **Grab**
Conventional Parameters (mg/L, NTU)			
	Biochemical Oxygen Demand	9	15
	Solids, Total Suspended	35	15
Total Petroleum Hydrocarbons (µg/L)			
	Diesel Range Organics	100 J	100 BJ
	Residual Range Organics	200 J	100 J

Notes: µg/L = micrograms per liter mg/L = milligrams per liter
U = compound not detected
B = analyte found in associated method blank
J = estimated concentration

Temperature Results (°Farenheit)
Port of Portland Deicing Project

Date Sampled	Sample Type	Station 001	002	004	006	07N	07W
11/8/00	Biweekly	51.08	51.26	50.36	51.08	52.88	55.58
11/22/00	Biweekly	40.28	42.08	41	44.24	56.3	56.3
12/6/00	Biweekly	40.64	44.42	43.7	47.66	55.4	53.42
12/13/00	Event	36.86	41.18	38.84	45.86	47.84	54.32
12/14/00	Event	35.06	44.06	40.64	45.14	48.92	51.44
12/15/00	Bioassay				44.6		
12/15/00	Event	40.1	44.6	43.34	44.78	46.58	46.94
12/18/00	Bioassay				45.86		
12/19/00	Biweekly	41.9	43.16	41.54	47.12	51.62	51.62
12/20/00	Bioassay				46.58		
1/4/01	Biweekly	42.98	46.58	44.42	50.18	51.44	54.32
1/19/01	Biweekly	42.62	44.78	42.8	45.68	48.74	53.06
1/31/01	Biweekly	42.08	45.68	43.7	46.58	52.7	51.62
2/14/01	Biweekly	42.44	44.06	42.62	43.7	52.16	52.7
2/28/01	Biweekly	47.12	46.4	47.12	51.8	52.52	53.06
3/15/01	Biweekly	49.1	48.56	49.1	50.54	48.56	53.06
3/26/01	Biweekly	54.14	51.98	53.78	53.78	53.42	54.14
4/12/01	Biweekly	51.26	50	51.08	50.9	52.16	51.44
4/25/01	Biweekly	71.24	59.18	62.6	65.3	59.9	55.58

TABLE 2q
PDX 2000-20011200-COLS NPDES STORM WATER DISCHARGE PERMIT
SCHEDULE B MONITORING REPORT
Reporting Period: July 1, 2000 – June 30, 2001

Port of Portland
Portland International Airport, Portland, Oregon
File No. 107220

Sampling Conducted in response to Storm Water Incident Reports

Basin	Date	pH EPA Method 150.1
6	1/30/01	7.5 SU

Measured in field using Oakton pHTestr 2

TABLE 3
T-6 2000-2001 1200-Z NPDES STORMWATER DISCHARGE PERMIT
INDUSTRIAL STORMWATER MONITORING REPORT

T-6 Location **Manhole 1** Outfall L (B605)	**Parameters**	**EPA Method**	**MRL**	**Permit Benchmark**	**1st Sampling 9-Oct-00**	**2nd Sampling 15-May-01**
	TSS	160.2	5	130 mg/L	48 mg/L	12 mg/L
	pH			5.5 - 9 S.U.	6.74	6.56
	Oil and Grease	1664	5	10 mg/L	4 mg/L	ND
	Total Copper	6010B	0.010	0.1 mg/L	0.02 mg/L	0.018 mg/L
	Total Lead	7421	0.002	0.4 mg/L	0.017 mg/L	0.004 mg/L
	Total Zinc	6010B	0.010	0.6 mg/L	0.43 mg/L	0.219 mg/L
	Foam/Debris			No Visible	No Visible	No Visible
	Oil/Grease Sheen			No Visible	No Visible	No Visible

T-6 Location **Manhole 2** Outfall M (CDC)	**Parameters**	**EPA Method**	**MRL**	**Permit Benchmark**	**1st Sampling 9-Oct-00**	**2nd Sampling 15-May-01**
	TSS	160.2	5	130 mg/L	18 mg/L	33 mg/L
	pH			5.5 - 9 S.U.	6.74	6.44
	Oil and Grease	1664	5	10 mg/L	ND	ND
	Total Copper	6010B	0.010	0.1 mg/L	ND	0.016 mg/L
	Total Lead	7421	0.002	0.4 mg/L	0.004 mg/L	0.006 mg/L
	Total Zinc	6010B	0.010	0.6 mg/L	0.29 mg/L	0.088 mg/L
	Foam/Debris			No Visible	No Visible	No Visible
	Oil/Grease Sheen			No Visible	No Visible	No Visible

T-6 Location **Manhole 3** Outfall O (B603)	Parameters	**EPA Method**	MRL	**Permit Benchmark**	**1st Sampling 9-Oct-00**	**2nd Sampling 15-May-01**
	TSS	160.2	5	130 mg/L	106 mg/L	73 mg/L
	pH			5.5 - 9 S.U.	7.22	7.06
	Oil and Grease	1664	5	10 mg/L	3.7 mg/L	ND
	Total Copper	6010B	0.010	0.1 mg/L	0.026 mg/L	0.020 mg/L
	Total Lead	7421	0.002	0.4 mg/L	0.052 mg/L	0.025 mg/L
	Total Zinc	6010B	0.010	0.6 mg/L	0.387 mg/L	0.224 mg/L
	Foam/Debris			No Visible	No Visible	No Visible
	Oil/Grease Sheen			No Visible	No Visible	No Visible

TABLE 3
T-6 2000-2001 1200-Z NPDES STORMWATER DISCHARGE PERMIT
INDUSTRIAL STORMWATER MONITORING REPORT (CONT.)

T-6 Location **Manhole 4** Outfall K (B606)	Parameters	**EPA Method**	MRL	**Permit Benchmark**	**1st Sampling 9-Oct-00**	**2nd Sampling 15-May-01**
	TSS	160.2	5	130 mg/L	21 mg/L	16 mg/L
	pH			5.5 - 9 S.U.	6.68	6.38
	Oil and Grease	1664	5	10 mg/L	3.2 mg/L	ND
	Total Copper	6010B	0.010	0.1 mg/L	ND	0.010 mg/L
	Total Lead	7421	0.002	0.4 mg/L	0.008 mg/L	0.004 mg/L
	Total Zinc	6010B	0.010	0.6 mg/L	0.408 mg/L	0.230 mg/L
	Foam/Debris			No Visible	No Visible	No Visible
	Oil/Grease Sheen			No Visible	No Visible	No Visible

TABLE 4
DRY SEASON STORMWATER OUTFALL INSPECTION SCHEDULE

OPERATING AREA	OUTFALL	OUTFALL OWNER	OUTFALL LOCATION	PRIORITY OUTFALL	2001	2002	2003	2004
PDX	MDD2*	MCDD	30” adjacent to MCDD pump station MDD2 N side of Col. Slough – Basin 1	Yes (not inspected at outfall)	X	X	X	X
PDX	MDD3**	MCDD	30” adjacent to MCDD pump station MDD3 north side of Col. Slough – Basin 2	Yes (not inspected at outfall)	X	X	X	X
PDX	SSO4PP	Port	30” NE 47th & Cornfoot N side of Col. Slough – Basin 3	No		X		
PDX	SS03PP	Port	48” West of Airtrans across Cornfoot from Central Quiescent Pond – Basin 4	Yes	X	X	X	X
PDX	SS12500	Port	54” W of NE 55th bridge at Cornfoot, N side of Col Slough – Basin 5	Yes	X	X	X	X
PDX	POPE1***	Port	60” E of NE 55th bridge at Cornfoot, N side of Col Slough – Basin 6	Yes (not inspected at outfall)	X	X	X	X
PDX	SS12200**** (MDD6)	MCDD	60” E of NE Alderwood, N side of Col Slough – Basin 7	Yes (not inspected at outfall)	X	X	X	X
PDX	SS12200	Port/City	48” NE 92nd, W of bridge, N side of Col. Slough – Basin 8	Yes	X	X	X	X
PDX	MCDD 72”	MCDD	72” MCDD outfall on Glass Plant Road	Yes	X	X	X	X
PDX	SS6300	Port	Carl Street, PDX	No				
Marine, T-2	BC50PP	Port	N of Warehouse 203, T-2 N	No	X		X	
Marine, T-2	BC54PP	Port	Between Berths 204 & 205, T-2 S	No		X		X
Marine, T-4	SJ25PP	Port	Berth 415, T-4	Yes	X	X	X	X
Marine, T-4	SJ23PP	Port	N of Berth 415, T-4	No			X	
Marine, T-4	SJ27PP	Port	Berth 416, T-4	No	X			X
Marine, T-4	SJ15PP	Port	Berth 405, under pier	No		X		
Marine, T-4	SJ19PP	Port	Berth 411, Pier 2, Berth 410, T-4	No	X			X
Marine, T-4	SJ20PP	Port	Beth 411, T-4, under pier	No		X		
Marine, T-4	SJ13PP	Port	Berth 401, T-4	No			X	

TABLE 4
DRY SEASON STORMWATER OUTFALL INSPECTION SCHEDULE (CONT.)

OPERATING AREA	OUTFALL	OUTFALL OWNER	OUTFALL LOCATION	PRIORITY OUTFALL	2001	2002	2003	2004
Marine, T-4	SJ26PP	Port	Berth 416, T-4	No		X		
Marine, T-4	SJ24PP	Port	Berth 414, T-4	No	X			X
Marine, T-4	SJ17PP	Port	S of Berth 405, T-4	No		X		
Marine, T-4	SJ21PP	Port	Berth 411, T-4	No			X	
Marine, T-4	SJ22PP	Port	Berth 414 N, T-4	No			X	
Marine, T-4	SJ18PP	Port	S of Berth 405, T-4, under pier	No	X			X
Marine, T-4	SJ14PP	Port	Between Berths 401 & 403	No	X			X
Marine, T-4	SJ28PP	Port	South Lot, Berth 416	No				
Marine, T-5	RG11PP	Port	N end of Columbia Grain, T-5	No			X	
Marine, T-5	RG04PP	Port	1st Outfall, E end of T-5	No				
Marine, T-5	RG12PP	Port	200 yds. S of RG11pp, T-5 Columbia Grain	No	X			X
Marine, T-5	RG13PP	Port	Port Bulk Facility, under dock, T-5, 300 yds. S of Alcatel	Yes	X	X	X	X
Marine, T-5	RG12.5PP	Port	T-5 Alcatel Property, NW of parking lot	No		X		
Marine, T-6	RG07PP	Port	1st Pier, 300 yds. E of T-6	No		X		
Marine, T-6	RG04PP	Port	1st Outfall, E end of T-6	No	X			X
Marine, T-6	RG08PP	Port	NW end of pier, T-6	No			X	
Marine, T-6	RG10PP	Port	T-6 Kelly Point Boat Ramp, Hyundai	Yes	X	X	X	X
Marine, T-6	RG05PP	Port	800 yds. E of T-6	No		X		
Marine, T-6	RG09PP	Port	W of pier at Berth 601, next to Kelley Point Park	No		X		
Marine, T-6	RG06PP	Port	450 yds. E of T-6	No			X	
Marine, T-6	RG07.5PP	Port	NE end of Pier, T-6	No		X		X
Marine, T-6	RG07.25PP	Port	Berth 606	No			X	

TABLE 4
DRY SEASON STORMWATER OUTFALL INSPECTION SCHEDULE (CONT.)

OPERATING AREA	OUTFALL	OUTFALL OWNER	OUTFALL LOCATION	PRIORITY OUTFALL	2001	2002	2003	2004
Properties	TWW43PP	Port	Near House 106, T-1 S	No				
Properties	WW48PP	Port	Berth 101, T-1 N	No				
Properties	WW46PP	Port	Berth 104, T-1	No				
Properties	WW41PP	Port	E corner of T-1 S	No				
Properties	WW42PP	Port	Berth 106, T-1 S	No				
Properties	WW45PP	Port	Between Berths 104 & 105, T-1 S	Yes	X	X	X	X
Properties	WW47PP	Port	Berth 102, T-1 N	No				
Properties	WW44PP	Port	Berth 105, T-1 S	Yes	X	X	X	X
Properties	WW77UN	Port	T-1, North of warehouse 5	No				
Properties	RG15PP	Port	30” outfall north of Western Transportation	Yes	X	X	X	X
Properties	RG16PP	Port	30” outfall south of Western Transportation	Yes	X	X	X	X
Properties	RG17PP	Port	30” outfall ½ way between Rivergate Blvd & N. Lombard	Yes	X	X	X	X
Properties	RG18PP	Port	60” outfall N. Lombard and Columbia Slough	Yes	X	X	X	X
Properties	SJ45PP	Port	Ports O’Call, Swan Island	Yes	X	X	X	X
Properties	SE53PP	Port	NW Front and Doane	No				
Properties	SJ43PP	Port	Freightliner, Swan Island	Yes	X	X	X	X
Properties	SJ44PP	Port	Ports O’Call, Swan Island, under bridge	No		X		

*Inspected at 1A and 1B: 54”CSP located adjacent to W Perimeter Rd., at the W end of Taxiway C
** Inspected at West Detention Pond located in Basin 3 south of Taxiway 3
*** Inspected at East Detention Pond
****Inspected at 78” CMP pipe discharging to ditch at rear of PMF off Alderwood Rd.

TABLE 5
1999 / 2000 DRY SEASON STORMWATER OUTFALL INSPECTION OBSERVATIONS

OUTFALL	LOCATION	DATE	FLOW	ODOR	COLOR	CLARITY	FLOATABLES	DEPOSITS/ STAINS	STRUCTURAL CONDITION	VEGETATION CONDITION
RG15PP	North of Fort James and open channel to Willamette	9/22/00	Yes	Musty	Yellow	Slightly Turbid	Oily Sheen	Rust	Normal	Normal
RG16PP	South end of Fort James	9/22/00	No	None	None	None	None	None	Normal	Normal
RG17PP	Between Rivergate Blvd. And Lombard	9/22/00	No	None	None	None	None	None	Normal	Normal
RG18PP	N. Lombard and Columbia Slough	9/22/00	Yes	Sewage & rotten eggs	Yellow	Slightly Turbid	Particles	None	Normal	Normal
SJ43PP	Freightliner, Swan Island	9/22/00	No	None	None	None	None	None	Normal	Normal
SJ44PP	Port O'Call, Swan Island, under bridge	9/22/00	No	None	None	None	None	None	Normal	Normal
SJ45PP	Port O'Call, Swan Island	9/22/00	No	None	None	None	None	None	Normal	Normal
SJ46PP	Boise Cascade bldg., Swan Island	9/22/00	No	None	None	None	None	None	Normal	Normal
SJ47PP	Boise Cascade bldg., Swan Island	9/22/00	No	None	None	None	None	None	Normal	Normal
WW44PP	Berth 105, T-1 S.	9/22/00	No	None	None	None	None	None	Normal	Normal
MDD2	PDX Basin 1A	7/26/00	No	None	Clear	Clear	None	None	Normal	Excessive Growth
MDD2	PDX Basin 1B	7/26/00	No	None	Clear	Clear	None	None	Pipe slightly compressed	Excessive Growth
MDD3	PDX Basin 2	7/21/00	Yes	None	Clear	Clear	None	None	Concrete cracking	Normal
SS03PP	PDX Basin 4	7/26/00	Yes	None	Clear	Clear	None	None	Concrete cracking	Normal

TABLE 5
1999 / 2000 DRY SEASON STORMWATER OUTFALL INSPECTION OBSERVATIONS (CONT.)

OUTFALL	LOCATION	DATE	FLOW	ODOR	COLOR	CLARITY	FLOATABLES	DEPOSITS/ STAINS	STRUCTURAL CONDITION	VEGETATION CONDITION
SS12500	PDX Basin 5	7/21/00	No	None	None	Clear	None	None	Normal	Normal
POPE 1	PDX Basin 6	7/21/00	No	None	Green	Clear	None	None	Normal	Normal
SS12200	PDX Basin 7	7/28/00	No	None	Brown (in ditch)	Slightly Turbid (in ditch)	None	None	Normal	Normal
SS12000	PDX Basin 8	7/19/00	No	None	Brown	Slightly Turbid	None	Sediments	Normal	Normal
MCDD 72”	PDX Basin 9	7/19/00	No	None	None	None	None	None	Normal	Normal
WW45PP	T-1	7/14/00	No	None	None	None	None	None	Normal	Normal
SJ24PP	NW of 414 and floating dock	7/14/00	No	None	None	None	None	None	Normal	Normal
SJ25PP	T-4, Berths 415 & 416	7/14/00	Yes	None	Clear	Clear	None	Rusty sediments	Normal	Normal
SJ19PP	T-4, Slip 2, Berth 410	7/14/00	No	None	None	None	None	None	Normal	Normal
SJ17PP	T-4, Slip 1, between Berths 405 and 408	7/14/00	No	None	None	None	None	None	Normal	Normal
SJ18PP	T-4, Inland from Berth 408	7/14/00	No	None	None	None	None	None	Normal	Normal
SJ14PP	T-4, SE end of Berth 401	7/14/00	No	None	None	None	None	None	Normal	Normal
RG11PP	T-5, NE of grain loading dock	7/14/00	No	None	None	None	None	None	Normal	Normal
RG12PP	T-5, NW of grain loading dock	7/17/00	No	None	None	None	None	None	Normal	Normal
RG13PP	T-5	7/17/00	Yes	None	Brown	Cloudy	Oily Sheen	None	Normal	Normal
RG10PP	T-6, S end of Hyundai	7/17/00	Yes	None	Clear	Clear	None	None	Normal	Normal
RG7.5PP	T-6, between Berths 404 and 605	7/31/00	Yes	None	Clear	Clear	None	None	Normal	None
RG04PP	T-6, Honda	7/17/00	No	None	None	None	None	None	Normal	Normal

TABLE 6
ENVIRONMENTAL TRAINING DURING THE
JULY 1, 2000 TO JUNE 30, 2001 PERMIT COMPLIANCE TERM

Operating Area/Department	Training Topic(s)	Attendees	Date(s)
ESD	ACWA – Annual Stormwater Conference 2000	ESD Staff	July 2000
PDX	USEPA - Water Quality Standards Academy	Aviation Environmental Group	July 2000
PDX, Properties	In-House Training – Environmental Workshop	Aviation Environmental Group, Properties Environmental Group	September 2000
Marine	Northwest Conference on Contaminated Sediments	Marine Environmental	September 2000
Marine	Northwest Environmental Conference	Marine Environmental Group	November 2000
PDX	Portland Community College – Erosion Control Class	Aviation Environmental Group	Fall 2000
Marine	In-House Training – Revised SPCC Plan for First Responders	Security and Gearlocker personnel	Fall 2000
PDX	In-House Training – PDX Spill Response Training	Aviation Police, Fire, Maintenance, Environmental and Safety, Airside Operations, Landside Operations, Communications Centers, Engineering, Construction, and Administration Departments	December 2000

TABLE 6
ENVIRONMENTAL TRAINING DURING THE
JULY 1, 2000 TO JUNE 30, 2001 PERMIT COMPLIANCE TERM (CONT.)

Operating Area/Department	Training Topic(s)	Attendees	Date(s)
ESD, PDX	Environmental Law Education Center – Northwest Conference: TMDLs and the Clean Water Act	ESD Staff, Aviation Environmental Group	February 2001
PDX	Clackamas Community College – Wastewater Short School	Aviation Environmental Group	March 2001
PDX	American Association of Airport Executives – Environmental Deicing Conference	Aviation Environmental Group	March 2001
Marine	USACOE – Dredging Conference	Marine Environmental	April 2001
ESD, PDX, Marine	Environmental Law Education Center – Stormwater Management and Erosion Control Annual Conference	ESD Staff, Aviation Environmental Group	April 2001
ESD, PDX	ACWA – Stormwater Summit	ESD Staff	April 2001
Property	Society of Ecological Restoration Conference	Property Mitigation Staff	April 2001
Marine	Sustainability Conference	Marine Environmental	May 2001

TABLE 6
ENVIRONMENTAL TRAINING DURING THE
JULY 1, 2000 TO JUNE 30, 2001 PERMIT COMPLIANCE TERM (CONT.)

Operating Area/Department	Training Topic(s)	Attendees	Date(s)
PDX	Environmental Law Education Center – Stormwater Conference	Aviation Environmental Group	May 2001
PDX	The Seminar Group – Endangered Species Act Conference	Aviation Environmental Group	June 2001
PDX	Marine & Environmental Testing – Field Chemistry	Aviation Environmental Group	June 2001
Property	Society of Wetlands Scientists – Conference	Property Mitigation Staff	June 2001
Marine	Marine Terminal Tenant Meetings	Marine Terminal Staff and Tenants	Quarterly
PDX	Aviation BMP Committee Meetings	Aviation Staff and Tenants	Bi-monthly
ESD	In-House EMS Training – Stormwater and Water Quality Policies and Procedures	ESD Staff	Various
ESD	In-House Training – Municipal Stormwater Permit and Dry-Season Monitoring Procedures	ESD Staff	Various

TABLE 6
ENVIRONMENTAL TRAINING DURING THE
JULY 1, 2000 TO JUNE 30, 2001 PERMIT COMPLIANCE TERM (CONT.)

Operating Area/Department	Training Topic(s)	Attendees	Date(s)
ESD, PDX, Marine, Properties, Engineering	City of Portland – Stormwater Management Manual Training	ESD Staff, Aviation Environmental Group, Marine Environmental Group, Properties Staff, Engineering Staff	Various
Property	PSU – ecological seminars	Property Staff	Various
Property	Ecoforum seminars	Property Staff	Various
PDX, Marine, Properties	OSHA – HAZWOPER annual refresher	All individuals with OSHA 24- and 40-Hour HAZWOPER Training	Various

Section V

MULTNOMAH COUNTY DRAINAGE DISTRICT NO. 1 (MCDD#1)

PENINSULA DRAINAGE DISTRICT NO. 1 (PENN 1)

PENINSULA DRAINAGE DISTRICT NO. 2 (PENN 2)

MULTNOMAH COUNTY DRAINAGE DISTRICT NO. 1
PENINSULA DRAINAGE DISTRICT NO. 1
PENINSULA DRAINAGE DISTRICT NO. 2

NPDES MS4
ANNUAL COMPLIANCE REPORT
FISCAL YEAR 2000-2001

During permit year five, the drainage districts examined their role under the permit and determined they could fulfill this role effectively through memoranda of agreement (MOAs) among all the parties. As a result, they have proposed taking that approach, rather than continuing as a co-permittee, in the second five-year permit term. DEQ has not formally accepted this status change, pending review of the permit renewal; however, the drainage districts expect that DEQ will support the MOA concept as the appropriate vehicle for their participation. The districts are devoting considerable effort toward complying with the BMPs in the permit and are investing resources in new initiatives to improve water quality and habitat inside their jurisdictional boundaries. Progress on these programs is continuing on the track described in the 1998-99 Annual Compliance Report. With this in mind, the drainage districts' report for permit year six is the same as their 1998-99 report.

Appendix A

CITY OF PORTLAND NPDES STORMWATER PERMIT

SEP 0 7 1995

Oregon

DEPARTMENT OF
ENVIRONMENTAL
QUALITY

NORTHWEST REGION

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

DAVID KLIEWER PE
STORMWATER/WATERSHED DIVISION MANAGER
CITY OF PORTLAND
BUREAU OF ENVIRONMENTAL SERVICES
1120 SW FIFTH #400
PORTLAND OR 97204

Re: Municipal Separate Storm Sewer Discharge Permit
File Number 108015
Multnomah County

We have completed our review of your permit application and the comments received regarding the preliminary draft permit which was mailed to you for review on January 6, 1995, as well as comments received during the May 3 public hearing and participation period, and have issued the enclosed National Pollutant Discharge Elimination System (NPDES) Waste Discharge Permit.

We greatly appreciate the effort the City and Co-permittees have expended in putting together what we hope will be a model storm water program.

This permit will be considered as the final action on permit application number 995938.

If you are dissatisfied with the conditions or limitations of this permit, you have 20 days to request a hearing before the Environmental Quality Commission or its authorized representative. Any such request shall be made in writing to the Director and shall clearly state the grounds for the request.

You are urged to carefully read the permit and take all possible steps to comply with the conditions established. If you have questions regarding the permit, please contact Paul Keiran at (503) 229-5937.

Sincerely,

Neil J. Mullane

Neil J. Mullane, Manager
Water Quality Source Control
Northwest Region

John A. Kitzhaber
Governor

js
Enclosure

2020 SW Fourth Avenue
Suite 400
Portland, OR 97201-4987
(503) 229-5263 Voice
TTY (503) 229-5471

DEQ-1

COPY

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
MUNICIPAL SEPARATE STORM SEWER SYSTEM DISCHARGE PERMIT

Department of Environmental Quality
Northwest Region Office
2020 S.W. Fourth Avenue, Suite 400, Portland, OR 97201
Telephone: (503) 229-5263

Issued pursuant to ORS 468B.050 and The Federal Clean Water Act

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ISSUED TO CO-PERMITTEES:

City of Portland
1120 SW Fifth Avenue
Room 400
Portland OR 97204-1972

Multnomah County

Port of Portland

Oregon Department of Transportation

Multnomah County Drainage District #1

Peninsula Drainage District #1

Peninsula Drainage District #2

SOURCES COVERED BY THIS PERMIT:

All Existing and New Discharges of Storm Water From the Municipal Separate Storm Sewer System Within the City of Portland Urban Services Boundary

RECEIVING STREAM INFORMATION:

Basin: Willamette, Columbia
Subbasin: Lower Willamette and Tualatin
Stream: Willamette River*#, Columbia River*#, Columbia Slough*, Fanno Creek#, Balch Creek*, Johnson Creek*, Tryon Creek*, Smith Lake, Bybee Lake

Hydro Code: 22=-WILL, 10=-COLU
County: Multnomah

* These water bodies have been designated, or drain to water bodies that have been designated, as water quality limited.

Total Maximum Daily Loads/Waste Load Allocations/Load Allocations have been established for these water bodies.

DESCRIPTION OF SYSTEM:

Municipal Separate Storm Sewer System

EPA REFERENCE NO: ORS 108015

Issued in response to Application No. 995938 received May 26, 1993 and Addendum No. 1 to the application, dated May 17, 1994.

This permit is issued based on the land use findings in the permit record.

Tom Bispham
Tom Bispham, Administrator
Northwest Region

September 7, 1995
Date

PERMITTED ACTIVITIES

Until this permit expires or is modified or revoked, the co-permittees are authorized to implement a storm water management program to reduce the contribution of pollutants in storm water to the maximum extent practicable and to discharge storm water to public waters in conformance with all the requirements and conditions set forth in the attached schedules as follows:

	Page
Schedule A - Controls and Limitations	2
Schedule B - Minimum Monitoring and Reporting Requirements	3
Schedule C - Compliance Conditions and Schedules	*
Schedule D - Special Conditions	4
General Conditions	Attached

* The standard Schedule C is omitted from this permit because the Storm Water Management Program and addenda (SWMP) identifies the compliance items and schedules required by the co-permittees and Schedule B requires an annual status report on the SWMP.

SCHEDULE A

Controls and Limitations for Storm Water Discharges from Municipal Separate Storm Sewer Systems

1. The co-permittees shall maintain compliance with this permit and implement the Storm Water Management Program and addenda (SWMP) as submitted in the National Pollutant Discharge Elimination System (NPDES) permit application Parts 1 and 2 (including amendments) currently approved by the Department, and hereby incorporated into this permit by reference, in order to comply with the following conditions required by the Clean Water Act:

   a. Reduce the discharge of pollutants to the maximum extent practicable from the municipal separate storm sewer system (MS4).

   b. Effectively prohibit non-storm water discharges into the MS4 unless such discharges are otherwise permitted by an existing NPDES permit or special permit issued for short term activities pursuant to OAR 340-14-050. The following category of non-storm water discharges need not be prohibited from entering the MS4, provided appropriate control measures (if needed) to minimize the impacts of such sources, are developed under the SWMP: water line flushing; landscape irrigation; diverted stream flows; rising ground waters; uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)) to separate storm sewers; uncontaminated pumped ground water; discharges from potable water sources; foundation drains; air conditioning condensate; irrigation water; springs; water from crawl space pumps; footing drains; lawn watering; individual residential car washing; flows from riparian habitats and wetlands; dechlorinated swimming pool discharges; street wash water and discharges or flows from fire fighting activities only where such discharges or flows are identified as significant sources of pollutants to waters of the United States.

   Each co-permittee shall be deemed to be in compliance with (a) and (b) above by implementing the SWMP for the MS4s within the co-permittees' jurisdiction.

2. The Department has developed or will be developing total maximum daily loads (TMDLs) including a subsequent implementation program for several of the receiving streams listed on page 1 of this permit. The Department will enter into a memorandum of agreement (MOA) with each of the designated management agencies that describes the activities that they will complete and the time frames for completion of these tasks. The Department will utilize the MOAs in conjunction with this permit as the regulatory tool to insure compliance with the stormwater component of the TMDL program. The MOAs will establish mutually agreeable commitments for each jurisdiction. Compliance with the stormwater component of the MOA will constitute compliance with the TMDL provision of this permit.

SCHEDULE B

Minimum Monitoring and Reporting Requirements (unless otherwise approved in writing by the Department)

1. Storm Water Sampling Points

The co-permittees shall monitor storm water from the sampling points specified in the approved SWMP.

2. Storm Selection Criteria

The co-permittees shall sample storms which are representative of climatic conditions within the area served by the MS4 as specified in the approved SWMP.

3. Monitoring Frequency and Parameters to be Monitored

The frequency of sampling storms and the parameters to be analyzed shall be as specified in the approved SWMP.

4. Sampling Waiver

In the event the co-permittees are unable to collect or analyze any sample or pollutant parameter due to circumstances beyond the co-permittee's control, a written explanation of the circumstances that prevented the collection or analysis shall be submitted to the Department in the annual report. The co-permittee shall exercise due diligence in collecting and analyzing all samples as required by this Schedule. Circumstances beyond the control of the co-permittee may include abnormal climatic conditions (e.g., fewer storms in the annual reporting period than typically are representative of climatic conditions); weather conditions that make the collection or analysis of samples unsafe or impracticable (e.g., storms of such intensity that sampling would present an unreasonable safety risk); or unavoidable equipment failures caused by weather conditions or other conditions beyond the control of the co-permittee (provided that operator error is not a condition beyond the control of the co-permittee). If more than one sampling event is missed at any storm water sampling point, then re-sampling at that point will occur within twelve months of the second missed storm event.

5. Monitoring Adjustments

In the event that monitoring at an individual location or for an individual parameter is determined by the co-permittees and the Department to be unproductive, the Department will delete or change the monitoring by a permit action letter.

6. Reporting Procedures

Monitoring data shall be summarized to include concentrations of each pollutant for each monitoring site for each storm event monitored, compared to previously collected data, and reported as directed in Condition 7 of this Schedule.

7. System-Wide Report

The co-permittees shall submit by September 1, 1996, and annually thereafter a coordinated system-wide report, for the fiscal year July 1 - June 30, containing:

a. A description of the activities undertaken to implement the components of the SWMP;

b. A description of any changes made, initiated or proposed, to the SWMP;

c. A summary of data, including monitoring data required by Schedule B, that is accumulated throughout the reporting year; and

d. Any water quality improvements or degradation that have been identified.

SCHEDULE D

Special Conditions

1. Each co-permittee shall maintain, through ordinance, interagency agreement, or other means, adequate legal authority to implement and enforce the provisions of this permit.

2. Each co-permittee shall be responsible for the portion of the system-wide report applicable to their individual jurisdiction. Individual co-permittees shall not be held responsible for the noncompliance of another co-permittee with the conditions of this permit.

3. Each co-permittee shall manage storm water in accordance with the current SWMP approved by the Department. Insignificant changes to management activities as described in the approved SWMP may be made without written approval of the Department. Insignificant changes are modifications of implementation tasks within a management activity that do not change the intent or overall implementation schedule of that activity. No significant changes shall be made in storm water management activities as described in the approved SWMP without the prior written approval of the Department.

   All changes to the SWMP shall be summarized in the annual report required by Schedule B.

4. The preparation and submittal of a system-wide annual report as required by Schedule B shall be coordinated by the City of Portland.

5. Permit coverage may be terminated for a single co-permittee without terminating coverage for other co-permittees.

Appendix B

MONITORING DATA

Industrial Stormwater Outfall Monitoring

Table 1: HYDRA Rain Gauge Data
Industrial Stormwater Outfall Monitoring
Event 8: September 30, 2000

Daily Rain Report — All Times in Pacific Standard Time
Rain Data Collected by HYDRA - City of Portland — Rain gauge data are reported in inches

Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Gauge 125: Guilds Lake																									
9/27/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/28/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/29/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/30/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.01	0.01	0.19	0.03	0.01	0.01	0.00	0.00	0.00	0.00	0.02	0.34	0.01	0.00	0.69
Gauge 121: Yeon																									
9/27/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/28/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/29/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/30/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.05	0.02	0.03	0.23	0.07	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.30	0.03	0.00	0.73
Average of Gauges 125 and 121																									
9/27/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/28/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/29/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/30/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.015	0.055	0.015	0.005	0.21	0.05	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.32	0.02	0.00	0.71
River Level Data (feet) - Ankeny Pump Station																									**Avg**
9/28/00	5.0	5.1	6.1	7.4	8.2	8.1	7.5	6.9	6.5	6.2	5.8	5.4	5.1	4.9	5.1	6.3	7.6	8.1	7.8	7.0	6.5	6.2	5.9	5.5	6.4
9/29/00	5.1	4.9	5.0	6.0	7.3	7.9	7.6	6.8	6.3	5.9	5.6	5.2	4.8	4.5	4.5	5.3	6.7	7.7	7.8	7.2	6.5	6.1	5.8	5.5	6.1
9/30/00	5.1	4.8	4.5	4.8	5.9	7.2	7.6	7.2	6.4	5.9	5.5	5.3	4.9	4.5	4.4	4.8	6.1	7.4	8.0	7.9	7.2	6.6	6.2	5.9	6.0

- Storm event duration

Table 2: Analytical Summary
Industrial Stormwater Outfall Monitoring
Event 8: September 30, 2000

Composite Parameters	Units	OF 19	1200-Z Permit	Load
Lab ID		FO001620	Benchmark	(lbs.)
AMMONIA-NITROGEN	mg/L	0.32	--	1.45
BOD5	mg/L	14	--	63
COD	mg/L	99	--	448
HARDNESS	mg CaCO3/L	23.6	--	107
NITRATE-NITROGEN	mg/L	0.41	--	1.86
O-PHOSPHATE-PHOSPHORUS, DISS	mg/L	0.091	--	0.412
SPECIFIC CONDUCTANCE	µmhos/cm	40.9	--	N/A
TOTAL DISSOLVED SOLIDS	mg/L	43	--	195
TOTAL KJELDAHL NITROGEN	mg/L	1.83	--	8.29
TOTAL PHOSPHORUS	mg/L	0.58	--	2.63
TOTAL SOLIDS	mg/L	231	--	1046
TOTAL SUSPENDED SOLIDS	mg/L	188	130	851
CADMIUM, TOTAL	µg/L	1.36	--	0.006
CHROMIUM, TOTAL	µg/L	16.6	--	0.075
COPPER, TOTAL	µg/L	118	100	0.534
LEAD, TOTAL	µg/L	66.2	400	0.300
SILVER, TOTAL	µg/L	24.5	--	0.111
ZINC, TOTAL	µg/L	410	600	1.856
CADMIUM, DISSOLVED	µg/L	0.24	--	0.001
CHROMIUM, DISSOLVED	µg/L	0.62	--	0.003
COPPER, DISSOLVED	µg/L	17.6	--	0.080
LEAD, DISSOLVED	µg/L	1.28	--	0.006
SILVER, DISSOLVED	µg/L	0.13	--	0.001
ZINC, DISSOLVED	µg/L	100	--	0.453

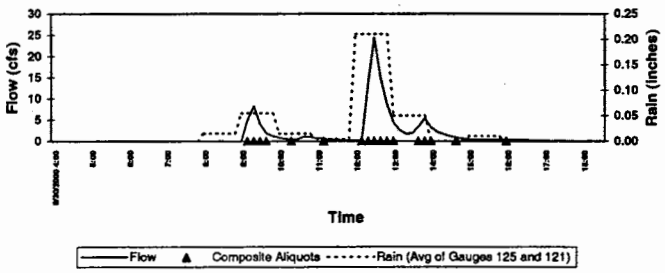
Total flow volume for the sampling period = 72,680 cf

N/A = Not applicable

FO001620	OF19	9/30/2000	9:09	DJH/MJS	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.32	CONC	mg/L	0.02	EPA 350.1	10/13/2000
FO001620	OF19	9/30/2000	9:09	DJH/MJS	COMPOSITE	STORMWTR	BOD5	BOD5	14	CONC	mg/L	2	SM 5210 B	10/7/2000
FO001620	OF19	9/30/2000	9:09	DJH/MJS	COMPOSITE	STORMWTR	COD	COD	99	CONC	mg/L	2	SM 5220 D	10/5/2000
FO001620	OF19	9/30/2000	9:09	DJH/MJS	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	23.6	CONC	mg CaCO3/L	1	SM 2340 C	10/5/2000
FO001620	OF19	9/30/2000	9:09	DJH/MJS	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.41	CONC	mg/L	0.1	EPA 300.0	10/2/2000
FO001620	OF19	9/30/2000	9:09	DJH/MJS	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.091	CONC	mg/L	0.02	EPA 365.1	10/2/2000
FO001620	OF19	9/30/2000	9:09	DJH/MJS	COMPOSITE	STORMWTR	SPECIFIC CONDUCTANCE (LAB)	CONDUCTIVITY (LAB)	40.9	CONC	µmhos/cm	1	SM 2510 B	10/5/2000
FO001620	OF19	9/30/2000	9:09	DJH/MJS	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	43	CONC	mg/L	1	SM 2540 BD	10/10/2000
FO001620	OF19	9/30/2000	9:09	DJH/MJS	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	1.83	CONC	mg/L	0.2	EPA 351.2	10/4/2000
FO001620	OF19	9/30/2000	9:09	DJH/MJS	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.58	CONC	mg/L	0.03	EPA 365.4	10/5/2000
FO001620	OF19	9/30/2000	9:09	DJH/MJS	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	231	CONC	mg/L	1	SM 2540 B	10/2/2000
FO001620	OF19	9/30/2000	9:09	DJH/MJS	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	188	CONC	mg/L	1	SM 2540 D	10/2/2000
FO001620	OF19	9/30/2000	9:09	DJH/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	1.36	CONC	µg/L	0.1	EPA 200.8	10/14/2000
FO001620	OF19	9/30/2000	9:09	DJH/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CHROMIUM	16.6	CONC	µg/L	0.4	EPA 200.8	10/14/2000
FO001620	OF19	9/30/2000	9:09	DJH/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	118	CONC	µg/L	0.2	EPA 200.8	10/14/2000
FO001620	OF19	9/30/2000	9:09	DJH/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	66.2	CONC	µg/L	0.1	EPA 200.8	10/14/2000
FO001620	OF19	9/30/2000	9:09	DJH/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	24.5	CONC	µg/L	0.1	EPA 200.8	10/14/2000
FO001620	OF19	9/30/2000	9:09	DJH/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	410	CONC	µg/L	0.5	EPA 200.8	10/14/2000
FO001620	OF19	9/30/2000	9:09	DJH/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	0.24	CONC	µg/L	0.1	EPA 200.8	10/14/2000
FO001620	OF19	9/30/2000	9:09	DJH/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CHROMIUM, DISSOLVED	0.62	CONC	µg/L	0.4	EPA 200.8	10/14/2000
FO001620	OF19	9/30/2000	9:09	DJH/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	17.6	CONC	µg/L	0.2	EPA 200.8	10/14/2000
FO001620	OF19	9/30/2000	9:09	DJH/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	1.28	CONC	µg/L	0.1	EPA 200.8	10/14/2000
FO001620	OF19	9/30/2000	9:09	DJH/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	0.13	CONC	µg/L	0.1	EPA 200.8	10/14/2000
FO001620	OF19	9/30/2000	9:09	DJH/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	100	CONC	µg/L	0.5	EPA 200.8	10/14/2000

Time	Flow	Composite Aliquots	Missed Aliquots	Rain (Avg of Gauges 125 and 121)
		30	0	
9/30/2000 4:00	0.008			0.00
4:10	0.008			0.00
4:20	0.009			0.00
4:30	0.007			0.00
4:40	0.007			0.00
4:50	0.009			0.00
5:00	0.009			0.00
5:10	0.009			0.00
5:20	0.009			0.00
5:30	0.009			0.00
5:40	0.009			0.00
5:50	0.009			0.00
6:00	0.01			0.00
6:10	0.009			0.00
6:20	0.009			0.00
6:30	0.007			0.00
6:40	0.007			0.00
6:50	0.007			0.00
7:00	0.009			0.00
7:10	0.009			0.00
7:20	0.007			0.00
7:30	0.007			0.00
7:40	0.007			0.00
7:50	0.009			0.00
8:00	0.007			0.015
8:10	0.009			0.015
8:20	0.007			0.015
8:30	0.007			0.015
8:40	0.009			0.015
8:50	0.007			0.015
9:00	0.011			0.055
9:10	4.906		0	0.055
9:20	8.225		0	0.055
9:30	4.034		0	0.055
9:40	1.933		0	0.055
9:50	1.244			0.055
10:00	0.859			0.015
10:10	0.644			0.015
10:20	0.472		0	0.015
10:30	0.5			0.015
10:40	1.113			0.015
10:50	0.951			0.015
11:00	0.721			0.005
11:10	0.584		0	0.005
11:20	0.465			0.005
11:30	0.355			0.005
11:40	0.263			0.005
11:50	0.238			0.005
12:00	0.214			0.21
12:10	0.218		0	0.21
12:20	13.728		0	0.21
12:30	24.274		0	0.21
12:40	14.812		0	0.21
12:50	8.663		0	0.21
13:00	4.401		0	0.05
13:10	2.588			0.05
13:20	1.733			0.05
13:30	1.915			0.05
13:40	3.386		0	0.05
13:50	5.36		0	0.05
14:00	3.245		0	0.00
14:10	2.157			0.00
14:20	1.636			0.00
14:30	1.212			0.00
14:40	0.929		0	0.00
14:50	0.82			0.00
15:00	0.492			0.01
15:10	0.455			0.01
15:20	0.39			0.01
15:30	0.347			0.01
15:40	0.406			0.01
15:50	0.434			0.01
16:00	0.414		0	0.00
16:10	0.379			0.00
16:20	0.32			0.00
16:30	0.289			0.00
16:40	0.251			0.00
16:50	0.194			0.00
17:00	0.193			0.00
17:10	0.186			0.00
17:20	0.145			0.00
17:30	0.132			0.00
17:40	0.116			0.00
17:50	0.106			0.00
18:00	0.097			0.00
18:10	0.1			0.00

Figure 3: Event Hydrograph
Industrial Stormwater Outfall Monitoring
FY 2000-01 Event 8: September 30, 2000



Time	Flow	Composite Aliquots	Missed Aliquots	Rain (Avg of Gauges 125 and 121)
		30	0	
18:20	0.091			0.00
18:30	0.085			0.00

Table 1: HYDRA Rain Gauge Data
Industrial Stormwater Outfall Monitoring
Event 9: January 18-19, 2001

Daily Rain Report — All Times in Pacific Standard Time

Rain Data Collected by HYDRA - City of Portland — Rain gauge data are reported in inches

Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Gauge 125: Guilds Lake																									
1/15/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/16/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/17/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/18/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.04	0.01	0.02	0.10
1/19/01	0.02	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
Gauge 121: Yeon																									
1/15/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/16/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/17/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/18/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.02	0.02	0.12
1/19/01	0.02	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
Average of Gauges 125 and 121																									
1/15/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/16/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/17/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/18/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.005	0.01	0.005	0.055	0.02	0.02	0.115
1/19/01	0.02	0.02	0.025	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.065
River Level Data (feet) - Ankeny Pump Station																									**Avg**
1/16/01	6.2	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	6.2
1/17/01	M	M	M	M	M	M	M	M	4.8	5.4	6.5	7.2	7.3	6.8	6.4	6.1	5.9	5.5	5.2	4.9	4.7	4.6	4.7	5.0	5.0
1/18/01	5.3	5.3	5.2	5.0	4.8	4.6	4.4	4.2	4.2	4.6	5.6	6.7	7.3	7.4	6.9	6.5	6.3	6.0	5.7	5.5	5.2	5.0	4.9	5.1	5.5
1/19/01	5.5	6.0	6.2	6.0	5.9	5.7	5.5	5.3	5.2	5.2	5.6	6.6	7.7	8.3	8.2	7.7	7.3	7.1	6.8	6.5	6.2	5.9	5.7	5.5	6.3

- Storm event duration

M - Data missing

Table 2: Analytical Summary
Industrial Stormwater Outfall Monitoring
Event 9: January 18-19, 2001

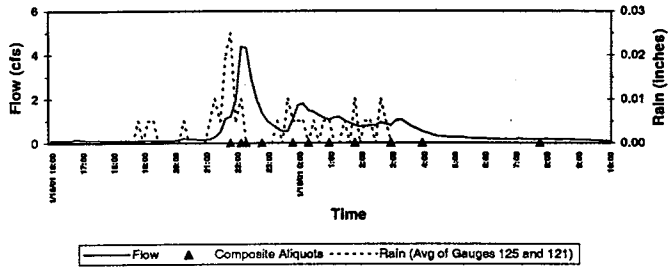
Composite Parameters	Units	OF 19	1200-Z Permit	Load
Lab ID		FO010092	Benchmark	(lbs.)
AMMONIA-NITROGEN	mg/L	0.36	--	0.72
BOD5	mg/L	17	--	34
COD	mg/L	46	--	93
HARDNESS	mg CaCO3/L	96.3	--	194
NITRATE-NITROGEN	mg/L	43.2	--	87
O-PHOSPHATE-PHOSPHORUS, DISS	mg/L	0.78	--	1.57
SPECIFIC CONDUCTANCE	µmhos/cm	0.044	--	N/A
TOTAL DISSOLVED SOLIDS	mg/L	92	--	185
TOTAL KJELDAHL NITROGEN	mg/L	1.01	--	2.03
TOTAL PHOSPHORUS	mg/L	0.02	--	0.04
TOTAL SOLIDS	mg/L	130	--	261
TOTAL SUSPENDED SOLIDS	mg/L	38	130	76
CADMIUM, TOTAL	µg/L	0.65	--	0.001
CHROMIUM, TOTAL	µg/L	3.61	--	0.007
COPPER, TOTAL	µg/L	17.5	100	0.035
LEAD, TOTAL	µg/L	10.7	400	0.022
SILVER, TOTAL	µg/L	0.17	--	0.000
ZINC, TOTAL	µg/L	321	600	0.646
CADMIUM, DISSOLVED	µg/L	0.35	--	0.001
CHROMIUM, DISSOLVED	µg/L	0.58	--	0.001
COPPER, DISSOLVED	µg/L	6.60	--	0.013
LEAD, DISSOLVED	µg/L	0.54	--	0.001
SILVER, DISSOLVED	µg/L	0.10 U	--	0.000
ZINC, DISSOLVED	µg/L	235	--	0.473

Total flow volume for the sampling period = 32,286 cf
U = Not detected at method reporting limit shown
N/A = Not applicable

FO010092	OF19	1/18/2001	21:51	MJH/SMB	COMPOSITE	STORMWTR	BOD5	BOD5	17	CONC	mg/L	2	SM 5210 B	1/23/2001
FO010092	OF19	1/18/2001	21:51	MJH/SMB	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	38	CONC	mg/L	1	SM 2540 D	1/19/2001
FO010092	OF19	1/18/2001	21:51	MJH/SMB	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	130	CONC	mg/L	1	SM 2540 B	1/20/2001
FO010092	OF19	1/18/2001	21:51	MJH/SMB	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	92	CONC	mg/L	1	SM 2540 BD	1/26/2001
FO010092	OF19	1/18/2001	21:51	MJH/SMB	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.78	CONC	mg/L	0.1	EPA 300.0	1/19/2001
FO010092	OF19	1/18/2001	21:51	MJH/SMB	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.044	CONC	mg/L	0.02	EPA 365.1	1/19/2001
FO010092	OF19	1/18/2001	21:51	MJH/SMB	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.36	CONC	mg/L	0.02	EPA 350.1	1/26/2001
FO010092	OF19	1/18/2001	21:51	MJH/SMB	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.21	CONC	mg/L	0.03	EPA 365.4	1/29/2001
FO010092	OF19	1/18/2001	21:51	MJH/SMB	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	1.01	CONC	mg/L	0.2	EPA 351.2	1/29/2001
FO010092	OF19	1/18/2001	21:51	MJH/SMB	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	43.2	CONC	mg CaCO3/L	1	SM 2340 C	1/22/2001
FO010092	OF19	1/18/2001	21:51	MJH/SMB	COMPOSITE	STORMWTR	COD	COD	48	CONC	mg/L	2	SM 5220 D	1/26/2001
FO010092	OF19	1/18/2001	21:51	MJH/SMB	COMPOSITE	STORMWTR	CONDUCTIVITY (LAB)	CONDUCTIVITY (LAB)	96.3	CONC	µmhos/cm	1	SM 2510 B	1/26/2001
FO010092	OF19	1/18/2001	21:51	MJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CHROMIUM	3.61	CONC	µg/L	0.4	EPA 200.8	1/29/2001
FO010092	OF19	1/18/2001	21:51	MJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	17.5	CONC	µg/L	0.2	EPA 200.8	1/29/2001
FO010092	OF19	1/18/2001	21:51	MJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	321	CONC	µg/L	0.5	EPA 200.8	1/29/2001
FO010092	OF19	1/18/2001	21:51	MJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	0.17	CONC	µg/L	0.1	EPA 200.8	1/29/2001
FO010092	OF19	1/18/2001	21:51	MJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	0.65	CONC	µg/L	0.1	EPA 200.8	1/29/2001
FO010092	OF19	1/18/2001	21:51	MJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	10.7	CONC	µg/L	0.1	EPA 200.8	1/29/2001
FO010092	OF19	1/18/2001	21:51	MJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CHROMIUM, DISSOLVED	0.58	CONC	µg/L	0.4	EPA 200.8	1/29/2001
FO010092	OF19	1/18/2001	21:51	MJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	6.6	CONC	µg/L	0.2	EPA 200.8	1/29/2001
FO010092	OF19	1/18/2001	21:51	MJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	235	CONC	µg/L	0.5	EPA 200.8	1/29/2001
FO010092	OF19	1/18/2001	21:51	MJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	1/29/2001
FO010092	OF19	1/18/2001	21:51	MJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	0.35	CONC	µg/L	0.1	EPA 200.8	1/29/2001
FO010092	OF19	1/18/2001	21:51	MJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	0.54	CONC	µg/L	0.1	EPA 200.8	1/29/2001
FO010093	FILTER BLK	1/19/2001	16:00	KD	GRAB	DIWTR	METALS BY ICP-MS (DISSOLVED)	CHROMIUM, DISSOLVED	<0.40		µg/L	0.4	EPA 200.8	1/29/2001
FO010093	FILTER BLK	1/19/2001	16:00	KD	GRAB	DIWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	<0.20		µg/L	0.2	EPA 200.8	1/29/2001
FO010093	FILTER BLK	1/19/2001	16:00	KD	GRAB	DIWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	<0.50		µg/L	0.5	EPA 200.8	1/29/2001
FO010093	FILTER BLK	1/19/2001	16:00	KD	GRAB	DIWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	1/29/2001
FO010093	FILTER BLK	1/19/2001	16:00	KD	GRAB	DIWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	1/29/2001
FO010093	FILTER BLK	1/19/2001	16:00	KD	GRAB	DIWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	1/29/2001

Time	Flow	11 Composite Aliquots	0 Missed Aliquots	Rain (Avg of Gauges 125 and 121)
1/18/01 16:00	0.11			0.00
16:10	0.11			0.00
16:20	0.11			0.00
16:30	0.11			0.00
16:40	0.11			0.00
16:50	0.17			0.00
17:00	0.13			0.00
17:10	0.12			0.00
17:20	0.12			0.00
17:30	0.12			0.00
17:40	0.1			0.00
17:50	0.1			0.00
18:00	0.1			0.000
18:10	0.11			0.000
18:20	0.1			0.000
18:30	0.1			0.000
18:40	0.09			0.000
18:50	0.1			0.005
19:00	0.1			0.00
19:10	0.12			0.01
19:20	0.11			0.01
19:30	0.1			0.00
19:40	0.1			0.00
19:50	0.11			0.00
20:00	0.11			0.000
20:10	0.14			0.000
20:20	0.2			0.005
20:30	0.18			0.000
20:40	0.17			0.000
20:50	0.15			0.000
21:00	0.15			0.000
21:10	0.18			0.005
21:20	0.27			0.010
21:30	0.49			0.005
21:40	1.12			0.020
21:50	1.19		0.00	0.025
22:00	1.96			0.01
22:10	4.39		0.00	0.01
22:20	4.34		0.00	0.00
22:30	2.89			0.00
22:40	1.98			0.00
22:50	1.36		0.00	0.00
23:00	1.01			0.00
23:10	0.84			0.00
23:20	0.68			0.01
23:30	0.54			0.00
23:40	0.55			0.01
23:50	1.1		0.00	0.01
1/19/01 0:00	1.71			0.01
0:10	1.79			0.01
0:20	1.48		0.00	0.00
0:30	1.43			0.01
0:40	1.26			0.00
0:50	1.15			0.01
1:00	1.05		0.00	0.01
1:10	1.16			0.00
1:20	1.18			0.00
1:30	1.01			0.01
1:40	0.91			0.00
1:50	0.8		0.00	0.01
2:00	0.75			0.000
2:10	0.77			0.005
2:20	0.79			0.005
2:30	0.8			0.000
2:40	0.92			0.010
2:50	0.87			0.005
3:00	0.79		0.00	0.00
3:10	1.03			0.00
3:20	1.06			0.00
3:30	0.9			0.00
3:40	0.75			0.00
3:50	0.64			0.00
4:00	0.52		0.00	0.00
4:10	0.45			0.00
4:20	0.37			0.00
4:30	0.31			0.00
4:40	0.29			0.00
4:50	0.27			0.00
5:00	0.26			0.00
5:10	0.27			0.00
5:20	0.26			0.00
5:30	0.22			0.00
5:40	0.2			0.00
5:50	0.2			0.00
6:00	0.2			0.00
6:10	0.19			0.00

Figure 3: Event Hydrograph
Industrial Stormwater Outfall Monitoring
FY 2000-01 Event 9: January 18-19, 2001



Time	Flow	Composite Aliquots	Missed Aliquots	Rain (Avg of Gauges 125 and 121)	
		11	0		
6:20	0.19			0.00	
6:30	0.18			0.00	
6:40	0.17			0.00	
6:50	0.17			0.00	
7:00	0.18			0.00	
7:10	0.21			0.00	
7:20	0.18			0.00	
7:30	0.18			0.00	
7:40	0.16			0.00	
7:50	0.16	0.00		0.00	
8:00	0.19			0.00	
8:10	0.18			0.00	
8:20	0.16			0.00	**Last flow data on file is at 8:20**
8:30	0.16			0.00	**Estimated flow from 8:30 - 10:00**
8:40	0.17			0.00	
8:50	0.16			0.00	
9:00	0.15			0.00	
9:10	0.15			0.00	
9:20	0.14			0.00	
9:30	0.13			0.00	
9:40	0.12			0.00	
9:50	0.11			0.00	
10:00	0.11			0.00	

Table 1: HYDRA Rain Gauge Data
Industrial Stormwater Outfall Monitoring
Event 10: April 6, 2001

Daily Rain Report — All Times in Pacific Standard Time
Rain Data Collected by HYDRA - City of Portland — Rain gauge data are reported in inches

Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Gauge 125: Guilds Lake																									
4/2/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
4/3/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4/4/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4/5/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.02	0.00	0.00	0.00	0.00	0.08
4/6/01	0.00	0.00	0.00	0.00	0.01	0.03	0.03	0.00	0.02	0.00	0.00	0.01	0.02	0.00	0.00	0.02	0.00	0.00	0.05	0.00	0.01	0.00	0.00	0.00	0.20
Gauge 121: Yeon																									
4/2/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
4/3/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4/4/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4/5/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.05	0.02	0.00	0.00	0.00	0.00	0.12
4/6/01	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.11
Average of Gauges 125 and 121																									
4/2/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.015	0.00	0.005	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
4/3/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4/4/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4/5/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.005	0.035	0.04	0.02	0.00	0.00	0.00	0.00	0.10
4/6/01	0.00	0.00	0.00	0.00	0.005	0.02	0.02	0.00	0.02	0.00	0.00	0.005	0.01	0.00	0.00	0.01	0.025	0.00	0.025	0.015	0.005	0.00	0.00	0.00	0.155
River Level Data (feet) - Ankeny Pump Station																									**Avg**
4/3/01	6.1	6.5	6.4	6.1	5.9	5.7	5.4	5.1	5	5.1	5.6	6.5	7.1	7.2	6.9	6.6	6.5	6.2	5.9	5.7	5.5	5.2	5	5.1	5.9
4/4/01	5.5	6.3	6.8	6.7	6.3	6.1	5.8	5.5	5.3	5.1	5	5.4	6.2	7.2	7.5	7.1	6.7	6.5	6.2	6	5.7	5.4	5.2	5	6.0
4/5/01	5.1	5.8	6.7	7.3	7	6.5	6.2	5.9	5.5	5.2	5	4.9	5.2	6.3	7.6	8	7.6	7	6.7	6.4	6.1	5.8	5.5	5.2	6.2
4/6/01	5.2	5.5	6.6	7.8	8.2	7.4	7.2	6.9	6.6	6.3	6	5.7	5.6	5.9	6.9	8.2	8.6	8.2	7.6	7.4	7.1	6.8	6.5	6.3	6.9

- Storm event duration

Table 2: Analytical Summary
Industrial Stormwater Outfall Monitoring
Event 10: April 6, 2001

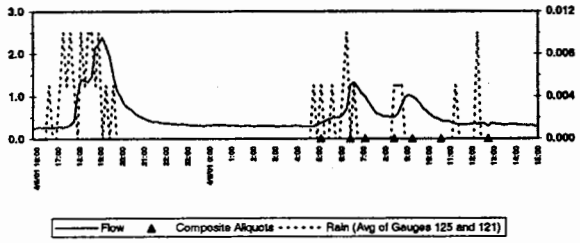
Composite Parameters	Units	OF 19	1200-Z Permit	Load
Lab ID		FO010382	Benchmark	(lbs.)
AMMONIA-NITROGEN	mg/L	0.25	--	0.27
BOD5	mg/L	5	--	5
COD	mg/L	31	--	33
HARDNESS	mg CaCO3/L	38.2	--	41
NITRATE-NITROGEN	mg/L	1.5	--	2
O-PHOSPHATE-PHOSPHORUS, DISS	mg/L	0.06	--	0.06
SPECIFIC CONDUCTANCE	µmhos/cm	97	--	N/A
TOTAL DISSOLVED SOLIDS	mg/L	92	--	99
TOTAL KJELDAHL NITROGEN	mg/L	0.88	--	0.95
TOTAL PHOSPHORUS	mg/L	0.16	--	0.17
TOTAL SOLIDS	mg/L	115	--	124
TOTAL SUSPENDED SOLIDS	mg/L	23	130	25
CADMIUM, TOTAL	µg/L	0.74	--	0.0008
CHROMIUM, TOTAL	µg/L	2.49	--	0.0027
COPPER, TOTAL	µg/L	14.8	100	0.0159
LEAD, TOTAL	µg/L	8.09	400	0.0087
SILVER, TOTAL	µg/L	0.10 U	--	0.0001
ZINC, TOTAL	µg/L	179	600	0.1922
CADMIUM, DISSOLVED	µg/L	0.37	--	0.0004
CHROMIUM, DISSOLVED	µg/L	0.40	--	0.0004
COPPER, DISSOLVED	µg/L	6.64	--	0.0071
LEAD, DISSOLVED	µg/L	0.41	--	0.0004
SILVER, DISSOLVED	µg/L	0.10 U	--	0.0001
ZINC, DISSOLVED	µg/L	114	--	0.1224

Total flow volume for the sampling period = 17,240 cf
U = Not detected at method reporting limit shown
N/A = Not applicable

FO010382	OF19	4900 NW KITTRIDGE AVE (OF19)	COMPOSITE	4/6/2001 5:10	JBB/MKS	COMPOSITE	STORMWTR	BOD5	BOD5	5	CONC	mg/L	2	SM 5210 B	4/11/2001
FO010382	OF19	4900 NW KITTRIDGE AVE (OF19)	COMPOSITE	4/6/2001 5:10	JBB/MKS	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	23	CONC	mg/L	1	SM 2540 D	4/7/2001
FO010382	OF19	4900 NW KITTRIDGE AVE (OF19)	COMPOSITE	4/6/2001 5:10	JBB/MKS	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	115	CONC	mg/L	1	SM 2540 B	4/7/2001
FO010382	OF19	4900 NW KITTRIDGE AVE (OF19)	COMPOSITE	4/6/2001 5:10	JBB/MKS	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	92	CONC	mg/L	1	SM 2540 BD	4/17/2001
FO010382	OF19	4900 NW KITTRIDGE AVE (OF19)	COMPOSITE	4/6/2001 5:10	JBB/MKS	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	1.5	CONC	mg/L	0.1	EPA 300.0	4/6/2001
FO010382	OF19	4900 NW KITTRIDGE AVE (OF19)	COMPOSITE	4/6/2001 5:10	JBB/MKS	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.06	CONC	mg/L	0.02	EPA 365.1	4/6/2001
FO010382	OF19	4900 NW KITTRIDGE AVE (OF19)	COMPOSITE	4/6/2001 5:10	JBB/MKS	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.25	CONC	mg/L	0.02	EPA 350.1	4/17/2001
FO010382	OF19	4900 NW KITTRIDGE AVE (OF19)	COMPOSITE	4/6/2001 5:10	JBB/MKS	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.16	CONC	mg/L	0.03	EPA 365.4	4/13/2001
FO010382	OF19	4900 NW KITTRIDGE AVE (OF19)	COMPOSITE	4/6/2001 5:10	JBB/MKS	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	0.88	CONC	mg/L	0.2	EPA 351.2	4/13/2001
FO010382	OF19	4900 NW KITTRIDGE AVE (OF19)	COMPOSITE	4/6/2001 5:10	JBB/MKS	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	38.2	CONC	mg CaCO3/L	1	SM 2340 C	4/9/2001
FO010382	OF19	4900 NW KITTRIDGE AVE (OF19)	COMPOSITE	4/6/2001 5:10	JBB/MKS	COMPOSITE	STORMWTR	COD	COD	31	CONC	mg/L	5	SM 5220 D	4/19/2001
FO010382	OF19	4900 NW KITTRIDGE AVE (OF19)	COMPOSITE	4/6/2001 5:10	JBB/MKS	COMPOSITE	STORMWTR	CONDUCTIVITY (LAB)	CONDUCTIVITY (LAB)	97	CONC	µmhos/cm	1	SM 2510 B	4/10/2001
FO010382	OF19	4900 NW KITTRIDGE AVE (OF19)	COMPOSITE	4/6/2001 5:10	JBB/MKS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CHROMIUM	2.49	CONC	µg/L	0.4	EPA 200.8	4/13/2001
FO010382	OF19	4900 NW KITTRIDGE AVE (OF19)	COMPOSITE	4/6/2001 5:10	JBB/MKS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	14.8	CONC	µg/L	0.2	EPA 200.8	4/13/2001
FO010382	OF19	4900 NW KITTRIDGE AVE (OF19)	COMPOSITE	4/6/2001 5:10	JBB/MKS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	179	CONC	µg/L	0.5	EPA 200.8	4/13/2001
FO010382	OF19	4900 NW KITTRIDGE AVE (OF19)	COMPOSITE	4/6/2001 5:10	JBB/MKS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	<0.10		µg/L	0.1	EPA 200.8	4/13/2001
FO010382	OF19	4900 NW KITTRIDGE AVE (OF19)	COMPOSITE	4/6/2001 5:10	JBB/MKS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	0.74	CONC	µg/L	0.1	EPA 200.8	4/13/2001
FO010382	OF19	4900 NW KITTRIDGE AVE (OF19)	COMPOSITE	4/6/2001 5:10	JBB/MKS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	8.09	CONC	µg/L	0.1	EPA 200.8	4/13/2001
FO010382	OF19	4900 NW KITTRIDGE AVE (OF19)	COMPOSITE	4/6/2001 5:10	JBB/MKS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CHROMIUM, DISSOLVED	0.4	CONC	µg/L	0.4	EPA 200.8	4/13/2001
FO010382	OF19	4900 NW KITTRIDGE AVE (OF19)	COMPOSITE	4/6/2001 5:10	JBB/MKS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	8.64	CONC	µg/L	0.2	EPA 200.8	4/13/2001
FO010382	OF19	4900 NW KITTRIDGE AVE (OF19)	COMPOSITE	4/6/2001 5:10	JBB/MKS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	114	CONC	µg/L	0.5	EPA 200.8	4/13/2001
FO010382	OF19	4900 NW KITTRIDGE AVE (OF19)	COMPOSITE	4/6/2001 5:10	JBB/MKS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	4/13/2001
FO010382	OF19	4900 NW KITTRIDGE AVE (OF19)	COMPOSITE	4/6/2001 5:10	JBB/MKS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	0.37	CONC	µg/L	0.1	EPA 200.8	4/13/2001
FO010382	OF19	4900 NW KITTRIDGE AVE (OF19)	COMPOSITE	4/6/2001 5:10	JBB/MKS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	0.41	CONC	µg/L	0.1	EPA 200.8	4/13/2001

Time	Flow	Composite Aliquots	Missed Aliquots	Rain (Avg of Gauges 125 and 121)
		7	0	
4/5/01 16:00	0.254			0.00
16:10	0.272			0.00
16:20	0.266			0.00
16:30	0.271			0.00
16:40	0.266			0.01
16:50	0.259			0.00
17:00	0.276			0.00
17:10	0.278			0.01
17:20	0.263			0.01
17:30	0.288			0.01
17:40	0.329			0.01
17:50	0.411			0.01
18:00	1.062			0.00
18:10	1.399			0.01
18:20	1.364			0.01
18:30	1.348			0.01
18:40	1.459			0.01
18:50	2.146			0.01
19:00	2.241			0.01
19:10	2.393			0.00
19:20	2.183			0.01
19:30	1.949			0.00
19:40	1.468			0.01
19:50	1.154			0.00
20:00	0.997			0.00
20:10	0.819			0.00
20:20	0.737			0.00
20:30	0.684			0.00
20:40	0.598			0.00
20:50	0.537			0.00
21:00	0.506			0.00
21:10	0.456			0.00
21:20	0.427			0.00
21:30	0.399			0.00
21:40	0.403			0.00
21:50	0.38			0.00
22:00	0.366			0.00
22:10	0.368			0.00
22:20	0.35			0.00
22:30	0.352			0.00
22:40	0.332			0.00
22:50	0.341			0.00
23:00	0.332			0.00
23:10	0.32			0.00
23:20	0.314			0.00
23:30	0.309			0.00
23:40	0.314			0.00
23:50	0.296			0.00
4/6/01 0:00	0.322			0.00
0:10	0.317			0.00
0:20	0.325			0.00
0:30	0.32			0.00
0:40	0.328			0.00
0:50	0.322			0.00
1:00	0.306			0.00
1:10	0.319			0.00
1:20	0.305			0.00
1:30	0.297			0.00
1:40	0.296			0.00
1:50	0.31			0.00
2:00	0.296			0.00
2:10	0.293			0.00
2:20	0.303			0.00
2:30	0.301			0.00
2:40	0.303			0.00
2:50	0.295			0.00
3:00	0.298			0.00
3:10	0.282			0.00
3:20	0.289			0.00
3:30	0.298			0.00
3:40	0.289			0.00
3:50	0.298			0.00
4:00	0.312			0.00
4:10	0.302			0.00
4:20	0.281			0.00
4:30	0.293			0.00
4:40	0.287			0.00
4:50	0.286			0.01
5:00	0.316			0.00
5:10	0.37		0.00	0.01
5:20	0.411			0.00
5:30	0.454			0.00
5:40	0.477			0.01
5:50	0.506			0.00
6:00	0.5			0.00
6:10	0.582			0.01
6:20	0.715			0.01
6:30	1.263		0	0.00
6:40	1.322			0.01
6:50	1.213			0.00
7:00	1.066			0.00
7:10	0.994		0	0.00
7:20	0.85			0.00
7:30	0.715			0.00
7:40	0.599			0.00
7:50	0.571			0.00

Figure 3: Event Hydrograph
Industrial Stormwater Outfall Monitoring
FY 2000-01 Event 10: April 6, 2001



Time	Flow	Composite Aliquots	Missed Aliquots	Rain (Avg of Gauges 125 and 121)
		7	0	
8:00	0.526			0.00
8:10	0.524			0.00
8:20	0.499			0.00
8:30	0.51		0	0.01
8:40	0.582			0.01
8:50	0.789			0.01
9:00	0.971			0.00
9:10	1.031			0.00
9:20	0.99		0	0.00
9:30	0.926			0.00
9:40	0.834			0.00
9:50	0.712			0.00
10:00	0.636			0.00
10:10	0.564			0.00
10:20	0.497			0.00
10:30	0.471			0.00
10:40	0.425		0	0.00
10:50	0.411			0.00
11:00	0.421			0.00
11:10	0.371			0.00
11:20	0.349			0.01
11:30	0.336			0.00
11:40	0.335			0.00
11:50	0.333			0.00
12:00	0.345			0.00
12:10	0.358			0.00
12:20	0.353			0.01
12:30	0.367			0.00
12:40	0.359			0.00
12:50	0.3		0	0.00
13:00	0.37			0.00
13:10	0.35			0.00
13:20	0.35			0.00
13:30	0.33			0.00
13:40	0.33			0.00
13:50	0.34			0.00
14:00	0.34			0.00
14:10	0.33			0.00
14:20	0.32			0.00
14:30	0.32			0.00
14:40	0.31			0.00
14:50	0.32			0.00
15:00	0.29			0.00

Land Use Stormwater Monitoring

Table 1: HYDRA Rain Gauge Data
Land Use Stormwater Monitoring
FY 2000-01 Event 25: September 2-3, 2000

Daily Rain Report — All Times in Pacific Standard Time

Rain Data Collected by HYDRA - City of Portland

Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Gauge 89: Vermont Hills (R1)																									
08/30/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08/31/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09/01/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09/02/00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.06	0.06	0.00	0.00	0.12	0.11	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.41
09/03/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
Gauge 147: Skyline Fire Station (OP1)																									
08/30/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08/31/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09/01/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.10	0.03	0.01	0.15
09/02/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.07	0.12	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.26
09/03/00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.09
Gauge 9: PDX E Business Park (M1)																									
08/30/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08/31/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09/01/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09/02/00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.00	0.00	0.07	0.01	0.01	0.05	0.10	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
09/03/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02

- Storm event duration

Table 2: Analytical Summary
Land Use Stormwater Monitoring
FY 2000-01 Event 25: September 2-3, 2000

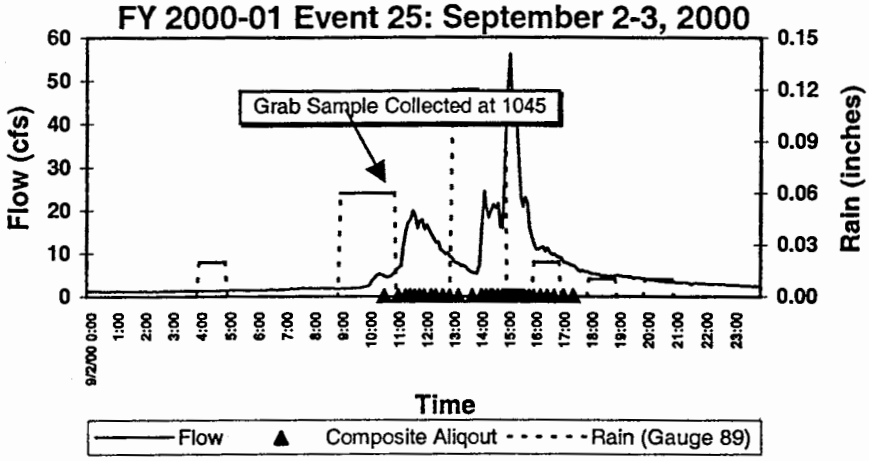
Grab Parameters	Units	M1	OP1	R1
Lab ID		FO001358	FO001359	FO001356
DISSOLVED OXYGEN (FIELD)	mg/L	8.9	9.9	8.2
pH (FIELD)	pH units	6.3	6.6	6.4
SPECIFIC CONDUCTANCE (FIELD)	umhos/cm	88	174	180
TEMPERATURE (FIELD)	Deg. C	18.5	14.1	15.1
E. COLI	CFU/100 ml	12000	1100	5800
FECAL COLIFORM	CFU/100 ml	4000	730	6000
NON-POLAR OIL & GREASE	mg/L	15.3	5 U	5 U
TOTAL OIL & GREASE	mg/L	18.3	5	5 U
Composite Parameters	**Units**	**M1**	**OP1**	**R1**
Lab ID		FO001365	FO001367	FO001366
AMMONIA-NITROGEN	mg/L	1.18	0.02 U	0.26
BOD5	mg/L	20	2 U	23
COD	mg/L	210	10	360
HARDNESS	mg CaCO3/L	40.4	69.0	12.0
NITRATE-NITROGEN	mg/L	0.98	0.43	1.5
ORTHO PO4-PHOSPHORUS (DIS)	mg/L	0.10	0.080	0.16
TOTAL DISSOLVED SOLIDS	mg/L	105	130	170
TOTAL KJELDAHL NITROGEN	mg/L	3.84	0.33	6.06
TOTAL PHOSPHORUS	mg/L	0.61	0.12	2.68
TOTAL SOLIDS	mg/L	301	145	1630
TOTAL SUSPENDED SOLIDS	mg/L	196	13	1460
ARSENIC (TOTAL)	ug/L	2.69	0.68	15.3
CADMIUM (TOTAL)	ug/L	0.85	0.1 U	1.64
COPPER (TOTAL)	ug/L	35.7	1.9	82.2
LEAD (TOTAL)	ug/L	49.7	0.76	96.4
MERCURY (TOTAL)	mg/L	0.0002 U	0.0002 U	0.0002 U
SILVER (TOTAL)	ug/L	0.11	0.1 U	0.29
ZINC (TOTAL)	ug/L	287	7.4	473
ARSENIC (DISSOLVED)	ug/L	1	0.42	1.73
CADMIUM (DISSOLVED)	ug/L	0.18	0.1 U	0.1 U
COPPER (DISSOLVED)	ug/L	11.3	1.06	5.95
LEAD (DISSOLVED)	ug/L	1.21	0.1 U	0.23
SILVER (DISSOLVED)	ug/L	0.1 U	0.1 U	0.1 U
ZINC (DISSOLVED)	ug/L	83.8	3.55	8.80

U = Not detected at the method reporting limit shown
N/A = Not applicable

FO001358	M1G	9/2/2000	17:20	MJS/WCR	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	4000	CONC	CFU/100 ml	2	SM 9222 D	9/4/2000	
FO001358	M1G	9/2/2000	17:20	MJS/WCR	GRAB	STORMWTR	E. COLI	E. COLI	12000	CONC	CFU/100 ml	2	SM 9213 D	9/4/2000	
FO001358	M1G	9/2/2000	17:20	MJS/WCR	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	6.3	CONC	pH Units	0.1	SM 4500-H B	9/2/2000	
FO001358	M1G	9/2/2000	17:20	MJS/WCR	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	6.9	CONC	mg/L	0.1	SM 4500-O G	9/2/2000	
FO001358	M1G	9/2/2000	17:20	MJS/WCR	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	16.5	CONC	Deg. C	0.1	SM 2550 B	9/2/2000	
FO001358	M1G	9/2/2000	17:20	MJS/WCR	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	88	CONC	µmhos/cm	1	SM 2510 B	9/2/2000	
FO001358	M1G	9/2/2000	17:20	MJS/WCR	GRAB	STORMWTR	NON-POLAR OIL & GREASE	NON-POLAR OIL & GREASE	15.3	CONC	mg/L	5	EPA 1664	9/13/2000	
FO001358	M1G	9/2/2000	17:20	MJS/WCR	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	18.3	CONC	mg/L	5	EPA 1664	9/13/2000	
FO001358	R1G	9/2/2000	11:45	MJS/WCR	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	6000	CONC	CFU/100 ml	2	SM 9222 D	9/4/2000	LAB: BECAUSE THE TOTAL OIL AND GREASE RESULT IS <5, THE NON-POLAR OIL AND GREASE CONCENTRATION IS ALSO <5.
FO001358	R1G	9/2/2000	11:45	MJS/WCR	GRAB	STORMWTR	E. COLI	E. COLI	5800	CONC	CFU/100 ml	2	SM 9213 D	9/4/2000	LAB: BECAUSE THE TOTAL OIL AND GREASE RESULT IS <5, THE NON-POLAR OIL AND GREASE CONCENTRATION IS ALSO <5.
FO001358	R1G	9/2/2000	11:45	MJS/WCR	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	6.4	CONC	pH Units	0.1	SM 4500-H B	9/2/2000	LAB: BECAUSE THE TOTAL OIL AND GREASE RESULT IS <5, THE NON-POLAR OIL AND GREASE CONCENTRATION IS ALSO <5.
FO001358	R1G	9/2/2000	11:45	MJS/WCR	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	6.2	CONC	mg/L	0.1	SM 4500-O G	9/2/2000	LAB: BECAUSE THE TOTAL OIL AND GREASE RESULT IS <5, THE NON-POLAR OIL AND GREASE CONCENTRATION IS ALSO <5.
FO001358	R1G	9/2/2000	11:45	MJS/WCR	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	15.1	CONC	Deg. C	0.1	SM 2550 B	9/2/2000	LAB: BECAUSE THE TOTAL OIL AND GREASE RESULT IS <5, THE NON-POLAR OIL AND GREASE CONCENTRATION IS ALSO <5.
FO001358	R1G	9/2/2000	11:45	MJS/WCR	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	180	CONC	µmhos/cm	1	SM 2510 B	9/2/2000	LAB: BECAUSE THE TOTAL OIL AND GREASE RESULT IS <5, THE NON-POLAR OIL AND GREASE CONCENTRATION IS ALSO <5.
FO001358	R1G	9/2/2000	11:45	MJS/WCR	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5		mg/L	5	EPA 1664	9/13/2000	LAB: BECAUSE THE TOTAL OIL AND GREASE RESULT IS <5, THE NON-POLAR OIL AND GREASE CONCENTRATION IS ALSO <5.
FO001359	OP1G	9/2/2000	16:00	MJS/WCR	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	730	CONC	CFU/100 ml	2	SM 9222 D	9/4/2000	
FO001359	OP1G	9/2/2000	16:00	MJS/WCR	GRAB	STORMWTR	E. COLI	E. COLI	1100	CONC	CFU/100 ml	2	SM 9213 D	9/4/2000	
FO001359	OP1G	9/2/2000	16:00	MJS/WCR	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	6.6	CONC	pH Units	0.1	SM 4500-H B	9/2/2000	
FO001359	OP1G	9/2/2000	16:00	MJS/WCR	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	9.9	CONC	mg/L	0.1	SM 4500-O G	9/2/2000	
FO001359	OP1G	9/2/2000	16:00	MJS/WCR	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	14.1	CONC	Deg. C	0.1	SM 2550 B	9/2/2000	
FO001359	OP1G	9/2/2000	16:00	MJS/WCR	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	174	CONC	µmhos/cm	1	SM 2510 B	9/2/2000	
FO001359	OP1G	9/2/2000	16:00	MJS/WCR	GRAB	STORMWTR	NON-POLAR OIL & GREASE	NON-POLAR OIL & GREASE	<5		mg/L	5	EPA 1664	9/13/2000	
FO001359	OP1G	9/2/2000	16:00	MJS/WCR	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	5	CONC	mg/L	5	EPA 1664	9/13/2000	
FO001365	M1C	9/2/2000	19:15	MJS/WCR	COMPOSITE	STORMWTR	BOD5	BOD5	20	CONC	mg/L	2	SM 5210 B	9/9/2000	
FO001365	M1C	9/2/2000	19:15	MJS/WCR	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	198	CONC	mg/L	1	SM 2540 D	9/4/2000	
FO001365	M1C	9/2/2000	19:15	MJS/WCR	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	105	CONC	mg/L	1	SM 2540 BD	9/7/2000	
FO001365	M1C	9/2/2000	19:15	MJS/WCR	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	301	CONC	mg/L	1	SM 2540 B	9/4/2000	
FO001365	M1C	9/2/2000	19:15	MJS/WCR	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.61	CONC	mg/L	0.03	EPA 365.4	9/8/2000	
FO001365	M1C	9/2/2000	19:15	MJS/WCR	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	1.18	CONC	mg/L	0.02	EPA 350.1	9/11/2000	
FO001365	M1C	9/2/2000	19:15	MJS/WCR	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	3.84	CONC	mg/L	0.2	EPA 351.2	9/7/2000	
FO001365	M1C	9/2/2000	19:15	MJS/WCR	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.98	CONC	mg/L	0.1	EPA 300.0	9/5/2000	
FO001365	M1C	9/2/2000	19:15	MJS/WCR	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.1	CONC	mg/L	0.02	EPA 365.1	9/5/2000	
FO001365	M1C	9/2/2000	19:15	MJS/WCR	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	40.4	CONC	mg CaCO3/L	1	SM 2340 C	9/7/2000	
FO001365	M1C	9/2/2000	19:15	MJS/WCR	COMPOSITE	STORMWTR	COD	COD	210	CONC	mg/L	2	SM 5220 D	9/13/2000	
FO001365	M1C	9/2/2000	19:15	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	35.7	CONC	µg/L	0.2	EPA 200.8	9/15/2000	
FO001365	M1C	9/2/2000	19:15	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	287	CONC	µg/L	0.5	EPA 200.8	9/15/2000	
FO001365	M1C	9/2/2000	19:15	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	2.69	CONC	µg/L	0.1	EPA 200.8	9/15/2000	
FO001365	M1C	9/2/2000	19:15	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	0.11	CONC	µg/L	0.1	EPA 200.8	9/15/2000	
FO001365	M1C	9/2/2000	19:15	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	0.65	CONC	µg/L	0.1	EPA 200.8	9/15/2000	
FO001365	M1C	9/2/2000	19:15	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	49.7	CONC	µg/L	0.1	EPA 200.8	9/15/2000	
FO001365	M1C	9/2/2000	19:15	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	11.3	CONC	µg/L	0.2	EPA 200.8	9/14/2000	
FO001365	M1C	9/2/2000	19:15	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	83.8	CONC	µg/L	0.5	EPA 200.8	9/14/2000	
FO001365	M1C	9/2/2000	19:15	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	1.16	CONC	µg/L	0.1	EPA 200.8	9/14/2000	
FO001365	M1C	9/2/2000	19:15	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8	9/14/2000	
FO001365	M1C	9/2/2000	19:15	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	0.16	CONC	µg/L	0.1	EPA 200.8	9/14/2000	
FO001365	M1C	9/2/2000	19:15	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	1.21	CONC	µg/L	0.1	EPA 200.8	9/14/2000	
FO001365	M1C	9/2/2000	19:15	MJS/WCR	COMPOSITE	STORMWTR	MERCURY	MERCURY	<0.0002		mg/L	0.0002	EPA 245.1	9/9/2000	
FO001366	R1C	9/2/2000	17:24	MJS/WCR	COMPOSITE	STORMWTR	BOD5	BOD5	23	CONC	mg/L	2	SM 5210 B	9/9/2000	
FO001366	R1C	9/2/2000	17:24	MJS/WCR	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	1460	CONC	mg/L	1	SM 2540 D	9/4/2000	
FO001366	R1C	9/2/2000	17:24	MJS/WCR	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	170	CONC	mg/L	1	SM 2540 BD	9/7/2000	
FO001366	R1C	9/2/2000	17:24	MJS/WCR	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	1630	CONC	mg/L	1	SM 2540 B	9/4/2000	
FO001366	R1C	9/2/2000	17:24	MJS/WCR	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	2.68	CONC	mg/L	0.03	EPA 365.4	9/8/2000	
FO001366	R1C	9/2/2000	17:24	MJS/WCR	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.26	CONC	mg/L	0.02	EPA 350.1	9/11/2000	
FO001366	R1C	9/2/2000	17:24	MJS/WCR	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	6.06	CONC	mg/L	0.2	EPA 351.2	9/7/2000	
FO001366	R1C	9/2/2000	17:24	MJS/WCR	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	1.5	CONC	mg/L	0.1	EPA 300.0	9/5/2000	
FO001366	R1C	9/2/2000	17:24	MJS/WCR	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.16	CONC	mg/L	0.02	EPA 365.1	9/5/2000	
FO001366	R1C	9/2/2000	17:24	MJS/WCR	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	12	CONC	mg CaCO3/L	1	SM 2340 C	9/7/2000	
FO001366	R1C	9/2/2000	17:24	MJS/WCR	COMPOSITE	STORMWTR	COD	COD	360	CONC	mg/L	2	SM 5220 D	9/13/2000	
FO001366	R1C	9/2/2000	17:24	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	82.2	CONC	µg/L	0.2	EPA 200.8	9/15/2000	
FO001366	R1C	9/2/2000	17:24	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	473	CONC	µg/L	0.5	EPA 200.8	9/15/2000	
FO001366	R1C	9/2/2000	17:24	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	15.3	CONC	µg/L	0.1	EPA 200.8	9/15/2000	
FO001366	R1C	9/2/2000	17:24	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	0.29	CONC	µg/L	0.1	EPA 200.8	9/15/2000	
FO001366	R1C	9/2/2000	17:24	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	1.64	CONC	µg/L	0.1	EPA 200.8	9/15/2000	
FO001366	R1C	9/2/2000	17:24	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	96.4	CONC	µg/L	0.1	EPA 200.8	9/15/2000	
FO001366	R1C	9/2/2000	17:24	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	5.95	CONC	µg/L	0.2	EPA 200.8	9/14/2000	
FO001366	R1C	9/2/2000	17:24	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	8.8	CONC	µg/L	0.5	EPA 200.8	9/14/2000	
FO001366	R1C	9/2/2000	17:24	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	1.73	CONC	µg/L	0.1	EPA 200.8	9/14/2000	
FO001366	R1C	9/2/2000	17:24	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8	9/14/2000	
FO001366	R1C	9/2/2000	17:24	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8	9/14/2000	
FO001366	R1C	9/2/2000	17:24	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	0.23	CONC	µg/L	0.1	EPA 200.8	9/14/2000	
FO001366	R1C	9/2/2000	17:24	MJS/WCR	COMPOSITE	STORMWTR	MERCURY	MERCURY	<0.0002		mg/L	0.0002	EPA 245.1	9/9/2000	
FO001367	OP1C	9/3/2000	7:50	MJS/WCR	COMPOSITE	STORMWTR	BOD5	BOD5	<2		mg/L	2	SM 5210 B	9/9/2000	
FO001367	OP1C	9/3/2000	7:50	MJS/WCR	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	13	CONC	mg/L	1	SM 2540 D	9/4/2000	
FO001367	OP1C	9/3/2000	7:50	MJS/WCR	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	130	CONC	mg/L	1	SM 2540 BD	9/7/2000	
FO001367	OP1C	9/3/2000	7:50	MJS/WCR	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	145	CONC	mg/L	1	SM 2540 B	9/4/2000	
FO001367	OP1C	9/3/2000	7:50	MJS/WCR	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.12	CONC	mg/L	0.03	EPA 365.4	9/12/2000	
FO001367	OP1C	9/3/2000	7:50	MJS/WCR	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	<0.02		mg/L	0.02	EPA 350.1	9/11/2000	
FO001367	OP1C	9/3/2000	7:50	MJS/WCR	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	0.33	CONC	mg/L	0.2	EPA 351.2	9/7/2000	
FO001367	OP1C	9/3/2000	7:50	MJS/WCR	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.43	CONC	mg/L	0.1	EPA 300.0	9/5/2000	
FO001367	OP1C	9/3/2000	7:50	MJS/WCR	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.08	CONC	mg/L	0.02	EPA 365.1	9/5/2000	

FO001367	OP1C	9/3/2000	7:50	MJS/WCR	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	69	CONC	mg CaCO3/L	1	SM 2340 C	9/7/2000
FO001367	OP1C	9/3/2000	7:50	MJS/WCR	COMPOSITE	STORMWTR	COD	COD	10	CONC	mg/L	2	SM 5220 D	9/13/2000
FO001367	OP1C	9/3/2000	7:50	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	1.91	CONC	µg/L	0.2	EPA 200.8	9/15/2000
FO001367	OP1C	9/3/2000	7:50	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	7.4	CONC	µg/L	0.5	EPA 200.8	9/15/2000
FO001367	OP1C	9/3/2000	7:50	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	0.68	CONC	µg/L	0.1	EPA 200.8	9/15/2000
FO001367	OP1C	9/3/2000	7:50	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	<0.1		µg/L	0.1	EPA 200.8	9/15/2000
FO001367	OP1C	9/3/2000	7:50	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	<0.1		µg/L	0.1	EPA 200.8	9/15/2000
FO001367	OP1C	9/3/2000	7:50	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	0.76	CONC	µg/L	0.1	EPA 200.8	9/15/2000
FO001367	OP1C	9/3/2000	7:50	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	1.06	CONC	µg/L	0.2	EPA 200.8	9/14/2000
FO001367	OP1C	9/3/2000	7:50	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	3.55	CONC	µg/L	0.5	EPA 200.8	9/14/2000
FO001367	OP1C	9/3/2000	7:50	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	0.42	CONC	µg/L	0.1	EPA 200.8	9/14/2000
FO001367	OP1C	9/3/2000	7:50	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8	9/14/2000
FO001367	OP1C	9/3/2000	7:50	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8	9/14/2000
FO001367	OP1C	9/3/2000	7:50	MJS/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8	9/14/2000
FO001367	OP1C	9/3/2000	7:50	MJS/WCR	COMPOSITE	STORMWTR	MERCURY	MERCURY	<0.0002		mg/L	0.0002	EPA 245.1	9/9/2000
FO001368	FILTER	9/3/2000	13:00	KD	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	<0.2		µg/L	0.2	EPA 200.8	9/14/2000
FO001368	FILTER	9/3/2000	13:00	KD	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	<0.5		µg/L	0.5	EPA 200.8	9/14/2000
FO001368	FILTER	9/3/2000	13:00	KD	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8	9/14/2000
FO001368	FILTER	9/3/2000	13:00	KD	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8	9/14/2000
FO001368	FILTER	9/3/2000	13:00	KD	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8	9/14/2000
FO001368	FILTER	9/3/2000	13:00	KD	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8	9/14/2000

Figure 5: R1 (Fanno Creek) Hydrograph
Land Use Stormwater Monitoring
FY 2000-01 Event 25: September 2-3, 2000



Location:R1 -Fanno Creek

	cfs	39	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 89)
9/2/00 0:00	1.1808			0.00
00:05:00	1.2317			0.00
00:10:00	1.2314			0.00
00:15:00	1.2372			0.00
00:20:00	1.2412			0.00
00:25:00	1.2441			0.00
00:30:00	1.2114			0.00
00:35:00	1.1849			0.00
00:40:00	1.2281			0.00
00:45:00	1.2084			0.00
00:50:00	1.2148			0.00
00:55:00	1.2313			0.00
1:00	1.2075			0.00
01:05:00	1.2325			0.00
01:10:00	1.2384			0.00
01:15:00	1.2256			0.00
01:20:00	1.2276			0.00
01:25:00	1.2025			0.00
01:30:00	1.2021			0.00
01:35:00	1.2252			0.00
01:40:00	1.2042			0.00
01:45:00	1.1883			0.00
01:50:00	1.2209			0.00
01:55:00	1.2707			0.00
2:00	1.2160			0.00
02:05:00	1.2348			0.00
02:10:00	1.2094			0.00
02:15:00	1.2084			0.00
02:20:00	1.1845			0.00
02:25:00	1.2552			0.00
02:30:00	1.2041			0.00
02:35:00	1.2237			0.00
02:40:00	1.2532			0.00
02:45:00	1.2623			0.00
02:50:00	1.2515			0.00
02:55:00	1.2743			0.00
3:00	1.2699			0.00

Location:R1 -Fanno Creek

	cfs	39	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 89)
03:05:00	1.2980			0.00
03:10:00	1.3028			0.00
03:15:00	1.3178			0.00
03:20:00	1.3480			0.00
03:25:00	1.3094			0.00
03:30:00	1.3312			0.00
03:35:00	1.3292			0.00
03:40:00	1.3057			0.00
03:45:00	1.3088			0.00
03:50:00	1.3331			0.00
03:55:00	1.3232			0.00
4:00	1.3345			0.02
04:05:00	1.3234			0.02
04:10:00	1.2897			0.02
04:15:00	1.3135			0.02
04:20:00	1.3285			0.02
04:25:00	1.3510			0.02
04:30:00	1.3520			0.02
04:35:00	1.3079			0.02
04:40:00	1.3318			0.02
04:45:00	1.3262			0.02
04:50:00	1.4453			0.02
04:55:00	1.3954			0.02
5:00	1.3491			0.00
05:05:00	1.5001			0.00
05:10:00	1.4491			0.00
05:15:00	1.4485			0.00
05:20:00	1.4641			0.00
05:25:00	1.4710			0.00
05:30:00	1.4546			0.00
05:35:00	1.4395			0.00
05:40:00	1.4235			0.00
05:45:00	1.4215			0.00
05:50:00	1.3959			0.00
05:55:00	1.5061			0.00
6:00	1.4557			0.00
06:05:00	1.5029			0.00
06:10:00	1.4587			0.00
06:15:00	1.4205			0.00
06:20:00	1.4133			0.00
06:25:00	1.5383			0.00
06:30:00	1.5592			0.00
06:35:00	1.5314			0.00
06:40:00	1.5637			0.00
06:45:00	1.4434			0.00
06:50:00	1.6277			0.00
06:55:00	1.5428			0.00
7:00	1.5289			0.00
07:05:00	1.6466			0.00
07:10:00	1.6361			0.00
07:15:00	1.8419			0.00
07:20:00	1.7264			0.00
07:25:00	1.7383			0.00
07:30:00	1.8682			0.00
07:35:00	1.8929			0.00
07:40:00	1.9309			0.00

Location:R1 -Fanno Creek

	cfs	39	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 89)
07:45:00	1.8513			0.00
07:50:00	1.8857			0.00
07:55:00	1.9081			0.00
8:00	1.8678			0.00
08:05:00	1.8798			0.00
08:10:00	1.8659			0.00
08:15:00	1.8760			0.00
08:20:00	1.9103			0.00
08:25:00	1.8692			0.00
08:30:00	1.8600			0.00
08:35:00	1.8587			0.00
08:40:00	1.8555			0.00
08:45:00	1.8811			0.00
08:50:00	1.8220			0.00
08:55:00	1.7978			0.00
9:00	1.8118			0.06
09:05:00	1.8406			0.06
09:10:00	1.8194			0.06
09:15:00	1.8382			0.06
09:20:00	1.8584			0.06
09:25:00	1.8938			0.06
09:30:00	1.9384			0.06
09:35:00	1.9642			0.06
09:40:00	2.0144			0.06
09:45:00	2.0475			0.06
09:50:00	2.1306			0.06
09:55:00	2.2011			0.06
10:00	2.4000			0.06
10:05:00	2.9158			0.06
10:10:00	3.8838			0.06
10:15:00	4.4953			0.06
10:20:00	5.0069			0.06
10:25:00	5.1975			0.06
10:30:00	4.9865			0.06
10:35:00	4.7196	0.0000		0.06
10:40:00	4.4754			0.06
10:45:00	4.5677			0.06
10:50:00	4.8385			0.06
10:55:00	5.3714			0.06
11:00	6.0099			0.00
11:05:00	6.6020	0.0000		0.00
11:10:00	7.0768			0.00
11:15:00	11.9349			0.00
11:20:00	15.3794	0.0000		0.00
11:25:00	17.3099			0.00
11:30:00	17.7796	0.0000		0.00
11:35:00	19.8503			0.00
11:40:00	18.7643	0.0000		0.00
11:45:00	15.8898			0.00
11:50:00	17.4818	0.0000		0.00
11:55:00	17.7175			0.00
12:00	15.5423	0.0000		0.00
12:05:00	16.6278			0.00
12:10:00	15.4435			0.00
12:15:00	14.4417	0.0000		0.00
12:20:00	13.4210			0.00

Location:R1 -Fanno Creek

	cfs	39	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 89)
12:25:00	12.4766	0.0000		0.00
12:30:00	12.6105			0.00
12:35:00	10.9051			0.00
12:40:00	10.4282	0.0000		0.00
12:45:00	9.8616			0.00
12:50:00	10.0625			0.00
12:55:00	9.2457	0.0000		0.00
13:00	8.9544			0.12
13:05:00	7.9067			0.12
13:10:00	7.7572			0.12
13:15:00	7.5901	0.0000		0.12
13:20:00	7.0489			0.12
13:25:00	7.2330			0.12
13:30:00	6.8186			0.12
13:35:00	6.2332			0.12
13:40:00	5.8505			0.12
13:45:00	5.5108	0.0000		0.12
13:50:00	5.3940			0.12
13:55:00	5.3256			0.12
14:00	7.2442			0.11
14:05:00	16.1006	0.0000		0.11
14:10:00	24.3562			0.11
14:15:00	20.4773	0.0000		0.11
14:20:00	18.2336			0.11
14:25:00	19.9048	0.0000		0.11
14:30:00	21.2257	0.0000		0.11
14:35:00	20.5166			0.11
14:40:00	21.5616	0.0000		0.11
14:45:00	16.1586			0.11
14:50:00	15.8555	0.0000		0.11
14:55:00	34.8905	0.0000		0.11
15:00	48.2360	0.0000		0.00
15:05:00	56.0911	0.0000		0.00
15:10:00	44.7019	0.0000		0.00
15:15:00	40.2037	0.0000		0.00
15:20:00	39.7504	0.0000		0.00
15:25:00	31.7057	0.0000		0.00
15:30:00	22.8849	0.0000		0.00
15:35:00	20.8593	0.0000		0.00
15:40:00	22.9650	0.0000		0.00
15:45:00	21.6777			0.00
15:50:00	16.0908	0.0000		0.00
15:55:00	13.8048			0.00
16:00	12.2356	0.0000		0.02
16:05:00	10.9689			0.02
16:10:00	10.9728			0.02
16:15:00	11.2945	0.0000		0.02
16:20:00	11.4594			0.02
16:25:00	10.5400			0.02
16:30:00	11.2374	0.0000		0.02
16:35:00	10.1917			0.02
16:40:00	9.7231			0.02
16:45:00	9.8351	0.0000		0.02
16:50:00	9.3178			0.02
16:55:00	9.0137			0.02
17:00	8.9882			0.00

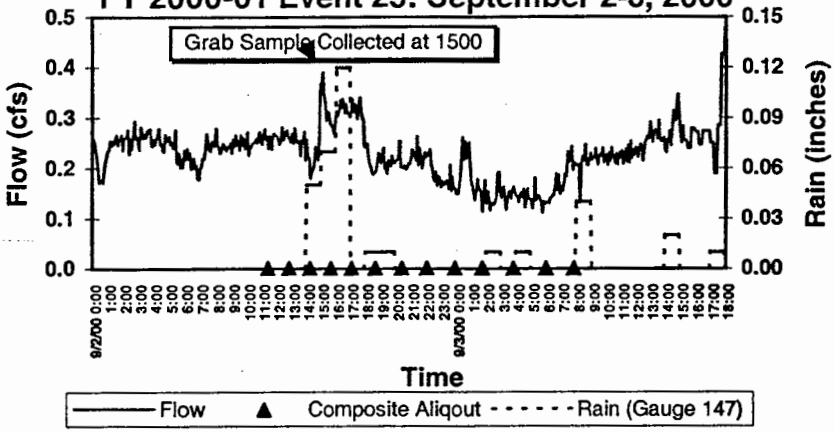
Location:R1 -Fanno Creek

	cfs	39	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 89)
17:05:00	7.8799	0.0000		0.00
17:10:00	7.8513			0.00
17:15:00	7.5747			0.00
17:20:00	7.3026			0.00
17:25:00	7.1708	0.0000		0.00
17:30:00	6.8264			0.00
17:35:00	6.2764			0.00
17:40:00	5.8225			0.00
17:45:00	6.0661			0.00
17:50:00	5.8041			0.00
17:55:00	5.7826			0.00
18:00	5.5878			0.01
18:05:00	5.2555			0.01
18:10:00	5.2657			0.01
18:15:00	5.1387			0.01
18:20:00	5.1595			0.01
18:25:00	4.8337			0.01
18:30:00	4.8735			0.01
18:35:00	4.8978			0.01
18:40:00	4.6668			0.01
18:45:00	4.7609			0.01
18:50:00	4.6592			0.01
18:55:00	4.8304			0.01
19:00	4.9144			0.00
19:05:00	4.8756			0.00
19:10:00	4.7797			0.00
19:15:00	4.7287			0.00
19:20:00	4.7107			0.00
19:25:00	4.5485			0.00
19:30:00	4.5972			0.00
19:35:00	4.1626			0.00
19:40:00	4.4119			0.00
19:45:00	4.3916			0.00
19:50:00	4.2680			0.00
19:55:00	4.1597			0.00
20:00	4.1791			0.01
20:05:00	3.9580			0.01
20:10:00	3.8893			0.01
20:15:00	3.8566			0.01
20:20:00	3.7448			0.01
20:25:00	3.6769			0.01
20:30:00	3.5720			0.01
20:35:00	3.6040			0.01
20:40:00	3.4484			0.01
20:45:00	3.3620			0.01
20:50:00	3.3669			0.01
20:55:00	3.3647			0.01
21:00	3.3456			0.00
21:05:00	3.2787			0.00
21:10:00	3.2561			0.00
21:15:00	3.2009			0.00
21:20:00	3.2432			0.00
21:25:00	3.2128			0.00
21:30:00	3.1020			0.00
21:35:00	2.7385			0.00
21:40:00	3.0738			0.00

Location:R1 -Fanno Creek

	cfs	39	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 89)
21:45:00	3.1090			0.00
21:50:00	3.0431			0.00
21:55:00	3.0621			0.00
22:00	3.0922			0.00
22:05:00	2.9197			0.00
22:10:00	2.9380			0.00
22:15:00	2.8944			0.00
22:20:00	2.9216			0.00
22:25:00	2.8994			0.00
22:30:00	2.9333			0.00
22:35:00	2.8560			0.00
22:40:00	2.9145			0.00
22:45:00	2.7640			0.00
22:50:00	2.6844			0.00
22:55:00	2.6926			0.00
23:00	2.6640			0.00
23:05:00	2.6602			0.00
23:10:00	2.6668			0.00
23:15:00	2.5232			0.00
23:20:00	2.5513			0.00
23:25:00	2.4592			0.00
23:30:00	2.4543			0.00
23:35:00	2.4768			0.00
23:40:00	2.4142			0.00
23:45:00	2.4420			0.00
23:50:00	2.4057			0.00
23:55:00	2.4771			0.00

Figure 6: OP1 (Balch Creek) Hydrograph
Land Use Stormwater Monitoring
FY 2000-01 Event 25: September 2-3, 2000



Location: OP1 - Balch Creek

	cfs	13	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 14
9/2/00 0:00	0.2588			0.00
00:05:00	0.2557			0.00
00:10:00	0.2421			0.00
00:15:00	0.2229			0.00
00:20:00	0.2000			0.00
00:25:00	0.1720			0.00
00:30:00	0.1741			0.00
00:35:00	0.1754			0.00
00:40:00	0.1719			0.00
00:45:00	0.1934			0.00
00:50:00	0.2121			0.00
00:55:00	0.2222			0.00
1:00	0.2350			0.00
01:05:00	0.2379			0.00
01:10:00	0.2546			0.00
01:15:00	0.2450			0.00
01:20:00	0.2539			0.00
01:25:00	0.2489			0.00
01:30:00	0.2607			0.00
01:35:00	0.2664			0.00
01:40:00	0.2453			0.00
01:45:00	0.2568			0.00
01:50:00	0.2593			0.00
01:55:00	0.2668			0.00
2:00	0.2357			0.00
02:05:00	0.2602			0.00
02:10:00	0.2629			0.00
02:15:00	0.2602			0.00
02:20:00	0.2768			0.00
02:25:00	0.2292			0.00
02:30:00	0.2590			0.00
02:35:00	0.2392			0.00
02:40:00	0.2677			0.00
02:45:00	0.2934			0.00
02:50:00	0.2592			0.00
02:55:00	0.2625			0.00

Location: OP1 - Balch Creek

Time	cfs Flow	13 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 14
3:00	0.2481			0.00
03:05:00	0.2370			0.00
03:10:00	0.2828			0.00
03:15:00	0.2740			0.00
03:20:00	0.2597			0.00
03:25:00	0.2678			0.00
03:30:00	0.2610			0.00
03:35:00	0.2747			0.00
03:40:00	0.2773			0.00
03:45:00	0.2780			0.00
03:50:00	0.2473			0.00
03:55:00	0.2444			0.00
4:00	0.2577			0.00
04:05:00	0.2466			0.00
04:10:00	0.2587			0.00
04:15:00	0.2664			0.00
04:20:00	0.2788			0.00
04:25:00	0.2479			0.00
04:30:00	0.2494			0.00
04:35:00	0.2346			0.00
04:40:00	0.2327			0.00
04:45:00	0.2667			0.00
04:50:00	0.2536			0.00
04:55:00	0.2596			0.00
5:00	0.2632			0.00
05:05:00	0.2483			0.00
05:10:00	0.2520			0.00
05:15:00	0.2407			0.00
05:20:00	0.2421			0.00
05:25:00	0.2760			0.00
05:30:00	0.2137			0.00
05:35:00	0.2095			0.00
05:40:00	0.2308			0.00
05:45:00	0.2011			0.00
05:50:00	0.2187			0.00
05:55:00	0.2022			0.00
6:00	0.2355			0.00
06:05:00	0.2180			0.00
06:10:00	0.2394			0.00
06:15:00	0.2188			0.00
06:20:00	0.2308			0.00
06:25:00	0.1992			0.00
06:30:00	0.2008			0.00
06:35:00	0.2208			0.00
06:40:00	0.2008			0.00
06:45:00	0.2062			0.00
06:50:00	0.1792			0.00
06:55:00	0.1784			0.00
7:00	0.1992			0.00
07:05:00	0.2038			0.00
07:10:00	0.2196			0.00
07:15:00	0.2185			0.00
07:20:00	0.2370			0.00
07:25:00	0.2679			0.00
07:30:00	0.2518			0.00
07:35:00	0.2350			0.00

Location: OP1 - Balch Creek

Time	cfs Flow	13 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 14
07:40:00	0.2340			0.00
07:45:00	0.2541			0.00
07:50:00	0.2447			0.00
07:55:00	0.2441			0.00
8:00	0.2790			0.00
08:05:00	0.2454			0.00
08:10:00	0.2416			0.00
08:15:00	0.2300			0.00
08:20:00	0.2354			0.00
08:25:00	0.2493			0.00
08:30:00	0.2463			0.00
08:35:00	0.2380			0.00
08:40:00	0.2353			0.00
08:45:00	0.2436			0.00
08:50:00	0.2411			0.00
08:55:00	0.2496			0.00
9:00	0.2307			0.00
09:05:00	0.2571			0.00
09:10:00	0.2430			0.00
09:15:00	0.2658			0.00
09:20:00	0.2459			0.00
09:25:00	0.2559			0.00
09:30:00	0.2366			0.00
09:35:00	0.2658			0.00
09:40:00	0.2460			0.00
09:45:00	0.2601			0.00
09:50:00	0.2398			0.00
09:55:00	0.2406			0.00
10:00	0.2719			0.00
10:05:00	0.2261			0.00
10:10:00	0.2419			0.00
10:15:00	0.2404			0.00
10:20:00	0.2493			0.00
10:25:00	0.2510			0.00
10:30:00	0.2514			0.00
10:35:00	0.2584			0.00
10:40:00	0.2501			0.00
10:45:00	0.2685			0.00
10:50:00	0.2723			0.00
10:55:00	0.2488			0.00
11:00	0.2468			0.00
11:05:00	0.2693			0.00
11:10:00	0.2783			0.00
11:15:00	0.2564			0.00
11:20:00	0.2633			0.00
11:25:00	0.2398		0.00	0.00
11:30:00	0.2648			0.00
11:35:00	0.2536			0.00
11:40:00	0.2377			0.00
11:45:00	0.2686			0.00
11:50:00	0.2695			0.00
11:55:00	0.2650			0.00
12:00	0.2637			0.00
12:05:00	0.2552			0.00
12:10:00	0.2477			0.00
12:15:00	0.2557			0.00

Location: OP1 - Balch Creek

Time	cfs Flow	13 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 14
12:20:00	0.2820			0.00
12:25:00	0.2557			0.00
12:30:00	0.2599			0.00
12:35:00	0.2737			0.00
12:40:00	0.2761			0.00
12:45:00	0.2614			0.00
12:50:00	0.2596	0.00		0.00
12:55:00	0.2526			0.00
13:00	0.2682			0.00
13:05:00	0.2491			0.00
13:10:00	0.2796			0.00
13:15:00	0.2694			0.00
13:20:00	0.2521			0.00
13:25:00	0.2512			0.00
13:30:00	0.2546			0.00
13:35:00	0.2252			0.00
13:40:00	0.2559			0.00
13:45:00	0.2556			0.00
13:50:00	0.2721			0.00
13:55:00	0.2162			0.00
14:00	0.2571			0.05
14:05:00	0.2225			0.05
14:10:00	0.2212			0.05
14:15:00	0.1802	0.00		0.05
14:20:00	0.1938			0.05
14:25:00	0.1965			0.05
14:30:00	0.2064			0.05
14:35:00	0.2421			0.05
14:40:00	0.2377			0.05
14:45:00	0.2161			0.05
14:50:00	0.2261			0.05
14:55:00	0.3676			0.05
15:00	0.3662			0.07
15:05:00	0.3903			0.07
15:10:00	0.3438			0.07
15:15:00	0.3292			0.07
15:20:00	0.2950			0.07
15:25:00	0.3120			0.07
15:30:00	0.3116			0.07
15:35:00	0.2899			0.07
15:40:00	0.2844	0.00		0.07
15:45:00	0.2837			0.07
15:50:00	0.2695			0.07
15:55:00	0.2898			0.07
16:00	0.3130			0.12
16:05:00	0.3042			0.12
16:10:00	0.3115			0.12
16:15:00	0.3347			0.12
16:20:00	0.3199			0.12
16:25:00	0.3375			0.12
16:30:00	0.3295			0.12
16:35:00	0.3105			0.12
16:40:00	0.3279			0.12
16:45:00	0.3089			0.12
16:50:00	0.3102			0.12
16:55:00	0.3040			0.12

Location: OP1 - Balch Creek

Time	cfs Flow	13 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 14
17:00	0.3111			0.00
17:05:00	0.3372	0.00		0.00
17:10:00	0.3121			0.00
17:15:00	0.3273			0.00
17:20:00	0.3142			0.00
17:25:00	0.2990			0.00
17:30:00	0.3237			0.00
17:35:00	0.3396			0.00
17:40:00	0.3120			0.00
17:45:00	0.3001			0.00
17:50:00	0.2936			0.00
17:55:00	0.2430			0.00
18:00	0.2430			0.01
18:05:00	0.2487			0.01
18:10:00	0.2255			0.01
18:15:00	0.2097			0.01
18:20:00	0.2028			0.01
18:25:00	0.1924			0.01
18:30:00	0.1883			0.01
18:35:00	0.1905			0.01
18:40:00	0.1927	0.00		0.01
18:45:00	0.2066			0.01
18:50:00	0.2302			0.01
18:55:00	0.2269			0.01
19:00	0.2099			0.01
19:05:00	0.2289			0.01
19:10:00	0.2396			0.01
19:15:00	0.1997			0.01
19:20:00	0.2049			0.01
19:25:00	0.1890			0.01
19:30:00	0.2157			0.01
19:35:00	0.2108			0.01
19:40:00	0.2024			0.01
19:45:00	0.2244			0.01
19:50:00	0.2095			0.01
19:55:00	0.2089			0.01
20:00	0.2156			0.00
20:05:00	0.2153			0.00
20:10:00	0.2234			0.00
20:15:00	0.2541			0.00
20:20:00	0.2024			0.00
20:25:00	0.2014	0.00		0.00
20:30:00	0.2002			0.00
20:35:00	0.2051			0.00
20:40:00	0.1967			0.00
20:45:00	0.2010			0.00
20:50:00	0.2097			0.00
20:55:00	0.2076			0.00
21:00	0.2200			0.00
21:05:00	0.2363			0.00
21:10:00	0.2323			0.00
21:15:00	0.2285			0.00
21:20:00	0.2158			0.00
21:25:00	0.2627			0.00
21:30:00	0.2059			0.00
21:35:00	0.2405			0.00

Location: OP1 - Balch Creek

	cfs	13	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 14
21:40:00	0.2238			0.00
21:45:00	0.1993			0.00
21:50:00	0.2103			0.00
21:55:00	0.2312			0.00
22:00	0.2220			0.00
22:05:00	0.2255	0.00		0.00
22:10:00	0.2313			0.00
22:15:00	0.2363			0.00
22:20:00	0.2067			0.00
22:25:00	0.1981			0.00
22:30:00	0.1793			0.00
22:35:00	0.1741			0.00
22:40:00	0.1928			0.00
22:45:00	0.1652			0.00
22:50:00	0.1839			0.00
22:55:00	0.1818			0.00
23:00	0.1620			0.00
23:05:00	0.1744			0.00
23:10:00	0.1657			0.00
23:15:00	0.1676			0.00
23:20:00	0.1754			0.00
23:25:00	0.1726			0.00
23:30:00	0.1584			0.00
23:35:00	0.2056			0.00
23:40:00	0.1540			0.00
23:45:00	0.1829			0.00
23:50:00	0.1590			0.00
23:55:00	0.1606	0.00		0.00
9/3/00 0:00	0.1487			0.00
00:05:00	0.1516			0.00
00:10:00	0.1491			0.00
00:15:00	0.1766			0.00
00:20:00	0.2088			0.00
00:25:00	0.2611			0.00
00:30:00	0.2170			0.00
00:35:00	0.2523			0.00
00:40:00	0.2200			0.00
00:45:00	0.2365			0.00
00:50:00	0.2504			0.00
00:55:00	0.2087			0.00
1:00	0.1721			0.00
01:05:00	0.1634			0.00
01:10:00	0.1476			0.00
01:15:00	0.1354			0.00
01:20:00	0.1538			0.00
01:25:00	0.1779			0.00
01:30:00	0.1571			0.00
01:35:00	0.1587			0.00
01:40:00	0.1383			0.00
01:45:00	0.1137	0.00		0.00
01:50:00	0.1512			0.00
01:55:00	0.1759			0.00
2:00	0.1292			0.01
02:05:00	0.1544			0.01
02:10:00	0.1538			0.01
02:15:00	0.1166			0.01

Location: OP1 - Balch Creek

Time	cfs Flow	13 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 14
02:20:00	0.1287			0.01
02:25:00	0.1309			0.01
02:30:00	0.1263			0.01
02:35:00	0.1322			0.01
02:40:00	0.1442			0.01
02:45:00	0.1896			0.01
02:50:00	0.1919			0.01
02:55:00	0.1515			0.01
3:00	0.1414			0.00
03:05:00	0.1594			0.00
03:10:00	0.1637			0.00
03:15:00	0.1373			0.00
03:20:00	0.1174			0.00
03:25:00	0.1333			0.00
03:30:00	0.1522			0.00
03:35:00	0.1540			0.00
03:40:00	0.1395			0.00
03:45:00	0.1565			0.00
03:50:00	0.1623	0.00		0.00
03:55:00	0.1534			0.00
4:00	0.1446			0.01
04:05:00	0.1447			0.01
04:10:00	0.1322			0.01
04:15:00	0.1441			0.01
04:20:00	0.1517			0.01
04:25:00	0.1414			0.01
04:30:00	0.1584			0.01
04:35:00	0.1218			0.01
04:40:00	0.1366			0.01
04:45:00	0.1590			0.01
04:50:00	0.1383			0.01
04:55:00	0.1390			0.01
5:00	0.1368			0.00
05:05:00	0.1202			0.00
05:10:00	0.1335			0.00
05:15:00	0.1803			0.00
05:20:00	0.1359			0.00
05:25:00	0.1436			0.00
05:30:00	0.1449			0.00
05:35:00	0.1389			0.00
05:40:00	0.1325			0.00
05:45:00	0.1116			0.00
05:50:00	0.1335			0.00
05:55:00	0.1289			0.00
6:00	0.1308	0.00		0.00
06:05:00	0.1325			0.00
06:10:00	0.1302			0.00
06:15:00	0.1397			0.00
06:20:00	0.1425			0.00
06:25:00	0.1453			0.00
06:30:00	0.1467			0.00
06:35:00	0.1627			0.00
06:40:00	0.1890			0.00
06:45:00	0.1561			0.00
06:50:00	0.1868			0.00
06:55:00	0.1494			0.00

Location: OP1 - Balch Creek

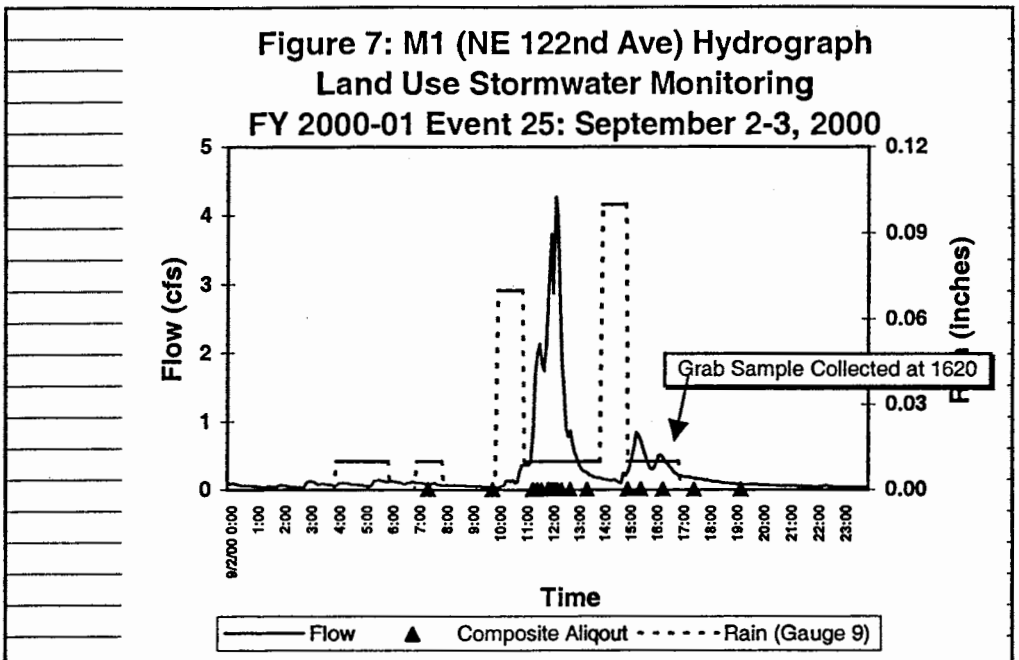
Time	cfs Flow	13 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 14
7:00	0.1621			0.00
07:05:00	0.1547			0.00
07:10:00	0.1678			0.00
07:15:00	0.1891			0.00
07:20:00	0.1844			0.00
07:25:00	0.2324			0.00
07:30:00	0.2122			0.00
07:35:00	0.2169			0.00
07:40:00	0.2429			0.00
07:45:00	0.1962			0.00
07:50:00	0.2109	0.00		0.00
07:55:00	0.2090			0.00
8:00	0.2061			0.04
08:05:00	0.2052			0.04
08:10:00	0.2074			0.04
08:15:00	0.1314			0.04
08:20:00	0.2101			0.04
08:25:00	0.2232			0.04
08:30:00	0.2151			0.04
08:35:00	0.2471			0.04
08:40:00	0.2070			0.04
08:45:00	0.2059			0.04
08:50:00	0.2156			0.04
08:55:00	0.2296			0.04
9:00	0.2156			0.00
09:05:00	0.2208			0.00
09:10:00	0.2198			0.00
09:15:00	0.2392			0.00
09:20:00	0.2166			0.00
09:25:00	0.2081			0.00
09:30:00	0.2230			0.00
09:35:00	0.2279			0.00
09:40:00	0.2236			0.00
09:45:00	0.2395			0.00
09:50:00	0.2118			0.00
09:55:00	0.2192			0.00
10:00	0.2270			0.00
10:05:00	0.2068			0.00
10:10:00	0.2309			0.00
10:15:00	0.2132			0.00
10:20:00	0.2411			0.00
10:25:00	0.2257			0.00
10:30:00	0.2205			0.00
10:35:00	0.2096			0.00
10:40:00	0.2298			0.00
10:45:00	0.2078			0.00
10:50:00	0.2229			0.00
10:55:00	0.2313			0.00
11:00	0.2204			0.00
11:05:00	0.2344			0.00
11:10:00	0.2091			0.00
11:15:00	0.2188			0.00
11:20:00	0.2377			0.00
11:25:00	0.2127			0.00
11:30:00	0.2458			0.00
11:35:00	0.2109			0.00

Location: OP1 - Balch Creek

Time	cfs Flow	13 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 14
11:40:00	0.2540			0.00
11:45:00	0.2200			0.00
11:50:00	0.2361			0.00
11:55:00	0.2260			0.00
12:00	0.2412			0.00
12:05:00	0.2402			0.00
12:10:00	0.2223			0.00
12:15:00	0.2393			0.00
12:20:00	0.2473			0.00
12:25:00	0.2437			0.00
12:30:00	0.2152			0.00
12:35:00	0.2333			0.00
12:40:00	0.2523			0.00
12:45:00	0.2569			0.00
12:50:00	0.2637			0.00
12:55:00	0.2583			0.00
13:00	0.2917			0.00
13:05:00	0.2754			0.00
13:10:00	0.2519			0.00
13:15:00	0.2699			0.00
13:20:00	0.2762			0.00
13:25:00	0.2736			0.00
13:30:00	0.2584			0.00
13:35:00	0.2951			0.00
13:40:00	0.2570			0.00
13:45:00	0.2540			0.00
13:50:00	0.2534			0.00
13:55:00	0.2616			0.00
14:00	0.2378			0.02
14:05:00	0.2316			0.02
14:10:00	0.2566			0.02
14:15:00	0.2553			0.02
14:20:00	0.2740			0.02
14:25:00	0.2450			0.02
14:30:00	0.2857			0.02
14:35:00	0.3135			0.02
14:40:00	0.2944			0.02
14:45:00	0.3085			0.02
14:50:00	0.3462			0.02
14:55:00	0.3100			0.02
15:00	0.2710			0.00
15:05:00	0.2515			0.00
15:10:00	0.2842			0.00
15:15:00	0.2554			0.00
15:20:00	0.2554			0.00
15:25:00	0.2554			0.00
15:30:00	0.2397			0.00
15:35:00	0.2397			0.00
15:40:00	0.2397			0.00
15:45:00	0.2788			0.00
15:50:00	0.2788			0.00
15:55:00	0.2788			0.00
16:00	0.2726			0.00
16:05:00	0.2726			0.00
16:10:00	0.2726			0.00
16:15:00	0.2471			0.00

Location: OP1 - Balch Creek

	cfs	13	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 14
16:20:00	0.2471			0.00
16:25:00	0.2471			0.00
16:30:00	0.2740			0.00
16:35:00	0.2740			0.00
16:40:00	0.2740			0.00
16:45:00	0.2743			0.00
16:50:00	0.2743			0.00
16:55:00	0.2743			0.00
17:00	0.2504			0.01
17:05:00	0.2504			0.01
17:10:00	0.2504			0.01
17:15:00	0.1899			0.01
17:20:00	0.1899			0.01
17:25:00	0.1899			0.01
17:30:00	0.2849			0.01
17:35:00	0.2849			0.01
17:40:00	0.2849			0.01
17:45:00	0.4264			0.01
17:50:00	0.4264			0.01
17:55:00	0.4264			0.01
18:00	0.4781			0.00



Location: M1 - NE 122nd

	cfs	24	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 9)
9/2/00 0:00	0.0990			0.00
00:05:00	0.0867			0.00
00:10:00	0.0931			0.00
00:15:00	0.0825			0.00
00:20:00	0.0742			0.00
00:25:00	0.0659			0.00
00:30:00	0.0617			0.00
00:35:00	0.0608			0.00
00:40:00	0.0615			0.00
00:45:00	0.0605			0.00
00:50:00	0.0583			0.00
00:55:00	0.0573			0.00
1:00	0.0544			0.00
01:05:00	0.0493			0.00
01:10:00	0.0471			0.00
01:15:00	0.0438			0.00
01:20:00	0.0428			0.00
01:25:00	0.0408			0.00
01:30:00	0.0496			0.00
01:35:00	0.0479			0.00
01:40:00	0.0462			0.00
01:45:00	0.0444			0.00
01:50:00	0.0482			0.00
01:55:00	0.0678			0.00
2:00	0.0641			0.00
02:05:00	0.0611			0.00
02:10:00	0.0561			0.00
02:15:00	0.0515			0.00
02:20:00	0.0467			0.00
02:25:00	0.0430			0.00
02:30:00	0.0409			0.00
02:35:00	0.0393			0.00
02:40:00	0.0389			0.00
02:45:00	0.0369			0.00
02:50:00	0.0373			0.00

Location: M1 - NE 122nd				
	cfs	24	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 9)
02:55:00	0.0920			0.00
3:00	0.1220			0.00
03:05:00	0.1235			0.00
03:10:00	0.1159			0.00
03:15:00	0.1034			0.00
03:20:00	0.0759			0.00
03:25:00	0.0854			0.00
03:30:00	0.0909			0.00
03:35:00	0.0846			0.00
03:40:00	0.0771			0.00
03:45:00	0.0747			0.00
03:50:00	0.0699			0.00
03:55:00	0.0630			0.00
4:00	0.0616			0.01
04:05:00	0.0918			0.01
04:10:00	0.0960			0.01
04:15:00	0.0972			0.01
04:20:00	0.0964			0.01
04:25:00	0.0922			0.01
04:30:00	0.0851			0.01
04:35:00	0.0805			0.01
04:40:00	0.0793			0.01
04:45:00	0.0740			0.01
04:50:00	0.0708			0.01
04:55:00	0.0701			0.01
5:00	0.0629			0.01
05:05:00	0.0598			0.01
05:10:00	0.0521			0.01
05:15:00	0.0497			0.01
05:20:00	0.0775			0.01
05:25:00	0.1352			0.01
05:30:00	0.1355			0.01
05:35:00	0.1468			0.01
05:40:00	0.1296			0.01
05:45:00	0.1250			0.01
05:50:00	0.1152			0.01
05:55:00	0.1169			0.01
6:00	0.1214			0.00
06:05:00	0.1261			0.00
06:10:00	0.1166			0.00
06:15:00	0.1116			0.00
06:20:00	0.1068			0.00
06:25:00	0.1028			0.00
06:30:00	0.0833			0.00
06:35:00	0.0858			0.00
06:40:00	0.1015			0.00
06:45:00	0.1026			0.00
06:50:00	0.1171			0.00
06:55:00	0.1084			0.00
7:00	0.1014			0.01
07:05:00	0.1015			0.01
07:10:00	0.0969			0.01
07:15:00	0.0930			0.01
07:20:00	0.0845			0.01
07:25:00	0.0847	0.00		0.01
07:30:00	0.0811			0.01

Location: M1 - NE 122nd				
	cfs	24	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 9)
07:35:00	0.0955			0.01
07:40:00	0.0961			0.01
07:45:00	0.0764			0.01
07:50:00	0.0693			0.01
07:55:00	0.0649			0.01
8:00	0.0599			0.00
08:05:00	0.0695			0.00
08:10:00	0.0664			0.00
08:15:00	0.0617			0.00
08:20:00	0.0625			0.00
08:25:00	0.0676			0.00
08:30:00	0.0663			0.00
08:35:00	0.0652			0.00
08:40:00	0.0642			0.00
08:45:00	0.0674			0.00
08:50:00	0.0569			0.00
08:55:00	0.0550			0.00
9:00	0.0542			0.00
09:05:00	0.0561			0.00
09:10:00	0.0574			0.00
09:15:00	0.0533			0.00
09:20:00	0.0542			0.00
09:25:00	0.0507			0.00
09:30:00	0.0439			0.00
09:35:00	0.0457			0.00
09:40:00	0.0421			0.00
09:45:00	0.0437			0.00
09:50:00	0.0399	0.00		0.00
09:55:00	0.0414			0.00
10:00	0.0431			0.07
10:05:00	0.0421			0.07
10:10:00	0.0569			0.07
10:15:00	0.0606			0.07
10:20:00	0.1302			0.07
10:25:00	0.1344			0.07
10:30:00	0.1210			0.07
10:35:00	0.1407			0.07
10:40:00	0.1013			0.07
10:45:00	0.1140			0.07
10:50:00	0.2726			0.07
10:55:00	0.3588			0.07
11:00	0.3641			0.01
11:05:00	0.3638			0.01
11:10:00	0.3588			0.01
11:15:00	0.4140			0.01
11:20:00	0.8567	0.00		0.01
11:25:00	1.7119			0.01
11:30:00	2.0131	0.00		0.01
11:35:00	2.1326			0.01
11:40:00	1.8433	0.00		0.01
11:45:00	1.7425			0.01
11:50:00	2.1252			0.01
11:55:00	2.9474	0.00		0.01
12:00	3.7301	0.00		0.01
12:05:00	2.8720	0.00		0.01
12:10:00	4.2682	0.00		0.01

Location: M1 - NE 122nd				
	cfs	24	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 9)
12:15:00	3.9735	0.00		0.01
12:20:00	2.7835			0.01
12:25:00	1.8645	0.00		0.01
12:30:00	1.4504			0.01
12:35:00	0.9008			0.01
12:40:00	0.7804			0.01
12:45:00	0.8677	0.00		0.01
12:50:00	0.6741			0.01
12:55:00	0.5500			0.01
13:00	0.4748			0.01
13:05:00	0.3743			0.01
13:10:00	0.3201			0.01
13:15:00	0.2748			0.01
13:20:00	0.2682			0.01
13:25:00	0.2508	0.00		0.01
13:30:00	0.2120			0.01
13:35:00	0.2121			0.01
13:40:00	0.1879			0.01
13:45:00	0.1841			0.01
13:50:00	0.1740			0.01
13:55:00	0.1791			0.01
14:00	0.1627			0.10
14:05:00	0.1534			0.10
14:10:00	0.1488			0.10
14:15:00	0.1383			0.10
14:20:00	0.1378			0.10
14:25:00	0.1383			0.10
14:30:00	0.1489			0.10
14:35:00	0.1287			0.10
14:40:00	0.1011			0.10
14:45:00	0.0962			0.10
14:50:00	0.2386			0.10
14:55:00	0.2058			0.10
15:00	0.2595	0.00		0.01
15:05:00	0.3495			0.01
15:10:00	0.4893			0.01
15:15:00	0.6310			0.01
15:20:00	0.8380			0.01
15:25:00	0.7942			0.01
15:30:00	0.7165	0.00		0.01
15:35:00	0.5996			0.01
15:40:00	0.5075			0.01
15:45:00	0.3946			0.01
15:50:00	0.3285			0.01
15:55:00	0.2989			0.01
16:00	0.3204			0.01
16:05:00	0.4016			0.01
16:10:00	0.4957			0.01
16:15:00	0.5085			0.01
16:20:00	0.4764	0.00		0.01
16:25:00	0.4080			0.01
16:30:00	0.3833			0.01
16:35:00	0.3377			0.01
16:40:00	0.3012			0.01
16:45:00	0.2549			0.01
16:50:00	0.2329			0.01

Location: M1 - NE 122nd				
	cfs	24	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 9)
16:55:00	0.2045			0.01
17:00	0.2084			0.00
17:05:00	0.1954			0.00
17:10:00	0.1870			0.00
17:15:00	0.1861			0.00
17:20:00	0.1814			0.00
17:25:00	0.1794			0.00
17:30:00	0.1652	0.00		0.00
17:35:00	0.1632			0.00
17:40:00	0.1587			0.00
17:45:00	0.1562			0.00
17:50:00	0.1490			0.00
17:55:00	0.1394			0.00
18:00	0.1445			0.00
18:05:00	0.1343			0.00
18:10:00	0.1261			0.00
18:15:00	0.1195			0.00
18:20:00	0.1232			0.00
18:25:00	0.1215			0.00
18:30:00	0.1079			0.00
18:35:00	0.1023			0.00
18:40:00	0.0992			0.00
18:45:00	0.0994			0.00
18:50:00	0.0928			0.00
18:55:00	0.0953			0.00
19:00	0.0917			0.00
19:05:00	0.0867			0.00
19:10:00	0.0824			0.00
19:15:00	0.0882	0.00		0.00
19:20:00	0.0754			0.00
19:25:00	0.0794			0.00
19:30:00	0.0798			0.00
19:35:00	0.0776			0.00
19:40:00	0.0832			0.00
19:45:00	0.0773			0.00
19:50:00	0.0864			0.00
19:55:00	0.0695			0.00
20:00	0.0699			0.00
20:05:00	0.0705			0.00
20:10:00	0.0698			0.00
20:15:00	0.0700			0.00
20:20:00	0.0638			0.00
20:25:00	0.0665			0.00
20:30:00	0.0675			0.00
20:35:00	0.0630			0.00
20:40:00	0.0593			0.00
20:45:00	0.0579			0.00
20:50:00	0.0603			0.00
20:55:00	0.0583			0.00
21:00	0.0636			0.00
21:05:00	0.0581			0.00
21:10:00	0.0586			0.00
21:15:00	0.0603			0.00
21:20:00	0.0574			0.00
21:25:00	0.0537			0.00
21:30:00	0.0560			0.00

Location: M1 - NE 122nd				
	cfs	24	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 9)
21:35:00	0.0547			0.00
21:40:00	0.0531			0.00
21:45:00	0.0520			0.00
21:50:00	0.0506			0.00
21:55:00	0.0483			0.00
22:00	0.0474			0.00
22:05:00	0.0490			0.00
22:10:00	0.0502			0.00
22:15:00	0.0486			0.00
22:20:00	0.0650			0.00
22:25:00	0.0646			0.00
22:30:00	0.0500			0.00
22:35:00	0.0498			0.00
22:40:00	0.0473			0.00
22:45:00	0.0474			0.00
22:50:00	0.0468			0.00
22:55:00	0.0471			0.00
23:00	0.0451			0.00
23:05:00	0.0426			0.00
23:10:00	0.0434			0.00
23:15:00	0.0423			0.00
23:20:00	0.0413			0.00
23:25:00	0.0405			0.00
23:30:00	0.0399			0.00
23:35:00	0.0413			0.00
23:40:00	0.0382			0.00
23:45:00	0.0383			0.00
23:50:00	0.0397			0.00
23:55:00	0.0394			0.00

Table 1: HYDRA Rain Gauge Data
Land Use Stormwater Monitoring
FY 2000-01 Event 26: September 30, 2000

Daily Rain Report — All Times in Pacific Standard Time

Rain Data Collected by HYDRA - City of Portland

Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Gauge 89: Vermont Hills (R1)																									
09/26/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09/27/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09/28/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09/29/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09/30/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.06	0.00	0.13	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.04	0.34
Gauge 147: Skyline Fire Station (OP1)																									
09/26/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09/27/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09/28/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09/29/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09/30/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.01	0.01	0.12	0.05	0.00	0.01	0.00	0.00	0.00	0.00	0.05	0.22	0.01	0.01	0.64
Gauge 9: PDX E Business Park (M1)																									
09/26/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09/27/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09/28/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09/29/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09/30/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.00	0.01	0.13	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.01	0.00	0.55

- Storm event duration

Table 2: Analytical Summary
Land Use Stormwater Monitoring
FY 2000-01 Event 26: September 30, 2000

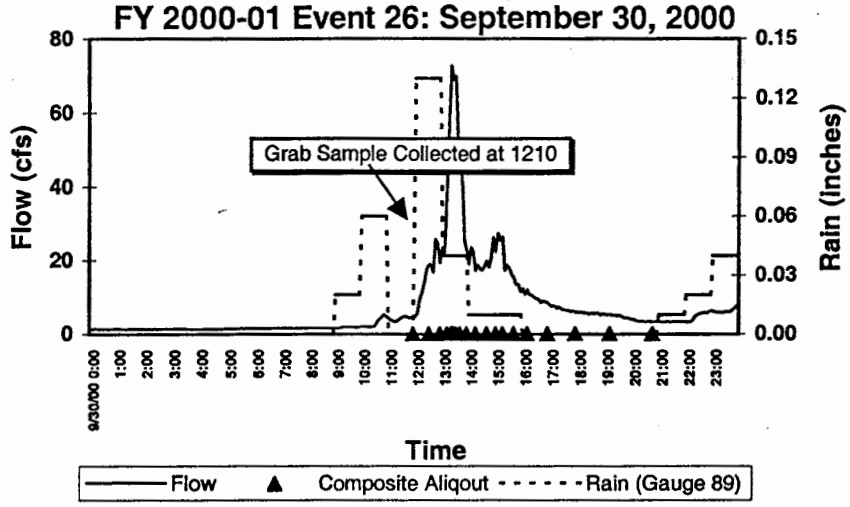
Grab Parameters	Sample Site:	M1	OP1	R1
	Units Lab ID:	FO001609	FO001611	FO001610
DISSOLVED OXYGEN (FIELD)	mg/L	NR	9.0	6.8
pH (FIELD)	pH units	5.7	5.5	6.8
SPECIFIC CONDUCTANCE (FIELD)	umhos/cm	61	134	194
TEMPERATURE (FIELD)	Deg. C	18.3	15.5	15.9
E. COLI	CFU/100 ml	46000	32000	40000
FECAL COLIFORM	CFU/100 ml	46000	34000	24000
NON-POLAR OIL & GREASE	mg/L	5 U	5 U	5 U
TOTAL OIL & GREASE	mg/L	5 U	5 U	5 U
Composite Parameters	**Sample Site:**	**M1**	**OP1**	**R1**
	Units Lab ID:	**FO001621**	**FO001623**	**FO001622**
AMMONIA-NITROGEN	mg/L	0.54	0.039	0.16
BOD5	mg/L	11	3	20
COD	mg/L	98	16	280
HARDNESS	mg CaCO3/L	23.4	68.2	64.6
NITRATE-NITROGEN	mg/L	0.42	0.44	0.84
ORTHOPHOSPHATE-PHOSPHORUS	mg/L	0.12	0.093	0.070
TOTAL DISSOLVED SOLIDS	mg/L	40	160	140
TOTAL KJELDAHL NITROGEN	mg/L	2.54	0.68	4.81
TOTAL PHOSPHORUS	mg/L	0.58	0.26	2.14
TOTAL SOLIDS	mg/L	222	211	1170
TOTAL SUSPENDED SOLIDS	mg/L	182	56.0	1030
ARSENIC (TOTAL)	ug/L	2.38	3.42	14.1
CADMIUM (TOTAL)	ug/L	0.73	0.1 U	0.75
COPPER (TOTAL)	ug/L	32.5	7.3	81.3
LEAD (TOTAL)	ug/L	46.6	3.50	82.9
MERCURY (TOTAL)	mg/L	0.0002 U	0.0002 U	0.0002 U
SILVER (TOTAL)	ug/L	0.19	0.1 U	0.26
ZINC (TOTAL)	ug/L	230	21.2	467
ARSENIC (DISSOLVED)	ug/L	0.98	1.92	1.51
CADMIUM (DISSOLVED)	ug/L	0.10	0.1 U	0.1 U
COPPER (DISSOLVED)	ug/L	6.78	2.46	5.50
LEAD (DISSOLVED)	ug/L	0.73	0.1 U	0.24
SILVER (DISSOLVED)	ug/L	0.1 U	0.1 U	0.1 U
ZINC (DISSOLVED)	ug/L	35.9	2.15	8.10

U = Not detected at the method reporting limit shown
N/A = Not Applicable
NR = Not Reportable

FO001609	M1G	9/30/2000	9:53 MKS/DEV	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	46000	CONC	CFU/100 ml	2	SM 9222 D	10/2/2000	LAB: BECAUSE THE RESULT FOR TOTAL OIL&GREASE IS <5 MG/L, THE	CONCENTRATION OF NON-POLAR OIL&GREASE IS ALSO <5 MG/L.
FO001609	M1G	9/30/2000	9:53 MKS/DEV	GRAB	STORMWTR	E. COLI	E. COLI	46000	CONC	CFU/100 ml	2	SM 9213 D	10/2/2000	LAB: BECAUSE THE RESULT FOR TOTAL OIL&GREASE IS <5 MG/L, THE	CONCENTRATION OF NON-POLAR OIL&GREASE IS ALSO <5 MG/L.
FO001609	M1G	9/30/2000	9:53 MKS/DEV	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	5.7	CONC	pH Units	0.1	SM 4500-H B	9/30/2000	LAB: BECAUSE THE RESULT FOR TOTAL OIL&GREASE IS <5 MG/L, THE	CONCENTRATION OF NON-POLAR OIL&GREASE IS ALSO <5 MG/L.
FO001609	M1G	9/30/2000	9:53 MKS/DEV	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	Not Reportable		mg/L	0.1	SM 4500-O G	9/30/2000	LAB: BECAUSE THE RESULT FOR TOTAL OIL&GREASE IS <5 MG/L, THE	CONCENTRATION OF NON-POLAR OIL&GREASE IS ALSO <5 MG/L.
FO001609	M1G	9/30/2000	9:53 MKS/DEV	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	18.3	CONC	Deg. C	0.1	SM 2550 B	9/30/2000	LAB: BECAUSE THE RESULT FOR TOTAL OIL&GREASE IS <5 MG/L, THE	CONCENTRATION OF NON-POLAR OIL&GREASE IS ALSO <5 MG/L.
FO001609	M1G	9/30/2000	9:53 MKS/DEV	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	61	CONC	µmhos/cm	1	SM 2510 B	9/30/2000	LAB: BECAUSE THE RESULT FOR TOTAL OIL&GREASE IS <5 MG/L, THE	CONCENTRATION OF NON-POLAR OIL&GREASE IS ALSO <5 MG/L.
FO001609	M1G	9/30/2000	9:53 MKS/DEV	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5		mg/L	5	EPA 1664	10/10/2000	LAB: BECAUSE THE RESULT FOR TOTAL OIL&GREASE IS <5 MG/L, THE	CONCENTRATION OF NON-POLAR OIL&GREASE IS ALSO <5 MG/L.
FO001610	R1G	9/30/2000	12:10 MKS/DEV	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	24000	CONC	CFU/100 ml	2	SM 9222 D	10/2/2000	LAB: BECAUSE THE RESULT FOR TOTAL OIL&GREASE IS <5 MG/L, THE	CONCENTRATION OF NON-POLAR OIL&GREASE IS ALSO <5 MG/L.
FO001610	R1G	9/30/2000	12:10 MKS/DEV	GRAB	STORMWTR	E. COLI	E. COLI	40000	CONC	CFU/100 ml	2	SM 9213 D	10/2/2000	LAB: BECAUSE THE RESULT FOR TOTAL OIL&GREASE IS <5 MG/L, THE	CONCENTRATION OF NON-POLAR OIL&GREASE IS ALSO <5 MG/L.
FO001610	R1G	9/30/2000	12:10 MKS/DEV	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	6.8	CONC	pH Units	0.1	SM 4500-H B	9/30/2000	LAB: BECAUSE THE RESULT FOR TOTAL OIL&GREASE IS <5 MG/L, THE	CONCENTRATION OF NON-POLAR OIL&GREASE IS ALSO <5 MG/L.
FO001610	R1G	9/30/2000	12:10 MKS/DEV	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	6.8	CONC	mg/L	0.1	SM 4500-O G	9/30/2000	LAB: BECAUSE THE RESULT FOR TOTAL OIL&GREASE IS <5 MG/L, THE	CONCENTRATION OF NON-POLAR OIL&GREASE IS ALSO <5 MG/L.
FO001610	R1G	9/30/2000	12:10 MKS/DEV	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	15.9	CONC	Deg. C	0.1	SM 2550 B	9/30/2000	LAB: BECAUSE THE RESULT FOR TOTAL OIL&GREASE IS <5 MG/L, THE	CONCENTRATION OF NON-POLAR OIL&GREASE IS ALSO <5 MG/L.
FO001610	R1G	9/30/2000	12:10 MKS/DEV	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	194	CONC	µmhos/cm	1	SM 2510 B	9/30/2000	LAB: BECAUSE THE RESULT FOR TOTAL OIL&GREASE IS <5 MG/L, THE	CONCENTRATION OF NON-POLAR OIL&GREASE IS ALSO <5 MG/L.
FO001610	R1G	9/30/2000	12:10 MKS/DEV	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5		mg/L	5	EPA 1664	10/10/2000	LAB: BECAUSE THE RESULT FOR TOTAL OIL&GREASE IS <5 MG/L, THE	CONCENTRATION OF NON-POLAR OIL&GREASE IS ALSO <5 MG/L.
FO001611	OP1G	9/30/2000	13:36 MKS/DJH	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	34000	CONC	CFU/100 ml	2	SM 9222 D	10/2/2000	LAB: BECAUSE THE RESULT FOR TOTAL OIL&GREASE IS <5 MG/L, THE	CONCENTRATION OF NON-POLAR OIL&GREASE IS ALSO <5 MG/L.
FO001611	OP1G	9/30/2000	13:36 MKS/DJH	GRAB	STORMWTR	E. COLI	E. COLI	32000	CONC	CFU/100 ml	2	SM 9213 D	10/2/2000	LAB: BECAUSE THE RESULT FOR TOTAL OIL&GREASE IS <5 MG/L, THE	CONCENTRATION OF NON-POLAR OIL&GREASE IS ALSO <5 MG/L.
FO001611	OP1G	9/30/2000	13:36 MKS/DJH	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	5.5	CONC	pH Units	0.1	SM 4500-H B	9/30/2000	LAB: BECAUSE THE RESULT FOR TOTAL OIL&GREASE IS <5 MG/L, THE	CONCENTRATION OF NON-POLAR OIL&GREASE IS ALSO <5 MG/L.
FO001611	OP1G	9/30/2000	13:36 MKS/DJH	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	9	CONC	mg/L	0.1	SM 4500-O G	9/30/2000	LAB: BECAUSE THE RESULT FOR TOTAL OIL&GREASE IS <5 MG/L, THE	CONCENTRATION OF NON-POLAR OIL&GREASE IS ALSO <5 MG/L.
FO001611	OP1G	9/30/2000	13:36 MKS/DJH	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	15.5	CONC	Deg. C	0.1	SM 2550 B	9/30/2000	LAB: BECAUSE THE RESULT FOR TOTAL OIL&GREASE IS <5 MG/L, THE	CONCENTRATION OF NON-POLAR OIL&GREASE IS ALSO <5 MG/L.
FO001611	OP1G	9/30/2000	13:36 MKS/DJH	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	134	CONC	µmhos/cm	1	SM 2510 B	9/30/2000	LAB: BECAUSE THE RESULT FOR TOTAL OIL&GREASE IS <5 MG/L, THE	CONCENTRATION OF NON-POLAR OIL&GREASE IS ALSO <5 MG/L.
FO001611	OP1G	9/30/2000	13:36 MKS/DJH	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5		mg/L	5	EPA 1664	10/10/2000	LAB: BECAUSE THE RESULT FOR TOTAL OIL&GREASE IS <5 MG/L, THE	CONCENTRATION OF NON-POLAR OIL&GREASE IS ALSO <5 MG/L.
FO001621	M1C	9/30/2000	9:25 MJS/DJH	COMPOSITE	STORMWTR	BOD5	BOD5	11	CONC	mg/L	2	SM 5210 B	10/7/2000		
FO001621	M1C	9/30/2000	9:25 MJS/DJH	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	182	CONC	mg/L	1	SM 2540 D	10/2/2000		
FO001621	M1C	9/30/2000	9:25 MJS/DJH	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	40	CONC	mg/L	1	SM 2540 BD	10/10/2000		
FO001621	M1C	9/30/2000	9:25 MJS/DJH	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	222	CONC	mg/L	1	SM 2540 B	10/2/2000		
FO001621	M1C	9/30/2000	9:25 MJS/DJH	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.58	CONC	mg/L	0.03	EPA 365.4	10/5/2000		
FO001621	M1C	9/30/2000	9:25 MJS/DJH	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.54	CONC	mg/L	0.02	EPA 350.1	10/13/2000		
FO001621	M1C	9/30/2000	9:25 MJS/DJH	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	2.54	CONC	mg/L	0.2	EPA 351.2	10/4/2000		
FO001621	M1C	9/30/2000	9:25 MJS/DJH	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.42	CONC	mg/L	0.1	EPA 300.0	10/2/2000		
FO001621	M1C	9/30/2000	9:25 MJS/DJH	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.12	CONC	mg/L	0.02	EPA 365.1	10/2/2000		
FO001621	M1C	9/30/2000	9:25 MJS/DJH	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	23.4	CONC	mg CaCO3/L	1	SM 2340 C	10/5/2000		
FO001621	M1C	9/30/2000	9:25 MJS/DJH	COMPOSITE	STORMWTR	COD	COD	98	CONC	mg/L	2	SM 5220 D	10/5/2000		
FO001621	M1C	9/30/2000	9:25 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	32.5	CONC	µg/L	0.2	EPA 200.8	10/14/2000		
FO001621	M1C	9/30/2000	9:25 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	230	CONC	µg/L	0.5	EPA 200.8	10/14/2000		
FO001621	M1C	9/30/2000	9:25 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	2.38	CONC	µg/L	0.1	EPA 200.8	10/14/2000		
FO001621	M1C	9/30/2000	9:25 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	0.19	CONC	µg/L	0.1	EPA 200.8	10/14/2000		
FO001621	M1C	9/30/2000	9:25 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	0.73	CONC	µg/L	0.1	EPA 200.8	10/14/2000		
FO001621	M1C	9/30/2000	9:25 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	46.6	CONC	µg/L	0.1	EPA 200.8	10/14/2000		
FO001621	M1C	9/30/2000	9:25 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	6.78	CONC	µg/L	0.2	EPA 200.8	10/14/2000		
FO001621	M1C	9/30/2000	9:25 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	35.9	CONC	µg/L	0.5	EPA 200.8	10/14/2000		
FO001621	M1C	9/30/2000	9:25 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	0.96	CONC	µg/L	0.1	EPA 200.8	10/14/2000		
FO001621	M1C	9/30/2000	9:25 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	10/14/2000		
FO001621	M1C	9/30/2000	9:25 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	0.1	CONC	µg/L	0.1	EPA 200.8	10/14/2000		
FO001621	M1C	9/30/2000	9:25 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	0.73	CONC	µg/L	0.1	EPA 200.8	10/14/2000		
FO001621	M1C	9/30/2000	9:25 MJS/DJH	COMPOSITE	STORMWTR	MERCURY	MERCURY	<0.0002		mg/L	0.0002	EPA 245.1	10/6/2000		
FO001622	R1C	9/30/2000	11:55 MJS/DJH	COMPOSITE	STORMWTR	BOD5	BOD5	20	CONC	mg/L	2	SM 5210 B	10/7/2000		
FO001622	R1C	9/30/2000	11:55 MJS/DJH	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	1030	CONC	mg/L	1	SM 2540 D	10/2/2000		
FO001622	R1C	9/30/2000	11:55 MJS/DJH	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	140	CONC	mg/L	1	SM 2540 BD	10/10/2000		
FO001622	R1C	9/30/2000	11:55 MJS/DJH	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	1170	CONC	mg/L	1	SM 2540 B	10/2/2000		
FO001622	R1C	9/30/2000	11:55 MJS/DJH	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	2.14	CONC	mg/L	0.03	EPA 365.4	10/5/2000		
FO001622	R1C	9/30/2000	11:55 MJS/DJH	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.16	CONC	mg/L	0.02	EPA 350.1	10/13/2000		
FO001622	R1C	9/30/2000	11:55 MJS/DJH	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	4.81	CONC	mg/L	0.2	EPA 351.2	10/4/2000		
FO001622	R1C	9/30/2000	11:55 MJS/DJH	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.84	CONC	mg/L	0.1	EPA 300.0	10/2/2000		
FO001622	R1C	9/30/2000	11:55 MJS/DJH	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.07	CONC	mg/L	0.02	EPA 365.1	10/2/2000		
FO001622	R1C	9/30/2000	11:55 MJS/DJH	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	64.6	CONC	mg CaCO3/L	1	SM 2340 C	10/5/2000		
FO001622	R1C	9/30/2000	11:55 MJS/DJH	COMPOSITE	STORMWTR	COD	COD	260	CONC	mg/L	2	SM 5220 D	10/5/2000		
FO001622	R1C	9/30/2000	11:55 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	81.3	CONC	µg/L	0.2	EPA 200.8	10/14/2000		
FO001622	R1C	9/30/2000	11:55 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	467	CONC	µg/L	0.5	EPA 200.8	10/14/2000		
FO001622	R1C	9/30/2000	11:55 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	14.1	CONC	µg/L	0.1	EPA 200.8	10/14/2000		
FO001622	R1C	9/30/2000	11:55 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	0.26	CONC	µg/L	0.1	EPA 200.8	10/14/2000		
FO001622	R1C	9/30/2000	11:55 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	0.75	CONC	µg/L	0.1	EPA 200.8	10/14/2000		
FO001622	R1C	9/30/2000	11:55 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	82.9	CONC	µg/L	0.1	EPA 200.8	10/14/2000		
FO001622	R1C	9/30/2000	11:55 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	5.5	CONC	µg/L	0.2	EPA 200.8	10/14/2000		
FO001622	R1C	9/30/2000	11:55 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	8.1	CONC	µg/L	0.5	EPA 200.8	10/14/2000		
FO001622	R1C	9/30/2000	11:55 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	1.51	CONC	µg/L	0.1	EPA 200.8	10/14/2000		
FO001622	R1C	9/30/2000	11:55 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	10/14/2000		
FO001622	R1C	9/30/2000	11:55 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	10/14/2000		
FO001622	R1C	9/30/2000	11:55 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	0.24	CONC	µg/L	0.1	EPA 200.8	10/14/2000		
FO001622	R1C	9/30/2000	11:55 MJS/DJH	COMPOSITE	STORMWTR	MERCURY	MERCURY	<0.0002		mg/L	0.0002	EPA 245.1	10/6/2000		
FO001623	OP1C	9/30/2000	9:10 MJS/DJH	COMPOSITE	STORMWTR	BOD5	BOD5	3	CONC	mg/L	2	SM 5210 B	10/7/2000		
FO001623	OP1C	9/30/2000	9:10 MJS/DJH	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	56	CONC	mg/L	1	SM 2540 D	10/2/2000		
FO001623	OP1C	9/30/2000	9:10 MJS/DJH	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	160	CONC	mg/L	1	SM 2540 BD	10/10/2000		
FO001623	OP1C	9/30/2000	9:10 MJS/DJH	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	211	CONC	mg/L	1	SM 2540 B	10/2/2000		
FO001623	OP1C	9/30/2000	9:10 MJS/DJH	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.26	CONC	mg/L	0.03	EPA 365.4	10/5/2000		
FO001623	OP1C	9/30/2000	9:10 MJS/DJH	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.039	CONC	mg/L	0.02	EPA 350.1	10/13/2000		
FO001623	OP1C	9/30/2000	9:10 MJS/DJH	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	0.68	CONC	mg/L	0.2	EPA 351.2	10/4/2000		
FO001623	OP1C	9/30/2000	9:10 MJS/DJH	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.44	CONC	mg/L	0.1	EPA 300.0	10/2/2000		
FO001623	OP1C	9/30/2000	9:10 MJS/DJH	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.093	CONC	mg/L	0.02	EPA 365.1	10/2/2000		
FO001623	OP1C	9/30/2000	9:10 MJS/DJH	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	68.2	CONC	mg CaCO3/L	1	SM 2340 C	10/5/2000		
FO001623	OP1C	9/30/2000	9:10 MJS/DJH	COMPOSITE	STORMWTR	COD	COD	16	CONC	mg/L	2	SM 5220 D	10/5/2000		
FO001623	OP1C	9/30/2000	9:10 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	7.33	CONC	µg/L	0.2	EPA 200.8	10/14/2000		
FO001623	OP1C	9/30/2000	9:10 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	21.2	CONC	µg/L	0.5	EPA 200.8	10/14/2000		
FO001623	OP1C	9/30/2000	9:10 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	3.42	CONC	µg/L	0.1	EPA 200.8	10/14/2000		
FO001623	OP1C	9/30/2000	9:10 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	<0.10		µg/L	0.1	EPA 200.8	10/14/2000		
FO001623	OP1C	9/30/2000	9:10 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	<0.10		µg/L	0.1	EPA 200.8	10/14/2000		
FO001623	OP1C	9/30/2000	9:10 MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	3.5	CONC	µg/L	0.1	EPA 200.8	10/14/2000		

FO001623	OP1C	9/30/2000	9:10	MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	2.46	CONC	µg/L	0.2	EPA 200.8	10/14/2000
FO001623	OP1C	9/30/2000	9:10	MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	2.15	CONC	µg/L	0.5	EPA 200.8	10/14/2000
FO001623	OP1C	9/30/2000	9:10	MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	1.92	CONC	µg/L	0.1	EPA 200.8	10/14/2000
FO001623	OP1C	9/30/2000	9:10	MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	10/14/2000
FO001623	OP1C	9/30/2000	9:10	MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	10/14/2000
FO001623	OP1C	9/30/2000	9:10	MJS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	10/14/2000
FO001623	OP1C	9/30/2000	9:10	MJS/DJH	COMPOSITE	STORMWTR	MERCURY	MERCURY	<0.0002		mg/L	0.0002	EPA 245.1	10/5/2000
FO001624	FILTER	10/1/2000	13:00	KD	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	<0.20		µg/L	0.2	EPA 200.8	10/14/2000
FO001624	FILTER	10/1/2000	13:00	KD	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	<0.50		µg/L	0.5	EPA 200.8	10/14/2000
FO001624	FILTER	10/1/2000	13:00	KD	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	10/14/2000
FO001624	FILTER	10/1/2000	13:00	KD	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	10/14/2000
FO001624	FILTER	10/1/2000	13:00	KD	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	10/14/2000
FO001624	FILTER	10/1/2000	13:00	KD	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	10/14/2000

Figure 5: R1 (Fanno Creek) Hydrograph
Land Use Stormwater Monitoring
FY 2000-01 Event 26: September 30, 2000



Location:R1 -Fanno Creek

	cfs	19	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 89)
9/30/00 0:00	1.4326			0.00
00:05:00	1.4122			0.00
00:10:00	1.4425			0.00
00:15:00	1.4237			0.00
00:20:00	1.4239			0.00
00:25:00	1.4230			0.00
00:30:00	1.4337			0.00
00:35:00	1.4256			0.00
00:40:00	1.4305			0.00
00:45:00	1.4354			0.00
00:50:00	1.4336			0.00
00:55:00	1.4420			0.00
1:00	1.4439			0.00
01:05:00	1.4402			0.00
01:10:00	1.4279			0.00
01:15:00	1.4152			0.00
01:20:00	1.4217			0.00
01:25:00	1.4268			0.00
01:30:00	1.4375			0.00
01:35:00	1.4373			0.00
01:40:00	1.4559			0.00
01:45:00	1.4502			0.00
01:50:00	1.4875			0.00
01:55:00	1.4453			0.00
2:00	1.3861			0.00
02:05:00	1.3866			0.00
02:10:00	1.4080			0.00
02:15:00	1.4029			0.00
02:20:00	1.3834			0.00
02:25:00	1.4425			0.00
02:30:00	1.4213			0.00
02:35:00	1.4585			0.00
02:40:00	1.4603			0.00
02:45:00	1.4655			0.00
02:50:00	1.4449			0.00
02:55:00	1.4597			0.00

Location:R1 -Fanno Creek

Time	cfs Flow	19 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 89)
12:10:00	9.4020			0.13
12:15:00	11.2517			0.13
12:20:00	14.4580			0.13
12:25:00	17.7968			0.13
12:30:00	18.8971	0.00		0.13
12:35:00	18.8042			0.13
12:40:00	16.7661			0.13
12:45:00	25.7784			0.13
12:50:00	24.6103			0.13
12:55:00	19.4559	0.00		0.13
13:00	23.5700			0.04
13:05:00	22.0821			0.04
13:10:00	39.4197	0.00		0.04
13:15:00	58.5069			0.04
13:20:00	72.6025	0.00		0.04
13:25:00	68.9618	0.00		0.04
13:30:00	69.8567	0.00		0.04
13:35:00	51.9116			0.04
13:40:00	48.1980	0.00		0.04
13:45:00	40.1274			0.04
13:50:00	25.3314			0.04
13:55:00	22.8252	0.00		0.04
14:00	18.9691			0.01
14:05:00	23.4983			0.01
14:10:00	22.3458			0.01
14:15:00	17.3570	0.00		0.01
14:20:00	18.6905			0.01
14:25:00	17.6258			0.01
14:30:00	17.4178			0.01
14:35:00	18.3529			0.01
14:40:00	19.8439	0.00		0.01
14:45:00	18.1563			0.01
14:50:00	20.7640			0.01
14:55:00	26.2183			0.01
15:00	22.3971	0.00		0.01
15:05:00	27.3331			0.01
15:10:00	25.4598			0.01
15:15:00	26.3357	0.00		0.01
15:20:00	17.3388			0.01
15:25:00	18.6784			0.01
15:30:00	17.9423			0.01
15:35:00	16.3870			0.01
15:40:00	15.4463	0.00		0.01
15:45:00	13.4823			0.01
15:50:00	13.5101			0.01
15:55:00	11.5992			0.01
16:00	12.3867			0.00
16:05:00	10.7879			0.00
16:10:00	11.9778	0.00		0.00
16:15:00	10.7990			0.00
16:20:00	10.5968			0.00
16:25:00	10.0525			0.00
16:30:00	9.6763			0.00
16:35:00	9.4996			0.00
16:40:00	8.5588			0.00

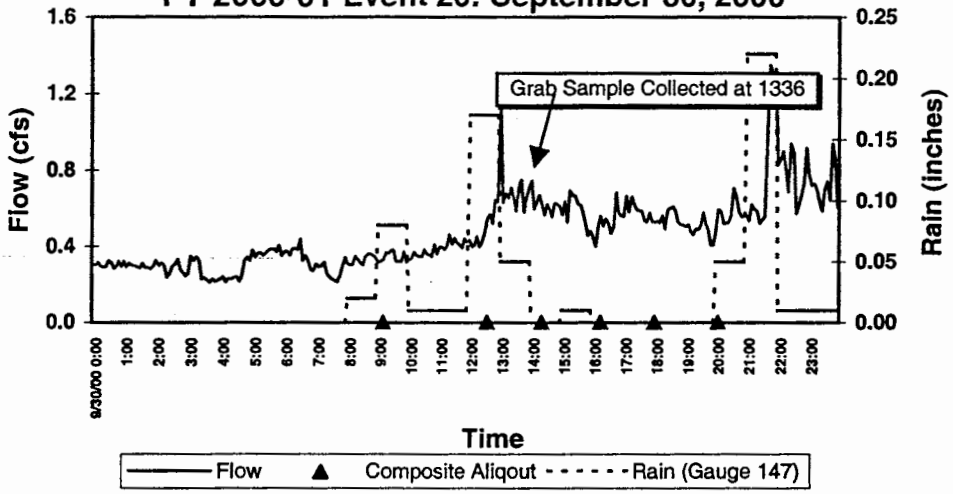
Location:R1 -Fanno Creek

	cfs	19	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 89)
16:45:00	9.0656			0.00
16:50:00	8.8284			0.00
16:55:00	8.6323	0.00		0.00
17:00	7.9016			0.00
17:05:00	7.6150			0.00
17:10:00	7.7026			0.00
17:15:00	7.0362			0.00
17:20:00	7.3856			0.00
17:25:00	6.9192			0.00
17:30:00	6.5905			0.00
17:35:00	6.5006			0.00
17:40:00	6.4586			0.00
17:45:00	6.1554			0.00
17:50:00	6.2666			0.00
17:55:00	6.0133	0.00		0.00
18:00	5.9682			0.00
18:05:00	5.8984			0.00
18:10:00	5.9875			0.00
18:15:00	5.7061			0.00
18:20:00	5.7930			0.00
18:25:00	5.5154			0.00
18:30:00	5.7843			0.00
18:35:00	5.5729			0.00
18:40:00	5.7213			0.00
18:45:00	5.7355			0.00
18:50:00	5.2555			0.00
18:55:00	5.5900			0.00
19:00	5.4579			0.00
19:05:00	5.2792			0.00
19:10:00	5.3957	0.00		0.00
19:15:00	5.2166			0.00
19:20:00	5.0926			0.00
19:25:00	5.0910			0.00
19:30:00	5.0415			0.00
19:35:00	5.0502			0.00
19:40:00	4.5477			0.00
19:45:00	4.5701			0.00
19:50:00	4.4479			0.00
19:55:00	4.1833			0.00
20:00	4.0300			0.00
20:05:00	3.8744			0.00
20:10:00	3.6873			0.00
20:15:00	3.5250			0.00
20:20:00	3.5400			0.00
20:25:00	3.5145			0.00
20:30:00	3.3976			0.00
20:35:00	3.4389			0.00
20:40:00	3.5070			0.00
20:45:00	3.3797	0.00		0.00
20:50:00	3.4281			0.00
20:55:00	3.5149			0.00
21:00	3.4129			0.01
21:05:00	3.4306			0.01
21:10:00	3.3838			0.01
21:15:00	3.3518			0.01

Location:R1 -Fanno Creek

	cfs	19	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 89)
21:20:00	3.4003			0.01
21:25:00	3.3080			0.01
21:30:00	3.3928			0.01
21:35:00	3.4316			0.01
21:40:00	3.4511			0.01
21:45:00	3.4343			0.01
21:50:00	3.4257			0.01
21:55:00	3.3772			0.01
22:00	3.3127			0.02
22:05:00	3.3226			0.02
22:10:00	3.3771			0.02
22:15:00	3.9086			0.02
22:20:00	4.8337			0.02
22:25:00	5.1881			0.02
22:30:00	5.5411			0.02
22:35:00	5.7798			0.02
22:40:00	5.9104			0.02
22:45:00	5.7044			0.02
22:50:00	6.1252			0.02
22:55:00	6.3443			0.02
23:00	6.2762			0.04
23:05:00	6.0989			0.04
23:10:00	5.9552			0.04
23:15:00	6.0285			0.04
23:20:00	5.9230			0.04
23:25:00	5.9656			0.04
23:30:00	6.1507			0.04
23:35:00	6.1663			0.04
23:40:00	6.2236			0.04
23:45:00	6.7278			0.04
23:50:00	7.3006			0.04
23:55:00	7.7494			0.04

Figure 6: OP1 (Balch Creek) Hydrograph
Land Use Stormwater Monitoring
FY 2000-01 Event 26: September 30, 2000



Location: OP1 - Balch Creek

	cfs	6	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 14
9/30/00 0:00	0.3069			0.00
00:05:00	0.3027			0.00
00:10:00	0.3158			0.00
00:15:00	0.2984			0.00
00:20:00	0.2908			0.00
00:25:00	0.2937			0.00
00:30:00	0.3271			0.00
00:35:00	0.3164			0.00
00:40:00	0.2839			0.00
00:45:00	0.2966			0.00
00:50:00	0.3206			0.00
00:55:00	0.2946			0.00
1:00	0.3221			0.00
01:05:00	0.2927			0.00
01:10:00	0.3133			0.00
01:15:00	0.3008			0.00
01:20:00	0.2988			0.00
01:25:00	0.2927			0.00
01:30:00	0.2873			0.00
01:35:00	0.3125			0.00
01:40:00	0.2897			0.00
01:45:00	0.2900			0.00
01:50:00	0.2827			0.00
01:55:00	0.2953			0.00
2:00	0.3267			0.00
02:05:00	0.2995			0.00
02:10:00	0.3152			0.00
02:15:00	0.2987			0.00
02:20:00	0.2396			0.00
02:25:00	0.2547			0.00
02:30:00	0.2946			0.00
02:35:00	0.3058			0.00
02:40:00	0.3317			0.00
02:45:00	0.2815			0.00
02:50:00	0.2635			0.00

Location: OP1 - Balch Creek

	cfs	6	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 14
02:55:00	0.2455			0.00
3:00	0.2569			0.00
03:05:00	0.3483			0.00
03:10:00	0.3264			0.00
03:15:00	0.3444			0.00
03:20:00	0.3223			0.00
03:25:00	0.2293			0.00
03:30:00	0.2364			0.00
03:35:00	0.2251			0.00
03:40:00	0.2122			0.00
03:45:00	0.2295			0.00
03:50:00	0.2178			0.00
03:55:00	0.2246			0.00
4:00	0.2305			0.00
04:05:00	0.2406			0.00
04:10:00	0.2154			0.00
04:15:00	0.2319			0.00
04:20:00	0.2293			0.00
04:25:00	0.2378			0.00
04:30:00	0.2401			0.00
04:35:00	0.2166			0.00
04:40:00	0.2471			0.00
04:45:00	0.3250			0.00
04:50:00	0.3436			0.00
04:55:00	0.3252			0.00
5:00	0.3795			0.00
05:05:00	0.3412			0.00
05:10:00	0.3646			0.00
05:15:00	0.3670			0.00
05:20:00	0.3541			0.00
05:25:00	0.3619			0.00
05:30:00	0.3791			0.00
05:35:00	0.3876			0.00
05:40:00	0.3869			0.00
05:45:00	0.3713			0.00
05:50:00	0.4053			0.00
05:55:00	0.3492			0.00
6:00	0.3739			0.00
06:05:00	0.3750			0.00
06:10:00	0.3535			0.00
06:15:00	0.3891			0.00
06:20:00	0.3894			0.00
06:25:00	0.3844			0.00
06:30:00	0.4369			0.00
06:35:00	0.3267			0.00
06:40:00	0.3515			0.00
06:45:00	0.3209			0.00
06:50:00	0.2753			0.00
06:55:00	0.2718			0.00
7:00	0.3080			0.00
07:05:00	0.2932			0.00
07:10:00	0.2977			0.00
07:15:00	0.3182			0.00
07:20:00	0.2568			0.00
07:25:00	0.2389			0.00

Location: OP1 - Balch Creek

	cfs	6	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 14
07:30:00	0.2293			0.00
07:35:00	0.2215			0.00
07:40:00	0.2140			0.00
07:45:00	0.2433			0.00
07:50:00	0.2926			0.00
07:55:00	0.3427			0.00
8:00	0.3087			0.02
08:05:00	0.3046			0.02
08:10:00	0.3026			0.02
08:15:00	0.3490			0.02
08:20:00	0.3327			0.02
08:25:00	0.3152			0.02
08:30:00	0.3023			0.02
08:35:00	0.3467			0.02
08:40:00	0.3603			0.02
08:45:00	0.3608			0.02
08:50:00	0.3532			0.02
08:55:00	0.3408			0.02
9:00	0.3164			0.08
09:05:00	0.3207			0.08
09:10:00	0.3303	0.0000		0.08
09:15:00	0.3669			0.08
09:20:00	0.3631			0.08
09:25:00	0.3779			0.08
09:30:00	0.3809			0.08
09:35:00	0.3212			0.08
09:40:00	0.3215			0.08
09:45:00	0.3219			0.08
09:50:00	0.3713			0.08
09:55:00	0.3205			0.08
10:00	0.3303			0.01
10:05:00	0.3368			0.01
10:10:00	0.3707			0.01
10:15:00	0.3517			0.01
10:20:00	0.3459			0.01
10:25:00	0.3446			0.01
10:30:00	0.3836			0.01
10:35:00	0.3593			0.01
10:40:00	0.3573			0.01
10:45:00	0.3476			0.01
10:50:00	0.4100			0.01
10:55:00	0.3611			0.01
11:00	0.3966			0.01
11:05:00	0.3975			0.01
11:10:00	0.3844			0.01
11:15:00	0.3991			0.01
11:20:00	0.4618			0.01
11:25:00	0.4120			0.01
11:30:00	0.4441			0.01
11:35:00	0.4184			0.01
11:40:00	0.4078			0.01
11:45:00	0.3914			0.01
11:50:00	0.4407			0.01
11:55:00	0.4237			0.01
12:00	0.4328			0.17

Location: OP1 - Balch Creek

	cfs	6	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 14
12:05:00	0.4010			0.17
12:10:00	0.4066			0.17
12:15:00	0.4507			0.17
12:20:00	0.3971			0.17
12:25:00	0.4219			0.17
12:30:00	0.4691			0.17
12:35:00	0.5456	0.0000		0.17
12:40:00	0.5666			0.17
12:45:00	0.5224			0.17
12:50:00	0.6427			0.17
12:55:00	0.6348			0.17
13:00	1.1297			0.05
13:05:00	0.6303			0.05
13:10:00	0.6789			0.05
13:15:00	0.6533			0.05
13:20:00	0.7088			0.05
13:25:00	0.6557			0.05
13:30:00	0.5876			0.05
13:35:00	0.7031			0.05
13:40:00	0.7490			0.05
13:45:00	0.5817			0.05
13:50:00	0.6591			0.05
13:55:00	0.7080			0.05
14:00	0.7434			0.00
14:05:00	0.5977			0.00
14:10:00	0.6301			0.00
14:15:00	0.6679			0.00
14:20:00	0.6184	0.0000		0.00
14:25:00	0.5650			0.00
14:30:00	0.6217			0.00
14:35:00	0.5942			0.00
14:40:00	0.5575			0.00
14:45:00	0.6251			0.00
14:50:00	0.6243			0.00
14:55:00	0.6093			0.00
15:00	0.5676			0.01
15:05:00	0.6333			0.01
15:10:00	0.5278			0.01
15:15:00	0.6916			0.01
15:20:00	0.6671			0.01
15:25:00	0.6648			0.01
15:30:00	0.6232			0.01
15:35:00	0.6159			0.01
15:40:00	0.5766			0.01
15:45:00	0.5180			0.01
15:50:00	0.4572			0.01
15:55:00	0.4815			0.01
16:00	0.4515			0.00
16:05:00	0.4014			0.00
16:10:00	0.5062			0.00
16:15:00	0.5586	0.0000		0.00
16:20:00	0.5061			0.00
16:25:00	0.5451			0.00
16:30:00	0.5223			0.00
16:35:00	0.4690			0.00

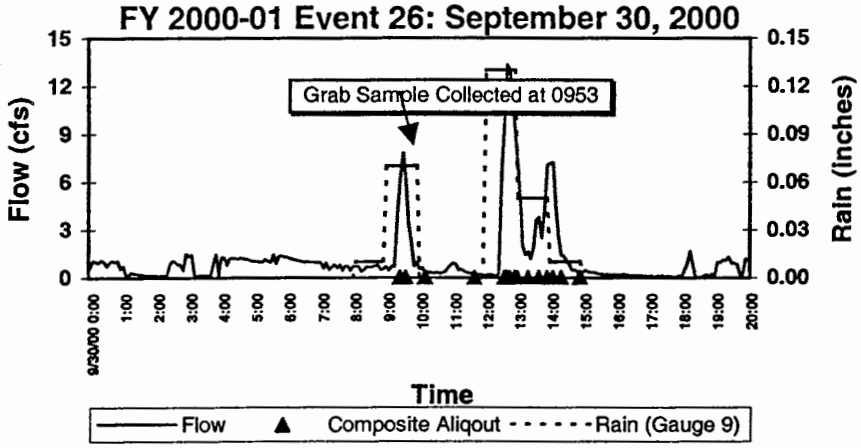
Location: OP1 - Balch Creek

Time	cfs Flow	6 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 14
16:40:00	0.5012			0.00
16:45:00	0.6810			0.00
16:50:00	0.5755			0.00
16:55:00	0.5606			0.00
17:00	0.5564			0.00
17:05:00	0.6629			0.00
17:10:00	0.5827			0.00
17:15:00	0.6590			0.00
17:20:00	0.6181			0.00
17:25:00	0.5928			0.00
17:30:00	0.5874			0.00
17:35:00	0.5830			0.00
17:40:00	0.5350			0.00
17:45:00	0.5291			0.00
17:50:00	0.5750			0.00
17:55:00	0.5299			0.00
18:00	0.5288	0.0000		0.00
18:05:00	0.5314			0.00
18:10:00	0.5252			0.00
18:15:00	0.5599			0.00
18:20:00	0.4925			0.00
18:25:00	0.5901			0.00
18:30:00	0.6028			0.00
18:35:00	0.6084			0.00
18:40:00	0.5840			0.00
18:45:00	0.5278			0.00
18:50:00	0.5150			0.00
18:55:00	0.5121			0.00
19:00	0.5047			0.00
19:05:00	0.5144			0.00
19:10:00	0.4781			0.00
19:15:00	0.4604			0.00
19:20:00	0.4909			0.00
19:25:00	0.4885			0.00
19:30:00	0.5063			0.00
19:35:00	0.5764			0.00
19:40:00	0.5157			0.00
19:45:00	0.4848			0.00
19:50:00	0.4070			0.00
19:55:00	0.4082			0.00
20:00	0.4793			0.05
20:05:00	0.5946	0.0000		0.05
20:10:00	0.5875			0.05
20:15:00	0.5191			0.05
20:20:00	0.5226			0.05
20:25:00	0.5246			0.05
20:30:00	0.5607			0.05
20:35:00	0.7046			0.05
20:40:00	0.6660			0.05
20:45:00	0.5797			0.05
20:50:00	0.5565			0.05
20:55:00	0.5585			0.05
21:00	0.5629			0.22
21:05:00	0.5347			0.22
21:10:00	0.6184			0.22

Location: OP1 - Balch Creek

	cfs	6	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 14
21:15:00	0.5957			0.22
21:20:00	0.5854			0.22
21:25:00	0.5223			0.22
21:30:00	0.5385			0.22
21:35:00	0.5581			0.22
21:40:00	1.0074			0.22
21:45:00	1.3473			0.22
21:50:00	1.3035			0.22
21:55:00	1.3123			0.22
22:00	0.8277			0.01
22:05:00	0.8559			0.01
22:10:00	0.8986			0.01
22:15:00	0.8019			0.01
22:20:00	0.6861			0.01
22:25:00	0.9391			0.01
22:30:00	0.8896			0.01
22:35:00	0.5719			0.01
22:40:00	0.6175			0.01
22:45:00	0.6666			0.01
22:50:00	0.7321			0.01
22:55:00	0.9152			0.01
23:00	0.7783			0.01
23:05:00	0.7193			0.01
23:10:00	0.7308			0.01
23:15:00	0.6983			0.01
23:20:00	0.6337			0.01
23:25:00	0.5879			0.01
23:30:00	0.6994			0.01
23:35:00	0.7410			0.01
23:40:00	0.6451			0.01
23:45:00	0.9382			0.01
23:50:00	0.8535			0.01
23:55:00	0.6061			0.01

Figure 7: M1 (NE 122nd Ave) Hydrograph
Land Use Stormwater Monitoring
FY 2000-01 Event 26: September 30, 2000



Location: M1 - NE 122nd

	cfs	15	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 9)
9/30/00 0:00	0.5944			0.00
00:05:00	1.0630			0.00
00:10:00	1.0164			0.00
00:15:00	0.9544			0.00
00:20:00	1.0862			0.00
00:25:00	0.9830			0.00
00:30:00	0.7509			0.00
00:35:00	0.9928			0.00
00:40:00	1.0679			0.00
00:45:00	1.0043			0.00
00:50:00	1.0431			0.00
00:55:00	0.5817			0.00
1:00	0.7233			0.00
01:05:00	0.1372			0.00
01:10:00	0.1880			0.00
01:15:00	0.3164			0.00
01:20:00	0.2538			0.00
01:25:00	0.2419			0.00
01:30:00	0.2265			0.00
01:35:00	0.2105			0.00
01:40:00	0.1817			0.00
01:45:00	0.1575			0.00
01:50:00	0.1585			0.00
01:55:00	0.1441			0.00
2:00	0.1508			0.00
02:05:00	0.1142			0.00
02:10:00	0.1638			0.00
02:15:00	0.1503			0.00
02:20:00	0.1547			0.00
02:25:00	0.8481			0.00
02:30:00	1.0627			0.00
02:35:00	1.0091			0.00
02:40:00	0.8262			0.00
02:45:00	0.8388			0.00
02:50:00	0.4895			0.00
02:55:00	1.4877			0.00

Location: M1 - NE 122nd

	cfs	15	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 9)
3:00	1.3541			0.00
03:05:00	1.4340			0.00
03:10:00	0.1692			0.00
03:15:00	0.1301			0.00
03:20:00	0.1459			0.00
03:25:00	0.1439			0.00
03:30:00	0.1597			0.00
03:35:00	0.1393			0.00
03:40:00	0.1334			0.00
03:45:00	0.8863			0.00
03:50:00	1.4675			0.00
03:55:00	0.1289			0.00
4:00	1.2722			0.00
04:05:00	1.2509			0.00
04:10:00	0.8016			0.00
04:15:00	1.2043			0.00
04:20:00	1.2291			0.00
04:25:00	1.2086			0.00
04:30:00	1.1920			0.00
04:35:00	1.2526			0.00
04:40:00	1.1826			0.00
04:45:00	1.1896			0.00
04:50:00	1.1203			0.00
04:55:00	1.0452			0.00
5:00	1.0330			0.00
05:05:00	1.0218			0.00
05:10:00	1.0038			0.00
05:15:00	0.9841			0.00
05:20:00	1.1491			0.00
05:25:00	1.0570			0.00
05:30:00	0.9700			0.00
05:35:00	1.4469			0.00
05:40:00	0.8865			0.00
05:45:00	1.3532			0.00
05:50:00	1.3675			0.00
05:55:00	1.3064			0.00
6:00	1.2809			0.00
06:05:00	1.1991			0.00
06:10:00	1.1738			0.00
06:15:00	1.1105			0.00
06:20:00	1.0596			0.00
06:25:00	1.0236			0.00
06:30:00	0.9893			0.00
06:35:00	1.0017			0.00
06:40:00	0.9860			0.00
06:45:00	0.9716			0.00
06:50:00	0.9605			0.00
06:55:00	0.9572			0.00
7:00	0.9554			0.00
07:05:00	0.6025			0.00
07:10:00	0.9331			0.00
07:15:00	0.4992			0.00
07:20:00	0.6615			0.00
07:25:00	0.8298			0.00
07:30:00	0.5992			0.00
07:35:00	0.8225			0.00

Location: M1 - NE 122nd

	cfs	15	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 9)
07:40:00	0.4354			0.00
07:45:00	0.7513			0.00
07:50:00	0.7511			0.00
07:55:00	0.4259			0.00
8:00	0.7242			0.00
08:05:00	0.7333			0.01
08:10:00	0.7210			0.01
08:15:00	0.3860			0.01
08:20:00	0.5061			0.01
08:25:00	0.6854			0.01
08:30:00	0.6650			0.01
08:35:00	0.6898			0.01
08:40:00	0.7375			0.01
08:45:00	0.7757			0.01
08:50:00	0.5312			0.01
08:55:00	0.5171			0.01
9:00	0.7087			0.07
09:05:00	0.4549			0.07
09:10:00	0.7146			0.07
09:15:00	0.7125			0.07
09:20:00	3.9201			0.07
09:25:00	6.2003	0.0000		0.07
09:30:00	7.8212			0.07
09:35:00	5.9663	0.0000		0.07
09:40:00	3.4359			0.07
09:45:00	2.2338			0.07
09:50:00	0.7484			0.07
09:55:00	0.9536			0.07
10:00	0.5347			0.00
10:05:00	0.6173			0.00
10:10:00	0.3152	0.0000		0.00
10:15:00	0.3574			0.00
10:20:00	0.3254			0.00
10:25:00	0.2913			0.00
10:30:00	0.3126			0.00
10:35:00	0.2897			0.00
10:40:00	0.3078			0.00
10:45:00	0.3755			0.00
10:50:00	0.5925			0.00
10:55:00	0.7657			0.00
11:00	0.9215			0.00
11:05:00	0.8532			0.00
11:10:00	0.5103			0.00
11:15:00	0.5273			0.00
11:20:00	0.4200			0.00
11:25:00	0.3200			0.00
11:30:00	0.3120			0.00
11:35:00	0.2869			0.00
11:40:00	0.2411	0.0000		0.00
11:45:00	0.2152			0.00
11:50:00	0.2208			0.00
11:55:00	0.2031			0.00
12:00	0.1731			0.13
12:05:00	0.1972			0.13
12:10:00	0.2039			0.13
12:15:00	0.1816			0.13

Location: M1 - NE 122nd

	cfs	15	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 9)
12:20:00	0.1270			0.13
12:25:00	0.2348			0.13
12:30:00	6.8599			0.13
12:35:00	10.1192	0.0000		0.13
12:40:00	13.3312	0.0000		0.13
12:45:00	12.9970	0.0000		0.13
12:50:00	10.9573			0.13
12:55:00	9.1640	0.0000		0.13
13:00	7.1820	0.0000		0.05
13:05:00	4.9632			0.05
13:10:00	2.0148			0.05
13:15:00	1.4566			0.05
13:20:00	1.6226	0.0000		0.05
13:25:00	1.1812			0.05
13:30:00	1.8788			0.05
13:35:00	3.6385			0.05
13:40:00	3.7860	0.0000		0.05
13:45:00	2.4955			0.05
13:50:00	4.1827			0.05
13:55:00	7.0556	0.0000		0.05
14:00	7.1868			0.01
14:05:00	7.2159	0.0000		0.01
14:10:00	4.6582			0.01
14:15:00	2.6280			0.01
14:20:00	1.4280	0.0000		0.01
14:25:00	1.3629			0.01
14:30:00	1.0417			0.01
14:35:00	0.8162			0.01
14:40:00	0.5006			0.01
14:45:00	0.5117			0.01
14:50:00	0.3997			0.01
14:55:00	0.4123	0.0000		0.01
15:00	0.3444			0.00
15:05:00	0.4553			0.00
15:10:00	0.3603			0.00
15:15:00	0.3370			0.00
15:20:00	0.3357			0.00
15:25:00	0.3028			0.00
15:30:00	0.2397			0.00
15:35:00	0.2194			0.00
15:40:00	0.1969			0.00
15:45:00	0.2175			0.00
15:50:00	0.2024			0.00
15:55:00	0.2078			0.00
16:00	0.1784			0.00
16:05:00	0.2020			0.00
16:10:00	0.2060			0.00
16:15:00	0.2171			0.00
16:20:00	0.1727			0.00
16:25:00	0.1673			0.00
16:30:00	0.1674			0.00
16:35:00	0.1235			0.00
16:40:00	0.1551			0.00
16:45:00	0.1459			0.00
16:50:00	0.1244			0.00
16:55:00	0.1220			0.00

Location: M1 - NE 122nd

	cfs	15	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 9)
17:00	0.0844			0.00
17:05:00	0.1391			0.00
17:10:00	0.0645		15.0000	0.00
17:15:00	0.1115			0.00
17:20:00	0.0922			0.00
17:25:00	0.1402			0.00
17:30:00	0.0603			0.00
17:35:00	0.1229			0.00
17:40:00	0.0718			0.00
17:45:00	0.0640			0.00
17:50:00	0.0680			0.00
17:55:00	0.1305			0.00
18:00	0.0868			0.00
18:05:00	0.4510			0.00
18:10:00	0.8697			0.00
18:15:00	1.6414			0.00
18:20:00	0.8817			0.00
18:25:00	0.0302			0.00
18:30:00	0.0340			0.00
18:35:00	0.0411			0.00
18:40:00	0.1250			0.00
18:45:00	0.2042			0.00
18:50:00	0.1473			0.00
18:55:00	0.2329			0.00
19:00	0.0993			0.00
19:05:00	0.9724			0.00
19:10:00	0.9729			0.00
19:15:00	1.1077			0.00
19:20:00	1.1159			0.00
19:25:00	1.3062			0.00
19:30:00	0.9190			0.00
19:35:00	0.9228			0.00
19:40:00	0.8514			0.00
19:45:00	0.1829			0.00
19:50:00	0.1808			0.00
19:55:00	1.1776			0.00
20:00	1.1349			0.00

Table 1: HYDRA Rain Gauge Data
Land Use Stormwater Monitoring
FY 2000-01 Event 27: April 30, 2001

Daily Rain Report — All Times in Pacific Standard Time

Rain Data Collected by HYDRA - City of Portland

Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Gauge 89: Vermont Hills (R1)																									
04/27/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.01	0.00	0.04
04/28/00	0.00	0.02	0.07	0.03	0.01	0.01	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
04/29/00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
04/30/00	0.00	0.00	0.01	0.01	0.04	0.01	0.04	0.03	0.07	0.14	0.06	0.01	0.09	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
05/01/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gauge 147: Skyline Fire Station (OP1)																									
04/27/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.03
04/28/00	0.00	0.00	0.00	0.03	0.04	0.00	0.01	0.00	0.00	0.02	0.27	0.00	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
04/29/00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.01	0.02	0.02	0.00	0.00	0.00	0.01	0.11
04/30/00	0.02	0.02	0.00	0.01	0.02	0.00	0.03	0.04	0.04	0.05	0.02	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
05/01/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gauge 9: PDX E Business Park (M1)																									
04/27/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.04
04/28/00	0.00	0.00	0.02	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.08	0.01	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
04/29/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.05
04/30/00	0.00	0.01	0.03	0.04	0.04	0.01	0.08	0.05	0.06	0.05	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
05/01/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

- Storm event duration

Table 2: Analytical Summary
Land Use Stormwater Monitoring
FY 2000-01 Event 27: April 30, 2001

Grab Parameters	Sample Site:	M1	OP1	R1
	Units Lab ID:	FO010471	FO010473	FO010472
DISSOLVED OXYGEN (FIELD)	mg/L	11.1	10.4	10.0
pH (FIELD)	pH units	5.4	7.5	7.3
SPECIFIC CONDUCTANCE (FIELD)	umhos/cm	21	117	30
TEMPERATURE (FIELD)	Deg. C	12.2	9.5	10.4
E. COLI	CFU/100 ml	2400	1500	1900
FECAL COLIFORM	CFU/100 ml	EST 7000	550	1700
NON-POLAR OIL & GREASE	mg/L	5 U	5 U	5 U
TOTAL OIL & GREASE	mg/L	5 U	5 U	5 U
Composite Parameters	**Sample Site:**	**M1**	**OP1**	**R1**
	Units Lab ID:	**FO010476**	**FO010478**	**FO010477**
AMMONIA-NITROGEN	mg/L	0.25	0.020 U	0.053
BOD5	mg/L	5	3	10
COD	mg/L	43	30	120
HARDNESS	mg CaCO3/L	10.4	43.8	38.6
NITRATE-NITROGEN	mg/L	0.19	1.1	0.42
ORTHOPHOSPHATE PHOSPHORUS	mg/L	0.030	0.033	0.031
TOTAL DISSOLVED SOLIDS	mg/L	25	120	55
TOTAL KJELDAHL NITROGEN	mg/L	0.98	0.79	2.95
TOTAL PHOSPHORUS	mg/L	0.22	0.24	1.22
TOTAL SOLIDS	mg/L	91	189	715
TOTAL SUSPENDED SOLIDS	mg/L	66.4	68.4	660
ARSENIC (TOTAL)	ug/L	0.89	1.25	7.55
CADMIUM (TOTAL)	ug/L	0.29	0.10 U	0.44
COPPER (TOTAL)	ug/L	10.8	5.73	34.7
LEAD (TOTAL)	ug/L	12.4	3.50	44.8
MERCURY (TOTAL)	mg/L	0.00020 U	0.00020 U	0.00020 U
SILVER (TOTAL)	ug/L	0.10 U	0.10 U	0.11
ZINC (TOTAL)	ug/L	83.8	17.3	200
ARSENIC (DISSOLVED)	ug/L	0.36	0.35	0.85
CADMIUM (DISSOLVED)	ug/L	0.10 U	0.10 U	0.10 U
COPPER (DISSOLVED)	ug/L	3.27	1.61	3.27
LEAD (DISSOLVED)	ug/L	0.21	0.10 U	0.17
SILVER (DISSOLVED)	ug/L	0.10 U	0.10 U	0.10 U
ZINC (DISSOLVED)	ug/L	26.3	1.68	5.56

U = Not detected at the method reporting limit shown
EST = Estimate due to interfering overgrowth

Location:R1 -Fanno Creek

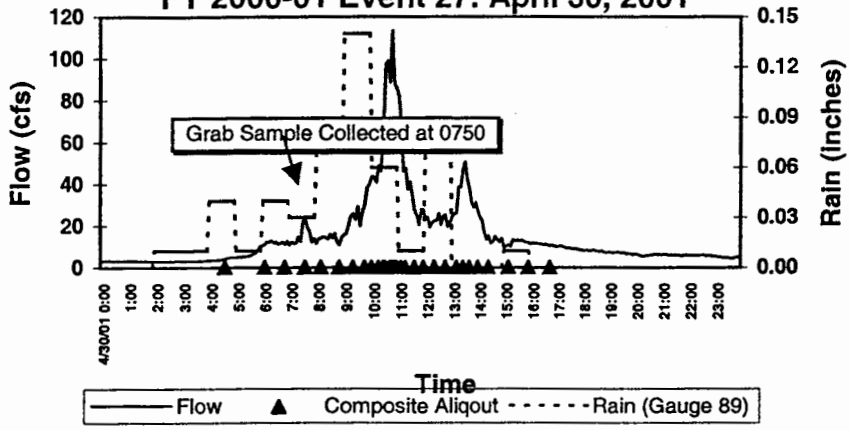
	cfs	19	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 89)
3:00	1.4724			0.00
03:05:00	1.4550			0.00
03:10:00	1.4942			0.00
03:15:00	1.4665			0.00
03:20:00	1.4646			0.00
03:25:00	1.4556			0.00
03:30:00	1.4530			0.00
03:35:00	1.4121			0.00
03:40:00	1.4254			0.00
03:45:00	1.4050			0.00
03:50:00	1.3980			0.00
03:55:00	1.4077			0.00
4:00	1.4071			0.00
04:05:00	1.3830			0.00
04:10:00	1.3928			0.00
04:15:00	1.3854			0.00
04:20:00	1.3665			0.00
04:25:00	1.3819			0.00
04:30:00	1.3709			0.00
04:35:00	1.3668			0.00
04:40:00	1.3857			0.00
04:45:00	1.3862			0.00
04:50:00	1.3830			0.00
04:55:00	1.4819			0.00
5:00	1.5083			0.00
05:05:00	1.5058			0.00
05:10:00	1.4937			0.00
05:15:00	1.5066			0.00
05:20:00	1.5224			0.00
05:25:00	1.5080			0.00
05:30:00	1.5236			0.00
05:35:00	1.5162			0.00
05:40:00	1.5427			0.00
05:45:00	1.5619			0.00
05:50:00	1.5792			0.00
05:55:00	1.5700			0.00
6:00	1.5605			0.00
06:05:00	1.5658			0.00
06:10:00	1.5760			0.00
06:15:00	1.5761			0.00
06:20:00	1.5860			0.00
06:25:00	1.5992			0.00
06:30:00	1.5989			0.00
06:35:00	1.5893			0.00
06:40:00	1.6198			0.00
06:45:00	1.6219			0.00
06:50:00	1.6167			0.00
06:55:00	1.6441			0.00
7:00	1.6567			0.00
07:05:00	1.6639			0.00
07:10:00	1.6435			0.00
07:15:00	1.6794			0.00
07:20:00	1.6419			0.00
07:25:00	1.5952			0.00
07:30:00	1.6237			0.00

Location:R1 -Fanno Creek

Time	cfs Flow	19 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 89)
07:35:00	1.6335			0.00
07:40:00	1.6039			0.00
07:45:00	1.6132			0.00
07:50:00	1.6299			0.00
07:55:00	1.6101			0.00
8:00	1.6229			0.00
08:05:00	1.6175			0.00
08:10:00	1.6250			0.00
08:15:00	1.6130			0.00
08:20:00	1.6276			0.00
08:25:00	1.6232			0.00
08:30:00	1.6407			0.00
08:35:00	1.6127			0.00
08:40:00	1.6242			0.00
08:45:00	1.6404			0.00
08:50:00	1.5953			0.00
08:55:00	1.6188			0.00
9:00	1.6145			0.02
09:05:00	1.6110			0.02
09:10:00	1.6560			0.02
09:15:00	1.8088			0.02
09:20:00	1.9362			0.02
09:25:00	1.9412			0.02
09:30:00	1.8830			0.02
09:35:00	1.8772			0.02
09:40:00	1.8757			0.02
09:45:00	1.8423			0.02
09:50:00	1.8702			0.02
09:55:00	1.8823			0.02
10:00	1.9885			0.06
10:05:00	2.0683			0.06
10:10:00	2.0645			0.06
10:15:00	2.0222			0.06
10:20:00	2.0069			0.06
10:25:00	2.0160			0.06
10:30:00	2.1739			0.06
10:35:00	3.3799			0.06
10:40:00	4.0711			0.06
10:45:00	4.5807			0.06
10:50:00	5.2981			0.06
10:55:00	4.8691			0.06
11:00	4.2850			0.00
11:05:00	3.8707			0.00
11:10:00	3.5631			0.00
11:15:00	3.4351			0.00
11:20:00	3.5856			0.00
11:25:00	4.1017			0.00
11:30:00	4.5142			0.00
11:35:00	4.8405			0.00
11:40:00	4.8808			0.00
11:45:00	4.4366			0.00
11:50:00	4.5306			0.00
11:55:00	4.4119	0.00		0.00
12:00	4.7665			0.13
12:05:00	5.7069			0.13

FO010471	M1G	5241 NE 122ND AVE	MANHOLE GRAB	4/30/01	8:23 MKS/AMC	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	EST 7000	CFU/100 ml	2	SM 9222 D	5/1/01	LAB: THE RESULT FOR FECAL COLIFORM BACTERIA IS AN ESTIMATE DUE TO	INTERFERING OVERGROWTH.	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS	ALSO <5.	
FO010471	M1G	5241 NE 122ND AVE	MANHOLE GRAB	4/30/01	8:23 MKS/AMC	GRAB	STORMWTR	E. COLI	E. COLI	2400 CONC	CFU/100 ml	2	SM 9213 D	5/1/01	LAB: THE RESULT FOR FECAL COLIFORM BACTERIA IS AN ESTIMATE DUE TO	INTERFERING OVERGROWTH.	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS	ALSO <5.	
FO010471	M1G	5241 NE 122ND AVE	MANHOLE GRAB	4/30/01	8:23 MKS/AMC	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	5.4 CONC	pH Units	0.1	SM 4500-H B	4/30/01	LAB: THE RESULT FOR FECAL COLIFORM BACTERIA IS AN ESTIMATE DUE TO	INTERFERING OVERGROWTH.	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS	ALSO <5.	
FO010471	M1G	5241 NE 122ND AVE	MANHOLE GRAB	4/30/01	8:23 MKS/AMC	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	11.1 CONC	mg/L	0.1	SM 4500-O G	4/30/01	LAB: THE RESULT FOR FECAL COLIFORM BACTERIA IS AN ESTIMATE DUE TO	INTERFERING OVERGROWTH.	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS	ALSO <5.	
FO010471	M1G	5241 NE 122ND AVE	MANHOLE GRAB	4/30/01	8:23 MKS/AMC	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	12.2 CONC	Deg. C	0.1	SM 2550 B	4/30/01	LAB: THE RESULT FOR FECAL COLIFORM BACTERIA IS AN ESTIMATE DUE TO	INTERFERING OVERGROWTH.	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS	ALSO <5.	
FO010471	M1G	5241 NE 122ND AVE	MANHOLE GRAB	4/30/01	8:23 MKS/AMC	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	21 CONC	µmhos/cm	1	SM 2510 B	4/30/01	LAB: THE RESULT FOR FECAL COLIFORM BACTERIA IS AN ESTIMATE DUE TO	INTERFERING OVERGROWTH.	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS	ALSO <5.	
FO010471	M1G	5241 NE 122ND AVE	MANHOLE GRAB	4/30/01	8:23 MKS/AMC	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5	mg/L	5	EPA 1664	5/9/01	LAB: THE RESULT FOR FECAL COLIFORM BACTERIA IS AN ESTIMATE DUE TO	INTERFERING OVERGROWTH.	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS	ALSO <5.	
FO010472	R1G	4916 SW 56TH AVE	OPEN CHANNEL GRAB	4/30/01	7:50 MKS/AMC	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	1700 CONC	CFU/100 ml	2	SM 9222 D	5/1/01	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS	ALSO <5.			
FO010472	R1G	4916 SW 56TH AVE	OPEN CHANNEL GRAB	4/30/01	7:50 MKS/AMC	GRAB	STORMWTR	E. COLI	E. COLI	1900 CONC	CFU/100 ml	2	SM 9213 D	5/1/01	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS	ALSO <5.			
FO010472	R1G	4916 SW 56TH AVE	OPEN CHANNEL GRAB	4/30/01	7:50 MKS/AMC	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	7.3 CONC	pH Units	0.1	SM 4500-H B	4/30/01	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS	ALSO <5.			
FO010472	R1G	4916 SW 56TH AVE	OPEN CHANNEL GRAB	4/30/01	7:50 MKS/AMC	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	10 CONC	mg/L	0.1	SM 4500-O G	4/30/01	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS	ALSO <5.			
FO010472	R1G	4916 SW 56TH AVE	OPEN CHANNEL GRAB	4/30/01	7:50 MKS/AMC	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	10.4 CONC	Deg. C	0.1	SM 2550 B	4/30/01	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS	ALSO <5.			
FO010472	R1G	4916 SW 56TH AVE	OPEN CHANNEL GRAB	4/30/01	7:50 MKS/AMC	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	30 CONC	µmhos/cm	1	SM 2510 B	4/30/01	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS	ALSO <5.			
FO010472	R1G	4916 SW 56TH AVE	OPEN CHANNEL GRAB	4/30/01	7:50 MKS/AMC	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5	mg/L	5	EPA 1664	5/9/01	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS	ALSO <5.			
FO010473	OP1G	3000 NW UPSHUR ST	OPEN CHANNEL GRAB	4/30/01	8:44 MKS/AMC	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	550 CONC	CFU/100 ml	2	SM 9222 D	5/1/01	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS	ALSO <5.			
FO010473	OP1G	3000 NW UPSHUR ST	OPEN CHANNEL GRAB	4/30/01	8:44 MKS/AMC	GRAB	STORMWTR	E. COLI	E. COLI	1500 CONC	CFU/100 ml	2	SM 9213 D	5/1/01	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS	ALSO <5.			
FO010473	OP1G	3000 NW UPSHUR ST	OPEN CHANNEL GRAB	4/30/01	8:44 MKS/AMC	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	7.5 CONC	pH Units	0.1	SM 4500-H B	4/30/01	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS	ALSO <5.			
FO010473	OP1G	3000 NW UPSHUR ST	OPEN CHANNEL GRAB	4/30/01	8:44 MKS/AMC	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	10.4 CONC	mg/L	0.1	SM 4500-O G	4/30/01	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS	ALSO <5.			
FO010473	OP1G	3000 NW UPSHUR ST	OPEN CHANNEL GRAB	4/30/01	8:44 MKS/AMC	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	9.5 CONC	Deg. C	0.1	SM 2550 B	4/30/01	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS	ALSO <5.			
FO010473	OP1G	3000 NW UPSHUR ST	OPEN CHANNEL GRAB	4/30/01	8:44 MKS/AMC	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	117 CONC	µmhos/cm	1	SM 2510 B	4/30/01	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS	ALSO <5.			
FO010473	OP1G	3000 NW UPSHUR ST	OPEN CHANNEL GRAB	4/30/01	8:44 MKS/AMC	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5	mg/L	5	EPA 1664	5/9/01	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS	ALSO <5.			
FO010476	M1C	5241 NE 122ND AVE	MANHOLE COMPOSITE	4/30/01	3:10 MJS/JBB	COMPOSITE	STORMWTR	BOD5	BOD5	5 CONC	mg/L	2	SM 5210 B	5/6/01					
FO010476	M1C	5241 NE 122ND AVE	MANHOLE COMPOSITE	4/30/01	3:10 MJS/JBB	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	66.4 CONC	mg/L	1	SM 2540 D	5/2/01					
FO010476	M1C	5241 NE 122ND AVE	MANHOLE COMPOSITE	4/30/01	3:10 MJS/JBB	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	25 CONC	mg/L	1	SM 2540 BD	5/8/01					
FO010476	M1C	5241 NE 122ND AVE	MANHOLE COMPOSITE	4/30/01	3:10 MJS/JBB	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	91 CONC	mg/L	1	SM 2540 B	5/2/01					
FO010476	M1C	5241 NE 122ND AVE	MANHOLE COMPOSITE	4/30/01	3:10 MJS/JBB	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.22 CONC	mg/L	0.03	EPA 365.4	5/8/01					
FO010476	M1C	5241 NE 122ND AVE	MANHOLE COMPOSITE	4/30/01	3:10 MJS/JBB	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.25 CONC	mg/L	0.02	EPA 350.1	5/7/01					
FO010476	M1C	5241 NE 122ND AVE	MANHOLE COMPOSITE	4/30/01	3:10 MJS/JBB	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	0.98 CONC	mg/L	0.2	EPA 351.2	5/7/01					
FO010476	M1C	5241 NE 122ND AVE	MANHOLE COMPOSITE	4/30/01	3:10 MJS/JBB	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.19 CONC	mg/L	0.1	EPA 300.0	5/1/01					
FO010476	M1C	5241 NE 122ND AVE	MANHOLE COMPOSITE	4/30/01	3:10 MJS/JBB	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DIS	O-PHOSPHATE-PHOSPHORUS, DISS	0.03 CONC	mg/L	0.02	EPA 365.1	5/1/01					
FO010476	M1C	5241 NE 122ND AVE	MANHOLE COMPOSITE	4/30/01	3:10 MJS/JBB	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	10.4 CONC	mg CaCO3/L	1	SM 2340 C	5/7/01					
FO010476	M1C	5241 NE 122ND AVE	MANHOLE COMPOSITE	4/30/01	3:10 MJS/JBB	COMPOSITE	STORMWTR	COD	COD	43 CONC	mg/L	5	SM 5220 D	5/5/01					
FO010476	M1C	5241 NE 122ND AVE	MANHOLE COMPOSITE	4/30/01	3:10 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	10.8 CONC	µg/L	0.2	EPA 200.8	5/2/01					
FO010476	M1C	5241 NE 122ND AVE	MANHOLE COMPOSITE	4/30/01	3:10 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	83.8 CONC	µg/L	0.5	EPA 200.8	5/2/01					
FO010476	M1C	5241 NE 122ND AVE	MANHOLE COMPOSITE	4/30/01	3:10 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	0.89 CONC	µg/L	0.1	EPA 200.8	5/2/01					
FO010476	M1C	5241 NE 122ND AVE	MANHOLE COMPOSITE	4/30/01	3:10 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	<0.10	µg/L	0.1	EPA 200.8	5/2/01					
FO010476	M1C	5241 NE 122ND AVE	MANHOLE COMPOSITE	4/30/01	3:10 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	0.29 CONC	µg/L	0.1	EPA 200.8	5/2/01					
FO010476	M1C	5241 NE 122ND AVE	MANHOLE COMPOSITE	4/30/01	3:10 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	12.4 CONC	µg/L	0.1	EPA 200.8	5/2/01					
FO010476	M1C	5241 NE 122ND AVE	MANHOLE COMPOSITE	4/30/01	3:10 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	3.27 CONC	µg/L	0.2	EPA 200.8	5/2/01					
FO010476	M1C	5241 NE 122ND AVE	MANHOLE COMPOSITE	4/30/01	3:10 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	26.3 CONC	µg/L	0.5	EPA 200.8	5/2/01					
FO010476	M1C	5241 NE 122ND AVE	MANHOLE COMPOSITE	4/30/01	3:10 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	0.36 CONC	µg/L	0.1	EPA 200.8	5/2/01					
FO010476	M1C	5241 NE 122ND AVE	MANHOLE COMPOSITE	4/30/01	3:10 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.10	µg/L	0.1	EPA 200.8	5/2/01					
FO010476	M1C	5241 NE 122ND AVE	MANHOLE COMPOSITE	4/30/01	3:10 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10	µg/L	0.1	EPA 200.8	5/2/01					
FO010476	M1C	5241 NE 122ND AVE	MANHOLE COMPOSITE	4/30/01	3:10 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	0.21 CONC	µg/L	0.1	EPA 200.8	5/2/01					
FO010476	M1C	5241 NE 122ND AVE	MANHOLE COMPOSITE	4/30/01	3:10 MJS/JBB	COMPOSITE	STORMWTR	MERCURY	MERCURY	<0.00020	mg/L	0.0002	EPA 245.1	5/2/01					
FO010477	R1C	4916 SW 56TH AVE	OPEN CHANNEL COMPOS	4/30/01	4:36 MJS/JBB	COMPOSITE	STORMWTR	BOD5	BOD5	10 CONC	mg/L	2	SM 5210 B	5/6/01					
FO010477	R1C	4916 SW 56TH AVE	OPEN CHANNEL COMPOS	4/30/01	4:36 MJS/JBB	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	660 CONC	mg/L	1	SM 2540 D	5/2/01					
FO010477	R1C	4916 SW 56TH AVE	OPEN CHANNEL COMPOS	4/30/01	4:36 MJS/JBB	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	55 CONC	mg/L	1	SM 2540 BD	5/8/01					
FO010477	R1C	4916 SW 56TH AVE	OPEN CHANNEL COMPOS	4/30/01	4:36 MJS/JBB	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	715 CONC	mg/L	1	SM 2540 B	5/3/01					
FO010477	R1C	4916 SW 56TH AVE	OPEN CHANNEL COMPOS	4/30/01	4:36 MJS/JBB	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	1.22 CONC	mg/L	0.03	EPA 365.4	5/8/01					
FO010477	R1C	4916 SW 56TH AVE	OPEN CHANNEL COMPOS	4/30/01	4:36 MJS/JBB	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.053 CONC	mg/L	0.02	EPA 350.1	5/7/01					
FO010477	R1C	4916 SW 56TH AVE	OPEN CHANNEL COMPOS	4/30/01	4:36 MJS/JBB	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	2.95 CONC	mg/L	0.2	EPA 351.2	5/7/01					
FO010477	R1C	4916 SW 56TH AVE	OPEN CHANNEL COMPOS	4/30/01	4:36 MJS/JBB	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.42 CONC	mg/L	0.1	EPA 300.0	5/1/01					
FO010477	R1C	4916 SW 56TH AVE	OPEN CHANNEL COMPOS	4/30/01	4:36 MJS/JBB	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DIS	O-PHOSPHATE-PHOSPHORUS, DISS	0.031 CONC	mg/L	0.02	EPA 365.1	5/1/01					
FO010477	R1C	4916 SW 56TH AVE	OPEN CHANNEL COMPOS	4/30/01	4:36 MJS/JBB	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	38.6 CONC	mg CaCO3/L	1	SM 2340 C	5/5/01					
FO010477	R1C	4916 SW 56TH AVE	OPEN CHANNEL COMPOS	4/30/01	4:36 MJS/JBB	COMPOSITE	STORMWTR	COD	COD	120 CONC	mg/L	5	SM 5220 D	5/5/01					
FO010477	R1C	4916 SW 56TH AVE	OPEN CHANNEL COMPOS	4/30/01	4:36 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	34.7 CONC	µg/L	0.2	EPA 200.8	5/2/01					
FO010477	R1C	4916 SW 56TH AVE	OPEN CHANNEL COMPOS	4/30/01	4:36 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	200 CONC	µg/L	0.5	EPA 200.8	5/2/01					
FO010477	R1C	4916 SW 56TH AVE	OPEN CHANNEL COMPOS	4/30/01	4:36 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	7.55 CONC	µg/L	0.1	EPA 200.8	5/2/01					
FO010477	R1C	4916 SW 56TH AVE	OPEN CHANNEL COMPOS	4/30/01	4:36 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	0.11 CONC	µg/L	0.1	EPA 200.8	5/2/01					
FO010477	R1C	4916 SW 56TH AVE	OPEN CHANNEL COMPOS	4/30/01	4:36 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	0.44 CONC	µg/L	0.1	EPA 200.8	5/2/01					
FO010477	R1C	4916 SW 56TH AVE	OPEN CHANNEL COMPOS	4/30/01	4:36 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	44.8 CONC	µg/L	0.1	EPA 200.8	5/2/01					
FO010477	R1C	4916 SW 56TH AVE	OPEN CHANNEL COMPOS	4/30/01	4:36 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	3.27 CONC	µg/L	0.2	EPA 200.8	5/2/01					
FO010477	R1C	4916 SW 56TH AVE	OPEN CHANNEL COMPOS	4/30/01	4:36 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	5.56 CONC	µg/L	0.5	EPA 200.8	5/2/01					
FO010477	R1C	4916 SW 56TH AVE	OPEN CHANNEL COMPOS	4/30/01	4:36 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	0.85 CONC	µg/L	0.1	EPA 200.8	5/2/01					
FO010477	R1C	4916 SW 56TH AVE	OPEN CHANNEL COMPOS	4/30/01	4:36 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.10	µg/L	0.1	EPA 200.8	5/2/01					
FO010477	R1C	4916 SW 56TH AVE	OPEN CHANNEL COMPOS	4/30/01	4:36 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10	µg/L	0.1	EPA 200.8	5/2/01					
FO010477	R1C	4916 SW 56TH AVE	OPEN CHANNEL COMPOS	4/30/01	4:36 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	0.17 CONC	µg/L	0.1	EPA 200.8	5/2/01					
FO010477	R1C	4916 SW 56TH AVE	OPEN CHANNEL COMPOS	4/30/01	4:36 MJS/JBB	COMPOSITE	STORMWTR	MERCURY	MERCURY	<0.00020	mg/L	0.0002	EPA 245.1	5/2/01					
FO010478	OP1C	3000 NW UPSHUR ST	OPEN CHANNEL COMPOS	4/30/01	5:10 MJS/JBB	COMPOSITE	STORMWTR	BOD5	BOD5	3 CONC	mg/L	2	SM 5210 B	5/6/01					
FO010478	OP1C	3000 NW UPSHUR ST	OPEN CHANNEL COMPOS	4/30/01	5:10 MJS/JBB	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	68.4 CONC	mg/L	1	SM 2540 D	5/2/01					
FO010478	OP1C	3000 NW UPSHUR ST	OPEN CHANNEL COMPOS	4/30/01	5:10 MJS/JBB	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	120 CONC	mg/L	1	SM 2540 BD	5/8/01					
FO010478	OP1C	3000 NW UPSHUR ST	OPEN CHANNEL COMPOS	4/30/01	5:10 MJS/JBB	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	189 CONC	mg/L	1	SM 2540 B	5/2/01					
FO010478	OP1C	3000 NW UPSHUR ST	OPEN CHANNEL COMPOS	4/30/01	5:10 MJS/JBB	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.24 CONC	mg/L	0.03	EPA 365.4	5/8/01					
FO010478	OP1C	3000 NW UPSHUR ST	OPEN CHANNEL COMPOS	4/30/01	5:10 MJS/JBB	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	<0.020	mg/L	0.02	EPA 350.1	5/7/01					
FO010478	OP1C	3000 NW UPSHUR ST	OPEN CHANNEL COMPOS	4/30/01	5:10 MJS/JBB	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	0.79 CONC	mg/L	0.2	EPA 351.2	5/7/01					
FO010478	OP1C	3000 NW UPSHUR ST	OPEN CHANNEL COMPOS	4/30/01	5:10 MJS/JBB	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	1.1 CONC	mg/L	0.1	EPA 300.0	5/1/01					
FO010478	OP1C	3000 NW UPSHUR ST	OPEN CHANNEL COMPOS	4/30/01	5:10 MJS/JBB	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DIS	O-PHOSPHATE-PHOSPHORUS, DISS	0.033 CONC	mg/L	0.02	EPA 365.1	5/1/01					
FO010478	OP1C	3000 NW UPSHUR ST	OPEN CHANNEL COMPOS	4/30/01	5:10 MJS/JBB	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	43.8 CONC	mg CaCO3/L	1	SM 2340 C	5/5/01					
FO010478	OP1C	3000 NW UPSHUR ST	OPEN CHANNEL COMPOS	4/30/01	5:10 MJS/JBB	COMPOSITE	STORMWTR	COD	COD	30 CONC	mg/L	5	SM 5220 D	5/5/01					
FO010478	OP1C	3000 NW UPSHUR ST	OPEN CHANNEL COMPOS	4/30/01	5:10 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	5.73 CONC	µg/L	0.2	EPA 200.8	5/2/01					
FO010478	OP1C	3000 NW UPSHUR ST	OPEN CHANNEL COMPOS	4/30/01	5:10 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	17.3 CONC	µg/L	0.5	EPA 200.8	5/2/01					
FO010478	OP1C	3000 NW UPSHUR ST	OPEN CHANNEL COMPOS	4/30/01	5:10 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	1.25 CONC	µg/L	0.1	EPA 200.8	5/2/01					
FO010478	OP1C	3000 NW UPSHUR ST	OPEN CHANNEL COMPOS	4/30/01	5:10 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	<0.10	µg/L	0.1	EPA 200.8	5/2/01					
FO010478	OP1C	3000 NW UPSHUR ST	OPEN CHANNEL COMPOS	4/30/01	5:10 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	<0.10	µg/L	0.1	EPA 200.8	5/2/01					
FO010478	OP1C	3000 NW UPSHUR ST	OPEN CHANNEL COMPOS	4/30/01	5:10 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	3.5 CONC	µg/L	0.1	EPA 200.8	5/2/01					
FO010478	OP1C	3000 NW UPSHUR ST	OPEN CHANNEL COMPOS	4/30/01	5:10 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	1.61 CONC	µg/L	0.2	EPA 200.8	5/2/01					
FO010478	OP1C	3000 NW UPSHUR ST	OPEN CHANNEL COMPOS	4/30/01	5:10 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	1.68 CONC	µg/L	0.5	EPA 200.8	5/2/01					
FO010478	OP1C	3000 NW UPSHUR ST	OPEN CHANNEL COMPOS	4/30/01	5:10 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	0.35 CONC	µg/L	0.1	EPA 200.8	5/2/01					
FO010478	OP1C	3000 NW UPSHUR ST	OPEN CHANNEL COMPOS	4/30/01	5:10 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.10	µg/L	0.1	EPA 200.8	5/2/01					
FO010478	OP1C	3000 NW UPSHUR ST	OPEN CHANNEL COMPOS	4/30/01	5:10 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10	µg/L	0.1	EPA 200.8	5/2/01					
FO010478	OP1C	3000 NW UPSHUR ST	OPEN CHANNEL COMPOS	4/30/01	5:10 MJS/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	<0.10	µg/L	0.1	EPA 200.8	5/2/01					
FO010478	OP1C	3000 NW UPSHUR ST	OPEN CHANNEL COMPOS	4/30/01	5:10 MJS/JBB	COMPOSITE	STORMWTR	MERCURY	MERCURY	<0.00020	mg/L	0.0002	EPA 245.1	5/2/01					

Figure 5: R1 (Fanno Creek) Hydrograph
Land Use Stormwater Monitoring
FY 2000-01 Event 27: April 30, 2001



Location:R1 -Fanno Creek

Time	cfs Flow	30 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 89)
4/30/01 0:00	3.278			0.00
0:05	3.202			0.00
0:10	3.322			0.00
0:15	3.181			0.00
0:20	3.312			0.00
0:25	3.252			0.00
0:30	3.282			0.00
0:35	3.209			0.00
0:40	3.248			0.00
0:45	3.182			0.00
0:50	3.181			0.00
0:55	3.165			0.00
1:00	3.2			0.00
1:05	3.222			0.00
1:10	3.2			0.00
1:15	3.219			0.00
1:20	3.215			0.00
1:25	3.155			0.00
1:30	3.171			0.00
1:35	3.144			0.00
1:40	3.218			0.00
1:45	3.064			0.00
1:50	3.155			0.00
1:55	3.106			0.00
2:00	3.103			0.01
2:05	3.13			0.01
2:10	3.1			0.01
2:15	3.117			0.01
2:20	3.143			0.01
2:25	3.063			0.01
2:30	3.149			0.01
2:35	3.149			0.01
2:40	2.969			0.01
2:45	3.059			0.01
2:50	3.185			0.01
2:55	3.121			0.01

Location:R1 -Fanno Creek

Time	cfs Flow	30 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 89)
3:00	3.103			0.01
3:05	3.115			0.01
3:10	3.135			0.01
3:15	3.097			0.01
3:20	3.122			0.01
3:25	3.009			0.01
3:30	3.072			0.01
3:35	3.146			0.01
3:40	3.193			0.01
3:45	3.149			0.01
3:50	3.255			0.01
3:55	3.313			0.01
4:00	3.323			0.04
4:05	3.45			0.04
4:10	3.545			0.04
4:15	3.493			0.04
4:20	3.759			0.04
4:25	3.676			0.04
4:30	3.854			0.04
4:35	4.173		0	0.04
4:40	4.484			0.04
4:45	4.589			0.04
4:50	4.824			0.04
4:55	4.801			0.04
5:00	4.741			0.01
5:05	4.983			0.01
5:10	5.085			0.01
5:15	5.131			0.01
5:20	5.232			0.01
5:25	5.39			0.01
5:30	5.548			0.01
5:35	5.882			0.01
5:40	6.662			0.01
5:45	7.15			0.01
5:50	8.691			0.01
5:55	10.132			0.01
6:00	10.55			0.04
6:05	11.165		0	0.04
6:10	12.297			0.04
6:15	12.27			0.04
6:20	12.934			0.04
6:25	11.905			0.04
6:30	12.336			0.04
6:35	11.269			0.04
6:40	11.771			0.04
6:45	12.257			0.04
6:50	11.103		0	0.04
6:55	12.637			0.04
7:00	10.859			0.03
7:05	12.104			0.03
7:10	11.608			0.03
7:15	11.782			0.03
7:20	14.702			0.03
7:25	12.41			0.03
7:30	21.676			0.03
7:35	23.74		0	0.03

Location:R1 -Fanno Creek

Time	cfs Flow	30 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 89)
7:40	19.319			0.03
7:45	16.894			0.03
7:50	12.352			0.03
7:55	14.057			0.03
8:00	11.526			0.07
8:05	13.696			0.07
8:10	14.089	0		0.07
8:15	14.81			0.07
8:20	14.35			0.07
8:25	13.64			0.07
8:30	15.897			0.07
8:35	14.173			0.07
8:40	16.349			0.07
8:45	12.347			0.07
8:50	10.931	0		0.07
8:55	14.111			0.07
9:00	15.522			0.14
9:05	16.489			0.14
9:10	20.174			0.14
9:15	24.819			0.14
9:20	25.873	0		0.14
9:25	22.893			0.14
9:30	29.106			0.14
9:35	20.095			0.14
9:40	26.286			0.14
9:45	30.351	0		0.14
9:50	38.41			0.14
9:55	39.823			0.14
10:00	43.587	0		0.06
10:05	43.494			0.06
10:10	41.177			0.06
10:15	48.982	0		0.06
10:20	46.192			0.06
10:25	62.923	0		0.06
10:30	96.929	0		0.06
10:35	99.134			0.06
10:40	88.703	0		0.06
10:45	113.365	0		0.06
10:50	88.012	0		0.06
10:55	85.724	0		0.06
11:00	81.782			0.01
11:05	67.42	0		0.01
11:10	46.288			0.01
11:15	47.617	0		0.01
11:20	37.59			0.01
11:25	41.099			0.01
11:30	34.382			0.01
11:35	27.495	0		0.01
11:40	25.015			0.01
11:45	20.456			0.01
11:50	27.868			0.01
11:55	27.715	0		0.01
12:00	22.892			0.09
12:05	24.24			0.09
12:10	19.314			0.09
12:15	21.388			0.09

Location:R1 -Fanno Creek

Time		cfs Flow	30 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 89)
	12:20	22.366	0		0.09
	12:25	22.458			0.09
	12:30	25.865			0.09
	12:35	20.56			0.09
	12:40	24.416			0.09
	12:45	25.167	0		0.09
	12:50	19.775			0.09
	12:55	21.464			0.09
	13:00	24.138			0
	13:05	25.756			0
	13:10	26.058	0		0
	13:15	38.621			0
	13:20	38.717			0
	13:25	46.962	0		0
	13:30	50.66			0
	13:35	42.389			0
	13:40	37.936	0		0
	13:45	31.464			0
	13:50	28.916			0
	13:55	31.088			0
	14:00	27.044	0		0
	14:05	24.226			0
	14:10	22.39			0
	14:15	16.65			0
	14:20	13.352			0
	14:25	15.3	0		0
	14:30	11.678			0
	14:35	12.38			0
	14:40	14.879			0
	14:45	13.35			0
	14:50	12.351			0
	14:55	13.973			0
	15:00	9.405			0.01
	15:05	10.55			0.01
	15:10	10.731	0		0.01
	15:15	9.996			0.01
	15:20	13.331			0.01
	15:25	12.772			0.01
	15:30	13.076			0.01
	15:35	12.717			0.01
	15:40	13.035			0.01
	15:45	12.405			0.01
	15:50	12.188			0.01
	15:55	12.072	0		0.01
	16:00	11.365			0.00
	16:05	11.87			0.00
	16:10	11.576			0.00
	16:15	11.591			0.00
	16:20	11.428			0.00
	16:25	11.266			0.00
	16:30	10.767			0.00
	16:35	11.202			0.00
	16:40	10.856			0.00
	16:45	10.479	0		0.00
	16:50	10.844			0.00
	16:55	10.227			0.00

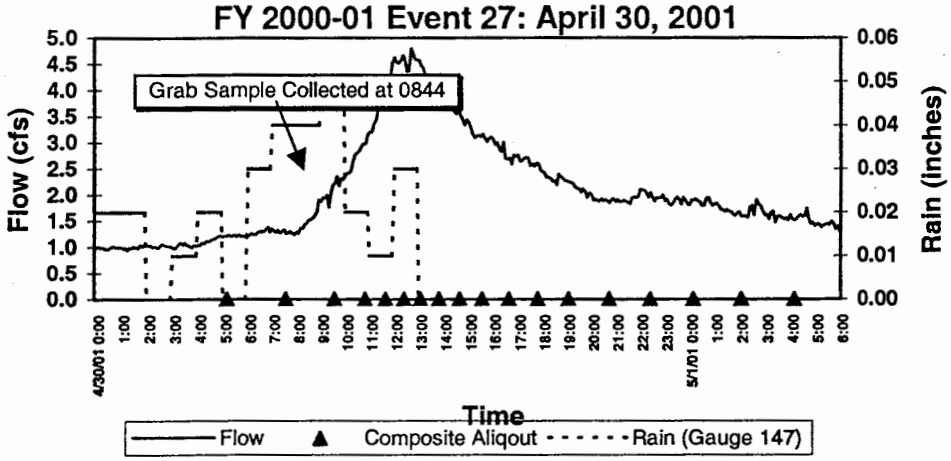
Location:R1 -Fanno Creek

Time	cfs Flow	30 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 89)
17:00	10.226			0.00
17:05	10.159			0.00
17:10	10.529			0.00
17:15	10.234			0.00
17:20	9.517			0.00
17:25	9.37			0.00
17:30	9.42			0.00
17:35	9.054			0.00
17:40	8.888			0.00
17:45	9.036			0.00
17:50	8.702			0.00
17:55	8.7			0.00
18:00	8.259			0.00
18:05	8.363			0.00
18:10	8.383			0.00
18:15	8.193			0.00
18:20	7.988			0.00
18:25	8.482			0.00
18:30	8.108			0.00
18:35	7.836			0.00
18:40	7.833			0.00
18:45	8.078			0.00
18:50	7.435			0.00
18:55	7.27			0.00
19:00	7.461			0.00
19:05	7.47			0.00
19:10	7.045			0.00
19:15	7.195			0.00
19:20	7.43			0.00
19:25	7.281			0.00
19:30	7.078			0.00
19:35	7.224			0.00
19:40	6.606			0.00
19:45	6.763			0.00
19:50	6.565			0.00
19:55	6.168			0.00
20:00	6.561			0.00
20:05	6.292			0.00
20:10	6.046			0.00
20:15	5.588			0.00
20:20	5.536			0.00
20:25	5.644			0.00
20:30	5.847			0.00
20:35	5.949			0.00
20:40	6.181			0.00
20:45	6.487			0.00
20:50	6.315			0.00
20:55	6.369			0.00
21:00	6.199			0
21:05	6.319			0
21:10	6.242			0
21:15	6.082			0
21:20	6.178			0
21:25	6.082			0
21:30	6.156			0
21:35	5.908			0

Location:R1 -Fanno Creek

Time	cfs Flow	30 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 89)
21:40	5.851			0
21:45	5.617			0
21:50	5.838			0
21:55	6.111			0
22:00	5.887			0
22:05	5.896			0
22:10	5.809			0
22:15	5.801			0
22:20	5.915			0
22:25	5.808			0
22:30	6.018			0
22:35	6.182			0
22:40	5.67			0
22:45	5.878			0
22:50	5.745			0
22:55	5.499			0
23:00	5.333			0
23:05	5.194			0
23:10	5.041			0
23:15	4.868			0
23:20	4.86			0
23:25	4.779			0
23:30	4.641			0
23:35	4.533			0
23:40	4.502			0
23:45	4.822			0
23:50	4.874			0
23:55	5.034			0
5/1/01 0:00	5.093			0

Figure 6: OP1 (Balch Creek) Hydrograph
Land Use Stormwater Monitoring
FY 2000-01 Event 27: April 30, 2001



Location: OP1 - Balch Creek

	cfs	18	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 14
4/30/01 0:00	0.988			0.02
0:05	0.999			0.02
0:10	0.995			0.02
0:15	0.988			0.02
0:20	0.986			0.02
0:25	0.957			0.02
0:30	0.962			0.02
0:35	0.994			0.02
0:40	1.006			0.02
0:45	1.004			0.02
0:50	0.998			0.02
0:55	0.992			0.02
1:00	0.999			0.02
1:05	0.972			0.02
1:10	0.983			0.02
1:15	0.936			0.02
1:20	0.989			0.02
1:25	0.975			0.02
1:30	1.015			0.02
1:35	0.986			0.02
1:40	0.978			0.02
1:45	1.042			0.02
1:50	1.007			0.02
1:55	1.041			0.02
2:00	1.04			0.00
2:05	1.027			0.00
2:10	1.029			0.00
2:15	0.999			0.00
2:20	1.018			0.00
2:25	0.985			0.00
2:30	1			0.00
2:35	1.05			0.00
2:40	1.048			0.00
2:45	1.027			0.00
2:50	1.014			0.00
2:55	1.019			0.00
3:00	0.992			0.01

Location: OP1 - Balch Creek

Time	cfs Flow	18 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 14
3:05	0.972			0.01
3:10	1.01			0.01
3:15	1.06			0.01
3:20	1.083			0.01
3:25	1.045			0.01
3:30	1.078			0.01
3:35	1.033			0.01
3:40	1.022			0.01
3:45	0.989			0.01
3:50	1.03			0.01
3:55	1.027			0.01
4:00	1.029			0.02
4:05	1.036			0.02
4:10	1.077			0.02
4:15	1.074			0.02
4:20	1.106			0.02
4:25	1.1			0.02
4:30	1.122			0.02
4:35	1.144			0.02
4:40	1.164			0.02
4:45	1.189			0.02
4:50	1.207			0.02
4:55	1.216			0.02
5:00	1.192			0.00
5:05	1.212			0.00
5:10	1.211		0	0.00
5:15	1.233			0.00
5:20	1.202			0.00
5:25	1.226			0.00
5:30	1.204			0.00
5:35	1.211			0.00
5:40	1.223			0.00
5:45	1.202			0.00
5:50	1.208			0.00
5:55	1.197			0.00
6:00	1.214			0.03
6:05	1.223			0.03
6:10	1.261			0.03
6:15	1.237			0.03
6:20	1.246			0.03
6:25	1.279			0.03
6:30	1.3			0.03
6:35	1.293			0.03
6:40	1.301			0.03
6:45	1.341			0.03
6:50	1.386			0.03
6:55	1.285			0.03
7:00	1.355			0.04
7:05	1.31			0.04
7:10	1.283			0.04
7:15	1.321			0.04
7:20	1.268			0.04
7:25	1.303			0.04
7:30	1.337			0.04
7:35	1.264		0	0.04
7:40	1.277			0.04

Location: OP1 - Balch Creek

Time	cfs Flow	18 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 14
7:45	1.302			0.04
7:50	1.266			0.04
7:55	1.236			0.04
8:00	1.293			0.04
8:05	1.27			0.04
8:10	1.368			0.04
8:15	1.353			0.04
8:20	1.421			0.04
8:25	1.468			0.04
8:30	1.514			0.04
8:35	1.53			0.04
8:40	1.564			0.04
8:45	1.603			0.04
8:50	1.674			0.04
8:55	1.902			0.04
9:00	1.869			0.05
9:05	1.939			0.05
9:10	1.942			0.05
9:15	1.996			0.05
9:20	1.766			0.05
9:25	2.029			0.05
9:30	2.199			0.05
9:35	2.216		0	0.05
9:40	2.354			0.05
9:45	2.173			0.05
9:50	2.318			0.05
9:55	2.293			0.05
10:00	2.392			0.02
10:05	2.407			0.02
10:10	2.417			0.02
10:15	2.48			0.02
10:20	2.678			0.02
10:25	2.773			0.02
10:30	2.816			0.02
10:35	2.845			0.02
10:40	2.939			0.02
10:45	2.974			0.02
10:50	2.988		0	0.02
10:55	3.157			0.02
11:00	3.205			0.01
11:05	3.197			0.01
11:10	3.361			0.01
11:15	3.422			0.01
11:20	3.629			0.01
11:25	3.816			0.01
11:30	3.875			0.01
11:35	3.966			0.01
11:40	3.835		0	0.01
11:45	3.98			0.01
11:50	4.248			0.01
11:55	4.527			0.01
12:00	4.624			0.03
12:05	4.528			0.03
12:10	4.522			0.03
12:15	4.564			0.03
12:20	4.662			0.03

Location: OP1 - Balch Creek

Time	cfs Flow	18 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 14
12:25	4.585	0		0.03
12:30	4.358			0.03
12:35	4.37			0.03
12:40	4.789			0.03
12:45	4.692			0.03
12:50	4.581			0.03
12:55	4.578			0.03
13:00	4.569			0
13:05	4.47	0		0
13:10	4.413			0
13:15	4.284			0
13:20	4.236			0
13:25	4.222			0
13:30	4.186			0
13:35	4.268			0
13:40	4.197			0
13:45	3.97			0
13:50	3.903	0		0
13:55	4.218			0
14:00	4.02			0
14:05	4.043			0
14:10	3.891			0
14:15	3.849			0
14:20	3.684			0
14:25	3.605			0
14:30	3.546			0
14:35	3.648			0
14:40	3.524	0		0
14:45	3.451			0
14:50	3.33			0
14:55	3.437			0
15:00	3.381			0
15:05	3.278			0
15:10	3.17			0
15:15	3.083			0
15:20	3.12			0
15:25	3.128			0
15:30	3.113			0
15:35	3.157	0		0
15:40	3.079			0
15:45	3.015			0
15:50	3.074			0
15:55	3.097			0
16:00	3.066			0
16:05	2.963			0
16:10	2.992			0
16:15	2.884			0
16:20	2.825			0
16:25	2.998			0
16:30	2.699			0
16:35	2.677			0
16:40	2.704	0		0
16:45	2.589			0
16:50	2.756			0
16:55	2.731			0
17:00	2.761			0

Location: OP1 - Balch Creek

Time	cfs Flow	18 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 14
17:05	2.643			0
17:10	2.656			0
17:15	2.701			0
17:20	2.715			0
17:25	2.697			0
17:30	2.558			0
17:35	2.595			0
17:40	2.548			0
17:45	2.601			0
17:50	2.59	0		0
17:55	2.483			0
18:00	2.445			0
18:05	2.411			0
18:10	2.334			0
18:15	2.335			0
18:20	2.313			0
18:25	2.255			0
18:30	2.271			0
18:35	2.191			0
18:40	2.39			0
18:45	2.344			0
18:50	2.317			0
18:55	2.27			0
19:00	2.258			0
19:05	2.246	0		0
19:10	2.234			0
19:15	2.213			0
19:20	2.152			0
19:25	2.121			0
19:30	2.119			0
19:35	2.052			0
19:40	2.112			0
19:45	2.061			0
19:50	1.952			0
19:55	2.031			0
20:00	2.013			0
20:05	1.892			0
20:10	1.913			0
20:15	1.889			0
20:20	1.872			0
20:25	1.927			0
20:30	1.886			0
20:35	1.909			0
20:40	1.877			0
20:45	1.846	0		0
20:50	1.915			0
20:55	1.926			0
21:00	1.868			0
21:05	1.906			0
21:10	1.863			0
21:15	1.881			0
21:20	1.899			0
21:25	1.872			0
21:30	1.861			0
21:35	1.831			0
21:40	1.94			0

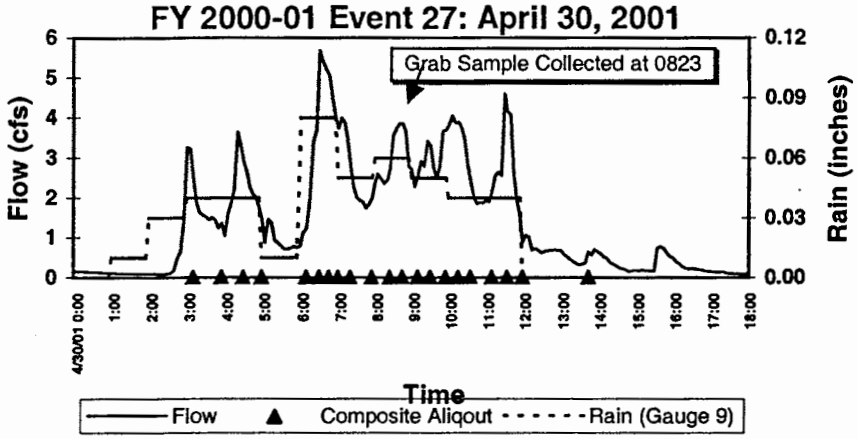
Location: OP1 - Balch Creek

Time	cfs Flow	18 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 14
21:45	1.957			0
21:50	1.944			0
21:55	1.971			0
22:00	2.097			0
22:05	2.101			0
22:10	2.087			0
22:15	2.038			0
22:20	1.959			0
22:25	2.042	0		0
22:30	1.95			0
22:35	1.879			0
22:40	1.944			0
22:45	1.937			0
22:50	1.944			0
22:55	2.001			0
23:00	1.886			0
23:05	1.918			0
23:10	1.835			0
23:15	1.796			0
23:20	1.843			0
23:25	1.918			0
23:30	1.957			0
23:35	1.918			0
23:40	1.819			0
23:45	1.949			0
23:50	1.904			0
23:55	1.814			0
5/1/01 0:00	1.802			0
0:05	1.9			0
0:10	1.898	0		0
0:15	1.92			0
0:20	1.876			0
0:25	1.869			0
0:30	1.791			0
0:35	1.799			0
0:40	1.931			0
0:45	1.948			0
0:50	1.856			0
0:55	1.8			0
1:00	1.825			0
1:05	1.842			0
1:10	1.801			0
1:15	1.724			0
1:20	1.714			0
1:25	1.684			0
1:30	1.719			0
1:35	1.678			0
1:40	1.684			0
1:45	1.626			0
1:50	1.61			0
1:55	1.661			0
2:00	1.669			0
2:05	1.59	0		0
2:10	1.597			0
2:15	1.59			0
2:20	1.569			0

Location: OP1 - Balch Creek

Time	cfs Flow	18 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 14
2:25	1.76			0
2:30	1.791			0
2:35	1.611			0
2:40	1.907			0
2:45	1.831			0
2:50	1.786			0
2:55	1.695			0
3:00	1.615			0
3:05	1.627			0
3:10	1.537			0
3:15	1.669			0
3:20	1.688			0
3:25	1.474			0
3:30	1.587			0
3:35	1.599			0
3:40	1.563			0
3:45	1.534			0
3:50	1.567			0
3:55	1.517			0
4:00	1.622			0
4:05	1.541			0
4:10	1.514	0		0
4:15	1.541			0
4:20	1.588			0
4:25	1.615			0
4:30	1.591			0
4:35	1.604			0
4:40	1.74			0
4:45	1.547			0
4:50	1.447			0
4:55	1.469			0
5:00	1.403			0
5:05	1.442			0
5:10	1.442			0
5:15	1.381			0
5:20	1.415			0
5:25	1.433			0
5:30	1.44			0
5:35	1.427			0
5:40	1.49			0
5:45	1.461			0
5:50	1.349			0
5:55	1.407			0
6:00	1.302			0

Figure 7: M1 (NE 122nd Ave) Hydrograph
Land Use Stormwater Monitoring
FY 2000-01 Event 27: April 30, 2001



Location: M1 - NE 122nd

	cfs	21	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 9)
4/30/01 0:00	0.163			0.00
0:05	0.157			0.00
0:10	0.154			0.00
0:15	0.152			0.00
0:20	0.145			0.00
0:25	0.141			0.00
0:30	0.139			0.00
0:35	0.137			0.00
0:40	0.126			0.00
0:45	0.121			0.00
0:50	0.118			0.00
0:55	0.114			0.00
1:00	0.112			0.01
1:05	0.109			0.01
1:10	0.108			0.01
1:15	0.105			0.01
1:20	0.103			0.01
1:25	0.099			0.01
1:30	0.099			0.01
1:35	0.095			0.01
1:40	0.094			0.01
1:45	0.096			0.01
1:50	0.095			0.01
1:55	0.099			0.01
2:00	0.097			0.03
2:05	0.094			0.03
2:10	0.093			0.03
2:15	0.091			0.03
2:20	0.091			0.03
2:25	0.092			0.03
2:30	0.1			0.03
2:35	0.101			0.03
2:40	0.175			0.03
2:45	0.465			0.03
2:50	0.646			0.03
2:55	1.356			0.03
3:00	3.259			0.04

Location: M1 - NE 122nd

Time	cfs Flow	21 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 9)
3:05	3.232			0.04
3:10	2.454	0		0.04
3:15	1.878			0.04
3:20	1.634			0.04
3:25	1.569			0.04
3:30	1.524			0.04
3:35	1.458			0.04
3:40	1.506			0.04
3:45	1.444			0.04
3:50	1.25			0.04
3:55	1.352	0		0.04
4:00	1.043			0.04
4:05	1.609			0.04
4:10	1.834			0.04
4:15	2.195			0.04
4:20	3.637			0.04
4:25	3.301			0.04
4:30	2.916	0		0.04
4:35	2.667			0.04
4:40	2.288			0.04
4:45	2.101			0.04
4:50	2.002			0.04
4:55	1.788			0.04
5:00	1.499	0		0.01
5:05	0.873			0.01
5:10	1.457			0.01
5:15	1.377			0.01
5:20	0.941			0.01
5:25	0.873			0.01
5:30	0.795			0.01
5:35	0.716			0.01
5:40	0.717			0.01
5:45	0.734			0.01
5:50	0.784			0.01
5:55	0.751			0.01
6:00	0.785			0.08
6:05	1.127			0.08
6:10	1.231	0		0.08
6:15	1.987			0.08
6:20	3.404			0.08
6:25	3.69			0.08
6:30	5.676	0		0.08
6:35	5.415			0.08
6:40	5.215			0.08
6:45	5.046	0		0.08
6:50	4.468			0.08
6:55	4.052			0.08
7:00	3.739	0		0.05
7:05	3.994			0.05
7:10	3.87			0.05
7:15	3.459			0.05
7:20	2.798	0		0.05
7:25	2.253			0.05
7:30	2.013			0.05
7:35	1.93			0.05
7:40	1.903			0.05

Location: M1 - NE 122nd

Time	cfs Flow	21 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 9)
7:45	1.738			0.05
7:50	1.842			0.05
7:55	1.976	0		0.05
8:00	2.381			0.06
8:05	2.591			0.06
8:10	2.475			0.06
8:15	2.361			0.06
8:20	2.432			0.06
8:25	2.718	0		0.06
8:30	3.56			0.06
8:35	3.725			0.06
8:40	3.847			0.06
8:45	3.851	0		0.06
8:50	3.654			0.06
8:55	2.784			0.06
9:00	2.707			0.05
9:05	2.283			0.05
9:10	2.554	0		0.05
9:15	2.907			0.05
9:20	2.779			0.05
9:25	3.417			0.05
9:30	3.293	0		0.05
9:35	2.733			0.05
9:40	2.485			0.05
9:45	2.781			0.05
9:50	3.668			0.05
9:55	3.696	0		0.05
10:00	3.813			0.04
10:05	4.051			0.04
10:10	3.872			0.04
10:15	3.887	0		0.04
10:20	3.748			0.04
10:25	3.446			0.04
10:30	2.827			0.04
10:35	2.407	0		0.04
10:40	2.007			0.04
10:45	1.851			0.04
10:50	1.873			0.04
10:55	1.869			0.04
11:00	1.936			0.04
11:05	1.893			0.04
11:10	2.162	0		0.04
11:15	2.536			0.04
11:20	2.639			0.04
11:25	2.558			0.04
11:30	4.596			0.04
11:35	4.148	0		0.04
11:40	4.083			0.04
11:45	2.683			0.04
11:50	1.973			0.04
11:55	1.597			0.04
12:00	0.872	0		0
12:05	1.067			0
12:10	1.017			0
12:15	0.691			0
12:20	0.725			0

Location: M1 - NE 122nd

	cfs	21	0	inches
Time	Flow	Composite Aliqout	Missed Triggers	Rain (Gauge 9)
12:25	0.686			0
12:30	0.615			0
12:35	0.663			0
12:40	0.665			0
12:45	0.681			0
12:50	0.694			0
12:55	0.683			0
13:00	0.68			0
13:05	0.588			0
13:10	0.528			0
13:15	0.471			0
13:20	0.4			0
13:25	0.357			0
13:30	0.325			0
13:35	0.337			0
13:40	0.361			0
13:45	0.637	0		0
13:50	0.569			0
13:55	0.701			0
14:00	0.645			0
14:05	0.596			0
14:10	0.518			0
14:15	0.48			0
14:20	0.382			0
14:25	0.337			0
14:30	0.292			0
14:35	0.242			0
14:40	0.219			0
14:45	0.203			0
14:50	0.147			0
14:55	0.169			0
15:00	0.175			0
15:05	0.173			0
15:10	0.189			0
15:15	0.181			0
15:20	0.174			0
15:25	0.168			0
15:30	0.161			0
15:35	0.739			0
15:40	0.776			0
15:45	0.732			0
15:50	0.62			0
15:55	0.533			0
16:00	0.498			0
16:05	0.414			0
16:10	0.354			0
16:15	0.283			0
16:20	0.243			0
16:25	0.217			0
16:30	0.227			0
16:35	0.22			0
16:40	0.207			0
16:45	0.194			0
16:50	0.178			0
16:55	0.164			0
17:00	0.152			0

Location: M1 - NE 122nd

Time	cfs Flow	21 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 9)
17:05	0.146			0
17:10	0.139		15.0000	0
17:15	0.137			0
17:20	0.143			0
17:25	0.123			0
17:30	0.107			0
17:35	0.101			0
17:40	0.095			0
17:45	0.094			0
17:50	0.091			0
17:55	0.088			0
18:00	0.1			0
18:05	0.102			0
18:10	0.101			0
18:15	0.098			0
18:20	0.095			0
18:25	0.093			0
18:30	0.076			0
18:35	0.075			0
18:40	0.056			0
18:45	0.058			0
18:50	0.054			0
18:55	0.144			0
19:00	0.15			0
19:05	0.148			0
19:10	0.132			0
19:15	0.1			0
19:20	0.112			0
19:25	0.079			0
19:30	0.069			0
19:35	0.081			0
19:40	0.07			0
19:45	0.064			0
19:50	0.067			0
19:55	0.061			0
20:00	0.064			0
20:05	0.073			0
20:10	0.078			0
20:15	0.057			0
20:20	0.055			0
20:25	0.065			0
20:30	0.072			0
20:35	0.062			0
20:40	0.066			0
20:45	0.046			0
20:50	0.058			0
20:55	0.061			0
21:00	0.04			0
21:05	0.033			0
21:10	0.03			0
21:15	0.03			0
21:20	0.03			0
21:25	0.033			0
21:30	0.027			0
21:35	0.028			0
21:40	0.029			0

Location: M1 - NE 122nd

Time	cfs Flow	21 Composite Aliqout	0 Missed Triggers	inches Rain (Gauge 9)
21:45	0.029			0
21:50	0.027			0
21:55	0.027			0
22:00	0.027			0
22:05	0.034			0
22:10	0.035			0
22:15	0.033			0
22:20	0.031			0
22:25	0.031			0
22:30	0.033			0
22:35	0.03			0
22:40	0.032			0
22:45	0.032			0
22:50	0.034			0
22:55	0.034			0
23:00	0.036			0
23:05	0.032			0
23:10	0.036			0
23:15	0.029			0
23:20	0.029			0
23:25	0.026			0
23:30	0.025			0
23:35	0.024			0
23:40	0.026			0
23:45	0.024			0
23:50	0.024			0
23:55	0.022			0
0:00	0.022			0

Water Pollution Control Laboratory (WPCL)
Bioswale Monitoring

Table 1: HYDRA Rain Gauge Data
WPCL Bioswale Monitoring
FY 2000-01

Daily Rain Report — All Times in Pacific Standard Time

Rain Data Collected by HYDRA - City of Portland

Gauge 160: WPCL

Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Event 7: March 15, 2001																									
3/12/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
3/13/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.00	0.00	0.06
3/14/01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
3/15/01	0.00	0.00	0.00	0.01	0.03	0.03	0.02	0.04	0.04	0.01	0.03	0.02	0.01	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
Event 8: April 30, 2001																									
4/27/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.01	0.00	0.03
4/28/01	0.00	0.01	0.04	0.03	0.00	0.00	0.01	0.00	0.00	0.00	0.04	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
4/29/01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.17	0.00	0.00	0.00	0.00	0.19
4/30/01	0.00	0.03	0.00	0.02	0.01	0.01	0.04	0.04	0.05	0.07	0.03	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36

- Storm event duration

Table 2A: Analytical Summary
WPCL Bioswale Monitoring
Event 7: March 15, 2001

Grab Parameters	Sample Site:	Inlet	West Outlet (Non-native)	East Outlet (Native)
	Units Lab ID:	FO010268	FO010269	FO010270
pH (FIELD)	pH Unit	6.8	6.7	6.7
SPECIFIC CONDUCTANCE (FIELD)	umhos/cm	80	80	81
TEMPERATURE (FIELD)	Deg. C	8.9	8.6	8.4
E. COLI	CFU/100 ml	5600	3800	3700
FECAL COLIFORM	CFU/100 ml	18000	15000	5700
NON-POLAR OIL & GREASE	mg/L	5 U	5 U	5 U
TOTAL OIL & GREASE	mg/L	5 U	5 U	5 U
Composite Parameters	**Sample Site:**	**Inlet**	**West Outlet (Non-native)**	**East Outlet (Native)**
	Units Lab ID:	**FO010271**	**FO010272**	**FO010273**
AMMONIA-NITROGEN	mg/L	0.33	0.22	0.22
BOD5	mg/L	8	6	6
COD	mg/L	73	44	46
HARDNESS	mg CaCO3/L	39.2	25.6	33.6
NITRATE-NITROGEN	mg/L	0.34	0.36	0.35
ORTHOPHOSPHATE PHOSPHORUS, DISS	mg/L	0.039	0.063	0.068
TOTAL DISSOLVED SOLIDS	mg/L	56	64	74
TOTAL KJELDAHL NITROGEN	mg/L	1.32	0.97	0.94
TOTAL PHOSPHORUS	mg/L	0.28	0.20	0.21
TOTAL SOLIDS	mg/L	142	96	102
TOTAL SUSPENDED SOLIDS	mg/L	86	31.6	28
ARSENIC, TOTAL	ug/L	1.81	1.05	1.22
CADMIUM, TOTAL	ug/L	0.47	0.28	0.19
COPPER, TOTAL	µg/L	27.8	12.7	14.7
LEAD, TOTAL	µg/L	23.9	8.57	10.2
SILVER, TOTAL	µg/L	0.1 U	0.1 U	0.1 U
ZINC, TOTAL	µg/L	154	54.9	62.7
ARSENIC, DISSOLVED	µg/L	0.73	0.75	0.75
CADMIUM, DISSOLVED	µg/L	0.1 U	0.1 U	0.1 U
COPPER, DISSOLVED	µg/L	8.20	7.66	7.73
LEAD, DISSOLVED	µg/L	0.59	0.48	0.53
SILVER, DISSOLVED	µg/L	0.1 U	0.1 U	0.1 U
ZINC, DISSOLVED	µg/L	35.4	22.4	21.7

U = Not detected at the method reporting limit shown

FO010268	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	6.8	CONC	pH Units	0.1	SM 4500-H B	3/15/2001	BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL &	GREASE IS ALSO <5MG/L.
FO010268	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	80	CONC	µmhos/cm	1	SM 2510 B	3/15/2001	BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL &	GREASE IS ALSO <5MG/L.
FO010268	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	8.9	CONC	Deg. C	0.1	SM 2550 B	3/15/2001	BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL &	GREASE IS ALSO <5MG/L.
FO010268	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5		mg/L	5	EPA 1664	3/24/2001	BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL &	GREASE IS ALSO <5MG/L.
FO010268	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	18000	CONC	CFU/100 ml	2	SM 9222 D	3/16/2001	BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL &	GREASE IS ALSO <5MG/L.
FO010268	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	GRAB	STORMWTR	E. COLI	E. COLI	5600	CONC	CFU/100 ml	2	SM 9213 D	3/16/2001	BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL &	GREASE IS ALSO <5MG/L.
FO010269	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	6.7	CONC	pH Units	0.1	SM 4500-H B	3/15/2001	BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL &	GREASE IS ALSO <5MG/L.
FO010269	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	80	CONC	µmhos/cm	1	SM 2510 B	3/15/2001	BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL &	GREASE IS ALSO <5MG/L.
FO010269	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	8.6	CONC	Deg. C	0.1	SM 2550 B	3/15/2001	BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL &	GREASE IS ALSO <5MG/L.
FO010269	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5		mg/L	5	EPA 1664	3/24/2001	BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL &	GREASE IS ALSO <5MG/L.
FO010269	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	15000	CONC	CFU/100 ml	2	SM 9222 D	3/16/2001	BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL &	GREASE IS ALSO <5MG/L.
FO010269	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	GRAB	STORMWTR	E. COLI	E. COLI	3800	CONC	CFU/100 ml	2	SM 9213 D	3/16/2001	BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL &	GREASE IS ALSO <5MG/L.
FO010270	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	6.7	CONC	pH Units	0.1	SM 4500-H B	3/15/2001	BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL &	GREASE IS ALSO <5MG/L.
FO010270	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	81	CONC	µmhos/cm	1	SM 2510 B	3/15/2001	BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL &	GREASE IS ALSO <5MG/L.
FO010270	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	8.4	CONC	Deg. C	0.1	SM 2550 B	3/15/2001	BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL &	GREASE IS ALSO <5MG/L.
FO010270	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5		mg/L	5	EPA 1664	3/24/2001	BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL &	GREASE IS ALSO <5MG/L.
FO010270	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	5700	CONC	CFU/100 ml	2	SM 9222 D	3/16/2001	BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL &	GREASE IS ALSO <5MG/L.
FO010270	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	GRAB	STORMWTR	E. COLI	E. COLI	3700	CONC	CFU/100 ml	2	SM 9213 D	3/16/2001	BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL &	GREASE IS ALSO <5MG/L.
FO010271	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	86.4	CONC	mg/L	1	SM 2540 D	3/16/2001		
FO010271	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	142	CONC	mg/L	1	SM 2540 B	3/18/2001		
FO010271	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	56	CONC	mg/L	1	SM 2540 BD	3/29/2001		
FO010271	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.28	CONC	mg/L	0.03	EPA 365.4	3/20/2001		
FO010271	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	39.2	CONC	mg CaCO3/L	1	SM 2340 C	3/19/2001		
FO010271	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	COMPOSITE	STORMWTR	COD	COD	73	CONC	mg/L	5	SM 5220 D	3/19/2001		
FO010271	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.34	CONC	mg/L	0.1	EPA 300.0	3/16/2001		
FO010271	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.039	CONC	mg/L	0.02	EPA 365.1	3/16/2001		
FO010271	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	1.32	CONC	mg/L	0.2	EPA 351.2	3/22/2001		
FO010271	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	27.8	CONC	µg/L	0.2	EPA 200.8	3/16/2001		
FO010271	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	154	CONC	µg/L	0.5	EPA 200.8	3/16/2001		
FO010271	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	1.81	CONC	µg/L	0.1	EPA 200.8	3/16/2001		
FO010271	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	<0.1		µg/L	0.1	EPA 200.8	3/16/2001		
FO010271	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	0.47	CONC	µg/L	0.1	EPA 200.8	3/16/2001		
FO010271	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	23.9	CONC	µg/L	0.1	EPA 200.8	3/16/2001		
FO010271	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	8.2	CONC	µg/L	0.2	EPA 200.8	3/16/2001		
FO010271	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	35.4	CONC	µg/L	0.5	EPA 200.8	3/16/2001		
FO010271	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	0.73	CONC	µg/L	0.1	EPA 200.8	3/16/2001		
FO010271	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8	3/16/2001		
FO010271	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8	3/16/2001		
FO010271	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	0.59	CONC	µg/L	0.1	EPA 200.8	3/16/2001		
FO010271	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	COMPOSITE	STORMWTR	BOD5	BOD5	8	CONC	mg/L	2	SM 5210 B	3/21/2001		
FO010271	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	3/15/2001	7:10	DJH	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.33	CONC	mg/L	0.02	EPA 350.1	3/22/2001		
FO010272	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	31.6	CONC	mg/L	1	SM 2540 D	3/16/2001		
FO010272	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	96	CONC	mg/L	1	SM 2540 B	3/18/2001		
FO010272	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	64	CONC	mg/L	1	SM 2540 BD	3/29/2001		
FO010272	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.2	CONC	mg/L	0.03	EPA 365.4	3/20/2001		
FO010272	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	25.6	CONC	mg CaCO3/L	1	SM 2340 C	3/19/2001		
FO010272	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	COMPOSITE	STORMWTR	COD	COD	44	CONC	mg/L	5	SM 5220 D	3/19/2001		
FO010272	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.36	CONC	mg/L	0.1	EPA 300.0	3/16/2001		
FO010272	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.063	CONC	mg/L	0.02	EPA 365.1	3/16/2001		
FO010272	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	0.97	CONC	mg/L	0.2	EPA 351.2	3/22/2001		
FO010272	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	12.7	CONC	µg/L	0.2	EPA 200.8	3/16/2001		
FO010272	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	54.9	CONC	µg/L	0.5	EPA 200.8	3/16/2001		
FO010272	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	1.05	CONC	µg/L	0.1	EPA 200.8	3/16/2001		
FO010272	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	<0.1		µg/L	0.1	EPA 200.8	3/16/2001		
FO010272	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	0.28	CONC	µg/L	0.1	EPA 200.8	3/16/2001		
FO010272	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	8.57	CONC	µg/L	0.1	EPA 200.8	3/16/2001		
FO010272	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	7.66	CONC	µg/L	0.2	EPA 200.8	3/16/2001		
FO010272	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	22.4	CONC	µg/L	0.5	EPA 200.8	3/16/2001		
FO010272	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	0.75	CONC	µg/L	0.1	EPA 200.8	3/16/2001		
FO010272	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8	3/16/2001		
FO010272	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8	3/16/2001		
FO010272	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	0.48	CONC	µg/L	0.1	EPA 200.8	3/16/2001		
FO010272	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	COMPOSITE	STORMWTR	BOD5	BOD5	6	CONC	mg/L	2	SM 5210 B	3/21/2001		
FO010272	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	3/15/2001	7:24	DJH	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.22	CONC	mg/L	0.02	EPA 350.1	3/22/2001		
FO010273	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	28	CONC	mg/L	1	SM 2540 D	3/16/2001		
FO010273	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	102	CONC	mg/L	1	SM 2540 B	3/18/2001		
FO010273	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	74	CONC	mg/L	1	SM 2540 BD	3/29/2001		
FO010273	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.21	CONC	mg/L	0.03	EPA 365.4	3/20/2001		
FO010273	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	33.6	CONC	mg CaCO3/L	1	SM 2340 C	3/19/2001		
FO010273	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	COMPOSITE	STORMWTR	COD	COD	46	CONC	mg/L	5	SM 5220 D	3/19/2001		
FO010273	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.35	CONC	mg/L	0.1	EPA 300.0	3/16/2001		
FO010273	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.068	CONC	mg/L	0.02	EPA 365.1	3/16/2001		
FO010273	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	0.94	CONC	mg/L	0.2	EPA 351.2	3/22/2001		
FO010273	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	14.7	CONC	µg/L	0.2	EPA 200.8	3/16/2001		
FO010273	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	62.7	CONC	µg/L	0.5	EPA 200.8	3/16/2001		
FO010273	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	1.22	CONC	µg/L	0.1	EPA 200.8	3/16/2001		
FO010273	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	<0.1		µg/L	0.1	EPA 200.8	3/16/2001		
FO010273	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	0.19	CONC	µg/L	0.1	EPA 200.8	3/16/2001		
FO010273	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	10.2	CONC	µg/L	0.1	EPA 200.8	3/16/2001		
FO010273	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	7.73	CONC	µg/L	0.2	EPA 200.8	3/16/2001		

FO010273	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	21.7	CONC	µg/L	0.5	EPA 200.8	3/16/2001
FO010273	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	0.75	CONC	µg/L	0.1	EPA 200.8	3/16/2001
FO010273	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8	3/16/2001
FO010273	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8	3/16/2001
FO010273	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	0.53	CONC	µg/L	0.1	EPA 200.8	3/16/2001
FO010273	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	COMPOSITE	STORMWTR	BOD5	BOD5	6	CONC	mg/L	2	SM 5210 B	3/21/2001
FO010273	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	3/15/2001	7:30	DJH	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.22	CONC	mg/L	0.02	EPA 350.1	3/22/2001

Fig 3A

Time	East (Native) Inflow	West (Non-native) Inflow	East (Native) Outflow	West (Non-native) Outflow	
630	0	0	0	0	
631	0	0	0	0	
632	0	0	0	0	
633	0	0	0	0	
634	0	0	0	0	
635	0	0	0	0	
636	0	0	0	0	
637	0	0	0	0	
638	0	0	0	0	
639	0	0	0	0	
640	0	0	0	0	
641	0	0	0	0	
642	0	0	0	0	
643	0	0	0	0	
644	0	0	0	0	
645	0	0	0	0	
646	0	0	0	0	
647	0	0	0	0	
648	0	0	0	0	
649	0	0	0	0	
650	0	0	0	0	
651	0	0	0	0	
652	0	0	0	0	
653	0	0	0	0	
654	0	0	0	0	
655	0	0	0	0	
656	0.003	0.003	0	0	
657	0.052	0.057	0	0	
658	0.077	0.078	0	0	
659	0.079	0.078	0	0	
700	0.081	0.079	0	0	
701	0.08	0.079	0	0	
702	0.08	0.079	0	0	
703	0.08	0.079	0	0	
704	0.08	0.078	0	0	
705	0.08	0.078	0	0	
706	0.08	0.078	0	0	
707	0.08	0.078	0	0	
708	0.08	0.078	0	0	
709	0.08	0.078	0	0	
710	0.08	0.078	0	0	
711	0.079	0.078	0	0.001	
712	0.079	0.078	0	0.018	
713	0.078	0.078	0	0.032	
714	0.078	0.078	0.004	0.038	
715	0.078	0.078	0.028	0.041	
716	0.078	0.078	0.038	0.042	
717	0.034	0.078	0.044	0.044	
718	0	0.078	0.045	0.044	
719	0	0.077	0.046	0.044	
720	0	0.077	0.047	0.045	
721	0	0.077	0.048	0.047	
722	0	0.077	0.049	0.047	
723	0	0.077	0.05	0.047	

Fig 3A

Time	East (Native) Inflow	West (Non-native) Inflow	East (Native) Outflow	West (Non-native) Outflow	
724	0	0.077	0.05	0.048	
725	0	0.077	0.051	0.047	
726	0	0.076	0.05	0.048	
727	0	0.076	0.049	0.048	
728	0	0.076	0.049	0.049	
729	0	0.077	0.053	0.049	
730	0	0.076	0.054	0.049	
731	0	0.076	0.052	0.049	
732	0	0.077	0.053	0.049	
733	0	0.076	0.051	0.049	
734	0	0.077	0.051	0.049	
735	0	0.076	0.05	0.049	
736	0	0.076	0.05	0.049	
737	0	0.077	0.05	0.049	
738	0.157	0.055	0.051	0.049	
739	0.174	0.04	0.051	0.049	
740	0.156	0.042	0.052	0.049	
741	0.098	0.066	0.052	0.049	
742	0.09	0.071	0.057	0.049	
743	0.082	0.074	0.073	0.047	
744	0.079	0.076	0.087	0.043	
745	0.078	0.08	0.088	0.039	
746	0.078	0.081	0.083	0.036	
747	0.078	0.081	0.076	0.035	
748	0.078	0.081	0.071	0.037	
749	0.079	0.081	0.067	0.042	
750	0.079	0.081	0.069	0.048	
751	0.079	0.081	0.072	0.051	
752	0.078	0.081	0.07	0.055	
753	0.08	0.081	0.068	0.056	
754	0.081	0.08	0.067	0.057	
755	0.081	0.08	0.067	0.058	
756	0.081	0.08	0.067	0.059	
757	0.081	0.08	0.067	0.059	
758	0.081	0.081	0.069	0.059	
759	0.081	0.08	0.059	0.06	
800	0.081	0.08	0.053	0.064	
801	0.081	0.08	0.053	0.064	
802	0.081	0.08	0.053	0.064	
803	0.08	0.081	0.054	0.064	
804	0.08	0.08	0.054	0.064	
805	0.08	0.081	0.054	0.064	
806	0.08	0.08	0.055	0.064	
807	0.08	0.08	0.055	0.064	
808	0.079	0.079	0.055	0.064	
809	0.079	0.078	0.055	0.064	
810	0.079	0.078	0.055	0.064	
811	0.079	0.078	0.055	0.064	
812	0.079	0.078	0.055	0.064	
813	0.079	0.078	0.055	0.064	
814	0.078	0.078	0.055	0.064	
815	0.078	0.077	0.055	0.064	
816	0.078	0.077	0.055	0.064	
817	0.078	0.077	0.055	0.064	
818	0.078	0.077	0.055	0.064	

Fig 3A

Time	East (Native) Inflow	West (Non-native) Inflow	East (Native) Outflow	West (Non-native) Outflow	
819	0.078	0.078	0.055	0.064	
820	0.079	0.078	0.055	0.064	
821	0.078	0.078	0.055	0.064	
822	0.078	0.078	0.055	0.063	
823	0.078	0.078	0.055	0.063	
824	0.078	0.079	0.055	0.062	
825	0.078	0.079	0.055	0.064	
826	0.078	0.078	0.056	0.065	
827	0.078	0.079	0.055	0.067	
828	0.078	0.078	0.056	0.07	
829	0.078	0.078	0.057	0.071	
830	0.079	0.078	0.057	0.07	
831	0.078	0.078	0.056	0.071	
832	0.079	0.078	0.057	0.071	
833	0.079	0.079	0.056	0.071	
834	0.079	0.079	0.056	0.071	
835	0.079	0.078	0.056	0.071	
836	0.079	0.079	0.057	0.071	
837	0.079	0.078	0.056	0.071	
838	0.079	0.078	0.055	0.072	
839	0.079	0.078	0.055	0.071	
840	0.079	0.078	0.056	0.072	
841	0.079	0.078	0.056	0.072	
842	0.078	0.078	0.055	0.072	
843	0.079	0.078	0.056	0.072	
844	0.079	0.079	0.057	0.072	
845	0.079	0.079	0.057	0.072	
846	0.079	0.079	0.057	0.073	
847	0.079	0.079	0.058	0.072	
848	0.079	0.079	0.059	0.073	
849	0.079	0.079	0.057	0.073	
850	0.079	0.079	0.058	0.073	
851	0.079	0.079	0.057	0.073	
852	0.079	0.079	0.057	0.073	
853	0.079	0.079	0.057	0.073	
854	0.079	0.078	0.058	0.073	
855	0.079	0.079	0.057	0.073	
856	0.079	0.078	0.058	0.073	
857	0.079	0.079	0.057	0.073	
858	0.079	0.079	0.058	0.073	
859	0.079	0.079	0.057	0.073	
900	0.079	0.078	0.057	0.073	
901	0.079	0.078	0.057	0.073	
902	0.079	0.079	0.057	0.073	
903	0.08	0.079	0.058	0.073	
904	0.08	0.079	0.058	0.073	
905	0.08	0.079	0.058	0.073	
906	0.08	0.079	0.059	0.072	
907	0.079	0.078	0.058	0.068	
908	0.079	0.079	0.059	0.068	
909	0.079	0.079	0.06	0.068	
910	0.078	0.079	0.059	0.068	
911	0.078	0.079	0.059	0.068	
912	0.079	0.079	0.058	0.068	
913	0.079	0.079	0.058	0.068	

Fig 3A

Time	East (Native) Inflow	West (Non-native) Inflow	East (Native) Outflow	West (Non-native) Outflow	
914	0.078	0.079	0.057	0.068	
915	0.078	0.079	0.058	0.068	
916	0.079	0.079	0.057	0.068	
917	0.079	0.079	0.058	0.068	
918	0.078	0.079	0.058	0.068	
919	0.079	0.078	0.06	0.068	
920	0.078	0.079	0.06	0.068	
921	0.078	0.079	0.06	0.068	
922	0.079	0.079	0.06	0.068	
923	0.078	0.079	0.06	0.068	
924	0.078	0.079	0.06	0.068	
925	0.078	0.079	0.06	0.068	
926	0.078	0.078	0.06	0.068	
927	0.078	0.079	0.06	0.068	
928	0.078	0.078	0.06	0.068	
929	0.078	0.078	0.061	0.068	
930	0.078	0.078	0.061	0.068	
931	0.078	0.078	0.062	0.068	
932	0.077	0.078	0.062	0.068	
933	0.077	0.078	0.062	0.068	
934	0.077	0.077	0.062	0.068	
935	0.075	0.076	0.059	0.068	
936	0.073	0.073	0.059	0.068	
937	0.071	0.071	0.059	0.068	
938	0.067	0.067	0.059	0.068	
939	0.067	0.067	0.058	0.068	
940	0.063	0.062	0.058	0.068	
941	0.06	0.027	0.057	0.066	
942	0.057	0	0.057	0.065	
943	0.055	0	0.055	0.063	
944	0.053	0	0.054	0.061	
945	0.046	0	0.053	0.059	
946	0	0	0.051	0.057	
947	0	0	0.05	0.055	
948	0	0	0.048	0.052	
949	0	0	0.046	0.05	
950	0	0	0.044	0.049	
951	0	0	0.043	0.045	
952	0	0.005	0.041	0.043	
953	0.001	0.064	0.04	0.042	
954	0.051	0.055	0.038	0.039	
955	0.071	0.039	0.036	0.036	
956	0.063	0	0.034	0.032	
957	0.006	0	0.031	0.029	
958	0	0	0.028	0.024	
959	0	0	0.025	0.021	
1000	0	0	0.023	0.019	
1001	0	0	0.024	0.02	
1002	0	0	0.028	0.023	
1003	0	0	0.03	0.026	
1004	0	0	0.031	0.027	
1005	0	0	0.029	0.026	
1006	0	0	0.027	0.023	
1007	0	0	0.025	0.021	
1008	0	0	0.022	0.018	

Fig 3A

Time	East (Native) Inflow	West (Non-native) Inflow	East (Native) Outflow	West (Non-native) Outflow	
1009	0	0	0.02	0.016	
1010	0	0	0.018	0.014	
1011	0	0	0.015	0.012	
1012	0	0	0.014	0.01	
1013	0	0	0.013	0.009	
1014	0	0	0.013	0.008	
1015	0	0	0.011	0.007	
1016	0	0	0.01	0.006	
1017	0	0	0.009	0.005	
1018	0	0	0.008	0.005	
1019	0	0	0.007	0.004	
1020	0	0	0.007	0.004	
1021	0	0	0.006	0.003	
1022	0	0	0.006	0.003	
1023	0	0	0.006	0.003	
1024	0	0	0.005	0.003	
1025	0	0	0.005	0.001	
1026	0.012	0	0.005	0	
1027	0.005	0	0.004	0	
1028	0	0	0.004	0	
1029	0	0	0.004	0	
1030	0	0	0.004	0	
1031	0	0	0.004	0	
1032	0	0	0.003	0	
1033	0	0	0.003	0	
1034	0	0	0.003	0	
1035	0	0	0.003	0	
1036	0	0	0.003	0	
1037	0	0	0.003	0	
1038	0	0	0.002	0	
1039	0	0	0.001	0	
1040	0	0	0	0	
1041	0	0	0	0	
1042	0	0	0	0	
1043	0	0	0	0	
1044	0	0	0	0	
1045	0	0	0	0	
1046	0	0	0	0	
1047	0	0	0	0	
1048	0	0	0	0	
1049	0	0	0	0	
1050	0	0	0	0	
1051	0	0	0	0	
1052	0	0	0	0	
1053	0	0	0	0	
1054	0	0	0	0	
1055	0	0	0	0	
1056	0	0	0	0	
1057	0	0	0	0	
1058	0	0	0	0	
1059	0	0	0	0	
1100	0	0	0	0	

Fig 3A

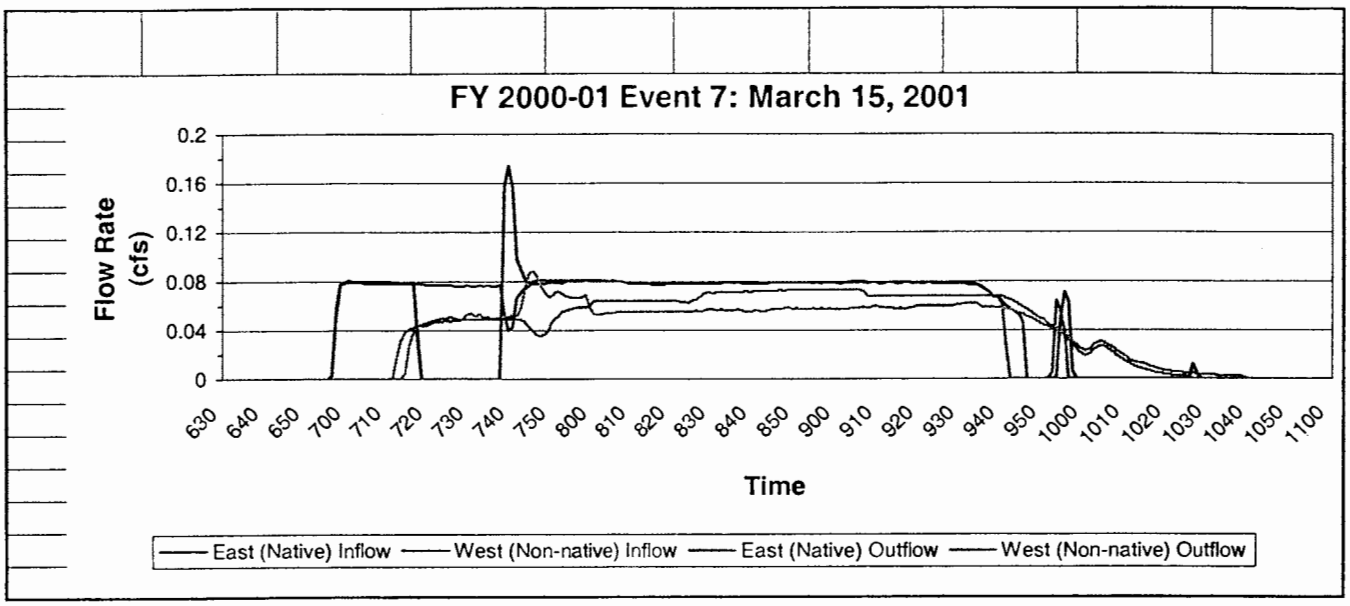

FY 2000-01 Event 7: March 15, 2001
Flow Rate (cfs)
0.2
0.16
0.12
0.08
0.04
0
630
640
650
700
710
720
730
740
750
800
810
820
830
840
850
900
910
920
930
940
950
1000
1010
1020
1030
1040
1050
1100
Time
East (Native) Inflow
West (Non-native) Inflow
East (Native) Outflow
West (Non-native) Outflow

Fig 3B

Time	East (Native) Cumulative Outflc	West (Non-native) Cumulative Outflow	
630	0	0	
631	0	0	
632	0	0	
633	0	0	
634	0	0	
635	0	0	
636	0	0	
637	0	0	
638	0	0	
639	0	0	
640	0	0	
641	0	0	
642	0	0	
643	0	0	
644	0	0	
645	0	0	
646	0	0	
647	0	0	
648	0	0	
649	0	0	
650	0	0	
651	0	0	
652	0	0	
653	0	0	
654	0	0	
655	0	0	
656	0	0	
657	0	0	
658	0	0	
659	0	0	
700	0	0	
701	0	0	
702	0	0	
703	0	0	
704	0	0	
705	0	0	
706	0	0	
707	0	0	
708	0	0	
709	0	0	
710	0	0	
711	0	0.03	
712	0	0.6	
713	0	2.1	
714	0.12	4.2	
715	1.08	6.57	
716	3.06	9.06	
717	5.52	11.64	
718	8.19	14.28	
719	10.92	16.92	
720	13.71	19.59	
721	16.56	22.35	
722	19.47	25.17	
723	22.44	27.99	

Fig 3B

Time	East (Native) Cumulative Outflo	West (Non-native) Cumulative Outflow	
724	25.44	30.84	
725	28.47	33.69	
726	31.5	36.54	
727	34.47	39.42	
728	37.41	42.33	
729	40.47	45.27	
730	43.68	48.21	
731	46.86	51.15	
732	50.01	54.09	
733	53.13	57.03	
734	56.19	59.97	
735	59.22	62.91	
736	62.22	65.85	
737	65.22	68.79	
738	68.25	71.73	
739	71.31	74.67	
740	74.4	77.61	
741	77.52	80.55	
742	80.79	83.49	
743	84.69	86.37	
744	89.49	89.07	
745	94.74	91.53	
746	99.87	93.78	
747	104.64	95.91	
748	109.05	98.07	
749	113.19	100.44	
750	117.27	103.14	
751	121.5	106.11	
752	125.76	109.29	
753	129.9	112.62	
754	133.95	116.01	
755	137.97	119.46	
756	141.99	122.97	
757	146.01	126.51	
758	150.09	130.05	
759	153.93	133.62	
800	157.29	137.34	
801	160.47	141.18	
802	163.65	145.02	
803	166.86	148.86	
804	170.1	152.7	
805	173.34	156.54	
806	176.61	160.38	
807	179.91	164.22	
808	183.21	168.06	
809	186.51	171.9	
810	189.81	175.74	
811	193.11	179.58	
812	196.41	183.42	
813	199.71	187.26	
814	203.01	191.1	
815	206.31	194.94	
816	209.61	198.78	
817	212.91	202.62	
818	216.21	206.46	

Fig 3B

Time	East (Native) Cumulative Outflo	West (Non-native) Cumulative Outflow	
819	219.51	210.3	
820	222.81	214.14	
821	226.11	217.98	
822	229.41	221.79	
823	232.71	225.57	
824	236.01	229.32	
825	239.31	233.1	
826	242.64	236.97	
827	245.97	240.93	
828	249.3	245.04	
829	252.69	249.27	
830	256.11	253.5	
831	259.5	257.73	
832	262.89	261.99	
833	266.28	266.25	
834	269.64	270.51	
835	273	274.77	
836	276.39	279.03	
837	279.78	283.29	
838	283.11	287.58	
839	286.41	291.87	
840	289.74	296.16	
841	293.1	300.48	
842	296.43	304.8	
843	299.76	309.12	
844	303.15	313.44	
845	306.57	317.76	
846	309.99	322.11	
847	313.44	326.46	
848	316.95	330.81	
849	320.43	335.19	
850	323.88	339.57	
851	327.33	343.95	
852	330.75	348.33	
853	334.17	352.71	
854	337.62	357.09	
855	341.07	361.47	
856	344.52	365.85	
857	347.97	370.23	
858	351.42	374.61	
859	354.87	378.99	
900	358.29	383.37	
901	361.71	387.75	
902	365.13	392.13	
903	368.58	396.51	
904	372.06	400.89	
905	375.54	405.27	
906	379.05	409.62	
907	382.56	413.82	
908	386.07	417.9	
909	389.64	421.98	
910	393.21	426.06	
911	396.75	430.14	
912	400.26	434.22	
913	403.74	438.3	

Fig 3B

Time	East (Native) Cumulative Outflc	West (Non-native) Cumulative Outflow	
914	407.19	442.38	
915	410.64	446.46	
916	414.09	450.54	
917	417.54	454.62	
918	421.02	458.7	
919	424.56	462.78	
920	428.16	466.86	
921	431.76	470.94	
922	435.36	475.02	
923	438.96	479.1	
924	442.56	483.18	
925	446.16	487.26	
926	449.76	491.34	
927	453.36	495.42	
928	456.96	499.5	
929	460.59	503.58	
930	464.25	507.66	
931	467.94	511.74	
932	471.66	515.82	
933	475.38	519.9	
934	479.1	523.98	
935	482.73	528.06	
936	486.27	532.14	
937	489.81	536.22	
938	493.35	540.3	
939	496.86	544.38	
940	500.34	548.46	
941	503.79	552.48	
942	507.21	556.41	
943	510.57	560.25	
944	513.84	563.97	
945	517.05	567.57	
946	520.17	571.05	
947	523.2	574.41	
948	526.14	577.62	
949	528.96	580.68	
950	531.66	583.65	
951	534.27	586.47	
952	536.79	589.11	
953	539.22	591.66	
954	541.56	594.09	
955	543.78	596.34	
956	545.88	598.38	
957	547.83	600.21	
958	549.6	601.8	
959	551.19	603.15	
1000	552.63	604.35	
1001	554.04	605.52	
1002	555.6	606.81	
1003	557.34	608.28	
1004	559.17	609.87	
1005	560.97	611.46	
1006	562.65	612.93	
1007	564.21	614.25	
1008	565.62	615.42	

Fig 3B

Time	East (Native) Cumulative Outflo	West (Non-native) Cumulative Outflow	
1009	566.88	616.44	
1010	568.02	617.34	
1011	569.01	618.12	
1012	569.88	618.78	
1013	570.69	619.35	
1014	571.47	619.86	
1015	572.19	620.31	
1016	572.82	620.7	
1017	573.39	621.03	
1018	573.9	621.33	
1019	574.35	621.6	
1020	574.77	621.84	
1021	575.16	622.05	
1022	575.52	622.23	
1023	575.88	622.41	
1024	576.21	622.59	
1025	576.51	622.71	
1026	576.81	622.74	
1027	577.08	622.74	
1028	577.32	622.74	
1029	577.56	622.74	
1030	577.8	622.74	
1031	578.04	622.74	
1032	578.25	622.74	
1033	578.43	622.74	
1034	578.61	622.74	
1035	578.79	622.74	
1036	578.97	622.74	
1037	579.15	622.74	
1038	579.3	622.74	
1039	579.39	622.74	
1040	579.42	622.74	
1041	579.42	622.74	
1042	579.42	622.74	
1043	579.42	622.74	
1044	579.42	622.74	
1045	579.42	622.74	
1046	579.42	622.74	
1047	579.42	622.74	
1048	579.42	622.74	
1049	579.42	622.74	
1050	579.42	622.74	
1051	579.42	622.74	
1052	579.42	622.74	
1053	579.42	622.74	
1054	579.42	622.74	
1055	579.42	622.74	
1056	579.42	622.74	
1057	579.42	622.74	
1058	579.42	622.74	
1059	579.42	622.74	
1100	579.42	622.74	

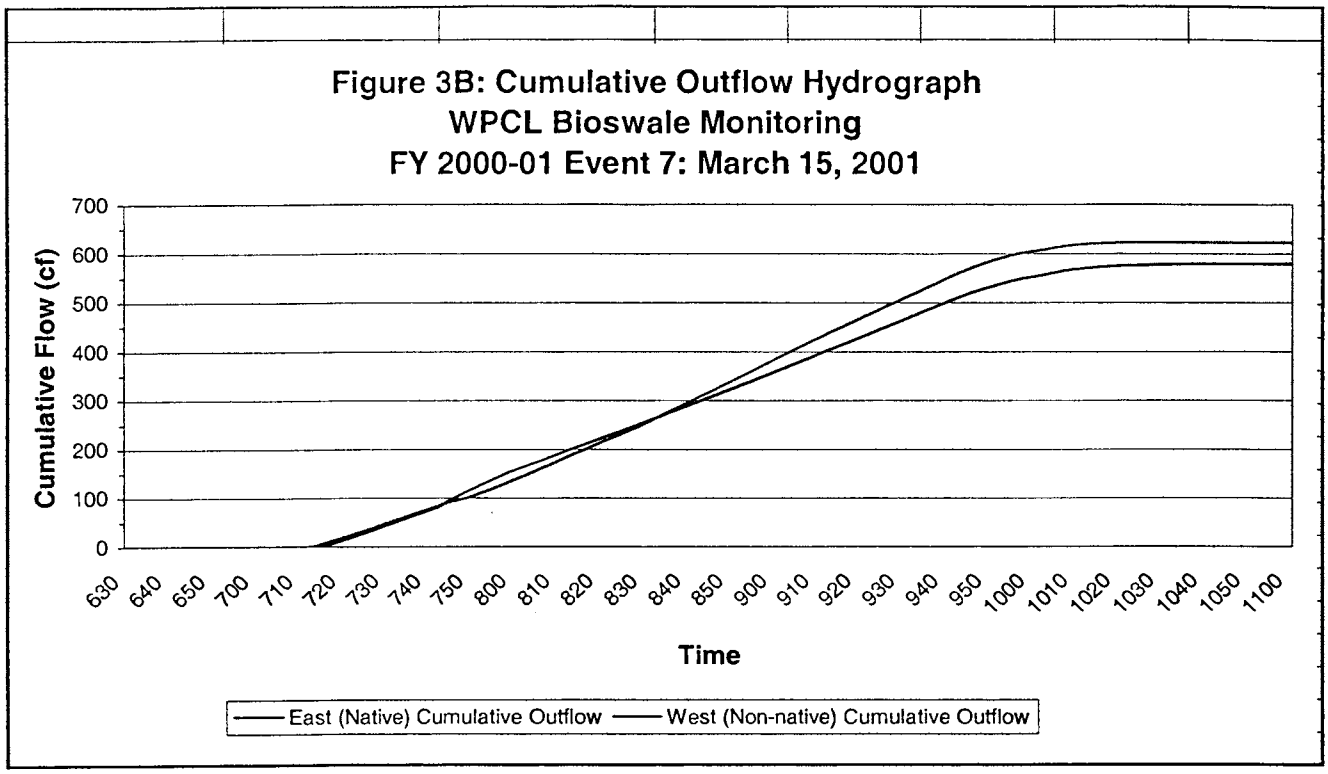


Figure 3B: Cumulative Outflow Hydrograph
WPCL Bioswale Monitoring
FY 2000-01 Event 7: March 15, 2001
Cumulative Flow (cf)
700
600
500
400
300
200
100
0
630
640
650
700
710
720
730
740
750
800
810
820
830
840
850
900
910
920
930
940
950
1000
1010
1020
1030
1040
1050
1100
Time
East (Native) Cumulative Outflow
West (Non-native) Cumulative Outflow

Table 2B: Analytical Summary
WPCL Bioswale Monitoring
Event 8: April 30, 2001

Grab Parameters	Sample Site:	Inlet	West Outlet (Non-native)	East Outlet (Native)
	Units Lab ID:	FO010462	FO010463	FO010464
pH (FIELD)	pH Unit	6.7	6.5	6.5
SPECIFIC CONDUCTANCE (FIELD)	umhos/cm	55	49	54
TEMPERATURE (FIELD)	Deg. C	12.5	12.0	11.9
E. COLI	CFU/100 ml	29000	30000	20000
FECAL COLIFORM	CFU/100 ml	48000	38000	37000
NON-POLAR OIL & GREASE	mg/L	5 U	5 U	5 U
TOTAL OIL & GREASE	mg/L	9.3	5.2	5 U
Composite Parameters	**Sample Site:**	**Inlet**	**West Outlet (Non-native)**	**East Outlet (Native)**
	Units Lab ID:	**FO010465**	**FO010466**	**FO010467**
AMMONIA-NITROGEN	mg/L	0.096	0.024	0.029
BOD5	mg/L	12	6	7
COD	mg/L	68	36	41
HARDNESS	mg CaCO3/L	18.4	14.7	14.8
NITRATE-NITROGEN	mg/L	0.40	0.66	0.59
ORTHOPHOSPHATE PHOSPHORUS, DISS	mg/L	0.040	0.058	0.066
TOTAL DISSOLVED SOLIDS	mg/L	28	38	40
TOTAL KJELDAHL NITROGEN	mg/L	1.20	0.83	0.85
TOTAL PHOSPHORUS	mg/L	0.27	0.21	0.22
TOTAL SOLIDS	mg/L	104	62	66
TOTAL SUSPENDED SOLIDS	mg/L	75.5	24	26
ARSENIC, TOTAL	ug/L	1.68	1.32	1.30
CADMIUM, TOTAL	ug/L	0.37	0.16	0.16
COPPER, TOTAL	µg/L	20.4	12.8	13.1
LEAD, TOTAL	µg/L	19.5	9.53	9.90
SILVER, TOTAL	µg/L	0.10 U	0.10 U	0.10 U
ZINC, TOTAL	µg/L	109	50.4	52.2
ARSENIC, DISSOLVED	µg/L	0.68	0.66	0.66
CADMIUM, DISSOLVED	µg/L	0.10 U	0.10 U	0.10 U
COPPER, DISSOLVED	µg/L	6.92	6.63	6.74
LEAD, DISSOLVED	µg/L	0.44	0.43	0.44
SILVER, DISSOLVED	µg/L	0.10 U	0.10 U	0.10 U
ZINC, DISSOLVED	µg/L	27.8	19.0	18.2

U = Not detected at the method reporting limit shown

FO010462	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	6.7	CONC	pH Units	0.1	SM 4500-H B	4/30/2001	
FO010462	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	55	CONC	µmhos/cm	1	SM 2510 B	4/30/2001	
FO010462	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	12.5	CONC	Deg. C	0.1	SM 2550 B	4/30/2001	
FO010462	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	9.3	CONC	mg/L	5	EPA 1664	5/5/2001	
FO010462	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	GRAB	STORMWTR	NON-POLAR OIL & GREASE	NON-POLAR OIL & GREASE	<5		mg/L	5	EPA 1664	5/5/2001	
FO010462	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	48000	CONC	CFU/100 ml	2	SM 9222 D	5/1/2001	
FO010462	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	GRAB	STORMWTR	E. COLI	E. COLI	29000	CONC	CFU/100 ml	2	SM 9213 D	5/1/2001	
FO010463	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	6.5	CONC	pH Units	0.1	SM 4500-H B	4/30/2001	
FO010463	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	49	CONC	µmhos/cm	1	SM 2510 B	4/30/2001	
FO010463	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	12	CONC	Deg. C	0.1	SM 2550 B	4/30/2001	
FO010463	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	5.2	CONC	mg/L	5	EPA 1664	5/5/2001	
FO010463	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	GRAB	STORMWTR	NON-POLAR OIL & GREASE	NON-POLAR OIL & GREASE	<5		mg/L	5	EPA 1664	5/5/2001	
FO010463	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	38000	CONC	CFU/100 ml	2	SM 9222 D	5/1/2001	
FO010463	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	GRAB	STORMWTR	E. COLI	E. COLI	30000	CONC	CFU/100 ml	2	SM 9213 D	5/1/2001	
FO010464	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	6.5	CONC	pH Units	0.1	SM 4500-H B	4/30/2001	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS ALSO <5.
FO010464	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	54	CONC	µmhos/cm	1	SM 2510 B	4/30/2001	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS ALSO <5.
FO010464	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	11.9	CONC	Deg. C	0.1	SM 2550 B	4/30/2001	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS ALSO <5.
FO010464	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5		mg/L	5	EPA 1664	5/5/2001	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS ALSO <5.
FO010464	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	37000	CONC	CFU/100 ml	2	SM 9222 D	5/1/2001	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS ALSO <5.
FO010464	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	GRAB	STORMWTR	E. COLI	E. COLI	20000	CONC	CFU/100 ml	2	SM 9213 D	5/1/2001	LAB: SINCE TOTAL OIL AND GREASE IS <5, NON POLAR OIL AND GREASE IS ALSO <5.
FO010465	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	75.5	CONC	mg/L	1	SM 2540 D	5/1/2001	
FO010465	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	104	CONC	mg/L	1	SM 2540 B	5/2/2001	
FO010465	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	28	CONC	mg/L	1	SM 2540 BD	5/8/2001	
FO010465	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.27	CONC	mg/L	0.03	EPA 365.4	5/4/2001	
FO010465	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	18.4	CONC	mg CaCO3/L	1	SM 2340 C	5/7/2001	
FO010465	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	COMPOSITE	STORMWTR	COD	COD	68	CONC	mg/L	5	SM 5220 D	5/5/2001	
FO010465	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.4	CONC	mg/L	0.1	EPA 300.0	5/1/2001	
FO010465	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.04	CONC	mg/L	0.02	EPA 365.1	5/1/2001	
FO010465	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	1.2	CONC	mg/L	0.2	EPA 351.2	5/7/2001	
FO010465	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	20.4	CONC	µg/L	0.2	EPA 200.8	5/2/2001	
FO010465	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	109	CONC	µg/L	0.5	EPA 200.8	5/2/2001	
FO010465	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	1.68	CONC	µg/L	0.1	EPA 200.8	5/2/2001	
FO010465	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	<0.10		µg/L	0.1	EPA 200.8	5/2/2001	
FO010465	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	0.37	CONC	µg/L	0.1	EPA 200.8	5/2/2001	
FO010465	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	19.5	CONC	µg/L	0.1	EPA 200.8	5/2/2001	
FO010465	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	6.92	CONC	µg/L	0.2	EPA 200.8	5/2/2001	
FO010465	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	27.8	CONC	µg/L	0.5	EPA 200.8	5/2/2001	
FO010465	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	0.68	CONC	µg/L	0.1	EPA 200.8	5/2/2001	
FO010465	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	5/2/2001	
FO010465	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	5/2/2001	
FO010465	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	0.44	CONC	µg/L	0.1	EPA 200.8	5/2/2001	
FO010465	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	COMPOSITE	STORMWTR	BOD5	BOD5	12	CONC	mg/L	2	SM 5210 B	5/6/2001	
FO010465	2	6543 N BURLINGTON AVE	W BIOSWALE INLET	4/30/2001	7:16	DJH/PHA	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.096	CONC	mg/L	0.02	EPA 350.1	5/7/2001	
FO010466	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	24	CONC	mg/L	1	SM 2540 D	5/1/2001	
FO010466	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	62	CONC	mg/L	1	SM 2540 B	5/2/2001	
FO010466	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	38	CONC	mg/L	1	SM 2540 BD	5/8/2001	
FO010466	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.21	CONC	mg/L	0.03	EPA 365.4	5/4/2001	
FO010466	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	14.7	CONC	mg CaCO3/L	1	SM 2340 C	5/7/2001	
FO010466	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	COMPOSITE	STORMWTR	COD	COD	36	CONC	mg/L	5	SM 5220 D	5/5/2001	
FO010466	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.66	CONC	mg/L	0.1	EPA 300.0	5/1/2001	
FO010466	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.058	CONC	mg/L	0.02	EPA 365.1	5/1/2001	
FO010466	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	0.83	CONC	mg/L	0.2	EPA 351.2	5/7/2001	
FO010466	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	12.8	CONC	µg/L	0.2	EPA 200.8	5/2/2001	
FO010466	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	50.4	CONC	µg/L	0.5	EPA 200.8	5/2/2001	
FO010466	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	1.32	CONC	µg/L	0.1	EPA 200.8	5/2/2001	
FO010466	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	<0.10		µg/L	0.1	EPA 200.8	5/2/2001	
FO010466	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	0.16	CONC	µg/L	0.1	EPA 200.8	5/2/2001	
FO010466	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	9.53	CONC	µg/L	0.1	EPA 200.8	5/2/2001	
FO010466	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	6.63	CONC	µg/L	0.2	EPA 200.8	5/2/2001	
FO010466	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	19	CONC	µg/L	0.5	EPA 200.8	5/2/2001	
FO010466	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	0.66	CONC	µg/L	0.1	EPA 200.8	5/2/2001	
FO010466	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	5/2/2001	
FO010466	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	5/2/2001	
FO010466	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	0.43	CONC	µg/L	0.1	EPA 200.8	5/2/2001	
FO010466	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	COMPOSITE	STORMWTR	BOD5	BOD5	6	CONC	mg/L	2	SM 5210 B	5/6/2001	
FO010466	4	6543 N BURLINGTON AVE	W BIOSWALE OUTLET	4/30/2001	7:27	DJH/PHA	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.024	CONC	mg/L	0.02	EPA 350.1	5/7/2001	
FO010467	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	26	CONC	mg/L	1	SM 2540 D	5/1/2001	
FO010467	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	66	CONC	mg/L	1	SM 2540 B	5/2/2001	
FO010467	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	40	CONC	mg/L	1	SM 2540 BD	5/8/2001	
FO010467	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.22	CONC	mg/L	0.03	EPA 365.4	5/4/2001	
FO010467	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	14.8	CONC	mg CaCO3/L	1	SM 2340 C	5/7/2001	
FO010467	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	COMPOSITE	STORMWTR	COD	COD	41	CONC	mg/L	5	SM 5220 D	5/5/2001	
FO010467	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.59	CONC	mg/L	0.1	EPA 300.0	5/1/2001	

FO010467	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.066	CONC	mg/L	0.02	EPA 365.1	5/1/2001
FO010467	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	0.85	CONC	mg/L	0.2	EPA 351.2	5/7/2001
FO010467	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	13.1	CONC	µg/L	0.2	EPA 200.8	5/2/2001
FO010467	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	52.2	CONC	µg/L	0.5	EPA 200.8	5/2/2001
FO010467	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	1.3	CONC	µg/L	0.1	EPA 200.8	5/2/2001
FO010467	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	<0.10		µg/L	0.1	EPA 200.8	5/2/2001
FO010467	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	0.16	CONC	µg/L	0.1	EPA 200.8	5/2/2001
FO010467	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	9.9	CONC	µg/L	0.1	EPA 200.8	5/2/2001
FO010467	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	6.74	CONC	µg/L	0.2	EPA 200.8	5/2/2001
FO010467	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	18.2	CONC	µg/L	0.5	EPA 200.8	5/2/2001
FO010467	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	0.66	CONC	µg/L	0.1	EPA 200.8	5/2/2001
FO010467	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	5/2/2001
FO010467	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	5/2/2001
FO010467	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	0.44	CONC	µg/L	0.1	EPA 200.8	5/2/2001
FO010467	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	COMPOSITE	STORMWTR	BOD5	BOD5	7	CONC	mg/L	2	SM 5210 B	5/6/2001
FO010467	5	6543 N BURLINGTON AVE	E BIOSWALE OUTLET	4/30/2001	7:30	DJH/PHA	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.029	CONC	mg/L	0.02	EPA 350.1	5/7/2001

Fig 4A

Time	East Inflow (cfs)	West Inflow (cfs)	East Outflow (cfs)	West Outflow (cfs)
700	0	0	0	0
701	0	0	0	0
702	0	0	0	0
703	0	0	0	0
704	0	0	0	0
705	0	0	0	0
706	0	0	0	0
707	0	0	0	0
708	0	0	0	0
709	0.049	0.029	0	0
710	0.072	0.073	0	0
711	0.073	0.081	0	0
712	0.074	0.083	0	0
713	0.073	0.083	0	0
714	0.073	0.083	0	0
715	0.073	0.083	0	0
716	0.073	0.083	0	0
717	0.073	0.083	0	0
718	0.073	0.083	0	0
719	0.073	0.083	0	0
720	0.072	0.083	0	0
721	0.073	0.083	0	0
722	0.073	0.083	0	0
723	0.073	0.083	0	0.007
724	0.073	0.083	0	0.024
725	0.073	0.084	0	0.034
726	0.08	0.075	0	0.039
727	0.079	0.08	0.003	0.042
728	0.081	0.077	0.014	0.045
729	0.08	0.078	0.018	0.046
730	0.08	0.078	0.02	0.049
731	0.08	0.077	0.022	0.049
732	0.081	0.077	0.024	0.049
733	0.08	0.077	0.024	0.049
734	0.08	0.078	0.026	0.049
735	0.081	0.077	0.031	0.057
736	0.08	0.078	0.044	0.059
737	0.079	0.076	0.044	0.058
738	0.079	0.076	0.046	0.059
739	0.078	0.077	0.046	0.059
740	0.078	0.078	0.047	0.059
741	0.079	0.078	0.047	0.059
742	0.079	0.078	0.047	0.059
743	0.079	0.079	0.047	0.059
744	0.079	0.079	0.048	0.059
745	0.079	0.079	0.048	0.06
746	0.079	0.078	0.048	0.061
747	0.079	0.079	0.049	0.062
748	0.079	0.079	0.049	0.062
749	0.078	0.079	0.049	0.062
750	0.079	0.079	0.049	0.062
751	0.079	0.079	0.049	0.063
752	0.079	0.079	0.049	0.064
753	0.079	0.079	0.049	0.063

Fig 4A

Time	East Inflow (cfs)	West Inflow (cfs)	East Outflow (cfs)	West Outflow (cfs)
754	0.079	0.079	0.049	0.065
755	0.079	0.079	0.049	0.064
756	0.079	0.08	0.049	0.065
757	0.079	0.08	0.049	0.065
758	0.08	0.08	0.049	0.066
759	0.079	0.079	0.05	0.066
800	0.079	0.079	0.05	0.066
801	0.079	0.079	0.051	0.066
802	0.079	0.079	0.051	0.066
803	0.079	0.079	0.051	0.066
804	0.079	0.079	0.051	0.066
805	0.079	0.08	0.051	0.065
806	0.079	0.079	0.051	0.066
807	0.079	0.079	0.052	0.066
808	0.079	0.079	0.052	0.066
809	0.079	0.079	0.052	0.066
810	0.078	0.079	0.052	0.066
811	0.079	0.079	0.052	0.067
812	0.08	0.079	0.052	0.066
813	0.079	0.079	0.052	0.066
814	0.08	0.079	0.052	0.068
815	0.079	0.079	0.052	0.067
816	0.079	0.079	0.052	0.067
817	0.077	0.078	0.052	0.067
818	0.077	0.078	0.052	0.067
819	0.078	0.078	0.053	0.068
820	0.078	0.077	0.053	0.069
821	0.077	0.078	0.053	0.069
822	0.078	0.077	0.053	0.068
823	0.077	0.078	0.053	0.069
824	0.078	0.078	0.054	0.069
825	0.078	0.079	0.053	0.069
826	0.078	0.079	0.054	0.07
827	0.078	0.079	0.054	0.07
828	0.078	0.079	0.054	0.069
829	0.078	0.079	0.055	0.07
830	0.078	0.079	0.054	0.07
831	0.078	0.079	0.055	0.07
832	0.078	0.079	0.054	0.07
833	0.079	0.079	0.055	0.07
834	0.079	0.079	0.055	0.069
835	0.078	0.077	0.055	0.071
836	0.078	0.078	0.055	0.07
837	0.078	0.078	0.055	0.067
838	0.078	0.079	0.055	0.067
839	0.078	0.079	0.055	0.068
840	0.078	0.079	0.055	0.068
841	0.078	0.078	0.055	0.07
842	0.079	0.079	0.055	0.069
843	0.078	0.078	0.055	0.069
844	0.078	0.078	0.055	0.069
845	0.079	0.079	0.055	0.07
846	0.078	0.079	0.055	0.07
847	0.079	0.079	0.056	0.07
848	0.078	0.079	0.055	0.07

Fig 4A

Time	East Inflow (cfs)	West Inflow (cfs)	East Outflow (cfs)	West Outflow (cfs)
849	0.079	0.079	0.055	0.07
850	0.078	0.078	0.056	0.07
851	0.079	0.079	0.056	0.07
852	0.079	0.079	0.056	0.07
853	0.078	0.079	0.056	0.07
854	0.078	0.079	0.057	0.07
855	0.079	0.08	0.057	0.07
856	0.078	0.079	0.057	0.07
857	0.079	0.079	0.057	0.07
858	0.078	0.079	0.058	0.07
859	0.078	0.079	0.057	0.07
900	0.078	0.079	0.058	0.07
901	0.078	0.079	0.058	0.07
902	0.078	0.079	0.057	0.07
903	0.078	0.079	0.057	0.07
904	0.078	0.079	0.058	0.07
905	0.078	0.078	0.058	0.07
906	0.078	0.079	0.057	0.07
907	0.078	0.08	0.057	0.07
908	0.079	0.079	0.057	0.07
909	0.079	0.079	0.058	0.07
910	0.079	0.079	0.058	0.07
911	0.079	0.079	0.058	0.071
912	0.078	0.08	0.058	0.071
913	0.079	0.079	0.057	0.07
914	0.078	0.079	0.058	0.07
915	0.079	0.079	0.058	0.071
916	0.079	0.079	0.058	0.071
917	0.078	0.08	0.059	0.07
918	0.078	0.079	0.059	0.07
919	0.079	0.079	0.059	0.071
920	0.078	0.079	0.059	0.071
921	0.079	0.079	0.06	0.071
922	0.078	0.079	0.059	0.071
923	0.078	0.079	0.059	0.07
924	0.078	0.079	0.06	0.071
925	0.078	0.079	0.059	0.071
926	0.078	0.079	0.06	0.072
927	0.078	0.079	0.059	0.072
928	0.078	0.078	0.06	0.072
929	0.079	0.079	0.06	0.072
930	0.079	0.079	0.06	0.072
931	0.079	0.079	0.06	0.072
932	0.079	0.079	0.06	0.073
933	0.078	0.079	0.061	0.074
934	0.08	0.079	0.06	0.073
935	0.08	0.079	0.06	0.073
936	0.08	0.079	0.06	0.072
937	0.08	0.078	0.06	0.073
938	0.079	0.079	0.06	0.073
939	0.079	0.078	0.06	0.072
940	0.079	0.078	0.061	0.073
941	0.079	0.078	0.061	0.073
942	0.079	0.078	0.061	0.073
943	0.078	0.078	0.06	0.072

Fig 4A

Time	East Inflow (cfs)	West Inflow (cfs)	East Outflow (cfs)	West Outflow (cfs)
944	0.078	0.077	0.06	0.072
945	0.078	0.076	0.06	0.073
946	0.078	0.076	0.06	0.072
947	0.077	0.075	0.06	0.072
948	0.077	0.076	0.06	0.072
949	0.077	0.075	0.061	0.072
950	0.077	0.076	0.06	0.072
951	0.078	0.075	0.06	0.071
952	0.077	0.075	0.06	0.071
953	0.077	0.075	0.06	0.071
954	0.076	0.076	0.059	0.07
955	0.076	0.074	0.059	0.071
956	0.077	0.07	0.059	0.07
957	0.077	0.071	0.059	0.071
958	0.076	0.072	0.059	0.07
959	0.074	0.074	0.059	0.07
1000	0.075	0.074	0.059	0.07
1001	0.077	0.074	0.059	0.07
1002	0.076	0.074	0.059	0.071
1003	0.075	0.074	0.06	0.071
1004	0.075	0.074	0.059	0.072
1005	0.074	0.074	0.059	0.072
1006	0.073	0.075	0.059	0.072
1007	0.074	0.075	0.059	0.072
1008	0.077	0.074	0.058	0.072
1009	0.076	0.074	0.058	0.072
1010	0.075	0.074	0.058	0.072
1011	0.074	0.073	0.058	0.072
1012	0.075	0.073	0.058	0.072
1013	0.076	0.072	0.058	0.072
1014	0.076	0.073	0.058	0.071
1015	0.075	0.074	0.059	0.072
1016	0.073	0.074	0.058	0.072
1017	0.074	0.073	0.059	0.071
1018	0.074	0.072	0.059	0.071
1019	0.074	0.073	0.059	0.071
1020	0.074	0.072	0.058	0.07
1021	0.028	0.031	0.059	0.07
1022	0.009	0.015	0.059	0.07
1023	0.009	0.015	0.059	0.07
1024	0.008	0.013	0.058	0.07
1025	0.006	0.012	0.057	0.07
1026	0.005	0.011	0.056	0.068
1027	0.004	0.011	0.053	0.064
1028	0.004	0.01	0.049	0.057
1029	0.003	0.011	0.043	0.05
1030	0.002	0.01	0.039	0.044
1031	0.001	0.01	0.034	0.039
1032	0	0.006	0.031	0.032
1033	0	0.003	0.027	0.027
1034	0	0	0.024	0.023
1035	0	0	0.021	0.02
1036	0	0	0.019	0.017
1037	0	0	0.017	0.015
1038	0	0	0.015	0.013

Fig 4A

Time	East Inflow (cfs)	West Inflow (cfs)	East Outflow (cfs)	West Outflow (cfs)
1039	0	0	0.014	0.012
1040	0	0	0.013	0.011
1041	0	0	0.012	0.01
1042	0	0	0.011	0.009
1043	0	0	0.01	0.008
1044	0	0	0.009	0.008
1045	0	0	0.009	0.007
1046	0	0	0.008	0.007
1047	0	0	0.008	0.006
1048	0	0	0.007	0.006
1049	0	0	0.007	0.005
1050	0	0	0.007	0.005
1051	0	0	0.006	0.004
1052	0	0	0.006	0.004
1053	0	0	0.005	0.003
1054	0	0	0.005	0.003
1055	0	0	0.005	0.003
1056	0	0	0.005	0.003
1057	0	0	0.005	0.002
1058	0	0	0.004	0.001
1059	0	0	0.004	0
1100	0	0	0.004	0
1101	0	0	0.004	0
1102	0	0	0.003	0
1103	0	0	0.003	0
1104	0	0	0.003	0
1105	0	0	0.003	0
1106	0	0	0.003	0
1107	0	0	0.003	0
1108	0	0	0.003	0
1109	0	0	0.002	0
1110	0	0	0.002	0
1111	0	0	0.001	0
1112	0	0	0.001	0
1113	0	0	0	0
1114	0	0	0	0
1115	0	0	0	0
1116	0	0	0	0
1117	0	0	0	0
1118	0	0	0	0
1119	0	0	0	0
1120	0	0	0	0
1121	0	0	0	0
1122	0	0	0	0
1123	0	0	0	0
1124	0	0	0	0
1125	0	0	0	0
1126	0	0	0	0
1127	0	0	0	0
1128	0	0	0	0
1129	0	0	0	0

Fig 4A

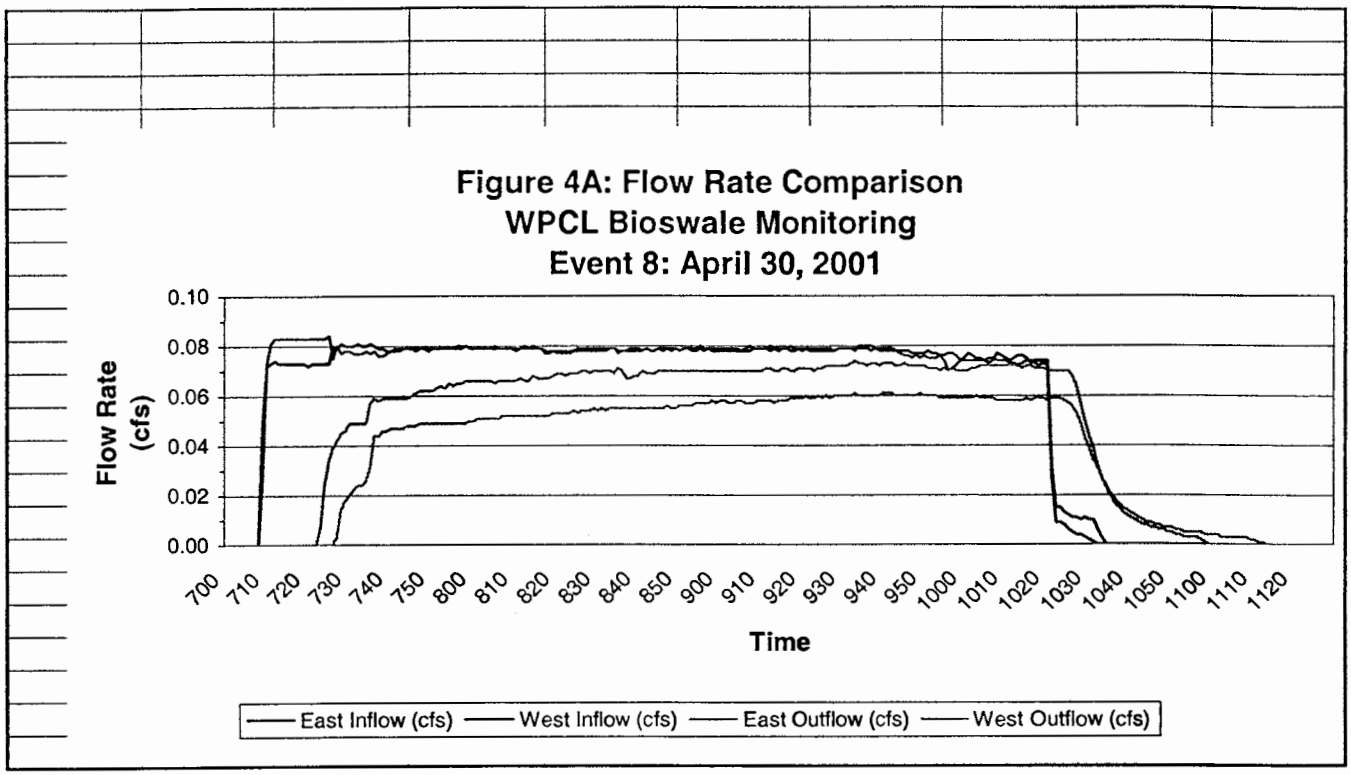


Figure 4A: Flow Rate Comparison
WPCL Bioswale Monitoring
Event 8: April 30, 2001
Flow Rate (cfs)
0.10
0.08
0.06
0.04
0.02
0.00
700 710 720 730 740 750 800 810 820 830 840 850 900 910 920 930 940 950 1000 1010 1020 1030 1040 1050 1100 1110 1120
Time
East Inflow (cfs)
West Inflow (cfs)
East Outflow (cfs)
West Outflow (cfs)

Fig 4B

Time	East (Native) Cumulative Outflow	West (Non-native) Cumulative Outflow
700	0	0
701	0	0
702	0	0
703	0	0
704	0	0
705	0	0
706	0	0
707	0	0
708	0	0
709	0	0
710	0	0
711	0	0
712	0	0
713	0	0
714	0	0
715	0	0
716	0	0
717	0	0
718	0	0
719	0	0
720	0	0
721	0	0
722	0	0
723	0	0.21
724	0	1.14
725	0	2.88
726	0	5.07
727	0.09	7.5
728	0.6	10.11
729	1.56	12.84
730	2.7	15.69
731	3.96	18.63
732	5.34	21.57
733	6.78	24.51
734	8.28	27.45
735	9.99	30.63
736	12.24	34.11
737	14.88	37.62
738	17.58	41.13
739	20.34	44.67
740	23.13	48.21
741	25.95	51.75
742	28.77	55.29
743	31.59	58.83
744	34.44	62.37
745	37.32	65.94
746	40.2	69.57
747	43.11	73.26
748	46.05	76.98
749	48.99	80.7
750	51.93	84.42
751	54.87	88.17
752	57.81	91.98
753	60.75	95.79

Fig 4B

Time	East (Native) Cumulative Outflow	West (Non-native) Cumulative Outflow
754	63.69	99.63
755	66.63	103.5
756	69.57	107.37
757	72.51	111.27
758	75.45	115.2
759	78.42	119.16
800	81.42	123.12
801	84.45	127.08
802	87.51	131.04
803	90.57	135
804	93.63	138.96
805	96.69	142.89
806	99.75	146.82
807	102.84	150.78
808	105.96	154.74
809	109.08	158.7
810	112.2	162.66
811	115.32	166.65
812	118.44	170.64
813	121.56	174.6
814	124.68	178.62
815	127.8	182.67
816	130.92	186.69
817	134.04	190.71
818	137.16	194.73
819	140.31	198.78
820	143.49	202.89
821	146.67	207.03
822	149.85	211.14
823	153.03	215.25
824	156.24	219.39
825	159.45	223.53
826	162.66	227.7
827	165.9	231.9
828	169.14	236.07
829	172.41	240.24
830	175.68	244.44
831	178.95	248.64
832	182.22	252.84
833	185.49	257.04
834	188.79	261.21
835	192.09	265.41
836	195.39	269.64
837	198.69	273.75
838	201.99	277.77
839	205.29	281.82
840	208.59	285.9
841	211.89	290.04
842	215.19	294.21
843	218.49	298.35
844	221.79	302.49
845	225.09	306.66
846	228.39	310.86
847	231.72	315.06
848	235.05	319.26

Fig 4B

Time	East (Native) Cumulative Outflow	West (Non-native) Cumulative Outflow
849	238.35	323.46
850	241.68	327.66
851	245.04	331.86
852	248.4	336.06
853	251.76	340.26
854	255.15	344.46
855	258.57	348.66
856	261.99	352.86
857	265.41	357.06
858	268.86	361.26
859	272.31	365.46
900	275.76	369.66
901	279.24	373.86
902	282.69	378.06
903	286.11	382.26
904	289.56	386.46
905	293.04	390.66
906	296.49	394.86
907	299.91	399.06
908	303.33	403.26
909	306.78	407.46
910	310.26	411.66
911	313.74	415.89
912	317.22	420.15
913	320.67	424.38
914	324.12	428.58
915	327.6	432.81
916	331.08	437.07
917	334.59	441.3
918	338.13	445.5
919	341.67	449.73
920	345.21	453.99
921	348.78	458.25
922	352.35	462.51
923	355.89	466.74
924	359.46	470.97
925	363.03	475.23
926	366.6	479.52
927	370.17	483.84
928	373.74	488.16
929	377.34	492.48
930	380.94	496.8
931	384.54	501.12
932	388.14	505.47
933	391.77	509.88
934	395.4	514.29
935	399	518.67
936	402.6	523.02
937	406.2	527.37
938	409.8	531.75
939	413.4	536.1
940	417.03	540.45
941	420.69	544.83
942	424.35	549.21
943	427.98	553.56

Fig 4B

Time	East (Native) Cumulative Outflow	West (Non-native) Cumulative Outflow
944	431.58	557.88
945	435.18	562.23
946	438.78	566.58
947	442.38	570.9
948	445.98	575.22
949	449.61	579.54
950	453.24	583.86
951	456.84	588.15
952	460.44	592.41
953	464.04	596.67
954	467.61	600.9
955	471.15	605.13
956	474.69	609.36
957	478.23	613.59
958	481.77	617.82
959	485.31	622.02
1000	488.85	626.22
1001	492.39	630.42
1002	495.93	634.65
1003	499.5	638.91
1004	503.07	643.2
1005	506.61	647.52
1006	510.15	651.84
1007	513.69	656.16
1008	517.2	660.48
1009	520.68	664.8
1010	524.16	669.12
1011	527.64	673.44
1012	531.12	677.76
1013	534.6	682.08
1014	538.08	686.37
1015	541.59	690.66
1016	545.1	694.98
1017	548.61	699.27
1018	552.15	703.53
1019	555.69	707.79
1020	559.2	712.02
1021	562.71	716.22
1022	566.25	720.42
1023	569.79	724.62
1024	573.3	728.82
1025	576.75	733.02
1026	580.14	737.16
1027	583.41	741.12
1028	586.47	744.75
1029	589.23	747.96
1030	591.69	750.78
1031	593.88	753.27
1032	595.83	755.4
1033	597.57	757.17
1034	599.1	758.67
1035	600.45	759.96
1036	601.65	761.07
1037	602.73	762.03
1038	603.69	762.87

Fig 4B

Time	East (Native) Cumulative Outflow	West (Non-native) Cumulative Outflow
1039	604.56	763.62
1040	605.37	764.31
1041	606.12	764.94
1042	606.81	765.51
1043	607.44	766.02
1044	608.01	766.5
1045	608.55	766.95
1046	609.06	767.37
1047	609.54	767.76
1048	609.99	768.12
1049	610.41	768.45
1050	610.83	768.75
1051	611.22	769.02
1052	611.58	769.26
1053	611.91	769.47
1054	612.21	769.65
1055	612.51	769.83
1056	612.81	770.01
1057	613.11	770.16
1058	613.38	770.25
1059	613.62	770.28
1100	613.86	770.28
1101	614.1	770.28
1102	614.31	770.28
1103	614.49	770.28
1104	614.67	770.28
1105	614.85	770.28
1106	615.03	770.28
1107	615.21	770.28
1108	615.39	770.28
1109	615.54	770.28
1110	615.66	770.28
1111	615.75	770.28
1112	615.81	770.28
1113	615.84	770.28
1114	615.84	770.28
1115	615.84	770.28
1116	615.84	770.28
1117	615.84	770.28
1118	615.84	770.28
1119	615.84	770.28
1120	615.84	770.28
1121	615.84	770.28
1122	615.84	770.28
1123	615.84	770.28
1124	615.84	770.28
1125	615.84	770.28
1126	615.84	770.28
1127	615.84	770.28
1128	615.84	770.28
1129	615.84	770.28

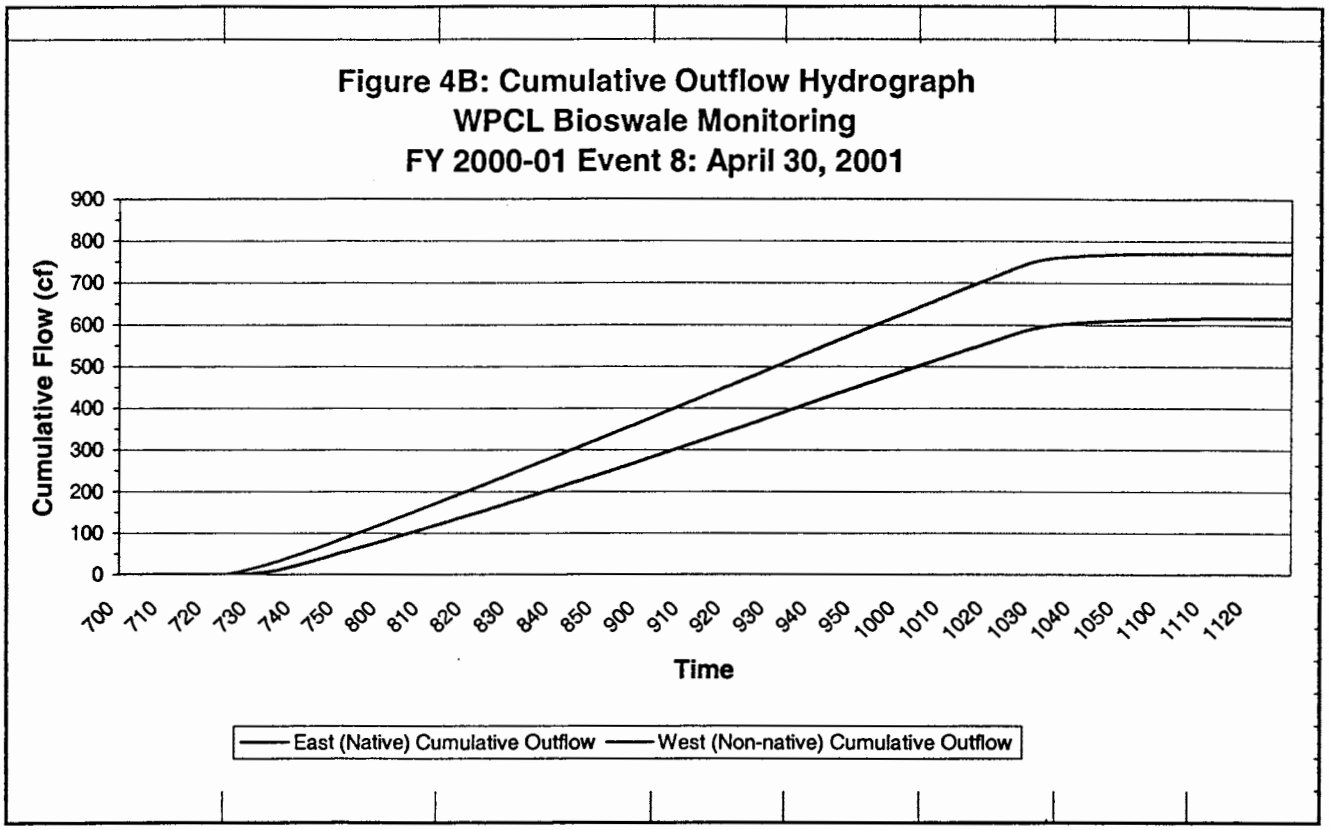


Figure 4B: Cumulative Outflow Hydrograph
WPCL Bioswale Monitoring
FY 2000-01 Event 8: April 30, 2001
Cumulative Flow (cf)
900
800
700
600
500
400
300
200
100
0
700
710
720
730
740
750
800
810
820
830
840
850
900
910
920
930
940
950
1000
1010
1020
1030
1040
1050
1100
1110
1120
Time
East (Native) Cumulative Outflow
West (Non-native) Cumulative Outflow

Walnut Park BMP Monitoring

Table 1: Analytical Data
Walnut Park BMP Monitoring
FY 2000-00: July 5, 2000

Grab Parameter	Units	0 to 20-cm	20 to 40-cm	40 to 60-cm
Lab ID		FO000936	FO000937	FO000938
E COLI	MPN/gram	3	1 U	1 U
FECAL COLIFORM	MPN/gram	1	1 U	1 U
pH	pH Units	6.9	6.7	6.8
TOTAL KJELDAHL NITROGEN (TKN)	mg/Kg	2650	2680	994
DIESEL	mg/Kg	164	96.1	34.7
HEAVY OIL	mg/Kg	546	336	133
CADMIUM	mg/Kg	0.54	0.54	0.25
COPPER	mg/Kg	42	45	31
LEAD	mg/Kg	33	32	14
MERCURY	mg/Kg	0.14	0.14	0.037
ZINC	mg/Kg	140	150	96
Sieve #4 (>4750)	Fract %	3.00	6.30	9.60
Sieve #10 (4750-2000 μm)	Fract %	5.40	7.80	22.5
Sieve #20 (2000-850 μm)	Fract %	7.40	10.0	16.3
Sieve #40 (850-425 μm)	Fract %	4.90	6.00	6.80
Sieve #60 (425-250 μm)	Fract %	3.60	3.80	3.20
Sieve #140 (250-106 μm)	Fract %	11.2	7.50	10.3
Sieve #200 (106-75 μm)	Fract %	5.60	3.50	3.00
Sieve #230 (75-62.5 μm)	Fract %	7.80	2.50	1.50
phi 4 (62.5-31.2 μm)	Fract %	38.6	34.7	6.90
phi 5 (31.2-15.6 μm)	Fract %	6.30	3.00	3.30
phi 6 (15.6-7.8 μm)	Fract %	0.1 U	3.00	1.70
phi 7 (7.8-3.9 μm)	Fract %	6.30	0.1 U	1.70
phi 8 (3.9-1.9 μm)	Fract %	01 U	6.00	0.1 U
phi 9 (1.9-0.9 μm)	Fract %	0.1 U	0.1 U	3.30
phi 10 (<0.9 μm)	Fract %	0.1 U	6.00	10.0

U = Not detected at the method reporting limit shown

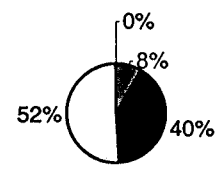
	SL1-30	SL1-60	SL1-90	
Sieve #4 (>4750)	3.00	6.30	9.60	gravel
Sieve #10 (4750-2000 μm)	5.40	7.80	22.5	
Sieve #20 (2000-850 μm)	7.40	10.0	16.3	sand
Sieve #40 (850-425 μm)	4.90	6.00	6.80	
Sieve #60 (425-250 μm)	3.60	3.80	3.20	
Sieve #140 (250-106 μm)	11.2	7.50	10.3	
Sieve #200 (106-75 μm)	5.60	3.50	3.00	
Sieve #230 (75-62.5 μm)	7.80	2.50	1.50	
phi 4 (62.5-31.2 μm)	38.6	34.7	6.90	silt
phi 5 (31.2-15.6 μm)	6.30	3.00	3.30	
phi 6 (15.6-7.8 μm)	0.1 U	3.00	1.70	
phi 7 (7.8-3.9 μm)	6.30	0.1 U	1.70	
phi 8 (3.9-1.9 μm)	01 U	6.00	0.1 U	
phi 9 (1.9-0.9 μm)	0.1 U	0.1 U	3.30	clay
phi 10 (<0.9 μm)	0.1 U	6.00	10.0	
gravel	8.40	14.10	32.10	
sand	40.50	33.30	41.10	
silt	51.2	46.7	13.6	
clay	0.00	6.00	13.30	

	SL-1
Gravel (> 2mm)	8.4
Sand (63 um - 2 mm)	40.5
Silt (2 um - 63 um)	51.2
Clay (< 2 um)	0

	SL-2
Gravel (> 2mm)	14.1
Sand (63 um - 2 mm)	33.3
Silt (2 um - 63 um)	46.7
Clay (< 2 um)	6

	SL-3
Gravel (> 2mm)	32.1
Sand (63 um - 2 mm)	41.1
Silt (2 um - 63 um)	13.6
Clay (< 2 um)	13.3

Figure 3: Grain Size Distribution - 0 to 20-cm
Walnut Park BMP Monitoring
FY 2000-01: July 5, 2000



■Gravel (> 2mm) ■Sand (63 um - 2 mm) □Silt (2 um - 63 um) □Clay (< 2 um)

Figure 4: Grain Size Distribution - 20 to 40-cm
Walnut Park BMP Monitoring
FY 2000-01: July 5, 2000

6% 14%

Figure 5: Grain Size Distribution - 40 to 60-cm

SAMPLE DATE	SAMPLE ID	SAMPLE MATRIX	SAMPLE TYPE	SAMPLE PT CODE	SAMPLE ADDRESS	PARAMETER GROUP	PARAMETER	NUMERIC RESULT	TEXT RESULT	UNITS	MRL	ANALYTICAL METHOD	ANALYSIS DATE	COMMENTS
7/5/2000	FO000936	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	pH (LAB)	pH (LAB)	6.9	CONC	pH Units	0.1	SM 4500-H B	7/7/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000936	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	FECAL COLIFORM BACTERIA (MPN)	FECAL COLIFORM BACTERIA (MPN)	1	CONC	MPN/gram	1	SM 9221 E	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000936	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	E. COLI (MPN)	E. COLI (MPN)	3	CONC	MPN/gram	1	SM 9221 F	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000936	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	2650	CONC	mg/Kg	200	EPA 351.2	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000936	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	CADMIUM	CADMIUM	0.54	CONC	mg/Kg	0.025	EPA 6020	7/7/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000936	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	COPPER	COPPER	42	CONC	mg/Kg	1	EPA 6010	7/12/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000936	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	LEAD	LEAD	33	CONC	mg/Kg	4	EPA 6010	7/12/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000936	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	ZINC	ZINC	140	CONC	mg/Kg	2	EPA 6010	7/12/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000936	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	MERCURY	MERCURY	0.14	CONC	mg/Kg	0.0035	EPA 7471	7/14/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000936	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	Sieve #4 (>4750μm)	3	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000936	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	Sieve #10 (4750-2000 μm)	5.4	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000936	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	Sieve #20 (2000-850 μm)	7.4	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000936	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	Sieve #40 (850-425 μm)	4.9	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000936	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	Sieve #60 (425-250 μm)	3.6	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000936	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	Sieve #140 (250-106 μm)	11.2	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000936	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	Sieve #200 (106-75 μm)	5.6	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000936	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	Sieve #230 (75-62.5 μm)	7.8	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000936	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	phi 4 (62.5-31.2 μm)	38.6	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	phi 5 (31.2-15.6 μm)	6.3	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000936	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	phi 6 (15.6-7.8 μm)	<0.1		Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000936	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	phi 7 (7.8-3.9 μm)	6.3	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000936	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	phi 8 (3.9-1.9 μm)	<0.1		Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000936	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	phi 9 (1.9-0.98 μm)	<0.1		Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000936	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	phi 10 (<0.98 μm)	<0.1		Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000936	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	NWTPH-Dx	DIESEL RANGE HYDROCARBONS	164	CONC	mg/Kg	25	NWTPH-Dx	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000936	SOIL	GRAB	SL1-20	NE EMERSON ST & MLK JR BLVD	NWTPH-Dx	HEAVY OIL RANGE HYDROCARBONS	546	CONC	mg/Kg	50	NWTPH-Dx	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	pH (LAB)	pH (LAB)	6.7	CONC	pH Units	0.1	SM 4500-H B	7/7/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	FECAL COLIFORM BACTERIA (MPN)	FECAL COLIFORM BACTERIA (MPN)	<1		MPN/gram	1	SM 9221 E	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	E. COLI (MPN)	E. COLI (MPN)	<1		MPN/gram	1	SM 9221 F	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	2680	CONC	mg/Kg	200	EPA 351.2	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	CADMIUM	CADMIUM	0.54	CONC	mg/Kg	0.025	EPA 6020	7/7/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	COPPER	COPPER	45	CONC	mg/Kg	1	EPA 6010	7/12/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	LEAD	LEAD	32	CONC	mg/Kg	4	EPA 6010	7/12/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	ZINC	ZINC	150	CONC	mg/Kg	2	EPA 6010	7/12/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	MERCURY	MERCURY	0.14	CONC	mg/Kg	0.0035	EPA 7471	7/14/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	Sieve #4 (>4750μm)	6.3	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	Sieve #10 (4750-2000 μm)	7.8	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	Sieve #20 (2000-850 μm)	10	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	Sieve #40 (850-425 μm)	6	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	Sieve #60 (425-250 μm)	3.8	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	Sieve #140 (250-106 μm)	7.5	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	Sieve #200 (106-75 μm)	3.5	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	Sieve #230 (75-62.5 μm)	2.5	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	phi 4 (62.5-31.2 μm)	34.7	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	phi 5 (31.2-15.8 μm)	3	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	phi 6 (15.6-7.8 μm)	3	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	phi 7 (7.8-3.9 μm)	<0.1		Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	phi 8 (3.9-1.9 μm)	6	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	phi 9 (1.9-0.98 μm)	<0.1		Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	phi 10 (<0.98 μm)	6	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	NWTPH-Dx	DIESEL RANGE HYDROCARBONS	96.1	CONC	mg/Kg	25	NWTPH-Dx	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000937	SOIL	GRAB	SL1-40	NE EMERSON ST & MLK JR BLVD	NWTPH-Dx	HEAVY OIL RANGE HYDROCARBONS	336	CONC	mg/Kg	50	NWTPH-Dx	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	pH (LAB)	pH (LAB)	6.8	CONC	pH Units	0.1	SM 4500-H B	7/7/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	FECAL COLIFORM BACTERIA (MPN)	FECAL COLIFORM BACTERIA (MPN)	<1		MPN/gram	1	SM 9221 E	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	E. COLI (MPN)	E. COLI (MPN)	<1		MPN/gram	1	SM 9221 F	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	994	CONC	mg/Kg	200	EPA 351.2	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	CADMIUM	CADMIUM	0.25	CONC	mg/Kg	0.025	EPA 6020	7/7/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	COPPER	COPPER	31	CONC	mg/Kg	1	EPA 6010	7/12/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	LEAD	LEAD	14	CONC	mg/Kg	4	EPA 6010	7/12/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	ZINC	ZINC	96	CONC	mg/Kg	2	EPA 6010	7/12/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	MERCURY	MERCURY	0.037	CONC	mg/Kg	0.0035	EPA 7471	7/14/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	Sieve #4 (>4750μm)	9.6	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	Sieve #10 (4750-2000 μm)	22.5	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	Sieve #20 (2000-850 μm)	16.3	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	Sieve #40 (850-425 μm)	6.8	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	Sieve #60 (425-250 μm)	3.2	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	Sieve #140 (250-106 μm)	10.3	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	Sieve #200 (106-75 μm)	3	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	Sieve #230 (75-62.5 μm)	1.5	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	phi 4 (62.5-31.2 μm)	6.9	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	phi 5 (31.2-15.6 μm)	3.3	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	phi 6 (15.6-7.8 μm)	1.7	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	phi 7 (7.8-3.9 μm)	1.7	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	phi 8 (3.9-1.9 μm)	<0.1		Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	phi 9 (1.9-0.98 μm)	3.3	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	GRAIN SIZE BY PSEP	phi 10 (<0.98 μm)	10	CONC	Fract %		ASTM D422M	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	NWTPH-Dx	DIESEL RANGE HYDROCARBONS	34.7	CONC	mg/Kg	25	NWTPH-Dx	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR
7/5/2000	FO000938	SOIL	GRAB	SL1-60	NE EMERSON ST & MLK JR BLVD	NWTPH-Dx	HEAVY OIL RANGE HYDROCARBONS	133	CONC	mg/Kg	50	NWTPH-Dx	7/6/2000	NOTE: SAMPLE ALIQUOT FOR E.COLI AND FECAL COLIFORMS WAS COLLECTED AT APPROXIMATELY 15:30 HOUR

Non-Stormwater Discharge Monitoring

Table 2: Analytical Summary
Nonstormwater Discharge Monitoring
FY 2000-01

Parameters	Units	1200-Z Permit Benchmark	1200-COL Permit Benchmark	DWS MCL (mg/L)	Irrigation Water	Foundation, Footing Drains Crawl Space Pumps		Uncontaminated Groundwater Infiltration	Springs		Flows from Riparian Habitats and Wetlands	
					WS-6A	OMSI1	OMSI2	OC1	HS2	CS1	FC10	GRF
					FO001322	FO010220	FO010221	FO002015	FO001128	FO010662	COG*	COP*
pH (FIELD)	pH Units	5.5-9.0	6.5-8.5	N/A	6.7	7.2	6.5	6.6	6.9	6.0	7.6	--
SPECIFIC CONDUCTANCE (FIELD)	µmhos/cm	N/A	N/A	N/A	159	96.8	93.5	176	188	206	166	--
TEMPERATURE (FIELD)	Deg. C	N/A	N/A	N/A	20.2	14.1	7.9	11.0	17.1	14.0	14.8	--
BOD5	mg/L	N/A	33	N/A	11	2 U	2 U	2 U	2 U	2 U	2	4
E. COLI	CFU/100 ml	406	406	N/A	3300	10 U	10 U	10 U	140	540	358	106
HARDNESS	mg $CaCO_3$/L	N/A	N/A	N/A	77.0	31.8	34.8	75.6	82.2	83.0	62.1	65.2
NITRATE-NITROGEN	mg/L	N/A	N/A	10	4.0	0.70	0.70	1.1	--	--	1.6	0.39
TOTAL DISSOLVED SOLIDS	mg/L	N/A	N/A	N/A	570	73	78	131	150	200	--	--
TOTAL KJELDAHL NITROGEN	mg/L	N/A	N/A	N/A	6.93	--	--	0.24	--	--	--	--
TOTAL OIL & GREASE	mg/L	10	10	N/A	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--
TOTAL PHOSPHORUS	mg/L	N/A	0.16	N/A	1.6	0.087	0.081	0.030 U	--	--	0.10	0.20
TOTAL SOLIDS	mg/L	N/A	N/A	N/A	1880	77	82	131	158	200	--	--
TOTAL SUSPENDED SOLIDS	mg/L	130	130	N/A	310	4.0	4.4	1 U	6.0	5.0	12	57
TOTAL ARSENIC	µg/L	N/A	N/A	50	63.2	0.49	0.48	0.13	0.28	0.77	--	--
TOTAL CADMIUM	µg/L	N/A	N/A	5	1.96	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.1 U	--
TOTAL CHROMIUM	µg/L	N/A	N/A	100	125	0.59	0.53	0.40 U	0.40 U	0.46	0.68	--
TOTAL COPPER	µg/L	100	36	1300	22	1.02	1.04	0.79	2.08	0.28	1.57	--
TOTAL LEAD	µg/L	400	6	15	97.8	0.15	0.64	0.10 U	0.16	0.13	0.72	1.98
TOTAL NICKEL	µg/L	N/A	N/A	N/A	72.2	0.44	0.43	0.3	0.23	0.30	0.79	--
TOTAL ZINC	µg/L	600	240	N/A	420	2.14	4.11	0.57	7.89	1.48	7.95	--
DISSOLVED ARSENIC	µg/L	N/A	N/A	N/A	1.83	0.38	0.41	0.12	0.26	0.73	--	--
DISSOLVED CADMIUM	µg/L	N/A	N/A	N/A	0.17	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.1 U	--
DISSOLVED CHROMIUM	µg/L	N/A	N/A	N/A	0.4 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.33	--
DISSOLVED COPPER	µg/L	N/A	N/A	N/A	6.08	0.63	0.64	0.67	1.31	0.20 U	0.91	--
DISSOLVED LEAD	µg/L	N/A	N/A	N/A	1.08	0.10 U	0.10	0.10 U	0.10 U	0.10 U	0.10	0.08
DISSOLVED NICKEL	µg/L	N/A	N/A	N/A	1.22	0.31	0.27	0.21	0.12	0.22	0.42	--
DISSOLVED ZINC	µg/L	N/A	N/A	N/A	8.31	1.37	2.48	0.50 U	6.09	4.58	3.42	--

*mean of 11 (COP) and 16 (COG) sampling events

U = Not detected at the method reporting limit shown
N/A = Not applicable
Permit Benchmarks are from Schedule A of the NPDES Storm Water Discharge Permit Numbers 1200-Z and 1200-COL
Bolded and shaded values exceed both the 1200-Z and 1200-COL permit benchmarks
Shaded values exceed only the 1200-COL permit benchmarks, which are more restrictive
DWS = EPA National Primary Drinking Water Standards (MCL = Maximum Contaminant Level) {*provided for reference only*}

FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	pH (FIELD)	pH (FIELD)	6.7	CONC	pH Units	0.1	SM 4500-H B	8/23/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	159	CONC	µmhos/cm	1	SM 2510 B	8/23/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	TEMPERATURE	TEMPERATURE	20.2	CONC	Deg. C	0.1	SM 2550 B	8/23/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	BOD5	BOD5	11	CONC	mg/L	2	SM 5210 B	8/29/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	E. COLI	E. COLI	3300	CONC	CFU/100 ml	2	SM 9213 D	8/25/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	HARDNESS	HARDNESS	77	CONC	mg CaCO3/L	1	SM 2340 C	9/6/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	NITRATE-NITROGEN	NITRATE-NITROGEN	4	CONC	mg/L	0.1	EPA 300.0	8/24/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	570	CONC	mg/L	1	SM 2540 BD	9/1/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	6.93	CONC	mg/L	0.2	EPA 351.2	8/31/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	TOTAL OIL & GREASE	TOTAL OIL & GREASE	5 U	<5	mg/L	5	EPA 1664	9/7/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	13.6	CONC	mg/L	0.03	EPA 365.4	9/5/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	TOTAL SOLIDS	TOTAL SOLIDS	1880	CONC	mg/L	1	SM 2540 B	8/25/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	1310	CONC	mg/L	1	SM 2540 D	8/24/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	ARSENIC	63.2	CONC	µg/L	0.1	EPA 200.8	8/25/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	CADMIUM	1.96	CONC	µg/L	0.1	EPA 200.8	8/25/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	CHROMIUM	125	CONC	µg/L	0.4	EPA 200.8	8/25/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	COPPER	122	CONC	µg/L	0.2	EPA 200.8	8/25/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	LEAD	97.8	CONC	µg/L	0.1	EPA 200.8	8/25/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	NICKEL	72.2	CONC	µg/L	0.2	EPA 200.8	8/25/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	ZINC	423	CONC	µg/L	0.5	EPA 200.8	8/25/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	1.83	CONC	µg/L	0.1	EPA 200.8	8/25/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	0.17	CONC	µg/L	0.1	EPA 200.8	8/25/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	CHROMIUM, DISSOLVED	0.4 U	<0.4	µg/L	0.4	EPA 200.8	8/25/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	6.08	CONC	µg/L	0.2	EPA 200.8	8/25/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	1.08	CONC	µg/L	0.1	EPA 200.8	8/25/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	NICKEL, DISSOLVED	1.22	CONC	µg/L	0.2	EPA 200.8	8/25/2000
FO001322	WS-6A	8/23/2000	10:20	DEV/WCR	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	8.31	CONC	µg/L	0.5	EPA 200.8	8/25/2000

FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	pH (FIELD)	pH (FIELD)	7.2	CONC	pH Units	0.1 SM 4500-H B	2/28/01
FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	96.8	CONC	µmhos/cm	1 SM 2510 B	2/28/01
FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	TEMPERATURE	TEMPERATURE	14.1	CONC	Deg. C	0.1 SM 2550 B	2/28/01
FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	CHROMIUM, DISSOLVED	<0.40		µg/L	0.4 EPA 200.8	3/7/01
FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	NICKEL, DISSOLVED	0.31	CONC	µg/L	0.2 EPA 200.8	3/7/01
FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	0.63	CONC	µg/L	0.2 EPA 200.8	3/7/01
FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	1.37	CONC	µg/L	0.5 EPA 200.8	3/7/01
FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	0.38	CONC	µg/L	0.1 EPA 200.8	3/7/01
FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10		µg/L	0.1 EPA 200.8	3/7/01
FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	<0.10		µg/L	0.1 EPA 200.8	3/7/01
FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	CHROMIUM	0.59	CONC	µg/L	0.4 EPA 200.8	3/7/01
FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	NICKEL	0.44	CONC	µg/L	0.2 EPA 200.8	3/7/01
FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	COPPER	1.02	CONC	µg/L	0.2 EPA 200.8	3/7/01
FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	ZINC	2.14	CONC	µg/L	0.5 EPA 200.8	3/7/01
FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	ARSENIC	0.49	CONC	µg/L	0.1 EPA 200.8	3/7/01
FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	CADMIUM	<0.10		µg/L	0.1 EPA 200.8	3/7/01
FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	LEAD	0.15	CONC	µg/L	0.1 EPA 200.8	3/7/01
FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	HARDNESS	HARDNESS	31.8	CONC	mg CaCO3/L	1 SM 2340 C	3/5/01
FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5		mg/L	5 EPA 1664	3/10/01
FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	4	CONC	mg/L	1 SM 2540 D	3/1/01
FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	BOD5	BOD5	<2		mg/L	2 SM 5210 B	3/6/01
FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	73	CONC	mg/L	1 SM 2540 BD	3/6/01
FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	E. COLI	E. COLI	<10		CFU/100 ml	2 SM 9213 D	3/2/01
FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.087	CONC	mg/L	0.03 EPA 365.4	3/9/01
FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	NITRATE-NITROGEN	NITRATE-NITROGEN	0.7	CONC	mg/L	0.1 EPA 300.0	2/28/01
FO010220	OMSI1	OMSI, 1945 SE WATER AVE		2/28/01	12:57	WCR/MJH	GRAB	OTHER	TOTAL SOLIDS	TOTAL SOLIDS	77	CONC	mg/L	1 SM 2540 B	3/2/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	pH (FIELD)	pH (FIELD)	6.5	CONC	pH Units	0.1 SM 4500-H B	2/28/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	93.5	CONC	µmhos/cm	1 SM 2510 B	2/28/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	TEMPERATURE	TEMPERATURE	7.9	CONC	Deg. C	0.1 SM 2550 B	2/28/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	CHROMIUM, DISSOLVED	<0.40		µg/L	0.4 EPA 200.8	3/7/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	NICKEL, DISSOLVED	0.27	CONC	µg/L	0.2 EPA 200.8	3/7/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	0.64	CONC	µg/L	0.2 EPA 200.8	3/7/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	2.48	CONC	µg/L	0.5 EPA 200.8	3/7/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	0.41	CONC	µg/L	0.1 EPA 200.8	3/7/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10		µg/L	0.1 EPA 200.8	3/7/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	0.1	CONC	µg/L	0.1 EPA 200.8	3/7/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	CHROMIUM	0.53	CONC	µg/L	0.4 EPA 200.8	3/7/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	NICKEL	0.43	CONC	µg/L	0.2 EPA 200.8	3/7/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	COPPER	1.04	CONC	µg/L	0.2 EPA 200.8	3/7/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	ZINC	4.11	CONC	µg/L	0.5 EPA 200.8	3/7/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	ARSENIC	0.48	CONC	µg/L	0.1 EPA 200.8	3/7/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	CADMIUM	<0.10		µg/L	0.1 EPA 200.8	3/7/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	LEAD	0.64	CONC	µg/L	0.1 EPA 200.8	3/7/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	HARDNESS	HARDNESS	34.8	CONC	mg CaCO3/L	1 SM 2340 C	3/5/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5		mg/L	5 EPA 1664	3/10/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	4.4	CONC	mg/L	1 SM 2540 D	3/1/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	BOD5	BOD5	<2		mg/L	2 SM 5210 B	3/6/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	78	CONC	mg/L	1 SM 2540 BD	3/6/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	E. COLI	E. COLI	<10		CFU/100 ml	2 SM 9213 D	3/2/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.081	CONC	mg/L	0.03 EPA 365.4	3/9/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	NITRATE-NITROGEN	NITRATE-NITROGEN	0.7	CONC	mg/L	0.1 EPA 300.0	2/28/01
FO010221	OMSI2	OMSI, 1945 SE WATER AVE	WILLAMETTE RIVER, 25 FT UPSTRM	2/28/01	13:01	WCR/MJH	GRAB	OTHER	TOTAL SOLIDS	TOTAL SOLIDS	82	CONC	mg/L	1 SM 2540 B	3/2/01

FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	pH (FIELD)	pH (FIELD)	5.6	CONC	pH Units	0.1	SM 4500-H B	12/21/2000
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	176	CONC	µmhos/cm	1	SM 2510 B	12/21/2000
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	TEMPERATURE	TEMPERATURE	11	CONC	Deg. C	0.1	SM 2550 B	12/21/2000
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	CHROMIUM, DISSOLVED	<0.40		µg/L	0.4	EPA 200.8	1/12/2001
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	NICKEL, DISSOLVED	0.21	CONC	µg/L	0.2	EPA 200.8	1/12/2001
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	0.67	CONC	µg/L	0.2	EPA 200.8	1/12/2001
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	<0.50		µg/L	0.5	EPA 200.8	1/12/2001
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	0.12	CONC	µg/L	0.1	EPA 200.8	1/12/2001
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	1/12/2001
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	1/12/2001
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	CHROMIUM	<0.40		µg/L	0.4	EPA 200.8	1/12/2001
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	NICKEL	0.31	CONC	µg/L	0.2	EPA 200.8	1/12/2001
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	COPPER	0.79	CONC	µg/L	0.2	EPA 200.8	1/12/2001
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	ZINC	0.57	CONC	µg/L	0.5	EPA 200.8	1/12/2001
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	ARSENIC	0.13	CONC	µg/L	0.1	EPA 200.8	1/12/2001
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	CADMIUM	<0.10		µg/L	0.1	EPA 200.8	1/12/2001
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	LEAD	<0.10		µg/L	0.1	EPA 200.8	1/12/2001
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	HARDNESS	HARDNESS	75.6	CONC	mg CaCO3/L	1	SM 2340 C	1/6/2001
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5		mg/L	5	EPA 1664	1/9/2001
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	<1		mg/L	1	SM 2540 D	12/22/2000
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	BOD5	BOD5	<2		mg/L	2	SM 5210 B	12/27/2000
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	131	CONC	mg/L	1	SM 2540 BD	12/22/2000
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	E. COLI	E. COLI	<10		CFU/100 ml	2	SM 9213 D	12/21/2000
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	<0.030		mg/L	0.03	EPA 365.4	12/27/2000
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	NITRATE-NITROGEN	NITRATE-NITROGEN	1.1	CONC	mg/L	0.1	EPA 300.0	12/21/2000
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	0.24	CONC	mg/L	0.2	EPA 351.2	12/21/2000
FO002015	OC1	SW OAK CREEK DR & VESTA ST	12/21/2000	13:37	MJH/WCR	GRAB	OTHER	TOTAL SOLIDS	TOTAL SOLIDS	131	CONC	mg/L	1	SM 2540 B	12/22/2000

FO010662	CS1	APPROX 5460 SE 37TH AVE	CRYSTAL SPRINGS	6/12/2001	12:10 MJH	GRAB	OTHER	pH (FIELD)	pH (FIELD)	6	CONC	pH Units	0.1	SM 4500-H B	6/12/2001 LAB: THE RESULT FOR DISSOLVED ZINC GREATER THAN TOTAL ZINC IS APPARENTLY DUE TO INCIDENTAL CONTAMINATION.
FO010662	CS1	APPROX 5460 SE 37TH AVE	CRYSTAL SPRINGS	6/12/2001	12:10 MJH	GRAB	OTHER	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	206	CONC	µmhos/cm	1	SM 2510 B	6/12/2001 LAB: THE RESULT FOR DISSOLVED ZINC GREATER THAN TOTAL ZINC IS APPARENTLY DUE TO INCIDENTAL CONTAMINATION.
FO010662	CS1	APPROX 5460 SE 37TH AVE	CRYSTAL SPRINGS	6/12/2001	12:10 MJH	GRAB	OTHER	TEMPERATURE	TEMPERATURE	14	CONC	Deg. C	0.1	SM 2550 B	6/12/2001 LAB: THE RESULT FOR DISSDLVED ZINC GREATER THAN TOTAL ZINC IS APPARENTLY DUE TO INCIDENTAL CONTAMINATION.
FO010662	CS1	APPROX 5460 SE 37TH AVE	CRYSTAL SPRINGS	6/12/2001	12:10 MJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	CHROMIUM, DISSOLVED	<0.40		µg/L	0.4	EPA 200.8	6/14/2001 LAB: THE RESULT FOR DISSOLVED ZINC GREATER THAN TOTAL ZINC IS APPARENTLY DUE TO INCIDENTAL CONTAMINATION.
FO010662	CS1	APPROX 5460 SE 37TH AVE	CRYSTAL SPRINGS	6/12/2001	12:10 MJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	NICKEL, DISSOLVEO	0.22	CONC	µg/L	0.2	EPA 200.8	6/14/2001 LAB: THE RESULT FOR DISSOLVED ZINC GREATER THAN TOTAL ZINC IS APPARENTLY DUE TO INCIDENTAL CONTAMINATION.
FO010662	CS1	APPROX 5460 SE 37TH AVE	CRYSTAL SPRINGS	6/12/2001	12:10 MJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	<0.20		µg/L	0.2	EPA 200.8	6/14/2001 LAB: THE RESULT FOR DISSOLVED ZINC GREATER THAN TOTAL ZINC IS APPARENTLY DUE TO INCIDENTAL CONTAMINATION.
FO010662	CS1	APPROX 5460 SE 37TH AVE	CRYSTAL SPRINGS	6/12/2001	12:10 MJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	4.58	CONC	µg/L	0.5	EPA 200.8	6/14/2001 LAB: THE RESULT FOR DISSOLVED ZINC GREATER THAN TOTAL ZINC IS APPARENTLY DUE TO INCIDENTAL CONTAMINATION.
FO010662	CS1	APPROX 5460 SE 37TH AVE	CRYSTAL SPRINGS	6/12/2001	12:10 MJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVEO	0.73	CONC	µg/L	0.1	EPA 200.8	6/14/2001 LAB: THE RESULT FOR DISSOLVED ZINC GREATER THAN TOTAL ZINC IS APPARENTLY DUE TO INCIDENTAL CONTAMINATION.
FO010662	CS1	APPROX 5460 SE 37TH AVE	CRYSTAL SPRINGS	6/12/2001	12:10 MJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	6/14/2001 LAB: THE RESULT FOR DISSOLVED ZINC GREATER THAN TOTAL ZINC IS APPARENTLY DUE TO INCIDENTAL CONTAMINATION.
FO010662	CS1	APPROX 5460 SE 37TH AVE	CRYSTAL SPRINGS	6/12/2001	12:10 MJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	6/14/2001 LAB: THE RESULT FOR DISSOLVED ZINC GREATER THAN TOTAL ZINC IS APPARENTLY DUE TO INCIDENTAL CONTAMINATION.
FO010662	CS1	APPROX 5460 SE 37TH AVE	CRYSTAL SPRINGS	6/12/2001	12:10 MJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	CHROMIUM	0.46	CONC	µg/L	0.4	EPA 200.8	6/14/2001 LAB: THE RESULT FOR DISSOLVED ZINC GREATER THAN TOTAL ZINC IS APPARENTLY DUE TO INCIDENTAL CONTAMINATION.
FO010662	CS1	APPROX 5460 SE 37TH AVE	CRYSTAL SPRINGS	6/12/2001	12:10 MJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	NICKEL	0.3	CONC	µg/L	0.2	EPA 200.8	6/14/2001 LAB: THE RESULT FOR DISSOLVED ZINC GREATER THAN TOTAL ZINC IS APPARENTLY DUE TO INCIDENTAL CONTAMINATION.
FO010662	CS1	APPROX 5460 SE 37TH AVE	CRYSTAL SPRINGS	6/12/2001	12:10 MJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	COPPER	0.28	CONC	µg/L	0.2	EPA 200.8	6/14/2001 LAB: THE RESULT FOR DISSOLVED ZINC GREATER THAN TOTAL ZINC IS APPARENTLY DUE TO INCIDENTAL CONTAMINATION.
FO010662	CS1	APPROX 5460 SE 37TH AVE	CRYSTAL SPRINGS	6/12/2001	12:10 MJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	ZINC	1.46	CONC	µg/L	0.5	EPA 200.8	6/14/2001 LAB: THE RESULT FOR DISSOLVEO ZINC GREATER THAN TOTAL ZINC IS APPARENTLY DUE TO INCIDENTAL CONTAMINATION.
FO010662	CS1	APPROX 5460 SE 37TH AVE	CRYSTAL SPRINGS	6/12/2001	12:10 MJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	ARSENIC	0.77	CONC	µg/L	0.1	EPA 200.8	6/14/2001 LAB: THE RESULT FOR DISSOLVED ZINC GREATER THAN TOTAL ZINC IS APPARENTLY DUE TO INCIDENTAL CONTAMINATION.
FO010662	CS1	APPROX 5460 SE 37TH AVE	CRYSTAL SPRINGS	6/12/2001	12:10 MJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	CADMIUM	<0.10		µg/L	0.1	EPA 200.8	6/14/2001 LAB: THE RESULT FOR DISSOLVED ZINC GREATER THAN TOTAL ZINC IS APPARENTLY DUE TO INCIDENTAL CONTAMINATION.
FO010662	CS1	APPROX 5460 SE 37TH AVE	CRYSTAL SPRINGS	6/12/2001	12:10 MJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	LEAD	0.13	CONC	µg/L	0.1	EPA 200.8	6/14/2001 LAB: THE RESULT FOR DISSOLVED ZINC GREATER THAN TOTAL ZINC IS APPARENTLY DUE TO INCIDENTAL CONTAMINATION.
FO010662	CS1	APPROX 5460 SE 37TH AVE	CRYSTAL SPRINGS	6/12/2001	12:10 MJH	GRAB	OTHER	HARDNESS	HARDNESS	83	CONC	mg CaCO3/L	1	SM 2340 C	6/13/2001 LAB: THE RESULT FOR DISSOLVED ZINC GREATER THAN TOTAL ZINC IS APPARENTLY DUE TO INCIDENTAL CONTAMINATION.
FO010662	CS1	APPROX 5460 SE 37TH AVE	CRYSTAL SPRINGS	6/12/2001	12:10 MJH	GRAB	OTHER	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5		mg/L	5	EPA 1664	6/23/2001 LAB: THE RESULT FOR DISSOLVED ZINC GREATER THAN TOTAL ZINC IS APPARENTLY DUE TO INCIDENTAL CONTAMINATION.
FO010662	CS1	APPROX 5460 SE 37TH AVE	CRYSTAL SPRINGS	6/12/2001	12:10 MJH	GRAB	OTHER	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDEO SOLIDS	5	CONC	mg/L	1	SM 2540 D	6/12/2001 LAB: THE RESULT FOR DISSOLVED ZINC GREATER THAN TOTAL ZINC IS APPARENTLY DUE TO INCIDENTAL CONTAMINATION.
FO010662	CS1	APPROX 5460 SE 37TH AVE	CRYSTAL SPRINGS	6/12/2001	12:10 MJH	GRAB	OTHER	BOD5	BOD5	<2		mg/L	2	SM 5210 B	6/17/2001 LAB: THE RESULT FOR DISSOLVED ZINC GREATER THAN TOTAL ZINC IS APPARENTLY DUE TO INCIDENTAL CONTAMINATION.
FO010662	CS1	APPROX 5460 SE 37TH AVE	CRYSTAL SPRINGS	6/12/2001	12:10 MJH	GRAB	OTHER	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	200	CONC	mg/L	1	SM 2540 BD	6/19/2001 LAB: THE RESULT FOR DISSOLVED ZINC GREATER THAN TOTAL ZINC IS APPARENTLY DUE TO INCIDENTAL CONTAMINATION.
FO010662	CS1	APPROX 5460 SE 37TH AVE	CRYSTAL SPRINGS	6/12/2001	12:10 MJH	GRAB	OTHER	E. COLI	E. COLI	540	CONC	CFU/100 ml	2	SM 9213 D	6/13/2001 LAB: THE RESULT FOR DISSOLVED ZINC GREATER THAN TOTAL ZINC IS APPARENTLY DUE TO INCIDENTAL CONTAMINATION.
FO010662	CS1	APPROX 5460 SE 37TH AVE	CRYSTAL SPRINGS	6/12/2001	12:10 MJH	GRAB	OTHER	TOTAL SOLIDS	TOTAL SOLIDS	200	CONC	mg/L	1	SM 2540 B	6/13/2001 LAB: THE RESULT FOR DISSOLVED ZINC GREATER THAN TOTAL ZINC IS APPARENTLY DUE TO INCIDENTAL CONTAMINATION.

FO001128	HS2	8/4/2000	11:00	DJH	GRAB	OTHER	pH (FIELD)	pH (FIELD)	6.9	CONC	pH Units	0.1	SM 4500-H B	8/4/2000
FO001128	HS2	8/4/2000	11:00	DJH	GRAB	OTHER	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	188	CONC	µmhos/cm	1	SM 2510 B	8/4/2000
FO001128	HS2	8/4/2000	11:00	DJH	GRAB	OTHER	TEMPERATURE	TEMPERATURE	17.1	CONC	Deg. C	0.1	SM 2550 B	8/4/2000
FO001128	HS2	8/4/2000	11:00	DJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	CHROMIUM	<0.4		µg/L	0.4	EPA 200.8	8/10/2000
FO001128	HS2	8/4/2000	11:00	DJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	NICKEL	0.23	CONC	µg/L	0.2	EPA 200.8	8/10/2000
FO001128	HS2	8/4/2000	11:00	DJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	COPPER	2.08	CONC	µg/L	0.2	EPA 200.8	8/10/2000
FO001128	HS2	8/4/2000	11:00	DJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	ZINC	7.89	CONC	µg/L	0.5	EPA 200.8	8/10/2000
FO001128	HS2	8/4/2000	11:00	DJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	ARSENIC	0.28	CONC	µg/L	0.1	EPA 200.8	8/10/2000
FO001128	HS2	8/4/2000	11:00	DJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	CADMIUM	<0.1		µg/L	0.1	EPA 200.8	8/10/2000
FO001128	HS2	8/4/2000	11:00	DJH	GRAB	OTHER	METALS BY ICP-MS (TOTAL)	LEAD	0.16	CONC	µg/L	0.1	EPA 200.8	8/10/2000
FO001128	HS2	8/4/2000	11:00	DJH	GRAB	OTHER	HARDNESS	HARDNESS	82.2	CONC	mg CaCO3/L	1	SM 2340 C	8/8/2000
FO001128	HS2	8/4/2000	11:00	DJH	GRAB	OTHER	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5		mg/L	5	EPA 1664	8/14/2000
FO001128	HS2	8/4/2000	11:00	DJH	GRAB	OTHER	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	6	CONC	mg/L	1	SM 2540 D	8/4/2000
FO001128	HS2	8/4/2000	11:00	DJH	GRAB	OTHER	BOD5	BOD5	<2		mg/L	2	SM 5210 B	8/9/2000
FO001128	HS2	8/4/2000	11:00	DJH	GRAB	OTHER	E. COLI	E. COLI	140	CONC	CFU/100 ml	2	SM 9213 D	8/5/2000
FO001128	HS2	8/4/2000	11:00	DJH	GRAB	OTHER	TOTAL SOLIDS	TOTAL SOLIDS	158	CONC	mg/L	1	SM 2540 B	8/5/2000
FO001128	HS2	8/4/2000	11:00	DJH	GRAB	OTHER	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	150	CONC	mg/L	1	SM 2540 BD	8/15/2000
FO001128	HS2	8/4/2000	11:00	DJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	CHROMIUM, DISSOLVED	<0.4		µg/L	0.4	EPA 200.8	8/10/2000
FO001128	HS2	8/4/2000	11:00	DJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	NICKEL, DISSOLVED	0.12	CONC	µg/L	0.2	EPA 200.8	8/10/2000
FO001128	HS2	8/4/2000	11:00	DJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	1.31	CONC	µg/L	0.2	EPA 200.8	8/10/2000
FO001128	HS2	8/4/2000	11:00	DJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	6.09	CONC	µg/L	0.5	EPA 200.8	8/10/2000
FO001128	HS2	8/4/2000	11:00	DJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	0.26	CONC	µg/L	0.1	EPA 200.8	8/10/2000
FO001128	HS2	8/4/2000	11:00	DJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8	8/10/2000
FO001128	HS2	8/4/2000	11:00	DJH	GRAB	OTHER	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8	8/10/2000

sample_code	location_code	location_description	collection_date
FO000001	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	01/04/2000 09:12:00
FO000001	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	01/04/2000 09:12:00
FO000001	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	01/04/2000 09:12:00
FO000001	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	01/04/2000 09:12:00
FO000001	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	01/04/2000 09:12:00
FO000001	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	01/04/2000 09:12:00
FO000001	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	01/04/2000 09:12:00
FO000001	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	01/04/2000 09:12:00
FO000001	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	01/04/2000 09:12:00
FO000001	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	01/04/2000 09:12:00
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FO000001	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	01/04/2000 09:12:00
FO000001	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	01/04/2000 09:12:00
FO000001	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	01/04/2000 09:12:00
FO000037	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	01/10/2000 11:35:00
FO000065	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	01/18/2000 11:18:00
FO000102	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	01/24/2000 12:50:00
FO000113	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	01/26/2000 09:40:00
FO000143	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	02/01/2000 10:15:00
FO000143	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	02/01/2000 10:15:00
FO000143	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	02/01/2000 10:15:00
FO000143	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	02/01/2000 10:15:00
FO000143	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	02/01/2000 10:15:00
FO000143	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	02/01/2000 10:15:00
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FO000143	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	02/01/2000 10:15:00
FO000143	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	02/01/2000 10:15:00
FO000308	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	03/07/2000 09:05:00
FO000308	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	03/07/2000 09:05:00
FO000308	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	03/07/2000 09:05:00
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FO000447	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	04/04/2000 09:50:00
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FO000447	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	04/04/2000 09:50:00
FO000595	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	05/02/2000 10:06:00
FO000595	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	05/02/2000 10:06:00
FO000595	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	05/02/2000 10:06:00
FO000595	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	05/02/2000 10:06:00

sample_code	location_code	location_description	collection_date
FO000595	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	05/02/2000 10:06:00
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FO000595	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	05/02/2000 10:06:00
FO000595	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	05/02/2000 10:06:00
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FO000595	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	05/02/2000 10:06:00
FO000595	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	05/02/2000 10:06:00
FO000595	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	05/02/2000 10:06:00
FO000595	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	05/02/2000 10:06:00
FO000770	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	06/06/2000 10:16:00
FO000770	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	06/06/2000 10:16:00
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FO000958	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	07/11/2000 10:46:00
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FO001119	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	08/02/2000 09:16:00
FO001138	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	08/08/2000 10:23:00
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FO001211	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	08/14/2000 10:55:00
FO001244	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	08/21/2000 11:40:00
FO001323	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	08/28/2000 09:52:00
FO001373	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	09/05/2000 11:40:00
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sample_code	location_code	location_description	collection_date
FO001373	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	09/05/2000 11:40:00
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FO001938	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	12/04/2000 12:50:00
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FO001938	GRF	FAIRVIEW LAKE OUTLET (MAIN CHANNEL)	12/04/2000 12:50:00

analyte_name	method_code	result_op	numeric_result	analyte_units	result_mdl
bod - 5	SM 5210 B	<	2	mg/L	2
chlorophyll a	SM 10200 H	=	1.9	mg/M3	1
e. coli	SM 9213 D	=	250	cfu/100 ml	2
hardness	SM 2340 C	=	50.4	mg CaCO3/L	1
lead	EPA 200.8	=	1.73	ug/L	0.1
lead, dissolved	EPA 200.8	=	0.24	ug/L	0.1
nitrogen - ammonia	EPA 350.1	=	0.023	mg/L	0.02
nitrogen - nitrate	EPA 300.0	=	1.3	mg/L	0.1
nitrogen - nitrite	EPA 353.2	<	0.01	mg/L	0.01
nitrogen - total kjeldahl	EPA 351.2	=	0.43	mg/L	0.2
phosphorus - ortho phosphate (dissolved)	EPA 365.1	=	0.032	mg/L	0.02
phosphorus - total	EPA 365.4	=	0.12	mg/L	0.03
solids - total suspended	SM 2540 D	=	34	mg/L	1
e. coli	SM 9213 D	=	64	cfu/100 ml	2
e. coli	SM 9213 D	=	18	cfu/100 ml	2
e. coli	SM 9213 D	=	64	cfu/100 ml	2
e. coli	SM 9213 D	=	55	cfu/100 ml	2
bod - 5	SM 5210 B	<	2	mg/L	2
chlorophyll a	SM 10200 H	<	1	mg/M3	1
e. coli	SM 9213 D	=	1400	cfu/100 ml	2
hardness	SM 2340 C	=	32	mg CaCO3/L	1
lead	EPA 200.8	=	3.34	ug/L	0.1
lead, dissolved	EPA 200.8	=	0.24	ug/L	0.1
nitrogen - ammonia	EPA 350.1	=	0.069	mg/L	0.02
nitrogen - nitrate	EPA 300.0	=	0.52	mg/L	0.1
nitrogen - nitrite	EPA 353.2	<	0.01	mg/L	0.01
nitrogen - total kjeldahl	EPA 351.2	=	0.39	mg/L	0.2
phosphorus - ortho phosphate (dissolved)	EPA 365.1	=	0.041	mg/L	0.02
phosphorus - total	EPA 365.4	=	0.11	mg/L	0.03
solids - total suspended	SM 2540 D	=	17	mg/L	1
bod - 5	SM 5210 B	=	2	mg/L	2
chlorophyll a	SM 10200 H	=	7.4	mg/M3	1
e. coli	SM 9213 D	=	18	cfu/100 ml	2
hardness	SM 2340 C	=	48.4	mg CaCO3/L	1
lead	EPA 200.8	=	0.93	ug/L	0.1
lead, dissolved	EPA 200.8	<	0.1	ug/L	0.1
nitrogen - ammonia	EPA 350.1	<	0.02	mg/L	0.02
nitrogen - nitrate	EPA 300.0	=	1	mg/L	0.1
nitrogen - nitrite	EPA 353.2	<	0.01	mg/L	0.01
nitrogen - total kjeldahl	EPA 351.2	=	0.54	mg/L	0.2
phosphorus - ortho phosphate (dissolved)	EPA 365.1	<	0.02	mg/L	0.02
phosphorus - total	EPA 365.4	=	0.1	mg/L	0.03
solids - total suspended	SM 2540 D	=	16	mg/L	1
bod - 5	SM 5210 B	=	7	mg/L	2
chlorophyll a	SM 10200 H	=	24	mg/M3	1.5
e. coli	SM 9213 D	=	9	cfu/100 ml	2
hardness	SM 2340 C	=	60.4	mg CaCO3/L	1
lead	EPA 200.8	=	2.65	ug/L	0.1
lead, dissolved	EPA 200.8	<	0.1	ug/L	0.1
nitrogen - ammonia	EPA 350.1	<	0.02	mg/L	0.02
nitrogen - nitrate	EPA 300.0	=	0.24	mg/L	0.1
nitrogen - nitrite	EPA 353.2	<	0.01	mg/L	0.01
nitrogen - total kjeldahl	EPA 351.2	=	1.33	mg/L	0.2
phosphorus - ortho phosphate (dissolved)	EPA 365.1	<	0.02	mg/L	0.02
phosphorus - total	EPA 365.4	=	0.19	mg/L	0.03
solids - total suspended	SM 2540 D	=	87.5	mg/L	1
bod - 5	SM 5210 B	=	6	mg/L	2
chlorophyll a	SM 10200 H	=	16	mg/M3	1.8
e. coli	SM 9213 D	=	36	cfu/100 ml	2
hardness	SM 2340 C	=	59	mg CaCO3/L	1

analyte_name	method_code	result_op	numeric_result	analyte_units	result_mdl
lead	EPA 200.8	=	2.22	ug/L	0.1
lead, dissolved	EPA 200.8	<	0.1	ug/L	0.1
nitrogen - ammonia	EPA 350.1	<	0.02	mg/L	0.02
nitrogen - nitrate	EPA 300.0	<	0.1	mg/L	0.1
nitrogen - nitrite	EPA 353.2	<	0.01	mg/L	0.01
nitrogen - total kjeldahl	EPA 351.2	=	1.3	mg/L	0.2
phosphorus - ortho phosphate (dissolved)	EPA 365.1	<	0.02	mg/L	0.02
phosphorus - total	EPA 365.4	=	0.21	mg/L	0.03
solids - total suspended	SM 2540 D	=	82	mg/L	1
bod - 5	SM 5210 B	=	4	mg/L	2
chlorophyll a	SM 10200 H	=	6.1	mg/M3	1.2
e. coli	SM 9213 D	=	36	cfu/100 ml	2
hardness	SM 2340 C	=	69	mg CaCO3/L	1
lead	EPA 200.8	=	2.63	ug/L	0.1
lead, dissolved	EPA 200.8	=	0.11	ug/L	0.1
nitrogen - ammonia	EPA 350.1	<	0.02	mg/L	0.02
nitrogen - nitrate	EPA 300.0	<	0.1	mg/L	0.1
nitrogen - nitrite	EPA 353.2	<	0.01	mg/L	0.01
nitrogen - total kjeldahl	EPA 351.2	=	0.79	mg/L	0.2
phosphorus - ortho phosphate (dissolved)	EPA 365.1	=	0.021	mg/L	0.02
phosphorus - total	EPA 365.4	=	0.14	mg/L	0.03
solids - total suspended	SM 2540 D	=	49	mg/L	1
bod - 5	SM 5210 B	=	3	mg/L	2
chlorophyll a	SM 10200 H	=	12	mg/M3	1.2
e. coli	SM 9213 D	=	120	cfu/100 ml	2
hardness	SM 2340 C	=	71.8	mg CaCO3/L	1
lead	EPA 200.8	=	1.76	ug/L	0.1
lead, dissolved	EPA 200.8	=	0.1	ug/L	0.1
nitrogen - ammonia	EPA 350.1	=	0.76	mg/L	0.02
nitrogen - nitrate	EPA 300.0	=	0.12	mg/L	0.1
nitrogen - nitrite	EPA 353.2	=	0.037	mg/L	0.01
nitrogen - total kjeldahl	EPA 351.2	=	1.65	mg/L	0.2
phosphorus - ortho phosphate (dissolved)	EPA 365.1	=	0.34	mg/L	0.02
phosphorus - total	EPA 365.4	=	0.47	mg/L	0.03
solids - total suspended	SM 2540 D	=	45	mg/L	1
e. coli	SM 9213 D	=	20	cfu/100 ml	2
bod - 5	SM 5210 B	=	3	mg/L	2
chlorophyll a	SM 10200 H	=	30	mg/M3	1
e. coli	SM 9213 D	=	13	cfu/100 ml	2
hardness	SM 2340 C	=	79.2	mg CaCO3/L	1
lead	EPA 200.8	=	2.49	ug/L	0.1
lead, dissolved	EPA 200.8	<	0.1	ug/L	0.1
nitrogen - ammonia	EPA 350.1	=	0.05	mg/L	0.02
nitrogen - nitrate	EPA 300.0	<	0.1	mg/L	0.1
nitrogen - nitrite	EPA 353.2	<	0.01	mg/L	0.01
nitrogen - total kjeldahl	EPA 351.2	=	1.18	mg/L	0.2
phosphorus - ortho phosphate (dissolved)	EPA 365.1	=	0.073	mg/L	0.02
phosphorus - total	EPA 365.4	=	0.27	mg/L	0.03
solids - total suspended	SM 2540 D	=	70	mg/L	1
e. coli	SM 9213 D	=	20	cfu/100 ml	2
e. coli	SM 9213 D	<	7	cfu/100 ml	2
e. coli	SM 9213 D	=	5	cfu/100 ml	2
bod - 5	SM 5210 B	=	6	mg/L	2
chlorophyll a	SM 10200 H	=	59	mg/M3	1.3
e. coli	SM 9213 D	=	310	cfu/100 ml	2
hardness	SM 2340 C	=	81.6	mg CaCO3/L	1
lead	EPA 200.8	=	1.02	ug/L	0.1
lead, dissolved	EPA 200.8	<	0.1	ug/L	0.1
nitrogen - ammonia	EPA 350.1	=	0.058	mg/L	0.02
nitrogen - nitrate	EPA 300.0	<	0.1	mg/L	0.1

analyte_name	method_code	result_op	numeric_result	analyte_units	result_mdl
nitrogen - nitrite	EPA 353.2	<	0.01	mg/L	0.01
nitrogen - total kjeldahl	EPA 351.2	=	1.51	mg/L	0.2
phosphorus - ortho phosphate (dissolved)	EPA 365.1	=	0.047	mg/L	0.02
phosphorus - total	EPA 365.4	=	0.19	mg/L	0.03
solids - total suspended	SM 2540 D	=	50.3	mg/L	1
bod - 5	SM 5210 B	=	3	mg/L	2
chlorophyll a	SM 10200 H	=	17	mg/M3	1
e. coli	SM 9213 D	=	300	cfu/100 ml	2
hardness	SM 2340 C	=	70	mg CaCO3/L	1
lead	EPA 200.8	=	1.93	ug/L	0.1
lead, dissolved	EPA 200.8	<	0.1	ug/L	0.1
nitrogen - ammonia	EPA 350.1	=	0.072	mg/L	0.02
nitrogen - nitrate	EPA 300.0	=	0.18	mg/L	0.1
nitrogen - nitrite	EPA 353.2	=	0.01	mg/L	0.01
nitrogen - total kjeldahl	EPA 351.2	=	1.09	mg/L	0.2
phosphorus - ortho phosphate (dissolved)	EPA 365.1	=	0.041	mg/L	0.02
phosphorus - total	EPA 365.4	=	0.19	mg/L	0.03
solids - total suspended	SM 2540 D	=	64.4	mg/L	1
bod - 5	SM 5210 B	=	2	mg/L	2
chlorophyll a	SM 10200 H	=	13	mg/M3	1.5
e. coli	SM 9213 D	=	18	cfu/100 ml	2
hardness	SM 2340 C	=	71.2	mg CaCO3/L	1
lead	EPA 200.8	=	1.45	ug/L	0.1
lead, dissolved	EPA 200.8	<	0.1	ug/L	0.1
nitrogen - ammonia	EPA 350.1	=	0.018	mg/L	0.02
nitrogen - nitrate	EPA 300.0	=	0.41	mg/L	0.1
nitrogen - nitrite	EPA 353.2	<	0.01	mg/L	0.01
nitrogen - total kjeldahl	EPA 351.2	=	0.58	mg/L	0.2
phosphorus - ortho phosphate (dissolved)	EPA 365.1	=	0.021	mg/L	0.02
phosphorus - total	EPA 365.4	=	0.13	mg/L	0.03
solids - total suspended	SM 2540 D	=	39	mg/L	1
bod - 5	SM 5210 B	=	4	mg/L	2
chlorophyll a	SM 10200 H	=	9.3	mg/M3	1.9
e. coli	SM 9213 D	=	55	cfu/100 ml	2
hardness	SM 2340 C	=	56.6	mg CaCO3/L	1
lead	EPA 200.8	=	2.95	ug/L	0.1
lead, dissolved	EPA 200.8	<	0.1	ug/L	0.1
nitrogen - ammonia	EPA 350.1	<	0.02	mg/L	0.02
nitrogen - nitrate	EPA 300.0	=	0.93	mg/L	0.1
nitrogen - nitrite	EPA 353.2	<	0.01	mg/L	0.01
nitrogen - total kjeldahl	EPA 351.2	=	0.8	mg/L	0.2
phosphorus - ortho phosphate (dissolved)	EPA 365.1	=	0.028	mg/L	0.02
phosphorus - total	EPA 365.4	=	0.19	mg/L	0.03
solids - total suspended	SM 2540 D	=	91.5	mg/L	1

Analyte	Units	COG 1/27/00	COP 1/4/00	COG 3/2/00	COG 3/4/00	COP 3/7/00	COG 4/13/00	COP 4/4/00	COG 5/1/00	COG 5/30/00	COP 5/2/00	COG 6/27/00	COG 6/29/00	COP 6/6/00	COG 7/18/00	COG 7/25/00	COP 7/11/00	COG 8/22/00	COG 8/29/00	COP 8/8/00	COG 9/12/00	COP 9/5/00	COG 10/24/00	COG 10/31/01	COP 10/2/00	COP 11/7/00	COG 12/19/00	COP 12/4/00
pH	pH units	7.5					7.3		7.1	7.9		7.7	7.1		7.2	7.8		8	8.2		7.7		7.9	7.9				
temp	deg C	6.7					13.9		14.3	14.7		15.2	21		18.6	20.8		19.3	17.4		17.1		10.9	11.2			5.6	
cond	uS/cm	142					160		171	160		176	168		171	180		182	181		176			165			123	
bod	mg/L	2	2	2 U	2	2	2	7	2 U	2 U	6	2 U	2 U	4	2 U	2 U	3	3	3	3	2	6	2 U	2 U	3	2	2	4
ecoli	cfu/100 ml	50	250	36	1500	18	1500	9	120	200	36	50	200	36	470	220	120	240	310	13	400	310	82	110	300	18	240	55
hardness	mg CaCO3/L	56.8	50.4	46.4	35	48.4	62	60.4	64	62	59	65.6	58.4	69	69	76.8	71.8	72.2	70.6	79.2	70.6	81.6		72	70	71.2	49.4	56.6
NO3-N	mg/L	1.9	1.3	1.5	780	1		0.24	1.8	1.5	0.02	3.1		0.1 U		1.2	0.12		0.9	0.01 U		0.1 U		1.3	0.18	0.41		0.93
OG	mg/L	5 U		5 U	5 U		5 U		5 U	5 U		5 U				5 U			5 U					5 U				
TP	mg/L	0.061	0.12	0.089	0.2	0.1	0.095	0.19	0.069	0.066	0.21	0.09	0.074	0.14	0.076	0.1	0.47	0.11	0.13	0.27	0.11	0.19	0.1	0.1	0.19	0.13	0.091	0.19
TSS	mg/L	4	34	11	48	16	48	87.5	5.8	4.4	82	2	7	49	3.8	10	45	11	8.6	70	5.3	50.3	7	6.4	64.4	39	10	91.5
total cadmium	ug/L	0.1 U		0.1 U	0.1 U				0.1 U	0.1 U		0.1 U				0.1 U			0.1 U					0.1 U				
total chromium	ug/L	0.4		1.26	2.95				0.4 U	0.4 U		0.4 U				0.4 U			0.4 U					0.49				
total copper	ug/L	0.96		2.39	3.92				1.23	1.2		0.49				1.15			1.51					1.24				
total lead	ug/L	0.12	1.73	1.22	2.89	0.93	1.32	2.65	0.46	0.44	2.20	0.38	0.3	2.63	0.3	0.4	1.76	0.28	0.37	2.49	0.28	1.02	0.6	0.64	1.93	1.45	1.49	2.95
total nickel	ug/L	0.45		1.31	2.23				0.56	0.55		0.47				0.65			0.41					0.51				
total zinc	ug/L	3.81		12.2	26.2				4.45	4.16		4.84				7.46			4.27					4.13				
dissolved cadmium	ug/L	0.1 U		0.1 U	0.1 U				0.1 U	0.1 U		0.1 U				0.1 U			0.1 U					0.1 U				
dissolved chromium	ug/L	0.52		0.46	0.41				0.4	0.4		0.4 U				0.4 U			0.4 U					0.4 U				
dissolved copper	ug/L	1.09		1.16	1.16				1.06	0.85		0.31				0.71			1.09					0.8				
dissolved lead	ug/L	0.43	0.24	0.19	0.12	0.1 U	0.1 U	0.1 U	0.1 U	0.1	0.1 U	0.1 U	0.1 U	0.11	0.1 U	0.1 U	0.1	0.17	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1	0.1 U	0.1 U	0.1 U	0.1 U
disolved nickel	ug/L	0.61		0.49	0.46				0.35	0.34		0.44				0.48			0.3					0.27				
dissolved zinc	ug/L	5.73		5.23	6.26				2.3	1.79		3.75				2.22			2.18					1.32				

COG MEAN

Analyte	Analyte	Units	COG 1/27/00	COG 3/2/00	COG 3/4/00	COG 4/13/00	COG 5/1/00	COG 5/30/00	COG 6/27/00	COG 6/29/00	COG 7/18/00	COG 7/25/00	COG 8/22/00	COG 8/29/00	COG 9/12/00	COG 10/24/00	COG 10/31/01	COG 12/19/00	Mean
pH	pH	pH units	7.5			7.3	7.1	7.9	7.7	7.1	7.2	7.8	8	8.2	7.7	7.9	7.9		7.6
temp	temp	deg C	6.7			13.9	14.3	14.7	15.2	21	18.6	20.8	19.3	17.4	17.1	10.9	11.2	5.6	14.8
cond	cond	uS/cm	142			160	171	160	176	168	171	180	182	181	176		165	123	165.8
bod	bod	mg/L	2	1	2	2	1	1	1	1	1	1	3	3	2	1	1	2	1.6
ecoli	ecoli	cfu/100 ml	50	36	1500	1500	120	200	50	200	470	220	240	310	400	82	110	240	358.0
hardness	hardness	mg CaCO3/L	56.8	46.4	35	62	64	62	65.6	58.4	69	76.8	72.2	70.6	70.6		72	49.4	62.1
NO3-N	NO3-N	mg/L	1.9	1.5	0.78		1.8	1.5	3.1			1.2		0.9			1.3		1.6
OG	OG	mg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U			5 U		5 U			5 U		5 U
TP	TP	mg/L	0.061	0.089	0.2	0.095	0.069	0.066	0.09	0.074	0.076	0.1	0.11	0.13	0.11	0.1	0.1	0.091	0.10
TSS	TSS	mg/L	4	11	48	48	5.8	4.4	2	7	3.8	10	11	8.6	5.3	7	6.4	10	12.0
total cadmium	total cadmium	ug/L	0.1 U	0.1 U	0.1 U		0.1 U	0.1 U	0.1 U			0.1 U		0.1 U			0.1 U		0.1 U
total chromium	total chromium	ug/L	0.4	1.26	2.95		0.2	0.2	0.2			0.2		0.2			0.49		0.7
total copper	total copper	ug/L	0.96	2.39	3.92		1.23	1.2	0.49			1.15		1.51			1.24		1.6
total lead	total lead	ug/L	0.12	1.22	2.89	1.32	0.46	0.44	0.38	0.3	0.3	0.4	0.28	0.37	0.28	0.6	0.64	1.49	0.7
total nickel	total nickel	ug/L	0.45	1.31	2.23		0.56	0.55	0.47			0.65		0.41			0.51		0.8
total zinc	total zinc	ug/L	3.81	12.2	26.2		4.45	4.16	4.84			7.46		4.27			4.13		7.9
dissolved cadmium	dissolved cadmium	ug/L	0.1 U	0.1 U	0.1 U		0.1 U	0.1 U	0.1 U			0.1 U		0.1 U			0.1 U		0.1 U
dissolved chromium	dissolved chromium	ug/L	0.52	0.46	0.41		0.4	0.4	0.2			0.2		0.2			0.2		0.3
dissolved copper	dissolved copper	ug/L	1.09	1.16	1.16		1.06	0.85	0.31			0.71		1.09			0.8		0.9
dissolved lead	dissolved lead	ug/L	0.43	0.19	0.12	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.17	0.05	0.05	0.05	0.1	0.05	0.1
disolved nickel	disolved nickel	ug/L	0.61	0.49	0.46		0.35	0.34	0.44			0.48		0.3			0.27		0.4
dissolved zinc	dissolved zinc	ug/L	5.73	5.23	6.26		2.3	1.79	3.75			2.22		2.18			1.32		3.4

COP MEAN

Analyte	Analyte	Units	COP 1/4/00	COP 3/7/00	COP 4/4/00	COP 5/2/00	COP 6/6/00	COP 7/11/00	COP 8/8/00	COP 9/5/00	COP 10/2/00	COP 11/7/00	COP 12/4/00	Mean
pH	pH	pH units												#DIV/0!
temp	temp	deg C												#DIV/0!
cond	cond	uS/cm												#DIV/0!
bod	bod	mg/L	2	2	7	6	4	3	3	6	3	2	4	3.818182
ecoli	ecoli	cfu/100 ml	250	18	9	36	36	120	13	310	300	18	55	105.9091
hardness	hardness	mg CaCO3/L	50.4	48.4	60.4	59	69	71.8	79.2	81.6	70	71.2	56.6	65.23636
NO3-N	NO3-N	mg/L	1.3	1	0.24	0.02	0.05	0.12	0.005	0.05	0.18	0.41	0.93	0.391364
OG	OG	mg/L												
TP	TP	mg/L	0.12	0.1	0.19	0.21	0.14	0.47	0.27	0.19	0.19	0.13	0.19	0.2
TSS	TSS	mg/L	34	16	87.5	82	49	45	70	50.3	64.4	39	91.5	57.15455
total cadmium	total cadmium	ug/L												
total chromium	total chromium	ug/L												
total copper	total copper	ug/L												
total lead	total lead	ug/L	1.73	0.93	2.65	2.20	2.63	1.76	2.49	1.02	1.93	1.45	2.95	1.976364
total nickel	total nickel	ug/L												
total zinc	total zinc	ug/L												
dissolved cadmium	dissolved cadmium	ug/L												
dissolved chromium	dissolved chromium	ug/L												
dissolved copper	dissolved copper	ug/L												
dissolved lead	dissolved lead	ug/L	0.24	0.05	0.05	0.05	0.11	0.1	0.05	0.05	0.05	0.05	0.05	0.077273
disolved nickel	disolved nickel	ug/L												
dissolved zinc	dissolved zinc	ug/L												

Sample ID	Site ID	Date	Time	Field Staff Lead	Field Staff Second	Field DO mg/L	Field pH
LAB990398	FCI0	10/27/1999	15:00	Storer	Brown	8.4	8.7
LAB000034	FCI0	1/27/2000	16:45	Adkins	Brown	13.4	7.5
LAB000213	FCI0	3/2/2000	14:15	Adkins	Storer		
LAB000242	FCI0	3/4/2000	9:30	Storer			
LAB000601	FCI0	4/13/2000	10:50	Adkins	Brown		7.3
LAB000627	FCI0	5/1/2000	9:30	Adkins	Brown	7.1	7.1
LAB000760	FCI0	5/30/2000	12:00	Brown	Adkins	6.1	7.9
LAB000841	FCI0	6/27/2000	11:32	Adkins	Wegner	7.4	7.7
LAB000852	FCI0	6/29/2000	11:42	Adkins	Wegner	6.8	7.1
LAB000922	FCI0	7/18/2000	10:50	Adkins	Koblitz	5	7.2
LAB000935	FCI0	7/25/2000	15:05	Wegner	Ernstrom	4.4	7.8
LAB001001	FCI0	8/22/2000	13:15	Wegner	Ernstrom	7.1	8
LAB001012	FCI0	8/29/2000	11:25	Wegner	Ernstrom	6.1	8.2
LAB001041	FCI0	9/12/2000	9:45	Wegner	Ernstrom	6.5	7.7
LAB001053	FCI0	9/14/2000	11:45	Wegner	Ernstrom	5.6	7.7
LAB001108	FCI0	10/24/2000	10:30	Adkins	Brown	7.4	7.9
LAB001132	FCI0	10/31/2000	11:30	Adkins	Brown	6.9	7.9
LAB001321	FCI0	12/19/2000	11:00	Adkins	Brown	9.2	

FCI0 = West of Blue Lake Road in Trailer Park

Bold Results:

E. Coli and Fecal: Values are estimated by laboratory

< Values: Below detection limits

Field Parameters							
Field Temp C	Conductivity uS/cm	Turbidity NTUs	Color	Flow CFS	NH3-N µg/L	BOD5 mg/L	Chloride mg/L
8.8	69		Light brown-grey			6	
6.7	142	5	Clear		**20**	**2**	3.1
			Light Grey		**20**	**2**	2.7
			Med Brown	75	34	2	1.4
13.9	160	14.2	Tan	11.7		2	
14.3	171	3.2	Clear	4.1	**20**	**2**	3.4
14.7	160	3.3	clear		**20**	**2**	3.5
15.2	176	1.6	Clear	1.6	**200**	**2**	4.1
21	168	3.2	clear	5		**2**	
18.6	171	3		2.1		**2**	
20.8	180	4.2	Clear		**20**	**2**	4
19.3	182	7.5	Green			3	
17.4	181	9.4	clear green	3	**20**	3	4
17.1	176	7.5	Cloudy	5.8		2	
21	186	5.6	Cloudy	2	**20**	**2**	4.3
10.9		8.2	clear			**2**	
11.2	165	7.1		9.32	20	**2**	3.7
5.6	123	28.5	cloudy-gray	2.58		2	

Lexington Hills BMP Monitoring

Table 1A: HYDRA Rain Gauge Data
Lexington Hills BMP Monitoring
Event 4: October 9-10, 2000

Daily Rain Report — All Times in Pacific Standard Time

Rain Data Collected by HYDRA - City of Portland — Rain gauge data are reported in inches

Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Gauge 21: Holgate																									
10/6/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/7/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/8/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/9/00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.02	0.01	0.03	0.02	0.05	0.02	0.01	0.00	0.00	0.00	0.00	0.22	0.12	0.00	0.00	0.00	0.00	0.53
10/10/00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.10
Gauge 145: Pleasant Hill																									
10/6/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/7/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/8/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/9/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.03	0.01	0.05	0.10	0.06	0.00	0.01	0.00	0.00	0.20	0.37	0.00	0.00	0.01	0.00	0.86
10/10/00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.04	0.02	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
Average of Gauges 21 and 145																									
10/6/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/7/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/8/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/9/00	0.00	0.00	0.00	0.00	0.00	0.00	0.015	0.01	0.015	0.03	0.015	0.05	0.06	0.035	0.00	0.005	0.00	0.00	0.21	0.245	0.00	0.00	0.005	0.00	0.695
10/10/00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.03	0.02	0.015	0.00	0.005	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.005	0.00	0.00	0.00	0.115

- Storm event duration

Table 2A: Analytical Summary
Lexington Hills BMP Monitoring
FY 2000-01 Event 4: October 9-10, 2000

Grab Parameters	Sample Site: / Units / Lab ID:	Inlet	Outlet
	Units / Lab ID:	FO001715	FO001716
DISSOLVED OXYGEN (FIELD)	mg/L	10.5	10.2
pH (FIELD)	pH Units	7.3	7.1
SPECIFIC CONDUCTANCE (FIELD)	µmhos/cm	45	114
TEMPERATURE (FIELD)	Deg. C	15.2	14.4
E. COLI	CFU/100 ml	1500	3400
FECAL COLIFORM	CFU/100 ml	250	3500
NON-POLAR OIL & GREASE	mg/L	5 U	5 U
TOTAL OIL & GREASE	mg/L	5 U	5 U
Composite Parameters	**Sample Site:**	**Inlet**	**Outlet**
	Units / Lab ID:	**FO001736**	**FO001737**
AMMONIA-NITROGEN	mg/L	0.12	0.13
BOD	mg/L	5	6
COD	mg/L	36 J	28 J
HARDNESS	mg CaCO3/L	31.0	24.8
NITRATE-NITROGEN	mg/L	0.25	0.36
ORTHOPHOSPHATE-PHOSPHORUS	mg/L	0.040	0.030
TOTAL DISSOLVED SOLIDS	mg/L	68	95
TOTAL KJELDAHL NITROGEN	mg/L	0.93	0.96
TOTAL PHOSPHORUS	mg/L	0.33	0.26
TOTAL SOLIDS	mg/L	290	209
TOTAL SUSPENDED SOLIDS	mg/L	222	114
ARSENIC, TOTAL	µg/L	1.89	1.84
CADMIUM, TOTAL	µg/L	0.25	0.43
COPPER, TOTAL	µg/L	11.30	9.25
LEAD, TOTAL	µg/L	4.72	3.59
MERCURY, TOTAL	mg/L	0.0002 U	0.0002 U
SILVER, TOTAL	µg/L	0.1 U	0.1 U
ZINC,TOTAL	µg/L	52.4	38.2
ARSENIC, DISSOLVED	µg/L	0.38	0.38
CADMIUM, DISSOLVED	µg/L	0.1 U	0.11
COPPER, DISSOLVED	µg/L	2.19	1.92
LEAD, DISSOLVED	µg/L	0.1 U	0.1 U
SILVER, DISSOLVED	µg/L	0.1 U	0.1 U
ZINC, DISSOLVED	µg/L	2.88	4.48
TOTAL PARTICLES	# Part/100 ml	75100	29000
5-15 MICRONS	# Part/100 ml	32400	26800
15-25 MICRONS	# Part/100 ml	4500	1600
25-50 MICRONS	# Part/100 ml	36900	500
50-100 MICRONS	# Part/100 ml	1300	100
>100 MICRONS	# Part/100 ml	100 U	100 U

J = Estimate due to laboratory error.
U = Not detected at method reporting limit shown.

FO001715	1	10/9/00	12:35	JBB/WCR	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	7.3	CONC	pH Units	0.1	SM 4500-H B
FO001715	1	10/9/00	12:35	JBB/WCR	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	10.5	CONC	mg/L	0.1	SM 4500-O G
FO001715	1	10/9/00	12:35	JBB/WCR	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	15.2	CONC	Deg. C	0.1	SM 2550 B
FO001715	1	10/9/00	12:35	JBB/WCR	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	45	CONC	µmhos/cm	1	SM 2510 B
FO001715	1	10/9/00	12:35	JBB/WCR	GRAB	STORMWTR	E. COLI	E. COLI	1500	CONC	CFU/100 ml	2	SM 9213 D
FO001715	1	10/9/00	12:35	JBB/WCR	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	2500	CONC	CFU/100 ml	2	SM 9222 D
FO001715	1	10/9/00	12:35	JBB/WCR	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5		mg/L	5	EPA 1664
FO001716	2	10/9/00	12:50	JBB/WCR	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	7.1	CONC	pH Units	0.1	SM 4500-H B
FO001716	2	10/9/00	12:50	JBB/WCR	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	10.2	CONC	mg/L	0.1	SM 4500-O G
FO001716	2	10/9/00	12:50	JBB/WCR	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	14.4	CONC	Deg. C	0.1	SM 2550 B
FO001716	2	10/9/00	12:50	JBB/WCR	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	114	CONC	µmhos/cm	1	SM 2510 B
FO001716	2	10/9/00	12:50	JBB/WCR	GRAB	STORMWTR	E. COLI	E. COLI	3400	CONC	CFU/100 ml	2	SM 9213 D
FO001716	2	10/9/00	12:50	JBB/WCR	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	3500	CONC	CFU/100 ml	2	SM 9222 D
FO001716	2	10/9/00	12:50	JBB/WCR	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5		mg/L	5	EPA 1664
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	222	CONC	mg/L	1	SM 2540 D
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	BOD5	BOD5	5	CONC	mg/L	2	SM 5210 B
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	COD	COD	36	CONC	mg/L	2	SM 5220 D
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.12	CONC	mg/L	0.02	EPA 350.1
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	0.93	CONC	mg/L	0.2	EPA 351.2
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.33	CONC	mg/L	0.03	EPA 365.4
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.04	CONC	mg/L	0.02	EPA 365.1
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.25	CONC	mg/L	0.1	EPA 300.0
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	31	CONC	mg CaCO3/L	1	SM 2340 C
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	11.3	CONC	µg/L	0.2	EPA 200.8
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	52.4	CONC	µg/L	0.5	EPA 200.8
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	1.89	CONC	µg/L	0.1	EPA 200.8
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	<0.1		µg/L	0.1	EPA 200.8
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	0.25	CONC	µg/L	0.1	EPA 200.8
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	4.72	CONC	µg/L	0.1	EPA 200.8
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	2.19	CONC	µg/L	0.2	EPA 200.8
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	2.88	CONC	µg/L	0.5	EPA 200.8
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	0.38	CONC	µg/L	0.1	EPA 200.8
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	MERCURY	MERCURY	<0.0002		mg/L	0.0002	EPA 245.1
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	5-15 microns	32400	CONC	# Part/100ml		OPTICAL
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	15-25 microns	4500	CONC	# Part/100ml		OPTICAL
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	25-50 microns	36900	CONC	# Part/100ml		OPTICAL
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	50-100 microns	1300	CONC	# Part/100ml		OPTICAL
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	>100 microns	<100		# Part/100ml		OPTICAL
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	Total (all sizes)	75100	CONC	# Part/100ml		OPTICAL
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	68	CONC	mg/L	1	SM 2540 BD
FO001736	1	10/9/00	12:27	WCR/JBB	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	290	CONC	mg/L	1	SM 2540 B
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	114	CONC	mg/L	1	SM 2540 D
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	BOD5	BOD5	6	CONC	mg/L	2	SM 5210 B
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	COD	COD	28	CONC	mg/L	2	SM 5220 D
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.13	CONC	mg/L	0.02	EPA 350.1
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	0.96	CONC	mg/L	0.2	EPA 351.2
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.26	CONC	mg/L	0.03	EPA 365.4
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.03	CONC	mg/L	0.02	EPA 365.1
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.36	CONC	mg/L	0.1	EPA 300.0
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	24.8	CONC	mg CaCO3/L	1	SM 2340 C
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	9.25	CONC	µg/L	0.2	EPA 200.8
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	38.2	CONC	µg/L	0.5	EPA 200.8
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	1.84	CONC	µg/L	0.1	EPA 200.8
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	<0.1		µg/L	0.1	EPA 200.8
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	0.43	CONC	µg/L	0.1	EPA 200.8
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	3.59	CONC	µg/L	0.1	EPA 200.8
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	1.92	CONC	µg/L	0.2	EPA 200.8
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	4.48	CONC	µg/L	0.5	EPA 200.8
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	0.38	CONC	µg/L	0.1	EPA 200.8
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	0.11	CONC	µg/L	0.1	EPA 200.8
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	MERCURY	MERCURY	<0.0002		mg/L	0.0002	EPA 245.1
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	5-15 microns	26800	CONC	# Part/100ml		OPTICAL
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	15-25 microns	1600	CONC	# Part/100ml		OPTICAL
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	25-50 microns	500	CONC	# Part/100ml		OPTICAL
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	50-100 microns	100	CONC	# Part/100ml		OPTICAL
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	>100 microns	<100		# Part/100ml		OPTICAL
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	Total (all sizes)	29000	CONC	# Part/100ml		OPTICAL
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	95	CONC	mg/L	1	SM 2540 BD
FO001737	2	10/9/00	14:46	WCR/JBB	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	209	CONC	mg/L	1	SM 2540 B
FO001738	FILTER BLK	10/10/00	15:30	WCR/JBB	GRAB	DIWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	<0.2		µg/L	0.2	EPA 200.8
FO001738	FILTER BLK	10/10/00	15:30	WCR/JBB	GRAB	DIWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	<0.5		µg/L	0.5	EPA 200.8
FO001738	FILTER BLK	10/10/00	15:30	WCR/JBB	GRAB	DIWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8
FO001738	FILTER BLK	10/10/00	15:30	WCR/JBB	GRAB	DIWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8
FO001738	FILTER BLK	10/10/00	15:30	WCR/JBB	GRAB	DIWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8
FO001738	FILTER BLK	10/10/00	15:30	WCR/JBB	GRAB	DIWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	<0.1		µg/L	0.1	EPA 200.8

10/9/00	LAB:	BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, THE CONCENTRATION OF NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
10/9/00	LAB:	BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, THE CONCENTRATION OF NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
10/9/00	LAB:	BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, THE CONCENTRATION OF NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
10/9/00	LAB:	BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, THE CONCENTRATION OF NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
10/11/00	LAB:	BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, THE CONCENTRATION OF NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
10/11/00	LAB:	BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, THE CONCENTRATION OF NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
10/21/00	LAB:	BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, THE CONCENTRATION OF NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
10/9/00	LAB:	BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, THE CONCENTRATION OF NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
10/9/00	LAB:	BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, THE CONCENTRATION OF NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
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10/11/00	LAB:	BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, THE CONCENTRATION OF NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
10/11/00	LAB:	BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, THE CONCENTRATION OF NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
10/21/00	LAB:	BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, THE CONCENTRATION OF NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
10/11/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
10/10/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
10/28/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
10/13/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
10/12/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
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10/21/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
10/17/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
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10/13/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
10/31/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
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10/31/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
10/23/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
10/11/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
10/11/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
10/10/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
10/28/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
10/13/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
10/12/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
10/12/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
10/10/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
10/21/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
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10/17/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
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10/13/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
10/31/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
10/31/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
10/31/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
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10/31/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
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10/31/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
10/23/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
10/11/00	LAB:	THE RESULT FOR COD SHOULD BE CONSIDERED AN ESTIMATE DUE TO LABORATORY ERROR IN SAMPLE HANDLING PROCEDURES.
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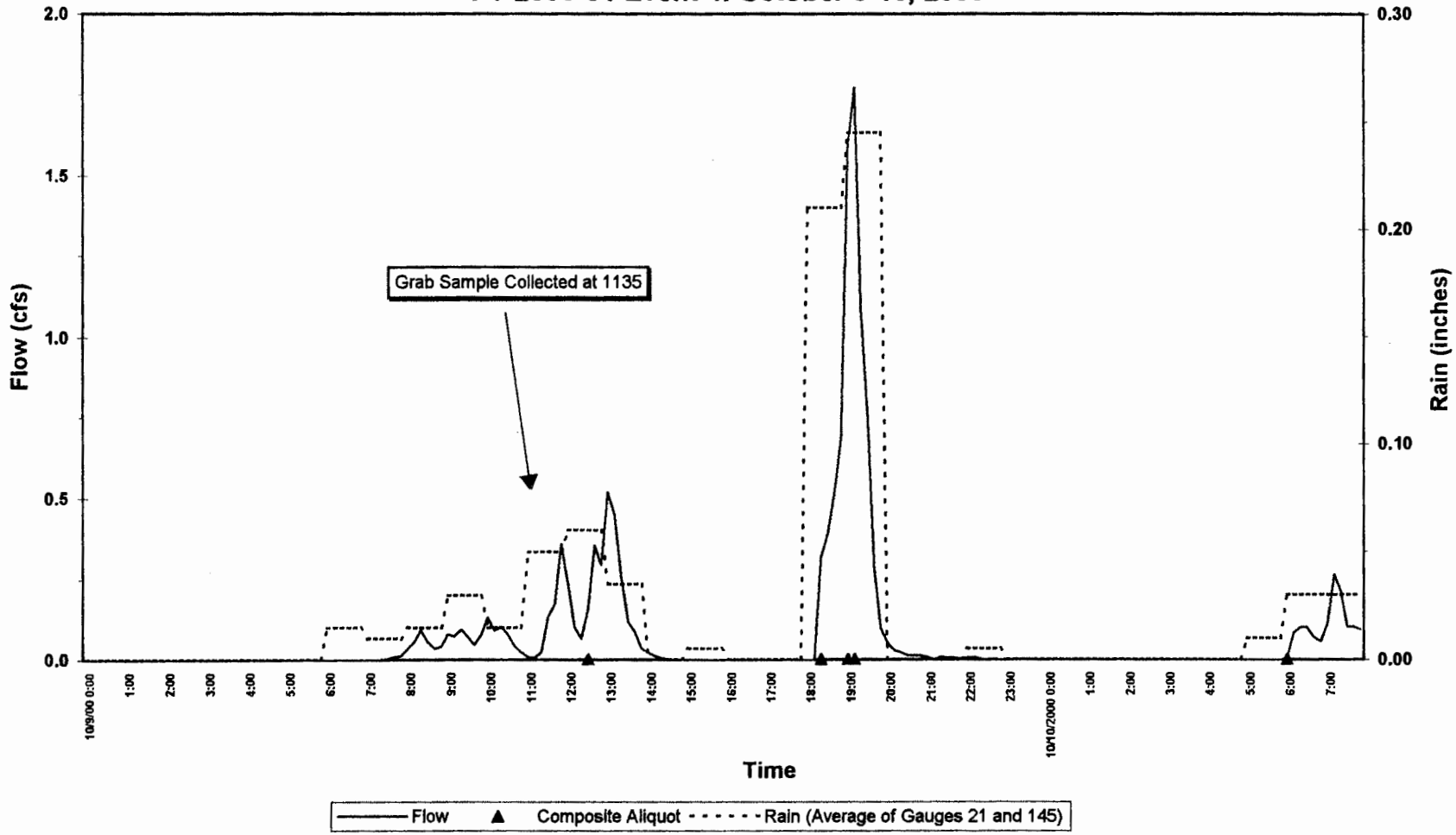
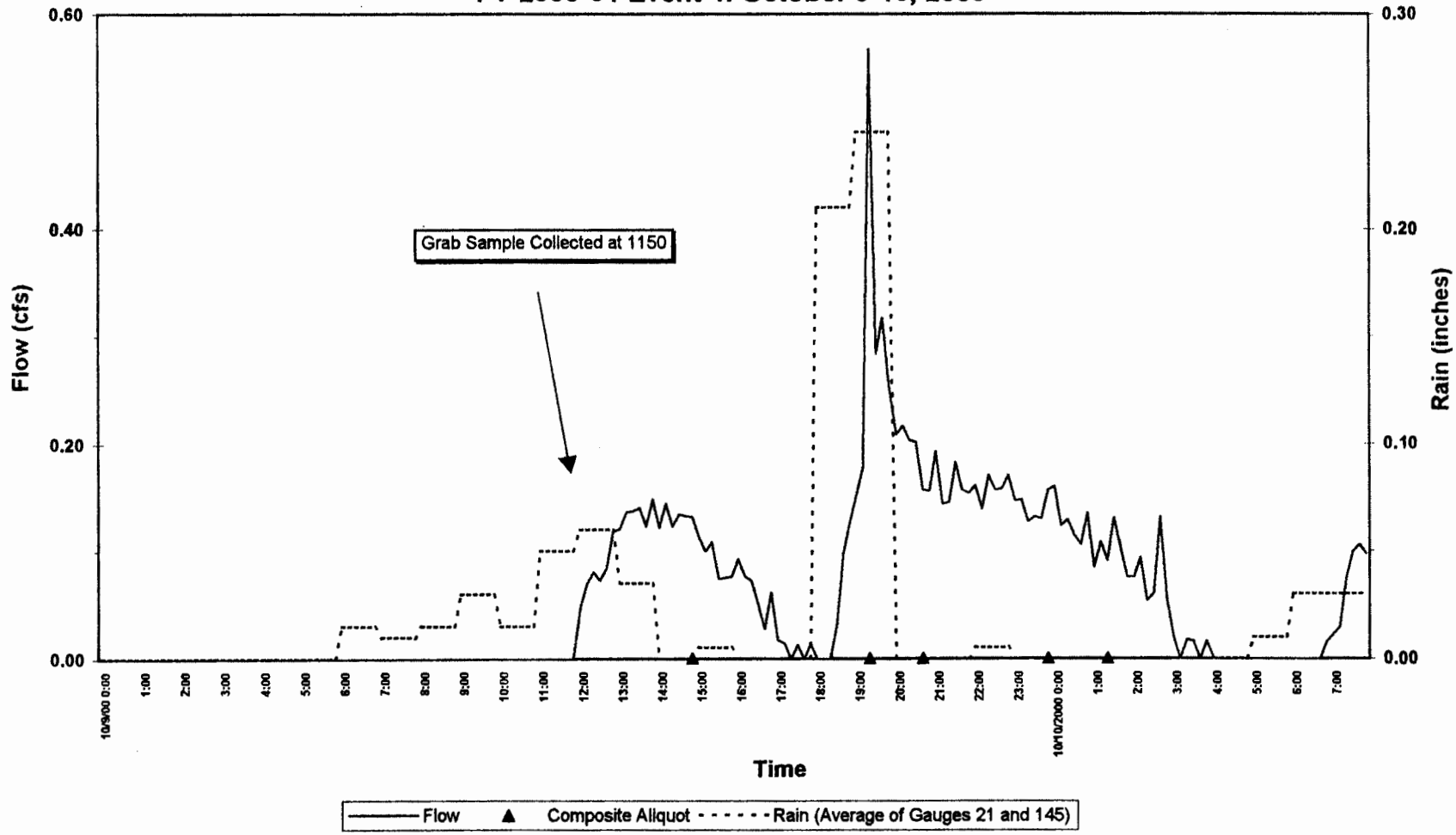
10/17/00		

Figure 3A: Event Inlet Hydrograph
Lexington Hills BMP Monitoring
FY 2000-01 Event 4: October 9-10, 2000



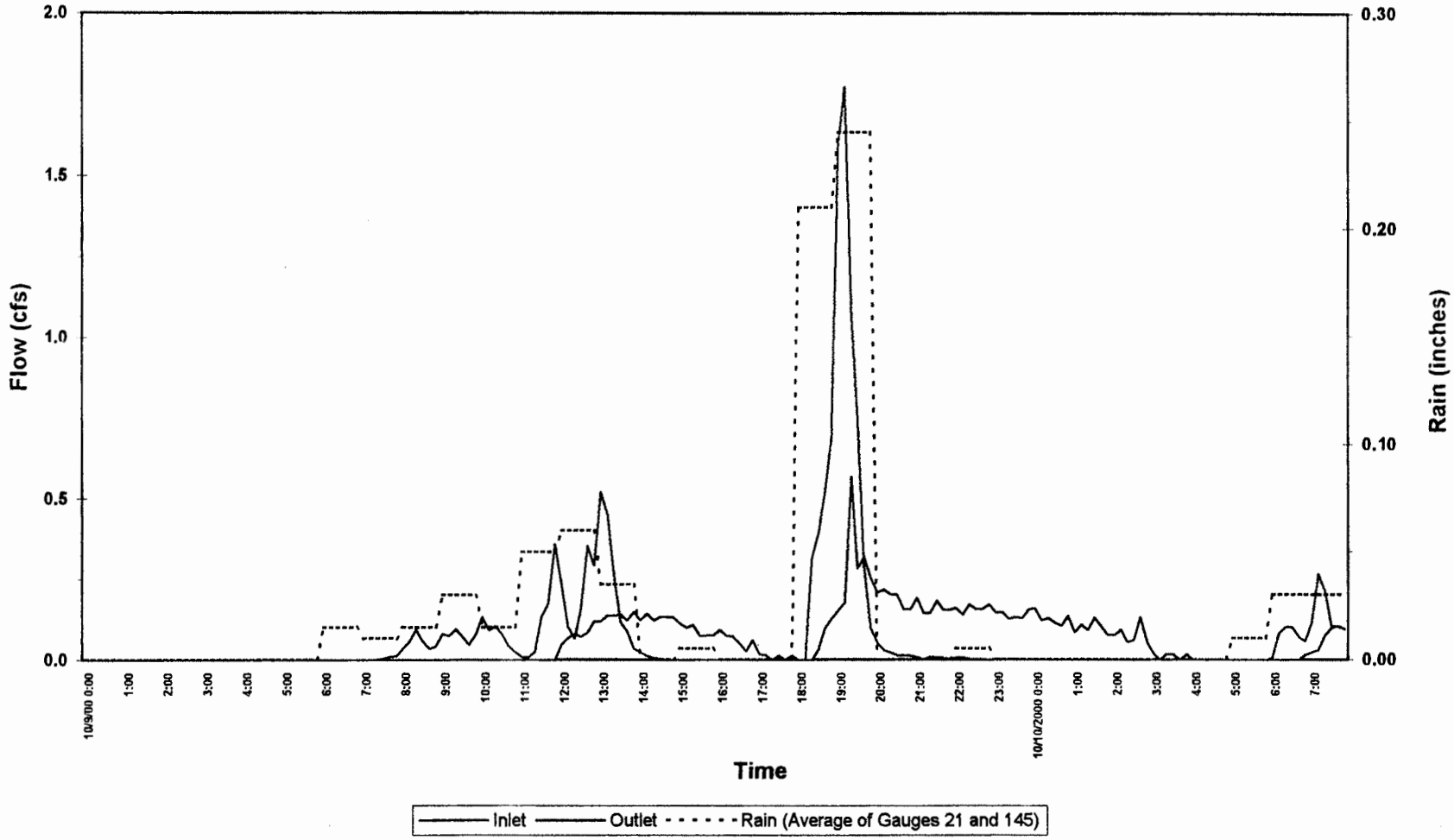
s:\eid\4010.009\datarep\event4\hgraph4.xls (inlet)

Figure 3B: Event Outlet Hydrograph
Lexington Hills BMP Monitoring
FY 2000-01 Event 4: October 9-10, 2000



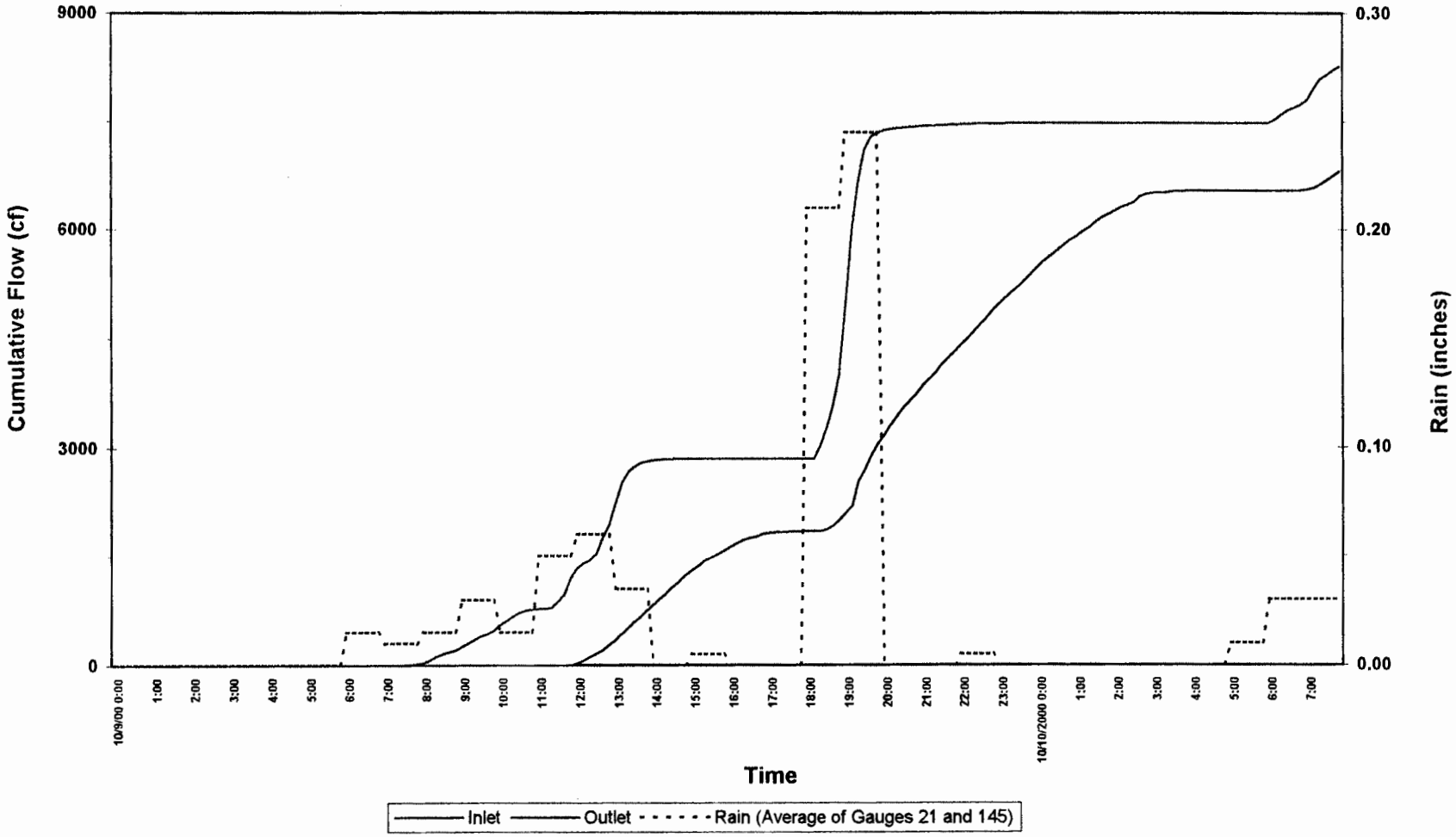
s:\eid\4010.009\datarep\event4\hgraph4.xls (outlet)

Figure 7A: Inlet and Outlet Hydrographs
Lexington Hills BMP Monitoring
FY 2000-01 Event 4: October 9-10, 2000



s:\eid\4010.009\datarep\event4\hgraph4.xls(combochart)

Figure 8A: Cumulative Flow Summary
Lexington Hills BMP Monitoring
FY 2000-01 Event 4: October 9-10, 2000



s:\eid\4010.009\datarep\event4\hgraph4.xls (cumulchart)

Table 1B: HYDRA Rain Gauge Data
Lexington Hills BMP Monitoring
Event 5: March 1-2, 2001

Daily Rain Report
Rain Data Collected by HYDRA - City of Portland

All Times in Pacific Standard Time
Rain gauge data are reported in inches

Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Gauge 21: Holgate																									
2/26/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2/27/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2/28/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/1/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	0.05	0.03	0.07	0.03	0.03	0.00	0.00	0.00	0.00	0.39
3/2/01	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
Gauge 145: Pleasant Hill																									
2/26/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2/27/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2/28/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/1/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.07	0.05	0.04	0.06	0.05	0.03	0.00	0.01	0.00	0.00	0.37
3/2/01	0.06	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
Average of Gauges 21 and 145																									
2/26/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2/27/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2/28/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/1/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.075	0.08	0.05	0.035	0.065	0.04	0.03	0.00	0.005	0.00	0.00	0.38
3/2/01	0.055	0.005	0.00	0.00	0.00	0.005	0.00	0.00	0.00	0.005	0.00	0.00	0.00	0.00	0.00	0.05	0.005	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.125

- Storm event duration

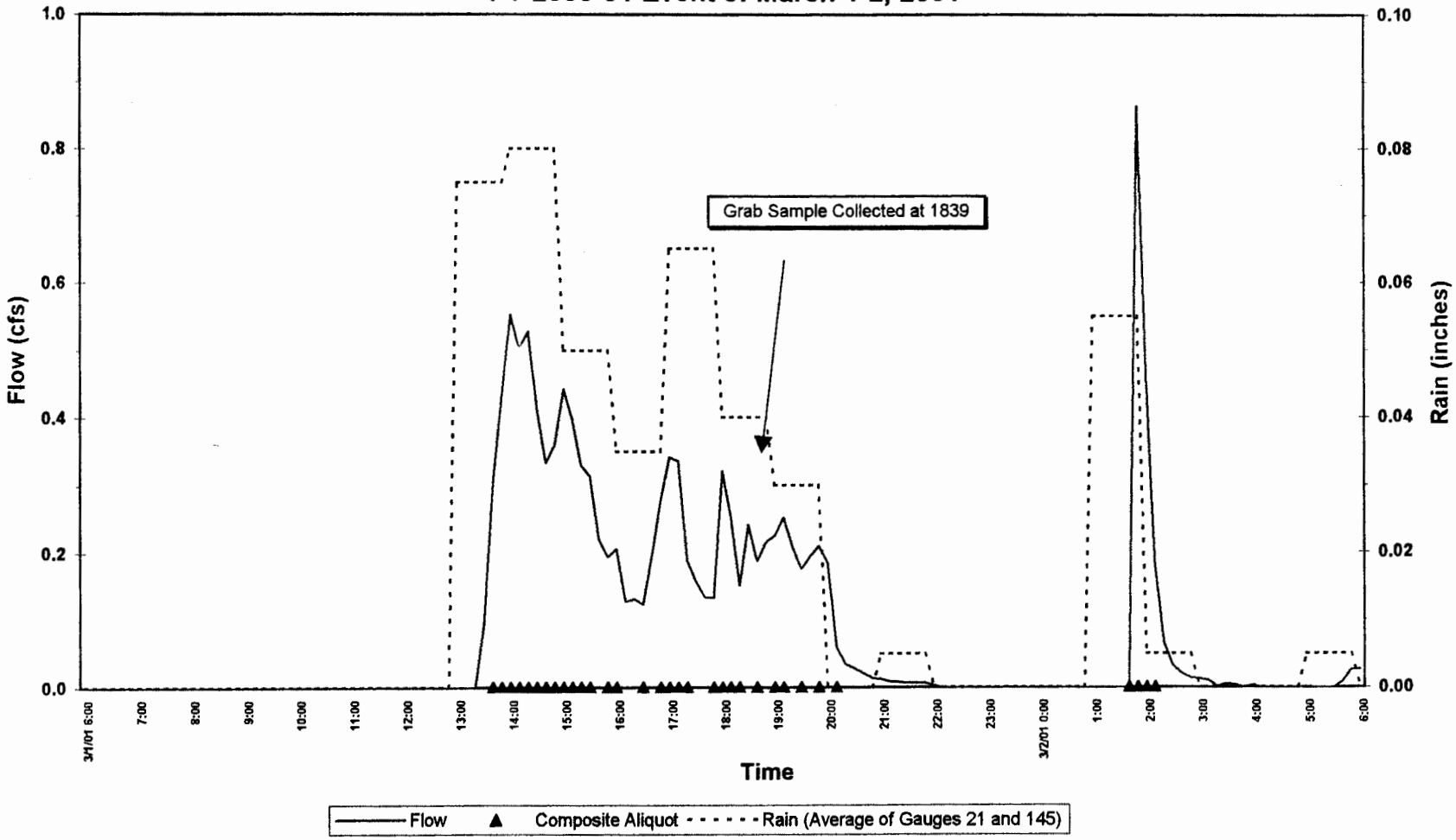
Table 2B: Analytical Summary
Lexington Hills BMP Monitoring
FY 2000-01 Event 5: March 1-2, 2001

Grab Parameters	Sample Site: / Units / Lab ID:	Inlet	Outlet
	Units / Lab ID:	FO010222	FO010223
DISSOLVED OXYGEN (FIELD)	mg/L	11.9	11.7
pH (FIELD)	pH Units	8.0	8.6
SPECIFIC CONDUCTANCE (FIELD)	µmhos/cm	45	52
TEMPERATURE (FIELD)	Deg. C	7.5	7.4
E. COLI	CFU/100 ml	10 U	10 U
FECAL COLIFORM	CFU/100 ml	10 U	9
NON-POLAR OIL & GREASE	mg/L	5 U	5 U
TOTAL OIL & GREASE	mg/L	5 U	5 U
Composite Parameters	**Sample Site: / Units / Lab ID:**	**Inlet**	**Outlet**
	Units / Lab ID:	**FO010024**	**FO010225**
AMMONIA-NITROGEN	mg/L	0.12	0.11
BOD	mg/L	5	6
COD	mg/L	24	27
HARDNESS	mg CaCO3/L	25.8	34.8
NITRATE-NITROGEN	mg/L	0.16	0.20
ORTHOPHOSPHATE-PHOSPHORUS	mg/L	0.029	0.030
TOTAL DISSOLVED SOLIDS	mg/L	63	81
TOTAL KJELDAHL NITROGEN	mg/L	0.63	0.74
TOTAL PHOSPHORUS	mg/L	0.15	0.13
TOTAL SOLIDS	mg/L	140	134
TOTAL SUSPENDED SOLIDS	mg/L	77.0	53.3
ARSENIC, TOTAL	µg/L	1.29	1.14
CADMIUM, TOTAL	µg/L	0.10 U	0.10 U
COPPER, TOTAL	µg/L	7.90	7.43
LEAD, TOTAL	µg/L	2.73	2.03
MERCURY, TOTAL	mg/L	0.0002 U	0.0002 U
SILVER, TOTAL	µg/L	0.10 U	0.10 U
ZINC,TOTAL	µg/L	41.9	34.4
ARSENIC, DISSOLVED	µg/L	0.46	0.57
CADMIUM, DISSOLVED	µg/L	0.10 U	0.10 U
COPPER, DISSOLVED	µg/L	2.04	2.98
LEAD, DISSOLVED	µg/L	0.10 U	0.10 U
SILVER, DISSOLVED	µg/L	0.10 U	0.10 U
ZINC, DISSOLVED	µg/L	1.39	2.44
TOTAL PARTICLES	# Part/100 ml	1474000	1013000
5-15 MICRONS	# Part/100 ml	1304000	993000
15-25 MICRONS	# Part/100 ml	100000	20000
25-50 MICRONS	# Part/100 ml	40000	10000 U
50-100 MICRONS	# Part/100 ml	20000	10000 U
>100 MICRONS	# Part/100 ml	10000	10000 U

U = Not detected at method reporting limit shown.

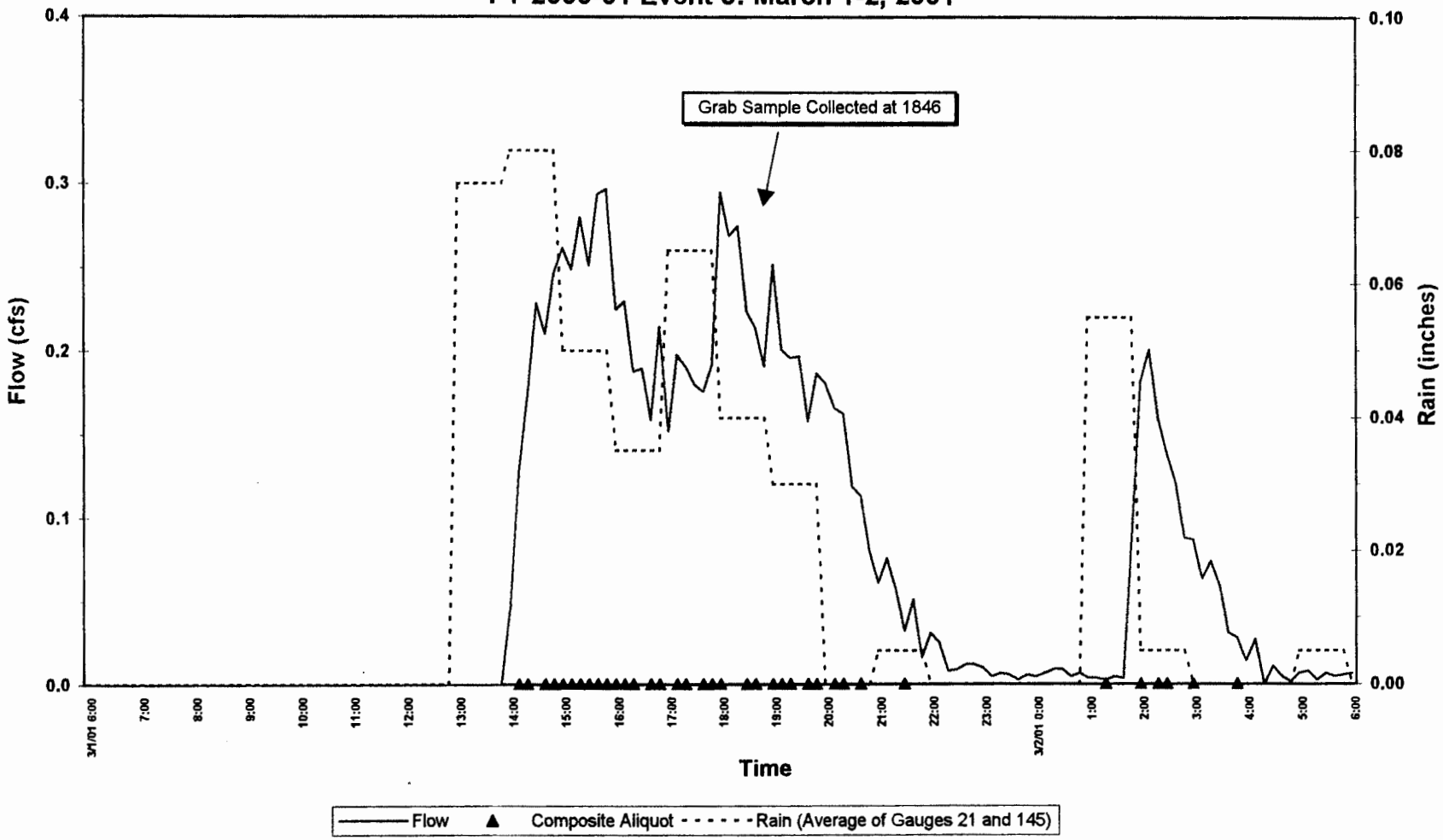
FO010222	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 18:39	JBB/MJH	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	8	CONC	pH Units	0.1	SM 4500-H B	3/1/01 BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL & GREASE IS ALSO <5MG/L.
FO010222	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 18:39	JBB/MJH	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	11.9	CONC	mg/L	0.1	SM 4500-O G	3/1/01 BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL & GREASE IS ALSO <5MG/L.
FO010222	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 18:39	JBB/MJH	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	7.5	CONC	Deg. C	0.1	SM 2550 B	3/1/01 BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL & GREASE IS ALSO <5MG/L.
FO010222	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 18:39	JBB/MJH	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	45	CONC	µmhos/cm	1	SM 2510 B	3/1/01 BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL & GREASE IS ALSO <5MG/L.
FO010222	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 18:39	JBB/MJH	GRAB	STORMWTR	E. COLI	E. COLI	<10	CONC	CFU/100 ml	2	SM 9213 D	3/3/01 BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL & GREASE IS ALSO <5MG/L.
FO010222	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 18:39	JBB/MJH	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	<10	CONC	CFU/100 ml	2	SM 9222 D	3/3/01 BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL & GREASE IS ALSO <5MG/L.
FO010222	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 18:39	JBB/MJH	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5	CONC	mg/L	5	EPA 1664	3/13/01 BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL & GREASE IS ALSO <5MG/L.
FO010223	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 18:46	JBB/MJH	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	8.6	CONC	pH Units	0.1	SM 4500-H B	3/1/01 BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL & GREASE IS ALSO <5MG/L.
FO010223	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 18:46	JBB/MJH	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	11.7	CONC	mg/L	0.1	SM 4500-O G	3/1/01 BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL & GREASE IS ALSO <5MG/L.
FO010223	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 18:46	JBB/MJH	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	7.4	CONC	Deg. C	0.1	SM 2550 B	3/1/01 BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL & GREASE IS ALSO <5MG/L.
FO010223	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 18:46	JBB/MJH	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	52	CONC	µmhos/cm	1	SM 2510 B	3/1/01 BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL & GREASE IS ALSO <5MG/L.
FO010223	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 18:46	JBB/MJH	GRAB	STORMWTR	E. COLI	E. COLI	<10	CONC	CFU/100 ml	2	SM 9213 D	3/3/01 BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL & GREASE IS ALSO <5MG/L.
FO010223	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 18:46	JBB/MJH	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	9	CONC	CFU/100 ml	2	SM 9222 D	3/3/01 BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL & GREASE IS ALSO <5MG/L.
FO010223	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 18:46	JBB/MJH	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5	CONC	mg/L	5	EPA 1664	3/13/01 BECAUSE THE TOTAL OIL & GREASE RESULT IS <5 MG/L, NON POLAR OIL & GREASE IS ALSO <5MG/L.
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	77	CONC	mg/L	1	SM 2540 D	3/2/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	BOD5	BOD5	5	CONC	mg/L	2	SM 5210 B	3/2/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	COD	COD	24	CONC	mg/L	5	SM 5220 D	3/6/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.12	CONC	mg/L	0.02	EPA 350.1	3/5/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	0.63	CONC	mg/L	0.2	EPA 351.2	3/9/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.15	CONC	mg/L	0.03	EPA 365.4	3/9/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.029	CONC	mg/L	0.02	EPA 365.1	3/2/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.16	CONC	mg/L	0.1	EPA 300.0	3/2/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	25.8	CONC	mg CaCO3/L	1	SM 2340 C	3/5/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	7.9	CONC	µg/L	0.2	EPA 200.8	3/7/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	41.9	CONC	µg/L	0.5	EPA 200.8	3/7/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	1.29	CONC	µg/L	0.1	EPA 200.8	3/7/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	<0.10		µg/L	0.1	EPA 200.8	3/7/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	<0.10		µg/L	0.1	EPA 200.8	3/7/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	2.73	CONC	µg/L	0.1	EPA 200.8	3/7/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	2.04	CONC	µg/L	0.2	EPA 200.8	3/7/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	1.39	CONC	µg/L	0.5	EPA 200.8	3/7/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	0.46	CONC	µg/L	0.1	EPA 200.8	3/7/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	3/7/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	3/7/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	3/7/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	MERCURY	MERCURY	<0.0002		mg/L	0.0002	EPA 245.1	3/14/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	5-15 microns	1304000	CONC	# Part/100ml		OPTICAL	3/13/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	15-25 microns	100000	CONC	# Part/100ml		OPTICAL	3/13/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	25-50 microns	40000	CONC	# Part/100ml		OPTICAL	3/13/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	50-100 microns	20000	CONC	# Part/100ml		OPTICAL	3/13/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	>100 microns	10000	CONC	# Part/100ml		OPTICAL	3/13/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	Total (all sizes)	1474000	CONC	# Part/100ml		OPTICAL	3/13/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	63	CONC	mg/L	1	SM 2540 BD	3/14/01
FO010224	1 SE 162ND AVE & FLAVEL DR	POND INLET	3/1/01 13:40	DJH/SMB	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	140	CONC	mg/L	1	SM 2540 B	3/3/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	53.3	CONC	mg/L	1	SM 2540 D	3/2/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	BOD5	BOD5	6	CONC	mg/L	2	SM 5210 B	3/2/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	COD	COD	27	CONC	mg/L	5	SM 5220 D	3/6/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.11	CONC	mg/L	0.02	EPA 350.1	3/5/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	0.74	CONC	mg/L	0.2	EPA 351.2	3/9/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.13	CONC	mg/L	0.03	EPA 365.4	3/9/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.03	CONC	mg/L	0.02	EPA 365.1	3/2/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.2	CONC	mg/L	0.1	EPA 300.0	3/2/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	34.8	CONC	mg CaCO3/L	1	SM 2340 C	3/5/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	7.43	CONC	µg/L	0.2	EPA 200.8	3/7/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	34.4	CONC	µg/L	0.5	EPA 200.8	3/7/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	1.14	CONC	µg/L	0.1	EPA 200.8	3/7/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	<0.10		µg/L	0.1	EPA 200.8	3/7/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	<0.10		µg/L	0.1	EPA 200.8	3/7/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	2.03	CONC	µg/L	0.1	EPA 200.8	3/7/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	2.98	CONC	µg/L	0.2	EPA 200.8	3/7/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	2.44	CONC	µg/L	0.5	EPA 200.8	3/7/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	0.57	CONC	µg/L	0.1	EPA 200.8	3/7/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	3/7/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	3/7/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	3/7/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	MERCURY	MERCURY	<0.0002		mg/L	0.0002	EPA 245.1	3/14/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	5-15 microns	993000	CONC	# Part/100ml		OPTICAL	3/13/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	15-25 microns	20000	CONC	# Part/100ml		OPTICAL	3/13/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	25-50 microns	<10000		# Part/100ml		OPTICAL	3/13/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	50-100 microns	<10000		# Part/100ml		OPTICAL	3/13/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	>100 microns	<10000		# Part/100ml		OPTICAL	3/13/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	Total (all sizes)	1013000	CONC	# Part/100ml		OPTICAL	3/13/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	81	CONC	mg/L	1	SM 2540 BD	3/14/01
FO010225	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	3/1/01 14:10	DJH/SMB	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	134	CONC	mg/L	1	SM 2540 B	3/3/01

Figure 4A: Event Inlet Hydrograph
Lexington Hills BMP Monitoring
FY 2000-01 Event 5: March 1-2, 2001



s:\eid\4010.009\datarep\event5\hgraph5.xls (inlet)

Figure 4B: Event Outlet Hydrograph
Lexington Hills BMP Monitoring
FY 2000-01 Event 5: March 1-2, 2001



s:\eid\4010.009\datarep\event5\hgraph5.xls (outlet)

Figure 7B: Inlet and Outlet Hydrographs
Lexington Hills BMP Monitoring
FY 2000-01 Event 5: March 1-2, 2001

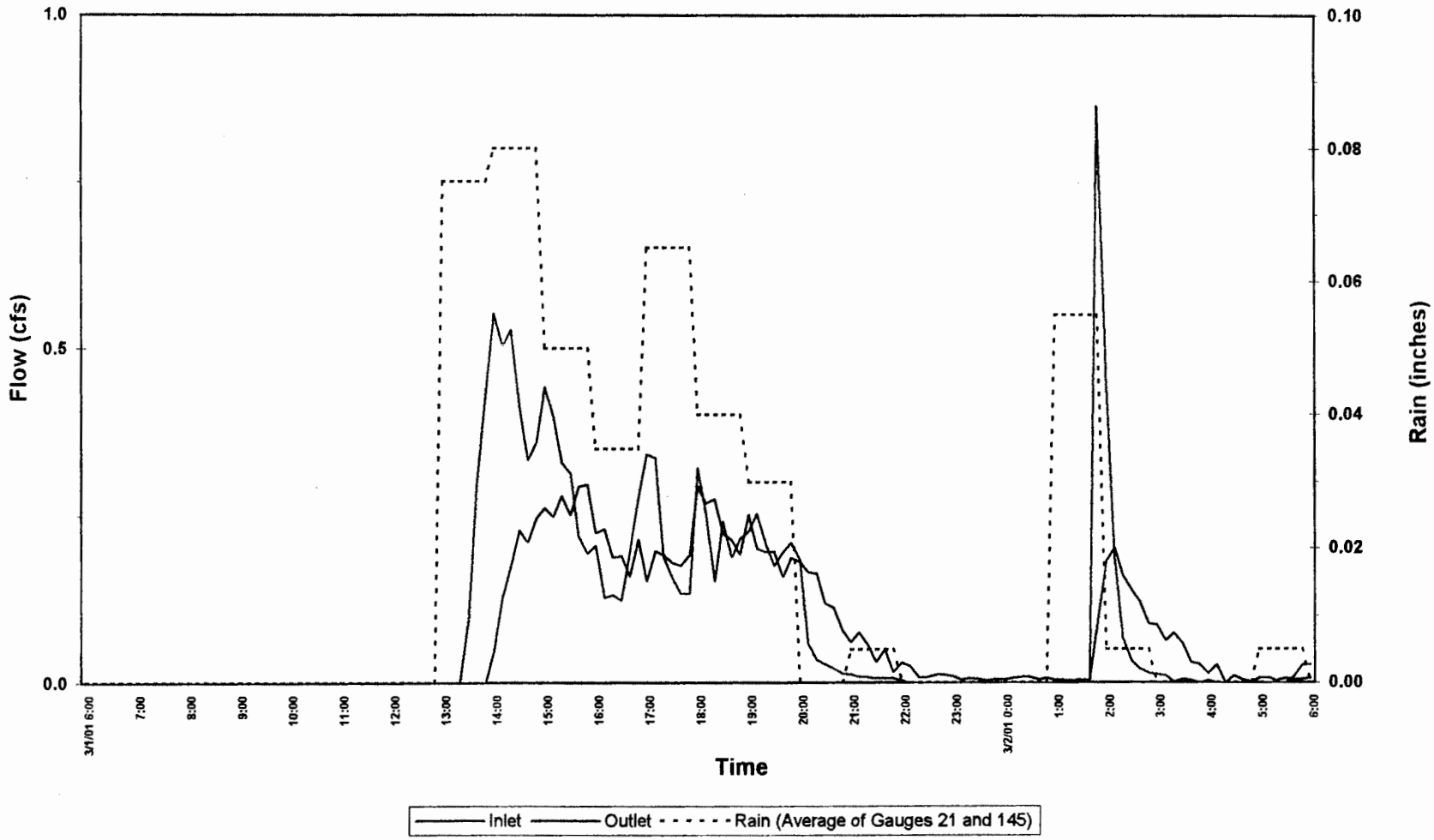


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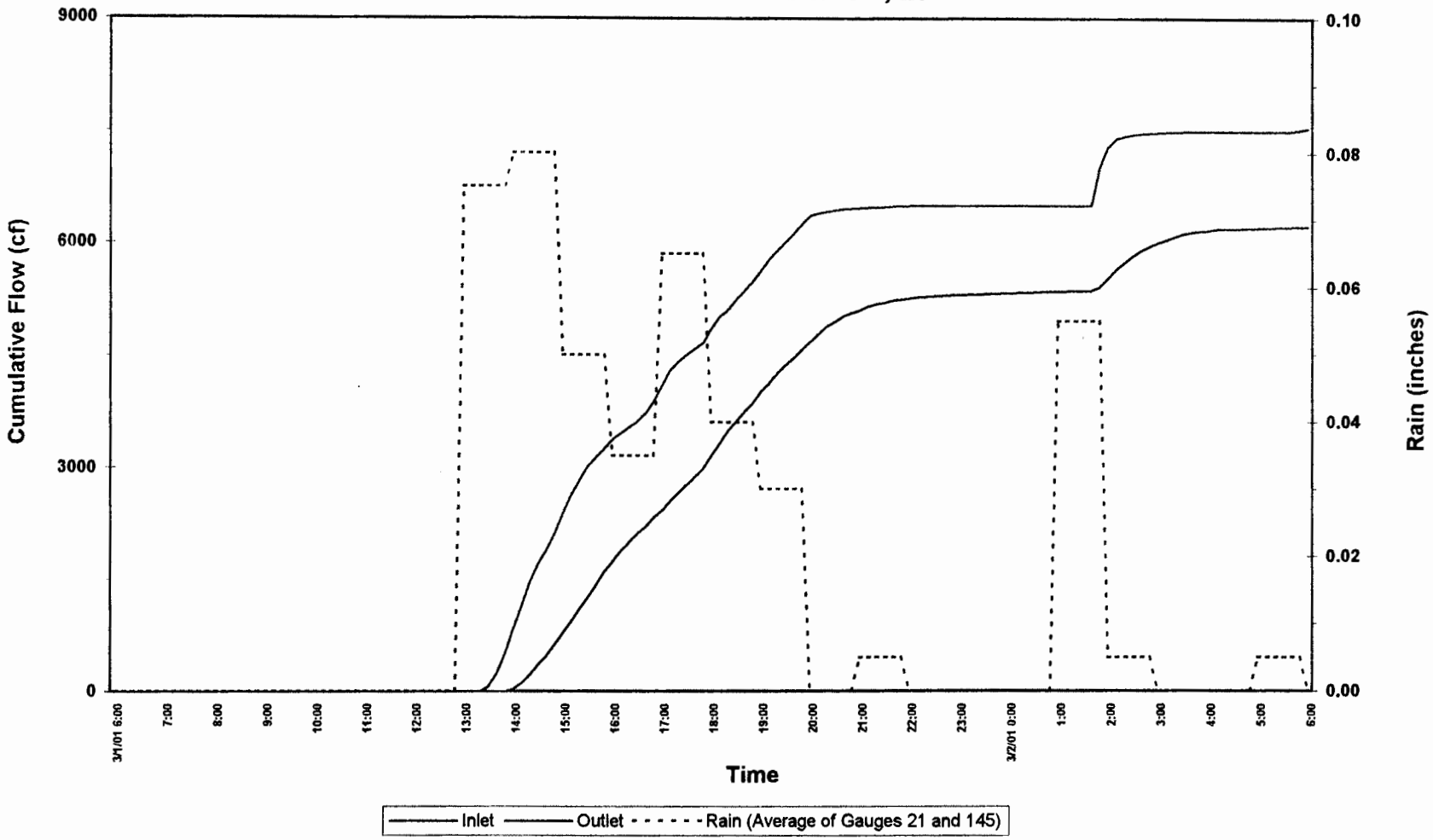
Figure 8B: Cumulative Flow Summary
Lexington Hills BMP Monitoring
FY 2000-01 Event 5: March 1-2, 2001



s:\eid\4010.009\datarep\event5\hgraph5.xls (cumulchart)

Table 1C: HYDRA Rain Gauge Data
Lexington Hills BMP Monitoring
Event 6: May 14, 2001

Daily Rain Report — All Times in Pacific Standard Time

Rain Data Collected by HYDRA - City of Portland — Rain gauge data are reported in inches

Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Gauge 21: Holgate																									
5/11/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5/12/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5/13/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5/14/01	0.00	0.00	0.00	0.01	0.02	0.04	0.01	0.01	0.01	0.05	0.07	0.05	0.02	0.02	0.03	0.05	0.03	0.03	0.04	0.06	0.00	0.00	0.01	0.00	0.56
Gauge 145: Pleasant Hill																									
5/11/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5/12/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5/13/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01
5/14/01	0.00	0.00	0.00	0.00	0.03	0.03	0.01	0.01	0.01	0.05	0.10	0.06	0.02	0.03	0.04	0.05	0.06	0.03	0.05	0.03	0.00	0.00	0.00	0.01	0.62
Average of Gauges 21 and 145																									
5/11/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5/12/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5/13/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5/14/01	0.00	0.00	0.00	0.005	0.025	0.035	0.01	0.01	0.01	0.05	0.085	0.055	0.02	0.025	0.035	0.05	0.045	0.03	0.045	0.045	0.00	0.00	0.005	0.005	0.59

- Storm event duration

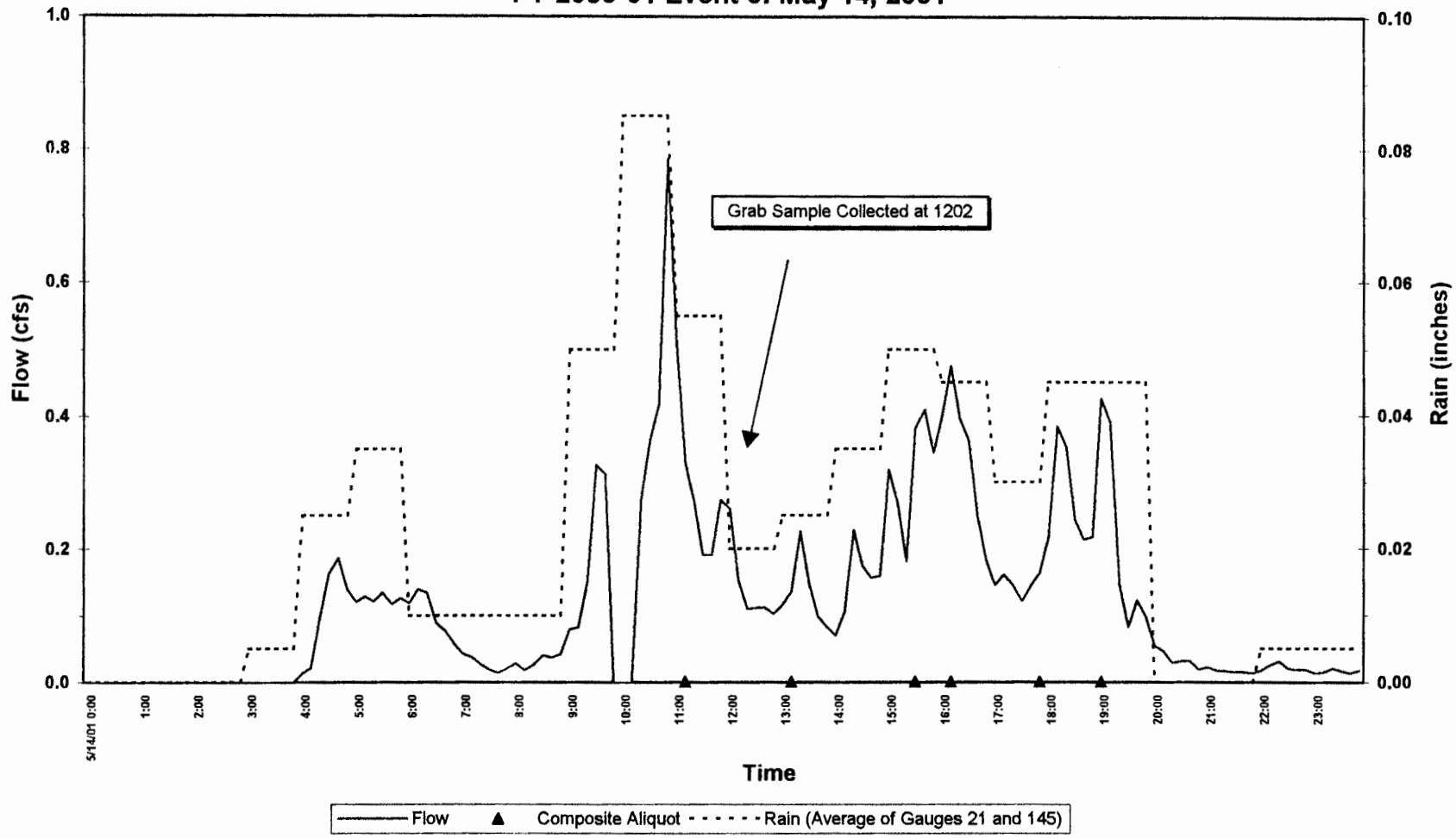
Table 2C: Analytical Summary
Lexington Hills BMP Monitoring
FY 2000-01 Event 6: May 14, 2001

Grab Parameters	Sample Site: / Units / Lab ID:	Inlet	Outlet
	Units / Lab ID:	FO010556	FO010557
DISSOLVED OXYGEN (FIELD)	mg/L	10.2	9.7
pH (FIELD)	pH Units	6.1	6.9
SPECIFIC CONDUCTANCE (FIELD)	µmhos/cm	30	62
TEMPERATURE (FIELD)	Deg. C	12.8	12.6
E. COLI	CFU/100 ml	520	1700
FECAL COLIFORM	CFU/100 ml	1500	1600
NON-POLAR OIL & GREASE	mg/L	5 U	5 U
TOTAL OIL & GREASE	mg/L	5 U	5 U
Composite Parameters	**Sample Site:**	**Inlet**	**Outlet**
	Units / Lab ID:	**FO010561**	**FO010562**
AMMONIA-NITROGEN	mg/L	0.084	0.074
BOD	mg/L	4	6
COD	mg/L	12	26
HARDNESS	mg CaCO3/L	20.8	27.0
NITRATE-NITROGEN	mg/L	0.13	0.13
ORTHOPHOSPHATE-PHOSPHORUS	mg/L	0.025	0.025
TOTAL DISSOLVED SOLIDS	mg/L	54	73
TOTAL KJELDAHL NITROGEN	mg/L	0.58	0.83
TOTAL PHOSPHORUS	mg/L	0.11	0.12
TOTAL SOLIDS	mg/L	95	99
TOTAL SUSPENDED SOLIDS	mg/L	41.2	26
ARSENIC, TOTAL	µg/L	2.49	1.84
CADMIUM, TOTAL	µg/L	0.10 U	0.10 U
COPPER, TOTAL	µg/L	5.40	7.59
LEAD, TOTAL	µg/L	1.67	1.28
MERCURY, TOTAL	mg/L	0.0002 U	0.0002 U
SILVER, TOTAL	µg/L	0.10 U	0.10 U
ZINC,TOTAL	µg/L	23.1	20.1
ARSENIC, DISSOLVED	µg/L	1.59	1.22
CADMIUM, DISSOLVED	µg/L	0.10 U	0.10 U
COPPER, DISSOLVED	µg/L	2.59	4.78
LEAD, DISSOLVED	µg/L	0.10 U	0.10 U
SILVER, DISSOLVED	µg/L	0.10 U	0.10 U
ZINC, DISSOLVED	µg/L	4.58	4.73
TOTAL PARTICLES	# Part/100 ml	168500	168400
5-15 MICRONS	# Part/100 ml	126900	149900
15-25 MICRONS	# Part/100 ml	23100	11500
25-50 MICRONS	# Part/100 ml	12000	7000
50-100 MICRONS	# Part/100 ml	6000	100 U
>100 MICRONS	# Part/100 ml	500	100 U

U = Not detected at method reporting limit shown

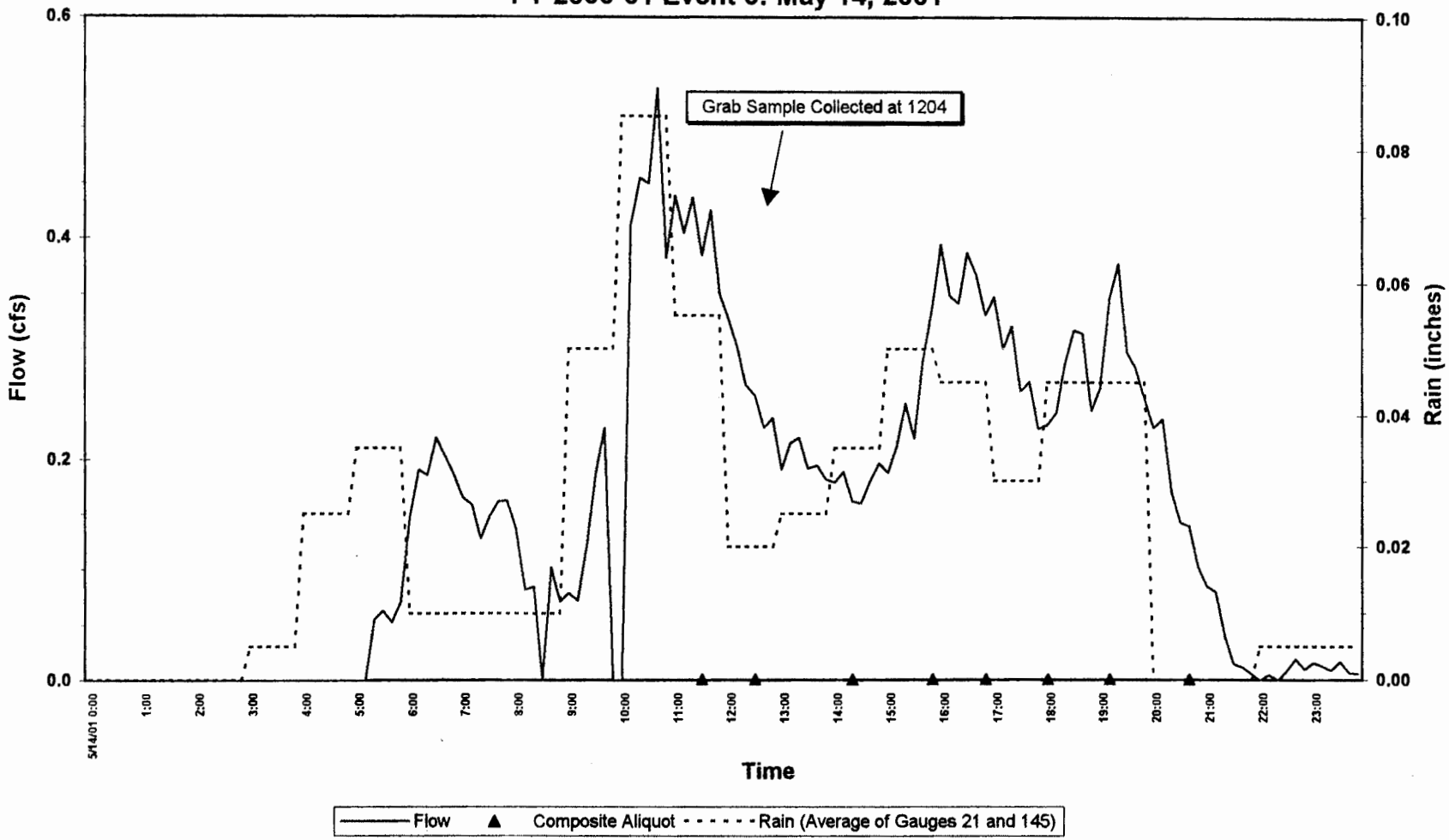
FO010556	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	12:02	WCR/JBB	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	6.1	CONC	pH Units	0.1	SM 4500-H B	5/14/01	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010556	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	12:02	WCR/JBB	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	10.2	CONC	mg/L	0.1	SM 4500-O G	5/14/01	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010556	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	12:02	WCR/JBB	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	12.8	CONC	Deg. C	0.1	SM 2550 B	5/14/01	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010556	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	12:02	WCR/JBB	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	30	CONC	µmhos/cm	1	SM 2510 B	5/14/01	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010556	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	12:02	WCR/JBB	GRAB	STORMWTR	E. COLI	E. COLI	520	CONC	CFU/100 ml	2	SM 9213 D	5/16/01	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010556	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	12:02	WCR/JBB	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	1500	CONC	CFU/100 ml	2	SM 9222 D	5/16/01	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010556	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	12:02	WCR/JBB	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5		mg/L	5	EPA 1664	5/18/01	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010557	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	12:04	WCR/JBB	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	6.9	CONC	pH Units	0.1	SM 4500-H B	5/14/01	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010557	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	12:04	WCR/JBB	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	9.7	CONC	mg/L	0.1	SM 4500-O G	5/14/01	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010557	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	12:04	WCR/JBB	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	12.6	CONC	Deg. C	0.1	SM 2550 B	5/14/01	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010557	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	12:04	WCR/JBB	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	62	CONC	µmhos/cm	1	SM 2510 B	5/14/01	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010557	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	12:04	WCR/JBB	GRAB	STORMWTR	E. COLI	E. COLI	1700	CONC	CFU/100 ml	2	SM 9213 D	5/16/01	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010557	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	12:04	WCR/JBB	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	1600	CONC	CFU/100 ml	2	SM 9222 D	5/16/01	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010557	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	12:04	WCR/JBB	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5		mg/L	5	EPA 1664	5/18/01	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	41.2	CONC	mg/L	1	SM 2540 D	5/15/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	BOD5	BOD5	4	CONC	mg/L	2	SM 5210 B	5/20/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	COD	COD	12	CONC	mg/L	5	SM 5220 D	5/18/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.084	CONC	mg/L	0.02	EPA 350.1	5/21/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	0.58	CONC	mg/L	0.2	EPA 351.2	5/25/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.11	CONC	mg/L	0.03	EPA 365.4	5/22/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.025	CONC	mg/L	0.02	EPA 365.1	5/15/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.13	CONC	mg/L	0.1	EPA 300.0	5/15/01	
FO010581	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	20.8	CONC	mg CaCO3/L	1	SM 2340 C	5/18/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	5.4	CONC	µg/L	0.2	EPA 200.8	5/17/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	23.1	CONC	µg/L	0.5	EPA 200.8	5/17/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	2.49	CONC	µg/L	0.1	EPA 200.8	5/17/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	<0.10		µg/L	0.1	EPA 200.8	5/17/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	<0.10		µg/L	0.1	EPA 200.8	5/17/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	1.67	CONC	µg/L	0.1	EPA 200.6	5/17/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	2.59	CONC	µg/L	0.2	EPA 200.8	5/17/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	4.58	CONC	µg/L	0.5	EPA 200.8	5/17/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	1.59	CONC	µg/L	0.1	EPA 200.8	5/17/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	5/17/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	5/17/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	5/17/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	MERCURY	MERCURY	<0.0002		mg/L	0.0002	EPA 245.1	5/16/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	5-15 microns	126900	CONC	# Part/100ml		OPTICAL	6/6/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	15-25 microns	23100	CONC	# Part/100ml		OPTICAL	6/6/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	25-50 microns	12000	CONC	# Part/100ml		OPTICAL	6/6/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	50-100 microns	6000	CONC	# Part/100ml		OPTICAL	6/6/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	>100 microns	500	CONC	# Part/100ml		OPTICAL	6/6/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	Total (all sizes)	168500	CONC	# Part/100ml		OPTICAL	6/6/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	54	CONC	mg/L	1	SM 2540 BD	5/17/01	
FO010561	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/14/01	11:09	JBB/MJH	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	95	CONC	mg/L	1	SM 2540 B	5/16/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	26	CONC	mg/L	1	SM 2540 D	5/15/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	BOD5	BOD5	6	CONC	mg/L	2	SM 5210 B	5/20/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	COD	COD	26	CONC	mg/L	5	SM 5220 D	5/18/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.074	CONC	mg/L	0.02	EPA 350.1	5/21/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	0.83	CONC	mg/L	0.2	EPA 351.2	5/25/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.12	CONC	mg/L	0.03	EPA 365.4	5/22/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.025	CONC	mg/L	0.02	EPA 365.1	5/15/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.13	CONC	mg/L	0.1	EPA 300.0	5/15/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	27	CONC	mg CaCO3/L	1	SM 2340 C	5/18/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	7.59	CONC	µg/L	0.2	EPA 200.8	5/17/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	20.1	CONC	µg/L	0.5	EPA 200.8	5/17/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	1.84	CONC	µg/L	0.1	EPA 200.8	5/17/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	<0.10		µg/L	0.1	EPA 200.8	5/17/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	<0.10		µg/L	0.1	EPA 200.8	5/17/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	1.28	CONC	µg/L	0.1	EPA 200.8	5/17/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	4.78	CONC	µg/L	0.2	EPA 200.8	5/17/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	4.73	CONC	µg/L	0.5	EPA 200.8	5/17/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	1.22	CONC	µg/L	0.1	EPA 200.8	5/17/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	5/17/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	5/17/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	5/17/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	MERCURY	MERCURY	<0.0002		mg/L	0.0002	EPA 245.1	5/16/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	5-15 microns	149900	CONC	# Part/100ml		OPTICAL	6/6/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	15-25 microns	11500	CONC	# Part/100ml		OPTICAL	6/6/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	25-50 microns	7000	CONC	# Part/100ml		OPTICAL	6/6/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	50-100 microns	<100		# Part/100ml		OPTICAL	6/6/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	>100 microns	<100		# Part/100ml		OPTICAL	6/6/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	Total (all sizes)	168400	CONC	# Part/100ml		OPTICAL	6/6/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	73	CONC	mg/L	1	SM 2540 BD	5/17/01	
FO010562	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/14/01	11:29	JBB/MJH	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	99	CONC	mg/L	1	SM 2540 B	5/16/01	

Figure 5A: Event Inlet Hydrograph
Lexington Hills BMP Monitoring
FY 2000-01 Event 6: May 14, 2001



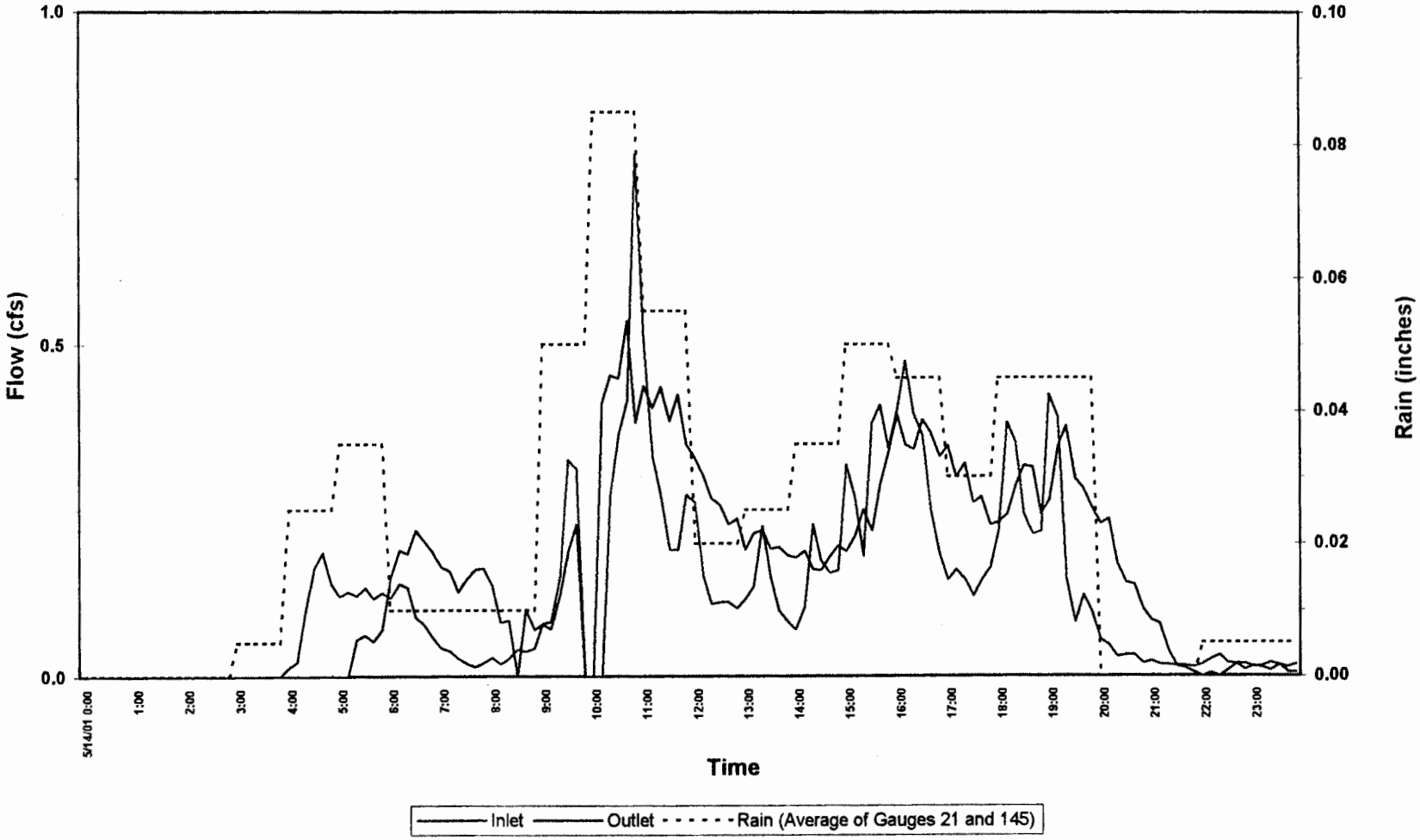
s:\eid\4010.009\datarep\event6\hgraph6.xls (inlet)

Figure 5B: Event Outlet Hydrograph
Lexington Hills BMP Monitoring
FY 2000-01 Event 6: May 14, 2001



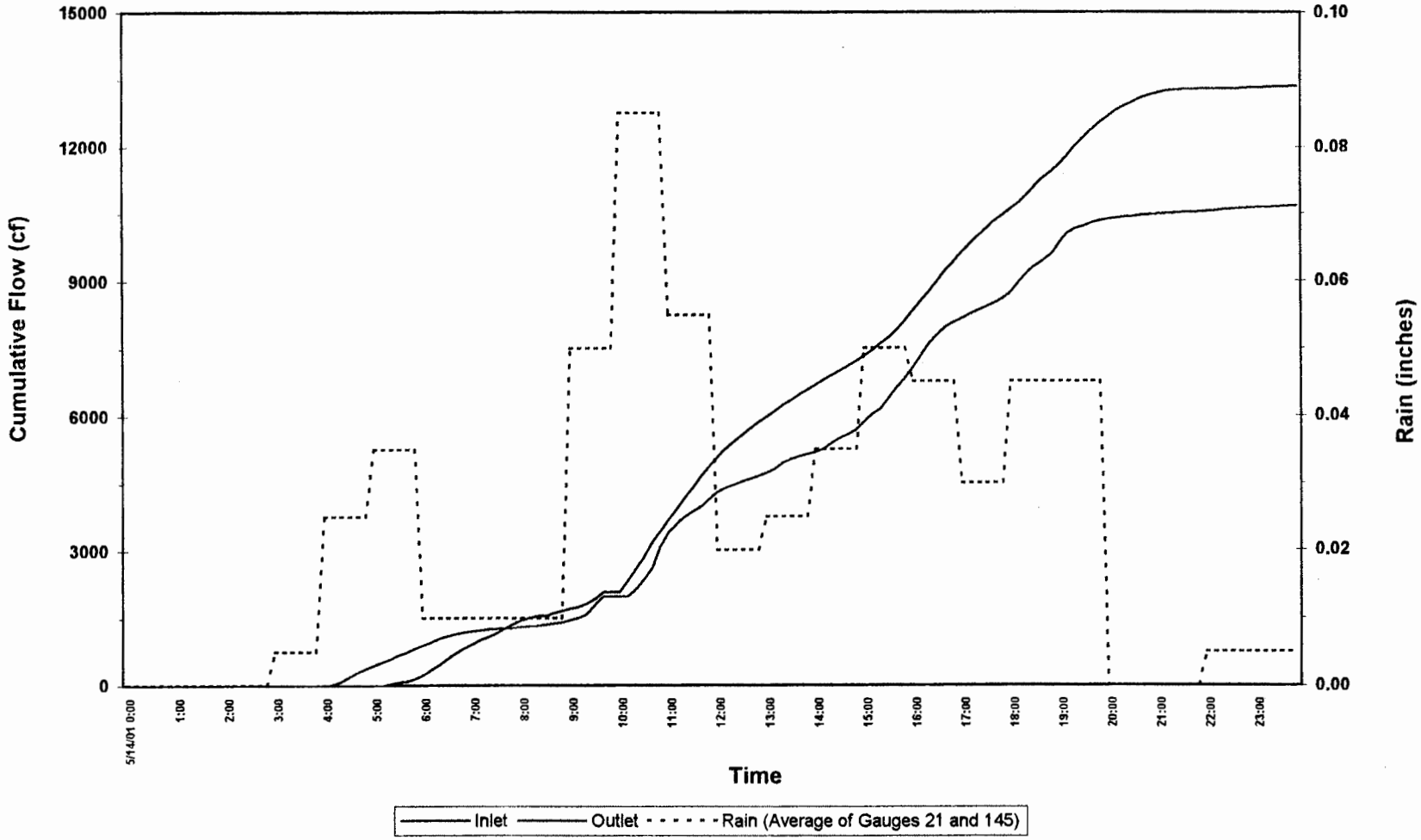
s:\eid\4010.009\datarep\event5\hgraph5.xls (outlet)

Figure 7C: Inlet and Outlet Hydrographs
Lexington Hills BMP Monitoring
FY 2000-01 Event 6: May 14, 2001



s:\eid\4010.009\datarep\event6\hgraph6.xls(combochart)

Figure 8C: Cumulative Flow Summary
Lexington Hills BMP Monitoring
FY 2000-01 Event 6: May 14, 2001



s:\eid\4010.009\datarep\event6\hgraph6.xls (cumulchart)

Table 1D: HYDRA Rain Gauge Data
Lexington Hills BMP Monitoring
Event 7: May 15-16, 2001

Daily Rain Report — All Times in Pacific Standard Time
Rain Data Collected by HYDRA - City of Portland — Rain gauge data are reported in inches

Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Gauge 21: Holgate																									
5/12/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5/13/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5/14/01	0.00	0.00	0.00	0.01	0.02	0.04	0.01	0.01	0.01	0.05	0.07	0.05	0.02	0.02	0.03	0.05	0.03	0.03	0.04	0.06	0.00	0.00	0.01	0.00	0.56
5/15/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.02	0.01	0.01	0.09	0.05	0.00	0.00	0.00	0.00	0.00	0.21
5/16/01	0.00	0.01	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
Gauge 145: Pleasant Hill																									
5/12/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5/13/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5/14/01	0.00	0.00	0.00	0.00	0.03	0.03	0.01	0.01	0.01	0.05	0.10	0.06	0.02	0.03	0.04	0.05	0.06	0.03	0.05	0.03	0.00	0.00	0.00	0.01	0.62
5/15/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.01	0.01	0.04	0.00	0.01	0.04	0.07	0.00	0.00	0.00	0.00	0.00	0.28
5/16/01	0.01	0.00	0.03	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
Average of Gauges 21 and 145																									
5/12/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5/13/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5/14/01	0.00	0.00	0.00	0.005	0.025	0.035	0.01	0.01	0.01	0.05	0.085	0.055	0.02	0.025	0.035	0.05	0.045	0.03	0.045	0.045	0.00	0.00	0.005	0.005	0.59
5/15/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.055	0.005	0.015	0.03	0.005	0.01	0.065	0.06	0.000	0.00	0.00	0.00	0.00	0.25
5/16/01	0.005	0.005	0.035	0.055	0.00	0.000	0.00	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10

- Storm event duration

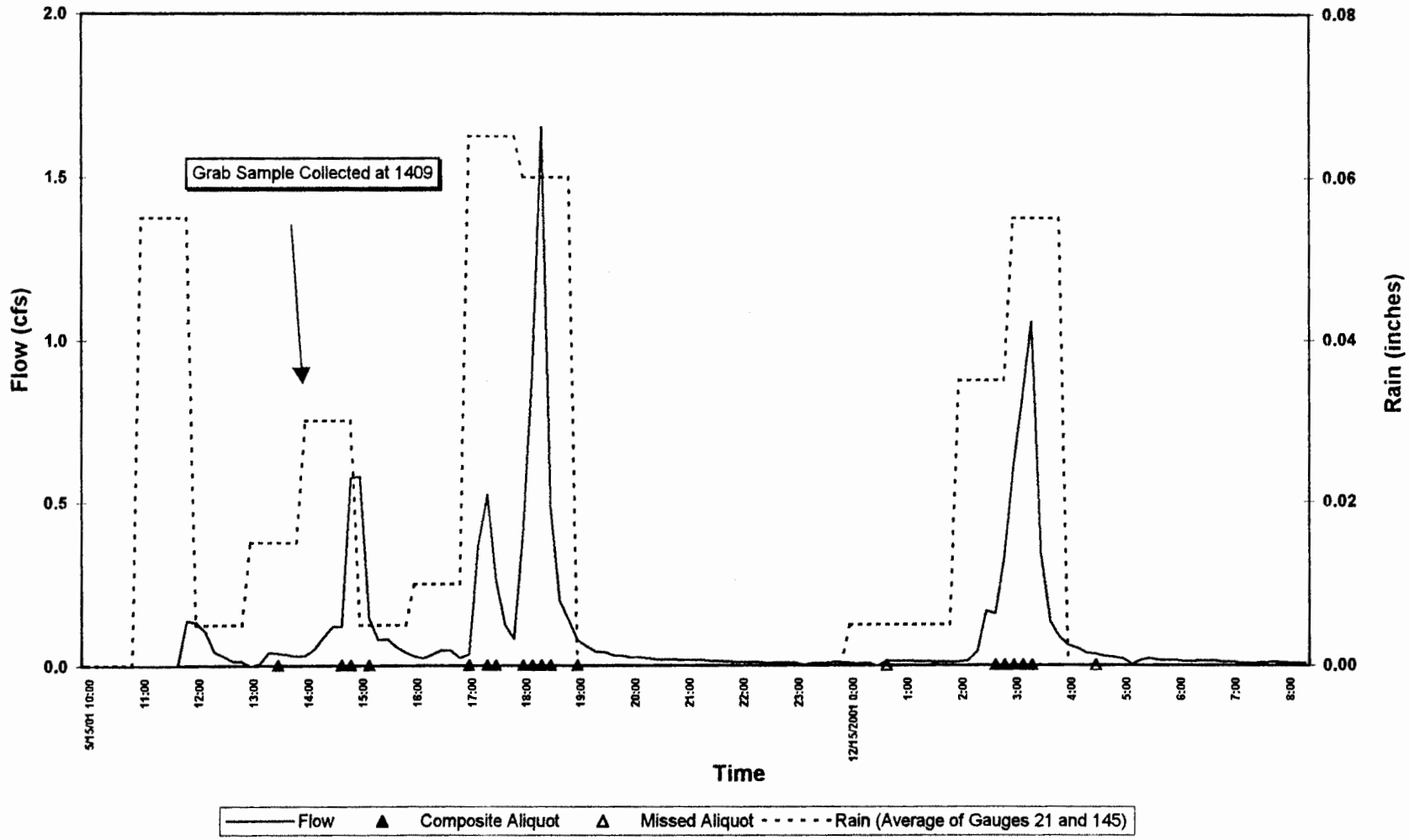
Table 2D: Analytical Summary
Lexington Hills BMP Monitoring
FY 2000-01 Event 7: May 15-16, 2001

Grab Parameters	Sample Site: / Units / Lab ID:	Inlet	Outlet
		FO010574	FO010575
DISSOLVED OXYGEN (FIELD)	mg/L	10.4	17.1
pH (FIELD)	pH Units	6.7	9.3
SPECIFIC CONDUCTANCE (FIELD)	µmhos/cm	95	94
TEMPERATURE (FIELD)	Deg. C	12.7	15.6
E. COLI	CFU/100 ml	490	10 U
FECAL COLIFORM	CFU/100 ml	550	45
NON-POLAR OIL & GREASE	mg/L	5 U	5 U
TOTAL OIL & GREASE	mg/L	5 U	5 U
Composite Parameters	**Sample Site: / Units / Lab ID:**	**Inlet**	**Outlet**
		FO010576	**FO010577**
AMMONIA-NITROGEN	mg/L	0.055	0.032
BOD	mg/L	4	5
COD	mg/L	27	20
HARDNESS	mg CaCO3/L	25 J	30 J
NITRATE-NITROGEN	mg/L	0.13	0.14
ORTHOPHOSPHATE-PHOSPHORUS	mg/L	0.021	0.02 U
TOTAL DISSOLVED SOLIDS	mg/L	60	63
TOTAL KJELDAHL NITROGEN	mg/L	0.73	0.61
TOTAL PHOSPHORUS	mg/L	0.28	0.17
TOTAL SOLIDS	mg/L	239	139
TOTAL SUSPENDED SOLIDS	mg/L	179	76.0
ARSENIC, TOTAL	µg/L	3.64	2.70
CADMIUM, TOTAL	µg/L	0.15	0.10 U
COPPER, TOTAL	µg/L	11.6	8.86
LEAD, TOTAL	µg/L	4.80	2.72
MERCURY, TOTAL	mg/L	0.0002 U	0.0002 U
SILVER, TOTAL	µg/L	0.10 U	0.10 U
ZINC,TOTAL	µg/L	47.8	25.7
ARSENIC, DISSOLVED	µg/L	1.37	1.24
CADMIUM, DISSOLVED	µg/L	0.10 U	0.10 U
COPPER, DISSOLVED	µg/L	1.61	2.75
LEAD, DISSOLVED	µg/L	0.10 U	0.10 U
SILVER, DISSOLVED	µg/L	0.10 U	0.10 U
ZINC, DISSOLVED	µg/L	1.28	1.59
TOTAL PARTICLES	# Part/100 ml	313900	348900
5-15 MICRONS	# Part/100 ml	262700	330900
15-25 MICRONS	# Part/100 ml	27600	8000
25-50 MICRONS	# Part/100 ml	19100	7000
50-100 MICRONS	# Part/100 ml	4500	3000
>100 MICRONS	# Part/100 ml	100 U	100 U

J = Estimate due to laboratory error
U = Not detected at method reporting limit shown

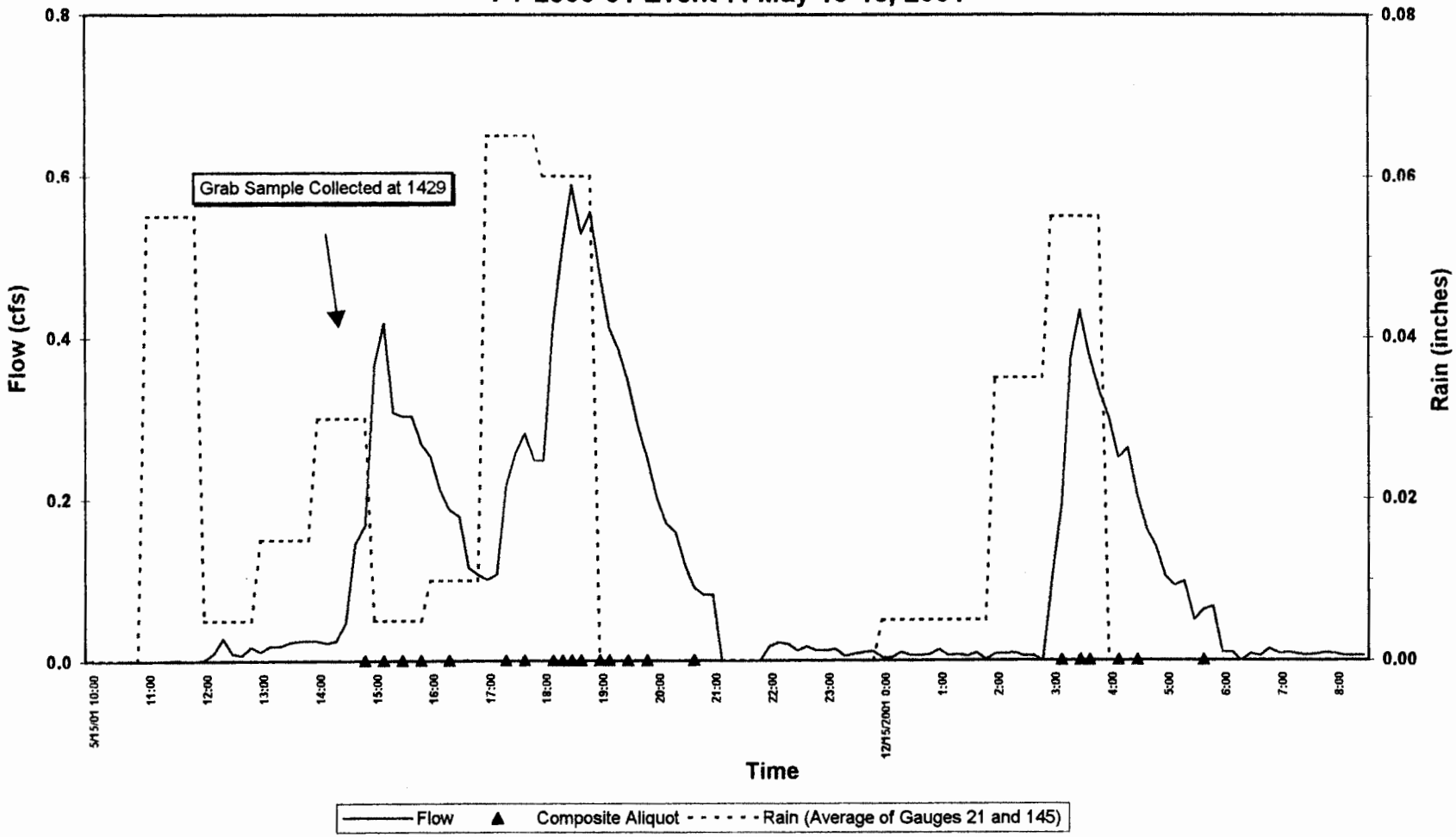
FO010574	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	14:09 DJH	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	6.7	CONC	pH Units	0.1	SM 4500-H B	5/16/01 LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010574	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	14:09 DJH	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	10.4	CONC	mg/L	0.1	SM 4500-O G	5/16/01 LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010574	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	14:09 DJH	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	12.7	CONC	Deg. C	0.1	SM 2550 B	5/16/01 LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010574	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	14:09 DJH	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	95	CONC	µmhos/cm	1	SM 2510 B	5/16/01 LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010574	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	14:09 DJH	GRAB	STORMWTR	E. COLI	E. COLI	490	CONC	CFU/100 ml	2	SM 9213 D	5/17/01 LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010574	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	14:09 DJH	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	550	CONC	CFU/100 ml	2	SM 9222 D	5/17/01 LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010574	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	14:09 DJH	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5		mg/L	5	EPA 1664	5/19/01 LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010575	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:29 DJH	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	9.3	CONC	pH Units	0.1	SM 4500-H B	5/16/01 LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010575	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:29 DJH	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	17.1	CONC	mg/L	0.1	SM 4500-O G	5/16/01 LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010575	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:29 DJH	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	15.6	CONC	Deg. C	0.1	SM 2550 B	5/16/01 LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010575	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:29 DJH	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	94	CONC	µmhos/cm	1	SM 2510 B	5/16/01 LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010575	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:29 DJH	GRAB	STORMWTR	E. COLI	E. COLI	<10		CFU/100 ml	2	SM 9213 D	5/17/01 LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010575	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:29 DJH	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	45	CONC	CFU/100 ml	2	SM 9222 D	5/17/01 LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010575	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:29 DJH	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5		mg/L	5	EPA 1664	5/19/01 LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	179	CONC	mg/L	1	SM 2540 D	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	BOD5	BOD5	4	CONC	mg/L	2	SM 5210 B	5/22/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	COD	COD	27	CONC	mg/L	5	SM 5220 D	5/18/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.055	CONC	mg/L	0.02	EPA 350.1	5/21/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	0.73	CONC	mg/L	0.2	EPA 351.2	5/25/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.26	CONC	mg/L	0.03	EPA 365.4	5/29/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.021	CONC	mg/L	0.02	EPA 365.1	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.13	CONC	mg/L	0.1	EPA 300.0	5/16/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	EST 25.0		mg CaCO3/L	1	SM 2340 C	5/21/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	11.6	CONC	µg/L	0.2	EPA 200.8	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	47.8	CONC	µg/L	0.5	EPA 200.8	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	3.64	CONC	µg/L	0.1	EPA 200.8	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	<0.10		µg/L	0.1	EPA 200.8	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	0.15	CONC	µg/L	0.1	EPA 200.8	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	4.8	CONC	µg/L	0.1	EPA 200.8	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	1.61	CONC	µg/L	0.2	EPA 200.8	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	1.28	CONC	µg/L	0.5	EPA 200.8	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	1.37	CONC	µg/L	0.1	EPA 200.8	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	MERCURY	MERCURY	<0.0002		mg/L	0.0002	EPA 245.1	5/16/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	5-15 microns	262700	CONC	# Part/100ml		OPTICAL	6/6/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	15-25 microns	27600	CONC	# Part/100ml		OPTICAL	6/6/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	25-50 microns	19100	CONC	# Part/100ml		OPTICAL	6/6/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	50-100 microns	4500	CONC	# Part/100ml		OPTICAL	6/6/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	>100 microns	<100		# Part/100ml		OPTICAL	6/6/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	Total (all sizes)	313900	CONC	# Part/100ml		OPTICAL	6/6/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	60	CONC	mg/L	1	SM 2540 BD	5/29/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010576	1 SE 162ND AVE & FLAVEL DR	N POND INLET	5/15/01	13:30 DJH/JBB	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	239	CONC	mg/L	1	SM 2540 B	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	76	CONC	mg/L	1	SM 2540 D	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	BOD5	BOD5	5	CONC	mg/L	2	SM 5210 B	5/22/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	COD	COD	20	CONC	mg/L	5	SM 5220 D	5/18/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.032	CONC	mg/L	0.02	EPA 350.1	5/21/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	0.61	CONC	mg/L	0.2	EPA 351.2	5/25/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.17	CONC	mg/L	0.03	EPA 365.4	5/29/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	<0.02		mg/L	0.02	EPA 365.1	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.14	CONC	mg/L	0.1	EPA 300.0	5/16/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	EST 30.0		mg CaCO3/L	1	SM 2340 C	5/21/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	8.86	CONC	µg/L	0.2	EPA 200.8	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	25.7	CONC	µg/L	0.5	EPA 200.8	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	2.7	CONC	µg/L	0.1	EPA 200.8	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	<0.10		µg/L	0.1	EPA 200.8	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	<0.10		µg/L	0.1	EPA 200.8	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	2.72	CONC	µg/L	0.1	EPA 200.8	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	2.75	CONC	µg/L	0.2	EPA 200.8	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	1.59	CONC	µg/L	0.5	EPA 200.8	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	1.24	CONC	µg/L	0.1	EPA 200.8	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	MERCURY	MERCURY	<0.0002		mg/L	0.0002	EPA 245.1	5/16/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	5-15 microns	330900	CONC	# Part/100ml		OPTICAL	6/6/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	15-25 microns	6000	CONC	# Part/100ml		OPTICAL	6/6/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	25-50 microns	7000	CONC	# Part/100ml		OPTICAL	6/6/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	50-100 microns	3000	CONC	# Part/100ml		OPTICAL	6/6/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	>100 microns	<100		# Part/100ml		OPTICAL	6/6/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	Total (all sizes)	348900	CONC	# Part/100ml		OPTICAL	6/6/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	63	CONC	mg/L	1	SM 2540 BD	5/29/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.
FO010577	2 SE 162ND AVE & FLAVEL DR	STILLING WELL INLET	5/15/01	14:52 DJH/JBB	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	139	CONC	mg/L	1	SM 2540 B	5/17/01 LAB: THE HARDNESS RESULT IS AN ESTIMATE DUE TO MATRIX	INTERFERENCE THAT CAUSED AN INDISTINCT TITRATION ENDPOINT.

Figure 6A: Event Inlet Hydrograph
Lexington Hills BMP Monitoring
FY 2000-01 Event 7: May 15-16, 2001



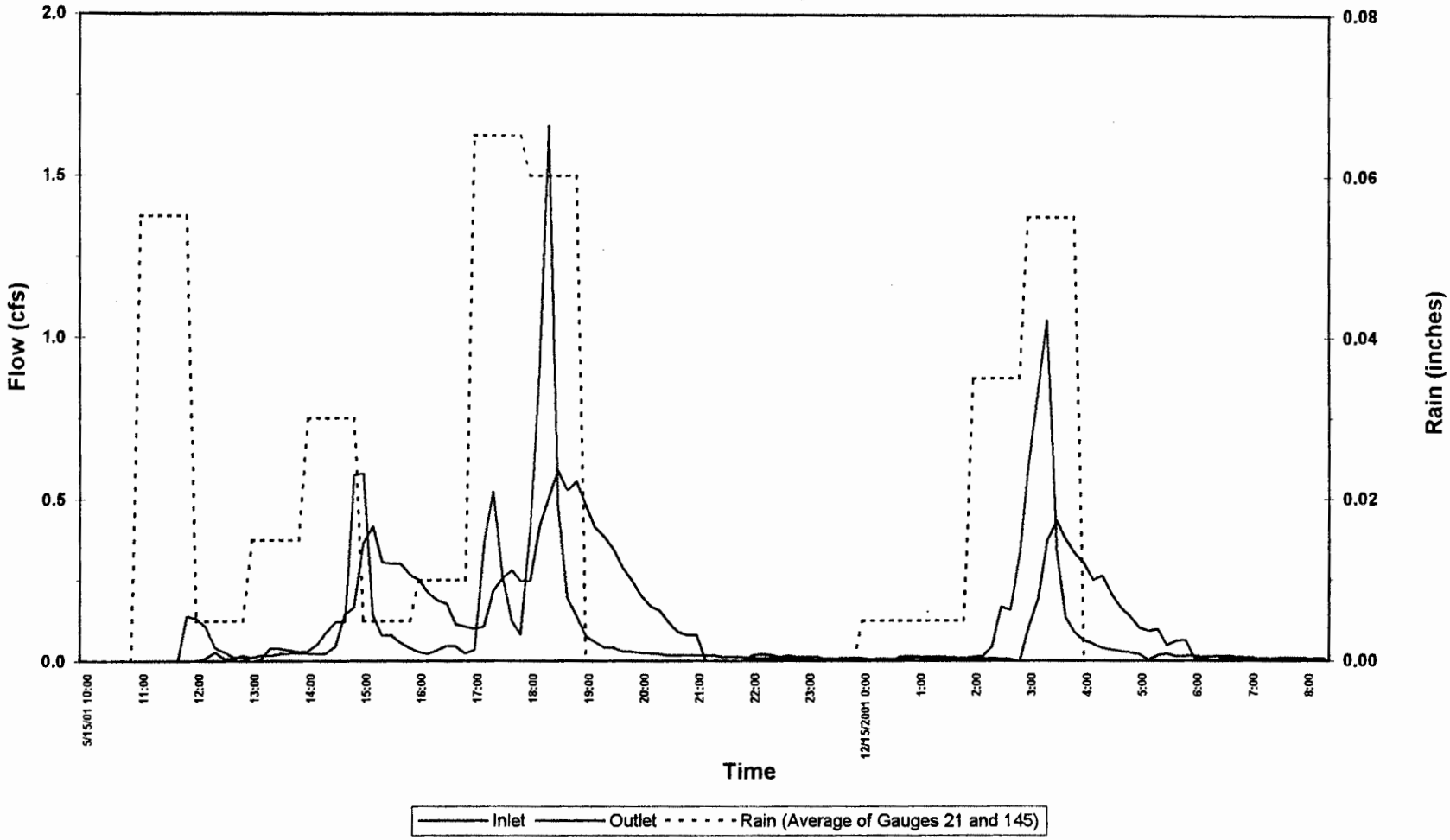
s:\eid\4010.009\datarep\event7\hgraph7.xls (inlet)

Figure 6B: Event Outlet Hydrograph
Lexington Hills BMP Monitoring
FY 2000-01 Event 7: May 15-16, 2001



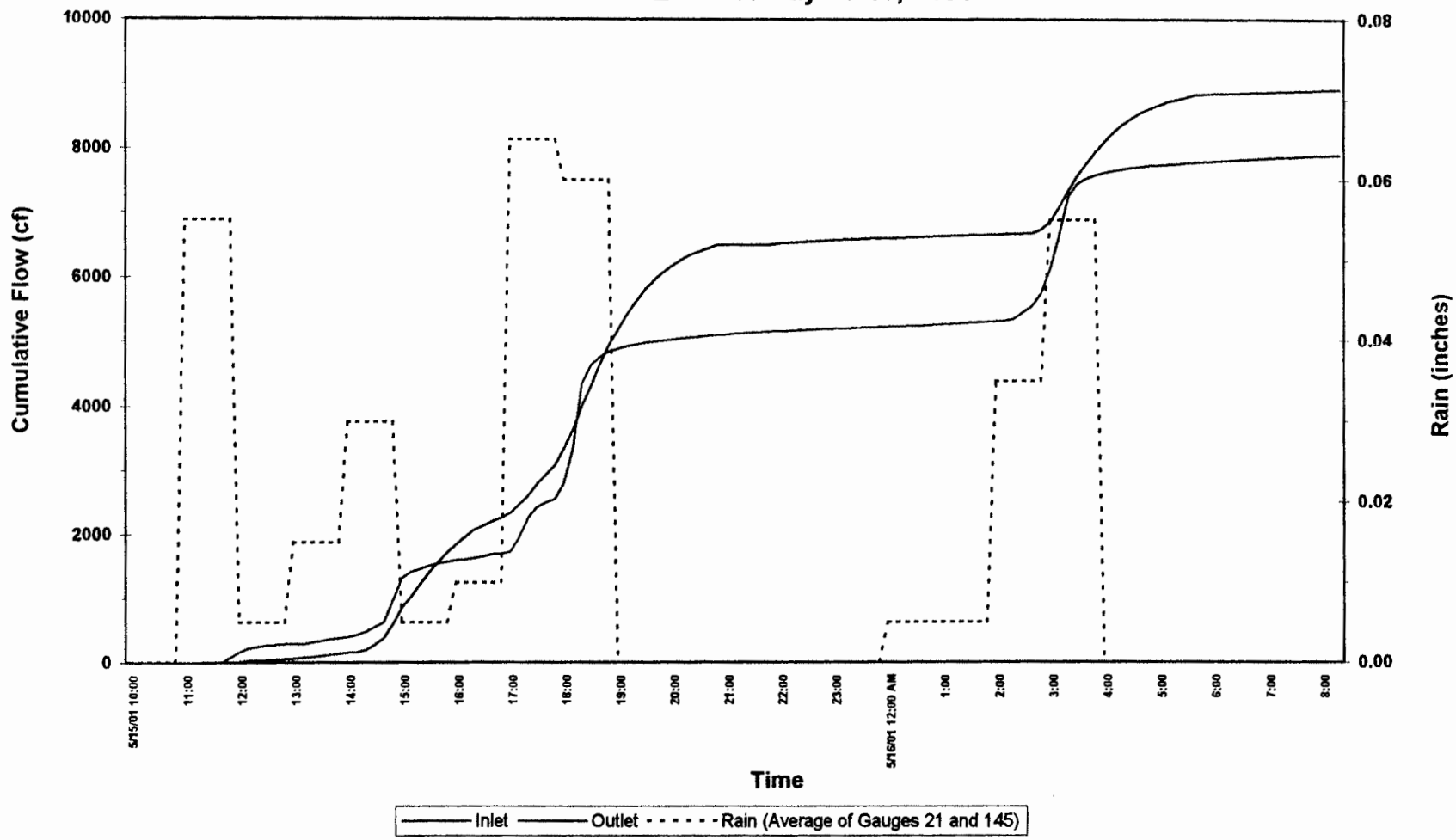
s:\eid\4010.009\datarep\event7\hgraph7.xls (outlet)

Figure 7D: Inlet and Outlet Hydrographs
Lexington Hills BMP Monitoring
FY 2000-01 Event 7: May 15-16, 2001



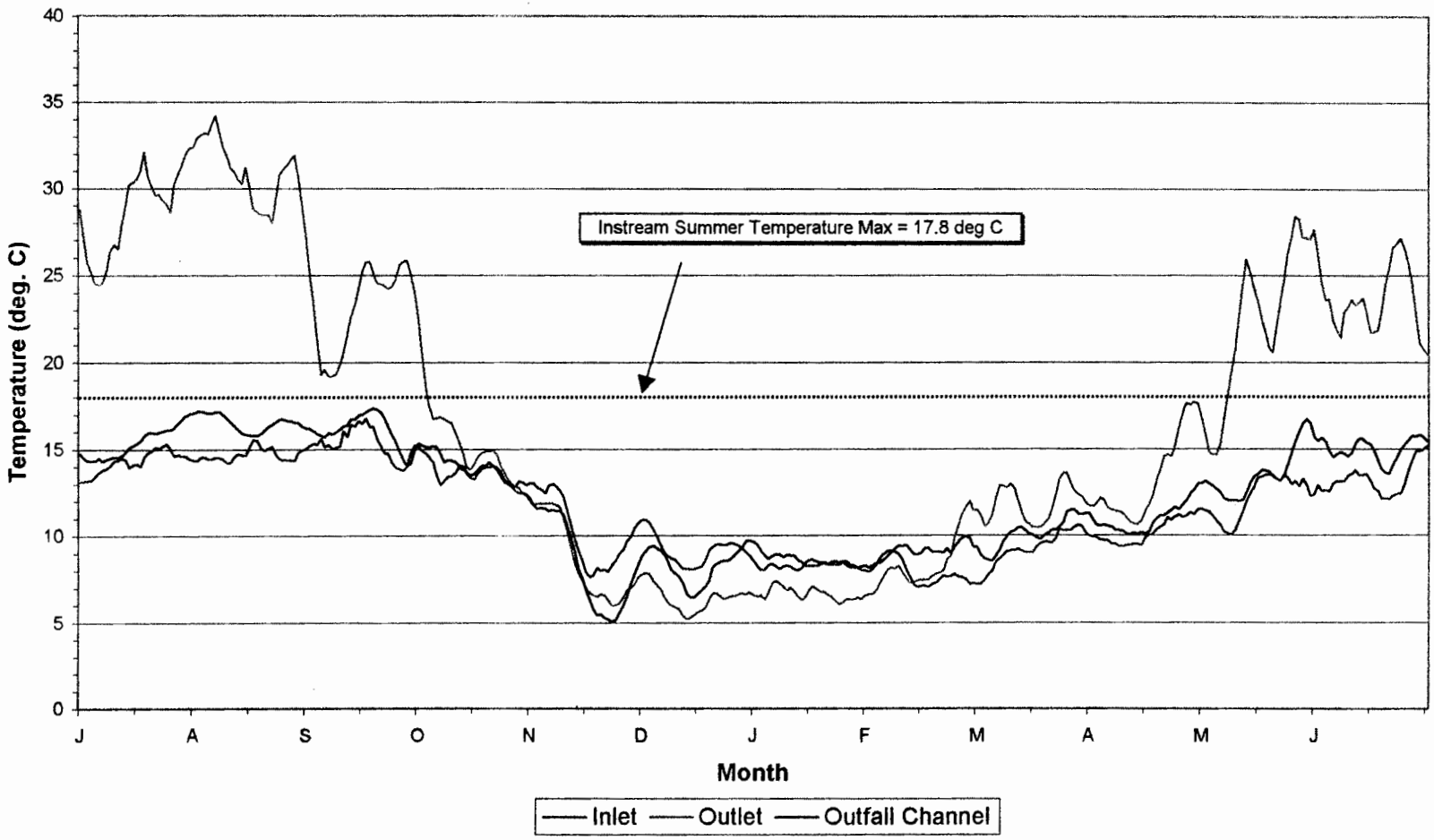
s:\eid\4010.009\datarep\event7\hgraph7.xls(combochart)

Figure 8D: Cumulative Flow Summary
Lexington Hills BMP Monitoring
FY 2000-01 Event 7: May 15-16, 2001



s:\eid\4010.009\datarep\event7\hgraph7.xls (cumulchart)

Figure 9: 7-day Moving Average of Daily Maximums
Lexington Hills BMP - Continuous Temperature Monitoring
FY 2000-01

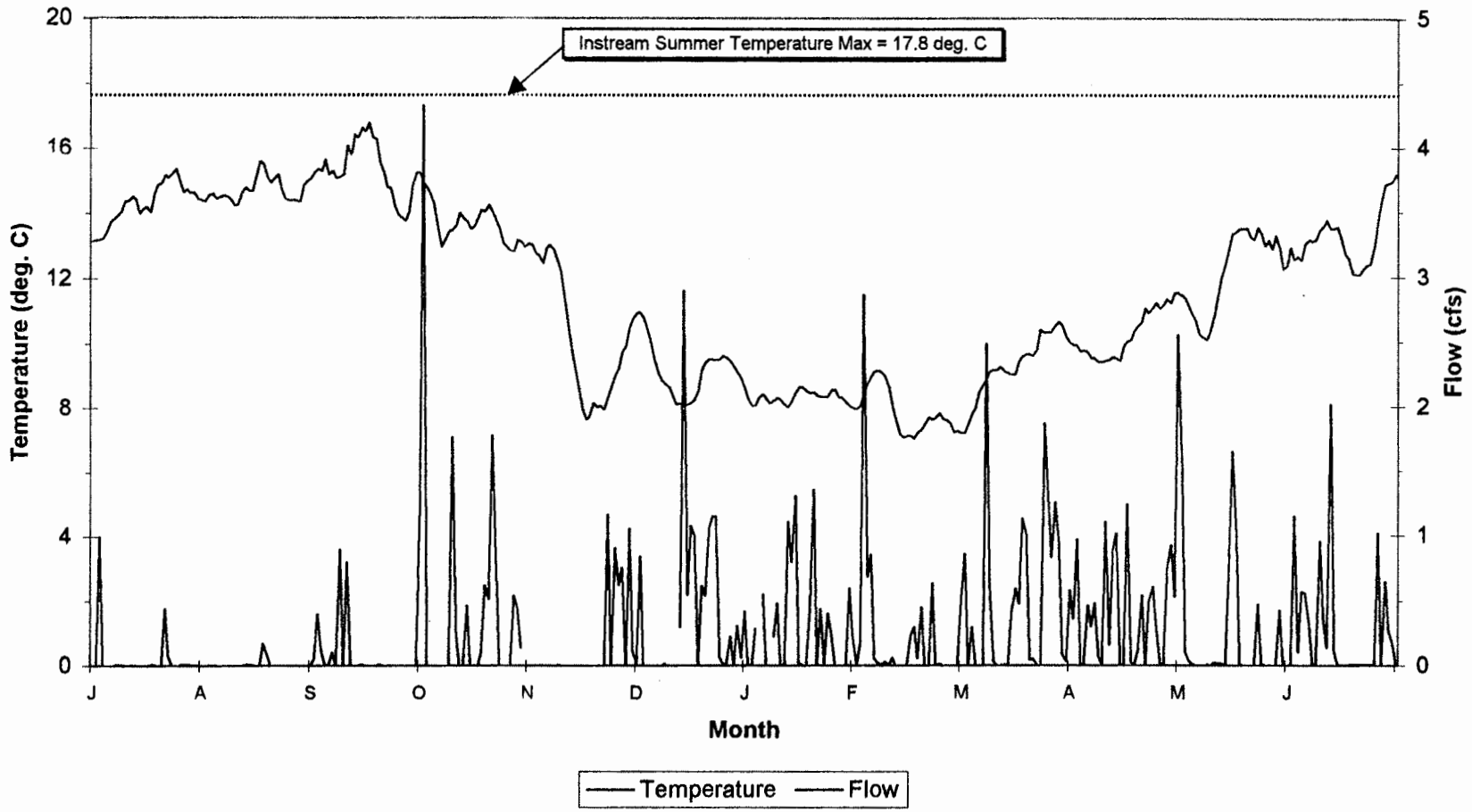


Temperature Standard per OAR 340-41 (Willamette) - (2)(6).

s:\eid\4010.009\Tempdata\fy0001\01TempGraph.xls

Temperature monitors at inlet and outlet channel are recording ambient air temperature during dry periods.

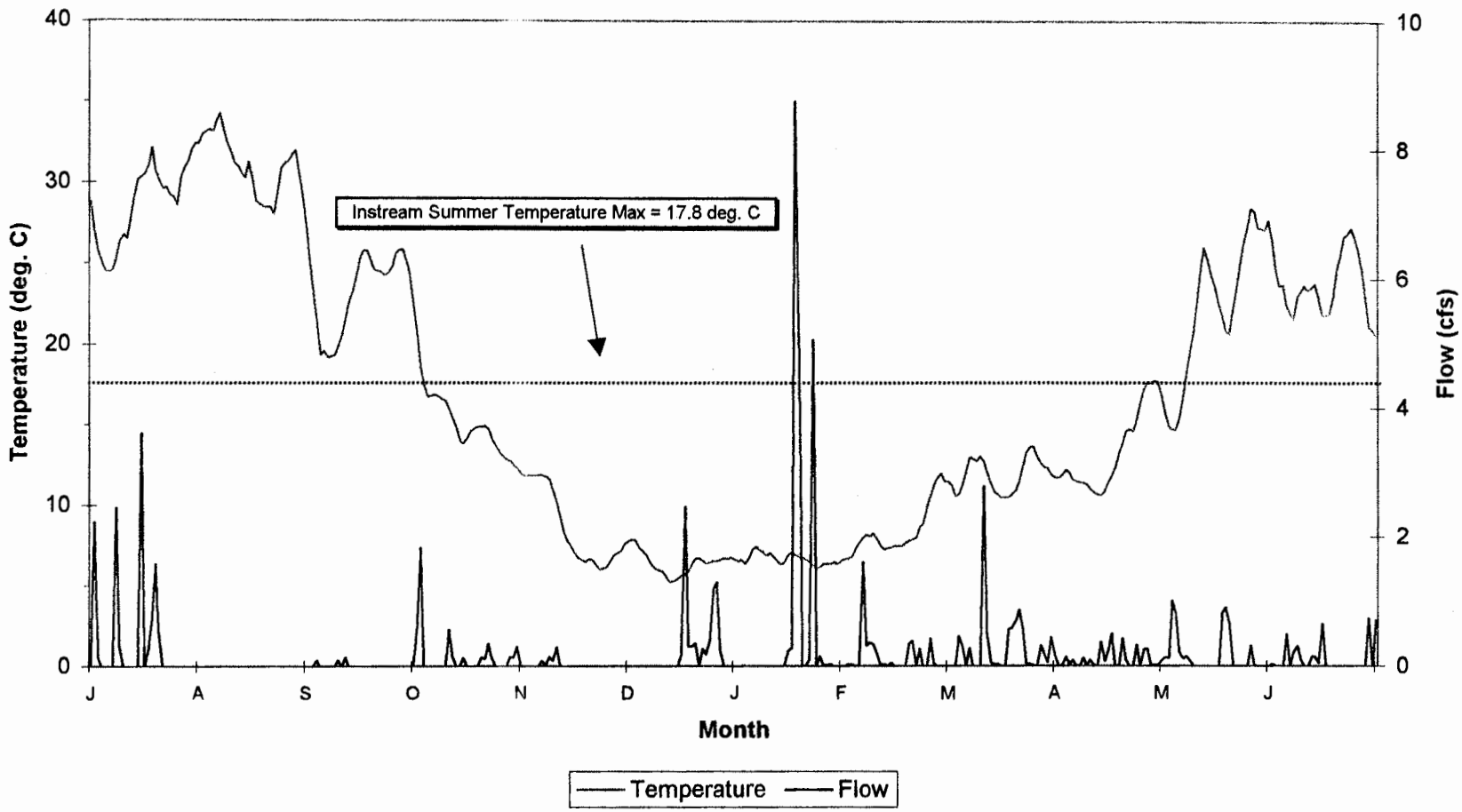
Figure 10A: Inlet Temperature and Flow
Lexington Hills BMP Monitoring
FY 2000-01



Temperature values plotted are the 7-day moving averages of the daily maximums.
Flow values plotted are the daily maximums.

s:\eid\4010.009\tempdata\fy0001\01TempGraph.xls

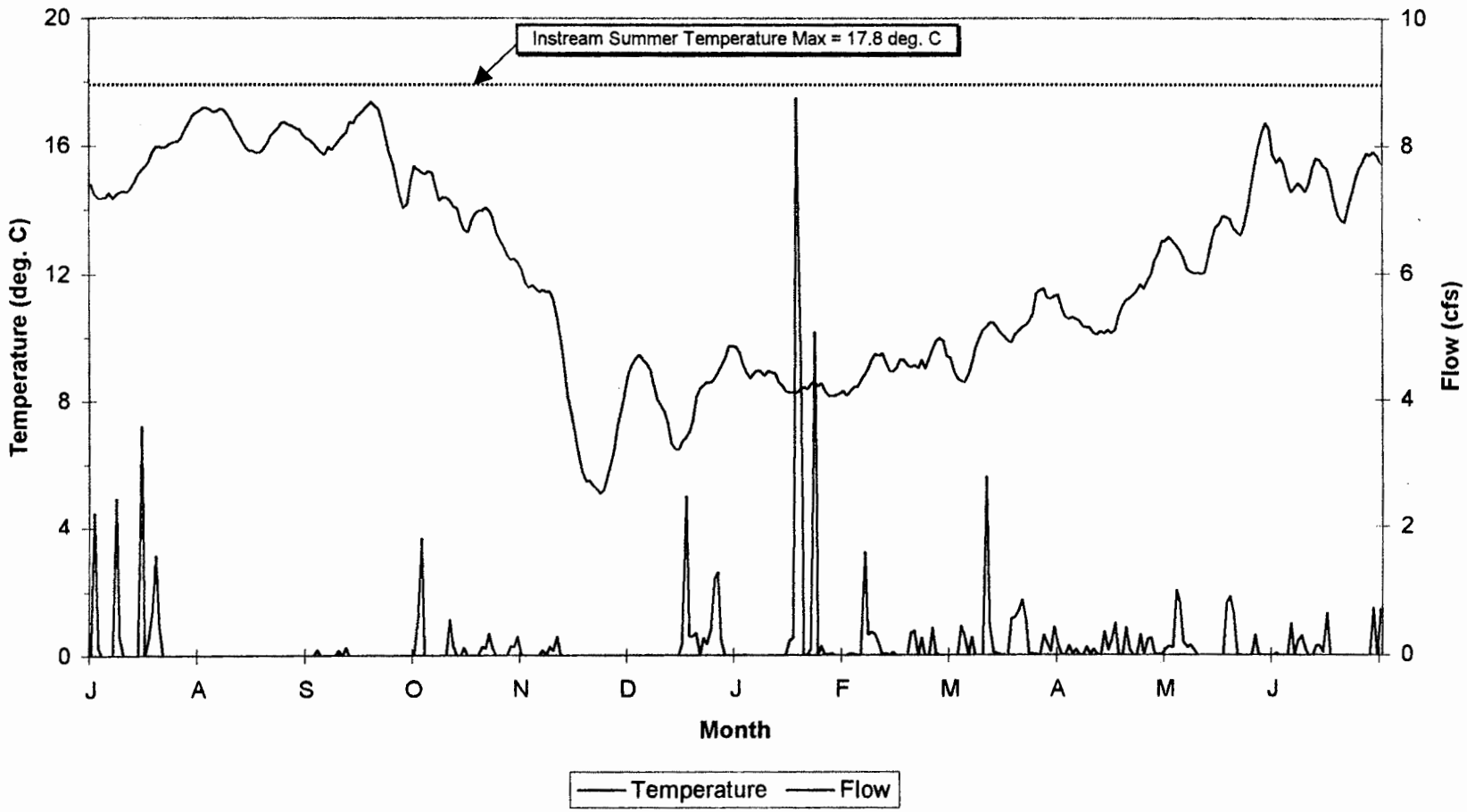
Figure 10B: Outlet Temperature and Flow
Lexington Hills BMP Monitoring
FY 2000-01



Temperature values averages of daily maximums.
Flow values plotted are the daily maximum.

s:\eid\4010.009\tempdata\fy0001\01TempGraph.xls

Figure 10C: Discharge Channel Temperature and Outlet Flow
Lexington Hills BMP Monitoring
FY 2000-01



Temperature values plotted are the 7-day moving averages of the daily maximums.
Flow values plotted are the daily maximums.

s:\leid\4010.009\Tempdata\2001\01TempGraph.xls

Hamilton Eco-Roof Monitoring

Table 1: HYDRA Rain Gauge Data
Hamilton Ecoroof Monitoring
FY 2000-01

Daily Rain Report — All Times in Pacific Standard Time

Rain Data Collected by HYDRA - City of Portland

Gauge 164: SW 12th and Clay

Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Event 1: February 2, 2001																									
1/30/2001	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
1/31/2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2/1/2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.03
2/2/2001	0.00	0.01	0.01	0.12	0.02	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.03	0.00	0.00	0.01	0.20	0.00	0.00	0.00	0.00	0.01	0.00	0.45
Event 2: March 24-25, 2001																									
3/21/2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/22/2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/23/2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/24/2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.00	0.00	0.01	0.06	0.07	0.04	0.00	0.32
3/25/2001	0.03	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
Event 3: April 23, 2001																									
4/20/2001	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.02	0.04	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
4/21/2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4/22/2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.06	0.03	0.02	0.01	0.01	0.01	0.00	0.00	0.01	0.02	0.01	0.01	0.21
4/23/2001	0.01	0.00	0.00	0.00	0.00	0.01	0.03	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
Event 4: May 14, 2001																									
5/11/2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5/12/2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5/13/2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5/14/2001	0.00	0.00	0.00	0.00	0.03	0.01	0.01	0.01	0.00	0.03	0.06	0.03	0.03	0.02	0.05	0.05	0.06	0.02	0.03	0.01	0.00	0.00	0.00	0.01	0.46

Table 2: Analytical Summary
Hamilton Ecoroof Monitoring
FY 2000-01 Event 1: February 2, 2001

Grab Parameters	Units	Sample Site: / Lab ID:	East Roof Drain FO010132	West Roof Drain FO010133
DISSOLVED OXYGEN (FIELD)	mg/L		5.7	5.1
pH (FIELD)	pH Units		6.4	6.3
SPECIFIC CONDUCTANCE (FIELD)	μmhos/cm		103	154
TEMPERATURE (FIELD)	Deg. C		9.4	9.8
AMMONIA-NITROGEN	mg/L		0.020 U	0.021
BOD5	mg/L		2 U	3
COD	mg/L		67	80
COLOR	Color Units		160	150
E. COLI	CFU/100 ml		4 U	4 U
FECAL COLIFORM	CFU/100 ml		4 U	4 U
FLUORIDE	mg/L		1.00 U	1.00 U
HARDNESS	mg CaCO3/L		40.8	71.2
NITRATE-NITROGEN	mg/L		0.11	0.10 U
ORTHOPHOSPHATE-PHOSPHORUS	mg/L		0.62	0.78
TOTAL DISSOLVED SOLIDS	mg/L		110	170
TOTAL KJELDAHL NITROGEN	mg/L		1.15	1.83
TOTAL OIL & GREASE	mg/L		5 U	5 U
TOTAL PHOSPHORUS	mg/L		0.70	1.11
TOTAL SOLIDS	mg/L		115	212
TOTAL SUSPENDED SOLIDS	mg/L		7.0	43.2
ARSENIC, TOTAL	μg/L		1.50	2.27
CADMIUM, TOTAL	μg/L		0.10 U	0.10 U
COPPER, TOTAL	μg/L		8.85	20.3
LEAD, TOTAL	μg/L		0.60	3.64
MERCURY, TOTAL	mg/L		0.00020 U	0.00020 U
SILVER, TOTAL	μg/L		0.10 U	0.10 U
ZINC, TOTAL	μg/L		33.3	41.4
ARSENIC, DISSOLVED	μg/L		1.34	1.60
CADMIUM, DISSOLVED	μg/L		0.10 U	0.10 U
COPPER, DISSOLVED	μg/L		7.00	7.34
LEAD, DISSOLVED	μg/L		0.12	0.10 U
SILVER, DISSOLVED	μg/L		0.10 U	0.10 U
ZINC, DISSOLVED	μg/L		29.1	13.1

U = Not detected at method reporting limit shown.

SAMPLE ID	SAMPLE PT CODE	SAMPLE ADDRESS	SAMPLE LOCATION	SAMPLE DATE	SAMPLE TIME	FIELD CREW	SAMPLE TYPE	SAMPLE MATRIX	PARAMETER GROUP	PARAMETER	NUMERIC RESULT	TEXT RESULT	UNITS	MRL	METHOD	ANALYSIS DATE	COMMENTS	
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	STORMWTR	pH (FIELD)	pH (FIELD)	6.4	CONC	pH Units	0.1	SM 4500-H B	2/2/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	TEMPERATURE	9.4	CONC	Deg. C	0.1	SM 2550 B	2/2/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	5.7	CONC	mg/L	0.1	SM 4500-O G	2/2/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	103	CONC	µmhos/cm	1	SM 2510 B	2/2/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	AMMONIA-NITROGEN	<0.020		mg/L	0.02	EPA 350.1	2/7/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	BOD5	BOD5	BOD5	<2		mg/L	2	SM 5210 B	2/8/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	COD	COD	COD	67	CONC	mg/L	2	SM 5220 D	2/10/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	COLOR	COLOR	COLOR	160	CONC	Color Units	5	SM 2120 B	2/2/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	E. COLI	E. COLI	E. COLI	<4		CFU/100 ml	2	SM 9213 D	2/3/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	<4		CFU/100 ml	2	SM 9222 D	2/3/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	FLUORIDE	FLUORIDE	FLUORIDE	<1.00		mg/L	1	EPA 300.0	2/5/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	HARDNESS	HARDNESS	HARDNESS	40.8	CONC	mg CaCO3/L	1	SM 2340 C	2/8/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	COPPER, DISSOLVED	7	CONC	µg/L	0.2	EPA 200.8	2/14/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	ZINC, DISSOLVED	29.1	CONC	µg/L	0.5	EPA 200.8	2/14/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	ARSENIC, DISSOLVED	1.34	CONC	µg/L	0.1	EPA 200.8	2/14/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	SILVER, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	2/14/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	CADMIUM, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	2/14/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	LEAD, DISSOLVED	0.12	CONC	µg/L	0.1	EPA 200.8	2/14/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	COPPER	8.85	CONC	µg/L	0.2	EPA 200.8	2/15/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	ZINC	33.3	CONC	µg/L	0.5	EPA 200.8	2/15/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	ARSENIC	1.5	CONC	µg/L	0.1	EPA 200.8	2/15/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	SILVER	<0.10		µg/L	0.1	EPA 200.8	2/15/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	CADMIUM	<0.10		µg/L	0.1	EPA 200.8	2/15/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	LEAD	0.6	CONC	µg/L	0.1	EPA 200.8	2/15/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	NITRATE-NITROGEN	0.11	CONC	mg/L	0.1	EPA 300.0	2/5/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.62	CONC	mg/L	0.02	EPA 365.1	2/4/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	110	CONC	mg/L	1	SM 2540 BD	2/8/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	1.15	CONC	mg/L	0.2	EPA 351.2	2/13/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	MERCURY	MERCURY	MERCURY	<0.00020		mg/L	0.0002	EPA 245.1	2/13/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5		mg/L	5	EPA 1664	2/9/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.7	CONC	mg/L	0.03	EPA 365.4	2/9/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	7	CONC	mg/L	1	SM 2540 D	2/3/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	TOTAL SOLIDS	115	CONC	mg/L	1	SM 2540 B	2/3/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010132	1	1212 SW CLAY ST	EAST ROOF DRAIN	2/2/01	13:35 DJH/SMB	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	pH (FIELD)	6.3	CONC	pH Units	0.1	SM 4500-H B	2/2/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	TEMPERATURE	9.8	CONC	Deg. C	0.1	SM 2550 B	2/2/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	5.1	CONC	mg/L	0.1	SM 4500-O G	2/2/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	154	CONC	µmhos/cm	1	SM 2510 B	2/2/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.021	CONC	mg/L	0.02	EPA 350.1	2/7/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	BOD5	BOD5	BOD5	3	CONC	mg/L	2	SM 5210 B	2/8/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	COD	COD	COD	80	CONC	mg/L	2	SM 5220 D	2/10/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	COLOR	COLOR	COLOR	150	CONC	Color Units	5	SM 2120 B	2/2/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	E. COLI	E. COLI	E. COLI	<4		CFU/100 ml	2	SM 9213 D	2/3/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	<4		CFU/100 ml	2	SM 9222 D	2/3/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	FLUORIDE	FLUORIDE	FLUORIDE	<1.00		mg/L	1	EPA 300.0	2/5/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	HARDNESS	HARDNESS	HARDNESS	71.2	CONC	mg CaCO3/L	1	SM 2340 C	2/8/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	COPPER, DISSOLVED	7.34	CONC	µg/L	0.2	EPA 200.8	2/14/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	ZINC, DISSOLVED	13.1	CONC	µg/L	0.5	EPA 200.8	2/14/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	ARSENIC, DISSOLVED	1.6	CONC	µg/L	0.1	EPA 200.8	2/14/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	SILVER, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	2/14/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	CADMIUM, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	2/14/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	LEAD, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	2/14/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	COPPER	20.3	CONC	µg/L	0.2	EPA 200.8	2/15/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	ZINC	41.4	CONC	µg/L	0.5	EPA 200.8	2/15/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	ARSENIC	2.27	CONC	µg/L	0.1	EPA 200.8	2/15/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	SILVER	<0.10		µg/L	0.1	EPA 200.8	2/15/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	CADMIUM	<0.10		µg/L	0.1	EPA 200.8	2/15/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	LEAD	3.64	CONC	µg/L	0.1	EPA 200.8	2/15/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	NITRATE-NITROGEN	<0.10		mg/L	0.1	EPA 300.0	2/5/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.78	CONC	mg/L	0.02	EPA 365.1	2/4/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	170	CONC	mg/L	1	SM 2540 BD	2/8/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	1.83	CONC	mg/L	0.2	EPA 351.2	2/13/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	MERCURY	MERCURY	MERCURY	<0.00020		mg/L	0.0002	EPA 245.1	2/13/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5		mg/L	5	EPA 1664	2/9/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	1.11	CONC	mg/L	0.03	EPA 365.4	2/9/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	43.2	CONC	mg/L	1	SM 2540 D	2/3/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010133	2	1212 SW CLAY ST	WEST ROOF DRAIN	2/2/01	13:20 DJH/SMB	GRAB	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	TOTAL SOLIDS	212	CONC	mg/L	1	SM 2540 B	2/3/01	BECAUSE THE RESULT FOR TOTAL OIL AND GREASE IS <5 MG/L, NON-POLAR	OIL AND GREASE IS ALSO <5 MG/L
FO010134	FILTER BLK			2/2/01	17:00 KD	GRAB	DIWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	COPPER, DISSOLVED	<0.20		µg/L	0.2	EPA 200.8	2/14/01		
FO010134	FILTER BLK			2/2/01	17:00 KD	GRAB	DIWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	ZINC, DISSOLVED	<0.50		µg/L	0.5	EPA 200.8	2/14/01		
FO010134	FILTER BLK			2/2/01	17:00 KD	GRAB	DIWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	ARSENIC, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	2/14/01		
FO010134	FILTER BLK			2/2/01	17:00 KD	GRAB	DIWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	SILVER, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	2/14/01		
FO010134	FILTER BLK			2/2/01	17:00 KD	GRAB	DIWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	CADMIUM, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	2/14/01		
FO010134	FILTER BLK			2/2/01	17:00 KD	GRAB	DIWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	LEAD, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	2/14/01		

Table 2: Analytical Summary
Hamilton Ecoroof Monitoring
FY 2000-01 Event 2: March 24-25, 2001

Grab Parameters	Units	Sample Site: East Roof Drain Lab ID: FO010330	West Roof Drain FO010331
DISSOLVED OXYGEN (FIELD)	mg/L	5.5	5.3
pH (FIELD)	pH Units	6.1	6.9
SPECIFIC CONDUCTANCE (FIELD)	µmhos/cm	99	83
TEMPERATURE (FIELD)	Deg. C	13.2	14.1
AMMONIA-NITROGEN	mg/L	0.02 U	0.028
BOD5	mg/L	2 U	2
COD	mg/L	63	34
COLOR	Color Units	160	60
E. COLI	CFU/100 ml	230	42
FECAL COLIFORM	CFU/100 ml	EST 80	EST 4 U
FLUORIDE	mg/L	1.0 U	1.0 U
HARDNESS	mg CaCO3/L	37.8	39.0
NITRATE-NITROGEN	mg/L	0.16	0.10 U
ORTHOPHOSPHATE-PHOSPHORUS	mg/L	0.43	0.32
TOTAL DISSOLVED SOLIDS	mg/L	120	82
TOTAL KJELDAHL NITROGEN	mg/L	1.01	0.91
TOTAL OIL & GREASE	mg/L	5 U	5 U
TOTAL PHOSPHORUS	mg/L	0.47	0.41
TOTAL SOLIDS	mg/L	117	106
TOTAL SUSPENDED SOLIDS	mg/L	1	24
ARSENIC, TOTAL	µg/L	1.41	1.05
CADMIUM, TOTAL	µg/L	0.10 U	0.10 U
COPPER, TOTAL	µg/L	7.95	7.65
LEAD, TOTAL	µg/L	0.21	0.38
MERCURY, TOTAL	mg/L	0.0002 U	0.0002 U
SILVER, TOTAL	µg/L	0.10 U	0.10 U
ZINC, TOTAL	µg/L	22.3	12.6
ARSENIC, DISSOLVED	µg/L	1.31	0.90
CADMIUM, DISSOLVED	µg/L	0.10 U	0.10 U
COPPER, DISSOLVED	µg/L	7.28	6.08
LEAD, DISSOLVED	µg/L	0.10 U	0.10 U
SILVER, DISSOLVED	µg/L	0.10 U	0.10 U
ZINC, DISSOLVED	µg/L	19.5	7.69

U = Not detected at method reporting limit shown.
EST = Low estimate due to interfering bacterial growth.

SAMPLE ID	SAMPLE PT CODE	SAMPLE ADDRESS	SAMPLE LOCATION	SAMPLE DATE	SAMPLE TIME	FIELD CREW	SAMPLE TYPE	SAMPLE MATRIX	PARAMETER GROUP	PARAMETER	NUMERIC RESULT	TEXT RESULT	UNITS	MRL	METHOD	ANALYSIS DATE	COMMENTS
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	6.1	CONC	pH Units	0.1	SM 4500-H B	3/25/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	13.2	CONC	Deg. C	0.1	SM 2550 B	3/25/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	5.5	CONC	mg/L	0.1	SM 4500-O G	3/25/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	99	CONC	µmhos/cm	1	SM 2510 B	3/25/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN		<0.02	mg/L	0.02	EPA 350.1	3/29/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	BOD5	BOD5		<2	mg/L	2	SM 5210 B	3/30/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	COD	COD	63	CONC	mg/L	5	SM 5220 D	3/26/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	COLOR	COLOR	160	CONC	Color Units	5	SM 2120 B	3/25/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	E. COLI	E. COLI	230	CONC	CFU/100 ml	2	SM 9213 D	3/26/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA		EST 80	CFU/100 ml	2	SM 9222 D	3/26/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	FLUORIDE	FLUORIDE		<1.0	mg/L	1	EPA 300.0	3/25/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	HARDNESS	HARDNESS	37.8	CONC	mg CaCO3/L	1	SM 2340 C	3/27/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	7.28	CONC	µg/L	0.2	EPA 200.8	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	19.5	CONC	µg/L	0.5	EPA 200.8	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	1.31	CONC	µg/L	0.1	EPA 200.8	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED		<0.10	µg/L	0.1	EPA 200.8	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED		<0.10	µg/L	0.1	EPA 200.8	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED		<0.10	µg/L	0.1	EPA 200.8	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	7.95	CONC	µg/L	0.2	EPA 200.8	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	22.3	CONC	µg/L	0.5	EPA 200.8	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	1.41	CONC	µg/L	0.1	EPA 200.8	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER		<0.10	µg/L	0.1	EPA 200.8	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM		<0.10	µg/L	0.1	EPA 200.8	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	0.21	CONC	µg/L	0.1	EPA 200.8	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.16	CONC	mg/L	0.1	EPA 300.0	3/25/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.43	CONC	mg/L	0.02	EPA 365.1	3/26/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	120	CONC	mg/L	1	SM 2540 BD	3/26/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	1.01	CONC	mg/L	0.2	EPA 351.2	4/2/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	MERCURY	MERCURY		<0.0002	mg/L	0.0002	EPA 245.1	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE		<5	mg/L	5	EPA 1664	4/2/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.47	CONC	mg/L	0.03	EPA 365.4	3/30/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	1	CONC	mg/L	1	SM 2540 D	3/26/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010330	1	1212 SW CLAY ST	EAST ROOF DRAIN	3/25/01	0:05	DJH/WCR	GRAB	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	117	CONC	mg/L	1	SM 2540 B	3/27/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	6.9	CONC	pH Units	0.1	SM 4500-H B	3/24/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	14.1	CONC	Deg. C	0.1	SM 2550 B	3/24/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	5.3	CONC	mg/L	0.1	SM 4500-O G	3/24/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	83	CONC	µmhos/cm	1	SM 2510 B	3/24/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.028	CONC	mg/L	0.02	EPA 350.1	3/29/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	BOD5	BOD5	2	CONC	mg/L	2	SM 5210 B	3/30/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	COD	COD	34	CONC	mg/L	5	SM 5220 D	3/26/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	COLOR	COLOR	60	CONC	Color Units	5	SM 2120 B	3/25/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	E. COLI	E. COLI	42	CONC	CFU/100 ml	2	SM 9213 D	3/26/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA		EST <4	CFU/100 ml	2	SM 9222 D	3/26/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	FLUORIDE	FLUORIDE		<1.0	mg/L	1	EPA 300.0	3/25/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	HARDNESS	HARDNESS	39	CONC	mg CaCO3/L	1	SM 2340 C	3/27/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	6.08	CONC	µg/L	0.2	EPA 200.8	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	7.69	CONC	µg/L	0.5	EPA 200.8	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	0.9	CONC	µg/L	0.1	EPA 200.8	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED		<0.10	µg/L	0.1	EPA 200.8	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED		<0.10	µg/L	0.1	EPA 200.8	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED		<0.10	µg/L	0.1	EPA 200.8	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	7.85	CONC	µg/L	0.2	EPA 200.8	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	12.6	CONC	µg/L	0.5	EPA 200.8	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	1.05	CONC	µg/L	0.1	EPA 200.8	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER		<0.10	µg/L	0.1	EPA 200.8	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM		<0.10	µg/L	0.1	EPA 200.8	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	0.38	CONC	µg/L	0.1	EPA 200.8	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN		<0.10	mg/L	0.1	EPA 300.0	3/25/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.32	CONC	mg/L	0.02	EPA 365.1	3/26/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	82	CONC	mg/L	1	SM 2540 BD	3/26/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	0.91	CONC	mg/L	0.2	EPA 351.2	4/2/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	MERCURY	MERCURY		<0.0002	mg/L	0.0002	EPA 245.1	3/28/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE		<5	mg/L	5	EPA 1664	4/2/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.41	CONC	mg/L	0.03	EPA 365.4	3/30/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	24	CONC	mg/L	1	SM 2540 D	3/26/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.
FO010331	2	1212 SW CLAY ST	WEST ROOF DRAIN	3/24/01	23:45	DJH/WCR	GRAB	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	106	CONC	mg/L	1	SM 2540 B	3/27/01	LAB: THE COUNT FOR FECAL COLIFORM BACTERIA SHOULD BE CONSIDERED A LOW ESTIMATE DUE TO INTERFERING BACTERIAL GROWTH. BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR OIL & GREASE IS ALSO <5 MG/L.

Table 2: Analytical Summary
Hamilton Ecoroof Monitoring
FY 2000-01 Event 3: April 23, 2001

Grab Parameters	Units	Sample Site: / Lab ID:	East Roof Drain FO010443	West Roof Drain FO010444
DISSOLVED OXYGEN (FIELD)	mg/L		4.6 J	4.5 J
pH (FIELD)	pH Units		6.0	5.9
SPECIFIC CONDUCTANCE (FIELD)	µmhos/cm		107	130
TEMPERATURE (FIELD)	Deg. C		13.4	14.4
AMMONIA-NITROGEN	mg/L		0.020 U	0.021
BOD5	mg/L		2 U	3
COD	mg/L		72	51
COLOR	Color Units		120	80
E. COLI	CFU/100 ml		4 U	48
FECAL COLIFORM	CFU/100 ml		3	29
FLUORIDE	mg/L		1.0 U	1 U
HARDNESS	mg CaCO3/L		49.6	56.4
NITRATE-NITROGEN	mg/L		0.1 U	0.1 U
ORTHOPHOSPHATE-PHOSPHORUS	mg/L		0.25	0.26
TOTAL DISSOLVED SOLIDS	mg/L		116	120
TOTAL KJELDAHL NITROGEN	mg/L		0.98	1.15
TOTAL OIL & GREASE	mg/L		5 U	5 U
TOTAL PHOSPHORUS	mg/L		0.29	0.35
TOTAL SOLIDS	mg/L		116	121
TOTAL SUSPENDED SOLIDS	mg/L		1 U	3.7
ARSENIC, TOTAL	µg/L		1.17	1.08
CADMIUM, TOTAL	µg/L		0.10 U	0.10 U
COPPER, TOTAL	µg/L		7.99	11.2
LEAD, TOTAL	µg/L		0.20	0.19
MERCURY, TOTAL	mg/L		0.00020 U	0.00020 U
SILVER, TOTAL	µg/L		0.10 U	0.10 U
ZINC, TOTAL	µg/L		27.1	15.0
ARSENIC, DISSOLVED	µg/L		1.09	0.95
CADMIUM, DISSOLVED	µg/L		0.10 U	0.10 U
COPPER, DISSOLVED	µg/L		7.40	10.4
LEAD, DISSOLVED	µg/L		0.14	0.10 U
SILVER, DISSOLVED	µg/L		0.10 U	0.10 U
ZINC, DISSOLVED	µg/L		25.1	12.9

U = Not detected at method reporting limit shown
J = Estimate due to low flow rate

SAMPLE ID	SAMPLE PT CODE	SAMPLE ADDRESS	SAMPLE LOCATION	SAMPLE DATE	SAMPLE TIME	FIELD CREW	SAMPLE TYPE	SAMPLE MATRIX	PARAMETER GROUP	PARAMETER	NUMERIC RESULT	TEXT RESULT	UNITS	MRL	METHOD	ANALYSIS DATE	COMMENTS		
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	6 CONC	pH Units		0.1	SM 4500-H B	4/23/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	13.4 CONC	Deg. C		0.1	SM 2550 B	4/23/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	EST 4.6		mg/L	0.1	SM 4500-O G	4/23/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	107 CONC		µmhos/cm	1	SM 2510 B	4/23/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	<0.020		mg/L	0.02	EPA 350.1	5/7/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	BOD5	BOD5	<2		mg/L	2	SM 5210 B	4/23/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	COD	COD	72 CONC		mg/L	5	SM 5220 D	5/4/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	COLOR	COLOR	120 CONC		Color Units	5	SM 2120 B	4/24/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	E. COLI	E. COLI	<4		CFU/100 ml	2	SM 9213 D	4/25/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	3 CONC		CFU/100 ml	2	SM 9222 D	4/25/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	FLUORIDE	FLUORIDE	<1.0		mg/L	1	EPA 300.0	4/23/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	HARDNESS	HARDNESS	49.6 CONC		mg CaCO3/L	1	SM 2340 C	4/24/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	7.4 CONC		µg/L	0.2	EPA 200.8	4/26/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	25.1 CONC		µg/L	0.5	EPA 200.8	4/26/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	1.09 CONC		µg/L	0.1	EPA 200.8	4/26/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	4/26/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	4/26/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	0.14 CONC		µg/L	0.1	EPA 200.8	4/26/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	7.99 CONC		µg/L	0.2	EPA 200.8	4/26/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	27.1 CONC		µg/L	0.5	EPA 200.8	4/26/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	1.17 CONC		µg/L	0.1	EPA 200.8	4/26/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	<0.10		µg/L	0.1	EPA 200.8	4/26/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	<0.10		µg/L	0.1	EPA 200.8	4/26/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	0.2 CONC		µg/L	0.1	EPA 200.8	4/26/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	<0.1		mg/L	0.1	EPA 300.0	4/23/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.25 CONC		mg/L	0.02	EPA 365.1	4/24/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	116 CONC		mg/L	1	SM 2540 BD	4/24/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	0.98 CONC		mg/L	0.2	EPA 351.2	5/2/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	MERCURY	MERCURY	<0.00020		mg/L	0.0002	EPA 245.1	4/25/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <6.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5		mg/L	5	EPA 1664	4/28/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.29 CONC		mg/L	0.03	EPA 365.4	5/2/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	<1		mg/L	1	SM 2540 D	4/24/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010443	1	1212 SW CLAY ST	EAST ROOF DRAIN	4/23/01	10:45 DJH		GRAB	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	116 CONC		mg/L	1	SM 2540 B	4/24/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	5.9 CONC	pH Units		0.1	SM 4500-H B	4/23/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	14.4 CONC	Deg. C		0.1	SM 2550 B	4/23/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	EST 4.5		mg/L	0.1	SM 4500-O G	4/23/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	130 CONC		µmhos/cm	1	SM 2510 B	4/23/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.021 CONC		mg/L	0.02	EPA 350.1	5/7/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	BOD5	BOD5	3 CONC		mg/L	2	SM 5210 B	4/29/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	COD	COD	51 CONC		mg/L	5	SM 5220 D	5/4/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	COLOR	COLOR	80 CONC		Color Units	5	SM 2120 B	4/24/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	E. COLI	E. COLI	48 CONC		CFU/100 ml	2	SM 9213 D	4/25/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	29 CONC		CFU/100 ml	2	SM 9222 D	4/25/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	FLUORIDE	FLUORIDE	<1		mg/L	1	EPA 300.0	4/23/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	HARDNESS	HARDNESS	56.4 CONC		mg CaCO3/L	1	SM 2340 C	4/24/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	10.4 CONC		µg/L	0.2	EPA 200.8	4/26/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	12.9 CONC		µg/L	0.5	EPA 200.8	4/26/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	0.95 CONC		µg/L	0.1	EPA 200.8	4/26/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	4/26/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	4/26/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	4/26/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	11.2 CONC		µg/L	0.2	EPA 200.8	4/26/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	15 CONC		µg/L	0.5	EPA 200.8	4/26/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC	1.08 CONC		µg/L	0.1	EPA 200.8	4/26/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	<0.10		µg/L	0.1	EPA 200.8	4/26/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	<0.10		µg/L	0.1	EPA 200.8	4/26/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	0.19 CONC		µg/L	0.1	EPA 200.8	4/26/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	<0.1		mg/L	0.1	EPA 300.0	4/23/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.26 CONC		mg/L	0.02	EPA 365.1	4/24/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	120 CONC		mg/L	1	SM 2540 BD	4/27/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	1.15 CONC		mg/L	0.2	EPA 351.2	5/2/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	MERCURY	MERCURY	<0.00020		mg/L	0.0002	EPA 245.1	4/25/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5		mg/L	5	EPA 1664	5/4/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.35 CONC		mg/L	0.03	EPA 365.4	5/2/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	3.7 CONC		mg/L	1	SM 2540 D	4/24/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.
F010444	2	1212 SW CLAY ST	WEST ROOF DRAIN	4/23/01	10:32 DJH		GRAB	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	121 CONC		mg/L	1	SM 2540 B	4/24/01	FO: THE D.O. READING IS AN ESTIMATE DUE TO LOW FLOW RATE	LAB: SINCE TOTAL OIL AND GREASE IS <5 . NON POLAR OIL AND GREASE IS	ALSO <5.

Table 2: Analytical Summary
Hamilton Ecoroof Monitoring
FY 2000-01 Event 4: May 14, 2001

Grab Parameters	Units	Sample Site: / Lab ID:	East Roof Drain FO010559	West Roof Drain FO010560
pH (FIELD)	pH Units		5.9	5.7
TEMPERATURE (FIELD)	Deg. C		14.6	15.0
DISSOLVED OXYGEN (FIELD)	mg/L		5.0	6.1
CONDUCTIVITY (FIELD)	µmhos/cm		87	51
AMMONIA-NITROGEN	mg/L		0.044	0.064
BOD5	mg/L		6	4
COD	mg/L		28	18
COLOR	Color Units		40	40
E. COLI	CFU/100 ml		1300	61
FECAL COLIFORM	CFU/100 ml		1400	71
FLUORIDE	mg/L		1 U	1 U
HARDNESS	mg CaCO3/L		30.2	14.4
NITRATE-NITROGEN	mg/L		0.40	0.15
ORTHOPHOSPHATE-PHOSPHORUS	mg/L		0.27	0.25
TOTAL DISSOLVED SOLIDS	mg/L		100	46
TOTAL KJELDAHL NITROGEN	mg/L		1.33	1.13
TOTAL OIL & GREASE	mg/L		5 U	5 U
TOTAL PHOSPHORUS	mg/L		0.37	0.36
TOTAL SOLIDS	mg/L		103	49
TOTAL SUSPENDED SOLIDS	mg/L		3	2.8
ARSENIC, TOTAL	µg/L		1.48	0.81
CADMIUM, TOTAL	µg/L		0.10 U	0.10 U
COPPER, TOTAL	µg/L		11.6	7.66
LEAD, TOTAL	µg/L		0.88	0.25
MERCURY, TOTAL	mg/L		0.0002 U	0.0002 U
SILVER, TOTAL	µg/L		0.10 U	0.10 U
ZINC, TOTAL	µg/L		35.8	17.3
ARSENIC, DISSOLVED	µg/L		1.39	0.75
CADMIUM, DISSOLVED	µg/L		0.10 U	0.10 U
COPPER, DISSOLVED	µg/L		10.5	6.29
LEAD, DISSOLVED	µg/L		0.49	0.10 U
SILVER, DISSOLVED	µg/L		0.10 U	0.10 U
ZINC, DISSOLVED	µg/L		31.5	13.3

U = Not detected at method reporting limit shown

FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR pH (FIELD)	pH (FIELD)	5.9 CONC	pH Units	0.1 SM 4500-H B	5/14/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR TEMPERATURE	TEMPERATURE	14.6 CONC	Deg. C	0.1 SM 2550 B	5/14/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	5 CONC	mg/L	0.1 SM 4500-O G	5/14/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	87 CONC	µmhos/cm	1 SM 2510 B	5/14/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.044 CONC	mg/L	0.02 EPA 350.1	5/21/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR BOD5	BOD5	6 CONC	mg/L	2 SM 5210 B	5/20/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR COD	COD	28 CONC	mg/L	5 SM 5220 D	5/18/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR COLOR	COLOR	40 CONC	Color Units	5 SM 2120 B	5/15/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR E. COLI	E. COLI	1300 CONC	CFU/100 ml	2 SM 9213 D	5/16/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	1400 CONC	CFU/100 ml	2 SM 9222 D	5/16/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR FLUORIDE	FLUORIDE	<1	mg/L	1 EPA 300.0	5/15/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR HARDNESS	HARDNESS	30.2 CONC	mg CaCO3/L	1 SM 2340 C	5/18/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	10.5 CONC	µg/L	0.2 EPA 200.8	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	31.5 CONC	µg/L	0.5 EPA 200.8	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	1.39 CONC	µg/L	0.1 EPA 200.8	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.10	µg/L	0.1 EPA 200.8	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10	µg/L	0.1 EPA 200.8	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	0.49 CONC	µg/L	0.1 EPA 200.8	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR METALS BY ICP-MS (TOTAL)	COPPER	11.6 CONC	µg/L	0.2 EPA 200.8	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR METALS BY ICP-MS (TOTAL)	ZINC	35.8 CONC	µg/L	0.5 EPA 200.8	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR METALS BY ICP-MS (TOTAL)	ARSENIC	1.48 CONC	µg/L	0.1 EPA 200.8	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR METALS BY ICP-MS (TOTAL)	SILVER	<0.10	µg/L	0.1 EPA 200.8	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR METALS BY ICP-MS (TOTAL)	CADMIUM	<0.10	µg/L	0.1 EPA 200.8	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR METALS BY ICP-MS (TOTAL)	LEAD	0.88 CONC	µg/L	0.1 EPA 200.8	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR NITRATE-NITROGEN	NITRATE-NITROGEN	0.4 CONC	mg/L	0.1 EPA 300.0	5/15/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.27 CONC	mg/L	0.02 EPA 365.1	5/15/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	100 CONC	mg/L	1 SM 2540 BD	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	1.33 CONC	mg/L	0.2 EPA 351.2	5/25/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR MERCURY	MERCURY	<0.0002	mg/L	0.0002 EPA 245.1	5/16/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5	mg/L	5 EPA 1664	5/18/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.37 CONC	mg/L	0.03 EPA 365.4	5/22/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	3 CONC	mg/L	1 SM 2540 D	5/15/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010559	1 1212 SW CLAY ST	EAST ROOF DRAIN	5/14/2001 13:14 MKS/AMC	GRAB	STORMWTR TOTAL SOLIDS	TOTAL SOLIDS	103 CONC	mg/L	1 SM 2540 B	5/16/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR pH (FIELD)	pH (FIELD)	5.7 CONC	pH Units	0.1 SM 4500-H B	5/14/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR TEMPERATURE	TEMPERATURE	15 CONC	Deg. C	0.1 SM 2550 B	5/14/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	6.1 CONC	mg/L	0.1 SM 4500-O G	5/14/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	51 CONC	µmhos/cm	1 SM 2510 B	5/14/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.064 CONC	mg/L	0.02 EPA 350.1	5/21/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR BOD5	BOD5	4 CONC	mg/L	2 SM 5210 B	5/20/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR COD	COD	18 CONC	mg/L	5 SM 5220 D	5/18/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR COLOR	COLOR	40 CONC	Color Units	5 SM 2120 B	5/15/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR E. COLI	E. COLI	61 CONC	CFU/100 ml	2 SM 9213 D	5/16/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	71 CONC	CFU/100 ml	2 SM 9222 D	5/16/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR FLUORIDE	FLUORIDE	<1	mg/L	1 EPA 300.0	5/15/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR HARDNESS	HARDNESS	14.4 CONC	mg CaCO3/L	1 SM 2340 C	5/18/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	6.29 CONC	µg/L	0.2 EPA 200.8	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	13.3 CONC	µg/L	0.5 EPA 200.8	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED	0.75 CONC	µg/L	0.1 EPA 200.8	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.10	µg/L	0.1 EPA 200.8	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10	µg/L	0.1 EPA 200.8	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	<0.10	µg/L	0.1 EPA 200.8	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR METALS BY ICP-MS (TOTAL)	COPPER	7.66 CONC	µg/L	0.2 EPA 200.8	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR METALS BY ICP-MS (TOTAL)	ZINC	17.3 CONC	µg/L	0.5 EPA 200.8	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR METALS BY ICP-MS (TOTAL)	ARSENIC	0.81 CONC	µg/L	0.1 EPA 200.8	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR METALS BY ICP-MS (TOTAL)	SILVER	<0.10	µg/L	0.1 EPA 200.8	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR METALS BY ICP-MS (TOTAL)	CADMIUM	<0.10	µg/L	0.1 EPA 200.8	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR METALS BY ICP-MS (TOTAL)	LEAD	0.25 CONC	µg/L	0.1 EPA 200.8	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR NITRATE-NITROGEN	NITRATE-NITROGEN	0.15 CONC	mg/L	0.1 EPA 300.0	5/15/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.25 CONC	mg/L	0.02 EPA 365.1	5/15/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	46 CONC	mg/L	1 SM 2540 BD	5/17/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	1.13 CONC	mg/L	0.2 EPA 351.2	5/25/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR MERCURY	MERCURY	<0.0002	mg/L	0.0002 EPA 245.1	5/16/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5	mg/L	5 EPA 1664	5/18/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.36 CONC	mg/L	0.03 EPA 365.4	5/22/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	2.8 CONC	mg/L	1 SM 2540 D	5/15/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.
FO010560	2 1212 SW CLAY ST	WEST ROOF DRAIN	5/14/2001 13:05 MKS/AMC	GRAB	STORMWTR TOTAL SOLIDS	TOTAL SOLIDS	49 CONC	mg/L	1 SM 2540 B	5/16/2001	LAB: BECAUSE THE RESULT FOR TOTAL OIL & GREASE IS <5 MG/L, NON-POLAR	OIL & GREASE IS ALSO <5 MG/L.

Russell Pond BMP Monitoring

Table 1: HYDRA Rain Gauge Data
Russell Pond BMP Monitoring
FY 2000-01

Daily Rain Report — All Times in Pacific Standard Time

Rain Data Collected by HYDRA - City of Portland

Gauge 72: Fremont Pump Station

Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Event 1: April 30, 2001																									
4/27/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.05
4/28/01	0.00	0.00	0.05	0.02	0.00	0.00	0.01	0.00	0.00	0.00	0.04	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
4/29/01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.03
4/30/01	0.00	0.00	0.04	0.04	0.05	0.03	0.13	0.05	0.09	0.09	0.07	0.05	0.03	0.01	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.70

- Storm event duration

Table 2A: Analytical Summary - Inlet and Outlet Samples
Russell Pond BMP Monitoring
Event 1: April 30, 2001

Grab Parameters	Units	INLET	OUTLET
Lab ID		**FO010468**	**FO010469**
pH (FIELD)	pH Unit	5.3	5.2
SPECIFIC CONDUCTANCE (FIELD)	umhos/cm	14	15
TEMPERATURE (FIELD)	Deg. C	11.7	11.7
E. COLI	CFU/100 ml	2000	2700
FECAL COLIFORM	CFU/100 ml	3500	3700
NON-POLAR OIL & GREASE	mg/L	5 U	5 U
TOTAL OIL & GREASE	mg/L	5 U	5 U
Composite Parameters	**Units**	**INLET**	**OUTLET**
Lab ID		**FO010474**	**FO010475**
AMMONIA-NITROGEN	mg/L	0.040	0.026
BOD5	mg/L	5	5
COD	mg/L	24	19
HARDNESS	mg CaCO3/L	5.3	5.7
NITRATE-NITROGEN	mg/L	0.1 U	0.1 U
ORTHOPHOSPHATE PHOSPHORUS	mg/L	0.040	0.035
TOTAL DISSOLVED SOLIDS	mg/L	19	21
TOTAL KJELDAHL NITROGEN	mg/L	0.45	0.44
TOTAL PHOSPHORUS	mg/L	0.087	0.079
TOTAL SOLIDS	mg/L	29	28
TOTAL SUSPENDED SOLIDS	mg/L	10	7.2
ARSENIC, TOTAL	µg/L	0.31	0.30
CADMIUM, TOTAL	µg/L	0.10 U	0.10 U
CHROMIUM, TOTAL	µg/L	0.57	0.51
COPPER, TOTAL	µg/L	3.56	3.16
LEAD, TOTAL	µg/L	2.88	2.29
MERCURY, TOTAL	mg/L	0.00020 U	0.00020 U
ZINC, TOTAL	µg/L	19.4	19.0
ARSENIC, DISSOLVED	µg/L	0.23	0.21
CADMIUM, DISSOLVED	µg/L	0.10 U	0.10 U
CHROMIUM, DISSOLVED	µg/L	0.40 U	0.40 U
COPPER, DISSOLVED	µg/L	2.56	2.18
LEAD, DISSOLVED	µg/L	0.45	0.29
MERCURY, DISSOLVED	mg/L	0.00020 U	0.00020 U
ZINC, DISSOLVED	µg/L	12.9	12.2

U = Not detected at the method reporting limit shown

Table 2B: Analytical Summary - Infiltrate Sample
Russell Pond BMP Monitoring
Event 1: April 30, 2001

Grab Parameters	Units	INFILTRATE
Lab ID		FO010470
E. COLI	CFU/100 ml	1700
FECAL COLIFORM	CFU/100 ml	2800
HARDNESS	mg CaCO3/L	11.9
NITRATE-NITROGEN	mg/L	0.1 U
ORTHOPHOSPHATE PHOSPHORUS	mg/L	0.056
SULFATE	mg/L	1.46
TOTAL KJELDAHL NITROGEN	mg/L	0.26
TOTAL PHOSPHORUS	mg/L	0.12
ARSENIC, TOTAL	µg/L	0.59
CADMIUM, TOTAL	µg/L	0.10 U
CHROMIUM, TOTAL	µg/L	1.14
COPPER, TOTAL	µg/L	4.52
LEAD, TOTAL	µg/L	1.60
MERCURY, TOTAL	mg/L	0.00020 U
ZINC, TOTAL	µg/L	6.94
ARSENIC, DISSOLVED	µg/L	0.33
CADMIUM, DISSOLVED	µg/L	0.10 U
CHROMIUM, DISSOLVED	µg/L	0.40 U
COPPER, DISSOLVED	µg/L	2.57
LEAD, DISSOLVED	µg/L	0.16
MERCURY, DISSOLVED	mg/L	0.00020 U
ZINC, DISSOLVED	µg/L	1.43
SEMI-VOLATILE ORGANICS		
Acenaphthene	µg/L	5.00 U
Acenaphthylene	µg/L	5.00 U
Anthracene	µg/L	5.00 U
Benzo(a)anthracene	µg/L	5.00 U
Benzo(a)pyrene	µg/L	5.00 U
Benzo(b)fluoranthene	µg/L	5.00 U
Benzo(g,h,i)perylene	µg/L	5.00 U
Benzo(k)fluoranthene	µg/L	5.00 U
Benzoic acid	µg/L	5.00 U
Benzyl alcohol	µg/L	10.0 U
4-Bromophenylphenyl ether	µg/L	5.00 U
Benzyl butyl phthalate	µg/L	5.00 U
4-Chloro-3-methylphenol	µg/L	5.00 U
4-Chloroaniline	µg/L	20.0 U
Bis(2-chloroethoxy) methane	µg/L	10.0 U
Bis(2-chloroethyl) ether	µg/L	5.00 U
Bis(2-chloroisopropyl) ether	µg/L	10.0 U
2-Chloronaphthalene	µg/L	5.00 U
2-Chlorophenol	µg/L	5.00 U

Table 2B: Analytical Summary - Infiltrate Sample
Russell Pond BMP Monitoring
Event 1: April 30, 2001

Grab Parameters	Units	INFILTRATE
Lab ID		FO010470
Phenol	µg/L	5.00 U
Pyrene	µg/L	5.00 U
1,2,4-Trichlorobenzene	µg/L	5.00 U
2,4,5-Trichlorophenol	µg/L	5.00 U
2,4,6-Trichlorophenol	µg/L	5.00 U
VOLATILE ORGANICS		
Acetone	µg/L	10.0 U
Benzene	µg/L	1.00 U
Bromobenzene	µg/L	1.00 U
Bromochloromethane	µg/L	1.00 U
Bromodichloromethane	µg/L	1.00 U
Bromoform	µg/L	1.00 U
Bromomethane	µg/L	5.00 U
2-Butanone	µg/L	10.0 U
n-Butylbenzene	µg/L	5.00 U
sec-Butylbenzene	µg/L	1.00 U
tert-Butylbenzene	µg/L	1.00 U
Carbon disulfide	µg/L	10.0 U
Carbon tetrachloride	µg/L	1.00 U
Chlorobenzene	µg/L	1.00 U
Chloroethane	µg/L	1.00 U
Chloroform	µg/L	1.00 U
Chloromethane	µg/L	5.00 U
2-Chlorotoluene	µg/L	1.00 U
4-Chlorotoluene	µg/L	1.00 U
1,2-Dibromo-3-chloropropane	µg/L	5.00 U
Dibromochloromethane	µg/L	1.00 U
1,2-Dibromoethane	µg/L	1.00 U
Dibromomethane	µg/L	1.00 U
1,2-Dichlorobenzene	µg/L	1.00 U
1,3-Dichlorobenzene	µg/L	1.00 U
1,4-Dichlorobenzene	µg/L	1.00 U
Dichlorodifluoromethane	µg/L	5.00 U
1,1-Dichloroethane	µg/L	1.00 U
1,2-Dichloroethane	µg/L	1.00 U
1,1-Dichloroethene	µg/L	1.00 U
cis-1,2-Dichloroethene	µg/L	1.00 U
trans-1,2-Dichloroethene	µg/L	1.00 U
1,2-Dichloropropane	µg/L	1.00 U
1,3-Dichloropropane	µg/L	1.00 U
2,2-Dichloropropane	µg/L	1.00 U

Table 4: Ranked Pollutant Load Summary
Russell Pond BMP Monitoring
Event 1: April 30, 2001

Composite Parameters	Change
AMMONIA-NITROGEN	88%
LEAD, DISSOLVED	88%
TOTAL SUSPENDED SOLIDS	86%
COD	85%
LEAD, TOTAL	85%
COPPER, DISSOLVED	84%
ORTHOPHOSPHATE PHOSPHORUS	83%
ARSENIC, DISSOLVED	83%
COPPER, TOTAL	83%
CHROMIUM, TOTAL	83%
TOTAL PHOSPHORUS	83%
ARSENIC, TOTAL	82%
ZINC, DISSOLVED	82%
TOTAL SOLIDS	82%
TOTAL KJELDAHL NITROGEN	81%
ZINC, TOTAL	81%
BOD5	81%
HARDNESS	80%
TOTAL DISSOLVED SOLIDS	79%
Non-detects	
MERCURY, TOTAL	81%
NITRATE-NITROGEN	81%
CADMIUM, TOTAL	81%
CADMIUM, DISSOLVED	81%
CHROMIUM, DISSOLVED	81%
MERCURY, DISSOLVED	81%

U = Not detected at the method reporting limit shown
For non-detected results, one-half the method reporting limit was used to calculate % change.

Table 5: Concentration Percent Change Between Inlet and Infiltrate
Russell Pond BMP Monitoring
Event 1: April 30, 2001

Parameters	Units	INLET	INFILTRATE	Change
E. COLI	CFU/100 ml	2000	1700	15%
FECAL COLIFORM	CFU/100 ml	3500	2800	20%
HARDNESS	mg CaCO3/L	5.3	11.9	-125%
NITRATE-NITROGEN	mg/L	0.1 U	0.1 U	N/A
ORTHOPHOSPHATE PHOSPHORUS	mg/L	0.040	0.056	-40%
TOTAL KJELDAHL NITROGEN	mg/L	0.45	0.26	42%
TOTAL PHOSPHORUS	mg/L	0.087	0.12	-38%
ARSENIC, TOTAL	µg/L	0.31	0.59	-90%
CADMIUM, TOTAL	µg/L	0.10 U	0.10 U	N/A
CHROMIUM, TOTAL	µg/L	0.57	1.14	-100%
COPPER, TOTAL	µg/L	3.56	4.52	-27%
LEAD, TOTAL	µg/L	2.88	1.60	44%
MERCURY, TOTAL	mg/L	0.00020 U	0.00020 U	N/A
ZINC, TOTAL	µg/L	19.4	6.94	64%
ARSENIC, DISSOLVED	µg/L	0.23	0.33	-43%
CADMIUM, DISSOLVED	µg/L	0.10 U	0.10 U	N/A
CHROMIUM, DISSOLVED	µg/L	0.40 U	0.40 U	N/A
COPPER, DISSOLVED	µg/L	2.56	2.57	0%
LEAD, DISSOLVED	µg/L	0.45	0.16	64%
MERCURY, DISSOLVED	mg/L	0.00020 U	0.00020 U	N/A
ZINC, DISSOLVED	µg/L	12.9	1.43	89%

U = Not detected at the method reporting limit shown
N/A = Not applicable

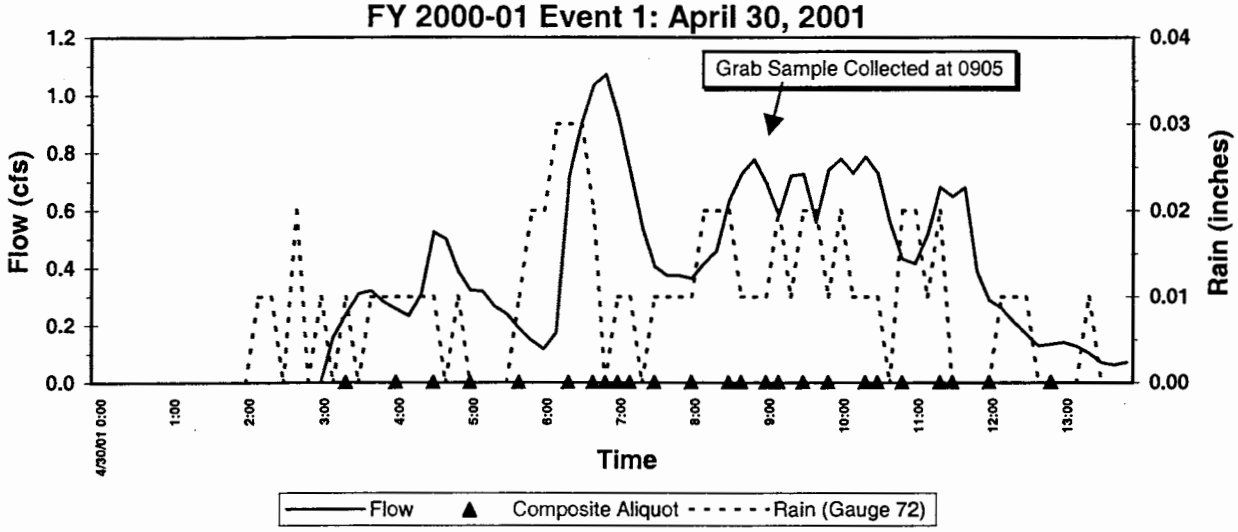
FO010468	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	9:05 WCR	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	5.3	CONC	pH Units	0.1	SM 4500-H B	4/30/2001
FO010468	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	9:05 WCR	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	14	CONC	µmhos/cm	1	SM 2510 B	4/30/2001
FO010468	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	9:05 WCR	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	11.7	CONC	Deg. C	0.1	SM 2550 B	4/30/2001
FO010468	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	9:05 WCR	GRAB	STORMWTR	E. COLI	E. COLI	2000	CONC	CFU/100 ml	2	SM 9213 D	5/1/2001
FO010468	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	9:05 WCR	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	3500	CONC	CFU/100 ml	2	SM 9222 D	5/1/2001
FO010468	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	9:05 WCR	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5		mg/L	5	EPA 1664	5/9/2001
FO010469	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	9:14 WCR	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	5.2	CONC	pH Units	0.1	SM 4500-H B	4/30/2001
FO010469	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	9:14 WCR	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	15	CONC	µmhos/cm	1	SM 2510 B	4/30/2001
FO010469	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	9:14 WCR	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	11.7	CONC	Deg. C	0.1	SM 2550 B	4/30/2001
FO010469	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	9:14 WCR	GRAB	STORMWTR	E. COLI	E. COLI	2700	CONC	CFU/100 ml	2	SM 9213 D	5/1/2001
FO010469	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	9:14 WCR	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	3700	CONC	CFU/100 ml	2	SM 9222 D	5/1/2001
FO010469	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	9:14 WCR	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE	<5		mg/L	5	EPA 1664	5/9/2001
FO010474	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	3:20 WCR	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.04	CONC	mg/L	0.02	EPA 350.1	5/7/2001
FO010474	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	3:20 WCR	COMPOSITE	STORMWTR	BOD5	BOD5	5	CONC	mg/L	2	SM 5210 B	5/6/2001
FO010474	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	3:20 WCR	COMPOSITE	STORMWTR	COD	COD	24	CONC	mg/L	5	SM 5220 D	5/5/2001
FO010474	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	3:20 WCR	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	5.3	CONC	mg CaCO3/L	1	SM 2340 C	5/7/2001
FO010474	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	3:20 WCR	COMPOSITE	STORMWTR	MERCURY	MERCURY	<0.00020		mg/L	0.0002	EPA 245.1	5/2/2001
FO010474	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	3:20 WCR	COMPOSITE	STORMWTR	MERCURY, DISSOLVED	MERCURY, DISSOLVED	<0.00020		mg/L	0.0002	EPA 245.1	5/2/2001
FO010474	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	3:20 WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CHROMIUM	0.57	CONC	µg/L	0.4	EPA 200.8	5/2/2001
FO010474	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	3:20 WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	3.56	CONC	µg/L	0.2	EPA 200.8	5/2/2001
FO010474	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	3:20 WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	19.4	CONC	µg/L	0.5	EPA 200.8	5/2/2001
FO010474	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	3:20 WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	<0.10		µg/L	0.1	EPA 200.8	5/2/2001
FO010474	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	3:20 WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	<0.10		µg/L	0.1	EPA 200.8	5/2/2001
FO010474	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	3:20 WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	2.88	CONC	µg/L	0.1	EPA 200.8	5/2/2001
FO010474	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	3:20 WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CHROMIUM, DISSOLVED	<0.40		µg/L	0.4	EPA 200.8	5/2/2001
FO010474	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	3:20 WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	2.56	CONC	µg/L	0.2	EPA 200.8	5/2/2001
FO010474	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	3:20 WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	12.9	CONC	µg/L	0.5	EPA 200.8	5/2/2001
FO010474	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	3:20 WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	5/2/2001
FO010474	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	3:20 WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	5/2/2001
FO010474	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	3:20 WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	0.45	CONC	µg/L	0.1	EPA 200.8	5/2/2001
FO010474	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	3:20 WCR	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	<0.1		mg/L	0.1	EPA 300.0	5/1/2001
FO010474	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	3:20 WCR	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.04	CONC	mg/L	0.02	EPA 365.1	5/1/2001
FO010474	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	3:20 WCR	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	19	CONC	mg/L	1	SM 2540 BD	5/8/2001
FO010474	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	3:20 WCR	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	0.45	CONC	mg/L	0.2	EPA 351.2	5/7/2001
FO010474	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	3:20 WCR	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.087	CONC	mg/L	0.03	EPA 365.4	5/4/2001
FO010474	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	3:20 WCR	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	10	CONC	mg/L	1	SM 2540 D	5/2/2001
FO010474	1 NE 89TH AVE & FREMONT DR	INLET	4/30/2001	3:20 WCR	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	29	CONC	mg/L	1	SM 2540 B	5/2/2001
FO010475	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	6:30 WCR	COMPOSITE	STORMWTR	AMMONIA-NITROGEN	AMMONIA-NITROGEN	0.026	CONC	mg/L	0.02	EPA 350.1	5/7/2001
FO010475	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	6:30 WCR	COMPOSITE	STORMWTR	BOD5	BOD5	5	CONC	mg/L	2	SM 5210 B	5/6/2001
FO010475	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	6:30 WCR	COMPOSITE	STORMWTR	COD	COD	19	CONC	mg/L	5	SM 5220 D	5/5/2001
FO010475	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	6:30 WCR	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	5.7	CONC	mg CaCO3/L	1	SM 2340 C	5/7/2001
FO010475	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	6:30 WCR	COMPOSITE	STORMWTR	MERCURY	MERCURY	<0.00020		mg/L	0.0002	EPA 245.1	5/2/2001
FO010475	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	6:30 WCR	COMPOSITE	STORMWTR	MERCURY, DISSOLVED	MERCURY, DISSOLVED	<0.00020		mg/L	0.0002	EPA 245.1	5/2/2001
FO010475	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	6:30 WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CHROMIUM	0.51	CONC	µg/L	0.4	EPA 200.8	5/2/2001
FO010475	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	6:30 WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	3.16	CONC	µg/L	0.2	EPA 200.8	5/2/2001
FO010475	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	6:30 WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	19	CONC	µg/L	0.5	EPA 200.8	5/2/2001
FO010475	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	6:30 WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER	<0.10		µg/L	0.1	EPA 200.8	5/2/2001
FO010475	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	6:30 WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM	<0.10		µg/L	0.1	EPA 200.8	5/2/2001
FO010475	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	6:30 WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	2.29	CONC	µg/L	0.1	EPA 200.8	5/2/2001
FO010475	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	6:30 WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CHROMIUM, DISSOLVED	<0.40		µg/L	0.4	EPA 200.8	5/2/2001
FO010475	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	6:30 WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	2.18	CONC	µg/L	0.2	EPA 200.8	5/2/2001
FO010475	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	6:30 WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	12.2	CONC	µg/L	0.5	EPA 200.8	5/2/2001
FO010475	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	6:30 WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	5/2/2001
FO010475	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	6:30 WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED	<0.10		µg/L	0.1	EPA 200.8	5/2/2001
FO010475	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	6:30 WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	0.29	CONC	µg/L	0.1	EPA 200.8	5/2/2001
FO010475	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	6:30 WCR	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	<0.1		mg/L	0.1	EPA 300.0	5/1/2001
FO010475	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	6:30 WCR	COMPOSITE	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS, DISS	0.035	CONC	mg/L	0.02	EPA 365.1	5/1/2001
FO010475	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	6:30 WCR	COMPOSITE	STORMWTR	TOTAL DISSOLVED SOLIDS	TOTAL DISSOLVED SOLIDS	21	CONC	mg/L	1	SM 2540 BD	5/8/2001
FO010475	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	6:30 WCR	COMPOSITE	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (TKN)	0.44	CONC	mg/L	0.2	EPA 351.2	5/7/2001
FO010475	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	6:30 WCR	COMPOSITE	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.079	CONC	mg/L	0.03	EPA 365.4	5/4/2001
FO010475	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	6:30 WCR	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	7.2	CONC	mg/L	1	SM 2540 D	5/2/2001
FO010475	2 NE 89TH AVE & FREMONT DR	OUTLET	4/30/2001	6:30 WCR	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS	28	CONC	mg/L	1	SM 2540 B	5/2/2001

FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	E. COLI	E. COLI	1700	CONC	CFU/	2	SM 9213 D	5/1/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	FECAL COLIFORM BACTERIA	FECAL COLIFORM BACTERIA	2800	CONC	CFU/	2	SM 9222 D	5/1/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	HARDNESS	HARDNESS	11.9	CONC	mg Ca	1	SM 2340 C	5/7/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	MERCURY	MERCURY		<0.0002	mg/L	2E-04	EPA 245.1	5/2/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	MERCURY, DISSOLVED	MERCURY, DISSOLVED		<0.0002	mg/L	2E-04	EPA 245.1	5/2/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	CHROMIUM	1.14	CONC	µg/L	0.4	EPA 200.8	5/2/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	4.52	CONC	µg/L	0.2	EPA 200.8	5/2/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	6.94	CONC	µg/L	0.5	EPA 200.8	5/2/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	SILVER		<0.10	µg/L	0.1	EPA 200.8	5/2/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	CADMIUM		<0.10	µg/L	0.1	EPA 200.8	5/2/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	1.6	CONC	µg/L	0.1	EPA 200.8	5/2/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CHROMIUM, DISSOLVED		<0.40	µg/L	0.4	EPA 200.8	5/2/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	2.57	CONC	µg/L	0.2	EPA 200.8	5/2/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	1.43	CONC	µg/L	0.5	EPA 200.8	5/2/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	SILVER, DISSOLVED		<0.10	µg/L	0.1	EPA 200.8	5/2/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CADMIUM, DISSOLVED		<0.10	µg/L	0.1	EPA 200.8	5/2/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	0.16	CONC	µg/L	0.1	EPA 200.8	5/2/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN		<0.1	mg/L	0.1	EPA 300.0	5/1/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	O-PHOSPHATE-PHOSPHORUS, DISS	O-PHOSPHATE-PHOSPHORUS	0.056	CONC	mg/L	0.02	EPA 365.1	5/1/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	TOTAL KJELDAHL NITROGEN (TKN)	TOTAL KJELDAHL NITROGEN (	0.26	CONC	mg/L	0.2	EPA 351.2	5/7/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	TOTAL PHOSPHORUS	TOTAL PHOSPHORUS	0.12	CONC	mg/L	0.03	EPA 365.4	5/4/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SULFATE	SULFATE	1.46	CONC	mg/L	1	EPA 300.0	5/1/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Acenaphthene		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Acenaphthylene		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Anthracene		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Benzo(a)anthracene		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Benzo(a)pyrene		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Benzo(b)fluoranthene		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Benzo(g,h,i)perylene		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Benzo(k)fluoranthene		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Benzoic acid		<50.0	µg/L	50	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Benzyl alcohol		<10.0	µg/L	10	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	4-Bromophenylphenyl ether		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Benzyl butyl phthalate		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	4-Chloro-3-methylphenol		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	4-Chloroaniline		<20.0	µg/L	20	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Bis(2-chloroethoxy) methane		<10.0	µg/L	10	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Bis(2-chloroethyl) ether		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Bis(2-chloroisopropyl) ether		<10.0	µg/L	10	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	2-Chloronaphthalene		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	2-Chlorophenol		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	4-Chlorophenylphenyl ether		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Chrysene		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Di-n-butyl phthalate		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Di-n-octyl phthalate		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Dibenzo(a,h)anthracene		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Dibenzofuran		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	1,2-Dichlorobenzene		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	1,3-Dichlorobenzene		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	1,4-Dichlorobenzene		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	3,3'-Dichlorobenzidine		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	2,4-Dichlorophenol		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Diethyl phthalate		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	2,4-Dimethylphenol		<10.0	µg/L	10	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Dimethyl phthalate		<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	4,6-Dinitro-2-methylphenol		<10.0	µg/L	10	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	2,4-Dinitrophenol		<25.0	µg/L	25	EPA 8270	5/11/2001

FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	1,1-Dichloroethane	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	1,2-Dichloroethane	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	1,1-Dichloroethene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	cis-1,2-Dichloroethene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	trans-1,2-Dichloroethene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	1,2-Dichloropropane	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	1,3-Dichloropropane	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	2,2-Dichloropropane	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	1,1-Dichloropropene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	cis-1,3-Dichloropropene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	trans-1,3-Dichloropropene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Ethylbenzene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Hexachlorobutadiene	<2.00	µg/L	2	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	2-Hexanone	<10.0	µg/L	10	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Isopropylbenzene	<2.00	µg/L	2	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	p-Isopropyltoluene	<2.00	µg/L	2	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	4-Methyl-2-pentanone (MIBK)	<5.00	µg/L	5	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Methyl tert-butyl ether	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Methylene chloride	<5.00	µg/L	5	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Naphthalene	<2.00	µg/L	2	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	n-Propylbenzene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Styrene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	1,1,1,2-Tetrachloroethane	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	1,1,2,2-Tetrachloroethane	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Tetrachloroethene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Toluene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	1,2,3-Trichlorobenzene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	1,2,4-Trichlorobenzene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	1,1,1-Trichloroethane	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	1,1,2-Trichloroethane	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Trichloroethene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Trichlorofluoromethane	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	1,2,3-Trichloropropane	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	1,2,4-Trimethylbenzene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	1,3,5-Trimethylbenzene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Vinyl chloride	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	o-Xylene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	m,p-Xylene	<2.00	µg/L	2	EPA 8260B	5/15/2001

FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	2,4-Dinitrotoluene	<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	2,6-Dinitrotoluene	<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Bis(2-ethylhexyl) phthalate	<10.0	µg/L	10	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Fluoranthene	<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Fluorene	<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Hexachlorobenzene	<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Hexachlorobutadiene	<10.0	µg/L	10	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Hexachlorocyclopentadiene	<10.0	µg/L	10	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Hexachloroethane	<10.0	µg/L	10	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Indeno(1,2,3-cd) pyrene	<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Isophorone	<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	2-Methylnaphthalene	<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	2-Methylphenol	<10.0	µg/L	10	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	3-,4-Methylphenol	<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Naphthalene	<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	2-Nitroaniline	<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	3-Nitroaniline	<10.0	µg/L	10	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	4-Nitroaniline	<10.0	µg/L	10	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Nitrobenzene	<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	2-Nitrophenol	<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	4-Nitrophenol	<25.0	µg/L	25	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	N-Nitroso-di-n-propylamine	<10.0	µg/L	10	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	N-Nitrosodiphenylamine	<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Pentachlorophenol	<10.0	µg/L	10	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Phenanthrene	<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Phenol	<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	Pyrene	<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	1,2,4-Trichlorobenzene	<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	2,4,5-Trichlorophenol	<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	SEMI-VOLATILE ORGANICS	2,4,6-Trichlorophenol	<5.00	µg/L	5	EPA 8270	5/11/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Acetone	<10.0	µg/L	10	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Benzene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Bromobenzene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Bromochloromethane	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Bromodichloromethane	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Bromoform	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Bromomethane	<5.00	µg/L	5	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	2-Butanone	<10.0	µg/L	10	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	n-Butylbenzene	<5.00	µg/L	5	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	sec-Butylbenzene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	tert-Butylbenzene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Carbon disulfide	<10.0	µg/L	10	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Carbon tetrachloride	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Chlorobenzene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Chloroethane	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Chloroform	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Chloromethane	<5.00	µg/L	5	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	2-Chlorotoluene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	4-Chlorotoluene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	1,2-Dibromo-3-chloropropane	<5.00	µg/L	5	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Dibromochloromethane	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	1,2-Dibromoethane	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Dibromomethane	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	1,2-Dichlorobenzene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	1,3-Dichlorobenzene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	1,4-Dichlorobenzene	<1.00	µg/L	1	EPA 8260B	5/15/2001
FO010470	3 NE 89TH AVE & FREMONT DR	INFILTRATE	4/30/2001	9:20 WCR	GRAB	STORMWTR	VOLATILE ORGANIC COMPOUNDS	Dichlorodifluoromethane	<5.00	µg/L	5	EPA 8260B	5/15/2001

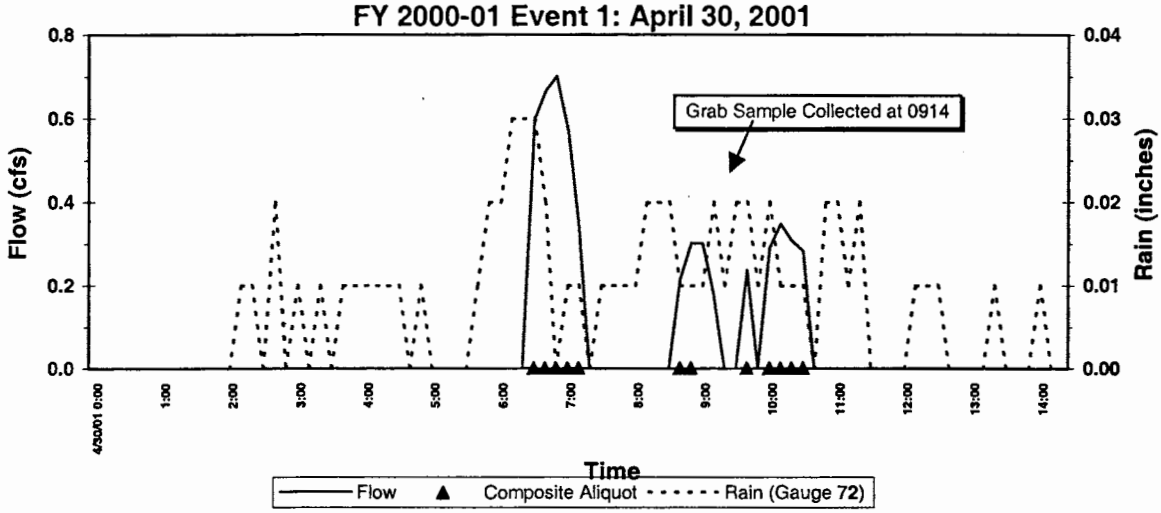
Figure 3A: Inlet Hydrograph
Russell Pond BMP Monitoring
FY 2000-01 Event 1: April 30, 2001



Russell Pond BMP Monitoring - inlet

Time	Flow	25 Composite Aliquot	0 Missed Aliquot	Rain (Gauge 72)
4/30/01 0:00	0			0.00
0:10	0			0.00
0:20	0			0.00
0:30	0			0.00
0:40	0			0.00
0:50	0			0.00
1:00	0			0.00
1:10	0			0.00
1:20	0			0.00
1:30	0			0.00
1:40	0			0.00
1:50	0			0.00
2:00	0			0.00
2:10	0			0.01
2:20	0			0.01
2:30	0			0.00
2:40	0			0.02
2:50	0			0.00
3:00	0			0.01
3:10	0.159			0.00
3:20	0.238		0	0.01
3:30	0.31			0.00
3:40	0.321			0.01
3:50	0.282			0.01
4:00	0.258		0	0.01
4:10	0.234			0.01
4:20	0.308			0.01
4:30	0.525		0	0.01
4:40	0.5			0.00
4:50	0.387			0.01
5:00	0.322		0	0.00
5:10	0.319			0.00
5:20	0.266			0.00

Figure 3B: Outlet Hydrograph
Russell Pond BMP Monitoring
FY 2000-01 Event 1: April 30, 2001

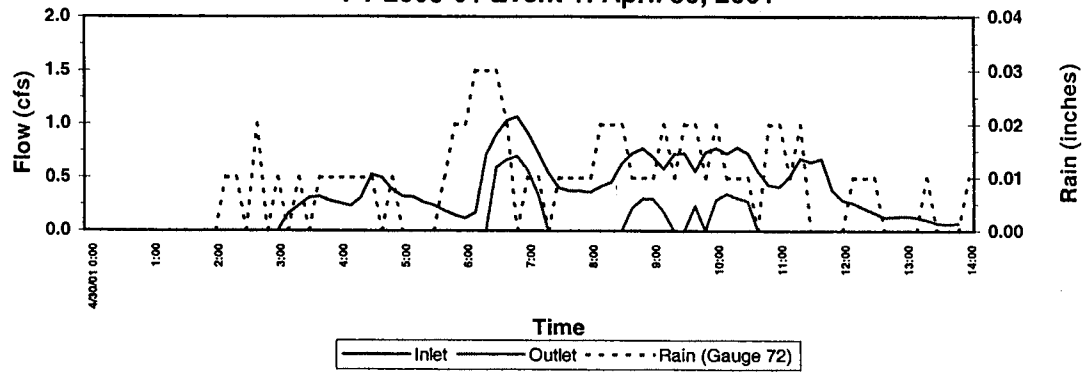


Russell Pond BMP Event 1 Outlet

Time	Flow	22 Composite Aliquot	0 Missed Aliquot	Rain (Gauge 72)
4/30/01 0:00	0			0.00
0:10	0			0.00
0:20	0			0.00
0:30	0			0.00
0:40	0			0.00
0:50	0			0.00
1:00	0			0.00
1:10	0			0.00
1:20	0			0.00
1:30	0			0.00
1:40	0			0.00
1:50	0			0.00
2:00	0			0.00
2:10	0			0.01
2:20	0			0.01
2:30	0			0.00
2:40	0			0.02
2:50	0			0.00
3:00	0			0.01
3:10	0			0.00
3:20	0			0.01
3:30	0			0.00
3:40	0			0.01
3:50	0			0.01
4:00	0			0.01
4:10	0			0.01
4:20	0			0.01
4:30	0			0.01
4:40	0			0.00
4:50	0			0.01
5:00	0			0.00
5:10	0			0.00
5:20	0			0.00
5:30	0			0.00
5:40	0			0.01
5:50	0			0.02
6:00	0			0.02
6:10	0			0.03

Time	Inlet	Outlet	Rain (Gauge 72)
4/30/01 0:00	0	0	0.00
0:10	0	0	0.00
0:20	0	0	0.00
0:30	0	0	0.00
0:40	0	0	0.00
0:50	0	0	0.00
1:00	0	0	0.00
1:10	0	0	0.00
1:20	0	0	0.00
1:30	0	0	0.00
1:40	0	0	0.00
1:50	0	0	0.00
2:00	0	0	0.00
2:10	0	0	0.01
2:20	0	0	0.01
2:30	0	0	0.00
2:40	0	0	0.02
2:50	0	0	0.00
3:00	0	0	0.01
3:10	0.159	0	0.00
3:20	0.238	0	0.01
3:30	0.31	0	0.00
3:40	0.321	0	0.01
3:50	0.282	0	0.01
4:00	0.258	0	0.01
4:10	0.234	0	0.01
4:20	0.308	0	0.01
4:30	0.525	0	0.01
4:40	0.5	0	0.00
4:50	0.387	0	0.01
5:00	0.322	0	0.00
5:10	0.319	0	0.00
5:20	0.266	0	0.00
5:30	0.24	0	0.00
5:40	0.189	0	0.01
5:50	0.148	0	0.02
6:00	0.118	0	0.02
6:10	0.173	0	0.03
6:20	0.717	0	0.03
6:30	0.903	0.598	0.03
6:40	1.035	0.666	0.02
6:50	1.071	0.701	0.00
7:00	0.922	0.571	0.01
7:10	0.734	0.339	0.01
7:20	0.54	0	0.00

Figure 4: Inlet and Outlet Flow Summary
Russell Pond BMP Monitoring
FY 2000-01 Event 1: April 30, 2001



Time	Inlet	Outlet	Rain (Gauge 72)
4/30/01 0:00	0	0	0.00
0:10	0	0	0.00
0:20	0	0	0.00
0:30	0	0	0.00
0:40	0	0	0.00
0:50	0	0	0.00
1:00	0	0	0.00
1:10	0	0	0.00
1:20	0	0	0.00
1:30	0	0	0.00
1:40	0	0	0.00
1:50	0	0	0.00
2:00	0	0	0.00
2:10	0	0	0.01
2:20	0	0	0.01
2:30	0	0	0.00
2:40	0	0	0.02
2:50	0	0	0.00
3:00	0	0	0.01
3:10	95	0	0.00
3:20	238	0	0.01
3:30	424	0	0.00
3:40	617	0	0.01
3:50	786	0	0.01
4:00	941	0	0.01
4:10	1081	0	0.01
4:20	1266	0	0.01
4:30	1581	0	0.01
4:40	1881	0	0.00
4:50	2113	0	0.01
5:00	2306	0	0.00
5:10	2498	0	0.00
5:20	2657	0	0.00
5:30	2801	0	0.00
5:40	2915	0	0.01
5:50	3004	0	0.02
6:00	3074	0	0.02
6:10	3178	0	0.03
6:20	3608	0	0.03
6:30	4150	358.8	0.03
6:40	4771	758.4	0.02
6:50	5414	1179	0.00
7:00	5967	1521.6	0.01
7:10	6407	1725	0.01

Figure 5: Cumulative Flow Summary
Russell Pond BMP Monitoring
FY 2000-01 Event 1: April 30, 2001

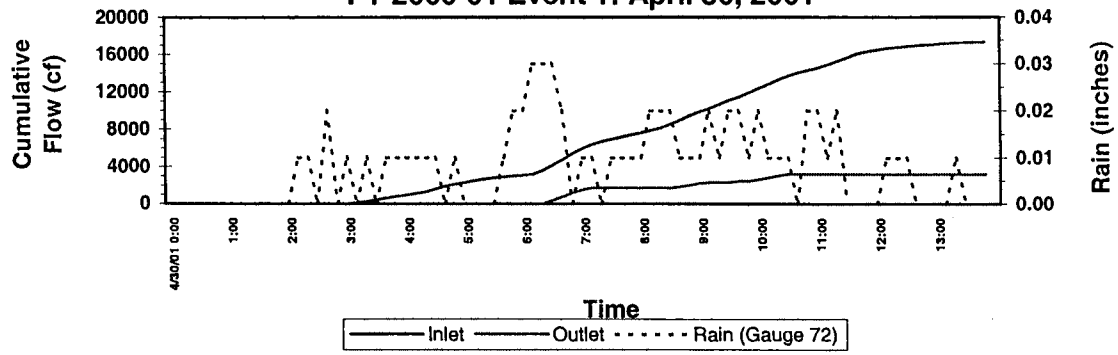


Figure 5: Cumulative Flow Summary

Time	Inlet	Outlet	Rain (Gauge 72)
7:20	6731	1725	0.00
7:30	6974	1725	0.01
7:40	7199	1725	0.01
7:50	7423	1725	0.01
8:00	7642	1725	0.01
8:10	7891	1725	0.02
8:20	8167	1725	0.02
8:30	8546	1725	0.02
8:40	8983	1854	0.01
8:50	9449	2035.2	0.01
9:00	9866	2215.8	0.01
9:10	10216	2323.8	0.02
9:20	10648	2323.8	0.01
9:30	11084	2323.8	0.02
9:40	11420	2466	0.02
9:50	11864	2466	0.01
10:00	12332	2640	0.02
10:10	12769	2848.8	0.01
10:20	13241	3033.6	0.01
10:30	13679	3203.4	0.01
10:40	14014	3203.4	0.00
10:50	14273	3203.4	0.02
11:00	14522	3203.4	0.02
11:10	14830	3203.4	0.01
11:20	15239	3203.4	0.02
11:30	15628	3203.4	0.00
11:40	16036	3203.4	0.00
11:50	16268	3203.4	0.00
12:00	16441	3203.4	0.00
12:10	16597	3203.4	0.01
12:20	16725	3203.4	0.01
12:30	16828	3203.4	0.01
12:40	16905	3203.4	0.00
12:50	16985	3203.4	0.00
13:00	17070	3203.4	0.00
13:10	17147	3203.4	0.00
13:20	17209	3203.4	0.01
13:30	17251	3203.4	0.00
13:40	17289	3203.4	0.00
13:50	17332	3203.4	0.00

Brookside Wetland Monitoring

Table 1: HYDRA Rain Gauge Data
Brookside Wetland Monitoring
FY 2000-01 Events

Daily Rain Report — All Times in Pacific Standard Time

Rain Data Collected by HYDRA - City of Portland — Each Tip = 0.01"

Gauge 14: Kelly School

Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Event 1: November 29, 2000																									
11/26/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.03	0.03	0.04	0.07	0.07	0.25
11/27/00	0.05	0.05	0.01	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
11/28/00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/29/00	0.01	0.04	0.00	0.01	0.00	0.00	0.05	0.11	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.11	0.00	0.01	0.45
Event 2: March 15, 2001																									
3/12/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/13/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/14/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/15/01	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.02	0.04	0.02	0.01	0.03	0.01	0.00	0.02	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26

- Sample Collection Period

Table 2A: Analytical Summary
Brookside Wetland Monitoring
FY 2000-01 Event 1: November 29, 2000

		Beaded Swale		Vernal Pool	
		Inlet	Outlet	Inlet	Outlet
Grab Parameters	**Units**	**FO001920**	**FO001921**	**FO001922**	**FO001923**
pH (FIELD)	pH Units	7.5	7.4	7.4	7.4
CONDUCTIVITY (FIELD)	µmhos/cm	90	110	150	140
TEMPERATURE	Deg. C	7.4	6.3	7.7	6.3
DISSOLVED OXYGEN (FIELD)	mg/L	7.0	7.6	7.8	10.1
E. COLI	CFU/100 ml	81	530	1100	590
TOTAL OIL & GREASE	mg/L	5 U	5 U	5 U	5 U
Composite Parameters	**Units**	**FO001924**	**FO001925**	**FO001926**	**FO001927**
HARDNESS	mg CaCO3/L	41.6	24.8	37.2	20.6
NITRATE-NITROGEN	mg/L	2.4	0.33	1.5	0.55
TOTAL SUSPENDED SOLIDS	mg/L	6.8	4.0	4.4	2.0
COPPER, TOTAL	µg/L	3.48	3.63	7.40	5.14
LEAD, TOTAL	µg/L	0.92	0.40	0.62	0.50
ZINC, TOTAL	µg/L	21.2	9.29	24.0	16.8
COPPER, DISSOLVED	µg/L	1.62	2.42	5.27	3.67
LEAD, DISSOLVED	µg/L	0.10 U	0.10	0.10	0.11
ZINC, DISSOLVED	µg/L	21.8	6.35	16.9	12.9
PESTICIDES Aldrin	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Alpha-BHC	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Beta-BHC	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Delta-BHC	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Gamma-BHC(Lindane)	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Gamma-Chlordane	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Alpha-Chlordane	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Chlordane(tech)	µg/L	1.00 U	1.00 U	1.00 U	1.00 U
4,4'-DDD	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
4,4'-DDE	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
4,4'-DDT	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Dieldrin	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Endosulfan I	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Endosulfan II	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Endosulfan Sulfate	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Endrin	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Endrin Aldehyde	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Endrin Ketone	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Heptachlor	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Heptachlor Epoxide	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Methoxychlor	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Toxaphene	µg/L	2.50 U	2.50 U	2.50 U	2.50 U
PCB 1016	µg/L	0.500 U	0.500 U	0.500 U	0.500 U
PCB 1221	µg/L	1.00 U	1.00 U	1.00 U	1.00 U
PCB 1232	µg/L	0.500 U	0.500 U	0.500 U	0.500 U
PCB 1242	µg/L	0.500 U	0.500 U	0.500 U	0.500 U
PCB 1248	µg/L	0.500 U	0.500 U	0.500 U	0.500 U
PCB 1254	µg/L	0.500 U	0.500 U	0.500 U	0.500 U
PCB 1260	µg/L	0.500 U	0.500 U	0.500 U	0.500 U

U = Not detected at the method reporting limit shown

Table 5A: Metals Criteria Conversion Worksheet
Brookside Wetland Monitoring
FY 2000-01 Event 1: November 29, 2000

Sample Site	Metal	Type	Hardness-Dependent Criteria Equation	Measured Hardness	Total WQ Criteria (ug/L)	Conversion Factor	Dissolved WQ Criteria (ug/L)	Dissolved Result (ug/L)
BW-2	Copper	Acute	e(0.9422[ln(hardness)]-1.464	41.6	8	0.960	**7.45**	**1.62**
		Chronic	e(0.8545[ln(hardness)]-1.465	41.6	6	0.960	**5.36**	
	Lead	Acute	e(1.273[ln(hardness)]-1.460	41.6	27	0.919	**24.56**	**0.10 U**
		Chronic	e(1.273[ln(hardness)]-4.705	41.6	1	0.919	**0.96**	
	Zinc	Acute	e(0.83[ln(hardness)]+1.95	41.6	155	0.978	**151.73**	**21.8**
		Chronic	N/A	41.6	47	0.986	**46.34**	
BW-3	Copper	Acute	e(0.9422[ln(hardness)]-1.464	24.8	5	0.960	**4.57**	**2.42**
		Chronic	e(0.8545[ln(hardness)]-1.465	24.8	4	0.960	**3.45**	
	Lead	Acute	e(1.273[ln(hardness)]-1.460	24.8	14	0.994	**13.76**	**0.10**
		Chronic	e(1.273[ln(hardness)]-4.705	24.8	1	0.994	**0.54**	
	Zinc	Acute	e(0.83[ln(hardness)]+1.95	24.8	101	0.978	**98.77**	**6.35**
		Chronic	N/A	24.8	47	0.986	**46.34**	
BW-5	Copper	Acute	e(0.9422[ln(hardness)]-1.464	37.2	7	0.960	**6.70**	**5.27**
		Chronic	e(0.8545[ln(hardness)]-1.465	37.2	5	0.960	**4.88**	
	Lead	Acute	e(1.273[ln(hardness)]-1.460	37.2	23	0.935	**21.68**	**0.10**
		Chronic	e(1.273[ln(hardness)]-4.705	37.2	1	0.935	**0.84**	
	Zinc	Acute	e(0.83[ln(hardness)]+1.95	37.2	141	0.978	**138.28**	**16.90**
		Chronic	N/A	37.2	47	0.986	**46.34**	
BW-6	Copper	Acute	e(0.9422[ln(hardness)]-1.464	20.6	4	0.960	**3.84**	**3.67**
		Chronic	e(0.8545[ln(hardness)]-1.465	20.6	3	0.960	**2.94**	
	Lead	Acute	e(1.273[ln(hardness)]-1.460	20.6	11	1.021	**11.16**	**0.11**
		Chronic	e(1.273[ln(hardness)]-4.705	20.6	0	1.021	**0.43**	
	Zinc	Acute	e(0.83[ln(hardness)]+1.95	20.6	87	0.978	**84.67**	**12.90**
		Chronic	N/A	20.6	47	0.986	**46.34**	

Reference: EPA document 823-B-96-007, June 1996

Table 5A: Metals Criteria Conversion Worksheet
Brookside Wetland Monitoring
FY 2000-01 Event 1: November 29, 2000

		HARD	
CF	(1.46203-[ln(hardness)] 0.145712	41.6	0.918801
		24.8	0.994172
		37.2	0.93509
		20.6	1.021209

FO001920	BW-2	11/29/2000	9:30	JH	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	7.5	CONC	pH Units	0.1	SM 4500-H B	11/29/2000
FO001920	BW-2	11/29/2000	9:30	JH	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	90	CONC	µmhos/cm	1	SM 2510 B	11/29/2000
FO001920	BW-2	11/29/2000	9:30	JH	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	7.4	CONC	Deg. C	0.1	SM 2550 B	11/29/2000
FO001920	BW-2	11/29/2000	9:30	JH	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	7	CONC	mg/L	0.1	SM 4500-O G	11/29/2000
FO001920	BW-2	11/29/2000	9:30	JH	GRAB	STORMWTR	E. COLI	E. COLI	81	CONC	CFU/100 ml	2	SM 9213 D	12/1/2000
FO001920	BW-2	11/29/2000	9:30	JH	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE		<5	mg/L	5	EPA 1664	12/7/2000
FO001921	BW-3	11/29/2000	9:30	JH	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	7.4	CONC	pH Units	0.1	SM 4500-H B	11/29/2000
FO001921	BW-3	11/29/2000	9:30	JH	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	110	CONC	µmhos/cm	1	SM 2510 B	11/29/2000
FO001921	BW-3	11/29/2000	9:30	JH	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	6.3	CONC	Deg. C	0.1	SM 2550 B	11/29/2000
FO001921	BW-3	11/29/2000	9:30	JH	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	7.6	CONC	mg/L	0.1	SM 4500-O G	11/29/2000
FO001921	BW-3	11/29/2000	9:30	JH	GRAB	STORMWTR	E. COLI	E. COLI	530	CONC	CFU/100 ml	2	SM 9213 D	12/1/2000
FO001921	BW-3	11/29/2000	9:30	JH	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE		<5	mg/L	5	EPA 1664	12/7/2000
FO001922	BW-5	11/29/2000	9:30	JH	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	7.4	CONC	pH Units	0.1	SM 4500-H B	11/29/2000
FO001922	BW-5	11/29/2000	9:30	JH	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	150	CONC	µmhos/cm	1	SM 2510 B	11/29/2000
FO001922	BW-5	11/29/2000	9:30	JH	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	7.7	CONC	Deg. C	0.1	SM 2550 B	11/29/2000
FO001922	BW-5	11/29/2000	9:30	JH	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	7.8	CONC	mg/L	0.1	SM 4500-O G	11/29/2000
FO001922	BW-5	11/29/2000	9:30	JH	GRAB	STORMWTR	E. COLI	E. COLI	1100	CONC	CFU/100 ml	2	SM 9213 D	12/1/2000
FO001922	BW-5	11/29/2000	9:30	JH	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE		<5	mg/L	5	EPA 1664	12/7/2000
FO001923	BW-6	11/29/2000	9:30	JH	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	7.4	CONC	pH Units	0.1	SM 4500-H B	11/29/2000
FO001923	BW-6	11/29/2000	9:30	JH	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	140	CONC	µmhos/cm	1	SM 2510 B	11/29/2000
FO001923	BW-6	11/29/2000	9:30	JH	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	6.3	CONC	Deg. C	0.1	SM 2550 B	11/29/2000
FO001923	BW-6	11/29/2000	9:30	JH	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	10.1	CONC	mg/L	0.1	SM 4500-O G	11/29/2000
FO001923	BW-6	11/29/2000	9:30	JH	GRAB	STORMWTR	E. COLI	E. COLI	590	CONC	CFU/100 ml	2	SM 9213 D	12/1/2000
FO001923	BW-6	11/29/2000	9:30	JH	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE		<5	mg/L	5	EPA 1664	12/7/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	6.8	CONC	mg/L	1	SM 2540 D	12/1/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	41.6	CONC	mg CaCO3/L	1	SM 2340 C	12/1/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	2.4	CONC	mg/L	0.1	EPA 300.0	11/30/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	3.48	CONC	µg/L	0.2	EPA 200.8	12/8/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	21.2	CONC	µg/L	0.5	EPA 200.8	12/8/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	0.92	CONC	µg/L	0.1	EPA 200.8	12/8/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	1.62	CONC	µg/L	0.2	EPA 200.8	12/8/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	21.8	CONC	µg/L	0.5	EPA 200.8	12/8/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED		<0.10	µg/L	0.1	EPA 200.8	12/8/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Aldrin		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Alpha-BHC		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Beta-BHC		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Delta-BHC		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Gamma-BHC(Lindane)		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Gamma-Chlordane		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Alpha-Chlordane		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Chlordane(tech)		<1.00	µg/L	1	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	4,4'-DDD		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	4,4'-DDE		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	4,4'-DDT		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Dieldrin		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endosulfan I		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endosulfan II		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endosulfan Sulfate		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endrin		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endrin Aldehyde		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endrin Ketone		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Heptachlor		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Heptachlor Epoxide		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Methoxychlor		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Toxaphene		<2.50	µg/L	2.5	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1016		<0.500	µg/L	0.5	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1221		<1.00	µg/L	1	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1232		<0.500	µg/L	0.5	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1242		<0.500	µg/L	0.5	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1248		<0.500	µg/L	0.5	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1254		<0.500	µg/L	0.5	EPA 8081	12/15/2000
FO001924	BW-2	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1260		<0.500	µg/L	0.5	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	4	CONC	mg/L	1	SM 2540 D	12/1/2000

FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endrin Ketone		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Heptachlor		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Heptachlor Epoxide		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Methoxychlor		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Toxaphene		<2.50	µg/L	2.5	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1016		<0.500	µg/L	0.5	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1221		<1.00	µg/L	1	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1232		<0.500	µg/L	0.5	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1242		<0.500	µg/L	0.5	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1248		<0.500	µg/L	0.5	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1254		<0.500	µg/L	0.5	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1260		<0.500	µg/L	0.5	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	2	CONC	mg/L	1	SM 2540 D	12/1/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	20.6	CONC	mg CaCO3/L	1	SM 2340 C	12/1/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.55	CONC	mg/L	0.1	EPA 300.0	11/30/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	5.14	CONC	µg/L	0.2	EPA 200.8	12/8/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	16.8	CONC	µg/L	0.5	EPA 200.8	12/8/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	0.5	CONC	µg/L	0.1	EPA 200.8	12/8/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	3.67	CONC	µg/L	0.2	EPA 200.8	12/8/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	12.9	CONC	µg/L	0.5	EPA 200.8	12/8/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	0.11	CONC	µg/L	0.1	EPA 200.8	12/8/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Aldrin		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Alpha-BHC		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Beta-BHC		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Delta-BHC		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Gamma-BHC(Lindane)		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Gamma-Chlordane		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Alpha-Chlordane		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Chlordane(tech)		<1.00	µg/L	1	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	4,4'-DDD		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	4,4'-DDE		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	4,4'-DDT		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Dieldrin		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endosulfan I		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endosulfan II		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endosulfan Sulfate		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endrin		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endrin Aldehyde		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endrin Ketone		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Heptachlor		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Heptachlor Epoxide		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Methoxychlor		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Toxaphene		<2.50	µg/L	2.5	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1016		<0.500	µg/L	0.5	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1221		<1.00	µg/L	1	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1232		<0.500	µg/L	0.5	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1242		<0.500	µg/L	0.5	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1248		<0.500	µg/L	0.5	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1254		<0.500	µg/L	0.5	EPA 8081	12/15/2000
FO001927	BW-6	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1260		<0.500	µg/L	0.5	EPA 8081	12/15/2000

FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	24.8	CONC	mg CaCO3/L	1	SM 2340 C	12/1/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.33	CONC	mg/L	0.1	EPA 300.0	11/30/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	3.63	CONC	µg/L	0.2	EPA 200.8	12/8/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	9.29	CONC	µg/L	0.5	EPA 200.8	12/8/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	0.4	CONC	µg/L	0.1	EPA 200.8	12/8/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	2.42	CONC	µg/L	0.2	EPA 200.8	12/8/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	6.35	CONC	µg/L	0.5	EPA 200.8	12/8/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	0.1	CONC	µg/L	0.1	EPA 200.8	12/8/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Aldrin		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Alpha-BHC		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Beta-BHC		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Delta-BHC		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Gamma-BHC(Lindane)		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Gamma-Chlordane		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Alpha-Chlordane		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Chlordane(tech)		<1.00	µg/L	1	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	4,4'-DDD		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	4,4'-DDE		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	4,4'-DDT		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Dieldrin		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endosulfan I		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endosulfan II		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endosulfan Sulfate		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endrin		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endrin Aldehyde		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endrin Ketone		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Heptachlor		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Heptachlor Epoxide		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Methoxychlor		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Toxaphene		<2.50	µg/L	2.5	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1016		<0.500	µg/L	0.5	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1221		<1.00	µg/L	1	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1232		<0.500	µg/L	0.5	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1242		<0.500	µg/L	0.5	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1248		<0.500	µg/L	0.5	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1254		<0.500	µg/L	0.5	EPA 8081	12/15/2000
FO001925	BW-3	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1260		<0.500	µg/L	0.5	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	4.4	CONC	mg/L	1	SM 2540 D	12/1/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	37.2	CONC	mg CaCO3/L	1	SM 2340 C	12/1/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	1.5	CONC	mg/L	0.1	EPA 300.0	11/30/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	7.4	CONC	µg/L	0.2	EPA 200.8	12/8/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	24	CONC	µg/L	0.5	EPA 200.8	12/8/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	0.62	CONC	µg/L	0.1	EPA 200.8	12/8/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	5.27	CONC	µg/L	0.2	EPA 200.8	12/8/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	16.9	CONC	µg/L	0.5	EPA 200.8	12/8/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED	0.1	CONC	µg/L	0.1	EPA 200.8	12/8/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Aldrin		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Alpha-BHC		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Beta-BHC		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Delta-BHC		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Gamma-BHC(Lindane)		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Gamma-Chlordane		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Alpha-Chlordane		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Chlordane(tech)		<1.00	µg/L	1	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	4,4'-DDD		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	4,4'-DDE		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	4,4'-DDT		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Dieldrin		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endosulfan I		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endosulfan II		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endosulfan Sulfate		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endrin		<0.100	µg/L	0.1	EPA 8081	12/15/2000
FO001926	BW-5	11/29/2000	9:30	JH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endrin Aldehyde		<0.100	µg/L	0.1	EPA 8081	12/15/2000

Hour	Rain (Gauge 14)
11/29/00 0:00	0.00
0:10	0.00
0:20	0.00
0:30	0.00
0:40	0.00
0:50	0.01
1:00	0.00
1:10	0.01
1:20	0.00
1:30	0.01
1:40	0.02
1:50	0.00
2:00	0.00
2:10	0.00
2:20	0.00
2:30	0.00
2:40	0.00
2:50	0.00
3:00	0.00
3:10	0.01
3:20	0.00
3:30	0.00
3:40	0.00
3:50	0.00
4:00	0.00
4:10	0.00
4:20	0.00
4:30	0.00
4:40	0.00
4:50	0.00
5:00	0.00
5:10	0.00
5:20	0.00
5:30	0.00
5:40	0.00
5:50	0.00
6:00	0.00
6:10	0.00
6:20	0.00
6:30	0.01
6:40	0.01
6:50	0.03
7:00	0.01
7:10	0.01

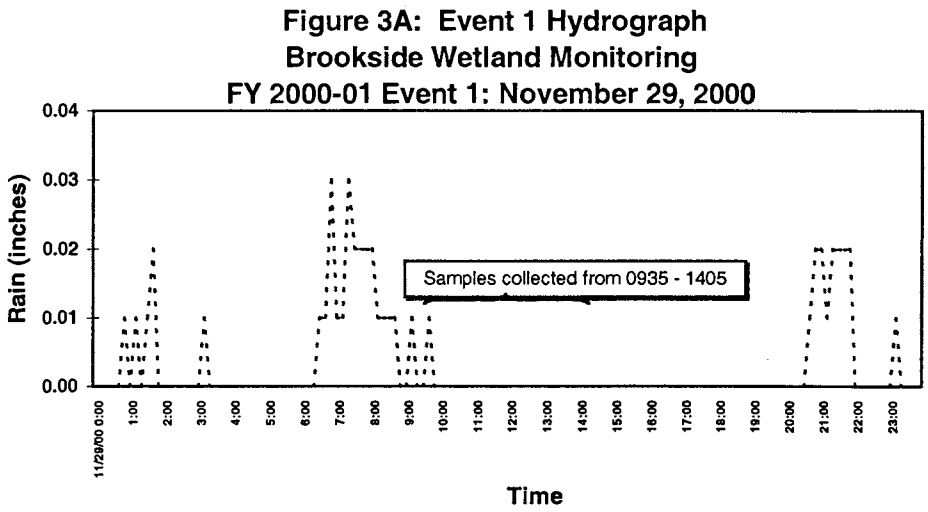


Table 2B: Analytical Summary
Brookside Wetland Monitoring
FY 2000-01 Event 2: March 15, 2001

		Beaded Swale		Vernal Pool	
		Inlet	Outlet	Inlet	Outlet
Grab Parameters	**Units**	**FO010274**	**FO010275**	**FO010276**	**FO010277**
pH (FIELD)	pH Units	5.7	5.2	6.5	6.6
CONDUCTIVITY (FIELD)	µmhos/cm	179	137	74	145
TEMPERATURE	Deg. C	8.5	7.6	8.7	8.2
DISSOLVED OXYGEN (FIELD)	mg/L	5.4	5.5	10.0	8.1
E. COLI	CFU/100 ml	9	18	310	9 U
TOTAL OIL & GREASE	mg/L	5 U	5 U	5 U	5 U
Composite Parameters	**Units**	**FO010278**	**FO010279**	**FO010280**	**FO010281**
HARDNESS	mg CaCO3/L	38.6	47.6	29.0	58.6
NITRATE-NITROGEN	mg/L	0.63	0.21	0.56	0.65
TOTAL SUSPENDED SOLIDS	mg/L	6.0	8.6	10	6.8
COPPER, TOTAL	µg/L	3.18	3.79	7.17	3.32
LEAD, TOTAL	µg/L	0.49	0.63	0.76	0.40
ZINC, TOTAL	µg/L	18.4	32.8	590	30.3
COPPER, DISSOLVED	µg/L	2.36	2.24	4.66	2.08
LEAD, DISSOLVED	µg/L	0.1 U	0.1 U	0.1 U	0.1 U
ZINC, DISSOLVED	µg/L	14.7	24.0	551	21.5
PESTICIDES Aldrin	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Alpha-BHC	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Beta-BHC	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Delta-BHC	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Gamma-BHC(Lindane)	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Gamma-Chlordane	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Alpha-Chlordane	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Chlordane(tech)	µg/L	1.00 U	1.00 U	1.00 U	1.00 U
4,4'-DDD	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
4,4'-DDE	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
4,4'-DDT	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Dieldrin	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Endosulfan I	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Endosulfan II	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Endosulfan Sulfate	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Endrin	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Endrin Aldehyde	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Endrin Ketone	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Heptachlor	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Heptachlor Epoxide	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Methoxychlor	µg/L	0.100 U	0.100 U	0.100 U	0.100 U
Toxaphene	µg/L	2.50 U	2.50 U	2.50 U	2.50 U
PCB 1016	µg/L	0.500 U	0.500 U	0.500 U	0.500 U
PCB 1221	µg/L	1.00 U	1.00 U	1.00 U	1.00 U
PCB 1232	µg/L	0.500 U	0.500 U	0.500 U	0.500 U
PCB 1242	µg/L	0.500 U	0.500 U	0.500 U	0.500 U
PCB 1248	µg/L	0.500 U	0.500 U	0.500 U	0.500 U
PCB 1254	µg/L	0.500 U	0.500 U	0.500 U	0.500 U
PCB 1260	µg/L	0.500 U	0.500 U	0.500 U	0.500 U

U = Not detected at the method reporting limit shown

Table 5B: Metals Criteria Conversion Worksheet
Brookside Wetland Monitoring
FY 2000-01 Event 2: March 15, 2001

Sample Site	Metal	Type	Hardness-Dependent Criteria Equation	Measured Hardness	Total WQ Criteria (ug/L)	Conversion Factor	Dissolved WQ Criteria (ug/L)	Dissolved Result (ug/L)
BW-2	Copper	Acute	e(0.9422[ln(hardness)]-1.464	38.6	7	0.960	**6.94**	**2.36**
		Chronic	e(0.8545[ln(hardness)]-1.465	38.6	5	0.960	**5.03**	
	Lead	Acute	e(1.273[ln(hardness)]-1.460	38.6	24	0.930	**22.59**	**0.10 U**
		Chronic	e(1.273[ln(hardness)]-4.705	38.6	1	0.930	**0.88**	
	Zinc	Acute	e(0.83[ln(hardness)]+1.95	38.6	146	0.978	**142.59**	**14.7**
		Chronic	N/A	38.6	47	0.986	**46.34**	
BW-3	Copper	Acute	e(0.9422[ln(hardness)]-1.464	47.6	9	0.960	**8.45**	**2.24**
		Chronic	e(0.8545[ln(hardness)]-1.465	47.6	6	0.960	**6.02**	
	Lead	Acute	e(1.273[ln(hardness)]-1.460	47.6	32	0.899	**28.53**	**0.10 U**
		Chronic	e(1.273[ln(hardness)]-4.705	47.6	1	0.899	**1.11**	
	Zinc	Acute	e(0.83[ln(hardness)]+1.95	47.6	173	0.978	**169.68**	**24.0**
		Chronic	N/A	47.6	47	0.986	**46.34**	
BW-5	Copper	Acute	e(0.9422[ln(hardness)]-1.464	29	6	0.960	**5.30**	**4.66**
		Chronic	e(0.8545[ln(hardness)]-1.465	29	4	0.960	**3.94**	
	Lead	Acute	e(1.273[ln(hardness)]-1.460	29	17	0.971	**16.40**	**0.10 U**
		Chronic	e(1.273[ln(hardness)]-4.705	29	1	0.971	**0.64**	
	Zinc	Acute	e(0.83[ln(hardness)]+1.95	29	115	0.978	**112.46**	**551**
		Chronic	N/A	29	47	0.986	**46.34**	
BW-6	Copper	Acute	e(0.9422[ln(hardness)]-1.464	58.6	11	0.960	**10.28**	**2.08**
		Chronic	e(0.8545[ln(hardness)]-1.465	58.6	7	0.960	**7.19**	
	Lead	Acute	e(1.273[ln(hardness)]-1.460	58.6	41	0.869	**35.93**	**0.10 U**
		Chronic	e(1.273[ln(hardness)]-4.705	58.6	2	0.869	**1.40**	
	Zinc	Acute	e(0.83[ln(hardness)]+1.95	58.6	206	0.978	**201.64**	**21.50**
		Chronic	N/A	58.6	47	0.986	**46.34**	

Reference: EPA document 823-B-96-007, June 1996

Table 5B: Metals Criteria Conversion Worksheet
Brookside Wetland Monitoring
FY 2000-01 Event 2: March 15, 2001

		HARD	
CF	(1.46203-[ln(hardness)] 0.145712	38.6	0.929707
		47.6	0.899169
		29	0.971375
		58.6	0.868875

FO010274	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:30	JBB	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	5.7	CONC	pH Units	0.1	SM 4500-H B	3/15/2001
FO010274	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:30	JBB	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	179	CONC	µmhos/cm	1	SM 2510 B	3/15/2001
FO010274	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:30	JBB	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	8.5	CONC	Deg. C	0.1	SM 2550 B	3/15/2001
FO010274	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:30	JBB	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	5.4	CONC	mg/L	0.1	SM 4500-O G	3/15/2001
FO010274	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:30	JBB	GRAB	STORMWTR	E. COLI	E. COLI	9	CONC	CFU/100 ml	2	SM 9213 D	3/17/2001
FO010274	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:30	JBB	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE		<5	mg/L	5	EPA 1664	3/27/2001
FO010275	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:40	JBB	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	5.2	CONC	pH Units	0.1	SM 4500-H B	3/15/2001
FO010275	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:40	JBB	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	137	CONC	µmhos/cm	1	SM 2510 B	3/15/2001
FO010275	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:40	JBB	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	7.6	CONC	Deg. C	0.1	SM 2550 B	3/15/2001
FO010275	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:40	JBB	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	5.5	CONC	mg/L	0.1	SM 4500-O G	3/15/2001
FO010275	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:40	JBB	GRAB	STORMWTR	E. COLI	E. COLI	18	CONC	CFU/100 ml	2	SM 9213 D	3/17/2001
FO010275	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:40	JBB	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE		<5	mg/L	5	EPA 1664	3/27/2001
FO010276	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:50	JBB	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	6.5	CONC	pH Units	0.1	SM 4500-H B	3/15/2001
FO010276	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:50	JBB	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	74	CONC	µmhos/cm	1	SM 2510 B	3/15/2001
FO010276	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:50	JBB	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	8.7	CONC	Deg. C	0.1	SM 2550 B	3/15/2001
FO010276	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:50	JBB	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	10	CONC	mg/L	0.1	SM 4500-O G	3/15/2001
FO010276	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:50	JBB	GRAB	STORMWTR	E. COLI	E. COLI	310	CONC	CFU/100 ml	2	SM 9213 D	3/17/2001
FO010276	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:50	JBB	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE		<5	mg/L	5	EPA 1664	3/27/2001
FO010277	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:58	JBB	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)	6.6	CONC	pH Units	0.1	SM 4500-H B	3/15/2001
FO010277	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:58	JBB	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)	145	CONC	µmhos/cm	1	SM 2510 B	3/15/2001
FO010277	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:58	JBB	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE	8.2	CONC	Deg. C	0.1	SM 2550 B	3/15/2001
FO010277	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:58	JBB	GRAB	STORMWTR	DISSOLVED OXYGEN (FIELD)	DISSOLVED OXYGEN (FIELD)	8.1	CONC	mg/L	0.1	SM 4500-O G	3/15/2001
FO010277	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:58	JBB	GRAB	STORMWTR	E. COLI	E. COLI		<9	CFU/100 ml	2	SM 9213 D	3/17/2001
FO010277	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:58	JBB	GRAB	STORMWTR	TOTAL OIL & GREASE	TOTAL OIL & GREASE		<5	mg/L	5	EPA 1664	3/27/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	6	CONC	mg/L	1	SM 2540 D	3/16/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	38.6	CONC	mg CaCO3/L	1	SM 2340 C	3/19/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.63	CONC	mg/L	0.1	EPA 300.0	3/16/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	3.18	CONC	µg/L	0.2	EPA 200.8	3/16/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	18.4	CONC	µg/L	0.5	EPA 200.8	3/16/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	0.49	CONC	µg/L	0.1	EPA 200.8	3/16/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	2.36	CONC	µg/L	0.2	EPA 200.8	3/16/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	14.7	CONC	µg/L	0.5	EPA 200.8	3/16/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED		<0.1	µg/L	0.1	EPA 200.8	3/16/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Aldrin		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Alpha-BHC		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Beta-BHC		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Delta-BHC		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Gamma-BHC(Lindane)		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Gamma-Chlordane		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Alpha-Chlordane		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Chlordane(tech)		<1.00	µg/L	1	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	4,4'-DDD		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	4,4'-DDE		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	4,4'-DDT		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Dieldrin		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endosulfan I		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endosulfan II		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endosulfan Sulfate		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endrin		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endrin Aldehyde		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endrin Ketone		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Heptachlor		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Heptachlor Epoxide		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Methoxychlor		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Toxaphene		<2.50	µg/L	2.5	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1016		<0.500	µg/L	0.5	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1221		<1.00	µg/L	1	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1232		<0.500	µg/L	0.5	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1242		<0.500	µg/L	0.5	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1248		<0.500	µg/L	0.5	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1254		<0.500	µg/L	0.5	EPA 8081	3/25/2001
FO010278	BW-2	SE 114TH AVE	BEADED SWALE INLET	3/15/2001	7:31	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1260		<0.500	µg/L	0.5	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	8.6	CONC	mg/L	1	SM 2540 D	3/16/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	47.6	CONC	mg CaCO3/L	1	SM 2340 C	3/19/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.21	CONC	mg/L	0.1	EPA 300.0	3/16/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	3.79	CONC	µg/L	0.2	EPA 200.8	3/16/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	32.8	CONC	µg/L	0.5	EPA 200.8	3/16/2001

FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	0.63	CONC	µg/L	0.1	EPA 200.8	3/16/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	2.24	CONC	µg/L	0.2	EPA 200.8	3/16/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	24	CONC	µg/L	0.5	EPA 200.8	3/16/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED		<0.1	µg/L	0.1	EPA 200.8	3/16/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Aldrin		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Alpha-BHC		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Beta-BHC		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Delta-BHC		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Gamma-BHC(Lindane)		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Gamma-Chlordane		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Alpha-Chlordane		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Chlordane(tech)		<1.00	µg/L	1	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	4,4'-DDD		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	4,4'-DDE		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	4,4'-DDT		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Dieldrin		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endosulfan I		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endosulfan II		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endosulfan Sulfate		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endrin		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endrin Aldehyde		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endrin Ketone		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Heptachlor		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Heptachlor Epoxide		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Methoxychlor		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Toxaphene		<2.50	µg/L	2.5	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1016		<0.500	µg/L	0.5	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1221		<1.00	µg/L	1	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1232		<0.500	µg/L	0.5	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1242		<0.500	µg/L	0.5	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1248		<0.500	µg/L	0.5	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1254		<0.500	µg/L	0.5	EPA 8081	3/25/2001
FO010279	BW-3	SE 114TH AVE	BEADED SWALE OUTLET	3/15/2001	7:41	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1260		<0.500	µg/L	0.5	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	10	CONC	mg/L	1	SM 2540 D	3/16/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	29	CONC	mg CaCO3/L	1	SM 2340 C	3/19/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.56	CONC	mg/L	0.1	EPA 300.0	3/16/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	7.17	CONC	µg/L	0.2	EPA 200.8	3/16/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	590	CONC	µg/L	0.5	EPA 200.8	3/16/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	0.76	CONC	µg/L	0.1	EPA 200.8	3/16/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	4.66	CONC	µg/L	0.2	EPA 200.8	3/16/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	551	CONC	µg/L	0.5	EPA 200.8	3/16/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED		<0.1	µg/L	0.1	EPA 200.8	3/16/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Aldrin		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Alpha-BHC		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Beta-BHC		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Delta-BHC		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Gamma-BHC(Lindane)		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Gamma-Chlordane		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Alpha-Chlordane		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Chlordane(tech)		<1.00	µg/L	1	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	4,4'-DDD		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	4,4'-DDE		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	4,4'-DDT		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Dieldrin		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endosulfan I		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endosulfan II		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endosulfan Sulfate		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endrin		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endrin Aldehyde		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endrin Ketone		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Heptachlor		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Heptachlor Epoxide		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Methoxychlor		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Toxaphene		<2.50	µg/L	2.5	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1016		<0.500	µg/L	0.5	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1221		<1.00	µg/L	1	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1232		<0.500	µg/L	0.5	EPA 8081	3/25/2001

FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1242		<0.500	µg/L	0.5	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1248		<0.500	µg/L	0.5	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1254		<0.500	µg/L	0.5	EPA 8081	3/25/2001
FO010280	BW-5	SE 115TH AVE	VERNAL POOL INLET	3/15/2001	7:51	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1260		<0.500	µg/L	0.5	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS	6.8	CONC	mg/L	1	SM 2540 D	3/16/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	HARDNESS	HARDNESS	58.6	CONC	mg CaCO3/L	1	SM 2340 C	3/19/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	NITRATE-NITROGEN	NITRATE-NITROGEN	0.65	CONC	mg/L	0.1	EPA 300.0	3/16/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER	3.32	CONC	µg/L	0.2	EPA 200.8	3/16/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC	30.3	CONC	µg/L	0.5	EPA 200.8	3/16/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD	0.4	CONC	µg/L	0.1	EPA 200.8	3/16/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED	2.08	CONC	µg/L	0.2	EPA 200.8	3/16/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED	21.5	CONC	µg/L	0.5	EPA 200.8	3/16/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED		<0.1	µg/L	0.1	EPA 200.8	3/16/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Aldrin		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Alpha-BHC		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Beta-BHC		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Delta-BHC		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Gamma-BHC(Lindane)		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Gamma-Chlordane		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Alpha-Chlordane		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Chlordane(tech)		<1.00	µg/L	1	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	4,4'-DDD		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	4,4'-DDE		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	4,4'-DDT		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Dieldrin		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endosulfan I		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endosulfan II		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endosulfan Sulfate		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endrin		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endrin Aldehyde		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Endrin Ketone		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Heptachlor		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Heptachlor Epoxide		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Methoxychlor		<0.100	µg/L	0.1	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	Toxaphene		<2.50	µg/L	2.5	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1016		<0.500	µg/L	0.5	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1221		<1.00	µg/L	1	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1232		<0.500	µg/L	0.5	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1242		<0.500	µg/L	0.5	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1248		<0.500	µg/L	0.5	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1254		<0.500	µg/L	0.5	EPA 8081	3/25/2001
FO010281	BW-6	SE 115TH AVE	VERNAL POOL OUTLET	3/15/2001	7:59	JBB	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081	PCB 1260		<0.500	µg/L	0.5	EPA 8081	3/25/2001

Figure 3B

	Rain (Gauge 14 Kelly School)
3/15/00 0:00	0.00
0:10	0.00
0:20	0.00
0:30	0.00
0:40	0.00
0:50	0.00
1:00	0.00
1:10	0.00
1:20	0.00
1:30	0.00
1:40	0.00
1:50	0.00
2:00	0.00
2:10	0.00
2:20	0.00
2:30	0.00
2:40	0.00
2:50	0.00
3:00	0.00
3:10	0.00
3:20	0.00
3:30	0.00
3:40	0.00
3:50	0.00
4:00	0.00
4:10	0.00
4:20	0.00
4:30	0.00
4:40	0.00
4:50	0.00
5:00	0.00
5:10	0.00
5:20	0.01
5:30	0.00
5:40	0.00
5:50	0.00
6:00	0.00
6:10	0.01
6:20	0.00
6:30	0.01
6:40	0.00
6:50	0.01
7:00	0.00
7:10	0.00
7:20	0.01
7:30	0.00

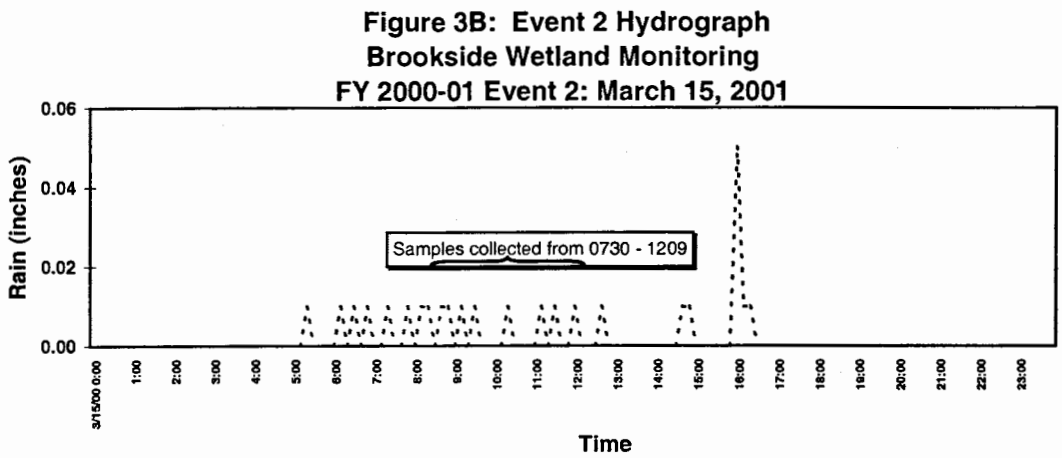


Table 3: Percent Change Summary
Brookside Wetland Monitoring
FY 2000-01

		Beaded Swale			Vernal Pool		
Grab Parameters	**Units**	**Event 1 % Change**	**Event 2 % Change**	**Mean**	**Event 1 % Change**	**Event 2 % Change**	**Mean**
pH (FIELD)	pH Units	1%	9%	5%	0%	-2%	-1%
CONDUCTIVITY (FIELD)	µmhos/cm	-22%	23%	1%	7%	-96%	-45%
TEMPERATURE	Deg. C	15%	11%	13%	18%	6%	12%
DISSOLVED OXYGEN (FIELD)	mg/L	-9%	-2%	-5%	-29%	19%	-5%
E. COLI	CFU/100 ml	-554%	-100%	-327%	46%	99%	72%
TOTAL OIL & GREASE	mg/L	0%	0%	0%	0%	0%	0%
Composite Parameters	**Units**	**% Change**	**% Change**	**Mean**	**% Change**	**% Change**	**Mean**
HARDNESS	mg CaCO3/L	40%	-23%	9%	45%	-102%	-29%
NITRATE-NITROGEN	mg/L	86%	67%	76%	63%	-16%	24%
TOTAL SUSPENDED SOLIDS	mg/L	41%	-43%	-1%	55%	32%	43%
COPPER, TOTAL	µg/L	-4%	-19%	-12%	31%	54%	42%
LEAD, TOTAL	µg/L	57%	-29%	14%	19%	47%	33%
ZINC, TOTAL	µg/L	56%	-78%	-11%	30%	95%	62%
COPPER, DISSOLVED	µg/L	-49%	5%	-22%	30%	55%	43%
LEAD, DISSOLVED	µg/L	-100%	0%	-50%	-20%	0%	-10%
ZINC, DISSOLVED	µg/L	71%	-63%	4%	24%	96%	60%

Table 4: Ranked Percent Change Summary
Brookside Wetland Monitoring
FY 2000-01

Parameters	Concentration % Change		
	Beaded Swale		Average
	November 29, 2000	March 15, 2001	
NITRATE-NITROGEN	86%	67%	76%
LEAD, TOTAL	57%	-29%	14%
TEMPERATURE	15%	11%	13%
HARDNESS	40%	-23%	9%
pH (FIELD)	1%	9%	5%
ZINC, DISSOLVED	71%	-63%	4%
CONDUCTIVITY (FIELD)	-22%	23%	1%
TOTAL OIL & GREASE	0%	0%	0%
TOTAL SUSPENDED SOLIDS	41%	-43%	-1%
DISSOLVED OXYGEN (FIELD)	-9%	-2%	-5%
ZINC, TOTAL	56%	-78%	-11%
COPPER, TOTAL	-4%	-19%	-12%
COPPER, DISSOLVED	-49%	5%	-22%
LEAD, DISSOLVED	-100%	0%	-50%
E. COLI	-554%	-100%	-327%

Parameters	Concentration % Change		
	Vernal Pool		Average
	November 29, 2000	March 15, 2001	
E. COLI	46%	99%	72%
ZINC, TOTAL	30%	95%	62%
ZINC, DISSOLVED	24%	96%	60%
TOTAL SUSPENDED SOLIDS	55%	32%	43%
COPPER, DISSOLVED	30%	55%	43%
COPPER, TOTAL	31%	54%	42%
LEAD, TOTAL	19%	47%	33%
NITRATE-NITROGEN	63%	-16%	24%
TEMPERATURE	18%	6%	12%
TOTAL OIL & GREASE	0%	0%	0%
pH (FIELD)	0%	-2%	-1%
DISSOLVED OXYGEN (FIELD)	-29%	19%	-5%
LEAD, DISSOLVED	-20%	0%	-10%
HARDNESS	45%	-102%	-29%
CONDUCTIVITY (FIELD)	7%	-96%	-45%

Figure 4: Comparison of Beaded Swale and Vernal Pool Results (Inlet and Outlet)
Brookside Wetland Monitoring
FY 2000-01

	November 29, 2000 Event 1	March 15, 2001 Event 2
Beaded Swale Inlet	6.8	6
Beaded Swale Outlet	4	8.6
Vernal Pool Inlet	4.4	10
Vernal Pool Outlet	2	6.8

	November 29, 2000 Event 1	March 15, 2001 Event 2
Beaded Swale Inlet	81	9
Beaded Swale Outlet	530	18
Vernal Pool Inlet	1100	310
Vernal Pool Outlet	590	4.5

Buffalo Slough Pollution Reduction Facility (PRF) Monitoring

Table 1: HYDRA Rain Gauge Data
Buffalo Slough PRF Monitoring
FY 2000-01

Daily Rain Report — All Times in Pacific Standard Time

Rain Data Collected by HYDRA - City of Portland

Gauge 9: Pdx Business Park

Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Event 1: March 15, 2001																									
3/12/2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/13/2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/14/2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/15/2001	0.00	0.00	0.00	0.00	0.01	0.01	0.04	0.03	0.06	0.01	0.03	0.03	0.01	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
Event 2: March 24, 2001																									
3/21/2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/22/2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/23/2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/24/2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.03	0.00	0.00	0.16	0.04	0.07	0.01	0.40
3/25/2001	0.03	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
Event 3: March 31, 2001																									
3/28/2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.08
3/29/2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/30/2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/31/2001	0.00	0.00	0.00	0.01	0.02	0.06	0.08	0.03	0.02	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26

- Storm event duration

Table 2A: Analytical Summary
Buffalo Slough PRF Monitoring
FY 2000-01 Event 1: March 15, 2001

Grab Parameters	Sample Site:	Inlet	Outlet
	Units Lab ID:	FO010289	FO010290
CONDUCTIVITY (FIELD)	µmhos/cm	62	55
pH (FIELD)	pH Units	7.3	6.7
TEMPERATURE (FIELD)	Deg. C	12.1	12.7
Composite Parameters	**Sample Site:**	**Inlet**	**Outlet**
	Units Lab ID:	**FO010289**	**FO010290**
TOTAL SOLIDS	mg/L	441	453
TOTAL SUSPENDED SOLIDS	mg/L	325	343
ARSENIC, TOTAL	µg/L	3.57	3.62
BERYLLIUM, TOTAL	µg/L	0.30	0.36
CHROMIUM, TOTAL	µg/L	29.7	32.0
COPPER, TOTAL	µg/L	82.6	81.0
LEAD, TOTAL	µg/L	101	98.9
MERCURY, TOTAL	mg/L	0.0002 U	0.0002 U
NICKEL, TOTAL	µg/L	17.2	16.5
ZINC, TOTAL	µg/L	598	522
ARSENIC, DISSOLVED	µg/L	0.58	0.55
BERYLLIUM, DISSOLVED	µg/L	0.1 U	0.1 U
CHROMIUM, DISSOLVED	µg/L	1.01	0.82
COPPER, DISSOLVED	µg/L	12.8	10.9
LEAD, DISSOLVED	µg/L	1.69	0.90
MERCURY, DISSOLVED	mg/L	0.0002 U	0.0002 U
NICKEL, DISSOLVED	µg/L	2.72	2.35
ZINC, DISSOLVED	µg/L	94.6	69.3
5-15 MICRONS	# Part/100 ml	22473000	11041000
15-25 MICRONS	# Part/100 ml	562000	391000
25-50 MICRONS	# Part/100 ml	190000	160000
50-100 MICRONS	# Part/100 ml	90000	50000
>100 MICRONS	# Part/100 ml	40000	10000
TOTAL (ALL SIZES)	# Part/100 ml	23355000	11652000
4,4-DDD	ng/L	4.28	3.91
4,4-DDE	ng/L	10.66	12.00
4,4-DDT	ng/L	33.38	33.18
A-CHLORDANE	ng/L	4.01	4.70
ALDRIN	ng/L	0.60 U	0.63 U
ALPHA-BHC	ng/L	0.21 U	0.22 U
BETA-BHC	ng/L	1.73 U	1.81 U
DELTA-BHC	ng/L	1.02 U	1.06 U
DIELDRIN	ng/L	11.67	11.72
GAMMA-BHC	ng/L	0.19 U	0.20 U
HEPTACHLOR	ng/L	0.18 U	0.19 U
HEPTACHLOR EPOXIDE	ng/L	0.35 U	0.37 U
TOXAPHENE	ng/L	161.65 U	169.35 U

Table 2A: Analytical Summary
Buffalo Slough PRF Monitoring
FY 2000-01 Event 1: March 15, 2001

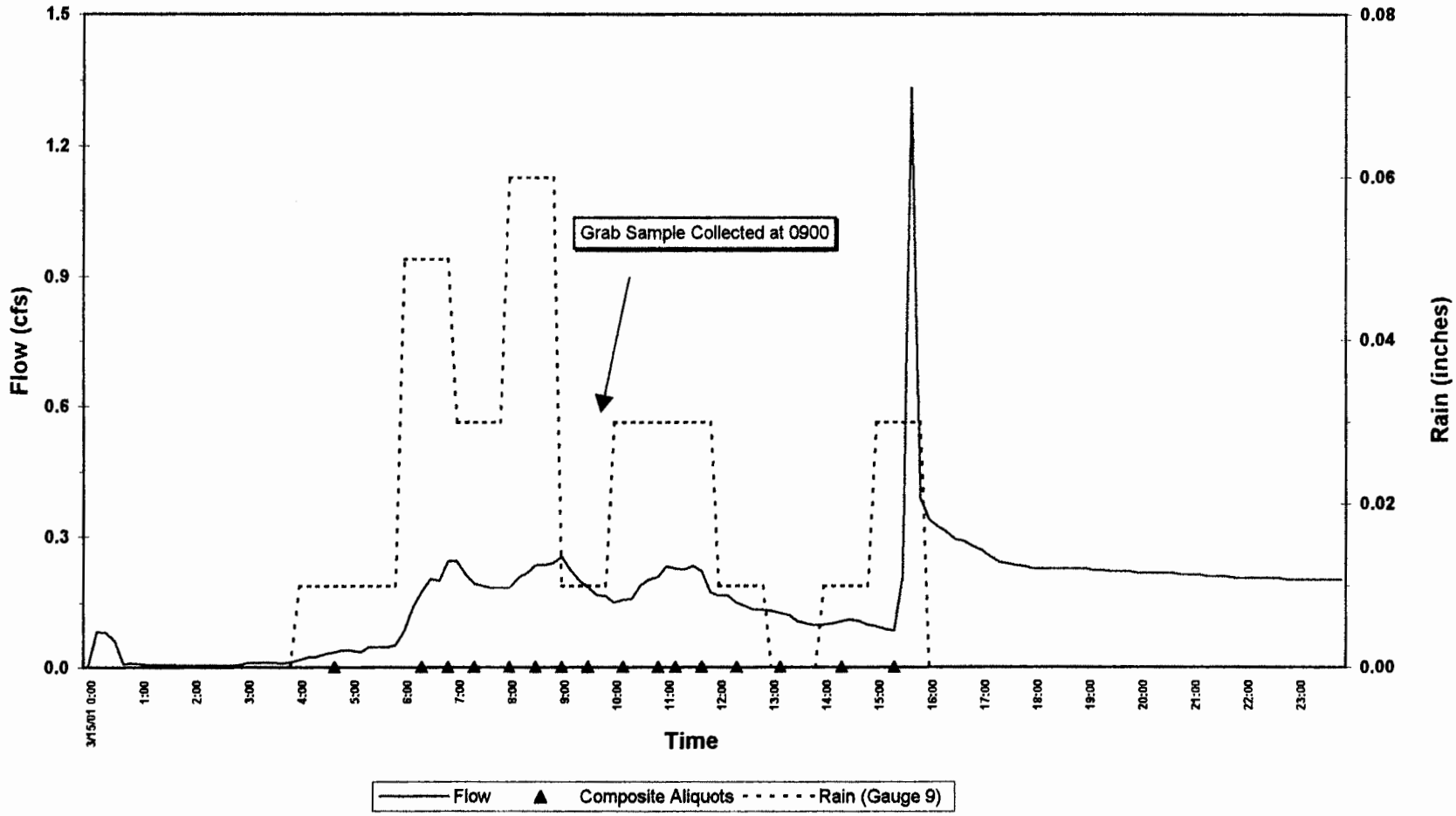
Composite Parameters	Sample Site:	Inlet	Outlet
	Units Lab ID:	FO010289	FO010290
Cl10(209)	ng/L	0.29 U	0.30 U
Cl2(08)/Cl2(05)	ng/L	5.94 U	6.84
Cl3(18)	ng/L	6.49	6.74
Cl3(28)	ng/L	3.43	3.79
Cl4(44)	ng/L	6.61	7.12
Cl4(49)	ng/L	17.89	16.85
Cl4(52)	ng/L	7.84	8.05
Cl4(66)	ng/L	3.25	3.35
Cl5(101)	ng/L	11.44	12.95
Cl5(105)	ng/L	4.95	5.13
Cl5(118)	ng/L	14.35	14.59
Cl6(128)	ng/L	1.93	2.08
Cl6(138)	ng/L	7.95	8.84
Cl6(153)	ng/L	14.64	15.18
Cl7(170)	ng/L	0.29 U	0.30 U
Cl7(180)	ng/L	6.65	6.23
Cl7(187)	ng/L	1.46	1.55
Cl8(195)	ng/L	0.29 U	0.30 U
Cl9(206)	ng/L	0.26 U	0.27 U

U = Not detected at the method reporting limit shown.

SAMPLE ID	SAMPLE PT CODE	SAMPLE ADDRESS	SAMPLE LOCATION	SAMPLE DATE	SAMPLE TIME	FIELD CREW	SAMPLE TYPE	SAMPLE MATRIX	PARAMETER GROUP	PARAMETER	RESULT	UNITS	MRL	METHOD	ANALYSIS LIST	COMMENTS
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	BERYLLIUM, DISSOLVED	<	0.1 µg/L	0.1	EPA 200.8	3/20/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CHROMIUM, DISSOLVED		1.01 µg/L	0.4	EPA 200.8	3/20/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	NICKEL, DISSOLVED		2.72 µg/L	0.2	EPA 200.8	3/20/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED		12.8 µg/L	0.2	EPA 200.8	3/20/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED		94.6 µg/L	0.5	EPA 200.8	3/20/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED		0.58 µg/L	0.1	EPA 200.8	3/20/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED		1.69 µg/L	0.1	EPA 200.8	3/20/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	BERYLLIUM		0.3 µg/L	0.1	EPA 200.8	3/20/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CHROMIUM		29.7 µg/L	0.4	EPA 200.8	3/20/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	NICKEL		17.2 µg/L	0.2	EPA 200.8	3/20/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER		82.6 µg/L	0.2	EPA 200.8	3/20/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC		598 µg/L	0.5	EPA 200.8	3/20/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC		3.57 µg/L	0.1	EPA 200.8	3/20/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD		101 µg/L	0.1	EPA 200.8	3/20/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	MERCURY	MERCURY	<	0.0002 mg/L	0.0002	EPA 245.1	3/27/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	MERCURY, DISSOLVED	MERCURY, DISSOLVED	<	0.0002 mg/L	0.0002	EPA 245.1	3/27/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	5-15 microns		22473000 # Part/100ml		OPTICAL	3/23/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	15-25 microns		562000 # Part/100ml		OPTICAL	3/23/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	25-50 microns		190000 # Part/100ml		OPTICAL	3/23/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	50-100 microns		90000 # Part/100ml		OPTICAL	3/23/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	>100 microns		40000 # Part/100ml		OPTICAL	3/23/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	Total (all sizes)		23355000 # Part/100ml		OPTICAL	3/23/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	4,4-DDE		10.66 ng/L	0.17	EPA 8081	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	4,4-DDD		4.28 ng/L	0.08	EPA 8081	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	4,4-DDT		33.38 ng/L	0.2	EPA 8081	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Aldrin	<	0.6 ng/L	0.6	EPA 8081	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Alpha-BHC	<	0.21 ng/L	0.21	EPA 8081	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Beta-BHC	<	1.73 ng/L	1.73	EPA 8081	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Delta-BHC	<	1.02 ng/L	1.02	EPA 8081	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Gamma-BHC	<	0.19 ng/L	0.19	EPA 8081	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	a-Chlordane		4.01 ng/L	0.29	EPA 8081	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Dieldrin		11.67 ng/L	0.17	EPA 8081	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Heptachlor	<	0.18 ng/L	0.18	EPA 8081	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Heptachlor epoxide	<	0.35 ng/L	0.35	EPA 8081	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Toxaphene	<	161.65 ng/L	161.65	EPA 8081	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl2(08)/Cl2(05)	<	5.94 ng/L	5.94	EPA 1668	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl3(18)		6.49 ng/L	0.22	EPA 1668	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl3(28)		3.43 ng/L	0.2	EPA 1668	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl4(44)		6.61 ng/L	0.25	EPA 1668	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl4(49)		17.89 ng/L	0.3	EPA 1668	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl4(52)		7.84 ng/L	0.28	EPA 1668	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl4(66)		3.25 ng/L	0.3	EPA 1668	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl5(101)		11.44 ng/L	0.34	EPA 1668	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl5(105)		4.95 ng/L	0.25	EPA 1668	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl5(118)		14.35 ng/L	0.19	EPA 1668	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl6(128)		1.93 ng/L	0.34	EPA 1668	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl6(138)		7.95 ng/L	0.43	EPA 1668	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl6(153)		14.64 ng/L	0.29	EPA 1668	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl7(170)	<	0.29 ng/L	0.29	EPA 1668	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl7(180)		6.65 ng/L	0.2	EPA 1668	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl7(187)		1.46 ng/L	0.27	EPA 1668	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl8(195)	<	0.29 ng/L	0.29	EPA 1668	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl9(206)	<	0.26 ng/L	0.26	EPA 1668	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl10(209)	<	0.29 ng/L	0.29	EPA 1668	6/21/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS		441 mg/L	1	SM 2540 B	3/18/2001	
FO010289	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	4:39	MKS/DJH	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS		325 mg/L	1	SM 2540 D	3/17/2001	
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	BERYLLIUM, DISSOLVED	<	0.1 µg/L	0.1	EPA 200.8	3/20/2001	
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CHROMIUM, DISSOLVED		0.82 µg/L	0.4	EPA 200.8	3/20/2001	
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	NICKEL, DISSOLVED		2.35 µg/L	0.2	EPA 200.8	3/20/2001	
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED		10.9 µg/L	0.2	EPA 200.8	3/20/2001	
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED		69.3 µg/L	0.5	EPA 200.8	3/20/2001	
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED		0.55 µg/L	0.1	EPA 200.8	3/20/2001	
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED		0.9 µg/L	0.1	EPA 200.8	3/20/2001	
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	BERYLLIUM		0.36 µg/L	0.1	EPA 200.8	3/20/2001	
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CHROMIUM		32 µg/L	0.4	EPA 200.8	3/20/2001	
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	NICKEL		16.5 µg/L	0.2	EPA 200.8	3/20/2001	
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER		81 µg/L	0.2	EPA 200.8	3/20/2001	
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC		522 µg/L	0.5	EPA 200.8	3/20/2001	
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC		3.62 µg/L	0.1	EPA 200.8	3/20/2001	
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD		98.9 µg/L	0.1	EPA 200.8	3/20/2001	
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	MERCURY	MERCURY	<	0.0002 mg/L	0.0002	EPA 245.1	3/27/2001	
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	MERCURY, DISSOLVED	MERCURY, DISSOLVED	<	0.0002 mg/L	0.0002	EPA 245.1	3/27/2001	
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	5-15 microns		11041000 # Part/100ml		OPTICAL	3/23/2001	
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	15-25 microns		391000 # Part/100ml		OPTICAL	3/23/2001	
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	25-50 microns		160000 # Part/100ml		OPTICAL	3/23/2001	
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	50-100 microns		50000 # Part/100ml		OPTICAL	3/23/2001	
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	>100 microns		10000 # Part/100ml		OPTICAL	3/23/2001	
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	Total (all sizes)		11652000 # Part/100ml		OPTICAL	3/23/2001	
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	4,4-DDE		12 ng/L	0.17	EPA 8081	6/21/2001	

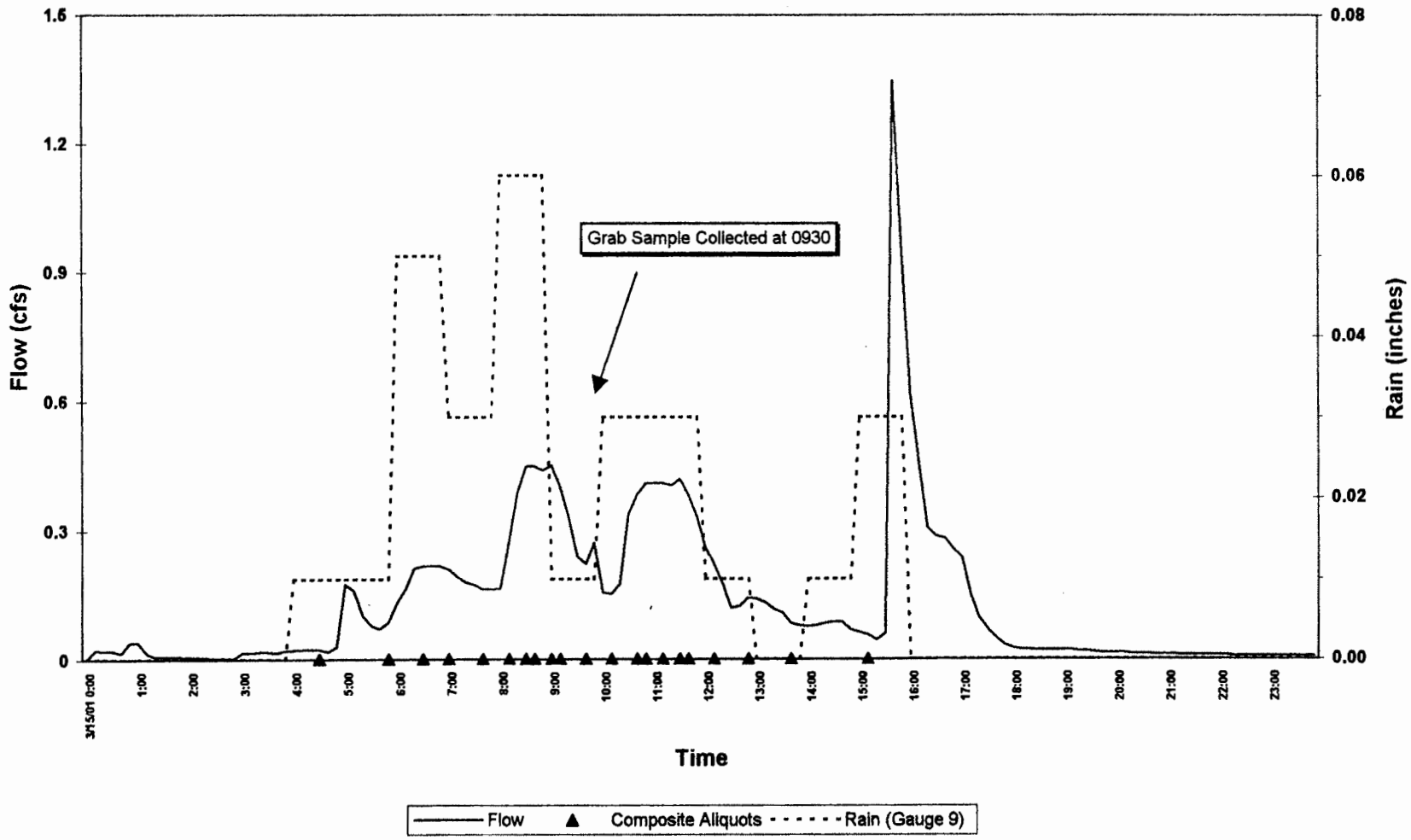
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	4,4-DDD		3.91	ng/L	0.08	EPA 8081	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	4,4-DDT		33.18	ng/L	0.2	EPA 8081	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Aldrin	<	0.63	ng/L	0.63	EPA 8081	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Alpha-BHC	<	0.22	ng/L	0.22	EPA 8081	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Beta-BHC	<	1.81	ng/L	1.81	EPA 8081	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Delta-BHC	<	1.06	ng/L	1.06	EPA 8081	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Gamma-BHC	<	0.2	ng/L	0.42	EPA 8081	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	a-Chlordane		4.7	ng/L	0.29	EPA 8081	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Dieldrin		11.72	ng/L	0.17	EPA 8081	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Heptachlor	<	0.19	ng/L	0.19	EPA 8081	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Heptachlor epoxide	<	0.37	ng/L	0.37	EPA 8081	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Toxaphene	<	169.35	ng/L	169.35	EPA 8081	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl2(08)/Cl2(05)		6.84	ng/L	5.94	EPA 1668	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl3(18)		6.74	ng/L	0.22	EPA 1668	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl3(28)		3.79	ng/L	0.2	EPA 1668	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl4(44)		7.12	ng/L	0.25	EPA 1668	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl4(49)		16.85	ng/L	0.3	EPA 1668	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl4(52)		8.05	ng/L	0.28	EPA 1668	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl4(66)		3.35	ng/L	0.3	EPA 1668	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl5(101)		12.95	ng/L	0.34	EPA 1668	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl5(105)		5.13	ng/L	0.25	EPA 1668	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl5(118)		14.59	ng/L	0.19	EPA 1668	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl6(128)		2.08	ng/L	0.34	EPA 1668	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl6(138)		8.84	ng/L	0.43	EPA 1668	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl6(153)		15.18	ng/L	0.29	EPA 1668	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl7(170)	<	0.3	ng/L	0.3	EPA 1668	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl7(180)		6.23	ng/L	0.2	EPA 1668	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl7(187)		1.55	ng/L	0.27	EPA 1668	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl8(195)	<	0.3	ng/L	0.3	EPA 1668	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl9(206)	<	0.27	ng/L	0.27	EPA 1668	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	PCB CONGENERS	Cl10(209)	<	0.3	ng/L	0.3	EPA 1668	6/21/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS		453	mg/L	1	SM 2540 B	3/18/2001
FO010290	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	4:29	MKS/DJH	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS		343	mg/L	1	SM 2540 D	3/17/2001
FO010291	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	9:00	MKS/DJH	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)		6.2	pH Units	0.1	SM 4500-H B	3/15/2001
FO010291	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	9:00	MKS/DJH	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)		79	µmhos/cm	1	SM 2510 B	3/15/2001
FO010291	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/15/2001	9:00	MKS/DJH	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE		8.4	Deg. C	0.1	SM 2550 B	3/15/2001
FO010292	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	9:30	MKS/DJH	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)		6.3	pH Units	0.1	SM 4500-H B	3/15/2001
FO010292	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	9:30	MKS/DJH	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)		81	µmhos/cm	1	SM 2510 B	3/15/2001
FO010292	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/15/2001	9:30	MKS/DJH	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE		8.3	Deg. C	0.1	SM 2550 B	3/15/2001

Figure 3A: Inlet Hydrograph
Buffalo Slough PRF Monitoring
FY 2000-01 Event 1: March 15, 2001



s:\eid\4000\4070.008\datarep\fy0001\hgraph1.xls

Figure 3B: Outlet Hydrograph
Buffalo Slough PRF Monitoring
FY 2000-01 Event 1: March 15, 2001



s:\eid\4000\4070.008\datarep\fy0001\hgraph1.xls

Table 2B: Analytical Summary
Buffalo Slough PRF Monitoring
FY 2000-01 Event 2: March 24, 2001

Grab Parameters	Sample Site:	Inlet	Outlet
	Units Lab ID:	FO010334	FO010335
CONDUCTIVITY (FIELD)	µmhos/cm	57	35
pH (FIELD)	pH Units	6.3	6.7
TEMPERATURE (FIELD)	Deg. C	12.5	12.7
Composite Parameters	**Sample Site:**	**Inlet**	**Outlet**
	Units Lab ID:	**FO010332**	**FO010333**
TOTAL SOLIDS	mg/L	72	199
TOTAL SUSPENDED SOLIDS	mg/L	32	153
ARSENIC, TOTAL	µg/L	0.82	1.48
BERYLLIUM, TOTAL	µg/L	0.10 U	0.11
CHROMIUM, TOTAL	µg/L	3.25	12.8
COPPER, TOTAL	µg/L	13.9	30.7
LEAD, TOTAL	µg/L	7.85	30.2
MERCURY, TOTAL	mg/L	0.0002 U	0.0002 U
NICKEL, TOTAL	µg/L	2.78	6.58
ZINC, TOTAL	µg/L	82.8	194
ARSENIC, DISSOLVED	µg/L	0.49	0.51
BERYLLIUM, DISSOLVED	µg/L	0.10 U	0.10 U
CHROMIUM, DISSOLVED	µg/L	0.48	0.52
COPPER, DISSOLVED	µg/L	8.09	10.2
LEAD, DISSOLVED	µg/L	0.83	1.15
MERCURY, DISSOLVED	mg/L	0.0002 U	0.0002 U
NICKEL, DISSOLVED	µg/L	1.46	1.92
ZINC, DISSOLVED	µg/L	51.6	59.8
5-15 MICRONS	# Part/100 ml	691000	4182000
15-25 MICRONS	# Part/100 ml	24000	341000
25-50 MICRONS	# Part/100 ml	19000	171000
50-100 MICRONS	# Part/100 ml	6000	50000
>100 MICRONS	# Part/100 ml	1000 U	10000
TOTAL (ALL SIZES)	# Part/100 ml	740000	4754000
4,4-DDD	ng/L	0.08 U	0.08 U
4,4-DDE	ng/L	3.04	5.02
4,4-DDT	ng/L	0.20 U	11.64
A-CHLORDANE	ng/L	0.59	1.85
ALDRIN	ng/L	0.59 U	0.59 U
ALPHA-BHC	ng/L	0.21 U	0.21 U
BETA-BHC	ng/L	1.71 U	1.71 U
DELTA-BHC	ng/L	1.01 U	1.01 U
DIELDRIN	ng/L	0.17 U	0.17 U
GAMMA-BHC	ng/L	0.19 U	0.19 U
HEPTACHLOR	ng/L	0.18 U	0.18 U
HEPTACHLOR EPOXIDE	ng/L	0.35 U	0.35 U
TOXAPHENE	ng/L	160.03 U	160.03 U

Table 2B: Analytical Summary
Buffalo Slough PRF Monitoring
FY 2000-01 Event 2: March 24, 2001

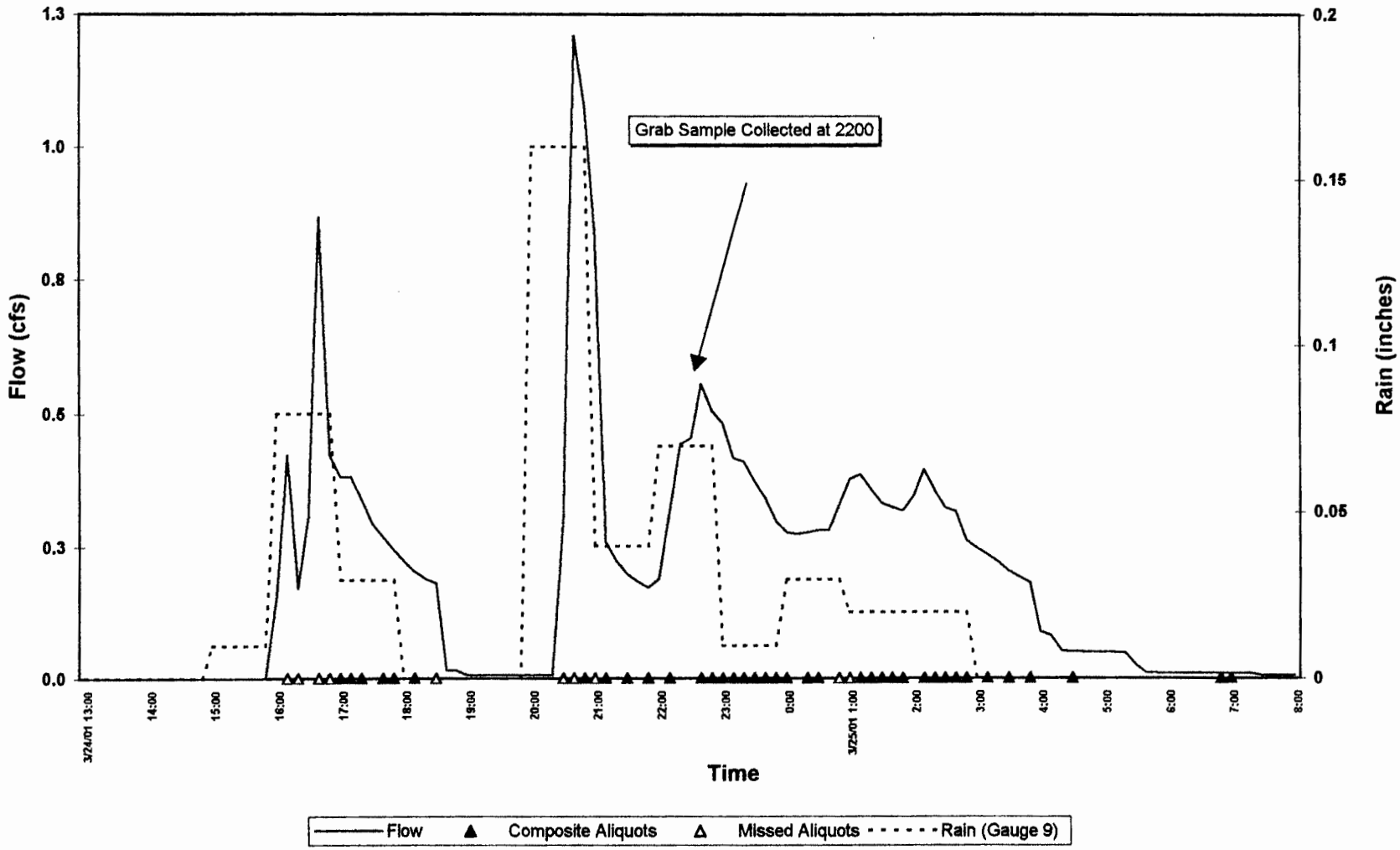
Composite Parameters	Sample Site:	Inlet	Outlet
	Units Lab ID:	FO010332	FO010333
Cl10(209)	ng/L	0.28 U	0.28 U
Cl2(08)/Cl2(05)	ng/L	5.94 U	5.94 U
Cl3(18)	ng/L	2.04	3.16
Cl3(28)	ng/L	0.20 U	1.08
Cl4(44)	ng/L	1.46	2.70
Cl4(49)	ng/L	0.30 U	0.30 U
Cl4(52)	ng/L	0.28 U	2.95
Cl4(66)	ng/L	0.30 U	1.96
Cl5(101)	ng/L	1.94	5.06
Cl5(105)	ng/L	0.25 U	0.25 U
Cl5(118)	ng/L	1.60	5.18
Cl6(128)	ng/L	0.34 U	0.34 U
Cl6(138)	ng/L	0.43 U	3.26
Cl6(153)	ng/L	0.29 U	5.12
Cl7(170)	ng/L	0.28 U	0.28 U
Cl7(180)	ng/L	0.20 U	2.76
Cl7(187)	ng/L	0.27 U	0.53
Cl8(195)	ng/L	0.28 U	0.28 U
Cl9(206)	ng/L	0.26 U	0.78

U = Not detected at the method reporting limit shown.

SAMPLE ID	SAMPLE PT CODE	SAMPLE ADDRESS	SAMPLE LOCATION	SAMPLE DATE	SAMPLE TIME	FIELD CREW	SAMPLE TYPE	SAMPLE MATRIX	PARAMETER GROUP	PARAMETER	RESULT	UNITS	MRL	METHOD	ANALYSIS LIST	COMMENTS
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	BERYLLIUM, DISSOLVED	<	0.1 µg/L	0.1	EPA 200.8	3/28/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CHROMIUM, DISSOLVED		0.48 µg/L	0.4	EPA 200.8	3/28/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	NICKEL, DISSOLVED		1.46 µg/L	0.2	EPA 200.8	3/28/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED		8.09 µg/L	0.2	EPA 200.8	3/28/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED		51.6 µg/L	0.5	EPA 200.8	3/28/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED		0.49 µg/L	0.1	EPA 200.8	3/28/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED		0.83 µg/L	0.1	EPA 200.8	3/28/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	BERYLLIUM	<	0.1 µg/L	0.1	EPA 200.8	3/28/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CHROMIUM		3.25 µg/L	0.4	EPA 200.8	3/28/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	NICKEL		2.78 µg/L	0.2	EPA 200.8	3/28/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER		13.9 µg/L	0.2	EPA 200.8	3/28/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC		82.8 µg/L	0.5	EPA 200.8	3/28/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC		0.82 µg/L	0.1	EPA 200.8	3/28/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD		7.85 µg/L	0.1	EPA 200.8	3/28/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	MERCURY	MERCURY	<	0.0002 mg/L	0.0002	EPA 245.1	3/27/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	MERCURY, DISSOLVED	MERCURY, DISSOLVED	<	0.0002 mg/L	0.0002	EPA 245.1	3/28/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	5-15 microns		691000 # Part/100ml		OPTICAL	4/4/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	15-25 microns		24000 # Part/100ml		OPTICAL	4/4/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	25-50 microns		19000 # Part/100ml		OPTICAL	4/4/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	50-100 microns		6000 # Part/100ml		OPTICAL	4/4/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	>100 microns	<	1000 # Part/100ml		OPTICAL	4/4/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	Total (all sizes)		740000 # Part/100ml		OPTICAL	4/4/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	4,4-DDE		3.04 ng/L	0.17	EPA 8081	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	4,4-DDD	<	0.08 ng/L	0.08	EPA 8081	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	4,4-DDT	<	0.2 ng/L	0.2	EPA 8081	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Aldrin	<	0.59 ng/L	0.59	EPA 8081	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Alpha-BHC	<	0.21 ng/L	0.21	EPA 8081	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Beta-BHC	<	1.71 ng/L	1.71	EPA 8081	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Delta-BHC	<	1.01 ng/L	1.01	EPA 8081	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Gamma-BHC	<	0.19 ng/L	0.19	EPA 8081	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	a-Chlordane		0.59 ng/L	0.29	EPA 8081	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Dieldrin	<	0.17 ng/L	0.17	EPA 8081	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Heptachlor	<	0.18 ng/L	0.18	EPA 8081	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Heptachlor epoxide	<	0.35 ng/L	0.35	EPA 8081	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Toxaphene	<	160.03 ng/L	160.03	EPA 8081	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl2(08)/Cl2(05)	<	5.94 ng/L	5.94	EPA 1668	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl3(18)		2.04 ng/L	0.22	EPA 1668	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl3(28)	<	0.2 ng/L	0.2	EPA 1668	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl4(44)		1.46 ng/L	0.25	EPA 1668	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl4(49)	<	0.3 ng/L	0.3	EPA 1668	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl4(52)	<	0.28 ng/L	0.28	EPA 1668	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl4(66)	<	0.3 ng/L	0.3	EPA 1668	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl5(101)		1.94 ng/L	0.34	EPA 1668	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl5(105)	<	0.25 ng/L	0.25	EPA 1668	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl5(118)		1.6 ng/L	0.19	EPA 1668	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl6(128)	<	0.34 ng/L	0.34	EPA 1668	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl6(138)	<	0.43 ng/L	0.43	EPA 1668	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl6(153)	<	0.29 ng/L	0.29	EPA 1668	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl7(170)	<	0.28 ng/L	0.28	EPA 1668	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl7(180)	<	0.2 ng/L	0.2	EPA 1668	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl7(187)	<	0.27 ng/L	0.27	EPA 1668	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl8(195)	<	0.28 ng/L	0.28	EPA 1668	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl9(206)	<	0.26 ng/L	0.26	EPA 1668	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl10(209)	<	0.28 ng/L	0.28	EPA 1668	6/21/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS		72 mg/L	1	SM 2540 B	3/27/2001	
FO010332	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	22:00	DJH/WCR	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS		32 mg/L	1	SM 2540 D	3/26/2001	
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	BERYLLIUM, DISSOLVED	<	0.1 µg/L	0.1	EPA 200.8	3/28/2001	
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CHROMIUM, DISSOLVED		0.52 µg/L	0.4	EPA 200.8	3/28/2001	
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	NICKEL, DISSOLVED		1.92 µg/L	0.2	EPA 200.8	3/28/2001	
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED		10.2 µg/L	0.2	EPA 200.8	3/28/2001	
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED		59.8 µg/L	0.5	EPA 200.8	3/28/2001	
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED		0.51 µg/L	0.1	EPA 200.8	3/28/2001	
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED		1.15 µg/L	0.1	EPA 200.8	3/28/2001	
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	BERYLLIUM		0.11 µg/L	0.1	EPA 200.8	3/28/2001	
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CHROMIUM		12.8 µg/L	0.4	EPA 200.8	3/28/2001	
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	NICKEL		6.58 µg/L	0.2	EPA 200.8	3/28/2001	
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER		30.7 µg/L	0.2	EPA 200.8	3/28/2001	
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC		194 µg/L	0.5	EPA 200.8	3/28/2001	
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC		1.48 µg/L	0.1	EPA 200.8	3/28/2001	
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD		30.2 µg/L	0.1	EPA 200.8	3/28/2001	
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	MERCURY	MERCURY	<	0.0002 mg/L	0.0002	EPA 245.1	3/27/2001	
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	MERCURY, DISSOLVED	MERCURY, DISSOLVED	<	0.0002 mg/L	0.0002	EPA 245.1	3/28/2001	
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	5-15 microns		4182000 # Part/100ml		OPTICAL	4/4/2001	
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	15-25 microns		341000 # Part/100ml		OPTICAL	4/4/2001	
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	25-50 microns		171000 # Part/100ml		OPTICAL	4/4/2001	
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	50-100 microns		50000 # Part/100ml		OPTICAL	4/4/2001	
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	>100 microns		10000 # Part/100ml		OPTICAL	4/4/2001	
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	Total (all sizes)		4754000 # Part/100ml		OPTICAL	4/4/2001	
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	4,4-DDE		5.02 ng/L	0.17	EPA 8081	6/21/2001	

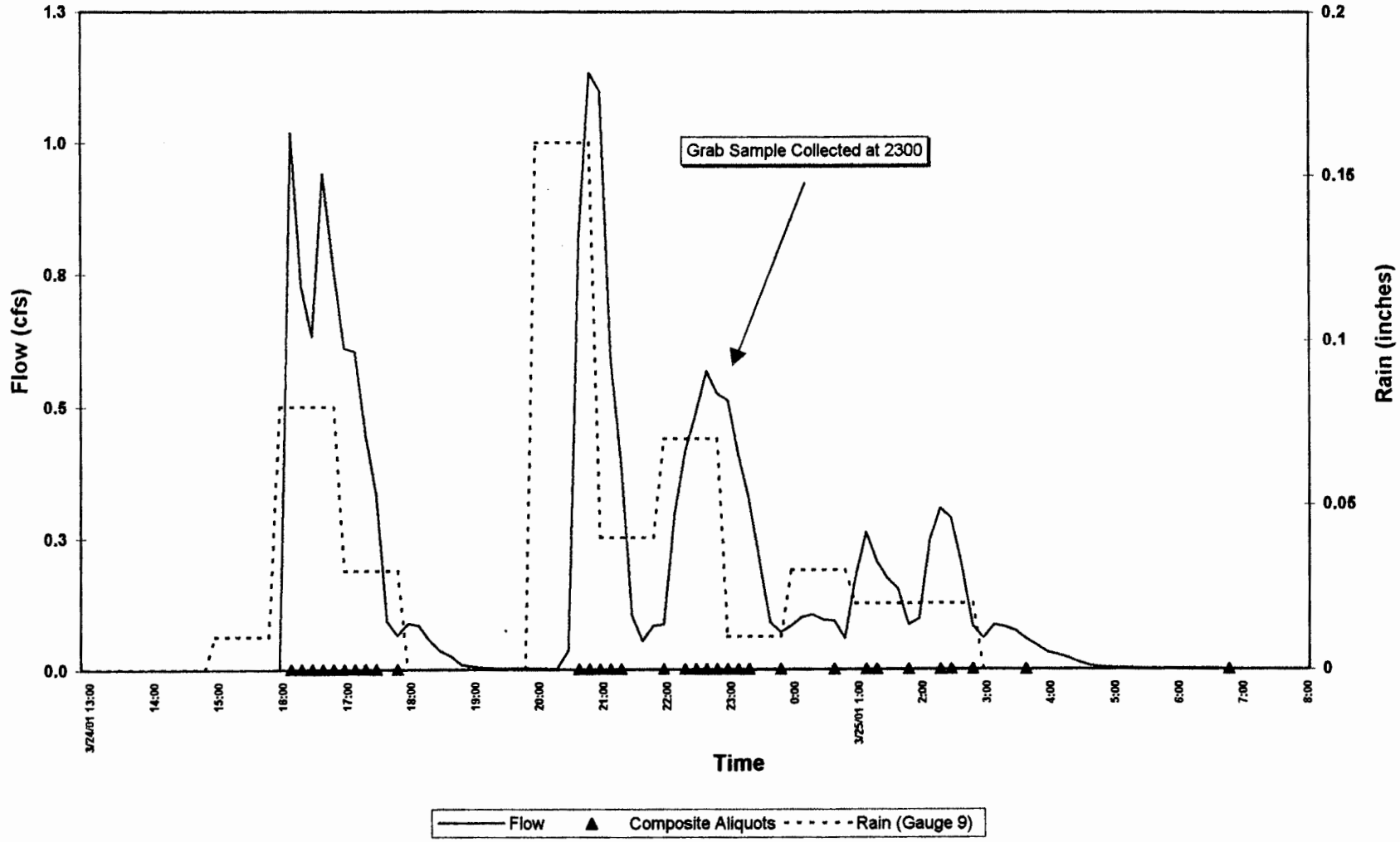
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	4,4-DDD	<	0.08	ng/L	0.08	EPA 8081	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	4,4-DDT		11.64	ng/L	0.2	EPA 8081	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Aldrin	<	0.59	ng/L	0.59	EPA 8081	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Alpha-BHC	<	0.21	ng/L	0.21	EPA 8081	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Beta-BHC	<	1.71	ng/L	1.71	EPA 8081	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Delta-BHC	<	1.01	ng/L	1.01	EPA 8081	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Gamma-BHC	<	0.19	ng/L	0.19	EPA 8081	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	a-Chlordane		1.85	ng/L	0.29	EPA 8081	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Dieldrin	<	0.17	ng/L	0.17	EPA 8081	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Heptachlor	<	0.18	ng/L	0.18	EPA 8081	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Heptachlor epoxide	<	0.35	ng/L	0.35	EPA 8081	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Toxaphene	<	160.03	ng/L	160.03	EPA 8081	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl2(08)/Cl2(05)	<	5.94	ng/L	5.94	EPA 1668	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl3(18)		3.16	ng/L	0.22	EPA 1668	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl3(28)		1.08	ng/L	0.2	EPA 1668	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl4(44)		2.7	ng/L	0.25	EPA 1668	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl4(49)	<	0.3	ng/L	0.3	EPA 1668	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl4(52)		2.95	ng/L	0.28	EPA 1668	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl4(66)		1.96	ng/L	0.3	EPA 1668	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl5(101)		5.06	ng/L	0.34	EPA 1668	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl5(105)	<	0.25	ng/L	0.25	EPA 1668	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl5(118)		5.18	ng/L	0.19	EPA 1668	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl6(128)	<	0.34	ng/L	0.34	EPA 1668	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl6(138)		3.26	ng/L	0.43	EPA 1668	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl6(153)		5.12	ng/L	0.29	EPA 1668	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl7(170)	<	0.28	ng/L	0.28	EPA 1668	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl7(180)		2.76	ng/L	0.2	EPA 1668	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl7(187)		0.53	ng/L	0.27	EPA 1668	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl8(195)	<	0.28	ng/L	0.28	EPA 1668	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl9(206)		0.78	ng/L	0.26	EPA 1668	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	PCB CONGENERS	Cl10(209)	<	0.28	ng/L	0.28	EPA 1668	6/21/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS		199	mg/L	1	SM 2540 B	3/27/2001
FO010333	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	23:00	DJH/WCR	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS		153	mg/L	1	SM 2540 D	3/26/2001
FO010334	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	16:59	DJH/WCR	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)		6.3	pH Units	0.1	SM 4500-H B	3/24/2001
FO010334	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	16:59	DJH/WCR	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)		57	µmhos/cm	1	SM 2510 B	3/24/2001
FO010334	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/24/2001	16:59	DJH/WCR	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE		12.5	Deg. C	0.1	SM 2550 B	3/24/2001
FO010335	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	16:09	DJH/WCR	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)		6.7	pH Units	0.1	SM 4500-H B	3/24/2001
FO010335	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	16:09	DJH/WCR	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)		35	µmhos/cm	1	SM 2510 B	3/24/2001
FO010335	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/24/2001	16:09	DJH/WCR	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE		12.7	Deg. C	0.1	SM 2550 B	3/24/2001

Figure 3C: Inlet Hydrograph
Buffalo Slough PRF Monitoring
FY 2000-01 Event 2: March 24-25, 2001



s:\eid\4000\4070.008\datarep\fy0001\hgraphs2.xls

Figure 3D: Outlet Hydrograph
Buffalo Slough PRF Monitoring
FY 2000-01 Event 2: March 24-25, 2001



s:\eid\4000\4070.008\datarep\fy0001\hgraph2.xls

Table 2C: Analytical Summary
Buffalo Slough PRF Monitoring
FY 2000-01 Event 3: March 31, 2001

Grab Parameters	Sample Site:	Inlet	Outlet
	Units Lab ID:	FO010291	FO010292
CONDUCTIVITY (FIELD)	µmhos/cm	79	81
pH (FIELD)	pH Units	6.2	6.3
TEMPERATURE (FIELD)	Deg. C	8.4	8.3
Composite Parameters	**Sample Site:**	**Inlet**	**Outlet**
	Units Lab ID:	**FO010350**	**FO010351**
TOTAL SOLIDS	mg/L	91	94
TOTAL SUSPENDED SOLIDS	mg/L	51.0	65.5
ARSENIC, TOTAL	µg/L	0.86	0.81
BERYLLIUM, TOTAL	µg/L	0.10 U	0.10 U
CHROMIUM, TOTAL	µg/L	5.19	5.98
COPPER, TOTAL	µg/L	17.2	16.7
LEAD, TOTAL	µg/L	11.1	12.7
MERCURY, TOTAL	mg/L	0.0002 U	0.0002 U
NICKEL, TOTAL	µg/L	3.69	3.49
ZINC, TOTAL	µg/L	112	109
ARSENIC, DISSOLVED	µg/L	0.39	0.32
BERYLLIUM, DISSOLVED	µg/L	0.10 U	0.10 U
CHROMIUM, DISSOLVED	µg/L	0.40 U	0.40 U
COPPER, DISSOLVED	µg/L	6.96	5.86
LEAD, DISSOLVED	µg/L	0.42	0.36
MERCURY, DISSOLVED	mg/L	0.0002 U	0.0002 U
NICKEL, DISSOLVED	µg/L	1.42	1.02
ZINC, DISSOLVED	µg/L	37.7	38.5
5-15 MICRONS	# Part/100 ml	3801000	3269000
15-25 MICRONS	# Part/100 ml	191000	150000
25-50 MICRONS	# Part/100 ml	10000	1000 U
50-100 MICRONS	# Part/100 ml	1000 U	1000 U
>100 MICRONS	# Part/100 ml	10000	1000 U
TOTAL (ALL SIZES)	# Part/100 ml	4012000	3419000
4,4-DDD	ng/L	0.07 U	0.08 U
4,4-DDE	ng/L	3.84	4.66
4,4-DDT	ng/L	0.19 U	0.20 U
A-CHLORDANE	ng/L	1.43	1.67
ALDRIN	ng/L	0.54 U	0.59 U
ALPHA-BHC	ng/L	0.19 U	0.21 U
BETA-BHC	ng/L	1.55 U	1.71 U
DELTA-BHC	ng/L	0.91 U	1.01 U
DIELDRIN	ng/L	0.16 U	0.17 U
GAMMA-BHC	ng/L	0.17 U	0.19 U
HEPTACHLOR	ng/L	0.17 U	0.18 U
HEPTACHLOR EPOXIDE	ng/L	0.32 U	0.35 U
TOXAPHENE	ng/L	145.48 U	160.03 U

Table 2C: Analytical Summary
Buffalo Slough PRF Monitoring
FY 2000-01 Event 3: March 31, 2001

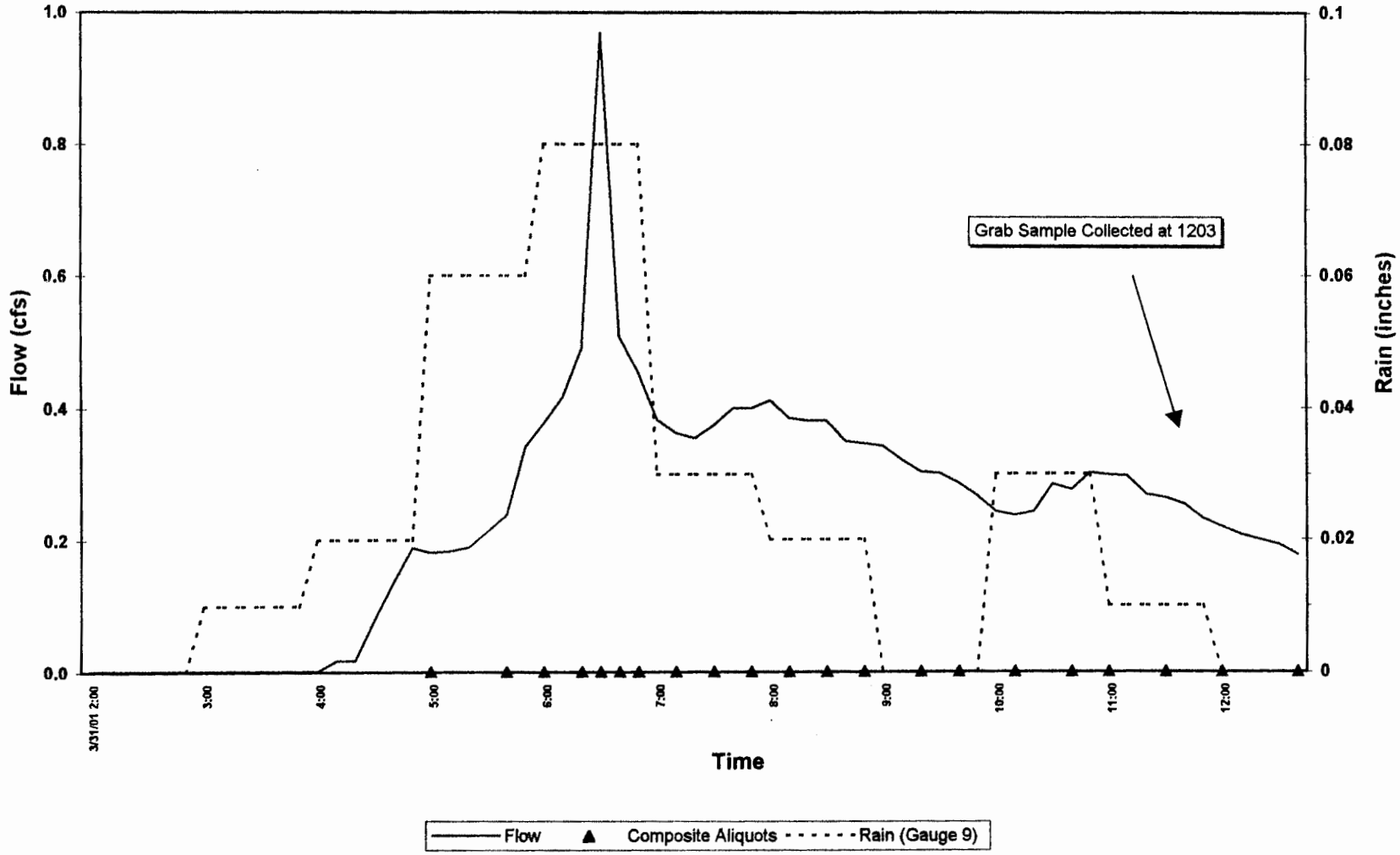
Composite Parameters	Sample Site:	Inlet	Outlet
	Units Lab ID:	FO010350	FO010351
Cl10(209)	ng/L	0.26 U	0.28 U
Cl2(08)/Cl2(05)	ng/L	5.94 U	5.94 U
Cl3(18)	ng/L	4.86	3.91
Cl3(28)	ng/L	0.42	1.04
Cl4(44)	ng/L	1.64	1.88
Cl4(49)	ng/L	0.27 U	0.30 U
Cl4(52)	ng/L	2.95	3.29
Cl4(66)	ng/L	0.28 U	0.92
Cl5(101)	ng/L	4.98	5.82
Cl5(105)	ng/L	0.23 U	0.25 U
Cl5(118)	ng/L	3.95	3.97
Cl6(128)	ng/L	0.57	0.62
Cl6(138)	ng/L	2.44	3.22
Cl6(153)	ng/L	3.91	4.97
Cl7(170)	ng/L	0.26 U	0.28 U
Cl7(180)	ng/L	1.11	4.45
Cl7(187)	ng/L	0.27 U	0.27
Cl8(195)	ng/L	0.26 U	0.28 U
Cl9(206)	ng/L	0.23 U	0.26 U

U = Not detected at the method reporting limit shown.

SAMPLE ID	SAMPLE PT CODE	SAMPLE ADDRESS	SAMPLE LOCATION	SAMPLE DATE	SAMPLE TIME	FIELD CREW	SAMPLE TYPE	SAMPLE MATRIX	PARAMETER GROUP	PARAMETER	RESULT	UNITS	MRL	METHOD	ANALYSIS LIST	COMMENTS
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	BERYLLIUM, DISSOLVED	<	0.1 µg/L	0.1	EPA 200.8	4/12/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CHROMIUM, DISSOLVED	<	0.4 µg/L	0.4	EPA 200.8	4/12/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	NICKEL, DISSOLVED		1.42 µg/L	0.2	EPA 200.8	4/12/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED		6.96 µg/L	0.2	EPA 200.8	4/12/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED		37.7 µg/L	0.5	EPA 200.8	4/12/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED		0.39 µg/L	0.1	EPA 200.8	4/12/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED		0.42 µg/L	0.1	EPA 200.8	4/12/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	BERYLLIUM	<	0.1 µg/L	0.1	EPA 200.8	4/12/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CHROMIUM		5.19 µg/L	0.4	EPA 200.8	4/12/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	NICKEL		3.69 µg/L	0.2	EPA 200.8	4/12/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER		17.2 µg/L	0.2	EPA 200.8	4/12/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC		112 µg/L	0.5	EPA 200.8	4/12/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC		0.86 µg/L	0.1	EPA 200.8	4/12/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD		11.1 µg/L	0.1	EPA 200.8	4/12/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	MERCURY	MERCURY	<	0.0002 mg/L	0.0002	EPA 245.1	4/4/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	MERCURY, DISSOLVED	MERCURY, DISSOLVED	<	0.0002 mg/L	0.0002	EPA 245.1	4/4/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	5-15 microns		3801000 # Part/100ml		OPTICAL	4/9/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	15-25 microns		191000 # Part/100ml		OPTICAL	4/9/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	25-50 microns		10000 # Part/100ml		OPTICAL	4/9/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	50-100 microns	<	1000 # Part/100ml		OPTICAL	4/9/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	>100 microns		10000 # Part/100ml		OPTICAL	4/9/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	Total (all sizes)		4012000 # Part/100ml		OPTICAL	4/9/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	4,4-DDE		3.84 ng/L	0.17	EPA 8081	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	4,4-DDD	<	0.07 ng/L	0.07	EPA 8081	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	4,4-DDT	<	0.19 ng/L	0.19	EPA 8081	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Aldrin	<	0.54 ng/L	0.54	EPA 8081	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Alpha-BHC	<	0.19 ng/L	0.19	EPA 8081	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Beta-BHC	<	1.55 ng/L	1.55	EPA 8081	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Delta-BHC	<	0.91 ng/L	0.91	EPA 8081	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Gamma-BHC	<	0.17 ng/L	0.17	EPA 8081	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	a-Chlordane		1.43 ng/L	0.29	EPA 8081	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Dieldrin	<	0.16 ng/L	0.16	EPA 8081	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Heptachlor	<	0.17 ng/L	0.17	EPA 8081	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Heptachlor epoxide	<	0.32 ng/L	0.32	EPA 8081	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Toxaphene	<	145.48 ng/L	145.48	EPA 8081	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl2(08)/Cl2(05)	<	5.94 ng/L	5.94	EPA 1668	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl3(18)		4.86 ng/L	0.22	EPA 1668	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl3(28)		0.42 ng/L	0.2	EPA 1668	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl4(44)		1.64 ng/L	0.25	EPA 1668	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl4(49)	<	0.27 ng/L	0.27	EPA 1668	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl4(52)		2.95 ng/L	0.28	EPA 1668	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl4(66)	<	0.28 ng/L	0.28	EPA 1668	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl5(101)		4.98 ng/L	0.34	EPA 1668	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl5(105)	<	0.23 ng/L	0.23	EPA 1668	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl5(118)		3.95 ng/L	0.19	EPA 1668	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl6(128)		0.57 ng/L	0.34	EPA 1668	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl6(138)		2.44 ng/L	0.43	EPA 1668	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl6(153)		3.91 ng/L	0.29	EPA 1668	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl7(170)	<	0.26 ng/L	0.26	EPA 1668	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl7(180)		1.11 ng/L	0.2	EPA 1668	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl7(187)	<	0.27 ng/L	0.27	EPA 1668	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl8(195)	<	0.26 ng/L	0.26	EPA 1668	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl9(206)	<	0.23 ng/L	0.23	EPA 1668	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl10(209)	<	0.26 ng/L	0.26	EPA 1668	6/21/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS		91 mg/L	1	SM 2540 B	4/1/2001	
FO010350	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	4:59	MKS/MJS	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS		51 mg/L	1	SM 2540 D	4/1/2001	
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	BERYLLIUM, DISSOLVED	<	0.1 µg/L	0.1	EPA 200.8	4/12/2001	
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	CHROMIUM, DISSOLVED	<	0.4 µg/L	0.4	EPA 200.8	4/12/2001	
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	NICKEL, DISSOLVED		1.02 µg/L	0.2	EPA 200.8	4/12/2001	
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	COPPER, DISSOLVED		5.86 µg/L	0.2	EPA 200.8	4/12/2001	
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ZINC, DISSOLVED		38.5 µg/L	0.5	EPA 200.8	4/12/2001	
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	ARSENIC, DISSOLVED		0.32 µg/L	0.1	EPA 200.8	4/12/2001	
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (DISSOLVED)	LEAD, DISSOLVED		0.36 µg/L	0.1	EPA 200.8	4/12/2001	
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	BERYLLIUM	<	0.1 µg/L	0.1	EPA 200.8	4/12/2001	
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	CHROMIUM		5.98 µg/L	0.4	EPA 200.8	4/12/2001	
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	NICKEL		3.49 µg/L	0.2	EPA 200.8	4/12/2001	
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	COPPER		16.7 µg/L	0.2	EPA 200.8	4/12/2001	
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ZINC		109 µg/L	0.5	EPA 200.8	4/12/2001	
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	ARSENIC		0.81 µg/L	0.1	EPA 200.8	4/12/2001	
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59	MKS/MJS	COMPOSITE	STORMWTR	METALS BY ICP-MS (TOTAL)	LEAD		12.7 µg/L	0.1	EPA 200.8	4/12/2001	
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59	MKS/MJS	COMPOSITE	STORMWTR	MERCURY	MERCURY	<	0.0002 mg/L	0.0002	EPA 245.1	4/4/2001	
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59	MKS/MJS	COMPOSITE	STORMWTR	MERCURY, DISSOLVED	MERCURY, DISSOLVED	<	0.0002 mg/L	0.0002	EPA 245.1	4/4/2001	
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59	MKS/MJS	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	5-15 microns		3269000 # Part/100ml		OPTICAL	4/9/2001	
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59	MKS/MJS	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	15-25 microns		150000 # Part/100ml		OPTICAL	4/9/2001	
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59	MKS/MJS	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	25-50 microns	<	1000 # Part/100ml		OPTICAL	4/9/2001	
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59	MKS/MJS	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	50-100 microns	<	1000 # Part/100ml		OPTICAL	4/9/2001	
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59	MKS/MJS	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	>100 microns	<	1000 # Part/100ml		OPTICAL	4/9/2001	
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59	MKS/MJS	COMPOSITE	STORMWTR	PARTICLE SIZE DISTRIBUTION	Total (all sizes)		3419000 # Part/100ml		OPTICAL	4/9/2001	
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59	MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	4,4-DDE		5 ng/L	0.17	EPA 8081	6/21/2001	

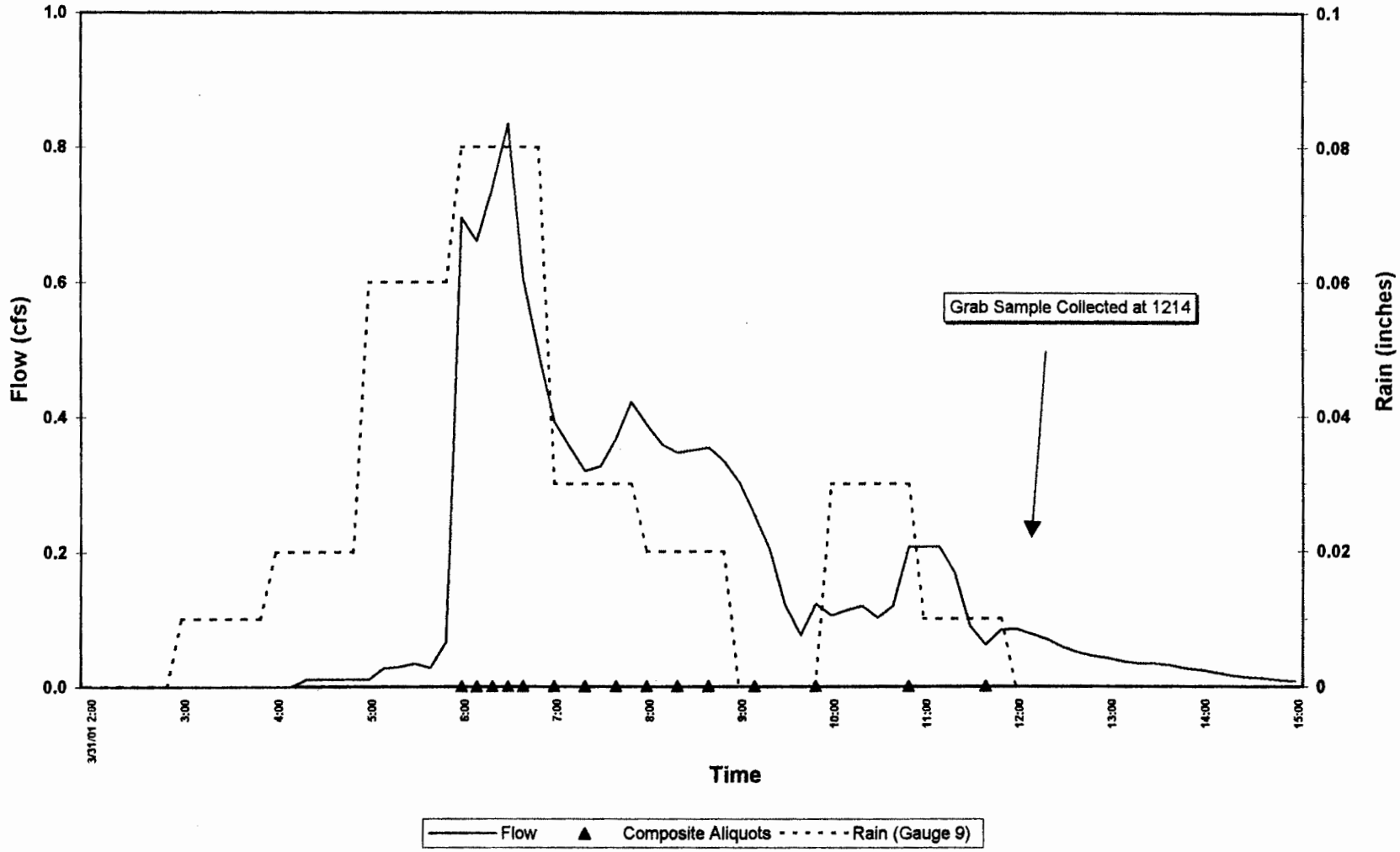
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	4,4-DDD	<	0.08	ng/L	0.08	EPA 8081	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	4,4-DDT	<	0.2	ng/L	0.2	EPA 8081	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Aldrin	<	0.59	ng/L	0.59	EPA 8081	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Alpha-BHC	<	0.21	ng/L	0.21	EPA 8081	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Beta-BHC	<	1.71	ng/L	1.71	EPA 8081	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Delta-BHC	<	1.01	ng/L	1.01	EPA 8081	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Gamma-BHC	<	0.19	ng/L	0.19	EPA 8081	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	a-Chlordane		1.67	ng/L	0.29	EPA 8081	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Dieldrin	<	0.17	ng/L	0.17	EPA 8081	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Heptachlor	<	0.18	ng/L	0.18	EPA 8081	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Heptachlor epoxide	<	0.35	ng/L	0.35	EPA 8081	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PESTICIDES/PCB'S BY EPA 8081MOD	Toxaphene	<	160.03	ng/L	160.03	EPA 8081	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl2(08)/Cl2(05)	<	5.94	ng/L	5.94	EPA 1668	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl3(18)		3.91	ng/L	0.22	EPA 1668	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl3(28)		1.04	ng/L	0.2	EPA 1668	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl4(44)		1.88	ng/L	0.25	EPA 1668	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl4(49)	<	0.3	ng/L	0.3	EPA 1668	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl4(52)		3.29	ng/L	0.28	EPA 1668	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl4(66)		0.92	ng/L	0.3	EPA 1668	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl5(101)		5.82	ng/L	0.34	EPA 1668	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl5(105)	<	0.25	ng/L	0.25	EPA 1668	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl5(118)		3.97	ng/L	0.19	EPA 1668	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl6(128)		0.62	ng/L	0.34	EPA 1668	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl6(138)		3.22	ng/L	0.43	EPA 1668	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl6(153)		4.97	ng/L	0.29	EPA 1668	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl7(170)	<	0.28	ng/L	0.28	EPA 1668	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl7(180)		4.45	ng/L	0.2	EPA 1668	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl7(187)		0.27	ng/L	0.27	EPA 1668	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl8(195)	<	0.28	ng/L	0.28	EPA 1668	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl9(206)	<	0.26	ng/L	0.26	EPA 1668	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	PCB CONGENERS	Cl10(209)	<	0.28	ng/L	0.28	EPA 1668	6/21/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	TOTAL SOLIDS	TOTAL SOLIDS		94	mg/L	1	SM 2540 B	4/1/2001
FO010351	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	5:59 MKS/MJS	COMPOSITE	STORMWTR	TOTAL SUSPENDED SOLIDS	TOTAL SUSPENDED SOLIDS		65.5	mg/L	1	SM 2540 D	4/1/2001
FO010348	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	12:03 MKS/MJS	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)		7.3	pH Units	0.1	SM 4500-H B	3/31/2001
FO010348	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	12:03 MKS/MJS	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)		62	µmhos/cm	1	SM 2510 B	3/31/2001
FO010348	SW-1	NE 33RD DR & HOLLAND CT	INLET MH	3/31/2001	12:03 MKS/MJS	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE		12.1	Deg. C	0.1	SM 2550 B	3/31/2001
FO010349	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	12:14 MKS/MJS	GRAB	STORMWTR	pH (FIELD)	pH (FIELD)		6.7	pH Units	0.1	SM 4500-H B	3/31/2001
FO010349	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	12:14 MKS/MJS	GRAB	STORMWTR	CONDUCTIVITY (FIELD)	CONDUCTIVITY (FIELD)		55	µmhos/cm	1	SM 2510 B	3/31/2001
FO010349	SW-2	NE 33RD DR & BUFFALO SLOUGH	OF 72	3/31/2001	12:14 MKS/MJS	GRAB	STORMWTR	TEMPERATURE	TEMPERATURE		12.7	Deg. C	0.1	SM 2550 B	3/31/2001

Figure 3E: Inlet Hydrograph
Buffalo Slough PRF Monitoring
FY 2000-01 Event 3: March 31, 2001



s:\eid\4000\4070.008\datarep\fy0001\hgraph3.xls

Figure 3F: Outlet Hydrograph
Buffalo Slough PRF Monitoring
FY 2000-01 Event 3: March 31, 2001



s:\eid\4000\4070.008\datarep\fy0001\hgraph3.xls

Table 2A: Analytical Summary - Sediment Data
Buffalo Slough PRF Monitoring
FY 2000-01: June 28, 2001

Grab Parameters	Sample Site: / Units / Lab ID:	VORTECHNICS / FO010718
SEDIMENT DEPTH	inches	12
TOTAL SOLIDS	%WW	58
CADMIUM, TOTAL	mg/Kg	1.32
CHROMIUM, TOTAL	mg/Kg	139.0
COPPER, TOTAL	mg/Kg	69.5
LEAD, TOTAL	mg/Kg	79.5
MERCURY, TOTAL	mg/Kg	0.025
NICKEL, TOTAL	mg/Kg	29.9
ZINC, TOTAL	mg/Kg	391
TOTAL ORGANIC CARBON	mg/Kg	42600
GASOLINE RANGE HYDROCARBONS	mg/Kg	10.9
DIESEL RANGE HYDROCARBONS	mg/Kg	580
HEAVY OIL RANGE HYDROCARBONS	mg/Kg	2390
GRAIN SIZE		
Gravel (>2000 μm)	FRACT %	1.0
Coarse Sand (2000-1000 μm)	FRACT %	7.1
phi 0 (1000-500 μm)	FRACT %	11.3
phi 1 (500-250 μm)	FRACT %	32.7
phi 2 (250-125 μm)	FRACT %	12
phi 3 (125-62 μm)	FRACT %	9.3
phi 4 (62.5-31.0 μm)	FRACT %	10.8
phi 5 (31.0-15.6 μm)	FRACT %	6.9
phi 6 (15.6-7.8 μm)	FRACT %	3.9
phi 7 (7.8-3.9 μm)	FRACT %	2.3
phi 8 (3.9-2.0 μm)	FRACT %	1.2
phi 9 (2.0-1.0 μm)	FRACT %	0.5
phi 10 (<1.0 μm)	FRACT %	1.0
PCB CO-PLANARS		
CL4(77)	ng/Kg	409
CL5(105)	ng/Kg	4960
CL5(123)	ng/Kg	156
CL5(114)	ng/Kg	10100
CL5(118)	ng/Kg	276
CL5(126)	ng/Kg	50 U
CL6(156)	ng/Kg	1430
CL6(157)	ng/Kg	319
CL6(167)	ng/Kg	481
CL6(169)	ng/Kg	50 U
CL7(170)	ng/Kg	1730
CL7(180)	ng/Kg	3120
CL7(189)	ng/Kg	63.2

U = Not detected at the method reporting limit shown.

FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	DEPTH OF SEDIMENT	DEPTH OF SEDIMENT	12	CONC	INCHES	1	6/28/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	GRAIN SIZE BY PSEP	Gravel (>2000 μm)	1	CONC	Fract %	PSEP	7/25/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	GRAIN SIZE BY PSEP	Coarse Sand (2000-1000 μm)	7.1	CONC	Fract %	PSEP	7/25/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	GRAIN SIZE BY PSEP	phi 0 (1000-500 μm)	11.3	CONC	Fract %	PSEP	7/25/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	GRAIN SIZE BY PSEP	phi 1 (500-250 μm)	32.7	CONC	Fract %	PSEP	7/25/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	GRAIN SIZE BY PSEP	phi 2 (250-125 μm)	12	CONC	Fract %	PSEP	7/25/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	GRAIN SIZE BY PSEP	phi 3 (125-62 μm)	9.3	CONC	Fract %	PSEP	7/25/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	GRAIN SIZE BY PSEP	phi 4 (62.5-31.0 μm)	10.8	CONC	Fract %	PSEP	7/25/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	GRAIN SIZE BY PSEP	phi 5 (31.0-15.6 μm)	6.9	CONC	Fract %	PSEP	7/25/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	GRAIN SIZE BY PSEP	phi 6 (15.6-7.8 μm)	3.9	CONC	Fract %	PSEP	7/25/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	GRAIN SIZE BY PSEP	phi 7 (7.8-3.9 μm)	2.3	CONC	Fract %	PSEP	7/25/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	GRAIN SIZE BY PSEP	phi 8 (3.9-2.0 μm)	1.2	CONC	Fract %	PSEP	7/25/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	GRAIN SIZE BY PSEP	phi 9 (2.0-1.0 μm)	0.5	CONC	Fract %	PSEP	7/25/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	GRAIN SIZE BY PSEP	phi 10 (<1.0 μm)	1	CONC	Fract %	PSEP	7/25/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	TOTAL SOLIDS	TOTAL SOLIDS	58.3	CONC	% W/W	0.01 SM 2540 G	6/28/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	TOTAL ORGANIC CARBON	TOTAL ORGANIC CARBON	42600	CONC	mg/Kg	1000 EPA 9060 MOD	7/16/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	NWTPH-HCID	GASOLINE RANGE HYDROCARBONS	DET		mg/Kg	20 NWTPH-HCID	7/1/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	NWTPH-HCID	DIESEL RANGE HYDROCARBONS	<50.0		mg/Kg	50 NWTPH-HCID	7/1/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	NWTPH-HCID	HEAVY OIL RANGE HYDROCARBONS	DET		mg/Kg	100 NWTPH-HCID	7/1/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	NWTPH-HCID	Surrogate Recovery (%)	122	CONC	mg/Kg	NWTPH-HCID	7/1/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	CADMIUM	CADMIUM	1.32	CONC	mg/Kg	0.1 EPA 6020	6/29/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	CHROMIUM	CHROMIUM	139	CONC	mg/Kg	0.5 EPA 6020	6/29/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	COPPER	COPPER	69.5	CONC	mg/Kg	0.25 EPA 6020	6/29/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	NWTPH-Dx	DIESEL RANGE HYDROCARBONS	580	CONC	mg/Kg	125 NWTPH-Dx	7/16/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	NWTPH-Dx	HEAVY OIL RANGE HYDROCARBONS	2390	CONC	mg/Kg	250 NWTPH-Dx	7/16/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	NWTPH-Gx	GASOLINE RANGE HYDROCARBONS	10.9	CONC	mg/Kg	2 NWTPH-Gx	7/16/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	LEAD	LEAD	79.8	CONC	mg/Kg	0.1 EPA 6020	6/29/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	MERCURY	MERCURY	0.025	CONC	mg/Kg	0.003 EPA 7471	6/30/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	NICKEL	NICKEL	29.9	CONC	mg/Kg	0.25 EPA 6020	6/29/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	ZINC	ZINC	391	CONC	mg/Kg	0.5 EPA 6020	6/29/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	PCB CO-PLANARS	CL4(77)	409	CONC	ng/Kg	50 EPA 1668 MOD	8/17/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	PCB CO-PLANARS	CL5(105)	4960	CONC	ng/Kg	50 EPA 1668 MOD	8/17/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	PCB CO-PLANARS	CL5(123)	156	CONC	ng/Kg	50 EPA 1668 MOD	8/17/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	PCB CO-PLANARS	CL5(114)	10100	CONC	ng/Kg	50 EPA 1668 MOD	8/17/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	PCB CO-PLANARS	CL5(118)	276	CONC	ng/Kg	50 EPA 1668 MOD	8/17/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	PCB CO-PLANARS	CL5(126)	<50.0		ng/Kg	50 EPA 1668 MOD	8/17/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	PCB CO-PLANARS	CL6(156)	1430	CONC	ng/Kg	50 EPA 1668 MOD	8/17/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	PCB CO-PLANARS	CL6(157)	319	CONC	ng/Kg	50 EPA 1668 MOD	8/17/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	PCB CO-PLANARS	CL6(167)	481	CONC	ng/Kg	50 EPA 1668 MOD	8/17/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	PCB CO-PLANARS	CL6(169)	<50.0		ng/Kg	50 EPA 1668 MOD	8/17/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	PCB CO-PLANARS	CL7(170)	1730	CONC	ng/Kg	50 EPA 1668 MOD	8/17/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	PCB CO-PLANARS	CL7(180)	3120	CONC	ng/Kg	50 EPA 1668 MOD	8/17/2001
FO010718	SED1	APPROX 7400 NE 33RD DR	VORTECHNICS	6/28/2001	11:30	MKS/JBB	GRAB	SEDIMENT	PCB CO-PLANARS	CL7(189)	63.2	CONC	ng/Kg	50 EPA 1668 MOD	8/17/2001

Sedimentation Manhole Monitoring

Table 1: HYDRA Rain Gauge Data
Sedimentation Manhole Monitoring
FY 2000-01

Daily Rain Report — All Times in Pacific Standard Time

Rain Data Collected by HYDRA - City of Portland

Gauge 48: Open Meadow																									
Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Event 5: March 15, 2001																									
3/12/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/13/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.02
3/14/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/15/01	0.00	0.00	0.00	0.01	0.03	0.02	0.03	0.03	0.02	0.01	0.04	0.03	0.00	0.01	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
Event 6: April 16, 2001																									
4/13/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4/14/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4/15/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4/16/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.10	0.08	0.00	0.00	0.21
4/17/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

- Storm event duration

Table 2A: Analytical Summary
Sedimentation Manhole Monitoring
FY 2000-01 Event 5: March 15, 2001

Grab Parameters	Sample Site: / Units / Lab ID:	SED1A	SED1	SED2
	Units / Lab ID:	FO010282	FO010283	FO010284
pH (FIELD)	pH Units	N/A	7.8	6.4
SPECIFC CONDUCTANCE (FIELD)	µmhos/cm	N/A	44	84
NON-POLAR OIL & GREASE	mg/L	5 U	N/A	5 U
TOTAL SOLIDS	mg/L	N/A	85	89
TOTAL SUSPENDED SOLIDS	mg/L	N/A	47.4	20
CADMIUM, TOTAL	µg/L	N/A	0.19	0.26
COPPER, TOTAL	µg/L	N/A	11.6	8.81
LEAD, TOTAL	µg/L	N/A	3.90	3.17
ZINC, TOTAL	µg/L	N/A	76.9	63.5
CADMIUM, DISSOLVED	µg/L	N/A	0.11	0.17
COPPER, DISSOLVED	µg/L	N/A	7.79	5.54
LEAD, DISSOLVED	µg/L	N/A	0.14	0.23
ZINC, DISSOLVED	µg/L	N/A	54	49.0

Composite Parameters	Sample Site: / Units / Lab ID:	SED1	SED2	SED3	SUMP1
	Units / Lab ID:	FO010285	FO010286	FO010287	FO010288
TOTAL SOLIDS	mg/L	58	63	61	55
TOTAL SUSPENDED SOLIDS	mg/L	36	14.0	9.5	8.0
CADMIUM, TOTAL	µg/L	0.15	0.21	0.19	0.12
COPPER, TOTAL	µg/L	9.27	7.30	6.7	6.24
LEAD, TOTAL	µg/L	4.22	2.8	1.65	1.44
ZINC, TOTAL	µg/L	57.0	48.6	42.0	40
CADMIUM, DISSOLVED	µg/L	0.1 U	0.12	0.1 U	0.1 U
COPPER, DISSOLVED	µg/L	5.60	5.43	4.56	3.87
LEAD, DISSOLVED	µg/L	0.25	0.19	0.15	0.13
ZINC, DISSOLVED	µg/L	37.8	39.1	33.3	30.5
TOTAL PARTICLES	# Part/100ml	1333000	150000	221000	323000
>100 microns	# Part/100ml	4000	1000	1000 U	1000 U
50-100 microns	# Part/100ml	17000	1000	1000 U	1000 U
25-50 microns	# Part/100ml	24000	11000	4000	1000 U
15-25 microns	# Part/100ml	80000	18000	14000	2000
5-15 microns	# Part/100ml	1208000	119000	203000	321000

N/A = Not Applicable
U = Not detected at method reporting limit shown

Figure 3A: Event Hydrograph
Sedimentation Manhole Sampling
FY 2000-01 Event 5: March 15, 2001

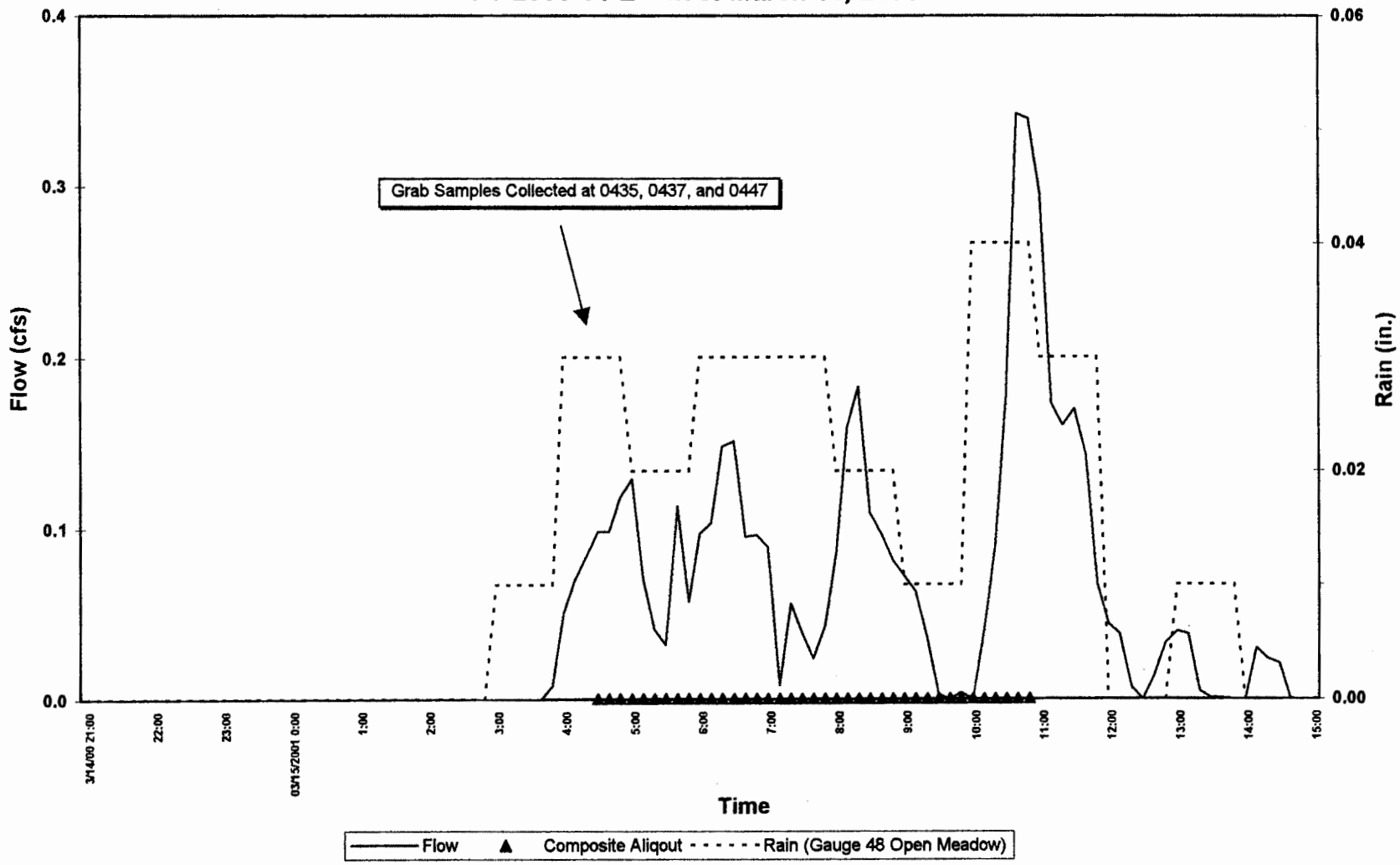


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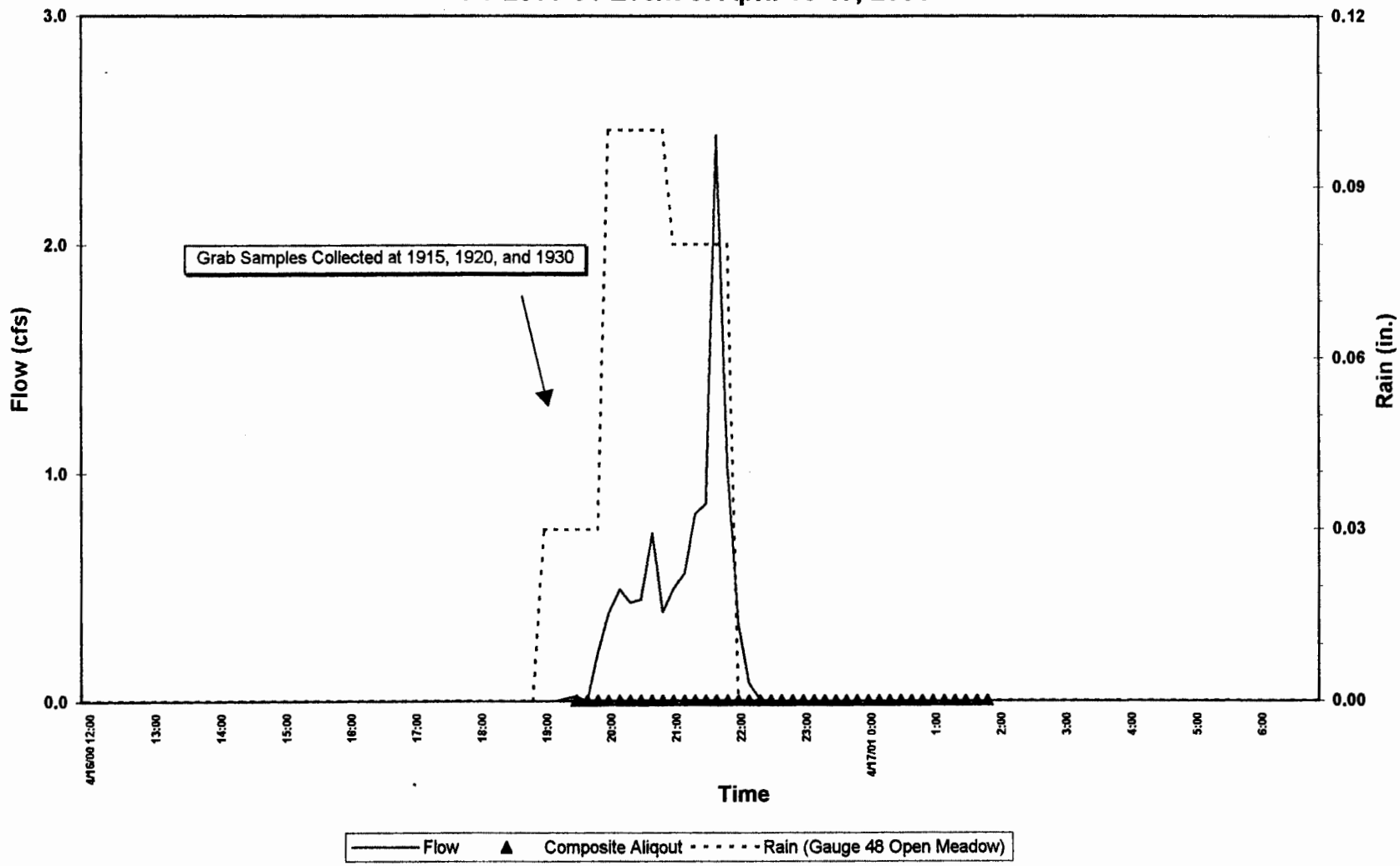
Table 2B: Analytical Summary
Sedimentation Manhole Monitoring
FY 2000-01 Event 6: April 16, 2001

Grab Parameters	Sample Site: / Units / Lab ID:	SED1A FO010399	SED1 FO010400	SED2 FO010401
pH (FIELD)	pH Units	N/A	6.9	6.1
SPECIFC CONDUCTANCE (FIELD)	µmhos/cm	N/A	179	58.9
NON-POLAR OIL & GREASE	mg/L	5.2	N/A	5 U
TOTAL SOLIDS	mg/L	N/A	560	80
TOTAL SUSPENDED SOLIDS	mg/L	N/A	162	22
CADMIUM, TOTAL	µg/L	N/A	0.80	0.23
COPPER, TOTAL	µg/L	N/A	43.8	9.80
LEAD, TOTAL	µg/L	N/A	12.60	3.61
ZINC, TOTAL	µg/L	N/A	226	47.3
CADMIUM, DISSOLVED	µg/L	N/A	0.51	0.10 U
COPPER, DISSOLVED	µg/L	N/A	33.3	3.78
LEAD, DISSOLVED	µg/L	N/A	1.19	0.66
ZINC, DISSOLVED	µg/L	N/A	157	30.1

Composite Parameters	Sample Site: / Units / Lab ID:	SED1 FO010402	SED2 FO010403	SED3 FO010404	SUMP1 FO010405
TOTAL SOLIDS	mg/L	89	92	79	70
TOTAL SUSPENDED SOLIDS	mg/L	67	55.6	37	28.0
CADMIUM, TOTAL	µg/L	0.17	0.80	0.18	0.26
COPPER, TOTAL	µg/L	11.3	11.8	10.4	10.0
LEAD, TOTAL	µg/L	7.10	6.6	4.79	3.93
ZINC, TOTAL	µg/L	61.4	61.8	54.8	53
CADMIUM, DISSOLVED	µg/L	0.10 U	0.10 U	0.10	0.14
COPPER, DISSOLVED	µg/L	6.15	6.44	6.06	5.66
LEAD, DISSOLVED	µg/L	0.17	0.24	0.26	0.26
ZINC, DISSOLVED	µg/L	24.7	30.6	31.0	32.6
TOTAL PARTICLES	# Part/100ml	1393000	1014900	1036900	998800
>100 microns	# Part/100ml	70000	19100	4000	1000
50-100 microns	# Part/100ml	30000	29100	7000	7000
25-50 microns	# Part/100ml	80000	48100	15000	11000
15-25 microns	# Part/100ml	150000	93300	28100	25100
5-15 microns	# Part/100ml	1063000	825300	982800	954700

N/A = Not Applicable
U = Not detected at method reporting limit shown

Figure 3B: Event Hydrograph
Sedimentation Manhole Sampling
FY 2000-01 Event 6: April 16-17, 2001



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Illicit Discharges Elimination Program (IDEP)

Illicit Discharges Elimination Program (IDEP)

ID	Outfall ID#	Date:	Time:	Field team:	Results entered by:	Type of Site:	Dominant land use:	Flow observed:	pH:	Temperature:	Conductivty:	Copper:	Iron:	Zinc:	Residual chlorine:	Fecal coliform:
113	50	5-Jul-00	10:45 AM	AD	AD	Manhole										
114	50	10-Jul-00	7:05 AM	AD	AD	Manhole	Commercial	Yes	6.4	61	40	.1	.1		.03	1500
115	22	10-Jul-00	7:40 AM	AD	AD	Outfall	Industrial	Yes	6.7	63	91	.1	.2			9
116	19	10-Jul-00	8:30 AM	AD	AD	Manhole	Industrial	Yes	6.2	61	181	.3	.1		.02	200
117	17	10-Jul-00	10:00 AM	AD	AD	Outfall	Industrial									
118	16	10-Jul-00	10:10 AM	AD	AD	Outfall	Industrial	Yes	6.5	61	520	.1	5.0		.02	160
119	18	10-Jul-00	12:45 PM	AD	AD	Manhole	Industrial	Yes	7.1	68	96	.1	.1		.06	45
120	44	10-Jul-00	1:25 PM	AD	AD	Manhole	Industrial									
121	S2	10-Jul-00	1:45 PM	AD	AD	Outfall	Industrial	Yes	7.1	66	181	.1	.1		.1	72
122	H1	10-Jul-00	2:25 PM	AD	AD	Outfall	Commercial	Yes	7.2	68	64	.1	.1		.06	330
123	34	12-Jul-00	7:30 AM	AD	AD	Manhole	Commercial	No								
124	40	12-Jul-00	7:50 AM	AD	AD	Manhole	Commercial	Yes	6.6	57	387	.1	.1		.05	54
125	41	12-Jul-00	8:25 AM	AD	AD	Manhole	Commercial	Yes	7.2	63	156	.1	.1		.04	330
126	73A	12-Jul-00	9:00 AM	AD	AD	Manhole	Industrial	No								
127	65A	12-Jul-00	9:10 AM	AD	AD	Manhole	Industrial	No								
128	74	12-Jul-00	9:25 AM	AD	AD	Outfall	Industrial	No								
129	75	12-Jul-00	9:30 AM	AD	AD	Manhole	Industrial	Yes	6.4	70	108	.1	.1		.21	10
130	77	12-Jul-00	10:00 AM	AD	AD	Manhole	Industrial	No								
131	77A	12-Jul-00	10:05 AM	AD	AD	Outfall	Industrial									
132	80	12-Jul-00	10:10 AM	AD	AD	Manhole	Industrial	Yes								
133	J4	19-Jul-00	8:45 AM	AD	AD	Outfall	Commercial	No								
134	J5B	19-Jul-00	8:50 AM	AD	AD	Outfall	Commercial	No								
135	J3	19-Jul-00	8:55 AM	AD	AD	Outfall	Commercial	No								
136	J5A	19-Jul-00	9:00 AM	AD	AD	Outfall	Commercial	No								
137	113	19-Jul-00	9:20 AM	AD	AD	Manhole	Commercial	Yes	6.7	63	199	.1	.1		.04	18
138	104B	19-Jul-00	9:50 AM	AD	AD	Manhole	Industrial	Yes	6.5	66	184	.1	.1			9300
139	104A	19-Jul-00	10:15 AM	AD	AD	Manhole	Industrial	Yes	6.3	61	192	.1	.1		.03	18
140	100	19-Jul-00	10:40 AM	AD	AD	Manhole	Commercial	Yes	6.3	61	203	.1	.1		.03	10
141	94	19-Jul-00	11:45 AM	AD	AD	Outfall	Industrial	Yes	7.5	69	110	.1	.1		.06	10
142	19	19-Jul-00	12:45 PM	AD	AD											
143	52	20-Jul-00	7:15 AM	AD	AD	Manhole	Commercial	Yes								
144	53	20-Jul-00	7:30 AM	AD	AD	Manhole	Commercial	No								
145	54A	20-Jul-00	7:45 AM	Ad	AD	Manhole	Industrial	No								
146	55A	20-Jul-00	7:50 AM	AD	AD	Outfall	Industrial	No								
147	56A	20-Jul-00	7:55 AM	AD	AD	Manhole	Industrial	Yes	6.3	65	60	.1	.1		.07	10
148	53D	20-Jul-00	8:35 AM	AD	AD	Outfall	Industrial	Yes	6.6	61	300	.1	.3		.03	10
149	53A	20-Jul-00	9:05 AM	AD	AD	Outfall	Industrial	Yes								
150	53B	20-Jul-00	9:20 AM	AD	AD	Outfall	Industrial	Yes	7.0	63	175	.1	.3		.01	730
151	53C	20-Jul-00	9:25 AM	AD	AD	Manhole	Industrial									
152	60C	20-Jul-00	9:45 AM	AD	AD	Outfall	Commercial									

Illicit Discharges Elimination Program (IDEP)

ID	Outfall ID#	Date:	Time:	Field team:	Results entered by:	Type of Site:	Dominant land use:	Flow observed:	pH:	Temperature:	Conductivty:	Copper:	Iron:	Zinc:	Residual chlorine:	Fecal coliform:
153	45	20-Jul-00	10:15 AM	AD	AD	Manhole	Industrial	Yes	6.9	101	36	.1	.1		.22	10
154	19	24-Jul-00	10:40 AM	JRH	AD											
155	73A	25-Jul-00	8:10 AM	AD	AD	Manhole	Industrial	No								
156	66	25-Jul-00	8:20 AM	AD	AD	Manhole	Industrial									
157	65A	25-Jul-00	8:25 AM	AD	AD	Manhole	Industrial	No								
158	S2	25-Jul-00	9:00 AM	AD	AD	Manhole	Industrial	Yes	6.1	63	137	.1	.1		.01	18
159	S1	25-Jul-00	9:30 AM	AD	AD	Manhole	Industrial	No								
160	M1	25-Jul-00	9:40 AM	AD	AD	Outfall	Industrial	Yes	6.4	73	183	5.0	.1			10
161	M2	25-Jul-00	10:25 AM	AD	AD	Outfall		Yes	6.5	65	558	.1	5.0		.03	81
162	M3	25-Jul-00	10:45 AM	AD	AD	Outfall	Industrial									
163	44	25-Jul-00	11:25 AM	AD	AD	Manhole	Industrial									
164	41	25-Jul-00	11:35 AM	AD	AD	Manhole	Commercial	Yes	6.7	68	123	.1	.1		.04	49000
165	40	25-Jul-00	12:10 PM	AD	AD	Manhole	Commercial	Yes	6.8	61	388	.1	.1		.02	36
166	34	25-Jul-00	12:30 PM	AD	AD	Manhole	Commercial	No								
167	16	25-Jul-00	12:50 PM	AD	AD	Outfall	Industrial	Yes	6.4	65	536	.1	5.0		.01	27
168	17	25-Jul-00	1:05 PM	AD	AD	Outfall	Industrial									
169	19	25-Jul-00	1:15 PM	AD	AD	Manhole	Industrial	Yes	6.9	65	252	.1	5.0			10000
170	22	25-Jul-00	1:35 PM	AD	AD	Outfall	Industrial	Yes	7.0			.1				10
171	50	25-Jul-00	1:55 PM	AD	AD	Manhole	Commercial	Yes	7.0	71	45	.1	.1		.04	540
172	H1	25-Jul-00	2:35 PM	AD	AD	Outfall	Commercial	Yes	6.9	70	76	ND	ND		.03	420
173	22	2-Aug-00	8:00 AM	AD	AD	Manhole	Industrial									
174	19	2-Aug-00	8:10 AM	AD	AD	Manhole	Industrial	Yes	6.4	61	308	ND	5.0	.17	.33	10
175	16	2-Aug-00	9:10 AM	AD	AD	Outfall	Industrial									
176	34	2-Aug-00	9:30 AM	AD	AD	Manhole	Commercial	No								
177	40	2-Aug-00	9:55 AM	AD	AD	Manhole	Commercial	Yes	6.8	66	388	ND	ND	ND	.06	90
178	41	2-Aug-00	10:40 AM	AD	AD	Manhole	Commercial	Yes	7.1	77	116	ND	ND	ND	.06	4000
179	44	2-Aug-00	10:55 AM	AD	AD	Manhole	Commercial	Yes								
180	J4	2-Aug-00	12:20 PM	AD	AD	Manhole	Commercial	No								
181	J3	2-Aug-00	12:25 PM	AD	AD	Outfall	Commercial	No								
182	J5A	2-Aug-00	12:30 PM	AD	AD		Commercial	No								
183	J5B	2-Aug-00	12:35 PM	AD	AD	Outfall	Commercial	No								
184	H1	2-Aug-00	1:15 PM	AD	AD	Outfall	Commercial	Yes	7.0	72	83	ND	ND		.06	9
185	S2	2-Aug-00	1:50 PM	AD	AD	Manhole	Industrial	Yes	7.2	71	401	ND	ND		.27	10
186	75	2-Aug-00	2:15 PM	AD	AD	Manhole	Industrial	No								
187	74	2-Aug-00	2:20 PM	AD	AD	Outfall	Industrial	Yes	7.3	79	729	ND	5.0	1.1		17000
188	73A	2-Aug-00	2:50 PM	AD	AD	Manhole	Industrial	No								
189	66	2-Aug-00	3:00 PM	AD	AD	Manhole	Industrial									
190	65A	2-Aug-00	3:05 PM	AD	AD	Manhole	Industrial									
191	56A	2-Aug-00	3:15 PM	AD	AD	Manhole	Industrial	Yes	7.2	73	55	ND	ND		.15	10
192	55A	2-Aug-00	3:30 PM	AD	AD	Manhole	Industrial	No								
193	50	2-Aug-00	3:45 PM	AD	AD	Manhole	Commercial	Yes	7.2	70	44	ND	ND		.06	140
194	113	14-Aug-00	8:00 AM	AD	AD	Manhole	Commercial	Yes	6.3	57	215	ND	ND		.05	350

Illicit Discharges Elimination Program (IDEP)

ID.	Outfall ID#	Date:	Time:	Field team:	Results entered by:	Type of Site:	Dominant land use:	Flow observed:	pH:	Temperature:	Conductivty:	Copper:	Iron:	Zinc:	Residual chlorine:	Fecal coliform:
195	104B	14-Aug-00	8:25 AM	AD	AD	Manhole	Commercial	Yes	6.5	63	88	ND	ND		.05	1100
196	104A	14-Aug-00	8:55 AM	AD	AD	Manhole	Commercial	Yes	7.4	61	246	ND	ND		.07	10
197	100	14-Aug-00	9:15 AM	AD	AD	Manhole	Commercial	Yes	6.7	69	137	ND	ND		.03	10
198	94	14-Aug-00	10:10 AM	AD	AD	Manhole	Commercial	Yes	6.2	59	198	ND	ND		.03	9
199	92	14-Aug-00	10:30 AM	AD	AD	Manhole	Industrial	No								
200	80	14-Aug-00	10:40 AM	AD	AD	Manhole	Industrial	No								
201	77A	14-Aug-00	10:50 AM	AD	AD	Outfall	Commercial	Yes								
202	77	14-Aug-00	10:55 AM	AD	AD	Manhole	Industrial	Yes								
203	60C	14-Aug-00	12:55 PM	AD	AD	Outfall	Industrial									
204	53A	14-Aug-00	1:05 PM	AD	AD	Outfall	Industrial	Yes	7.2	72	480	ND	ND		.04	18000
205	53B	14-Aug-00	1:30 PM	AD	AD	Outfall	Industrial	Yes	7.3	70	177	ND	ND		.03	18
206	53C	14-Aug-00	1:40 PM	AD	AD	Outfall	Industrial	No								
207	53D	14-Aug-00	2:00 PM	AD	AD	Outfall	Industrial	Yes	7.0	66	332	ND	5.0		.08	9
208	54A	14-Aug-00	2:25 PM	AD	AD	Manhole	Industrial	No								
209	53	14-Aug-00	2:50 PM	AD	AD	Outfall	Commercial	No								
210	52	14-Aug-00	3:05 PM	AD	AD	Manhole	Commercial	No								
211	34	16-Aug-00	8:10 AM	AD	AD	Manhole	Commercial	No								
212	40	16-Aug-00	8:20 AM	AD	AD	Manhole	Commercial	Yes	6.6	57	389	ND	ND		.01	72
213	41	16-Aug-00	9:00 AM	AD	AD	Manhole	Commercial	Yes	6.8	66	155	ND	ND		.02	2700
214	44	16-Aug-00	12:00 AM	AD	AD	Manhole	Industrial									
215	45	16-Aug-00	9:50 AM	AD	AD		Industrial	Yes	7.0	105	75	ND	ND		.22	10
216	H1	16-Aug-00	10:35 AM	AD	AD	Outfall	Commercial	Yes	7.0	68	137	ND	ND		.03	21000
217	S1	16-Aug-00	11:50 AM	AD	AD	Manhole	Industrial	Yes								
218	M1	16-Aug-00	12:00 PM	AD	AD	Manhole	Industrial									
219	M2	16-Aug-00	12:20 PM	AD	AD	Outfall	Industrial	Yes	6.8	73	556	ND	5.0			10
220	M3	16-Aug-00	12:35 PM	AD	AD	Outfall	Industrial									
221	16	16-Aug-00	12:45 PM	AD	AD	Outfall	Industrial	Yes	6.4	70	513	ND	5.0		.08	54
222	18	16-Aug-00	1:30 PM	AD	AD	Manhole	Industrial	Yes	6.9	75	635	ND	ND		.03	140
223	19	16-Aug-00	2:25 PM	AD	AD	Manhole	Industrial	Yes	6.7	71	386	ND	ND		.04	4600
224	22	16-Aug-00	3:00 PM	AD	AD	Outfall	Industrial	Yes	7.6	71	461	ND	ND		.07	10
225	50	16-Aug-00	3:25 PM	AD	AD	Manhole	Commercial	Yes	6.7	70	91	ND	ND		.03	99
226	104A	23-Aug-00	9:00 AM	AD/PFA	AD	Manhole	Commercial	Yes	6.1	63	157		ND		.04	820
227	113	23-Aug-00	9:45 AM	AD/PFA	AD	Manhole	Residential	Yes	7.0	64	208		ND		.04	36
228	111B	23-Aug-00	10:00 AM	AD/PFA	AD	Manhole	Industrial	Yes								
229	110A	23-Aug-00	10:15 AM	AD/PFA	AD	Manhole	Industrial	Yes	6.3	63	186		ND		.08	45
230	104B	23-Aug-00														
231	41	23-Aug-00	12:00 PM	AD/PFA	AD	Manhole	Commercial	Yes								
232	53A	23-Aug-00	1:05 PM	AD/PFA	AD	Outfall	Industrial	Yes								
233	104B	25-Aug-00														

Illicit Discharges Elimination Program (IDEP)

ID	Outfall ID#	Date:	Time:	Field team:	Results entered by:	Type of Site:	Dominant land use:	Flow observed:	pH:	Temperature:	Conductivty:	Copper:	Iron:	Zinc:	Residual chlorine:	Fecal coliform:
234	53A	31-Aug-00		AD												
235	34	27-Sep-00	7:45 AM	AD	AD	Manhole	Commercial	No								
236	40	27-Sep-00	8:00 AM	AD	AD	Manhole	Commercial	Yes	6.7	71	166	ND	ND		.04	10
237	53A	27-Sep-00	8:45 AM	AD	AD	Outfall	Industrial	Yes	6.7	57	429	.01	ND		.03	9
238	104B	27-Sep-00	9:50 AM	AD	AD	Manhole	Commercial	No								
239	H1	27-Sep-00	10:30 AM	AD	AD	Outfall	Commercial	Yes	7.0	64	112	ND	ND		.02	27
240	41	27-Sep-00	11:35 AM	AD	AD	Manhole	Commercial	Yes	7.4	64	168	ND	ND		.04	18000
241	18	27-Sep-00	2:25 PM	AD	AD	Manhole	Industrial	Yes								10