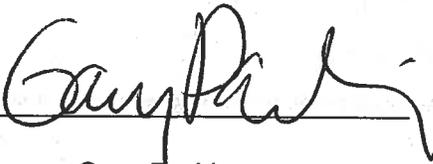


**National Pollutant Discharge Elimination System (NPDES)
Municipal Storm Water System Annual Report**

I, the undersigned, hereby submit this National Pollutant Discharge Elimination System (NPDES) Municipal Storm Water System Annual Report in accordance with NPDES Permit Number 101348. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person, or persons, who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for known violations.

 10/7/08

Name: Gary Harkin
Title: Engineering Director
City of Milwaukie

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1.0 Introduction and Permit Background

The Oregon Department of Environmental Quality (DEQ) regulates storm water runoff from the City of Milwaukie through the Municipal Separate Storm Sewer System Discharge Permit No. 101348 (MS4 Permit), issued to Clackamas County and its co-permittees. Clackamas County co-permittees include the City of Milwaukie along with a number of other smaller jurisdictions including the cities of Lake Oswego, Oregon City, West Linn, Gladstone, Wilsonville, Happy Valley, Johnson City, Rivergrove, and the Oak Lodge Sanitary District. Each co-permittee is a relatively small community, most having populations between 15,000 and 25,000 with some (Johnson City, Rivergrove) having populations significantly smaller.

As required under Schedule B(2)(a) of the MS4 Permit, each co-permittee must submit an annual report, summarizing accomplishments and implementation of the Municipal Storm Water Management Plan (SWMP). This annual report is for permit year 13 (or permit year 4 under the renewed permit dated 2004) documents activities from July 1, 2007 to June 30, 2008 as related to the City of Milwaukie's storm water management efforts under their MS4 Permit and associated SWMP.

With respect to annual reporting requirements, this annual report contains the following items per Schedule B(2)(a) of the MS4 permit:

- i) *The status of implementing components of the storm water management program;*

See Section 2.0 for a summary of the performance measures and program monitoring requirements as documented in the City's current SWMP.

- ii) *Proposed changes to the SWMP components, including new BMPs identified through implementing adaptive management. A timeline for implementation of new BMPs must also be included in the report;*

See Section 2.0 for a summary of the City's current SWMP, which was approved by DEQ July 31, 2006. This recently updated SWMP contains the most current changes to BMPs as a result of adaptive management. Thus, no additional changes are proposed for BMPs at this time.

- iii) *A summary of total storm water program expenditures and funding sources over the reporting fiscal year, and those anticipated in the next fiscal year;*

See Section 3.1 for a summary of storm water related expenditures.

- iv) *A summary of data, including monitoring data that is accumulated throughout the reporting year;*

See Section 2.0 for a summary of the program monitoring results. See Section 4.2 for a summary of the environmental monitoring data collected.

- v) *A summary describing the number and nature of enforcement actions, inspections, and public education programs;*

See Section 2.0 for a summary of the program monitoring activities.

- vi) *Identification of water quality improvements or degradation;*

See Section 4.3 for a brief summary of water quality characteristics within the City limits.

- vii) *Demonstration of continued legal authority to implement the programs outlined in the SWMP; and*

See Section 3.2 for the letter of continued legal authority.

- viii) *An overview, as related to MS4 discharges, of concept planning, land use changes and new development activities that occurred within the Urban Growth Boundary (UGB) expansion areas during the previous year, those forecast for the following year, and an evaluation for consistency with the requirements of Schedule D(2)(c)(i)(2).*

See Section 3.3 for the discussion of development activities.

Each section of this report, as described above, corresponds to the specific permit requirements in Schedule B(2)(a). The report emphasizes efforts and activities associated with individual Best Management Practices (BMPs) from the City's SWMP (summarized in Section 2.0).

Appendix C shows modifications to Sections B-1 & B-2 of the City of Milwaukie's monitoring plan. These modifications were completed after permit year 13, but were fully implemented on this permit cycle.

2.0 Implementation of the City of Milwaukie's SWMP

Tables 2-1 through 2-5 summarize the performance measures and program monitoring activities associated with the City of Milwaukie's BMPs, in accordance with each of the required components of a SWMP. The five SWMP components are as follows:

- Component #1: Structural and Source Control BMPs to Reduce Pollutants from Commercial and Residential Areas
- Component #2: A Program to Detect and Remove Illicit Discharges and Improper Disposal Into the Storm Sewer System
- Component #3: A Program to Monitor and Control Pollutants from Industrial Facilities
- Component #4: A Program to Reduce Pollutants in Storm Water Discharges from Construction Sites
- Component #5: Public Education, Coordination, and Public Involvement BMPs

TABLE 2-1 - Structural and Source Control BMPs to Reduce Pollutants from Commercial and Residential Areas

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
<p>NPDES Permit Requirement – (1) Maintenance activities and a maintenance schedule for structural controls to reduce pollutants (including floatables) in discharges from municipal separate storm sewers.</p>				
<p>BMP – Conduct Stormwater Conveyance System Cleaning and Maintenance</p>				
<p>BMP Owner: City of Milwaukie Public Works Department</p> <p>Permit Year: Ongoing</p> <p>Implementation Activities: The City of Milwaukie inspects their stormwater conveyance system including manholes, storm system pipes, culverts, and ditches as needed. Conveyance system components are inspected for accumulated sediment and debris that may prompt flooding and broken system components in need to repair.</p>	<p>(1) Estimate the volume of debris removed during conveyance system cleaning activities.</p> <p>(2) Track the conveyance system repair efforts conducted.</p>	<p>2005/2006</p> <p>(1) The following volumes of debris were removed during conveyance cleaning activities:</p> <ul style="list-style-type: none"> • Drywells = 168 cub. Yds. • Sedimentation manholes = 39 cub. Yds. <p>Volumes of debris removed during pipe cleaning activities are not possible to record. The City performed TV inspection on 4,822 feet of pipe during permit year 11.</p> <p>(2) The following maintenance/repairs were conducted during permit year 11:</p> <ul style="list-style-type: none"> • 4 manholes cleaned • 2 storm main repairs • 1 baffle installed in manhole • 3 drywells raised to surface • 9 repaired manhole lid/cover • 2 replaced manhole lids due to damage • 3 riser rings repaired • 30 storm main TV inspections • 8 manholes inspected • 557 drywell inspected • 22 outfalls cleared of brush & debris 	<p>2006/2007</p> <p>(1) The following volumes of debris were removed during conveyance cleaning activities:</p> <ul style="list-style-type: none"> • 70.6 Cubic feet of debris was removed • 2860.51 linear feet of storm pipe was cleaned. No totals of measurable mounts of debris could be obtained. • Sedimentation Manholes = • A total of 36 lines were cleaned • 787 Drywells were inspected • 37 Drywells were cleaned <p>(2) The following maintenance/repairs were conducted during permit year 12:</p> <ul style="list-style-type: none"> • A total of 36 lines were cleaned • 787 Drywells were inspected • 37 Drywells were cleaned • 19 Manholes Cleaned • 4 Drywells raised to surface 	<p>2007/2008</p> <p>(1) The following volumes of debris were removed during conveyance cleaning activities:</p> <ul style="list-style-type: none"> • 2,056 linear feet of storm line was cleaned. No totals of measurable amounts of debris could be obtained. • A total of 16 Manholes were cleaned for a total debris amount of 11.22 cubic feet of debris removed. • 56 Drywells were cleaned of which 159 cubic yards of debris was removed. • 6 drywells were “Gamma Jetted” in which once a drywell has had debris removed a rotating high-pressure nozzle is placed inside and assists in cleaning the perforations in the drywell. <p>(2) The following maintenance/repairs were conducted during permit year 13:</p> <ul style="list-style-type: none"> • A total of 15 storm lines were cleaned • 773 Drywells were inspected • 9 storm lines were repaired for a total of 98 feet • Oil booms were replaced in 37 drywells to ensure no oils or sheen in drywells • 6 buried drywells and 1 manhole were raised to the surface and cleaned • Approximately 4,686 feet of storm line was inspected by use of a motorized camera to look for defects and verify the need for cleaning.

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
BMP – Conduct Catch basin Cleaning and Maintenance				
<p>BMP Owner: City of Milwaukie Public Works Department</p> <p>Permit Year: Ongoing</p> <p>Implementation Activities: The City of Milwaukie cleans all public catch basins once every two years, more frequently if needed.</p>	<p>(1) Track the number of catch basins maintained.</p> <p>(2) Track the volume of debris removed during cleaning activities.</p>	<p>2005/2006</p> <p>(1) During permit year 11, twelve catch basins were maintained/repaired.</p> <p>(2) The following volume of debris was removed during catch basin cleaning activities:</p> <ul style="list-style-type: none"> • Catch basins = 42 cub. Yds. 	<p>2006/2007</p> <p>(1) During permit year 12, twelve catch basins were maintained/repaired.</p> <p>There were 440 catch basins cleaned.</p> <p>(2) The following volume of debris was removed during catch basin cleaning activities:</p> <ul style="list-style-type: none"> • Catch basins = 42 cub. Yds. 	<p>2007/2008</p> <p>(1) During permit year 13, twelve catch basins were repaired.</p> <p>There were 512 catch basins cleaned.</p> <p>The following volume of debris was removed during catch basin cleaning activities:</p> <ul style="list-style-type: none"> • Catch basins = 27.cub. Yds.
BMP – Conduct Structural Control Facility Cleaning and Maintenance				
<p>BMP Owner: City of Milwaukie Public Works Department</p> <p>Permit Year: Ongoing</p> <p>Implementation Activities: The City of Milwaukie inspects public structural water quality facilities annually on average. Facility maintenance is conducted every two years.</p>	<p>(1) Track the number of structural facilities inspected and maintained.</p> <p>(2) Track the volume of debris removed during cleaning activities.</p>	<p>2005/2006</p> <p>(1 & 2) The following maintenance/repairs were conducted during permit year 11:</p> <ul style="list-style-type: none"> • 5 detention ponds - removed brush only from perimeter, ponds them selves were ok. • 1 vault - removed 1.2 cubic yards of debris • 1 weir - removed approx 1 yd of debris 	<p>2006/2007</p> <p>(1 & 2) The following maintenance/ repairs were conducted during permit year 12:</p> <ul style="list-style-type: none"> • 1 pond was cleaned, lots of sticks in the bottom of the pond. • 2 vaults were cleaned – 4.5 cubic yards • 1 weir was cleaned- removed approx 1.5 yds. of debris 	<p>2007/2008</p> <p>(1 & 2) The following maintenance/ repairs were conducted during permit year 13:</p> <ul style="list-style-type: none"> • 1 detention pond has been maintained due to wildlife issue, approximately 10 yards of debris have been removed at this time with more to follow (beaver), this problem is being addressed at this time • 2 vaults were cleaned for a total of 1.9 yards of debris. • 1 weir was cleaned for approx 1.0 yard of debris

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
<p>NPDES Permit Requirement – (2) <i>Planning procedures including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal separate storm sewers that receive discharges from areas of new development and significant redevelopment. Such a plan must address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed. Controls to reduce pollutants in discharges from municipal separate storm sewers containing construction site runoff are addressed in paragraph Schedule D(2)(c)(iv).</i></p>				
<p>BMP – Conduct Master Planning for Stormwater Quality Improvement</p>				
<p>BMP Owner: City of Milwaukie Engineering Department</p> <p>Permit Year: Ongoing</p> <p>Implementation Activities: The City of Milwaukie recently conducted Master Planning efforts to identify and prioritize future capital improvement projects for flood control and water quality benefits. The City’s current master plan includes 15 CIPs to be implemented over an approximately 25-year period. Six of these CIPs were identified specifically for water quality purposes.</p>	<p>(1) Track master planning activity (new plans or revisions to older plans).</p> <p>(2) Track the number of CIP projects implemented each year and discuss the added benefit (flood control, water quality, habitat restoration, etc) of each.</p> <p>(3) Map the location and drainage area of CIPs.</p>	<p>2005/2006</p> <p>(1) No master planning activities were conducted during this permit year.</p> <p>(2) The following capital improvement projects were implemented during permit year 11:</p> <ul style="list-style-type: none"> • 42nd Ave. Street Improvements – Project for traffic and pedestrian safety, to reduce localized street flooding, and to reduce the amount of roadside erosion and sediment transport within the Johnson Creek Watershed. • North Main Bio-Swale – Project for onsite retention and infiltration of stormwater from a mixed-use, redevelopment project. <p>(3) The locations of CIPs are currently mapped. The delineation and mapping of drainage areas to CIPs is currently being initiated for implementation during the next permit year.</p>	<p>2006/2007</p> <p>(1) No master planning activities were conducted during this permit year.</p> <p>(2) The following capital improvement projects were completed during permit year 12:</p> <ul style="list-style-type: none"> • 42nd Ave. Street Improvements – Project for traffic and pedestrian safety, to reduce localized street flooding, and to reduce the amount of roadside erosion and sediment transport within the Johnson Creek Watershed. • North Main Bio-Swale – Project for onsite retention and infiltration of storm water from a mixed-use, redevelopment project. <p>(3) The locations of CIPs are currently mapped. The delineation and mapping of drainage areas to CIPs is currently being initiated for implementation during the next permit year.</p>	<p>2007/2008</p> <p>(1) No master planning activities were conducted during this permit year.</p> <p>(2 & 3) No capital improvement projects were completed during permit year 13.</p>

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
BMP – Implement Municipal Development Codes				
<p>BMP Owner: City of Milwaukie Engineering Department</p> <p>Permit Year: Ongoing</p> <p>Implementation Activities: The City of Milwaukie reviews all new and redevelopment plans through the building permit process.</p> <p>The City is currently reviewing various jurisdictions (City of Oregon City, Clackamas County) stormwater design standards in order to add more specific design criteria into the Development Code, as related to stormwater facility design (for both treatment and detention), water quality design storms, and approved facilities for stormwater treatment.</p>	<p>(1) Track the number of development applications reviewed and approved for compliance with the stormwater regulations.</p> <p>(2) Track any code modifications by ordinance.</p>	<p>2005/2006</p> <p>(1) Development applications including drainage reports are routinely reviewed for proper compliance with stormwater regulations. The following number of applications were reviewed during permit year 11:</p> <ul style="list-style-type: none"> • Commercial (New) = 10 • Commercial (Additions) = 7 • Residential (New) = 15 • Residential (Additions) = 32 <p>(2) The City of Milwaukie is developing their stormwater design standards and has obtained scopes of work from consultants to assist in the development of water quality design standards. The City expects to complete this work during the permit year 12.</p>	<p>2006/2007</p> <p>(1) Development applications including drainage reports are routinely reviewed for proper compliance with storm water regulations. The following number of applications were reviewed during permit year 12:</p> <ul style="list-style-type: none"> • Commercial (New) = 1 • Commercial (Additions) = 2 • Residential (New) = 15 • Residential (Additions) = 7 <p>(2) The City of Milwaukie has strengthened its stormwater design standards, including adoption by reference of the City of Portland Storm Water Manual. Revisions will be made on an annual basis or as needed as storm water management is considered to be a continual “work in progress.”</p>	<p>2007/2008</p> <p>(1) Development applications including drainage reports are routinely reviewed for proper compliance with storm water regulations. The following number of applications were reviewed during permit year 13:</p> <ul style="list-style-type: none"> • Commercial (New) = 1 • Commercial (Additions) = 1 • Residential (New) = 6 • Residential (Additions) = 11 <p>(2) The City of Milwaukie has strengthened its stormwater design standards, including adoption by reference of the City of Portland Storm Water Manual. Revisions will be made on an annual basis or as needed as storm water management is considered to be a continual “work in progress.”</p>

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation																																																																																																																																
NPDES Permit Requirement – (3) Practices for operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems, including pollutants discharged as a result of deicing activities.																																																																																																																																		
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<p>BMP Owner: City of Milwaukie Public Works Department</p> <p>Permit Year: Ongoing</p> <p>Implementation Activities: The City of Milwaukie conducts road maintenance and repair activities continuously throughout the year to prevent erosion and excessive transport of sediment and organics into the stormwater system.</p>	<p>(1) Track the number of sweeps per year.</p> <p>(2) Track the number of miles swept per year.</p> <p>(3) Track the volume of debris removed during sweeping activities.</p>	<p>2005/2006</p> <p>(1-3) The following street sweeping activities occurred during permit year 11:</p> <table border="1" data-bbox="831 459 1129 1177"> <thead> <tr> <th>Month</th> <th>Miles</th> <th>Debris (CY)</th> </tr> </thead> <tbody> <tr><td>Jul '05</td><td>310</td><td>45.0</td></tr> <tr><td>Aug '05</td><td>227</td><td>40.5</td></tr> <tr><td>Sep '05</td><td>343</td><td>61.5</td></tr> <tr><td>Oct '05</td><td>363</td><td>104.5</td></tr> <tr><td>Nov '05</td><td>517</td><td>206.0</td></tr> <tr><td>Dec '05</td><td>366</td><td>127.5</td></tr> <tr><td>Jan '06</td><td>370</td><td>62.5</td></tr> <tr><td>Feb '06</td><td>195</td><td>45.5</td></tr> <tr><td>Mar '06</td><td>168</td><td>36.0</td></tr> <tr><td>Apr '06</td><td>278</td><td>65.5</td></tr> <tr><td>May '06</td><td>77</td><td>15.5</td></tr> <tr><td>Jun '06</td><td>142</td><td>28.5</td></tr> <tr><td>Total</td><td>3,356</td><td>838.5</td></tr> </tbody> </table>	Month	Miles	Debris (CY)	Jul '05	310	45.0	Aug '05	227	40.5	Sep '05	343	61.5	Oct '05	363	104.5	Nov '05	517	206.0	Dec '05	366	127.5	Jan '06	370	62.5	Feb '06	195	45.5	Mar '06	168	36.0	Apr '06	278	65.5	May '06	77	15.5	Jun '06	142	28.5	Total	3,356	838.5	<p>2006/2007</p> <p>(1-3) The following street sweeping activities occurred during permit year 12:</p> <table border="1" data-bbox="1241 459 1539 1177"> <thead> <tr> <th>Month</th> <th>Miles</th> <th>Debris (CY)</th> </tr> </thead> <tbody> <tr><td>Jul '06</td><td>396</td><td>59</td></tr> <tr><td>Aug '06</td><td>521</td><td>89</td></tr> <tr><td>Sep '06</td><td>400</td><td>105</td></tr> <tr><td>Oct '06</td><td>512</td><td>176</td></tr> <tr><td>Nov '06</td><td>892</td><td>439</td></tr> <tr><td>Dec '06</td><td>443</td><td>149</td></tr> <tr><td>Jan '07</td><td>509</td><td>169</td></tr> <tr><td>Feb '07</td><td>404</td><td>86</td></tr> <tr><td>Mar '07</td><td>433</td><td>66</td></tr> <tr><td>Apr '07</td><td>242</td><td>61</td></tr> <tr><td>May '07</td><td>363</td><td>51</td></tr> <tr><td>Jun '07</td><td>524</td><td>92</td></tr> <tr><td>Total</td><td>5639</td><td>1542</td></tr> </tbody> </table>	Month	Miles	Debris (CY)	Jul '06	396	59	Aug '06	521	89	Sep '06	400	105	Oct '06	512	176	Nov '06	892	439	Dec '06	443	149	Jan '07	509	169	Feb '07	404	86	Mar '07	433	66	Apr '07	242	61	May '07	363	51	Jun '07	524	92	Total	5639	1542	<p>2007/2008</p> <p>(1-3) The following street sweeping activities occurred during permit year 13:</p> <table border="1" data-bbox="1650 459 1948 1177"> <thead> <tr> <th>Month</th> <th>Miles</th> <th>Debris (CY)</th> </tr> </thead> <tbody> <tr><td>Jul '07</td><td>329</td><td>46.5</td></tr> <tr><td>Aug '07</td><td>518</td><td>79.2</td></tr> <tr><td>Sep '07</td><td>542</td><td>231.4</td></tr> <tr><td>Oct '07</td><td>507</td><td>174.0</td></tr> <tr><td>Nov '07</td><td>751</td><td>508.0</td></tr> <tr><td>Dec '07</td><td>393</td><td>135.5</td></tr> <tr><td>Jan '08</td><td>227</td><td>46.0</td></tr> <tr><td>Feb '08</td><td>397</td><td>76.1</td></tr> <tr><td>Mar '08</td><td>472</td><td>70.6</td></tr> <tr><td>Apr '08</td><td>316</td><td>42.5</td></tr> <tr><td>May '08</td><td>383</td><td>88.0</td></tr> <tr><td>Jun '08</td><td>443</td><td>66.0</td></tr> <tr><td>Total</td><td>5278</td><td>1563.8</td></tr> </tbody> </table>	Month	Miles	Debris (CY)	Jul '07	329	46.5	Aug '07	518	79.2	Sep '07	542	231.4	Oct '07	507	174.0	Nov '07	751	508.0	Dec '07	393	135.5	Jan '08	227	46.0	Feb '08	397	76.1	Mar '08	472	70.6	Apr '08	316	42.5	May '08	383	88.0	Jun '08	443	66.0	Total	5278	1563.8
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BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
NPDES Permit Requirement – (4) Procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies and that existing structural flood control devices have been evaluated to determine if retrofitting the device to provide additional pollutant removal from storm water is feasible.				
See BMP “Conduct Master Planning for Stormwater Quality” under Requirement 2 for applicable BMP and performance measures.				
NPDES Permit Requirement – (5) A program to monitor pollutants in runoff from operating or closed municipal landfills or other treatment, storage or disposal facilities for municipal waste. The description must identify priorities and procedures for inspections and establishing and implementing control measures for such discharges (this program can be coordinated with the program developed under Schedule D (2)(c)(iii)).				
NA				
There are no open or closed landfills or other municipal waste handling facilities within the City of Milwaukie.	NA	2005/2006 NA	2006/2007 NA	2007/2008 NA
NPDES Permit Requirement – (6) A program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides and fertilizer that will include, as appropriate, controls such as educational activities, permits, certifications and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities.				
BMP – Minimize Water Quality Impacts Associated with Landscape Maintenance Practices				
BMP Owner: City of Milwaukie Public Works Department and North Clackamas Parks & Rec Permit Year: Ongoing Implementation Activities: The City of Milwaukie conducts a variety of activities to minimize water quality impacts associated with conducting pest management activities on public properties.	(1) Track any policy and/or procedural changes associated with pest management activities within the City.	2005/2006 (1) There have been no policy or procedural changes regarding pest management activities during permit year 11.	2006/2007 (1) There have been no policy or procedural changes regarding pest management activities during permit year 12.	2007/2008 (1) There have been no policy or procedural changes regarding pest management activities during permit year 13.

TABLE 2-2 - BMPs to Detect and Remove Illicit Discharges and Improper Disposal Into the Storm Sewer System

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
<p>NPDES Permit Requirement – (1) A program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the municipal separate storm sewer system; this program description must address all types of illicit discharges, however the following category of non-storm water discharges or flows must be addressed where such discharges are identified by the municipality as sources of pollutants to waters of the United States: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration, uncontaminated pumped ground water, discharges from potable water sources, start up flushing of groundwater wells, aquifer storage and recovery (ASR) wells, potable groundwater monitoring wells, draining and flushing of municipal potable water storage reservoirs, foundation drains, air conditioning condensation, 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 waters, discharges of treated water from investigation, removal and remedial actions selected or approved by the Department pursuant to Oregon Revised Statute (ORS) Chapter 465, the state’s environmental cleanup law; and discharges or flows from emergency fire fighting activities where discharges or flows from fire fighting are identified as not significant sources of pollutants to the waters of the state.</p> <p>NPDES Permit Requirement – (2) Procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens;</p> <p>NPDES Permit Requirement – (3) Procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water [such procedures may include: sampling procedures for constituents such as e. coli, surfactants (MBAS), residual chlorine, fluorides and potassium; testing with fluorometric dyes; or conducting in storm sewer inspections where safety and other considerations allow.] Such a description must include the location of storm sewers that have been identified for such evaluation.</p>				
<p>BMP – Implement the Illicit Discharge Elimination Program</p>				
<p>BMP Owner: City of Milwaukie Public Works Department</p> <p>Permit Year: Ongoing</p> <p>Implementation Activities: The City of Milwaukie conducts illicit discharge inspections, monitoring, and investigations annually during dry-weather conditions (typically between July and September) on all major outfalls (20) and select minor outfalls (44).</p>	<ol style="list-style-type: none"> (1) Track any updates and modifications to the inspection procedures. (2) Track the number and location of outfalls inspected annually. (3) Summarize inspection results and indicate outfalls requiring monitoring (sampling) and/or investigations. (4) Indicate the outcome and resolution of any investigation activities conducted. 	<p>2005/2006</p> <ol style="list-style-type: none"> (1) There have been no updates or modifications to the illicit discharge inspection procedures during permit year 11. (2-4) 64 outfalls (20 major and 44 minor) were inspected during the dry weather season. None were found to have evidence of cross connections or any waste other than stormwater or groundwater. The outfalls are plotted in GIS. The addresses of the outfalls are included in Appendix A. 	<p>2006/2007</p> <ol style="list-style-type: none"> (1) There have been no updates or modifications to the illicit discharge inspection procedures during permit year 12. (2-4) 68 outfalls (20 major and 48 minor) were inspected during the dry weather season. None were found to have evidence of cross connections or any waste other than storm water or groundwater. The outfalls are plotted in GIS. The addresses of the outfalls are included in Appendix A. 	<p>2007/2008</p> <ol style="list-style-type: none"> (1) There have been no updates or modifications to the illicit discharge inspection procedures during permit year 13. (2-4) 64 outfalls (35 major & 29 minor) are inspected during the dry weather season, however only 51 were completed, due to staffing issues. No evidence of anything other than storm water or groundwater was evident. The outfalls are plotted in GIS. The addresses of the outfalls are included in Appendix A

* Drywell field screening outfalls have been updated to include major outfalls that include 18” and larger diameter pipe

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
BMP – Minimize Water Quality Impacts Related to Water Line Flushing				
<p>BMP Owner: City of Milwaukie Public Works Department</p> <p>Permit Year: Ongoing</p> <p>Implementation Activities: The City of Milwaukie conducts periodic water line flushing throughout the City to ensure the quality of the water system. The City of Milwaukie requires all chlorinated water associated with the flushing of new and existing waterlines to be dechlorinated to a maximum allowable residual chlorine concentration of 0.1 mg/L or less, in accordance with DEQs requirements for discharge.</p>	<p>No performance measures were proposed for reporting for this BMP.</p>	<p>2005/2006 NA</p>	<p>2006/2007 NA</p>	<p>2007/2008 NA</p>

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
NPDES Permit Requirement – (4) Procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer.				
BMP – Implement the Spill Response Program				
<p>BMP Owner: City of Milwaukie Public Works Department and Clackamas County Fire District No. 1 Hazardous Materials Team</p> <p>Permit Year: Ongoing</p> <p>Implementation Activities: The City of Milwaukie Public Works Department responds to non-hazardous spills within the City. For non-hazardous materials (oil and grease, paint, sewage), spills are generally reported by citizens or observed by Public Works staff. Clackamas County Fire District No. 1 Hazardous Materials Team responds to chemical and hazardous waste spills within the City.</p>	<p>(1) Indicate the number of spills responded to by the Public Works Department.</p> <p>(2) Indicate sources, causes, and resulting water quality problems resulting from spill activities.</p>	<p>2005/2006</p> <p>(1 & 2) The City of Milwaukie did not have any large spills in 2005/2006. There were some small spills related to vehicles leaking transmission fluid, brake fluid or hydraulic fluid which none entered the infrastructure or any waterways.</p> <p>Only one spill incident was reported to OERS (incident #2005-3087). This particular leak originated from a dump truck that was working in SE Portland but had driven through Milwaukie to access Interstate 205. The truck discharged hydraulic fluid on route to Interstate 205. However, the sun had dissipated the fluid before it could reach the infrastructure or waterway.</p>	<p>2006/2007</p> <p>(1 & 2) The City of Milwaukie had one large spill and one smaller spill, which were responded to.</p> <p>The small spill came from a dump truck, which broke a fuel line. The driver noticed the fuel leak and turned off the fuel valves. No fuel entered the storm system. Clackamas County Fire District responded to the incident and spread oil absorbent over the fuel to soak it up, then was swept.</p> <p>The large spill came from Americold Logistics. A main compressor failed and gaseous ammonia was leaked into the sewer system. The outfall at Johnson Creek was inspected and there was no apparent damage. Was reported to OARS (incident # 2007-1188).</p>	<p>2007/2008</p> <p>(1 & 2) The City of Milwaukie had 4 small spills and 1 large spill, which were responded to.</p> <ul style="list-style-type: none"> • On 01/29/07 a motor vehicle accident involving a pick-up, which collided with the center median, broke a transmission line near a catch basin. Boom was placed in front of the catch basin to prevent further oil entering the catch basin but some did enter the system, prior to placement. OERS was called and The City was given a response # of 2008-0318. • On 08/31/07 a work van was vandalized. The filler neck tube to the gas tank was cut in order to steal fuel. The fuel made its way into the catch basin and was contained by the sump. A vactor was brought to the site and cleaning of the catch basin and site was conducted. OERS was not contacted due to the fact that the sump had contained the fuel. • On 09/17/07 a City owned sweeper was operating and broke a hydraulic line. No hydraulic fluid entered the storm system. Spill was contained and cleaned up with spill absorbent material. • On 12/03/07 a major sewage spill was released into the Willamette River. Due to excessive rains the WWTP could not contain the flow entering the plant. Wastewater backed up in the system and removed 2 lids that were covering the manhole on the boat dock and near Kellogg Creek near outfall into Willamette. Once rains became normalized the overflow quit and operations became normal. • On 04/21/08 a city Mower was working near SE37th and SE Oak when the side plate transmission gasket failed. Fluid was sprayed on the roadway and the pathway where the unit was working. There was no storm system in the area and absorbent was put down to contain the spill. Transmission was drained prior to moving equipment to City shops for repair.

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
<p>NPDES Permit Requirement – (5) <i>A program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from municipal separate storm sewers</i></p>				
<p>A Description of the City’s Public Reporting Program including performance measures is included in Component #5, Table 2-5.</p>				
<p>NPDES Permit Requirement – (6) <i>Educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials.</i></p>				
<p>A Description of the City’s Public Informational Activities regarding management of hazardous materials including performance measures is included in Component #5, Table 2-5.</p>				
<p>NPDES Permit Requirement – (7) <i>Controls to limit infiltration of seepage from municipal sanitary sewers to municipal separate storm sewer systems where necessary</i></p>				
<p>BMP – Control Infiltration and Cross Connections to the Stormwater Conveyance System</p>				
<p>BMP Owner: City of Milwaukie Public Works and Engineering Departments</p> <p>Permit Year: Ongoing</p> <p>Implementation Activities: The City of Milwaukie implements an inflow and infiltration (I&I) abatement program for the sanitary sewer system.</p> <p>The City’s Engineering Department reviews new and redevelopment plans for possible cross-connections, and if cross connections are discovered, they are eliminated. The City’s illicit discharge program also works to control and prevent any cross-connections during their outfall inspections and dry-weather field screening activities.</p>	<p>(1) Indicate whether any cross-connections were discovered during illicit discharge investigations, and describe follow-up activities.</p>	<p>2005/2006</p> <p>(1) Per results of the illicit discharge inspections, no cross connections were observed.</p>	<p>2006/2007</p> <p>(1) Per results of the illicit discharge inspections, no cross connections were observed.</p>	<p>2007/2008</p> <p>(1) Per results of the illicit discharge inspections, no cross connections were observed.</p>

TABLE 2-3 - A Program to Monitor and Control Pollutants from Industrial Facilities

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
<p>NPDES Permit Requirement – (1) Identify priorities and procedures for inspections and establishing and implementing control measures for such discharges.</p>				
<p>NPDES Permit Requirement – (2) Describe a monitoring program for storm water discharges associated with the industrial facilities identified in Schedule D(2)(c)(iii), to be implemented during the term of the permit, including, at a minimum, the submission of quantitative data on the pollutant parameters included in the Department's NPDES 1200-Z industrial general stormwater permit.</p>				
<p>BMP – Conduct Industrial Inspections and Enforcement</p>				
<p>BMP Owner: City of Milwaukie Public Works Department Permit Year: Ongoing Implementation Activities: The City of Milwaukie will update and maintain an inventory of all industrial facilities in the permit area that are covered by a 1200-Z permit. Onsite industrial inspections occur annually at selected facilities discharging directly to the City's municipal storm-water system through the City's Pretreatment Program (via an IGA with Clackamas County Service District No 1), and through the City's illicit discharge program. The City may potentially conduct periodic inspections of other high priority facilities not previously inspected under the other above-mentioned programs if specific concerns arise or are reported through citizen complaints.</p>	<p>(1) Track the number of permitted (1200-Z) industrial facilities within the City. (2) Note any water quality concerns identified during the review of 1200-Z monitoring data. (continued on next page)</p>	<p>2005/2006</p> <p>(1) The City of Milwaukie queried the active 1200-Z permits within the city limits from DEQs website. There are currently 5 active 1200-Z permits within the City's MS4 permit boundary.</p> <p>(2) The City of Milwaukie requested and received the submitted 1200-Z monitoring data from DEQ for the active 1200-Z permits within the city limits.</p> <p>Per submitted monitoring data for permit year 11, it appears that no data was submitted for two of the permits (although one permit is relatively new). One permit has a sampling waiver in place. Monitoring data was found for the remaining two permits, and each did not appear to exceed benchmarks during any of the monitored events.</p>	<p>2006/2007</p> <p>(1) The City of Milwaukie queried the active 1200-Z permits within the city limits from DEQs website. There are currently 5 active 1200-Z permits within the City's MS4 permit boundary.</p> <p>(2) Monitoring data has been backlogged until mid November.</p> <p>DEQ referred the City to see DEQ NW Region Program for further information.</p>	<p>2007/2008</p> <p>(1) The City of Milwaukie queried the active 1200-Z permits within the city limits from DEQ's website. There are currently 5 active 1200-Z permits within the City's MS4 permit boundary.</p> <p>(2) Monitoring data has been backlogged until mid November.</p> <p>DEQ referred the City to see DEQ NW Region Program for further information.</p>

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
BMP – Conduct Industrial Inspections and Enforcement (continued)				
	<p>(3) Track the number of industrial inspections conducted.</p> <p>(4) Report status and abatement measures required for any industry found to be inappropriately discharging to the municipal stormwater system.</p>	<p>2005/2006 (continued)</p> <p>(3 & 4) During permit year 11, no specific industrial inspections were initiated.</p> <p>However, while conducting storm system maintenance, an unauthorized vehicle wash area was observed at a nearby facility. City maintenance staff notified the owners that wash water could potentially enter the storm system, which would not be permissible, and the wash area was removed.</p>	<p>2006/2007 (continued)</p> <p>(3) During permit year 12, the City conducted 4 inspections of 1200-Z permit holders ensuring all were in compliance of 1200-Z storm water permit.</p> <p>(4) All 1200-Z permit holders were found to be in compliance of all regulations.</p>	<p>2007/2008 (continued)</p> <p>(3) During permit year 13, the City conducted 5 inspections of 1200-Z permit holders ensuring all were in compliance of 1200-Z storm water permit.</p> <p>(4) 1200-Z permit holders were found to be in compliance. One of the permit holders was not in compliance at the time; protection of a catch basin was needed at a loading dock. Second inspection on this company revealed that the company had come into compliance after the initial inspection.</p>

TABLE 2-4 - A Program to Reduce Pollutants in Stormwater Discharges from Construction Sites

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
<p>NPDES Permit Requirement – (1) Procedures for site planning which incorporate consideration of potential water quality impacts. NPDES Permit Requirement – (2) Requirements for nonstructural and structural best management practices.</p>				
<p>BMP – Implement Erosion Control for New and Redevelopment</p>				
<p>BMP Owner: City of Milwaukie Public Works and Engineering Departments Permit Year: Ongoing Implementation Activities: The City of Milwaukie reviews all site plans for new and redevelopment for compliance with the City’s Erosion Control Standards, which define requirements for erosion control plans including the implementation of structural and non-structural BMPs. The City recommends the use of the Clackamas County “Erosion Prevention and Sediment Control Planning and Design Manual (2000)” in preparing the erosion control plans.</p>	<p>(1) Report any updates or modifications to the “Erosion Prevention and Sediment Control Planning and Design Manual (2000)”.</p> <p>(2) Record the number of erosion control plan reviews completed.</p>	<p>2005/2006</p> <p>(1) There have been no updates to the “Erosion Prevention and Sediment Control Planning and Design Manual” during permit year 11. An updated edition is expected to be released during 2007.</p> <p>(2) During permit year 11, there were 47 erosion control plan reviews completed.</p>	<p>2006/2007</p> <p>(1) There have been no updates to the “Erosion Prevention and Sediment Control Planning and Design Manual” during permit year 12. An updated edition is still in review and has not been released to date.</p> <p>(2) During permit year 12, there were 45 erosion control plan reviews completed.</p>	<p>2007/2008</p> <p>(1) There have been no updates to the “Erosion Prevention and Sediment Control Planning and Design Manual” during permit year 13. An updated edition is still in review and has not been released to date. Finalization of this document is expected this upcoming permit period.</p> <p>(2) During permit year at 13, there were 46 erosion control plan reviews completed.</p>

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
NPDES Permit Requirement – (3) <i>Procedures for identifying priorities for inspecting sites and enforcing control measures that considers the nature of the construction activity, topography, and the characteristics of soils and receiving water quality.</i>				
BMP – Conduct Erosion Control Inspections				
BMP Owner: City of Milwaukie Public Works Department Permit Year: Ongoing Implementation Activities: The City of Milwaukie’s Stormwater Specialist initially inspects all new and redevelopment sites for proper implementation of erosion control measures.	(1) Record the number of erosion control inspections conducted annually. (2) Report the number of notices of non-compliance issued during inspections and the number of stop work orders issued annually.	2005/2006 (1) There were 73 erosion control inspections conducted during permit year 11. (2) There were 30 non-compliance notices issued during permit year 11.	2006/2007 (1) There were 107 erosion control inspections conducted during permit year 12. (2) There were 56 non-compliance notices issued during permit year 12.	2007/2008 (1) There were 82 erosion control inspections conducted during permit year 13. (2) There were 47 non-compliance notices issued during permit year 13.
NPDES Permit Requirement – (4) <i>Appropriate educational and training measures for construction site operators.</i>				
BMP – A Description of the City’s Educational Program for Construction Site Operators is included in Component #5, Table 2-5				

TABLE 2-5 – Public Education, Coordination, and Public Involvement

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
<p>NPDES Permit Requirement, Component 1 – (1) A program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides and fertilizer that will include, as appropriate, controls such as educational activities, permits, certifications and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities.</p> <p>NPDES Permit Requirement, Component 2 – (2) A program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from municipal separate storm sewers.</p> <p>NPDES Permit Requirement, Component 3 – (3) Educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials.</p>				
<p>BMP – Provide Public Education and Outreach Materials regarding Storm water Management</p>				
<p>BMP Owner: City of Milwaukie Public Works Department</p> <p>Permit Year: Ongoing</p> <p>Implementation Activities: The City of Milwaukie continues to implement a number of public education and public awareness activities aimed at reducing the discharge of pollutants associated with a variety of activities including but not limited to:</p> <ul style="list-style-type: none"> • The application of pesticides, herbicides and fertilizers by citizens. • Illicit discharges and dumping of waste materials into the storm drainage system. • Disposal of waste oil and toxic materials. 	<p>(1) Track the number, types, and topics of public educational materials dispersed to the public.</p> <p>(continued on next page)</p>	<p>2005/2006</p> <p>(1) Stormwater-related public educational materials are made available to the public at various City locations including the public library, city hall, and public works. For permit year 12, the City will track the number of material orders placed to gage the level of distribution.</p>	<p>2006/2007</p> <p>(1) Stormwater-related public educational materials are made available to the public at various City locations including the public library, city hall, and public works. For permit year 12, the City will track the number of material orders placed to gage the level of distribution.</p> <p>Through an advertising campaign linked with Milwaukie High School public awareness of the Fish Lid project was brought to the attention of Milwaukie High School. The storm systems “Drains to Stream” fish lid was focused upon.</p>	<p>2007/2008</p> <p>(1) Stormwater-related public educational materials are made available to the public at various City locations including the public library, city hall, and public works. For permit year 13, the City will track the number of material orders placed to gage the level of distribution.</p> <p>Through an advertising campaign linked with Milwaukie High School public awareness of the Fish Lid project was brought to the attention of Milwaukie High School. The storm systems “Drains to Stream” fish lid was focused upon. Other public awareness programs that have been implemented throughout the year include “Leaf Drop” and “Milwaukie Clean-Up Days.” These programs promote healthy streams by keeping leaves out of the drains and garbage from being dumped illegally.</p>

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
BMP – Provide Public Education and Outreach Materials regarding Storm water Management (continued)				
	<p>(2) Indicate any large-scale public educational campaigns.</p> <p>(3) Track coordinated public outreach activities with local co-permittees.</p> <p>(4) Record the number of catch basins stenciled in a given year.</p> <p>(5) Record the number of storm manhole lids that have been retrofit annually.</p>	<p>2005/2006 (continued)</p> <p>(2 & 3) The City of Milwaukie is actively partnered with a number of other jurisdictions to form the Regional Coalition for Clean Rivers and Streams, in order to develop regional advertising campaigns to promote healthy streams.</p> <p>In addition, during permit year 11, the City of Milwaukie conducted its first annual “Leaf Drop” program. This program allowed citizens to dispose of their leaves at a central location for no disposal fee. This program encouraged citizens to maintain and clean their lawns, thus minimizing the amount of debris entering the storm system and reducing the risk of flooding due to debris clogging catch basins.</p> <p>(4) Approximately 1600 catch basins have been stenciled to date.</p> <p>(5) During permit year 11, 95 storm manhole lids have been retrofit with “Dump no Waste to Streams” lids.</p>	<p>2006/2007 (continued)</p> <p>(2 & 3) The City of Milwaukie is actively partnered with a number of other jurisdictions to form the Regional Coalition for Clean Rivers and Streams, in order to develop regional advertising campaigns to promote healthy streams.</p> <p>In addition, during permit year 12, the City of Milwaukie conducted its 2nd annual “Leaf Drop” program. This program allowed citizens to dispose of their leaves at a central location for no disposal fee. This program encouraged citizens to maintain and clean their lawns, thus minimizing the amount of debris entering the storm system and reducing the risk of flooding due to debris clogging catch basins.</p> <p>(4) Approximately 1600 catch basins have been stenciled to date.</p> <p>(5) During permit year 12, 68 storm manhole lids have been retrofit with “Dump no Waste to Streams” lids.</p>	<p>2007/2008 (continued)</p> <p>(2 & 3) The City of Milwaukie is actively partnered with a number of other jurisdictions to form the Regional Coalition for Clean Rivers and Streams, in order to develop regional advertising campaigns to promote healthy streams.</p> <p>In addition, during permit year 13, the City of Milwaukie, conducted its 3rd annual “Leaf Drop”.</p> <p>(4) Approximately 14 catch basins have been marked “Dump no waste drains to stream” with fish logo, by use of a product called a “burn down”. Burn downs, are used in high traffic areas because there is minimal wear and tear on them.</p> <p>721 catch basins were stenciled “Dump no waste drains to stream” with a bright blue background with white lettering.</p> <p>(5) During permit year 13, 67 storm manhole lids have been retrofit with “Dump no Waste to Streams” lids.</p>

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
BMP – Conduct Staff Training in Spill Response				
<p>BMP Owner: City of Milwaukie Public Works Department</p> <p>Permit Year: Ongoing</p> <p>Implementation Activities: The City of Milwaukie provides training to City staff that initially respond to non-hazardous spills. Training is generally conducted at least once per year, in combination with City safety meetings, and new employees are trained at hire. Employees are educated on proper spill reporting and documentation, clean-up procedures and devices, and additional spill response contacts.</p>	<p>(1) Indicate the number of spill response training opportunities offered annually.</p>	<p>2005/2006</p> <p>(1) The City is currently in the process of formalizing and scheduling staff training related to spill response. A summary of the training activities will be included in the annual report for permit year 12.</p>	<p>2006/2007</p> <p>(1) The City is currently active with the Spill Committee (which is hosted by the Bureau of Environmental Services) on a monthly basis.</p>	<p>2007/2008</p> <p>(1) The City currently has trained its employees in proper spill response training.</p> <p>City employees were trained in both who to call in the event of an emergency spill, and what materials to use to protect catch basins.</p> <p>(2) All trucks were equipped with spill response kits and select vehicle were equipped with spill absorbent.</p>

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
NPDES Permit Requirement, Component 4 – (4) <i>Appropriate educational and training measures for construction site operators.</i>				
BMP – Provide Educational Information to Construction Site Operators				
<p>BMP Owner: City of Milwaukie Public Works Department</p> <p>Permit Year: Ongoing</p> <p>Implementation Activities: The City of Milwaukie makes available their technical guidance manual, the <i>Clackamas County Erosion Prevention and Sediment Control Planning and Design Manual</i> (revised Dec. 2000) to engineers, contractors, and the general public. The City of Milwaukie continues to partner with Clackamas County Water Environment Services (WES), the City of Oregon City, and the Homebuilders Association of Portland to provide the Erosion Control Certification program, which includes a four-hour course in erosion control fundamentals and biannual refresher courses for contractors.</p>	<p>(1) Track the number of contractors receiving a discount on erosion control permit fees.</p>	<p>2005/2006</p> <p>(1) During permit year 11, no contractors applied for this discount.</p>	<p>2006/2007</p> <p>(1) During permit year 12, 2 contractors applied for this discount.</p>	<p>2007/2008</p> <p>(1) During permit year 13, no contractors applied for this discount.</p> <p>(2) Currently the City of Milwaukie and other jurisdictions are involved in revamping the Regional Erosion Prevention Awards Program (REPA), this program includes erosion control training, as well as incentives to practice proper erosion control at the job site.</p>

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
Additional Coordination Efforts				
BMP – Participate in Intergovernmental Coordination Efforts				
<p>BMP Owner: City of Milwaukie Public Works Department</p> <p>Permit Year: Ongoing</p> <p>Implementation Activities: The City of Milwaukie will continue to meet periodically to coordinate with other Clackamas County co-permittees regarding regional water quality efforts. Areas for coordination include monitoring, public education, and BMP effectiveness studies. The City of Milwaukie also participates with a variety of federal, state, and local agencies and groups involved with a broad range of water quality issues including stormwater.</p>	<p>(1) Indicate groups, committees, and organizations with which the City is currently participating.</p>	<p>2005/2006</p> <p>(1) The City of Milwaukie is currently involved with the following groups and organizations:</p> <ul style="list-style-type: none"> • Clackamas County NPDES Co-permittees • Johnson Creek Watershed Council • Oregon Association of Clean Water Agencies • Johnson Creek Interjurisdictional Committee • American Public Works Association • ACWA Storm Water Spill Committee 	<p>2006/2007</p> <p>(1) The City of Milwaukie is currently involved with the following groups and organizations:</p> <ul style="list-style-type: none"> • Clackamas County NPDES Co-permittees • Johnson Creek Watershed Council • Oregon Association of Clean Water Agencies • Johnson Creek Interjurisdictional Committee • American Public Works Association • ACWA Storm Water Spill Committee 	<p>2007/2008</p> <p>(1) The City of Milwaukie is currently involved with the following groups and organizations:</p> <ul style="list-style-type: none"> • Clackamas County NPDES Co-permittees • Johnson Creek Watershed Council • Oregon Association of Clean Water Agencies • Johnson Creek Interjurisdictional Committee • American Public Works Association • ACWA Storm Water Spill Committee • Regional Erosion Prevention Awards

3.0 Additional Annual Report Requirements

3.1. Summary of Expenditures

The following summary outlines total storm water expenditures for permit year 12 (2006-2007) and projected expenditures for permit year 13 (2007-2008).

2006/2007

Personnel Services / 3.85 FTEs	337,376.00
Materials and Services	698,442.00
Capital Outlay	15,000.00
Transfers	578,189.00
<u>Contingency</u>	<u>86,316.00</u>

Total 1,715,323.00

2007/2008

Personnel Services / 3.85 FTEs	347,530.00
Materials and Services	668,873.00
Capital Outlay	10,000.00
Transfers	486,040.00
<u>Contingency</u>	<u>97,714.00</u>

Total 1,610,157.00*

* These numbers are estimated, not audited

3.2. Demonstration of Continued Legal Authority

The City of Milwaukie maintains authority over stormwater per the City of Milwaukie Municipal Code (MMC). Below is an excerpt from the MMC:

Chapter 13.14 STORMWATER MANAGEMENT

13.14.010 Purpose.

The city finds and declares that absent effective maintenance, operation, regulation and control, existing storm water drainage conditions in all drainage basins and subbasins within the city constitute a potential hazard to the health, safety and general welfare of the city. The city council further finds that natural and man-made storm water facilities and conveyances together constitute a storm water system and that the effective regulation and control of storm water can best be accomplished through formation, by the city, of a storm water utility. (Ord. 1755 § 6 (part), 1994)

The City of Milwaukie is currently updating its Storm water and Erosion Control standards to provide better guidance to staff and developers concerning BMPs for storm water management.

3.3. Overview of planning, land use changes and development activities within the UGB

The City of Milwaukie has identified and mapped Water Quality Resource Areas, including wetlands and wetland buffers, for consideration when development is proposed.

The City of Milwaukie is revitalizing its downtown area to include higher density, mixed use development. Capital and Public Improvement Projects are reviewed by Planning and Engineering staff to ensure that BMPs are employed to ensure post-development runoff is treated on-site to the maximum extent practicable through the use of natural infiltration, detention, and drywells for residential roof runoff. Erosion control permits are issued and enforced for projects where the potential for erosion exists.

Current development activities mainly involve in-fill and redevelopment of existing properties ranging from single-family homes to larger commercial developments. The next large Public Improvement Project, the Milwaukie Town Center, involves the redevelopment of a full downtown City block. The Town Center design team has been directed to incorporate storm water management early in the process instead of as an afterthought. Eco-roofs and rain gardens are being planned to attenuate and treat storm water. Sidewalk planter strips will be designed as rain gardens to treat street runoff wherever practicable, using the existing piped system to handle overflow.

Smaller redevelopment projects hold promise for greener, on-site storm water management. Rain gardens are becoming a preferred alternative to new pipe systems, and a means to pre-treat runoff that flows to existing catch basins. The City's Storm water Engineer is involved in weekly development review meetings to provide guidance. The City has adopted by reference rain garden and green street standards of the City of Portland Bureau of Environmental Services.

Capital Improvement Projects are being designed with green storm water practices in mind. The Logus Road Sidewalk Project will include several BMPs including pretreatment for existing drywells, pervious pavement, and rain gardens. A piped system that moves water offsite is not being considered.

The City of Milwaukie lies entirely within the UGB and any City expansion will not encroach upon the UGB due to the City being surrounded by other jurisdictions within the UGB. Any annexations will include properties already within the UGB. Recent annexation efforts have focused on properties that lie within or near the Johnson Creek floodplain, especially those properties that have on-site sewage disposal systems. City code requires hookup to public sewer upon annexation. An audit of City utility records in 2006 identified fifteen properties not connected to the City sanitary sewer, a violation of the Milwaukie Municipal Code. As of report year 2007/2008 all properties are have been connected to City sewers except for one which is being moved to City of Milwaukie's Code Compliance Agency, if not connected by Nov 1, 2008. This is a violation of City of Milwaukie Municipal Code.

4.0 Environmental Monitoring

4.1. Summary of Comprehensive Clackamas County Monitoring Plan

As part of the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit requirement, the City of Milwaukie, along with Clackamas County and its other co-permittees, are required to develop and implement a stormwater monitoring program. Specific stormwater monitoring requirements and objectives are defined in Schedule B of the Clackamas County NPDES MS4 permit (number 101348).

The NPDES stormwater monitoring program requires two components. The first component is program monitoring, which involves the tracking and assessment of programmatic activities, as described in the individual permittees Stormwater Management Plans (SWMP), through the use of performance indicators or metrics (see Section 2.0 of the City of Milwaukie's annual report). The second component is environmental monitoring which includes the actual collection and analysis of samples.

Given the magnitude of effort associated with implementing an effective environmental monitoring program that adequately meets all permit requirements and objectives, Clackamas County (i.e., CCSD#1 and SWMACC) and six of its co-permittees including the City of Milwaukie agreed to consolidate efforts and prepare one comprehensive stormwater monitoring plan. This plan was prepared for submittal with the November 1, 2006 NPDES Permit Annual Compliance Reports and is attached with this document. Based on approval from DEQ, the planned is intended for implementation beginning July 1, 2007.

4.2. Summary of Environmental Monitoring Data Collected

Until implementation of the Comprehensive Clackamas County Stormwater Monitoring Plan, the City of Milwaukie continued to conduct independent environmental monitoring activities consistent with previous years efforts. The City of Milwaukie currently monitors two locations: one instream location at Minthorn Springs Creek at Harmony Road, prior to discharge in Kellogg Creek, and one outfall location at the Brookside outfall, prior to discharge in Johnson Creek. Samples are collected quarterly at each site. Results of the monitoring effort are summarized on the next page.

TABLE 4-1 Enviromental Monitoring Results-- Minthorn Springs at Harmony Road						
ML 65015 C & ML 65015 G					Limits	
Sample Date	8/28/2007	9/30/2007	12/3/2007	3/28/2008	S>E	Else
	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
COLILERT	>2419	1633	1733	892	460 Col/100ml	460 Col/100ml
HARDNESS	398	28	56	38	none	none
NITRATE-NITRITE	0.14	0.25	0.79	0.36	none	none
ORTHOPHOSPHATE	0.12	0.13	0.11	0.02	none	none
TOTAL PHOSPHATE	0.15	0.11	0.14	..13	Tualitin: .07	Tualitin: .07
COPPER	0.0035	0.0059	0.0039	0.058	0.018	0.018
LEAD	0.00219	0.00217	0.00136	0.0493	.082*	.082*
ZINC	0.0013	0.00309	0.00222	.0414	.12*	.12*
TSS	17	14	15	62	?	?
AMMONIA	0.08	0.09	0.05	0.005	?	?
Field Test						
Temperature	20.5c	13.6c	12.5	7.1c	12.8	17.8
pH	7.7	7.25	6.57	7.56	6.5-8.5	6.5-8.5
DO-mg/l	7.06	7.64	2.8	7.71	11	8
Conductivity	1416mS	48mS	80mS	51mS	?	?

S>E=To to period between spawning to emergence of fry.

N.M.= No measurable amount

Else= Time period other than S>E

? = Parameters not set at this time

* = Hardness Dependant

TABLE 4-2 Environmental Monitoring Results-- Roswell Outfall					
ML 23003 C				Limits	
Sample Date	9/30/2007	12/3/2007	003/28/2008	S>E	Else
	mg/l	mg/l	mg/l	mg/l	mg/l
COLILERT	2599	770	416	460 Col/100ml	460 Col/100ml
HARDNESS	35	9	27	none	none
NITRATE-NITRITE	0.2	0.13	0.21	none	none
ORTHOPHOSPHATE	0.08	0.04	0.02	none	none
TOTAL PHOSPHATE	0.16	0.09	0.06	Tualitin: .07	Tualitin: .07
COPPER	0.006	0.0039	0.0048	0.018	0.018
LEAD	0.00224	0.00136	0.00197	.082*	.082*
ZINC	0.0315	0.0222	0.0277	.12*	.12*
TSS	12	3	5	?	?
AMMONIA	<.05	<.05	<.05	?	?
Field Test					
Temperature	14.9	12.3c	7.6c	12.8	17.8
pH	7.42	7.45	7.43	6.5-8.5	6.5-8.5
DO-mg/l	7.93	7.8	10.6	11	8
Conductivity	34	17.5mS	49mS		

S>E=To to period between spawning to emergence of fry.

N.M.= No measurable amount

Else= Time period other than S>E

? = Parameters not set at this time

* = Hardness Dependant

4.3. Overview of planning, land use changes and development activities within the UGB

The City of Milwaukie has identified and mapped Water Quality Resource Areas, including wetlands and wetland buffers, for consideration when development is proposed.

The City of Milwaukie is revitalizing its downtown area to include higher density, mixed use development. Capital and Public Improvement Projects are reviewed by Planning and Engineering staff to ensure that post-development runoff is treated on-site to the maximum extent practicable through the use of natural infiltration, detention, and drywells for residential roof runoff. Erosion control permits are issued and enforced for projects where the potential for erosion exists.

Current development activities mainly involve in-fill and redevelopment of existing properties ranging from single-family homes to larger commercial developments. Anticipated development in the downtown area involves the redevelopment of full downtown City blocks. The designs will incorporate storm water management early in the process instead of as an afterthought. Elements such as ecoroofs and rain gardens are being planned to attenuate and treat storm water. Sidewalk planter strips will be designed as rain gardens to treat street runoff wherever practicable, using the existing piped system to handle overflow.

Smaller redevelopment projects hold promise for greener, on-site storm water management. Rain gardens are becoming a preferred alternative to new pipe systems, and a means to pre-treat runoff that flows to existing catch basins. The City has adopted by reference rain garden and green street standards of the City of Portland Bureau of Environmental Services.

Capital Improvement Projects are being designed with green storm water practices in mind. The Logus Road Sidewalk Project will include several BMPs including pretreatment for existing drywells, pervious concrete sidewalks, and rain gardens. A piped system that moves water offsite is not being considered.

The City of Milwaukie lies entirely within the UGB. City expansion is planned for certain areas within the UGB but currently unincorporated. The City is currently evaluating the potential annexation of a developed area within or near the Johnson Creek floodplain (up to 350 acres) that is currently under the authority of Clackamas County in order to provide sanitary sewer service.

An audit of City utility records in 2006 identified fifteen properties not connected to the City sanitary sewer, a violation of the Milwaukie Municipal Code. As of report year 2007/2008 all properties have been connected to City sewers except for one, which is being moved to City of Milwaukie's Code Compliance Agency, if not connected by Nov 1, 2008. This is a violation of City of Milwaukie Municipal Code.

TABLE 4-3

USGS 14211550 Johnson Creek at Milwaukie, OR

Location: Lat 45 degrees 27'11", Long 122 Degrees 38' 31", in NE ¼ SE ¼ SEC. 26, T. 1 S., R 1 E.
 Clackamas County, Hydrologic Unit 17090012, on the right bank upstream side of the Milport Rd. Bridge,
 In the city limits of Milwaukie, at mile 0.7

Date	Discharge, cfs (Mean)	Gage height, feet (Mean)	Temperature, water, deg C (Maximum)	Temperature, water, deg C (Minimum)	Temperature, water, deg C (Mean)	Turbidity, IR LED light, det ang 90 deg, FNU (Maximum)	Turbidity, IR LED light, det ang 90 deg, FNU (Minimum)	Turbidity, IR LED light, det ang 90 deg, FNU (Median)
07/01/2007	22 ^A	24.13 ^A	20.6 ^A	16.2 ^A	18.4 ^A	4.1 ^P	2.7 ^P	3.3 ^P
07/02/2007	20 ^A	24.10 ^A	21.7 ^A	16.7 ^A	19.1 ^A	7.1 ^P	2.8 ^P	3.2 ^P
07/03/2007	19 ^A	24.09 ^A	22.7 ^A	17.6 ^A	20.1 ^A	4.8 ^P	2.9 ^P	3.5 ^P
07/04/2007	19 ^A	24.08 ^A	23.6 ^A	18.2 ^A	20.9 ^A	6.8 ^P	3.3 ^P	4.1 ^P
07/05/2007	19 ^A	24.08 ^A	23.6 ^A	18.6 ^A	21.1 ^A	10.0 ^P	3.2 ^P	3.9 ^P
07/06/2007	18 ^A	24.07 ^A	22.7 ^A	17.9 ^A	20.3 ^A	5.1 ^P	2.9 ^P	3.5 ^P
07/07/2007	18 ^A	24.07 ^A	22.0 ^A	17.4 ^A	19.6 ^A	5.0 ^P	2.9 ^P	3.6 ^P
07/08/2007	18 ^A	24.07 ^A	21.9 ^A	16.9 ^A	19.4 ^A	4.8 ^P	2.6 ^P	3.5 ^P
07/09/2007	18 ^A	24.07 ^A	22.6 ^A	17.6 ^A	19.9 ^A	5.5 ^P	2.7 ^P	3.5 ^P
07/10/2007	17 ^A	24.05 ^A	24.2 ^A	18.4 ^A	21.2 ^A	5.8 ^P	2.9 ^P	3.6 ^P
07/11/2007	18 ^A	24.06 ^A	23.7 ^A	19.7 ^A	21.5 ^A	5.9 ^P	3.2 ^P	3.6 ^P
07/12/2007	18 ^A	24.07 ^A	23.6 ^A	19.1 ^A	21.3 ^A	19.6 ^P	3.2 ^P	4.2 ^P
07/13/2007	19 ^A	24.08 ^A	23.4 ^A	18.9 ^A	21.2 ^A			
07/14/2007	18 ^A	24.07 ^A	23.5 ^A	19.0 ^A	21.2 ^A			
07/15/2007	18 ^A	24.07 ^A	21.8 ^A	19.1 ^A	20.5 ^A			
07/16/2007	18 ^A	24.07 ^A	21.1 ^A	18.2 ^A	19.6 ^A			
07/17/2007	20 ^A	24.09 ^A	19.5 ^A	18.0 ^A	18.6 ^A			
07/18/2007	27 ^A	24.19 ^A	18.7 ^A	17.4 ^A	18.0 ^A			
07/19/2007	33 ^A	24.26 ^A	19.9 ^A	17.2 ^A	18.5 ^A	57.5 ^P	4.5 ^P	6.2 ^P
07/20/2007	26 ^A	24.18 ^A	18.8 ^A	17.4 ^A	17.9 ^A	6.3 ^P	3.5 ^P	4.3 ^P
07/21/2007	22 ^A	24.13 ^A	18.6 ^A	16.8 ^A	17.6 ^A	7.1 ^P	2.8 ^P	3.5 ^P
07/22/2007	22 ^A	24.12 ^A	21.3 ^A	17.3 ^A	19.0 ^A	5.5 ^P	2.9 ^P	3.4 ^P
07/23/2007	21 ^A	24.11 ^A	20.1 ^A	18.4 ^A	19.2 ^A	8.6 ^P	3.0 ^P	3.5 ^P
07/24/2007	20 ^A	24.10 ^A	20.6 ^A	16.4 ^A	18.4 ^A	9.8 ^P	3.0 ^P	3.6 ^P
07/25/2007	20 ^A	24.09 ^A	21.5 ^A	16.7 ^A	19.0 ^A	5.4 ^P	2.9 ^P	3.5 ^P
07/26/2007	19 ^A	24.08 ^A	20.2 ^A	17.4 ^A	18.7 ^A	8.2 ^P	2.6 ^P	3.2 ^P
07/27/2007	19 ^A	24.08 ^A	21.7 ^A	16.6 ^A	19.1 ^A	4.5 ^P	2.9 ^P	3.5 ^P
07/28/2007	19 ^A	24.08 ^A	20.1 ^A	17.8 ^A	18.9 ^A	5.0 ^P	2.9 ^P	3.7 ^P
07/29/2007	19 ^A	24.08 ^A	19.0 ^A	17.5 ^A	18.1 ^A	5.0 ^P	2.9 ^P	3.6 ^P

Date	Discharge, cfs (Mean)	Gage height, feet (Mean)	Temperature, water, deg C (Maximum)	Temperature, water, deg C (Minimum)	Temperature, water, deg C (Mean)	Turbidity, IR LED light, det ang 90 deg, FNU (Maximum)	Turbidity, IR LED light, det ang 90 deg, FNU (Minimum)	Turbidity, IR LED light, det ang 90 deg, FNU (Median)
07/30/2007	19 ^A	24.08 ^A	20.4 ^A	15.8 ^A	18.1 ^A	7.3 ^P	3.4 ^P	3.9 ^P
07/31/2007	19 ^A	24.08 ^A	21.2 ^A	16.3 ^A	18.6 ^A	8.5 ^P	3.4 ^P	4.2 ^P
08/01/2007	18 ^A	24.07 ^A	22.0 ^A	16.7 ^A	19.2 ^A	5.6 ^P	3.5 ^P	4.2 ^P
08/02/2007	18 ^A	24.07 ^A	22.7 ^A	17.7 ^A	20.0 ^A	6.3 ^P	3.5 ^P	4.2 ^P
08/03/2007	18 ^A	24.07 ^A	20.8 ^A	17.9 ^A	19.2 ^A	7.6 ^P	3.5 ^P	4.2 ^P
08/04/2007	19 ^A	24.07 ^A	20.6 ^A	16.7 ^A	18.4 ^A	5.3 ^P	3.1 ^P	4.1 ^P
08/05/2007	19 ^A	24.08 ^A	18.7 ^A	16.6 ^A	17.6 ^A	5.0 ^P	3.1 ^P	3.9 ^P
08/06/2007	18 ^A	24.07 ^A	18.1 ^A	16.5 ^A	17.3 ^A	4.9 ^P	3.1 ^P	3.8 ^P
08/07/2007	18 ^A	24.06 ^A	17.6 ^A	16.1 ^A	16.9 ^A	5.3 ^P	3.3 ^P	3.8 ^P
08/08/2007	18 ^A	24.07 ^A	19.5 ^A	16.1 ^A	17.5 ^A	6.2 ^P	3.0 ^P	3.9 ^P
08/09/2007	19 ^A	24.07 ^A	19.8 ^A	16.1 ^A	17.7 ^A	4.7 ^P	3.2 ^P	3.9 ^P
08/10/2007	19 ^A	24.08 ^A	19.8 ^A	15.9 ^A	17.7 ^A	5.4 ^P	3.3 ^P	4.0 ^P
08/11/2007	19 ^A	24.08 ^A	20.6 ^A	15.6 ^A	18.0 ^A	6.4 ^P	3.0 ^P	3.9 ^P
08/12/2007	18 ^A	24.07 ^A	18.1 ^A	16.1 ^A	17.1 ^A	5.0 ^P	3.1 ^P	4.0 ^P
08/13/2007	18 ^A	24.07 ^A	20.1 ^A	15.5 ^A	17.6 ^A	6.4 ^P	3.2 ^P	4.3 ^P
08/14/2007	18 ^A	24.07 ^A	21.6 ^A	16.5 ^A	18.9 ^A	6.7 ^P	3.1 ^P	4.0 ^P
08/15/2007	18 ^A	24.06 ^A	22.2 ^A	17.6 ^A	19.9 ^A	8.4 ^P	3.3 ^P	4.4 ^P
08/16/2007	18 ^A	24.06 ^A	20.3 ^A	17.7 ^A	18.6 ^A	5.3 ^P	3.1 ^P	4.0 ^P
08/17/2007	17 ^A	24.06 ^A	19.0 ^A	16.0 ^A	17.6 ^A	5.7 ^P	3.3 ^P	4.3 ^P
08/18/2007	18 ^A	24.06 ^A	19.0 ^A	16.2 ^A	17.5 ^A	9.8 ^P	3.2 ^P	4.1 ^P
08/19/2007	31 ^A	24.24 ^A	18.3 ^A	15.8 ^A	17.1 ^A	35.9 ^P	4.2 ^P	10.0 ^P
08/20/2007	35 ^A	24.29 ^A	18.2 ^A	16.9 ^A	17.5 ^A	44.5 ^P	5.4 ^P	10.6 ^P
08/21/2007	31 ^A	24.24 ^A	19.7 ^A	16.8 ^A	18.0 ^A	24.3 ^P	4.9 ^P	6.2 ^P
08/22/2007	23 ^A	24.14 ^A	20.1 ^A	16.5 ^A	18.2 ^A	5.7 ^P	3.4 ^P	4.2 ^P
08/23/2007	21 ^A	24.11 ^A	20.3 ^A	16.2 ^A	18.2 ^A			
08/24/2007	20 ^A	24.10 ^A	20.6 ^A	17.0 ^A	18.6 ^A			
08/25/2007	20 ^A	24.10 ^A	19.8 ^A	16.7 ^A	18.2 ^A			
08/26/2007	20 ^A	24.09 ^A	18.7 ^A	16.6 ^A	17.6 ^A			
08/27/2007	18 ^A	24.07 ^A	19.0 ^A	15.0 ^A	17.0 ^A			
08/28/2007	18 ^A	24.06 ^A	19.7 ^A	15.4 ^A	17.5 ^A			
08/29/2007	18 ^A	24.06 ^A	21.1 ^A	16.2 ^A	18.5 ^A			
08/30/2007	18 ^A	24.06 ^A	21.7 ^A	17.6 ^A	19.5 ^A			
08/31/2007	18 ^A	24.06 ^A	20.0 ^A	17.3 ^A	18.6 ^A			
09/01/2007	17 ^A	24.06 ^A	20.0 ^A	15.8 ^A	17.8 ^A			

Date	Discharge, cfs (Mean)	Gage height, feet (Mean)	Temperature, water, deg C (Maximum)	Temperature, water, deg C (Minimum)	Temperature, water, deg C (Mean)	Turbidity, IR LED light, det ang 90 deg, FNU (Maximum)	Turbidity, IR LED light, det ang 90 deg, FNU (Minimum)	Turbidity, IR LED light, det ang 90 deg, FNU (Median)
09/02/2007	17 ^A	24.06 ^A	20.1 ^A	16.2 ^A	18.2 ^A			
09/03/2007	17 ^A	24.05 ^A	20.7 ^A	16.6 ^A	18.6 ^A	6.7 ^P	3.4 ^P	4.5 ^P
09/04/2007	45 ^A	24.37 ^A	19.4 ^A	17.5 ^A	18.6 ^A	168 ^P	4.6 ^P	21.1 ^P
09/05/2007	30 ^A	24.23 ^A	18.9 ^A	17.0 ^A	17.9 ^A	26.0 ^P	6.8 ^P	9.7 ^P
09/06/2007	22 ^A	24.12 ^A	18.2 ^A	16.4 ^A	17.2 ^A	6.8 ^P	4.5 ^P	5.6 ^P
09/07/2007	20 ^A	24.09 ^A	17.7 ^A	14.7 ^A	16.2 ^A	11.2 ^P	4.0 ^P	5.4 ^P
09/08/2007	20 ^A	24.09 ^A	18.4 ^A	14.6 ^A	16.4 ^A	9.2 ^P	3.9 ^P	5.8 ^P
09/09/2007	19 ^A	24.08 ^A	18.7 ^A	14.9 ^A	16.7 ^A			
09/10/2007	18 ^A	24.07 ^A	19.4 ^A	15.0 ^A	17.1 ^A			
09/11/2007	18 ^A	24.06 ^A	19.7 ^A	15.6 ^A	17.6 ^A			
09/12/2007	18 ^A	24.07 ^A	19.3 ^A	15.9 ^A	17.5 ^A			
09/13/2007	18 ^A	24.07 ^A	17.4 ^A	15.6 ^A	16.1 ^A			
09/14/2007	19 ^A	24.08 ^A	16.9 ^A	15.0 ^A	15.9 ^A			
09/15/2007	19 ^A	24.08 ^A	17.2 ^A	15.0 ^A	15.9 ^A			
09/16/2007	19 ^A	24.08 ^A	16.2 ^A	15.0 ^A	15.6 ^A			
09/17/2007	20 ^A	24.09 ^A	16.0 ^A	14.7 ^A	15.2 ^A			
09/18/2007	21 ^A	24.10 ^A	15.1 ^A	13.2 ^A	14.3 ^A			
09/19/2007	20 ^A	24.09 ^A	16.0 ^A	12.6 ^A	14.2 ^A			
09/20/2007	20 ^A	24.09 ^A	15.7 ^A	12.8 ^A	14.3 ^A			
09/21/2007	19 ^A	24.09 ^A	17.2 ^A	13.8 ^A	15.3 ^A			
09/22/2007	19 ^A	24.08 ^A	16.8 ^A	14.4 ^A	15.5 ^A			
09/23/2007	19 ^A	24.08 ^A	15.6 ^A	13.5 ^A	14.6 ^A			
09/24/2007	18 ^A	24.07 ^A	16.0 ^A	12.8 ^A	14.3 ^A			
09/25/2007	19 ^A	24.07 ^A	15.6 ^A	12.7 ^A	14.1 ^A			
09/26/2007	19 ^A	24.08 ^A	15.9 ^A	12.8 ^A	14.1 ^A			
09/27/2007	19 ^A	24.08 ^A	16.5 ^A	13.2 ^A	14.8 ^A			
09/28/2007	81 ^A	24.71 ^A	15.3 ^A	13.0 ^A	13.9 ^A	124 ^P	6.6 ^P	54.7 ^P
09/29/2007	47 ^A	24.41 ^A	13.2 ^A	11.6 ^A	12.6 ^A	90.6 ^P	12.8 ^P	25.2 ^P
09/30/2007	76 ^A	24.66 ^A	13.3 ^A	12.2 ^A	12.7 ^A	100 ^P	11.4 ^P	19.8 ^P
10/01/2007	68 ^P	24.62 ^P	14.1 ^P	12.4 ^P	13.1 ^P	68.5 ^P	20.2 ^P	27.1 ^P
10/02/2007	41 ^P	24.35 ^P	14.4 ^P	12.9 ^P	13.5 ^P	35.3 ^P	11.1 ^P	16.2 ^P
10/03/2007	57 ^P	24.52 ^P	13.8 ^P	12.7 ^P	13.2 ^P	74.5 ^P	18.1 ^P	27.9 ^P
10/04/2007	57 ^P	24.52 ^P	13.3 ^P	12.1 ^P	12.7 ^P	40.2 ^P	18.1 ^P	22.6 ^P
10/05/2007	38 ^P	24.32 ^P	12.7 ^P	11.6 ^P	12.1 ^P	49.3 ^P	22.7 ^P	37.0 ^P

Date	Discharge, cfs (Mean)	Gage height, feet (Mean)	Temperature, water, deg C (Maximum)	Temperature, water, deg C (Minimum)	Temperature, water, deg C (Mean)	Turbidity, IR LED light, det ang 90 deg, FNU (Maximum)	Turbidity, IR LED light, det ang 90 deg, FNU (Minimum)	Turbidity, IR LED light, det ang 90 deg, FNU (Median)
10/06/2007	30 ^P	24.23 ^P	12.5 ^P	11.2 ^P	11.9 ^P	50.3 ^P	20.4 ^P	34.2 ^P
10/07/2007	32 ^P	24.25 ^P	14.4 ^P	12.3 ^P	13.2 ^P	98.5 ^P	17.7 ^P	26.8 ^P
10/08/2007	66 ^P	24.60 ^P	13.7 ^P	12.5 ^P	13.2 ^P			
10/09/2007	35 ^P	24.29 ^P	13.4 ^P	12.7 ^P	13.1 ^P			
10/10/2007	35 ^P	24.28 ^P	14.3 ^P	12.9 ^P	13.5 ^P			
10/11/2007	36 ^P	24.30 ^P	13.6 ^P	12.2 ^P	12.9 ^P			
10/12/2007	28 ^P	24.21 ^P	14.8 ^P	12.7 ^P	13.6 ^P	7.8 ^P	4.6 ^P	5.2 ^P
10/13/2007	26 ^P	24.18 ^P	14.9 ^P	12.8 ^P	13.7 ^P	5.4 ^P	3.8 ^P	4.5 ^P
10/14/2007	26 ^P	24.18 ^P	14.4 ^P	12.6 ^P	13.4 ^P	5.1 ^P	3.7 ^P	4.2 ^P
10/15/2007	24 ^P	24.16 ^P	13.9 ^P	12.9 ^P	13.3 ^P	5.4 ^P	3.3 ^P	3.9 ^P
10/16/2007	28 ^P	24.20 ^P	13.1 ^P	11.6 ^P	12.3 ^P	25.3 ^P	2.8 ^P	4.9 ^P
10/17/2007	41 ^P	24.35 ^P	12.2 ^P	11.0 ^P	11.6 ^P	21.0 ^P	7.2 ^P	13.0 ^P
10/18/2007	72 ^P	24.65 ^P	12.2 ^P	10.7 ^P	11.4 ^P	81.4 ^P	7.1 ^P	27.5 ^P
10/19/2007	154 ^P	25.26 ^P	12.3 ^P	11.4 ^P	12.0 ^P	208 ^P	39.8 ^P	85.7 ^P
10/20/2007	296 ^P	26.07 ^P	11.5 ^P	10.4 ^P	10.9 ^P	265 ^P	118 ^P	158 ^P
10/21/2007	142 ^P	25.18 ^P	12.2 ^P	11.0 ^P	11.6 ^P	118 ^P	31.1 ^P	64.3 ^P
10/22/2007	71 ^P	24.68 ^P	13.0 ^P	11.3 ^P	12.1 ^P	33.9 ^P	13.3 ^P	22.6 ^P
10/23/2007	50 ^P	24.50 ^P	13.5 ^P	11.3 ^P	12.3 ^P	16.8 ^P	8.4 ^P	11.5 ^P
10/24/2007	44 ^P	24.43 ^P	12.7 ^P	11.4 ^P	12.1 ^P			
10/25/2007	50 ^P	24.48 ^P	11.4 ^P	10.0 ^P	10.7 ^P			
10/26/2007	35 ^P	24.34 ^P	10.7 ^P	8.8 ^P	9.7 ^P	7.7 ^P	5.6 ^P	6.9 ^P
10/27/2007	30 ^P	24.28 ^P	10.8 ^P	8.7 ^P	9.7 ^P	7.4 ^P	5.1 ^P	5.9 ^P
10/28/2007	27 ^P	24.25 ^P	10.9 ^P	8.6 ^P	9.8 ^P	5.6 ^P	3.9 ^P	5.1 ^P
10/29/2007	26 ^P	24.24 ^P	11.0 ^P	9.2 ^P	10.1 ^P	17.7 ^P	3.4 ^P	3.9 ^P
10/30/2007	24 ^P	24.22 ^P	11.4 ^P	10.0 ^P	10.6 ^P	5.5 ^P	3.0 ^P	3.5 ^P
10/31/2007	22 ^P	24.20 ^P	10.5 ^P	8.8 ^P	9.8 ^P	5.6 ^P	2.9 ^P	3.7 ^P
11/01/2007	21 ^P	24.18 ^P	11.3 ^P	9.8 ^P	10.4 ^P	9.2 ^P	2.8 ^P	4.3 ^P
11/02/2007	20 ^P	24.17 ^P	10.4 ^P	8.3 ^P	9.4 ^P	17.6 ^P	3.1 ^P	4.3 ^P
11/03/2007	20 ^P	24.16 ^P	10.7 ^P	8.2 ^P	9.4 ^P	22.1 ^P	3.8 ^P	5.7 ^P
11/04/2007	19 ^P	24.16 ^P	11.9 ^P	9.6 ^P	10.6 ^P	19.7 ^P	4.5 ^P	7.8 ^P
11/05/2007	19 ^P	24.15 ^P	12.2 ^P	10.4 ^P	11.1 ^P	24.5 ^P	5.1 ^P	9.9 ^P
11/06/2007	19 ^P	24.15 ^P	11.2 ^P	9.8 ^P	10.5 ^P	31.7 ^P	6.8 ^P	11.7 ^P
11/07/2007	19 ^P	24.15 ^P	11.2 ^P	9.9 ^P	10.4 ^P	49.9 ^P	7.9 ^P	19.7 ^P
11/08/2007	18 ^P	24.14 ^P	11.3 ^P	9.9 ^P	10.5 ^P	37.6 ^P	7.1 ^P	14.5 ^P

Date	Discharge, cfs (Mean)	Gage height, feet (Mean)	Temperature, water, deg C (Maximum)	Temperature, water, deg C (Minimum)	Temperature, water, deg C (Mean)	Turbidity, IR LED light, det ang 90 deg, FNU (Maximum)	Turbidity, IR LED light, det ang 90 deg, FNU (Minimum)	Turbidity, IR LED light, det ang 90 deg, FNU (Median)
11/09/2007	19 ^P	24.16 ^P	11.8 ^P	10.1 ^P	11.0 ^P	30.8 ^P	7.8 ^P	14.8 ^P
11/10/2007	35 ^P	24.34 ^P	11.6 ^P	10.1 ^P	11.2 ^P	44.6 ^P	12.1 ^P	29.0 ^P
11/11/2007	25 ^P	24.23 ^P	10.8 ^P	9.4 ^P	10.1 ^P	23.2 ^P	7.2 ^P	13.3 ^P
11/12/2007	27 ^P	24.25 ^P	10.9 ^P	9.8 ^P	10.2 ^P	25.4 ^P	8.3 ^P	14.8 ^P
11/13/2007	34 ^P	24.33 ^P	10.2 ^P	8.5 ^P	9.4 ^P	53.4 ^P	9.2 ^P	14.4 ^P
11/14/2007	24 ^P	24.22 ^P	9.6 ^P	8.0 ^P	8.8 ^P	44.3 ^P	7.9 ^P	12.7 ^P
11/15/2007	24 ^P	24.22 ^P	11.6 ^P	9.6 ^P	10.4 ^P	68.9 ^P	4.8 ^P	15.7 ^P
11/16/2007	78 ^P	24.68 ^P	11.7 ^P	10.7 ^P	11.2 ^P	126 ^P	5.6 ^P	14.1 ^P
11/17/2007	418 ^P	26.59 ^P	11.5 ^P	10.8 ^P	11.1 ^P	238 ^P	62.2 ^P	171 ^P
11/18/2007	272 ^P	25.93 ^P	11.3 ^P	9.3 ^P	10.4 ^P	170 ^P	45.4 ^P	64.4 ^P
11/19/2007	351 ^P	26.33 ^P	9.3 ^P	9.1 ^P	9.2 ^P	94.6 ^P	45.2 ^P	66.5 ^P
11/20/2007	191 ^P	25.49 ^P	9.2 ^P	8.6 ^P	9.0 ^P	48.2 ^P	23.3 ^P	36.6 ^P
11/21/2007	112 ^P	24.99 ^P	8.6 ^P	7.0 ^P	8.0 ^P	23.3 ^P	13.0 ^P	17.6 ^P
11/22/2007	81 ^P	24.76 ^P	7.0 ^P	5.6 ^P	6.4 ^P	13.9 ^P	8.7 ^P	11.1 ^P
11/23/2007	64 ^P	24.62 ^P	5.7 ^P	4.7 ^P	5.2 ^P	9.2 ^P	6.8 ^P	8.1 ^P
11/24/2007	53 ^P	24.52 ^P	6.0 ^P	4.6 ^P	5.3 ^P	7.8 ^P	5.7 ^P	6.4 ^P
11/25/2007	46 ^P	24.45 ^P	5.9 ^P	4.7 ^P	5.4 ^P	6.6 ^P	4.9 ^P	5.5 ^P
11/26/2007	47 ^P	24.46 ^P	6.3 ^P	4.4 ^P	4.8 ^P	17.0 ^P	4.8 ^P	5.7 ^P
11/27/2007	74 ^P	24.70 ^P	6.7 ^P	4.7 ^P	5.8 ^P	37.5 ^P	12.9 ^P	18.2 ^P
11/28/2007	70 ^P	24.66 ^P	6.6 ^P	5.8 ^P	6.1 ^P	81.6 ^P	15.0 ^P	18.7 ^P
11/29/2007	144 ^P	25.20 ^P	6.7 ^P	5.8 ^P	6.3 ^P	113 ^P	38.5 ^P	54.7 ^P
11/30/2007	153 ^P	25.26 ^P	6.8 ^P	6.5 ^P	6.7 ^P	108 ^P	35.1 ^P	48.9 ^P
12/01/2007	122 ^P	25.06 ^P	6.6 ^P	6.3 ^P	6.4 ^P	35.1 ^P	22.1 ^P	23.9 ^P
12/02/2007	317 ^P	26.04 ^P	7.4 ^P	6.3 ^P	6.8 ^P	317 ^P	22.2 ^P	34.8 ^P
12/03/2007	1,730 ^P	29.94 ^P	10.0 ^P	7.4 ^P	8.6 ^P			
12/04/2007	789 ^P	27.83 ^P	10.7 ^P	10.0 ^P	10.3 ^P			
12/05/2007	274 ^P	25.95 ^P	10.2 ^P	9.5 ^P	9.6 ^P	67.7 ^P	27.2 ^P	35.9 ^P
12/06/2007	259 ^P	25.88 ^P	9.6 ^P	9.1 ^P	9.4 ^P	64.2 ^P	26.7 ^P	46.5 ^P
12/07/2007	175 ^P	25.40 ^P	9.1 ^P	8.4 ^P	8.7 ^P	59.7 ^P	20.8 ^P	29.6 ^P
12/08/2007	123 ^P	25.06 ^P	8.4 ^P	6.7 ^P	7.7 ^P	28.1 ^P	14.7 ^P	18.6 ^P
12/09/2007	93 ^P	24.85 ^P	6.7 ^P	6.0 ^P	6.2 ^P	18.2 ^P	11.4 ^P	14.4 ^P
12/10/2007	78 ^P	24.73 ^P	6.9 ^P	5.8 ^P	6.3 ^P	12.5 ^P	9.7 ^P	10.9 ^P
12/11/2007	66 ^P	24.63 ^P	5.8 ^P	4.9 ^P	5.3 ^P	19.3 ^P	8.5 ^P	9.8 ^P
12/12/2007	56 ^P	24.55 ^P	6.4 ^P	5.2 ^P	5.8 ^P	13.1 ^P	7.8 ^P	8.6 ^P

Date	Discharge, cfs (Mean)	Gage height, feet (Mean)	Temperature, water, deg C (Maximum)	Temperature, water, deg C (Minimum)	Temperature, water, deg C (Mean)	Turbidity, IR LED light, det ang 90 deg, FNU (Maximum)	Turbidity, IR LED light, det ang 90 deg, FNU (Minimum)	Turbidity, IR LED light, det ang 90 deg, FNU (Median)
12/13/2007	50 ^P	24.50 ^P	6.3 ^P	5.4 ^P	5.8 ^P	9.0 ^P	7.2 ^P	7.8 ^P
12/14/2007	46 ^P	24.46 ^P	7.0 ^P	6.0 ^P	6.4 ^P	8.3 ^P	5.8 ^P	6.9 ^P
12/15/2007	50 ^P	24.50 ^P	7.4 ^P	6.6 ^P	7.0 ^P	10.0 ^P	6.8 ^P	7.7 ^P
12/16/2007	47 ^P	24.47 ^P	7.4 ^P	6.7 ^P	7.0 ^P	13.2 ^P	5.9 ^P	6.8 ^P
12/17/2007	75 ^P	24.71 ^P	7.2 ^P	6.6 ^P	6.9 ^P	34.0 ^P	13.2 ^P	18.3 ^P
12/18/2007	116 ^P	25.01 ^P	7.7 ^P	6.9 ^P	7.2 ^P	46.2 ^P	15.3 ^P	35.6 ^P
12/19/2007	177 ^P	25.37 ^P	7.9 ^P	7.4 ^P	7.7 ^P	154 ^P	33.9 ^P	41.3 ^P
12/20/2007	493 ^P	26.91 ^P	7.6 ^P	7.0 ^P	7.2 ^P	194 ^P	68.4 ^P	136 ^P
12/21/2007	209 ^P	25.60 ^P	7.2 ^P	6.7 ^P	7.0 ^P	88.1 ^P	23.0 ^P	36.0 ^P
12/22/2007	162 ^P	25.32 ^P	7.1 ^P	6.7 ^P	6.8 ^P	49.2 ^P	19.1 ^P	22.7 ^P
12/23/2007	294 ^P	25.91 ^P	8.6 ^P	7.1 ^P	7.9 ^P	226 ^P	23.4 ^P	35.8 ^P
12/24/2007	800 ^P	27.78 ^P	8.4 ^P	7.3 ^P	7.6 ^P	313 ^P	56.2 ^P	187 ^P
12/25/2007	257 ^P	25.87 ^P	7.3 ^P	6.3 ^P	6.7 ^P	56.2 ^P	26.7 ^P	33.5 ^P
12/26/2007	251 ^P	25.84 ^P	6.4 ^P	6.1 ^P	6.3 ^P	40.5 ^P	29.2 ^P	34.8 ^P
12/27/2007	295 ^P	26.03 ^P	6.3 ^P	5.5 ^P	6.0 ^P	68.0 ^P	24.6 ^P	32.2 ^P
12/28/2007	335 ^P	26.25 ^P	7.1 ^P	5.6 ^P	6.4 ^P	69.2 ^P	33.0 ^P	54.0 ^P
12/29/2007	248 ^P	25.82 ^P	7.4 ^P	7.1 ^P	7.2 ^P	38.6 ^P	26.1 ^P	31.5 ^P
12/30/2007	206 ^P	25.59 ^P	7.1 ^P	6.2 ^P	6.7 ^P	26.4 ^P	20.9 ^P	24.1 ^P
12/31/2007	156 ^P	25.28 ^P	6.3 ^P	5.8 ^P	6.0 ^P	24.9 ^P	14.0 ^P	18.7 ^P
01/01/2008	122 ^P	25.06 ^P	5.9 ^P	5.4 ^P	5.6 ^P	14.7 ^P	11.1 ^P	13.0 ^P
01/02/2008	168 ^P	25.34 ^P	6.2 ^P	5.4 ^P	5.7 ^P	56.1 ^P	11.1 ^P	22.0 ^P
01/03/2008	224 ^P	25.69 ^P	6.9 ^P	6.2 ^P	6.5 ^P	66.5 ^P	38.3 ^P	47.9 ^P
01/04/2008	219 ^P	25.66 ^P	7.5 ^P	6.8 ^P	7.2 ^P	97.7 ^P	38.4 ^P	47.2 ^P
01/05/2008	216 ^P	25.65 ^P	7.3 ^P	6.7 ^P	6.9 ^P	74.8 ^P	32.9 ^P	41.6 ^P
01/06/2008	155 ^P	25.27 ^P	6.8 ^P	6.4 ^P	6.6 ^P	32.9 ^P	18.0 ^P	22.5 ^P
01/07/2008	167 ^P	25.35 ^P	6.5 ^P	6.1 ^P	6.3 ^P	25.1 ^P	19.7 ^P	23.0 ^P
01/08/2008	299 ^P	26.06 ^P	6.4 ^P	5.6 ^P	6.0 ^P	128 ^P	20.6 ^P	56.7 ^P
01/09/2008	310 ^P	26.12 ^P	6.8 ^P	6.2 ^P	6.5 ^P	176 ^P	38.9 ^P	76.1 ^P
01/10/2008	348 ^P	26.32 ^P	8.1 ^P	6.8 ^P	7.4 ^P	102 ^P	38.3 ^P	44.9 ^P
01/11/2008	307 ^P	26.13 ^P	8.4 ^P	8.1 ^P	8.2 ^P	90.3 ^P	37.6 ^P	49.0 ^P
01/12/2008	293 ^P	26.05 ^P	8.4 ^P	8.1 ^P	8.2 ^P	139 ^P	32.9 ^P	62.8 ^P
01/13/2008	193 ^P	25.51 ^P	8.1 ^P	7.5 ^P	7.9 ^P	101 ^P	23.1 ^P	37.2 ^P
01/14/2008	167 ^P	25.35 ^P	7.5 ^P	6.7 ^P	7.2 ^P	66.5 ^P	17.6 ^P	21.7 ^P
01/15/2008	179 ^P	25.42 ^P	6.7 ^P	5.8 ^P	6.2 ^P	170 ^P	43.1 ^P	66.3 ^P

Date	Discharge, cfs (Mean)	Gage height, feet (Mean)	Temperature, water, deg C (Maximum)	Temperature, water, deg C (Minimum)	Temperature, water, deg C (Mean)	Turbidity, IR LED light, det ang 90 deg, FNU (Maximum)	Turbidity, IR LED light, det ang 90 deg, FNU (Minimum)	Turbidity, IR LED light, det ang 90 deg, FNU (Median)
01/16/2008	120 ^P	25.04 ^P	5.9 ^P	5.0 ^P	5.6 ^P	43.1 ^P	18.8 ^P	26.6 ^P
01/17/2008	99 ^P	24.89 ^P	5.3 ^P	4.6 ^P	5.0 ^P	23.9 ^P	13.6 ^P	17.7 ^P
01/18/2008	84 ^P	24.78 ^P	6.1 ^P	5.3 ^P	5.7 ^P	14.0 ^P	11.5 ^P	13.3 ^P
01/19/2008	75 ^P	24.71 ^P	6.3 ^P	5.7 ^P	6.0 ^P	14.9 ^P	10.7 ^P	11.8 ^P
01/20/2008	76 ^P	24.72 ^P	6.9 ^P	5.3 ^P	6.3 ^P	25.7 ^P	12.2 ^P	13.6 ^P
01/21/2008	64 ^P	24.62 ^P	5.3 ^P	3.0 ^P	4.3 ^P	22.3 ^P	12.9 ^P	16.6 ^P
01/22/2008	54 ^P	24.53 ^P	3.3 ^P	2.2 ^P	2.7 ^P	29.0 ^P	9.6 ^P	11.3 ^P
01/23/2008	49 ^P	24.49 ^P	2.6 ^P	1.3 ^P	2.0 ^P	10.6 ^P	8.4 ^P	9.6 ^P
01/24/2008	47 ^P	24.46 ^P	2.2 ^P	0.9 ^P	1.7 ^P	11.0 ^P	7.6 ^P	8.6 ^P
01/25/2008	43 ^P	24.43 ^P	3.2 ^P	1.4 ^P	2.3 ^P	9.5 ^P	6.5 ^P	7.7 ^P
01/26/2008	78 ^P	24.69 ^P	3.4 ^P	2.4 ^P	2.9 ^P	97.2 ^P	6.2 ^P	9.3 ^P
01/27/2008	228 ^P	25.71 ^P	4.1 ^P	2.8 ^P	3.5 ^P	122 ^P	45.7 ^P	94.5 ^P
01/28/2008	137 ^P	25.16 ^P	5.1 ^P	4.0 ^P	4.5 ^P	45.7 ^P	21.5 ^P	28.2 ^P
01/29/2008	165 ^P	25.34 ^P	5.4 ^P	4.7 ^P	4.9 ^P	54.1 ^P	21.3 ^P	28.7 ^P
01/30/2008	189 ^P	25.49 ^P	5.4 ^P	4.5 ^P	4.9 ^P	62.6 ^P	26.5 ^P	43.2 ^P
01/31/2008	372 ^P	26.39 ^P	5.8 ^P	5.4 ^P	5.5 ^P	297 ^P	26.9 ^P	169 ^P
02/01/2008	277 ^P	25.97 ^P	6.1 ^P	5.6 ^P	5.8 ^P	120 ^P	41.1 ^P	66.5 ^P
02/02/2008	433 ^P	26.62 ^P	6.0 ^P	4.7 ^P	5.3 ^P	164 ^P	38.5 ^P	70.0 ^P
02/03/2008	379 ^P	26.44 ^P	6.0 ^P	4.7 ^P	5.5 ^P	167 ^P	34.6 ^P	58.2 ^P
02/04/2008	208 ^P	25.60 ^P	6.2 ^P	5.6 ^P	5.9 ^P	35.1 ^P	22.7 ^P	29.1 ^P
02/05/2008	176 ^P	25.41 ^P	6.6 ^P	6.2 ^P	6.4 ^P	27.6 ^P	20.5 ^P	25.1 ^P
02/06/2008	179 ^P	25.42 ^P	6.5 ^P	6.0 ^P	6.2 ^P	95.5 ^P	20.5 ^P	30.1 ^P
02/07/2008	432 ^P	26.66 ^P	6.6 ^P	5.6 ^P	6.1 ^P	251 ^P	67.4 ^P	175 ^P
02/08/2008	260 ^P	25.89 ^P	7.1 ^P	6.6 ^P	6.8 ^P	67.4 ^P	33.7 ^P	51.7 ^P
02/09/2008	187 ^P	25.47 ^P	8.4 ^P	7.1 ^P	7.7 ^P	40.1 ^P	22.5 ^P	32.0 ^P
02/10/2008	142 ^P	25.19 ^P	9.0 ^P	8.2 ^P	8.5 ^P	22.6 ^P	17.2 ^P	19.6 ^P
02/11/2008	113 ^P	24.99 ^P	8.9 ^P	7.9 ^P	8.3 ^P	17.6 ^P	13.8 ^P	16.2 ^P
02/12/2008	97 ^P	24.86 ^P	8.6 ^P	7.3 ^P	7.9 ^P	14.0 ^P	11.6 ^P	12.8 ^P
02/13/2008	96 ^P	24.86 ^P	8.2 ^P	7.1 ^P	7.6 ^P	25.2 ^P	12.3 ^P	13.9 ^P
02/14/2008	89 ^P	24.80 ^P	8.3 ^P	7.0 ^P	7.4 ^P	29.2 ^P	17.4 ^P	20.5 ^P
02/15/2008	77 ^P	24.70 ^P	8.3 ^P	6.2 ^P	7.3 ^P	27.3 ^P	14.3 ^P	16.9 ^P
02/16/2008	70 ^P	24.64 ^P	8.3 ^P	6.2 ^P	7.2 ^P	14.7 ^P	10.5 ^P	12.4 ^P
02/17/2008	64 ^P	24.58 ^P	8.5 ^P	6.0 ^P	7.1 ^P	21.7 ^P	8.8 ^P	10.3 ^P
02/18/2008	60 ^P	24.54 ^P	8.6 ^P	6.2 ^P	7.3 ^P	11.3 ^P	8.3 ^P	8.7 ^P

Date	Discharge, cfs (Mean)	Gage height, feet (Mean)	Temperature, water, deg C (Maximum)	Temperature, water, deg C (Minimum)	Temperature, water, deg C (Mean)	Turbidity, IR LED light, det ang 90 deg, FNU (Maximum)	Turbidity, IR LED light, det ang 90 deg, FNU (Minimum)	Turbidity, IR LED light, det ang 90 deg, FNU (Median)
02/19/2008	56 ^P	24.50 ^P	8.3 ^P	6.3 ^P	7.4 ^P	14.1 ^P	7.2 ^P	8.3 ^P
02/20/2008	55 ^P	24.49 ^P	9.8 ^P	8.0 ^P	8.7 ^P	7.9 ^P	7.0 ^P	7.5 ^P
02/21/2008	52 ^P	24.47 ^P	9.8 ^P	7.3 ^P	8.5 ^P	8.2 ^P	6.6 ^P	7.3 ^P
02/22/2008	49 ^P	24.44 ^P	10.2 ^P	7.8 ^P	8.9 ^P	7.5 ^P	6.0 ^P	6.9 ^P
02/23/2008	46 ^P	24.40 ^P	9.9 ^P	7.0 ^P	8.5 ^P	7.4 ^P	5.5 ^P	6.3 ^P
02/24/2008	49 ^P	24.44 ^P	9.8 ^P	8.3 ^P	9.1 ^P	7.2 ^P	5.5 ^P	6.0 ^P
02/25/2008	45 ^P	24.39 ^P	11.0 ^P	9.0 ^P	9.9 ^P	21.6 ^P	5.0 ^P	5.5 ^P
02/26/2008	42 ^P	24.36 ^P	11.1 ^P	8.1 ^P	9.7 ^P	5.4 ^P	4.3 ^P	4.9 ^P
02/27/2008	40 ^P	24.34 ^P	11.7 ^P	8.9 ^P	10.2 ^P	5.7 ^P	4.2 ^P	4.8 ^P
02/28/2008	39 ^P	24.33 ^P	12.3 ^P	9.2 ^P	10.7 ^P	14.9 ^P	4.3 ^P	4.8 ^P
02/29/2008	41 ^P	24.35 ^P	12.1 ^P	9.8 ^P	10.9 ^P	17.0 ^P	4.4 ^P	5.0 ^P
03/01/2008	60 ^P	24.54 ^P	10.6 ^P	9.0 ^P	9.7 ^P	28.2 ^P	7.5 ^P	13.9 ^P
03/02/2008	54 ^P	24.48 ^P	10.6 ^P	8.0 ^P	9.2 ^P	28.2 ^P	6.0 ^P	7.4 ^P
03/03/2008	47 ^P	24.41 ^P	9.3 ^P	8.0 ^P	8.6 ^P	21.4 ^P	6.4 ^P	8.4 ^P
03/04/2008	47 ^P	24.41 ^P	9.6 ^P	7.8 ^P	8.6 ^P	30.7 ^P	6.2 ^P	12.4 ^P
03/05/2008	43 ^P	24.38 ^P	10.6 ^P	7.5 ^P	9.0 ^P	9.0 ^P	5.4 ^P	6.0 ^P
03/06/2008	41 ^P	24.35 ^P	10.4 ^P	7.3 ^P	8.9 ^P	7.5 ^P	5.2 ^P	5.7 ^P
03/07/2008	40 ^P	24.34 ^P	9.6 ^P	7.9 ^P	8.9 ^P	16.8 ^P	4.6 ^P	6.2 ^P
03/08/2008	77 ^P	24.69 ^P	10.0 ^P	8.3 ^P	9.1 ^P	52.2 ^P	7.2 ^P	16.2 ^P
03/09/2008	55 ^P	24.49 ^P	11.6 ^P	8.1 ^P	9.6 ^P	17.2 ^P	10.3 ^P	13.4 ^P
03/10/2008	50 ^P	24.44 ^P	12.4 ^P	9.9 ^P	11.0 ^P	16.6 ^P	7.6 ^P	10.0 ^P
03/11/2008	63 ^P	24.56 ^P	11.7 ^P	9.9 ^P	10.7 ^P	10.7 ^P	7.5 ^P	8.5 ^P
03/12/2008	59 ^P	24.52 ^P	11.5 ^P	9.1 ^P	10.2 ^P	28.2 ^P	9.0 ^P	10.2 ^P
03/13/2008	141 ^P	25.16 ^P	10.2 ^P	9.0 ^P	9.4 ^P	106 ^P	23.5 ^P	55.4 ^P
03/14/2008	252 ^P	25.84 ^P	9.0 ^P	8.2 ^P	8.6 ^P	217 ^P	75.8 ^P	137 ^P
03/15/2008	201 ^P	25.56 ^P	9.0 ^P	8.1 ^P	8.5 ^P	116 ^P	52.8 ^P	65.5 ^P
03/16/2008	159 ^P	25.30 ^P	8.9 ^P	8.1 ^P	8.5 ^P	61.8 ^P	30.1 ^P	40.4 ^P
03/17/2008	152 ^P	25.26 ^P	9.0 ^P	8.0 ^P	8.4 ^P	30.1 ^P	22.7 ^P	26.3 ^P
03/18/2008	211 ^P	25.60 ^P	10.1 ^P	8.8 ^P	9.4 ^P	100 ^P	25.4 ^P	74.5 ^P
03/19/2008	158 ^P	25.29 ^P	9.7 ^P	8.4 ^P	9.0 ^P	97.9 ^P	24.6 ^P	39.8 ^P
03/20/2008	134 ^P	25.14 ^P	9.3 ^P	8.3 ^P	8.7 ^P	43.9 ^P	18.2 ^P	22.7 ^P
03/21/2008	143 ^P	25.20 ^P	8.7 ^P	7.6 ^P	8.2 ^P	88.8 ^P	27.3 ^P	42.4 ^P
03/22/2008	109 ^P	24.96 ^P	10.1 ^P	7.1 ^P	8.5 ^P	41.7 ^P	16.6 ^P	21.7 ^P
03/23/2008	121 ^P	25.04 ^P	9.6 ^P	8.6 ^P	9.0 ^P	87.2 ^P	13.6 ^P	15.9 ^P

Date	Discharge, cfs (Mean)	Gage height, feet (Mean)	Temperature, water, deg C (Maximum)	Temperature, water, deg C (Minimum)	Temperature, water, deg C (Mean)	Turbidity, IR LED light, det ang 90 deg, FNU (Maximum)	Turbidity, IR LED light, det ang 90 deg, FNU (Minimum)	Turbidity, IR LED light, det ang 90 deg, FNU (Median)
03/24/2008	115 ^P	25.00 ^P	9.7 ^P	8.1 ^P	8.8 ^P	51.7 ^P	19.1 ^P	27.0 ^P
03/25/2008	92 ^P	24.82 ^P	9.2 ^P	7.2 ^P	8.2 ^P	19.1 ^P	11.0 ^P	13.2 ^P
03/26/2008	127 ^P	25.08 ^P	8.4 ^P	7.3 ^P	7.9 ^P	97.8 ^P	12.2 ^P	18.9 ^P
03/27/2008	127 ^P	25.09 ^P	8.8 ^P	6.6 ^P	7.6 ^P	82.0 ^P	36.3 ^P	46.7 ^P
03/28/2008	139 ^P	25.17 ^P	7.9 ^P	6.8 ^P	7.4 ^P	42.2 ^P	28.9 ^P	36.9 ^P
03/29/2008	142 ^P	25.19 ^P	8.2 ^P	6.2 ^P	6.9 ^P	48.8 ^P	32.4 ^P	40.1 ^P
03/30/2008	137 ^P	25.16 ^P	7.6 ^P	6.2 ^P	6.7 ^P	45.1 ^P	21.3 ^P	25.4 ^P
03/31/2008	107 ^P	24.94 ^P	9.0 ^P	6.4 ^P	7.4 ^P	21.9 ^P	11.8 ^P	13.0 ^P
04/01/2008	91 ^P	24.82 ^P	10.1 ^P	6.5 ^P	8.1 ^P	12.8 ^P	9.2 ^P	10.8 ^P
04/02/2008	80 ^P	24.72 ^P	10.9 ^P	6.8 ^P	8.7 ^P	17.5 ^P	7.6 ^P	8.9 ^P
04/03/2008	71 ^P	24.64 ^P	11.4 ^P	7.4 ^P	9.4 ^P	9.0 ^P	6.5 ^P	7.2 ^P
04/04/2008	73 ^P	24.66 ^P	10.9 ^P	8.4 ^P	9.6 ^P	20.8 ^P	6.6 ^P	8.1 ^P
04/05/2008	73 ^P	24.67 ^P	10.2 ^P	8.8 ^P	9.4 ^P	9.9 ^P	6.6 ^P	8.2 ^P
04/06/2008	80 ^P	24.72 ^P	11.0 ^P	8.8 ^P	9.8 ^P	17.2 ^P	8.8 ^P	11.8 ^P
04/07/2008	75 ^P	24.68 ^P	10.7 ^P	8.9 ^P	9.7 ^P	16.5 ^P	9.7 ^P	12.9 ^P
04/08/2008	82 ^P	24.74 ^P	11.3 ^P	8.8 ^P	9.8 ^P	28.2 ^P	9.7 ^P	13.9 ^P
04/09/2008	96 ^P	24.86 ^P	10.4 ^P	8.9 ^P	9.5 ^P	45.9 ^P	16.5 ^P	21.5 ^P
04/10/2008	99 ^P	24.88 ^P	10.5 ^P	9.0 ^P	9.7 ^P	43.5 ^P	20.3 ^P	24.3 ^P
04/11/2008	81 ^P	24.73 ^P	12.9 ^P	8.4 ^P	10.5 ^P	43.5 ^P	11.0 ^P	13.7 ^P
04/12/2008	71 ^P	24.65 ^P	15.5 ^P	10.2 ^P	12.6 ^P	12.5 ^P	7.8 ^P	8.9 ^P
04/13/2008	63 ^P	24.56 ^P	15.3 ^P	12.0 ^P	13.5 ^P	9.9 ^P	6.3 ^P	7.4 ^P
04/14/2008	58 ^P	24.51 ^P	12.9 ^P	10.8 ^P	12.1 ^P	9.3 ^P	6.1 ^P	7.2 ^P
04/15/2008	55 ^P	24.49 ^P	11.1 ^P	9.5 ^P	10.3 ^P	8.5 ^P	5.6 ^P	6.6 ^P
04/16/2008	55 ^P	24.49 ^P	11.2 ^P	9.5 ^P	10.3 ^P	7.1 ^P	5.3 ^P	5.9 ^P
04/17/2008	49 ^P	24.43 ^P	12.2 ^P	9.9 ^P	11.0 ^P	8.0 ^P	4.9 ^P	5.8 ^P
04/18/2008	46 ^P	24.40 ^P	11.5 ^P	9.9 ^P	10.6 ^P	6.3 ^P	4.9 ^P	5.6 ^P
04/19/2008	45 ^P	24.39 ^P	11.0 ^P	8.4 ^P	9.6 ^P	8.1 ^P	4.7 ^P	5.2 ^P
04/20/2008	44 ^P	24.39 ^P	10.8 ^P	8.0 ^P	9.3 ^P	8.1 ^P	4.1 ^P	4.8 ^P
04/21/2008	50 ^P	24.44 ^P	10.3 ^P	8.0 ^P	9.1 ^P	21.8 ^P	5.1 ^P	7.4 ^P
04/22/2008	80 ^P	24.71 ^P	9.7 ^P	8.1 ^P	8.9 ^P	108 ^P	9.9 ^P	14.9 ^P
04/23/2008	147 ^P	25.22 ^P	9.5 ^P	8.3 ^P	8.8 ^P	157 ^P	63.4 ^P	72.6 ^P
04/24/2008	89 ^P	24.80 ^P	10.6 ^P	8.7 ^P	9.5 ^P	63.4 ^P	15.8 ^P	23.5 ^P
04/25/2008	76 ^P	24.69 ^P	12.1 ^P	8.5 ^P	10.1 ^P	21.6 ^P	10.7 ^P	12.9 ^P
04/26/2008	65 ^P	24.59 ^P	14.1 ^P	9.4 ^P	11.6 ^P	15.3 ^P	8.2 ^P	11.8 ^P

Date	Discharge, cfs (Mean)	Gage height, feet (Mean)	Temperature, water, deg C (Maximum)	Temperature, water, deg C (Minimum)	Temperature, water, deg C (Mean)	Turbidity, IR LED light, det ang 90 deg, FNU (Maximum)	Turbidity, IR LED light, det ang 90 deg, FNU (Minimum)	Turbidity, IR LED light, det ang 90 deg, FNU (Median)
04/27/2008	58 ^P	24.52 ^P	14.7 ^P	11.2 ^P	12.9 ^P	8.7 ^P	6.1 ^P	6.9 ^P
04/28/2008	58 ^P	24.52 ^P	14.9 ^P	12.8 ^P	13.7 ^P	7.9 ^P	5.8 ^P	6.4 ^P
04/29/2008	67 ^P	24.60 ^P	13.3 ^P	11.2 ^P	12.4 ^P	15.6 ^P	6.1 ^P	7.2 ^P
04/30/2008	71 ^P	24.65 ^P	12.3 ^P	10.1 ^P	11.1 ^P	21.5 ^P	9.0 ^P	11.8 ^P
05/01/2008	71 ^P	24.64 ^P	13.6 ^P	9.7 ^P	11.5 ^P	27.3 ^P	10.0 ^P	14.6 ^P
05/02/2008	59 ^P	24.53 ^P	15.0 ^P	11.4 ^P	13.1 ^P	20.3 ^P	8.0 ^P	13.0 ^P
05/03/2008	54 ^P	24.48 ^P	13.9 ^P	12.4 ^P	13.2 ^P			
05/04/2008	52 ^P	24.46 ^P	16.2 ^P	10.9 ^P	13.4 ^P			
05/05/2008	46 ^P	24.41 ^P	17.7 ^P	13.0 ^P	15.2 ^P			
05/06/2008	42 ^P	24.36 ^P	15.6 ^P	13.6 ^P	14.3 ^P			
05/07/2008	40 ^P	24.34 ^P	13.6 ^P	12.0 ^P	12.7 ^P			
05/08/2008	38 ^P	24.32 ^P	12.9 ^P	11.0 ^P	11.9 ^P			
05/09/2008	37 ^P	24.31 ^P	15.0 ^P	10.8 ^P	12.7 ^P			
05/10/2008	33 ^P	24.27 ^P	14.1 ^P	12.4 ^P	13.2 ^P			
05/11/2008	32 ^P	24.26 ^P	13.8 ^P	11.8 ^P	12.8 ^P			
05/12/2008	31 ^P	24.25 ^P	14.6 ^P	11.2 ^P	12.8 ^P			
05/13/2008	32 ^P	24.25 ^P	13.8 ^P	12.6 ^P	13.2 ^P			
05/14/2008	35 ^P	24.29 ^P	17.3 ^P	13.0 ^P	14.8 ^P			
05/15/2008	30 ^P	24.24 ^P	20.6 ^P	14.8 ^P	17.5 ^P			
05/16/2008	29 ^P	24.22 ^P	22.0 ^P	16.6 ^P	19.2 ^P	9.5 ^P	3.1 ^P	4.5 ^P
05/17/2008	27 ^P	24.21 ^P	23.3 ^P	18.0 ^P	20.6 ^P	15.3 ^P	3.0 ^P	5.0 ^P
05/18/2008	27 ^P	24.20 ^P	22.5 ^P	18.0 ^P	20.3 ^P	14.7 ^P	3.4 ^P	4.7 ^P
05/19/2008	27 ^P	24.21 ^P	22.0 ^P	17.6 ^P	19.7 ^P	8.7 ^P	3.2 ^P	5.2 ^P
05/20/2008	37 ^P	24.31 ^P	19.9 ^P	16.0 ^P	17.5 ^P	23.3 ^P	3.0 ^P	6.7 ^P
05/21/2008	34 ^P	24.28 ^P	16.0 ^P	14.2 ^P	14.9 ^P	10.0 ^P	3.7 ^P	5.1 ^P
05/22/2008	37 ^P	24.31 ^P	14.2 ^P	13.0 ^P	13.5 ^P	16.5 ^P	3.6 ^P	4.7 ^P
05/23/2008	39 ^P	24.34 ^P	13.3 ^P	12.5 ^P	12.9 ^P	13.1 ^P	3.7 ^P	5.6 ^P
05/24/2008	37 ^P	24.31 ^P	18.2 ^P	12.6 ^P	15.1 ^P	14.7 ^P	3.9 ^P	5.0 ^P
05/25/2008	45 ^P	24.39 ^P	16.7 ^P	14.7 ^P	15.2 ^P	15.2 ^P	5.2 ^P	7.6 ^P
05/26/2008	42 ^P	24.36 ^P	15.4 ^P	14.2 ^P	14.7 ^P	11.7 ^P	4.1 ^P	5.3 ^P
05/27/2008	40 ^P	24.34 ^P	17.1 ^P	14.1 ^P	15.4 ^P	8.9 ^P	4.2 ^P	5.5 ^P
05/28/2008	36 ^P	24.30 ^P	16.3 ^P	14.5 ^P	15.2 ^P	8.9 ^P	3.5 ^P	4.6 ^P
05/29/2008	60 ^P	24.54 ^P	14.9 ^P	13.5 ^P	14.2 ^P	48.9 ^P	7.9 ^P	16.8 ^P
05/30/2008	42 ^P	24.36 ^P	17.8 ^P	13.2 ^P	15.3 ^P	10.8 ^P	7.3 ^P	8.9 ^P

Date	Discharge, cfs (Mean)	Gage height, feet (Mean)	Temperature, water, deg C (Maximum)	Temperature, water, deg C (Minimum)	Temperature, water, deg C (Mean)	Turbidity, IR LED light, det ang 90 deg, FNU (Maximum)	Turbidity, IR LED light, det ang 90 deg, FNU (Minimum)	Turbidity, IR LED light, det ang 90 deg, FNU (Median)
05/31/2008	35 ^P	24.29 ^P	18.3 ^P	14.6 ^P	16.4 ^P	11.2 ^P	6.9 ^P	8.8 ^P
06/01/2008	35 ^P	24.29 ^P	17.0 ^P	14.5 ^P	15.4 ^P	12.9 ^P	6.6 ^P	9.0 ^P
06/02/2008	32 ^P	24.26 ^P	16.8 ^P	13.5 ^P	15.1 ^P	13.1 ^P	5.6 ^P	7.1 ^P
06/03/2008	88 ^P	24.78 ^P	15.6 ^P	14.3 ^P	14.8 ^P	124 ^P	7.0 ^P	40.2 ^P
06/04/2008	62 ^P	24.56 ^P	15.0 ^P	13.7 ^P	14.3 ^P	33.8 ^P	19.3 ^P	24.6 ^P
06/05/2008	48 ^P	24.42 ^P	13.9 ^P	12.8 ^P	13.3 ^P	22.8 ^P	10.3 ^P	13.4 ^P
06/06/2008	46 ^P	24.40 ^P	13.5 ^P	11.9 ^P	12.7 ^P	13.3 ^P	7.0 ^P	10.1 ^P
06/07/2008	47 ^P	24.42 ^P	13.5 ^P	12.2 ^P	12.8 ^P	43.3 ^P	7.7 ^P	11.5 ^P
06/08/2008	41 ^P	24.35 ^P	17.1 ^P	12.1 ^P	14.4 ^P	11.9 ^P	6.1 ^P	7.5 ^P
06/09/2008	38 ^P	24.32 ^P	15.7 ^P	13.8 ^P	14.8 ^P	10.9 ^P	5.2 ^P	6.3 ^P
06/10/2008	39 ^P	24.33 ^P	13.8 ^P	12.2 ^P	12.7 ^P	11.6 ^P	5.6 ^P	7.9 ^P
06/11/2008	40 ^P	24.34 ^P	13.9 ^P	11.9 ^P	12.8 ^P	8.3 ^P	5.3 ^P	6.4 ^P
06/12/2008	35 ^P	24.29 ^P	16.2 ^P	12.0 ^P	13.8 ^P	9.0 ^P	5.2 ^P	6.0 ^P
06/13/2008	33 ^P	24.27 ^P	19.1 ^P	13.7 ^P	16.2 ^P	10.0 ^P	4.6 ^P	5.8 ^P
06/14/2008	30 ^P	24.24 ^P	18.7 ^P	13.9 ^P	16.2 ^P	10.5 ^P	4.1 ^P	6.3 ^P
06/15/2008	28 ^P	24.22 ^P	19.2 ^P	14.6 ^P	16.6 ^P	41.7 ^P	4.1 ^P	8.7 ^P
06/16/2008	27 ^P	24.20 ^P	19.6 ^P	14.9 ^P	17.1 ^P	102 ^P	5.0 ^P	20.4 ^P
06/17/2008	26 ^P	24.19 ^P	17.4 ^P	15.0 ^P	16.2 ^P	14.6 ^P	3.4 ^P	5.3 ^P
06/18/2008	26 ^P	24.19 ^P	17.9 ^P	14.2 ^P	15.9 ^P	9.5 ^P	3.1 ^P	4.4 ^P
06/19/2008	24 ^P	24.17 ^P	20.1 ^P	14.4 ^P	17.2 ^P	15.2 ^P	3.1 ^P	5.0 ^P
06/20/2008	24 ^P	24.17 ^P	21.2 ^P	16.2 ^P	18.7 ^P	360 ^P	4.2 ^P	6.0 ^P
06/21/2008	23 ^P	24.16 ^P	20.4 ^P	17.5 ^P	18.9 ^P	23.3 ^P	3.2 ^P	4.6 ^P
06/22/2008	23 ^P	24.15 ^P	19.2 ^P	16.5 ^P	17.7 ^P	19.3 ^P	3.1 ^P	4.4 ^P
06/23/2008	23 ^P	24.16 ^P	17.8 ^P	14.9 ^P	16.5 ^P	11.1 ^P	2.9 ^P	4.0 ^P
06/24/2008	22 ^P	24.15 ^P	19.9 ^P	14.3 ^P	17.0 ^P	28.5 ^P	2.9 ^P	4.0 ^P
06/25/2008	21 ^P	24.14 ^P	21.1 ^P	15.8 ^P	18.2 ^P	11.9 ^P	2.9 ^P	3.7 ^P
06/26/2008	21 ^P	24.12 ^P	19.0 ^P	15.9 ^P	17.3 ^P	5.2 ^P	2.9 ^P	3.5 ^P
06/27/2008	21 ^P	24.13 ^P	21.6 ^P	15.7 ^P	18.5 ^P	11.1 ^P	2.9 ^P	4.1 ^P
06/28/2008	20 ^P	24.12 ^P	24.1 ^P	17.8 ^P	20.8 ^P	7.3 ^P	3.3 ^P	4.3 ^P
06/29/2008	21 ^P	24.13 ^P	22.8 ^P	19.9 ^P	21.3 ^P	13.7 ^P	3.0 ^P	3.8 ^P
06/30/2008	29 ^P	24.22 ^P	23.3 ^P	18.6 ^P	20.9 ^P	26.4 ^P	3.7 ^P	6.9 ^P

Explanation

A	Approved for publication -- Processing and review completed.
P	Provisional data subject to revision.

Table 4-4**Rainfall Data 07-01-07 to 06-30-08 Using Clear-Vu 11”
Rain Gauge From Kellogg WWTP**

Sample Date/Time	Sample Type	Result Qualifier	Result Value	Analyte Units	Analyte Name	Location Name
7/1/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
7/2/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
7/3/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
7/4/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
7/5/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
7/6/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
7/7/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
7/8/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
7/9/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
7/10/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
7/11/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
7/12/2007 0:00	Observed		0.21	Inches	Rain	Kellogg Plant-Process
7/13/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
7/14/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
7/15/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
7/16/2007 0:00	Observed		0.09	Inches	Rain	Kellogg Plant-Process
7/17/2007 0:00	Observed		0.06	Inches	Rain	Kellogg Plant-Process
7/18/2007 0:00	Observed		0.29	Inches	Rain	Kellogg Plant-Process
7/19/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
7/20/2007 0:00	Observed		0.04	Inches	Rain	Kellogg Plant-Process
7/21/2007 0:00	Observed		0.06	Inches	Rain	Kellogg Plant-Process
7/22/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
7/23/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
7/24/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
7/25/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
7/26/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
7/27/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
7/28/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
7/29/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
7/30/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
7/31/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/1/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/2/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process

Sample Date/Time	Sample Type	Result Qualifier	Result Value	Analyte Units	Analyte Name	Location Name
8/3/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/4/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/5/2007 0:00	Observed		0.02	Inches	Rain	Kellogg Plant-Process
8/6/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/7/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/8/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/9/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/10/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/11/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/12/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/13/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/14/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/15/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/16/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/17/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/18/2007 0:00	Observed		0.36	Inches	Rain	Kellogg Plant-Process
8/19/2007 0:00	Observed		0.03	Inches	Rain	Kellogg Plant-Process
8/20/2007 0:00	Observed		0.75	Inches	Rain	Kellogg Plant-Process
8/21/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/22/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/23/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/24/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/25/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/26/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/27/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/28/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/29/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/30/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
8/31/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
9/1/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
9/2/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
9/3/2007 0:00	Observed		0.29	Inches	Rain	Kellogg Plant-Process
9/4/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
9/5/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
9/6/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
9/7/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
9/8/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process

Sample Date/Time	Sample Type	Result Qualifier	Result Value	Analyte Units	Analyte Name	Location Name
9/9/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
9/10/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
9/11/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
9/12/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
9/13/2007 0:00	Observed		0.01	Inches	Rain	Kellogg Plant-Process
9/14/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
9/15/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
9/16/2007 0:00	Observed		0.05	Inches	Rain	Kellogg Plant-Process
9/17/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
9/18/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
9/19/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
9/20/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
9/21/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
9/22/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
9/23/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
9/24/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
9/25/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
9/26/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
9/27/2007 0:00	Observed		0.74	Inches	Rain	Kellogg Plant-Process
9/28/2007 0:00	Observed		0.25	Inches	Rain	Kellogg Plant-Process
9/29/2007 0:00	Observed		0.17	Inches	Rain	Kellogg Plant-Process
9/30/2007 0:00	Observed		0.62	Inches	Rain	Kellogg Plant-Process
10/1/2007 0:00	Observed		0.21	Inches	Rain	Kellogg Plant-Process
10/2/2007 0:00	Observed		0.35	Inches	Rain	Kellogg Plant-Process
10/3/2007 0:00	Observed		0.2	Inches	Rain	Kellogg Plant-Process
10/4/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
10/5/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
10/6/2007 0:00	Observed		0.04	Inches	Rain	Kellogg Plant-Process
10/7/2007 0:00	Observed		0.43	Inches	Rain	Kellogg Plant-Process
10/8/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
10/9/2007 0:00	Observed		0.07	Inches	Rain	Kellogg Plant-Process
10/10/2007 0:00	Observed		0.14	Inches	Rain	Kellogg Plant-Process
10/11/2007 0:00	Observed		0.03	Inches	Rain	Kellogg Plant-Process
10/12/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
10/13/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
10/14/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
10/15/2007 0:00	Observed		0.04	Inches	Rain	Kellogg Plant-Process

Sample Date/Time	Sample Type	Result Qualifier	Result Value	Analyte Units	Analyte Name	Location Name
10/16/2007 0:00	Observed		0.33	Inches	Rain	Kellogg Plant-Process
10/17/2007 0:00	Observed		0.34	Inches	Rain	Kellogg Plant-Process
10/18/2007 0:00	Observed		0.7	Inches	Rain	Kellogg Plant-Process
10/19/2007 0:00	Observed		0.85	Inches	Rain	Kellogg Plant-Process
10/20/2007 0:00	Observed		0.6	Inches	Rain	Kellogg Plant-Process
10/21/2007 0:00	Observed		0.02	Inches	Rain	Kellogg Plant-Process
10/22/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
10/23/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
10/24/2007 0:00	Observed		0.11	Inches	Rain	Kellogg Plant-Process
10/25/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
10/26/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
10/27/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
10/28/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
10/29/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
10/30/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
10/31/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
11/1/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
11/2/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
11/3/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
11/4/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
11/5/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
11/6/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
11/7/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
11/8/2007 0:00	Observed		0.03	Inches	Rain	Kellogg Plant-Process
11/9/2007 0:00	Observed		0.33	Inches	Rain	Kellogg Plant-Process
11/10/2007 0:00	Observed		0.03	Inches	Rain	Kellogg Plant-Process
11/11/2007 0:00	Observed		0.01	Inches	Rain	Kellogg Plant-Process
11/12/2007 0:00	Observed		0.29	Inches	Rain	Kellogg Plant-Process
11/13/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
11/14/2007 0:00	Observed		0.03	Inches	Rain	Kellogg Plant-Process
11/15/2007 0:00	Observed		0.13	Inches	Rain	Kellogg Plant-Process
11/16/2007 0:00	Observed		1.69	Inches	Rain	Kellogg Plant-Process
11/17/2007 0:00	Observed		0.39	Inches	Rain	Kellogg Plant-Process
11/18/2007 0:00	Observed		0.83	Inches	Rain	Kellogg Plant-Process
11/19/2007 0:00	Observed		0.53	Inches	Rain	Kellogg Plant-Process
11/20/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
11/21/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process

Sample Date/Time	Sample Type	Result Qualifier	Result Value	Analyte Units	Analyte Name	Location Name
11/22/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
11/23/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
11/24/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
11/25/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
11/26/2007 0:00	Observed		0.38	Inches	Rain	Kellogg Plant-Process
11/27/2007 0:00	Observed		0.2	Inches	Rain	Kellogg Plant-Process
11/28/2007 0:00	Observed		0.46	Inches	Rain	Kellogg Plant-Process
11/29/2007 0:00	Observed		0.2	Inches	Rain	Kellogg Plant-Process
11/30/2007 0:00	Observed		0.03	Inches	Rain	Kellogg Plant-Process
12/1/2007 0:00	Observed		0.53	Inches	Rain	Kellogg Plant-Process
12/2/2007 0:00	Observed		2.62	Inches	Rain	Kellogg Plant-Process
12/3/2007 0:00	Observed		1.52	Inches	Rain	Kellogg Plant-Process
12/4/2007 0:00	Observed		0.4	Inches	Rain	Kellogg Plant-Process
12/5/2007 0:00	Observed		0.3	Inches	Rain	Kellogg Plant-Process
12/6/2007 0:00	Observed		0.17	Inches	Rain	Kellogg Plant-Process
12/7/2007 0:00	Observed		0.05	Inches	Rain	Kellogg Plant-Process
12/8/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
12/9/2007 0:00	Observed		0.04	Inches	Rain	Kellogg Plant-Process
12/10/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
12/11/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
12/12/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
12/13/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
12/14/2007 0:00	Observed		0.14	Inches	Rain	Kellogg Plant-Process
12/15/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
12/16/2007 0:00	Observed		0.26	Inches	Rain	Kellogg Plant-Process
12/17/2007 0:00	Observed		0.32	Inches	Rain	Kellogg Plant-Process
12/18/2007 0:00	Observed		0.27	Inches	Rain	Kellogg Plant-Process
12/19/2007 0:00	Observed		1.09	Inches	Rain	Kellogg Plant-Process
12/20/2007 0:00	Observed		0.06	Inches	Rain	Kellogg Plant-Process
12/21/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
12/22/2007 0:00	Observed		0.26	Inches	Rain	Kellogg Plant-Process
12/23/2007 0:00	Observed		1.07	Inches	Rain	Kellogg Plant-Process
12/24/2007 0:00	Observed		0.11	Inches	Rain	Kellogg Plant-Process
12/25/2007 0:00	Observed		0.56	Inches	Rain	Kellogg Plant-Process
12/26/2007 0:00	Observed		0.06	Inches	Rain	Kellogg Plant-Process
12/27/2007 0:00	Observed		0.56	Inches	Rain	Kellogg Plant-Process
12/28/2007 0:00	Observed		0.15	Inches	Rain	Kellogg Plant-Process

Sample Date/Time	Sample Type	Result Qualifier	Result Value	Analyte Units	Analyte Name	Location Name
12/29/2007 0:00	Observed		0.25	Inches	Rain	Kellogg Plant-Process
12/30/2007 0:00	Observed		0.07	Inches	Rain	Kellogg Plant-Process
12/31/2007 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
1/1/2008 0:00	Observed		0.16	Inches	Rain	Kellogg Plant-Process
1/2/2008 0:00	Observed		0.82	Inches	Rain	Kellogg Plant-Process
1/3/2008 0:00	Observed		0.2	Inches	Rain	Kellogg Plant-Process
1/4/2008 0:00	Observed		0.65	Inches	Rain	Kellogg Plant-Process
1/5/2008 0:00	Observed		0.18	Inches	Rain	Kellogg Plant-Process
1/6/2008 0:00	Observed		0.18	Inches	Rain	Kellogg Plant-Process
1/7/2008 0:00	Observed		0.45	Inches	Rain	Kellogg Plant-Process
1/8/2008 0:00	Observed		0.43	Inches	Rain	Kellogg Plant-Process
1/9/2008 0:00	Observed		0.34	Inches	Rain	Kellogg Plant-Process
1/10/2008 0:00	Observed		0.43	Inches	Rain	Kellogg Plant-Process
1/11/2008 0:00	Observed		0.34	Inches	Rain	Kellogg Plant-Process
1/12/2008 0:00	Observed		0.09	Inches	Rain	Kellogg Plant-Process
1/13/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
1/14/2008 0:00	Observed		0.51	Inches	Rain	Kellogg Plant-Process
1/15/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
1/16/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
1/17/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
1/18/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
1/19/2008 0:00	Observed		0.07	Inches	Rain	Kellogg Plant-Process
1/20/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
1/21/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
1/22/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
1/23/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
1/24/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
1/25/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
1/26/2008 0:00	Observed		1.01	Inches	Rain	Kellogg Plant-Process
1/27/2008 0:00	Observed		0.08	Inches	Rain	Kellogg Plant-Process
1/28/2008 0:00	Observed		0.2	Inches	Rain	Kellogg Plant-Process
1/29/2008 0:00	Observed		0.42	Inches	Rain	Kellogg Plant-Process
1/30/2008 0:00	Observed		0.67	Inches	Rain	Kellogg Plant-Process
1/31/2008 0:00	Observed		0.28	Inches	Rain	Kellogg Plant-Process
2/1/2008 0:00	Observed		0.27	Inches	Rain	Kellogg Plant-Process
2/2/2008 0:00	Observed		0.53	Inches	Rain	Kellogg Plant-Process
2/3/2008 0:00	Observed		0.03	Inches	Rain	Kellogg Plant-Process

Sample Date/Time	Sample Type	Result Qualifier	Result Value	Analyte Units	Analyte Name	Location Name
2/4/2008 0:00	Observed		0.04	Inches	Rain	Kellogg Plant-Process
2/5/2008 0:00	Observed		0.17	Inches	Rain	Kellogg Plant-Process
2/6/2008 0:00	Observed		0.98	Inches	Rain	Kellogg Plant-Process
2/7/2008 0:00	Observed		0.09	Inches	Rain	Kellogg Plant-Process
2/8/2008 0:00	Observed		0.2	Inches	Rain	Kellogg Plant-Process
2/9/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
2/10/2008 0:00	Observed		0.02	Inches	Rain	Kellogg Plant-Process
2/11/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
2/12/2008 0:00	Observed		0.03	Inches	Rain	Kellogg Plant-Process
2/13/2008 0:00	Observed		0.03	Inches	Rain	Kellogg Plant-Process
2/14/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
2/15/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
2/16/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
2/17/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
2/18/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
2/19/2008 0:00	Observed		0.05	Inches	Rain	Kellogg Plant-Process
2/20/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
2/21/2008 0:00	Observed		0.02	Inches	Rain	Kellogg Plant-Process
2/22/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
2/23/2008 0:00	Observed		0.07	Inches	Rain	Kellogg Plant-Process
2/24/2008 0:00	Observed		0.02	Inches	Rain	Kellogg Plant-Process
2/25/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
2/26/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
2/27/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
2/28/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
2/29/2008 0:00	Observed		0.2	Inches	Rain	Kellogg Plant-Process
3/1/2008 0:00	Observed		0.25	Inches	Rain	Kellogg Plant-Process
3/2/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
3/3/2008 0:00	Observed		0.06	Inches	Rain	Kellogg Plant-Process
3/4/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
3/5/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
3/6/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
3/7/2008 0:00	Observed		0.36	Inches	Rain	Kellogg Plant-Process
3/8/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
3/9/2008 0:00	Observed		0.03	Inches	Rain	Kellogg Plant-Process
3/10/2008 0:00	Observed		0.18	Inches	Rain	Kellogg Plant-Process
3/11/2008 0:00	Observed		0.03	Inches	Rain	Kellogg Plant-Process

Sample Date/Time	Sample Type	Result Qualifier	Result Value	Analyte Units	Analyte Name	Location Name
3/12/2008 0:00	Observed		0.43	Inches	Rain	Kellogg Plant-Process
3/13/2008 0:00	Observed		0.57	Inches	Rain	Kellogg Plant-Process
3/14/2008 0:00	Observed		0.23	Inches	Rain	Kellogg Plant-Process
3/15/2008 0:00	Observed		0.38	Inches	Rain	Kellogg Plant-Process
3/16/2008 0:00	Observed		0.19	Inches	Rain	Kellogg Plant-Process
3/17/2008 0:00	Observed		0.37	Inches	Rain	Kellogg Plant-Process
3/18/2008 0:00	Observed		0.04	Inches	Rain	Kellogg Plant-Process
3/19/2008 0:00	Observed		0.1	Inches	Rain	Kellogg Plant-Process
3/20/2008 0:00	Observed		0.26	Inches	Rain	Kellogg Plant-Process
3/21/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
3/22/2008 0:00	Observed		0.03	Inches	Rain	Kellogg Plant-Process
3/23/2008 0:00	Observed		0.44	Inches	Rain	Kellogg Plant-Process
3/24/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
3/25/2008 0:00	Observed		0.19	Inches	Rain	Kellogg Plant-Process
3/26/2008 0:00	Observed		0.28	Inches	Rain	Kellogg Plant-Process
3/27/2008 0:00	Observed		0.1	Inches	Rain	Kellogg Plant-Process
3/28/2008 0:00	Observed		0.31	Inches	Rain	Kellogg Plant-Process
3/29/2008 0:00	Observed		0.3	Inches	Rain	Kellogg Plant-Process
3/30/2008 0:00	Observed		0.16	Inches	Rain	Kellogg Plant-Process
3/31/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
4/1/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
4/2/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
4/3/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
4/4/2008 0:00	Observed		0.13	Inches	Rain	Kellogg Plant-Process
4/5/2008 0:00	Observed		0.11	Inches	Rain	Kellogg Plant-Process
4/6/2008 0:00	Observed		0.1	Inches	Rain	Kellogg Plant-Process
4/7/2008 0:00	Observed		0.17	Inches	Rain	Kellogg Plant-Process
4/8/2008 0:00	Observed		0.17	Inches	Rain	Kellogg Plant-Process
4/9/2008 0:00	Observed		0.07	Inches	Rain	Kellogg Plant-Process
4/10/2008 0:00	Observed		0.03	Inches	Rain	Kellogg Plant-Process
4/11/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
4/12/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
4/13/2008 0:00	Observed		0.05	Inches	Rain	Kellogg Plant-Process
4/14/2008 0:00	Observed		0.07	Inches	Rain	Kellogg Plant-Process
4/15/2008 0:00	Observed		0.14	Inches	Rain	Kellogg Plant-Process
4/16/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
4/17/2008 0:00	Observed		0.02	Inches	Rain	Kellogg Plant-Process

Sample Date/Time	Sample Type	Result Qualifier	Result Value	Analyte Units	Analyte Name	Location Name
4/18/2008 0:00	Observed		0.02	Inches	Rain	Kellogg Plant-Process
4/19/2008 0:00	Observed		0.03	Inches	Rain	Kellogg Plant-Process
4/20/2008 0:00	Observed		0.08	Inches	Rain	Kellogg Plant-Process
4/21/2008 0:00	Observed		0.29	Inches	Rain	Kellogg Plant-Process
4/22/2008 0:00	Observed		0.61	Inches	Rain	Kellogg Plant-Process
4/23/2008 0:00	Observed		0.17	Inches	Rain	Kellogg Plant-Process
4/24/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
4/25/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
4/26/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
4/27/2008 0:00	Observed		0.04	Inches	Rain	Kellogg Plant-Process
4/28/2008 0:00	Observed		0.12	Inches	Rain	Kellogg Plant-Process
4/29/2008 0:00	Observed		0.24	Inches	Rain	Kellogg Plant-Process
4/30/2008 0:00	Observed		0.1	Inches	Rain	Kellogg Plant-Process
5/1/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
5/2/2008 0:00	Observed		0.02	Inches	Rain	Kellogg Plant-Process
5/3/2008 0:00	Observed		0.1	Inches	Rain	Kellogg Plant-Process
5/4/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
5/5/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
5/6/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
5/7/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
5/8/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
5/9/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
5/10/2008 0:00	Observed		0.01	Inches	Rain	Kellogg Plant-Process
5/11/2008 0:00	Observed		0.01	Inches	Rain	Kellogg Plant-Process
5/12/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
5/13/2008 0:00	Observed		0.08	Inches	Rain	Kellogg Plant-Process
5/14/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
5/15/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
5/16/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
5/17/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
5/18/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
5/19/2008 0:00	Observed		0.01	Inches	Rain	Kellogg Plant-Process
5/20/2008 0:00	Observed		0.27	Inches	Rain	Kellogg Plant-Process
5/21/2008 0:00	Observed		0.03	Inches	Rain	Kellogg Plant-Process
5/22/2008 0:00	Observed		0.1	Inches	Rain	Kellogg Plant-Process
5/23/2008 0:00	Observed		0.2	Inches	Rain	Kellogg Plant-Process
5/24/2008 0:00	Observed		0.24	Inches	Rain	Kellogg Plant-Process

Sample Date/Time	Sample Type	Result Qualifier	Result Value	Analyte Units	Analyte Name	Location Name
5/25/2008 0:00	Observed		0.15	Inches	Rain	Kellogg Plant-Process
5/26/2008 0:00	Observed		0.12	Inches	Rain	Kellogg Plant-Process
5/27/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
5/28/2008 0:00	Observed		0.33	Inches	Rain	Kellogg Plant-Process
5/29/2008 0:00	Observed		0.05	Inches	Rain	Kellogg Plant-Process
5/30/2008 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
5/31/08 0:00	Observed		0.05	Inches	Rain	Kellogg Plant-Process
6/1/08 0:00	Observed		0.1	Inches	Rain	Kellogg Plant-Process
6/2/08 0:00	Observed		0.49	Inches	Rain	Kellogg Plant-Process
6/3/08 0:00	Observed		0.17	Inches	Rain	Kellogg Plant-Process
6/4/08 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
6/5/08 0:00	Observed		0.05	Inches	Rain	Kellogg Plant-Process
6/6/08 0:00	Observed		0.1	Inches	Rain	Kellogg Plant-Process
6/7/08 0:00	Observed		0.02	Inches	Rain	Kellogg Plant-Process
6/8/08 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
6/9/08 0:00	Observed		0.14	Inches	Rain	Kellogg Plant-Process
6/10/08 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
6/11/08 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
6/12/08 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
6/13/08 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
6/14/08 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
6/15/08 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
6/16/08 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
6/17/08 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
6/18/08 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
6/19/08 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
6/20/08 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
6/21/08 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
6/22/08 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
6/23/08 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
6/24/08 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
6/25/08 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
6/26/08 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
6/27/08 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
6/28/08 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process
6/29/08 0:00	Observed		0.02	Inches	Rain	Kellogg Plant-Process
6/30/08 0:00	Observed		0	Inches	Rain	Kellogg Plant-Process

Appendix A
Outfall Inventory for Use in Illicit Discharge Inspections

ID #	Dia.	Address		
25245	48.00	8810	SE	ROCKVORST
25019	24.00	2700	SE	BOYD
25237	48.00	2211	SE	OCHOCO
25238	11.50	2211	SE	OCHOCO
25246	12.00	9097	SE	MCCLOUGHLIN
25235	10.00	9200	SE	MCCBROD
25236	18.00	9097	SE	MCCLOUGHLIN
25273	18.00	9079	SE	MCCLOUGHLIN
25283	0.00	2381	SE	CLATSOP
25019	24.00	2700	SE	BOYD
25210	18.00	10505	SE	17TH
25213	24.00	10700	SE	MCCLOUGHLIN
25219	18.00	10500	SE	26TH
25221	12.00	10501	SE	MAIN
45008	12.00	12511	SE	GUILFORD
45009	24.00	3606	SE	LAKE
45010	24.00	3600	SE	LICYNTRA
45011	12.00	3926	SE	LICYNTRA
45013	20.00	4206	SE	SOMEWHERE
45014	21.00	4296	SE	BRAE
45015	18.00	4586	SE	RYAN
15001	24.00	12201	SE	19TH
45016	12.00	11100	SE	MCCLOUGHLIN
45017	24.00	11222	SE	MAIN
65007	32.00	12515	SE	70TH
65017	18.00	12515	SE	70TH
65008	12.00	12515	SE	70TH
65015	30.00	6201	SE	HARMONY
65016	0.00	12582	SE	LINWOOD
65027	48.00	13001	SE	RUSK

ID #	Dia.	Address		
65001	12.00	10890	SE	OAK
65002	24.00	10890	SE	OAK
65003	24.00	10890	SE	OAK
65004	12.00	11400	SE	37TH
65005	18.00	4141	SE	RAILROAD
65019	24.00	4243	SE	INTERNATIONAL
65029	54.00	4700	SE	INTERNATIONAL
65031	0.00	4700	SE	INTERNATIONAL
65032	48.00	4700	SE	INTERNATIONAL
25262	48.00	4539	SE	BROOKSIDE
25244	0.00	9301	SE	WICHITA
25261	8.00	5015	SE	BROOKSIDE
25264	24.00	5110	SE	JOHNSON CREEK
25266	12.00	5543	SE	TAMBARA
25267	10.00	5249	SE	BROOKSIDE
25274	12.00	4708	SE	JOHNSON CREEK
25275	10.00	5145	SE	BROOKSIDE
25333	18.00	9000	SE	MCBROD
25225	18.00	9800	SE	MCBROD
25226	36.00	9501	SE	MCLOUGHLIN
25227	21.00	9501	SE	MCLOUGHLIN
25228	24.00	9701	SE	MCLOUGHLIN
25232	18.00	2808	SE	BALFOUR
45006	12.00	12374	SE	OATFIELD
45007	10.00	12368	SE	OATFIELD
65011	0.00	12045	SE	STANLEY
65012	10.00	121396	SE	MAPLE
65013	15.00	12425	SE	ASH
65014	10.00	12476	SE	GROVE
65020	12.00	5124	SE	APPENINE
65021	0.00	11880	SE	HOME
65022	12.00	12015	SE	VIVALDI
65023	24.00	12172	SE	BECKMAN
65028	0.00	12045	SE	STANLEY

64 outfalls that are inspected annually

Appendix B

Summary of Milwaukie 1200-Z Permits

WQ File Number	SIC	Legal Name	City	County	Permit Type	Is Active
63545	3425	Blount, Inc	Milwaukie	Clackamas	GEN12Z	True
107733	3561	Harder Mechanical Contractors Inc	Milwaukie	Clackamas	GEN12Z	True
101867	3612	OECO Corporation	Milwaukie	Clackamas	GEN12Z	True
113693	4225	Oregon Transfer Co.	Milwaukie	Clackamas	GEN12Z	True
115817	3369	PCC Structurals. Inc	Milwaukie	Clackamas	GEN12Z	True

Table generated per DEQ's website, accessed 04/14/08, and modified per discussion with the City of Milwaukie: <http://www.deq.state.or.us/wq/sisdata/facilitycriteria.asp>

**Appendix C
B-1 & B-2 Monitoring Tables
for City of Milwaukie**

Table B-1: Milwaukie Sampling Types and Locations			
Sampling Type	Location(s)	Minimum Sample Frequency	Responsible Co-Permitee
MS4 Discharge Monitoring	One outfall in the city of Milwaukie	Three storm events per July 1 to June 30 reporting period	City of Milwaukie
In Stream	One Creek in the city of Milwaukie	Four visits per July 1 to June 30 reporting period	City of Milwaukie
In Stream Johnson Creek	Continuous Monitoring Station	Continuous	US Geological Survey (Portland)

Table B-2: Milwaukie Analytical Parameters MS4 Discharge Monitoring and In Stream Monitoring	
FIELD PARAMETERS	Conductivity pH Dissolved Oxygen Water Temperature
TOTAL METALS	Copper Lead Zinc
OTHER	Total Suspended Solids, Hardness
NUTRIENTS	Nitrate Ammonia Orthophosphate Total Phosphorus
BIOLOGICAL	Ecoli