

CITY OF GLADSTONE

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
MUNICIPAL STORMWATER SYSTEM ANNUAL REPORT**

The undersigned hereby submits this National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater 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 submitted 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 knowing violations.

Ron Partch, City Administrator
City of Gladstone

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1.0 Introduction and Permit Background

The Oregon Department of Environmental Quality (DEQ) regulates stormwater runoff from the City of Gladstone 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 Gladstone along with a number of other smaller jurisdictions including the cities of Lake Oswego, Oregon City, West Linn, Milwaukie, 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 Stormwater Management Plan (SWMP). This annual report for permit year 13 (or permit year 3 under the renewed permit dated 2004) documents activities from July 1, 2007 to June 30, 2008 as related to the City of Gladstone's stormwater 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 stormwater management program;*

See Section 2.0 for a summary of the performance measures and program monitoring requirements as documented in the City's current, approved 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, approved SWMP, which was approved by DEQ July 31, 2006. A revised SWMP has been completed as part of the NPDES permit renewal submittal (dated September 2, 2008), but has not been approved by DEQ as of yet. Thus, this annual report was developed based on the most current, approved SWMP (dated 2006) and associated BMPs.

- iii) *A summary of total stormwater 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 stormwater 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 regarding water quality characteristics and observations within the City.

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

See Section 3.2 for the statement 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). Again, this report emphasizes efforts and activities associated with individual Best Management Practices (BMPs) from the City's SWMP (summarized in Section 2.0), which was approved by DEQ on July 31, 2006.

2.0 Implementation of the City of Gladstone's SWMP

Tables 2-1 through 2-5 summarize the performance measures and program monitoring activities associated with the City of Gladstone'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 and Trainings 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) <i>Maintenance activities and a maintenance schedule for structural controls to reduce pollutants (including floatables) in discharges from municipal separate storm sewers.</i></p>				
<p>BMP –Stormwater Conveyance System Cleaning and Maintenance</p>				
<p>BMP Owner: City of Gladstone Public Works Department Permit Year: Ongoing Implementation Activities: The City of Gladstone inspects, maintains and/or repairs stormwater conveyance system components including culverts, conveyance ditches, and catch basins. Culverts and conveyance ditches are inspected annually and cleaned as needed; catch basins are inspected and cleaned annually at a minimum; and conveyance ditches are inspected for trash and debris that may prevent stormwater from freely discharging through the conveyance system.</p>	<p>(1) Record the number of conveyance system facilities (ditches, culverts, catchbasins) maintained annually. (2) Estimate the volume of debris removed from catch basins during cleaning activities. (3) Track changes to the inspection and maintenance procedures.</p>	<p>2005/2006</p> <p>(1) The following number of conveyance system facilities were inspected/ maintained:</p> <ul style="list-style-type: none"> • Catch basins = 214 maintained. • Ditches = 3 inspected, no maintenance necessary. • Culverts = 4 inspected, no maintenance necessary. <p>(2) During permit year 11, approximately 7.25 cubic yards of material was removed during catch basin maintenance activities.</p> <p>(3) No changes were proposed or made to the existing inspection and maintenance procedures.</p>	<p>2006/2007</p> <p>(1) The following number of conveyance system facilities were inspected/ maintained:</p> <ul style="list-style-type: none"> • Catch basins = 314 maintained • Ditches = 3 inspected, no maintenance necessary. • Culverts = 4 inspected, no maintenance necessary. <p>(2) During permit year 12, approx. 10 cubic yards of material was removed during catch basin maintenance activities.</p> <p>(3) No changes were proposed or made to the existing inspection and maintenance procedures.</p>	<p>2007/2008</p> <p>(1) The following number of conveyance system facilities were inspected/ maintained:</p> <ul style="list-style-type: none"> • Catch basins = 150 inspected. • Ditches = 3 inspected. • Culverts = 1 inspected. <p>(2) During permit year 13, approx. 5-10 cubic yards of material was removed during catch basin maintenance activities.</p> <p>(3) No changes were proposed or made to the existing inspection and maintenance procedures.</p>

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
BMP –Structural and Pollution Control Facility Cleaning and Maintenance				
<p>BMP Owner: City of Gladstone Public Works Department</p> <p>Permit Year: Ongoing</p> <p>Implementation Activities: The City of Gladstone inspects, maintains and/or repairs public structural control facilities within the City. Currently, the only public structural control facility is an oil/water separator located at the public works fleet maintenance yard.</p> <p>Private structural control facilities within the City of Gladstone include oil/water separators and a wetland. City staff periodically inspects the private wetland facility, as it is located in a public park.</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 and 2) The following structural facilities were inspected during permit year 11:</p> <ul style="list-style-type: none"> • Public Oil/ Water Separator – Inspected and pumped twice during permit year 11. • The private wetland facility at Meldrum Bar Park was inspected once during permit year 11. 	<p>2006/2007</p> <p>(1 and 2) The following structural facilities were inspected during permit year 12:</p> <ul style="list-style-type: none"> • Public oil/water separator inspected and pumped once. • The private wetland facility at Meldrum Bar Park was inspected once. 	<p>2007/2008</p> <p>(1) The following structural facilities were inspected during permit year 13:</p> <ul style="list-style-type: none"> • Public oil/water separator was inspected. <p>(2) None; maintenance was not required.</p>

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 – Review of New and Redevelopment Plans for Stormwater Components</p>				
<p>BMP Owner: City of Gladstone Public Works Department and Clackamas County Department of Transportation and Development Permit Year: Ongoing Implementation Activities: The City of Gladstone does have an intergovernmental agreement (IGA) with Clackamas County Department of Transportation and Development (DTD) for assistance with development review activities including land use planning, zoning, and enforcement. The City of Gladstone will review other jurisdictions surface/stormwater management guidelines for more explicit water quality design standards to incorporate into their City Municipal Code for new and redevelopment.</p>	<p>(1) Record the number of development applications reviewed for compliance with stormwater regulations. (2) Track any modifications made to City of Gladstone Municipal Code, to incorporate more specific stormwater guidelines.</p>	<p>2005/2006</p> <p>(1) The city reviewed the following development applications for compliance with existing stormwater requirements:</p> <ul style="list-style-type: none"> • Development of 13 residential lots from three applications; • Remodel of an existing auto dealership; construction of two accessory buildings on city-owned property; • A fill and grading permit allowing for construction of curb and sidewalk along city owned property; • A five-acre mixed use, residential and commercial development. <p>(2) City staff obtained a copy of the City of Oregon City’s stormwater guidelines and intends to request advice from the city’s consultant prior to preparing an ordinance.</p>	<p>2006/2007</p> <p>(1) The following development applications were reviewed for compliance with existing storm water requirements:</p> <ul style="list-style-type: none"> • Development of 7 residential lots from three applications; • Additions to two churches that involved expansion of school facilities; • Redevelopment of an existing auto dealer on a four acre site; • Addition to the city’s fire station; • Additions to three existing commercial developments. <p>(2) An ordinance has not yet been prepared pending advice from the city’s consultant.</p>	<p>2007/2008</p> <p>(1) The following development applications were reviewed for compliance with existing storm water requirements:</p> <ul style="list-style-type: none"> • Residential development applications: 3 • Remodel or addition applications: <ul style="list-style-type: none"> - 15 residential - 9 commercial - 6 demolition • Fill and grading permits: 0 • Commercial or mixed use development applications: 11 <p>(2) An ordinance has not yet been prepared pending advice from the city’s consultant. This is expected to occur by January 2009.</p>

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
<p>NPDES Permit Requirement – (3) <i>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.</i></p>				
<p>BMP – Street Maintenance</p>				
<p>BMP Owner: City of Gladstone Public Works Department</p> <p>Permit Year: Ongoing</p> <p>Implementation Activities: The City of Gladstone continues to conduct street sweeping 4-6 times per year depending on seasonal conditions throughout the City. The City also conducts scheduled winter leaf pick up (October to January) and weekly curbside collection of yard debris with garbage collection in order to minimize flooding and prevent transport of organics into the stormwater conveyance system.</p>	<p>(1) Track the number of miles of road swept per year.</p> <p>(2) Estimate the proportion of residences participating in the winter leaf collection program.</p>	<p>2005/2006</p> <p>(1) During permit year 11, approximately 240 lane miles of roadway were swept.</p> <p>(2) The City of Gladstone estimates that participation in the leaf pick up program likely exceeds seventy percent of residences on an annual basis.</p>	<p>2006/2007</p> <p>(1) During permit year 12, approximately 894 lane miles of roadway were swept.</p> <p>(2) The City of Gladstone estimates that participation in the leaf pick up program likely exceeds seventy percent of residences on an annual basis, and during permit year 12, approximately 1,640 cubic yards of leaves were removed.</p>	<p>2007/2008</p> <p>(1) During permit year 13, approximately 606 lane miles of roadway were swept.</p> <p>(2) The City of Gladstone estimates that participation in the leaf pick up program is 80% - 90% of residences on an annual basis.</p>

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
<p>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.</p>				
<p>BMP – Consideration of Water Quality with Flood Control Projects</p>				
<p>BMP Owner: City of Gladstone Public Works Department</p> <p>Permit Year: Ongoing</p> <p>Implementation Activities: The City is currently reviewing other local jurisdictions (Clackamas County Water Environment Services, City of Oregon City) surface/stormwater management guidelines for more explicit water quality design standards, and the City will reference these standards to evaluate and assess water quality when constructing various public works projects.</p>	<p>(1) Record public works projects constructed annually.</p> <p>(2) Track the development of a process to assess water quality during flood management projects.</p>	<p>2005/2006</p> <p>(1)The City constructed the following public works projects during permit year 11:</p> <ul style="list-style-type: none"> • The extension of a waterline beneath McLoughlin Blvd; • Asphalt paving of several city streets; • Construction of curb and sidewalk along sections of Webster Road, Oatfield Road and Cason Road. <p>(2)The City is currently reviewing the storm water guidelines for other local jurisdictions with the intent to preparing an ordinance.</p>	<p>2006/2007</p> <p>(1)The following public works projects were constructed during permit year 12:</p> <ul style="list-style-type: none"> • Replacement of a water line in River Road; • Asphalt paved six streets; • Reconstructed W. Gloucester Street. <p>(2)The City is currently reviewing storm water guidelines from other local jurisdictions with the intent of preparing an ordinance.</p>	<p>2007/2008</p> <p>(1) Approximately 12 streets were asphalt overlaid or chip sealed by Public Works during permit year 13.</p> <p>(2) The City is currently reviewing storm water guidelines from other local jurisdictions with the intent of preparing an ordinance.</p>
<p>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)).</p>				
<p>There are no open or closed landfills or other municipal waste handling facilities within the City of Gladstone.</p>	<p>N/A</p>	<p>2005/2006</p> <p>N/A</p>	<p>2006/2007</p> <p>N/A</p>	<p>2007/2008</p> <p>N/A</p>

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
<p>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.</p>				
<p>BMP – Minimize Impacts Associated with Landscape Maintenance Practices</p>				
<p>BMP Owner: City of Gladstone Public Works Department</p> <p>Permit Year: Ongoing</p> <p>Implementation Activities: The City of Gladstone conducts landscape maintenance and pest management activities on public park, roadside, and open space areas. Pest management activities are generally focused on low pollutant generating practices including the manual removal of non-native vegetation species and the avoidance of herbicide application near waterways. The City of Gladstone is currently reviewing the City of Portland's IPM guidelines and may consider adopting a more formal pest management program.</p>	<p>(1) Estimate the relative volume of herbicide and fertilizers applied by the City, based on purchasing records.</p> <p>(2) Track the development of a more formal pest management program (per City's consideration of Portland's IPM program).</p>	<p>2005/2006</p> <p>(1) The City of Gladstone Public Works Department purchased approximately one ton of fertilizer and 25 gallons of herbicide during permit year 11.</p> <p>(2) The City of Portland's IPM guidelines were reviewed during permit year 11. However, the City that guidelines followed by smaller jurisdictions (with similar resources) would be a more appropriate template for the City to follow. The City will continue looking into other jurisdictions pest management protocol.</p>	<p>2006/2007</p> <p>(1)The Public Works Department purchased approx. one ton of fertilizer and reduced herbicide purchases to 5.56 gallons during permit year 12.</p> <p>(2) The city will continue looking into IPM guidelines from other jurisdictions of comparable size.</p>	<p>2007/2008</p> <p>(1) The Public Works Department purchased approximately 500 lbs of fertilizer and 17.2 quarts of herbicides during permit year 13.</p> <p>(2) The city is currently reviewing the City of Portland's IPM guidelines and plans to use the document as guidance for pest management activities where appropriate.</p>

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>				
BMP – Illicit Discharges Elimination Program				
<p>BMP Owner: City of Gladstone Public Works Department</p> <p>Permit Year: Ongoing</p> <p>Implementation Activities: The City of Gladstone conducts illicit discharge inspections, monitoring, and investigations annually during dry-weather conditions (typically between July and September) on all major outfalls and select minor outfalls.</p>	<p>(1) Track the number and location of outfalls inspected annually.</p> <p>(2) Indicate all illicit discharge inspection results and indicate outfalls requiring monitoring and/ or investigation.</p> <p>(3) Describe the outcome and resolution of any investigation activities conducted.</p>	<p>2005/2006</p> <p>(1) All major outfalls were inspected during permit year 11.</p> <p>(2) One illicit discharge was observed this year. As the property owner was no longer conducting business in the city, DEQ became involved in order to implement penalties.</p> <p>DEQ required the property owner in violation, listed above, to submit and implement an employee educational plan on proper material handling, storage, and disposal of waste and to pay a fine.</p>	<p>2006/2007</p> <p>(1) All major outfalls were inspected during permit year 12. A photographic record and brief notes were made for each outfall inspection, which are available at Public Works.</p> <p>(2) No illicit discharges were reported or investigated during permit year 12.</p>	<p>2007/2008</p> <p>(1) One (1) outfall was inspected during permit year 13.</p> <p>(2) No illicit discharges were reported or investigated during permit year 13.</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 –Spill Response				
<p>BMP Owner: City of Gladstone Fire Department</p> <p>Permit Year: Ongoing</p> <p>Implementation Activities: Initial spill response within the City is the responsibility of the Gladstone Fire Department. When a spill is reported, the Fire Department is initially dispatched, and they determine whether or not to contact the DEQ Hazardous Materials Team for additional assistance. The Public Works Department may assist the Fire Department with containment and/or clean up, depending on the volume and hazardous rating of the spilled material.</p>	<p>(1) Indicate the number of spills reported to the Gladstone Fire Department annually.</p> <p>(2) Indicate sources, causes, and resulting water quality problems resulting from spill activities.</p>	<p>2005/2006</p> <p>(1 and 2) The spill incident documented under the illicit discharge BMP was initially reported to the Fire Department before being turned over to DEQ.</p>	<p>2006/2007</p> <p>(1) No spills were reported to the Fire Department during year 12.</p>	<p>2007/2008</p> <p>(1) No spills were reported to the Fire Department during year 13.</p>
NPDES Permit Requirement - (5) 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.				
A Description of the City’s Public Reporting Program in Table 2-5.				
NPDES Permit Requirement - (6) Educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials.				
A Description of the City’s Public Informational Activities regarding management of hazardous materials is included in Table 2-5.				

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
NPDES Permit Requirement - (7) Controls to limit infiltration of seepage from municipal sanitary sewers to municipal separate storm sewer systems where necessary				
BMP – Control Infiltration and Cross Connections to the Stormwater Conveyance System				
<p>BMP Owner: City of Gladstone Public Works Department and various departments of Clackamas County</p> <p>Permit Year: Ongoing</p> <p>Implementation Activities: The City of Gladstone’s development review process and coordination with Clackamas County DTD and the City’s illicit discharge inspection and investigation program all work to prevent and resolve any possible cross-connections of sanitary and storm lines.</p> <p>The City of Gladstone contracts with Clackamas County for emergency services activities including inflow and infiltration (I & I) investigations for their sanitary collection system.</p>	<p>(1) Indicate whether any cross-connections were discovered during the plan review process or during illicit discharge investigations, and describe follow-up activities.</p>	<p>2005/2006</p> <p>(1) Per results of the illicit discharge inspections and plan review process, no cross connections were observed.</p>	<p>2006/2007</p> <p>(1) No cross connections were observed during year 12.</p>	<p>2007/2008</p> <p>(1) No cross connections were observed during year 13.</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 – Industrial Inspections and Control</p>				
<p>BMP Owner: City of Gladstone Public Works Department and Fire Department</p> <p>Permit Year: Ongoing</p> <p>Implementation Activities: Annually, the Fire Department will inspect specific industrial facilities for appropriate stormwater controls and surface water pollution prevention, in conjunction with the business inspection activities. Industrial facilities may also be inspected in accordance with illicit discharge investigations.</p> <p>Industrial monitoring activities generally occur during the illicit discharge monitoring and investigations.</p>	<p>(1) Indicate the number of industrial inspections conducted (during the business inspection activities) for stormwater.</p> <p>(2) Report status and abatement measures for any industry found to be inappropriately discharging to the municipal stormwater system.</p>	<p>2005/2006</p> <p>(1 and 2) Combining the industrial inspections with the business inspection program is a performance measure added to the updated SWMP that was approved during permit 12. The City is currently drafting the inspection form to be used during such inspections, and this performance measure will be tracked during permit year 12 and reported in the annual report for permit year 12.</p> <p>Note that an illicit discharge from an industrial source was observed and abated per the BMP: Illicit Discharge Elimination Program.</p>	<p>2006/2007</p> <p>(1) Six combined business and industrial inspections were made by the Fire Department during permit year 12 using newly designed forms.</p> <p>(2) No abatement measures were needed because no inappropriate discharges were discovered.</p>	<p>2007/2008</p> <p>(1) Four (4) combined business and industrial inspections were made by the Fire Department during permit year 13 using newly designed forms.</p> <p>(2) No abatement measures were needed because no inappropriate discharges were discovered.</p>

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

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
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.				
BMP – Require Erosion Control for New and Redevelopment				
<p>BMP Owner: City of Gladstone Public Works Department, City of Gladstone Administration, and Clackamas County Service District #1</p> <p>Permit Year: Ongoing</p> <p>Implementation Activities: The City of Gladstone has an IGA with Clackamas County Service District #1 (CCSD#1) for a variety of erosion control services including review and approval of erosion control plans, attendance at pre-construction conferences, site inspections during construction activities, and notification to the City of enforcement needs. Plan review is conducted by CCSD#1 in accordance with the guidelines established in the City of Gladstone’s Municipal Code.</p>	<p>(1) Report any updates or modifications to the “<i>Erosion Prevention and Sediment Control Planning and Design Manual (2000)</i>” (the City’s source for their erosion control standards).</p> <p>(2) Renew the IGA with CCSD#1 for erosion control services as needed.</p>	<p>2005/2006</p> <p>(1) There have been no updates to the “<i>Erosion Prevention and Sediment Control Planning and Design Manual</i>” during permit year 11.</p> <p>(2) The IGA for erosion control services was signed in 2001 with a 5-year term, renewable automatically for another five years unless specifically requested by either party. Neither party has requested a change in the agreement.</p>	<p>2006/2007</p> <p>(1) There have been no updates to the “<i>Erosion Prevention and Sediment Control Planning and Design Manual</i>” during permit year 12.</p> <p>(2) The IGA for erosion control services was signed in 2001 with a 5-year term, renewable automatically for another five years unless specifically requested by either party. Neither party has requested a change in the agreement.</p>	<p>2007/2008</p> <p>(1) There have been no updates to the “<i>Erosion Prevention and Sediment Control Planning and Design Manual</i>” during permit year 13.</p> <p>(2) The IGA for erosion control services was signed in 2001 with a 5-year term, renewable automatically for another five years unless specifically requested by either party. Neither party has requested a change in the agreement.</p>

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
NPDES Permit Requirement - (3) 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				
BMP – Conduct Erosion Control Inspections				
<p>BMP Owner: City of Gladstone Public Works Department and Clackamas County Service District #1</p> <p>Permit Year: Ongoing</p> <p>Implementation Activities: The City of Gladstone has an IGA with Clackamas County Service District #1 (CCSD#1) authorizing CCSD#1 to conduct erosion control inspections on the City’s behalf. During construction activities, sites will be inspected a minimum of twice during construction activities, consistent with County’s current inspection frequency.</p> <p>If non-compliance is observed, CCSD#1 informs the City of Gladstone that enforcement actions are necessary.</p>	<p>(1) Report the number of erosion control inspections conducted each year.</p> <p>(2) Report the number of erosion control violations discovered during inspections, and describe methods to resolve the issue.</p>	<p>2005/2006</p> <p>(1) The reporting of the number of erosion control inspections is a performance measure added to the updated SWMP that was approved during permit 12. This performance measure will be tracked during permit year 12 and reported in the annual report for permit year 12.</p> <p>(2) No erosion control violations were reported to the City by Clackamas County.</p>	<p>2006/2007</p> <p>(1) Clackamas County Water Environment Services, specifically Clackamas County Service District #1, performs erosion control inspections for the city (and other jurisdictions) pursuant to intergovernmental agreement. The County advises that inspections were made during permit year 12, which may be viewed from the county year end report. However, due to limitation of its current software, inspection results from individual jurisdictions cannot be segregated. The County advises its software is being upgraded, and results for City inspections will be available during permit year 13.</p>	<p>2007/2008</p> <p>(1) CCSD#1 conducted the following inspections in permit year 13 on behalf of the City of Gladstone:</p> <ul style="list-style-type: none"> - 8 single-family - 6 commercial <p>(2) No erosion control violations were reported to the City by Clackamas County.</p>
NPDES Permit Requirement - (4) Appropriate educational and training measures for construction site operators.				
A Description of the City’s Educational Program for Construction Site Operators is included in 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 - (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.</p>				
<p>NPDES Permit Requirement, Component 2 - (5) 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 2 - (6) 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 Stormwater Management</p>				
<p>BMP Owner: City of Gladstone Public Works Department and City of Gladstone Administration</p> <p>Permit Year: Ongoing</p> <p>Implementation Activities: The City of Gladstone 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> <ol style="list-style-type: none"> 1. The application of pesticides, herbicides and fertilizers by citizens. 2. Illicit discharges and dumping of waste materials into the storm drainage system. 3. Disposal of waste oil and toxic materials. 	<ol style="list-style-type: none"> (1) Track the number and content of informational articles published in the City newsletter. (2) Indicate participation in any cooperative public education campaign. (3) Record the number of catch basins stenciled in a given year. 	<p>2005/2006</p> <ol style="list-style-type: none"> (1) An article in the February, 2006 edition of the City newsletter described the Clean Water Act and the City's participation in the NPDES program and advertised the opportunity for the public to review the proposed storm water management plan. (2) The City of Gladstone is 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. The City of Gladstone also participates in a community wide leaf pick-up program. A schedule and map are published in the September city 	<p>2006/2007</p> <ol style="list-style-type: none"> (1) Among other educational materials, the city made available to the public the brochure "Managing Concrete and Mortar to Protect Water Quality", which was developed by Clackamas County Water Environment Services. The brochure also discusses the Federal Clean Water Act and laws that prohibit discharges of non-storm water into waters of the United States. (2) The City of Gladstone has continued its partnership with other jurisdictions in developing regional advertising to promote healthy streams. (3) 314 catch basins were stenciled during permit 	<p>2007/2008</p> <ol style="list-style-type: none"> (1) 10-19-07: Article 1: Rinearson Creek, SOLV & Ivy Warriors – Rinearson creek being restored. Article 2: Winter Water Tips 11-16-07: Saving Water Indoors 12-18-07: Water Quality and You. Rinearson Creek Update. 02-21-08: Impacts of Urban Stormwater Runoff. 03-24-08: Save Water/Conserve Energy Tips. Willamette River TMDL's. 07-15-08: Storm Water Permit 10-10-08: Winterize Irrigation Systems.

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
		newsletter. (3) A new stencil was applied to each of the 214 catch basin that were cleaned.	year 12.	(2) The City of Gladstone has continued its partnership with other jurisdictions in developing regional advertising to promote healthy streams. (3) No catch basins were stenciled during permit year 13.
NPDES Permit Requirement, Component 4 – (4) Appropriate educational and training measures for construction site operators.				
BMP – Provide Educational Information to Construction Site Operators				
BMP Owner: City of Gladstone Public Works Department Permit Year: Ongoing Implementation Activities: The City of Gladstone supplies their technical guidance manual, the <i>Erosion Prevention and Sediment Control Planning and Design Manual (2000)</i> to engineers, contractors, and the general public.	(1) Indicate the number of <i>Design Manuals</i> distributed each year.	2005/2006 (1) No design manuals were distributed.	2006/2007 (1) No design manuals were distributed.	2007/2008 (1) Four (4) design manuals were distributed.
Additional Coordination Efforts				
BMP –Intergovernmental Coordination				
BMP Owner: City of Gladstone Administration Permit Year: Ongoing Implementation Activities: The City of Gladstone will	(1) Indicate groups, committees, and organizations with which the City is currently participating as related to stormwater.	2005/2006 (1) The City of Gladstone is currently involved with the following groups and organizations:	2006/2007 (1) The City of Gladstone continues its partnership with the following groups and	2007/2008 (1) The City of Gladstone continues its partnership with the following groups and

BMP Implementation Summary	Annual Performance Measures	SWMP Implementation		
<p>continue to meet and coordinate with Clackamas County and other Clackamas County co-permittees regarding regional water quality and stormwater management efforts. The City of Gladstone has an established IGA with departments of Clackamas County and districts run by Clackamas County for assistance with erosion control, development review and Pretreatment. Gladstone also participates with federal, state, and local agencies and groups involved with a broad range of water quality issues including stormwater.</p>	<p>(2) Report any revised and/or updated IGAs.</p>	<ul style="list-style-type: none"> • Clackamas County NPDES Co-permittees • Oregon Association of Clean Water Agencies • Regional Coalition of Clean Rivers and Streams • Willamette River Water Coalition <p>(2) There have been no updated or revised IGAs during this permit year.</p>	<p>organizations:</p> <ul style="list-style-type: none"> • Clackamas County NPDES Co-Permittees • Oregon Association of Clean Water Agencies • Regional Coalition of Clean Rivers and Streams <p>(2) There have been no changes to IGA's during this permit year.</p>	<p>organizations:</p> <ul style="list-style-type: none"> • Clackamas County NPDES Co-Permittees • Oregon Association of Clean Water Agencies • Regional Coalition of Clean Rivers and Streams • SOLV • Friends of Rinearson Creek • Ivy Warriors • Willamette Riverkeeper • DEQ's Volunteer in Action • Oregon Dept. of Fish and Wildlife • Clackamas Soil & Conservation District • Rinearson Neighborhood Association • Audubon Society • Gladstone High School <p>(2) There have been no changes to IGA's during this permit year.</p>

3.0 Additional Annual Report Requirements

3.1 Summary of Expenditures

The City of Gladstone's storm water management program is unique in that it is not funded by a separate storm water utility. Rather, it is funded entirely from rates and utility bills paid by sewer customers. Last year, total revenue from the sewer fund equaled \$1.2 million dollars. Of that revenue, approximately \$200,000 was transferred to a general fund to help reimburse administrative staff and fund contractors currently working on the storm water management program. This includes costs for street sweeping, catch basin cleaning, and consulting services. The revenue and expenditures for the next permit year are expected to be similar to those for this permit year.

3.2 Demonstration of Continued Legal Authority

The City of Gladstone has the legal authority to enforce compliance with provisions documented in its Municipal Code. Enforcement procedures and penalties for non-compliance are also defined within sections of the Municipal Code. Pertinent sections of the municipal code are related to erosion control, development, drainage, and illegal connections to the sanitary system. The City has the legal authority to investigate potential illicit connections to the storm drainage system through provisions of State Law.

3.3 Overview of Planning, Land Use Changes and Development Activities Within the UGB

The city engaged in no concept planning activities relating to MS4 discharges. There were no land use changes during the previous year. There were no development activities that occurred within UGB expansion areas during the previous year, and none forecast for next year. The City of Gladstone is located entirely within the Portland area UGB, and only a very small section of city limits is located adjacent to an area that's not within the UGB; this area lies along the Clackamas River, is within the 100-year floodplain and is used for agricultural purposes. For these reasons, development activity is very unlikely in this area.

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 Gladstone, 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 Gladstone'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 Gladstone 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. The plan is intended for implementation beginning July 1, 2007, so this year (permit year 13) is the first year associated with implementation of this monitoring plan.

4.2 Summary of Environmental Monitoring Data Collected

In accordance with the Comprehensive Clackamas County Stormwater Monitoring Plan, the City of Gladstone is required to monitor one instream location on Rinearson Creek at Risley Avenue, prior to discharge in the Willamette River, three times per year during rainfall events. Results of the monitoring effort are summarized in Appendix A.

4.3 Discussion of Water Quality Improvements or Degradations

The purpose of participating in a coordinated monitoring effort with Clackamas County and other co-permittees is to distribute resources widely and produce data that will provide comprehensive information for the County as a whole. Analyzing the limited number of samples collected by the City of Gladstone would not allow for assessment of water quality improvements or degradation, as there are not enough samples to report results with any statistical significance.

For the data collected as a result of the coordinated monitoring effort, some analyses would be conducted annually and submitted with the annual compliance reports while other analyses would be conducted after several years of data have been collected (e.g., the five year permit period) so that the data are more statistically robust in terms of providing information. Data and discussion regarding water quality improvements and degradation would be provided in annual reports following several years of implementation of the coordinated monitoring plan.

Appendix A City of Gladstone Sampling Results

~~Appendix B — Comprehensive Clackamas County Monitoring Plan~~