

Appendix A—Technical Memorandum #1:
Stormwater Regulatory Requirements



City of Mountlake Terrace
Six Year Stormwater Comprehensive Plan

Technical Memorandum #1

Stormwater Regulatory Requirements



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Surface Water Comprehensive Plan Update

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Surface Water Management Program Regulatory Requirements and Milestone Dates
spreadsheet

Technical Memorandum



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Date: September 10, 2007

Subject: Technical Memorandum #1
Review of Stormwater Regulatory Requirements

Project No.: 31088

Preface

This technical memorandum is the first in a series of memorandums that Otak is developing to analyze the City's stormwater program with respect to compliance with federal, state, and local surface water related requirements. The analysis includes the following steps, each documented in a separate technical memorandum:

- Step 1—Document the City's regulatory requirements and surface water related obligations.
- Step 2—Document the City's existing stormwater program.
- Step 3—Identify gaps in the City's existing program including maintenance and design standards compared to regulatory requirements and recommend approach for compliance; calculate staff levels and costs for full compliance; and develop a five-year implementation plan, including capital improvement projects.
- Step 4—Review funding options to finance needed enhancements to the City's surface water management program.

The series of memorandums will be integrated into a final report documenting all steps and recommendations from this program analysis. The final report will serve as the City's updated Surface Water Comprehensive Plan (SWCP). The updated plan is expected to be completed in February 2008.

Introduction

The City of Mountlake Terrace is known for its beautiful mountain views, quiet residential neighborhoods, beautiful parks, trails, a lake, first-class schools and close proximity to employment centers. Mountlake Terrace is located about 12 miles north of Seattle and about 15 miles south of

Everett. The city is inside Snohomish County along the northern border of King County, approximately three miles northwest of Lake Washington.

Mountlake Terrace has a population of 20,810 residents and is about four square miles in size. The City has responded well to the challenges of serving its growing population in an evolving regulatory environment. In the area of surface water management (SWM), the City is currently subject to the following requirements:

- National Pollution Discharge Elimination System (NPDES) Phase II Municipal Stormwater Permit
- The Lake Ballinger Total Phosphorus Total Maximum Daily Load (TMDL)
- The Swamp Creek Fecal Coliform Total Maximum Daily Load Water Quality Improvement Report and Implementation Plan
- Underground Injection Control (UIC) Rule
- Endangered Species Act (ESA) and associated 2005 Chinook Salmon Conservation Plan for Water Resource Inventory Area (WRIA) #8
- 2000 Puget Sound Water Quality Management Plan, as defined in the 2007–2009 Puget Sound Conservation and Recovery Plan

This technical memorandum outlines the requirements of each of these various stormwater related obligations of the City, along with applicable milestone completion dates and consequences for non-compliance. The information in this memorandum will be used as a building block to conduct an existing program analysis and a stormwater regulatory gap analysis, comparing the City's existing stormwater activities with the various activities required by the above listed regulations and plans. This portion of the analysis of the City's upcoming stormwater regulatory requirements focuses on activities needed to meet existing surface water management obligations, including compliance with applicable regulations. A detailed breakdown of the required activities and implementation dates is attached to this memorandum in a spreadsheet entitled *Stormwater Management Program Regulatory Requirements and Milestone Dates*.

NPDES Phase II Stormwater Permit

The City has been identified by the Washington State Department of Ecology (Ecology) as a NPDES Phase II community. As such, the City needs to comply with the requirements of its recently issued *National Pollutant Discharge Elimination System and State Waste Discharge General Permit for Discharges from Small Municipal Separate Storm Sewers in Western Washington*, hereafter referred to as the Phase II Permit.

The Phase II Permit outlines stormwater program activities and implementation milestones that the City must follow beginning February 16, 2007, in order to comply with federal law. All Phase II communities are expected to develop a stormwater program that includes all the required activities,

implement those activities within the required timeframes over the next five years (i.e. 2007–2011), and submit annual reports to Ecology to document progress toward complete program implementation.

Permit Coverage

The Phase II Permit applies to cities with populations less than 100,000, located within, or partially within an urbanized area, and that are operating a municipal separate storm sewer system (MS4) which discharges to a water of Washington State. The City of Mountlake Terrace has a population of approximately 20,810. As a Phase II community, the requirements of the Phase II Permit apply throughout the entire incorporated area of the City.

Permit Timeline

Mountlake Terrace's Phase II permit was issued by Ecology on January 17, 2007, and became effective on February 16, 2007. The permit covers a five-year period that expires on February 15, 2012. While the actual years of the permit run from February 16 to February 15 of the next year, it is somewhat unusual that the reporting requirements cover a calendar year from January 1 to December 31. The City's permit will be reviewed and renewed for a second five-year period, starting in 2012.

Permit Requirements

Summaries of the major program elements, key milestones, reporting requirements, and consequences for non-compliance are included below. Please refer to the Attachment 1, NPDES SWMP Elements #1–#15, for a more detailed review of NPDES requirements, compliance activities, and due dates.

Major Program Elements

To aid in tracking NPDES permit requirements, activities have been grouped into ten major surface water management program (SWMP) elements. These elements coincide with the nine Special Conditions and their sub-elements plus the TMDLs for both Swamp Creek for fecal coliform and Lake Ballinger for total phosphorus are outlined in Attachment 1 as follows:

- SWMP Element #1—Public Education and Outreach, Special Condition S5.C.1
 - 1.1 Education and Outreach Program
 - 1.2 Measure Results of Educational Activities
 - 1.3 Maintain Records
- SWMP Element #2—Public Involvement and Participation, Special Condition S5.C.2
 - 2.1 Input to SWMP
 - 2.2 Availability of Program Documents
- SWMP Element #3—Illicit Discharge Detection and Elimination (IDDE), Special Condition S5.C.3
 - 3.1 Storm Sewer System Map

- 3.2 Illicit Discharge Ordinance
- 3.3 Detection and Elimination Program
- 3.4 Public Education and Spill Reporting
- 3.5 Program Evaluation and Tracking
- 3.6 Staff Training
- SWMP Element #4—Controlling Runoff from New Development, Redevelopment, and Construction Sites, Special Condition S5.C.4
 - 4.1 Stormwater Runoff Control Ordinance
 - 4.2 Site Plan Review and Permitting
 - 4.3 Long Term Operation and Maintenance
 - 4.4 Maintenance Inspection Records
 - 4.5 Notice of Intent (NOI) for Construction Activity
 - 4.6 Staff Training
- SWMP Element #5—Pollution Prevention and Operation and Maintenance for Municipal Operations, Special Condition S5.C.5
 - 5.1 Establish Maintenance Standards
 - 5.2 Annual Inspections of Water Quality and Flow Control Facilities
 - 5.3 Spot Checks after Storm Events
 - 5.4 Catch Basin Inspection
 - 5.5 Road Maintenance
 - 5.6 Non-Roadway Property Maintenance
 - 5.7 Staff Training
 - 5.8 Stormwater Pollution Prevention Plan (SWPPP) for Maintenance Yards
 - 5.9 Record Keeping
- SWMP Element #6—Program Implementation, Special Conditions S5.A and S5.B
 - 6.1 SWMP Implementation
 - 6.2 SWMP Documentation
 - 6.3 Program Tracking
 - 6.4 Coordination Among Permittees
 - 6.5 Maximum Extent Practicable (MEP) and All Known Available and Reasonable methods of prevention, control and Treatment (AKART) requirements
- SWMP Element #7—Total Maximum Daily Load Allocations, Special Condition S7
 - 7.1 Applicable TMDLs (Total Maximum Daily Loads) in Appendix 2 of the Phase II permit
 - 7.2 TMDLs not listed in Appendix 2 of the Phase II permit
 - 7.3 TMDLs Approved during the Permit Cycle
- SWMP Element #8—Monitoring, Special Condition S8
 - 8.1 Existing Monitoring
 - 8.2 Stormwater Monitoring
 - 8.3 SWMP Effectiveness Monitoring
 - 8.4 Annual Reporting

- SWMP Element #9—Swamp Creek TMDL
 - 9.1 Pollution Source Control Activities
 - 9.2 Public Involvement
 - 9.3 Ongoing Tracking
 - 9.4 Public Outreach and Education
 - 9.5 Water Quality Monitoring
 - 9.6 Coordination of SWM Activities
 - 9.7 Illicit Discharge Detection and Elimination
- SWMP Element #10—Lake Ballinger TMDL
 - 10.1 Pollution Source Control Activities
 - 10.2 Public Involvement
 - 10.3 Ongoing Tracking
 - 10.4 Public Outreach and Education
 - 10.5 Water Quality Monitoring
 - 10.6 Coordination of SWM Activities
 - 10.7 Illicit Discharge Detection and Elimination
- SWMP Element #11—Reporting, Special Condition S9
 - 11.1 Annual Reports
 - 11.2 Ongoing Tracking
 - 11.3 Maintaining Records
 - 11.4 Public Access

It should be noted that some of the program elements cover a significant number of activities required for compliance. For example, SWMP Element 4.2—*Site Plan Review and Permitting* includes plan review, permitting of private and public projects, site inspection during and after construction, and enforcement for projects not following established guidelines. Other elements are fairly straight forward, such as SWMP Element 4.5—*Notice of Intent (NOI) for Construction Activity*, which simply requires that the City make copies of Ecology’s construction site permit available to developers.

Some SWMP Elements may include activities that can be covered by an activity in another category. For example, the public education aspect of SWMP Elements 3.4—*Public Education and Spill Reporting* and 9.4 *TMDL Public Outreach and Education* can be covered by focusing the public outreach in SWMP Element 1.1—*Education and Outreach Program* on reducing illegal discharges to the stormwater system and properly managing animal wastes and the use of household detergents. In the same way, many of the major program elements include program tracking, documentation, and reporting activities that are covered by maintaining records and submitting the annual reports, as outlined in SWMP #11—*Reporting*.

Additional permit conditions, such as Special Conditions S1 through S4 and General Conditions G1 through G20, also apply to the City of Mountlake Terrace, though they do not result in specific

program activities. These additional conditions cover topics such as who is covered by the Phase II Permit, what discharges are authorized under the permit, and legal guidelines for transferring, revoking, and appealing the permit. Penalties for non-compliance are also included as discussed below.

Key Milestones

As listed in the attached Spreadsheet, the Phase II Permit includes implementation deadlines for many of the program elements. The overall milestone is to have the SWMP fully developed and implemented no later than 180 days prior to the expiration date of the permit, or in about four and a half years from the date of issuance (by August 15, 2011). The Phase II Permit also includes interim milestones to ensure that communities are working toward full implementation throughout the permit cycle. Interim milestones are typically based on the end of permit years as follows:

- Year 1 = February 15, 2008
- Year 2 = February 15, 2009
- Year 3 = February 15, 2010
- Year 4 = February 15, 2011
- Year 5 = February 15, 2012

As an example, the permit requires that the runoff control ordinance and site plan review, permitting, and inspection activities be in place by the end of Year 2.5, but communities have until the end of Year 3 to implement operations and maintenance activities consistent with Ecology's 2005 *Stormwater Management Manual for Western Washington*.

Some program activities have milestone dates set several years into the future. However, the activities required will likely take multiple years to complete, so communities will need to start planning soon to be in compliance by the actual milestone date. For example, the deadline to develop a GIS map of the entire MS4 system is the end of Year 4. In order to reach that milestone, the City should plan on beginning field data collection in Year 1 with a goal of collecting at least 30 percent of the required data each year. Data processing and GIS mapping could then begin in Year 2 and continue through the end of Year 4 to reach the implementation deadline.

The Phase II Permit also leaves some activities somewhat ambiguous. In particular, staff training in SWMP Elements 3.6 and 5.7 require "ongoing training" programs be implemented by the end of Year 3, but the permit does not specify the frequency or extent of the ongoing training. It is recommended that communities develop a training program with sessions offered once or twice each year, covering several topics in each session. Training sessions should start in Year 2 with a goal of addressing all the required topics several times in the permit cycle. In this way, staff that cannot attend the first offering of a training topic have other chances to be trained before the end of the permit cycle. The City is also pursuing training under the Regional Road Maintenance ESA training

program. Several of these training track topics overlap with training required under NPDES Phase II. These overlaps will be identified and addressed in the future regulatory gap analysis technical memorandum, Otak Technical Memorandum #3, as will additional recommendations for implementing other SWMP elements.

The permit also acts as the implementing mechanism for TMDL implementation plans. Appendix 2 of the City’s Phase II Permit identifies the Swamp Creek TMDL for fecal coliform and the Lake Ballinger TMDL for phosphorus and lists Mountlake Terrace as a municipal permit holder with implementation responsibilities. These responsibilities shown in SWMP Elements #9 and #10 mirror the special requirements for municipal stormwater permit holders in Appendix D of the June 2006 Swamp Creek Fecal Coliform Bacteria Total Maximum Daily Load Water Quality Improvement Report and Implementation Plan and the 2006 Quality Assurance Project Plan for Lake Ballinger. These special requirements place emphasis on pollution source control activities, the development of a Bacterial Pollution Control Plan (BCRP) to supplement the SWMP, and water quality monitoring. An implementation plan has not yet been approved for Lake Ballinger. Table 1 shows the Phase II Permit requirements and associated implementation schedule.

Table 1: Phase II Permit Requirement Implementation Schedule					
Permit Requirements	Year 1	Year 2	Year 3	Year 4	Year 5
S5.C.1. Public Education and Outreach					
Education and Outreach					
Measure Results					
S5.C.2 Public Involvement & Participation					
Input to SMWP					
Availability of Program Documents		Annually	Annually	Annually	Annually
S5.C.3 Illicit Discharge Detection					
System Mapping					
Ordinance			Year 2.5		
Detection and Elimination Program	Variable	Variable	Variable	Variable	Variable
Education and Spill Reporting		Report			Educate
Program Evaluation and Tracking	Annually	Annually	Annually	Annually	Annually
Staff Training		Tech	Field		
S5.C.4 Controlling Runoff					
Ordinance			Year 2.5		
Site Plan Review			Year 2.5		
Operations and Maintenance			Year 2.5		
Notice of Intent	2/16/07				
Staff Training			Yr 2.5 -3		

Table I: Phase II Permit Requirement Implementation Schedule					
Permit Requirements	Year 1	Year 2	Year 3	Year 4	Year 5
S5.C.5 Pollution Prevention					
Maintenance Standards					
Annual Facility Inspections					
Spot Checks					
Catchbasin Inspection					
Road Maintenance					
Property Maintenance					
Staff Training					
SWPPP for Maintenance Yards					
Record Keeping					
SC.5.A and SC.5.B Program Implementation					
Implementation					
Documentation		Annually	Annually	Annually	Annually
Program Tracking		Annually	Annually	Annually	Annually
Coordination Among Permittees					
S7 Total Maximum Daily Loads (see S9 and S10)					
Applicable TMDLs in Appendix 2	N/A	N/A	N/A	N/A	N/A
TMDLs not listed in Appendix 2	N/A	N/A	N/A	N/A	N/A
TMDLs Approved During Permit Cycle					
S8 Monitoring					
Existing Monitoring	N/A	N/A	N/A	N/A	N/A
Stormwater Monitoring				12/31/10	
SWMP Effectiveness Monitoring				12/31/10	
Annual Reporting					
S10 Reporting					
Annual Reports		Annually	Annually	Annually	Annually
Ongoing Tracking					
Maintaining Records					
Public Access					

Reporting Requirements

The Phase II Permit requires all permittees to submit annual reports to Ecology. The reports should document the SWMP activities completed in the previous calendar year, the cost to implement the stormwater program, the status of activities under development, and any changes proposed to the existing program. Annual reports are due to Ecology by March 31 of each year. The first annual

report (due March 31, 2008) will cover the period from the permit start through December 31, 2007. Thereafter, annual reports will document activities for the previous calendar year.

The permit specifies the reporting submittals and compliance dates for all aspects of the permit. Those requirements that apply to the City of Mountlake Terrace are listed in Table 2 below.

Table 2 Report Submittals & Compliance Dates			
Permit Section	Submittal Required	Frequency	First Submittal Date
S5.A	Status report on development and implementation of SWMP	On-going per Appendix 3 of the Phase II Permit	March 31, 2008
S7.A	Status report on TMDL implementation as part of S5.A status report	Annually	March 31, 2008
S8	Monitoring site identification	Once	December 31, 2010
S9.A	SWMP Annual Report forms per Appendix 3 of the Phase II Permit	Annually	March 31, 2008
G3	Notification of Spill	As Needed	Immediately when a spill is identified
G18	Permit Coverage reapplication	Once	180 days prior to Permit expiration
G20	Non-compliance notification	As needed	Within 30 days of non-compliance

Consequences for Non-Compliance

Non-compliance with the Phase II Permit, including TMDLs, puts the City in violation of the Federal Clean Water Act. Based on the type of violation (administrative, criminal or civil) the City could be subject to fines ranging from \$2,500 to \$27,000 per day. Criminal penalties can also include jail time. Not meeting the requirements of the Phase II Permit puts the City at risk for a third party lawsuit challenging the City's role in protecting and maintaining clean water. One additional consequence is that federal and state grants and loans could be withheld until compliance is achieved.

General Condition G12 of the Phase II Permit allows Ecology to terminate coverage under the permit if the City is in violation of the terms and conditions. Ecology requires that permittees notify the agency within 30 days if they become aware that they are not in compliance with the permit terms and conditions. Such notification does not immediately result in revocation of the permit, but it does allow Ecology to make a decision as to whether the permit should be modified, revoked, or

reissued. Notification must occur immediately if "...the Permittee becomes aware of a discharge from the MS4 which may cause or contribute to an imminent threat to human health or the environment." (Condition G20.C)

Underground Injection Control (UIC) Rule

Applicability

With the passage of the Safe Drinking Water Act by Congress in 1974, the Environmental Protection Agency (EPA) created the Underground Injection Control (UIC) Program as one of the key programs for protecting drinking water sources. In 1984, Ecology received the authority from EPA to regulate UIC wells and adopted the UIC rule, Chapter 173-218 WAC. UIC wells do not include wells that draw water from underground aquifers such as potable water wells. In contrast, a UIC well is a human-made hole that is used to put water or other fluids into the ground. In Washington, most of these wells are used to dispose of septic wastes and stormwater runoff. In January of 2006, Ecology adopted revisions to the UIC program rule that went into effect on February 3, 2006. The rule applies to both new and existing UIC wells. Even though UIC wells are used for stormwater management, there is no overlap between the UIC rule and NPDES Phase II permit requirements. Under Special Condition S2.A.1, the Phase II permit clearly states that, "Discharges to ground waters of the state through facilities regulated under the Underground Injection Control (UIC) program, Chapter 173-218 WAC, are not covered under this permit."

As it relates to stormwater management, the rule regulates Class V UIC wells which must be registered and rule authorized (meet the nonendangerment standard) or receive a state waste discharge permit issued by Ecology to operate. The rule also requires annual updates to Ecology on well status changes and sets specific criteria for well decommissioning and associated notifications. Please refer to the attached Spreadsheet (SWMP Element #12 - UIC) for a more detailed analysis.

Timeline

Timelines for rule compliance vary for existing wells depending on how many wells the jurisdiction is operating. The dates shown here apply to operation of 50 wells or less. For existing wells, the City will need to complete registration by February 2, 2009. Existing wells must also be assessed to demonstrate that they meet the nonendangerment standard. Assessments must be completed by February 2, 2011. New wells (built after February 2, 2006) must be registered and demonstrate compliance with the nonendangerment standard prior to use.

Reporting Requirements

The rule requires annual updates to Ecology on well status changes. When decommissioning wells, the rule requires notification to Ecology either 30 days prior (in the case of prohibited wells or wells determined to be an imminent public health hazard) or within one year of closure. Annual updates also must be provided to Ecology on decommissioned wells.

Consequences for Non-Compliance

Compliance requirements cited in the UIC Rule, Chapter 173-218 WAC, are those contained in the Washington State Water Pollution Control Act, Chapter 90.48 RCW. As mentioned earlier, UIC wells must be rule authorized or receive a state waste discharge permit. In either case, penalties for non-compliance are specified in Chapter 90.48.140-144 RCW. Criminal penalties for willful violations of the chapter can include conviction of a gross misdemeanor punishable by a fine of up to \$10,000 and costs of prosecution, or by imprisonment in the County jail for not more than one year, or both. For willful violations, each day of the violation can be deemed a separate and additional violation. In certain cases, if violations cause the death of, or injury to fish, animals, vegetation, or other resources of the state, the violator shall be liable to pay compensatory damages to the state and affected municipalities. Civil penalties include fines of up to \$10,000 per day for single or ongoing violations.

Endangered Species Act (ESA) & Water Resource Inventory Area (WRIA) Planning

Applicability

In 1999, the federal government listed the Puget Sound Chinook salmon and bull trout as threatened in the Puget Sound Region. Local governments have responded to these listings by putting in place policies and practices to protect and restore these fish populations and their habitat. In the Puget Sound region, a coalition of local governments have created a Regional Forum system for coordinating these protection and restoration efforts on a watershed basis. The Regional Forum is organized by Water Resource Inventory Areas, consistent with the watershed identification system used by Ecology and other state resource agencies. In addition to these current listings, steelhead trout were listed as threatened in May of this year and this listing could also affect the City.

The Watershed Planning Act (RCW 90.82) provides local governments a framework and resources for developing local solutions to watershed issues on a watershed basis. These WRIA or watershed plans are required to address water quantity with optional elements of water quality and habitat.

In order to integrate salmon recovery planning into watershed planning, twelve State agencies signed a Memorandum of Understanding for the coordinated implementation of the Watershed Planning Act and the Salmon Recovery Planning Act. The Memorandum clarifies roles and responsibilities, fosters cooperative working relationships between state agencies, local governments and tribal governments, and, where possible, simplifies implementation procedures. The Regional Forum uses WRIA watershed planning as a tool to integrate water resource planning issues, including salmon protection and recovery.

The City of Mountlake Terrace is included in WRIA 8, the Cedar, Lake Washington, Sammamish watershed. The WRIA 8 Chinook Salmon Conservation Plan has been approved and is in the implementation planning phase. Actions for the Plan were developed in three broad categories: land use, planning, and infrastructure; site-specific habitat protection and restoration projects; and public outreach and education.

The City of Mountlake Terrace is assisting with the recovery of Chinook salmon through a habitat improvement project on Lyon Creek, participation in planning efforts through the Water Resource Inventory Area (WRIA) 8 Salmon Recovery Council, monitoring of Lake Ballinger, and a public education program to protect water quality.

Please refer to the attached Spreadsheet (SWMP Element #14 – WRIA 8 Chinook Salmon Conservation Plan).

As a part of WRIA 8, Mountlake Terrace participates with Snohomish, King, and Pierce Counties in the Tri-County Early Action Salmon Conservation Package planning effort for developing a recovery plan. On March 1, 1999 the City of Mountlake Terrace submitted an early action plan of salmon conservation measures as part of the Tri-County ESA response effort. These measures are to become a part of the Tri-County package of responses to NOAA Fisheries. This package will form the basis for discussions with NOAA Fisheries to develop a flexible 4(d) rule that phases performance requirements over time and that recognizes that local government actions are consistent with the ESA.

Timeline

Approved in 2005, the WRIA 8 plan covers an initial 10-year planning horizon. WRIA staff is assisting in prioritizing implementation of recommendations and has started work on developing an implementation strategy that should be complete near the end of 2007. Implementation of the plan is to be guided by the basic principles of adaptive management, which call for monitoring, evaluation, and adjustment that could affect plan implementation.

Reporting Requirements

WRIA Plan 8 calls for an annual report to keep stakeholders and the public informed on progress of implementation. As an implementing agency of the plan, the City, provides input on the status of planning and implementation to WRIA staff for their use in tracking and producing comprehensive annual reports for each plan.

Consequences for Non-Compliance

Since the 1970's there have been a succession of different approaches to watershed planning throughout Puget Sound, involving a variety of issues by a range of agencies. Since 1987, the Puget Sound Water Quality Management Plan has called for development of watershed action plans

guided by 400-12 WAC. In addition to WAC 400-12 plans, several other watershed planning approaches have been used or developed such as, Total Maximum Daily Loads (TMDL), Salmon Recovery Act Limiting Factors Analysis and Forestland Watershed Analysis. The 1998 Watershed Planning Act (Chapter 90.82 RCW) provided funding and a mechanism for the voluntary development of watershed plans that allowed the flexibility to incorporate salmon recovery planning. Many of the regional forum members have or are using this process to develop plans that integrate water quantity, water quality and habitat issues.

In terms of consequences for non-compliance with watershed planning, neither WAC 400-12 nor Chapter 90.82 RCW provide for penalties. WAC 400-12, however, does include provision for Ecology to work with entities that do not carry out their responsibilities pursuant to the regulation, and develop an appropriate strategy for addressing water quality concerns. Ecology can also use its authority under Chapter 90.48 RCW (Water Pollution Control) to require that water quality problems be corrected. More recently, Ecology is using the TMDL process to improve water quality for fish and habitat. Resulting TMDL water quality activities are typically incorporated into NPDES permit requirements.

The 2000 Puget Sound Water Quality Management Plan and the 2007–2009 Puget Sound Conservation and Recovery Plan

Applicability

The Puget Sound Water Quality Management Plan (PSWQMP) is Washington State's long-term strategy for protecting and restoring Puget Sound. The management plan provides the framework for managing and protecting the Sound and coordinating the roles and responsibilities of federal, state, and local governments.

To coordinate government actions for protecting and restoring the Sound, the legislature enacted Chapter 90.71 RCW, Puget Sound Water Quality Protection, which established the Puget Sound Water Quality Action Team, the Puget Sound Council, and a governor-appointed chair who manages both of these. Together, the Action Team and Council periodically review and update the management plan to reflect changing issues, advances in technology, public expectations, and political and budgetary concerns. The management plan gives governmental entities specific assignments based on the nature of their missions and authority. Refer to the attached Spreadsheet (SWMP Element #15) for more detailed analysis.

Timeline

In accordance with Chapter 90.71 RCW, each biennium the Action Team prepares a Puget Sound work plan prescribing the necessary federal, state, and local actions needed to maintain and enhance Puget Sound water quality.

The 2007–2009 Puget Sound Conservation and Recovery Plan (PSCR) identifies reducing the harm from stormwater runoff as a priority. The Action Team’s strategy for addressing this priority includes action by local governments to increase the use of innovative techniques such as Low Impact Development, and implementation of comprehensive stormwater programs. Element SW-1.2 of the 2000 Puget Sound Water Quality Management Plan (PSWQMP) calls out thirteen specific requirements of local comprehensive stormwater programs, ten of which are fully or partially addressed by the NPDES Phase II Permit requirements, as noted in SWMP Elements #1–#11 in the attached spreadsheet. The three specific components required by the PSWQMP not covered by NPDES Phase II requirements include identification and ranking of problems, watershed or basin planning, and funding.

Reporting Requirements

Action Team staff are responsible for tracking the implementation of the biennial work plan, as well as the overall water quality management plan, through the adoption of local comprehensive stormwater programs, timely issuance of NPDES municipal stormwater permits, case studies of program effectiveness, and performance of environmental conditions. No reporting requirements are specified for local governments at this time. Rather, local governments are expected to implement the management plan by planning at the watershed level, and through public education and involvement, policies, comprehensive land use plans, capital facilities plans, and development regulations. Local governments are also expected to monitor, evaluate, and improve their individual programs over time using adaptive management.

Consequences for Non-Compliance

The PSCR says that local governments “shall” perform specified actions. However, the Action Team recognizes that implementation is a long-term process. The plan goes on to restate RCW 90.91.070, which specifies that local government implementation of actions in the work plans are subject to the availability of appropriated funds, or other funding sources, and public input into their decision-making process. However, since ten of the thirteen specific components of local comprehensive stormwater programs are addressed by NPDES Phase II Permit requirements, once the City’s permit is issued, failure to comply will put the City at risk for those components of the NPDES Permit and in violation of federal and state laws, as defined in the Clean Water Act. For this case, refer to the consequences for non-compliance with NPDES described earlier in this report.

Conclusions

National Pollutant Discharge Elimination System (NDPES) Phase II Permit

As a Phase II community, the City of Mountlake Terrace is covered under Ecology’s NDPES Permit for small MS4s. The permit outlines stormwater program activities that must be implemented

based on scheduled milestone dates. The program activities can be grouped into ten major program elements.

The activities and milestone dates outlined in the Phase II Permit create a strong impetus for developing a comprehensive citywide SWMP that will meet all the program requirements during the permit cycle. The City will need to pay especially close attention to those activities whose milestone dates are several years away, and start them early to ensure that sufficient time is allocated to complete them on schedule.

The City has submitted its Quality Assurance Project Plan (QAPP) associated with the Swamp Creek TMDL for fecal coliform. The City is awaiting review of the QAPP by Ecology. The deadline to begin TMDL-related monitoring is 180 days after permit issuance, although Ecology will extend the monitoring start date, day for day if more than 30 days is required to review the QAPP.

Underground Injection Control (UIC) Rule

It appears that the City does not have any publically owned UIC. Future investigation during our next phase of work will confirm that there are no stormwater facilities that qualify as UIC wells. The results of this investigation will be presented in Technical memorandum #2 which will report existing conditions.

Endangered Species Act (ESA) and Water Resource Inventory Area (WRIA) Planning

The City has been taking an active role in ESA compliance and the associated regional watershed planning effort that has produced a Chinook salmon conservation plan for WRIA 8. ESA related stormwater management is being addressed through the City's Phase II Permit and other regional implementation plans.

2000 Puget Sound Water Quality Management Plan (PSWQMP) and 2007–2009 Puget Sound Conservation and Recovery Plan (PSCR)

These plans complement each other and require a variety of actions that duplicate many of the actions called out in NPDES Phase II Permit requirements or in WRIA salmon conservation plans. NPDES Phase II Permit requirements call for the City to develop a Stormwater Management Plan that addresses ten of the thirteen requirements of a comprehensive stormwater program. Two of the remaining components include watershed or basin planning, and identification and ranking of problems that degrade water quality, aquatic species and habitat, and natural hydrologic processes. The last component is funding. WRIA planning recommendations address watershed planning, and identification and ranking of problems, as well as the PSWQMP requirement to increase innovative techniques such as Low Impact Development. The City's current SWCP update, continued participation in WRIA 8 watershed planning, and establishing adequate ongoing funding for program activities should be sufficient for the City to meet current compliance requirements of the PSWQMP.

In terms of future compliance requirements, the Washington State Legislature recently passed legislation abolishing the Puget Sound Action Team and creating a new Puget Sound Partnership to coordinate and lead the effort to restore and protect Puget Sound. The partnership consists of a Leadership Council, Executive Director, Ecosystem Coordination Board, and a Puget Sound Science Panel. The partnership's charge is to define a strategic action agenda that prioritizes necessary actions based on science and includes clear, measurable goals for the recovery of Puget Sound by 2020. The action agenda is expected to be adopted by September 1, 2008, and revised as necessary. However, until that time the existing PSWQMP and its biennial PSCR remain in effect. This action agenda and implementing strategies will likely include recommendations that will need to be considered in future City work plans and SWCP updates.

Next Steps

This technical memorandum is the first in a series of memorandums to analyze the City's surface water management program with respect to SWM related regulatory requirements. The next memorandum, Technical Memorandum #2, will document the City's existing environmental conditions and stormwater activities and map them to the required program elements outlined in the regulations and plans listed in this Technical Memorandum. Analysis in Technical Memorandum #3 will identify gaps in the existing program, calculate staff levels and activities needed to reach full compliance, and identify an annual implementation schedule and costs over the next five years. Future memoranda (Technical Memorandum #4) will review funding options to finance the needed enhancements.

This series of memorandums (#1–#4) will be integrated into a final report documenting all steps and recommendations from this program analysis. The final report is expected to be complete by the end of February 2008.

References

National Pollutant Discharge Elimination System (NPDES) and State Waste Discharge Permit for Discharges from Small Municipal Separate Storm Sewers in Western Washington, Washington State Department of Ecology, January 17, 2007.

Puget Sound Chinook ESA Salmon Recovery Plan, Shared Strategy for Puget Sound, January 2007.
Washington Administrative Code (WAC) Chapter 173-218 Underground Injection Control Program

2007-2009 Puget Sound Conservation and Recovery Plan, *Puget Sound Action Team*, January, 2007.

RCW Chapter 90.82 Watershed Planning Act

Website: Washington State Department of Ecology, www.ecy.wa.gov

Website: Washington State Department of Health, www.doh.wa.gov

Website: Shared Strategy for Puget Sound, www.sharedsalmonstrategy.org

Website: The National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS), Northwest Regional Office, www.nwr.noaa.gov

Wellhead Protection Program Guidance Document, Washington State Department of Health, Environmental Health Programs, (DOH Publication #331-018), April 1995.

**ATTACHMENT #1—CITY OF MOUNTLAKE TERRACE
STORMWATER MANAGEMENT PROGRAM REGULATORY REQUIREMENTS AND MILESTONE DATES**

Stormwater Program Element	Permit Reference /Rule or Law	Activities/BMPs Needed for Regulatory Compliance	Required Implementation by end of:	Notes/Comments/Overlaps
NPDES SWMP Element #1 - Public Education and Outreach				
1.1 Outreach to Target Audiences and Subject Areas	S5.C.1.a	Provide an education and outreach program for the MS4 service area designed to achieve measurable improvements in the target audience's understanding of the problem and what they can do to solve it. Prioritized target audiences and subject areas: i. General public - impacts of stormwater on surface water, impacts of impervious surfaces, and source control BMPs and environmental stewardship actions and opportunities. ii. General public, businesses, including home-based/mobile businesses - BMPs for use and storage of automotive chemicals, hazardous cleaning supplies, carwash soaps and other hazardous materials, and impacts of illicit discharges and how to report them. iii. Homeowners, Landscapers, property managers - yard care techniques protective of water quality, BMPs for use/storage of pesticides/fertilizers, carpet cleaning, auto repair/maintenance, LID techniques, and stormwater pond maintenance. iv. Engineers, contractors, developers, review staff, land use planners - technical standards for stormwater site and erosion control plans, LID techniques, and storm-water treatment and flow control BMPs.	Year 2	
1.2 Measure Results of the Educational Activities	S5.C.1.b	Participate in an effort to measure understanding and adoption of the targeted behaviors among the target audiences.	Year 2	
1.3 Maintain Records	S5.C.1.c	Track and maintain records of public education and outreach activities.	With Annual Report	To be included as an ongoing tracking activity of Element 11.2.
NPDES SWMP Element #2 - Public Involvement and Participation				
2.1 Input to SWMP	S5.C.2.a	Create opportunities for public to participate in the decision making processes involved in the development, implementation and update of the SWMP.	Year 1	
2.2 Availability of Program Documents	S5.C.2.b	Post the SWMP, the Annual Report, and all other required permit submittals on the Permittee's Website.	March 31 Annually Starting 2008	

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Stormwater Program Element	Permit Reference /Rule or Law	Activities/BMPs Needed for Regulatory Compliance	Required Implementation by end of:	Notes/Comments/Overlaps
NPDES SWMP Element #3 - Illicit Discharge Detection and Elimination				
<p>3.1 Storm Sewer System Map</p>	<p>S5.C.3.a</p>	<p>Develop a municipal storm sewer system map of all storm sewer outfalls, receiving waters, and structural stormwater facilities. For all outfalls with a 24-inch nominal diameter include:</p> <ul style="list-style-type: none"> - Tributary conveyances (type, material, size) - Associated drainage areas - Land Use <p>Also map</p> <ul style="list-style-type: none"> - Authorized connection points - Geographic areas served that do not discharge to surface waters <p>Map should be in electronic format, with fully described mapping standards.</p>	<p>Year 4</p>	<p>The City has been mapping its existing conveyance in GIS. The NE quadrant of the City is not mapped where substantial development has occurred in recent years. As part of the Surface Water Management Plan Update scope of work, Otak is assisting the City in updating its storm drainage system maps and identifying short and long term data needs and priorities.</p>
<p>3.2 Illicit Discharge Ordinance</p>	<p>S5.C.3.b</p>	<p>Develop and implement an ordinance prohibiting non-stormwater discharge to the Municipal Separate Storm Sewer System (MS4). The ordinance should cover:</p> <ul style="list-style-type: none"> -Potable water flushing; -Lawn and landscape irrigation runoff; -Swimming pool discharges; -Street and sidewalk wash water; -Other non-stormwater discharges. <p>The ordinance must include escalating enforcement procedures and actions and an enforcement strategy.</p>	<p>Year 2.5</p>	

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Stormwater Program Element	Permit Reference /Rule or Law	Activities/BMPs Needed for Regulatory Compliance	Required Implementation by end of:	Notes/Comments/Overlaps
3.3 Detection and Elimination Program	S5.C.3.c	<p>Develop and implement an ongoing program to detect and address non-stormwater discharges, spills, illicit connections and illegal dumping.</p> <ul style="list-style-type: none"> -Include procedures for locating priority areas based on land use, previous complaints, and storage practices (Year 4.5); -Prioritize receiving waters for visual inspection (Year 3); -Field assessment of 3 priority receiving waters in the first four years (Year 4); -Field assessment of at least 1 priority receiving water each year annually (after Year 4). <p>Screening must follow Center for Watershed Protection guidance manual.</p> <p>Include procedures (Permit End) for:</p> <ul style="list-style-type: none"> -Characterizing nature and potential threat of illicit discharges; -Tracing the source of illicit discharge; -Notifying authorities and property owners; -Removing the source and conducting follow-up inspections <p>Once identified, investigate and characterize problems (7 days), initiate investigation needed to remove source (21 days), and terminate illicit discharge (180 days).</p>	Variable	
3.4 Public Education and Spill Reporting	S5.C.3.d	<p>Inform public employees, businesses, and general public of hazards associated with illegal discharges and improper waste disposal.</p> <p>Distribute information to target audiences identified in Element 1.1</p> <p>Publicly list and publicize a hotline for public reporting of spills and illicit discharges; keep records of calls and follow-up actions taken.</p>	Permit End Year 2	Activities could be covered by Element 1.1
3.5 Program Evaluation and Tracking	S5.C.3.e	Adopt and implement procedures for program evaluation and assessment, including tracking number and type of spills identified, inspections made, and feedback from public education efforts.	With Annual Report	To be included as an ongoing tracking activity of Element 10.2.

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Stormwater Program Element	Permit Reference /Rule or Law	Activities/BMPs Needed for Regulatory Compliance	Required Implementation by end of:	Notes/Comments/Overlaps
3.6 Staff Training	S5.C.3.f	Train responsible staff on illicit discharge identification, investigation, termination, clean-up, and reporting with follow up training as needed to address changes; Ongoing training for all municipal field staff on identification and reporting with follow up training as needed to address changes; document and maintain records of trainings.	Year 2.5 Year 3	
NPDES SWMP Element #4 - Controlling Runoff from New Development, Redevelopment, and Construction Sites				
4.1 Stormwater Runoff Control Ordinance	S5.C.4.a	Adopt an ordinance to address runoff from new development, redevelopment, and construction site projects disturbing 1 or more acre. The ordinance should include: -Minimum requirements and thresholds equivalent to the 2005 Ecology Manual; -BMP selection and design criteria equivalent to the 2005 Ecology Manual; -Legal authority for inspection of private facilities discharging to the MS4; -Provisions to allow LID techniques to reduce impervious surfaces; -Guidelines for applying Ecology's "erosivity waiver" (if applicable).	Year 2.5	
4.2 Site Plan Review and Permitting	S5.C.4.b	Develop a permitting process with plan review, inspection, and enforcement to ensure that the ordinance guidelines (Element 4.1) are applied to all sites disturbing 1 acre of land or greater. Inspection should apply to high risk sites prior to construction and all sites during and after construction.	Year 2.5	Compliance for inspection requirements is defined as presence and records of an established inspection program designed to inspect all sites and achieving at least 95% of scheduled inspections.
4.3 Long Term Operation and Maintenance	S5.C.4.c	Adopt an ordinance identifying parties responsible for maintenance and inspection of facilities permitted under Element 4.2, requiring inspection and establishing enforcement procedures; Establish maintenance standards for facilities permitted under Element 4.2 consistent with the 2005 Ecology Manual; Inspect established facilities (water quality and flow control) annually; Inspect new water quality and flow control facilities, including catch basins, every 6 months during building construction.	Year 2.5	
4.4 Maintenance Inspection Records	S5.C.4.d	Develop procedure for keeping records. Keep records of all inspections, enforcement actions, maintenance activities, and construction sites.	Year 2.5	To be included as an ongoing tracking activity of Element 11.2.

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Stormwater Program Element	Permit Reference /Rule or Law	Activities/BMPs Needed for Regulatory Compliance	Required Implementation by end of:	Notes/Comments/Overlaps
4.5 NOI for Construction Activity	S5.C.4.e	Make copies of the "Notice of Intent for Construction Activity" and/or "Notice of Intent for Industrial Activity" available to developers.	February 16, 2007	
4.6 Staff Training	S5.C.4.f	Conduct training for staff in permitting, plan review, construction site inspection, and enforcement concerning the Stormwater Runoff Control program (Element 4.1); Maintain records of training.	Year 2.5	Frequency and content of training is not specified in the permit.
NPDES SWMP Element #5 - Pollution Prevention and Operation and Maintenance for Municipal Operations				
5.1 Establish Maintenance Standards	S5.C.5.a	Establish maintenance standards consistent with the 2005 Ecology Manual; When an inspection identifies an exceedence of the maintenance standard, maintenance shall be performed: -Within 1 year for wet pool facilities and retention/detention ponds. -Within 6 months for typical maintenance. -Within 9 months for maintenance that requires capital construction. -Within 2 years for maintenance that requires capital construction of less than \$25k.	Year 3	
5.2 Annual Inspections of Water Quality and Flow Control Facilities	S5.C.5.b	Conduct annual inspections of stormwater treatment and flow control facilities, other than catch basins; Perform necessary maintenance actions in accordance with established maintenance standards.	Years 3, 4 and 5	Compliance of inspection requirements is defined as the presence of an established inspection program designed to inspect all sites and achieving inspection of 95% of all sites.
5.3 Spot Checks after Storm Events	S5.C.5.c	Spot check stormwater treatment and flow control facilities after major storm events (>10-year recurrence interval); Conduct repairs as necessary.	Year 3	Compliance of inspection requirements is the presence of an established inspection program designed to inspect all sites and achieving inspection of 95% of all sites.
5.4 Catch Basin Inspection	S5.C.5.d	Inspect all catch basins and inlets at least once during the permit term; Clean catch basins as necessary; Dispose of decant water appropriately.	Permit End Recommend inspecting 25% per year	Recommend inspecting at least 25% of the catch basins each year, starting in Year 1, so that there is some cushion in the schedule. Compliance of inspection requirements is defined as the presence of an established inspection program designed to inspect all sites and achieving inspection of 95% of all sites.

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Stormwater Program Element	Permit Reference /Rule or Law	Activities/BMPs Needed for Regulatory Compliance	Required Implementation by end of:	Notes/Comments/Overlaps
5.5 Road Maintenance	S5.C.5.f	Implement practices to reduce stormwater impacts from street, parking lot, and highway runoff. Address the following activities: -Pipe and culvert cleaning; -Ditch and roadside areas including vegetation management; -Street cleaning; -Street repair and resurfacing, including pavement grinding; -Pavement striping maintenance; -Snow and ice control; -Utility installation; -Dust control.	Year 3	Per the road O/M standards adopted under Section 5.1.
5.6 Non-Roadway Property Maintenance	S5.C.5.g	Implement practices to reduce stormwater impacts from non-roadway property runoff (parks, open space, right-of-way, and maintenance yards). Address the following: -Application of fertilizer, pesticides, and herbicides, including the development of nutrient management and integrated pest management plans; -Sediment and Erosion control; -Landscape maintenance and vegetation disposal; -Trash management; -Building exterior cleaning and maintenance.	Year 3	
5.7 Staff Training	S5.C.5.h	Implement ongoing training activities for construction, maintenance, and operations personnel. Include training on: -Permit requirements; -O&M standards; -Inspection procedures; -Selecting appropriate BMPs; -Reducing water quality impact in daily activities; -Reporting of water quality concerns and illicit discharges. Maintain records of training.	Year 3	The frequency and content of training activities are not specified in the permit. Training sessions could cover multiple topics to meet multiple requirements (Elements 1.1, 3.6, and 4.6). May overlap with the Regional Road Maintenance ESA Training program the City is already pursuing.
5.8 SWPPP for Maintenance Yards	S5.C.5.i	Develop and implement Stormwater Pollution Prevention Plans for all equipment maintenance and storage yards not covered under the Industrial Stormwater General Permit. Include an implementation schedule for structural BMPs and conduct occasional visual inspection of discharge from the site.	Year 3	
5.9 Record Keeping	S5.C.5.j	Maintain records of inspection and/or repair activities.	Ongoing	Recordkeeping for stormwater facilities noted separately in Element 4.4 and ties into Element 11.2.

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Stormwater Program Element	Permit Reference /Rule or Law	Activities/BMPs Needed for Regulatory Compliance	Required Implementation by end of:	Notes/Comments/Overlaps
NPDES SWMP Element #6 - Program Implementation				
6.1 SWMP Implementation	S5.A.1	Develop and implement a SWMP that covers the geographic area subject to the permit.	Permit End	Compliance is achieved by conducting the activities outlined in Elements 1 through 5 above.
6.2 SWMP Documentation	S5.A.2	Prepare written documentation of the SWMP and maintain annual updates in accordance with Element 10.	March 31 Annually Starting 2008	Compliance is achieved through timely submittals of annual reports (Element 11.1).
6.3 Program Tracking	S5.A.3	Track the cost of development and implementation of the SWMP (beginning no later than January 1, 2009), including the number of inspections, enforcement actions, and public education activities. Use this information to evaluate SWMP development, implementation and permit compliance and to set priorities. Include this information in the Annual Report.	March 31 Annually Starting 2008	Compliance is achieved through timely submittals of annual reports (Element 11.1) and ongoing tracking (Element 11.2).
6.4 Coordination Among Permittees	S5.A.5	Include in the SWMP stormwater management activity coordination mechanisms as needed among: -other municipal stormwater NPDES permittees within adjoining or shared areas to clarify roles and responsibilities for pollutant control and to avoid conflicting plans, policies and regulations. -departments within each jurisdiction to eliminate barriers to compliance.	Permit End	
6.5 MEP and AKART	S5.B	Design the SWMP to reduce discharge of pollutants from the MS4 to the Maximum Extent Practicable (MEP), meet State AKART requirements, and protect water quality. Continue to implement existing SWMP activities, even if they are ahead of the schedule of this permit.	N/A	Compliance is achieved through implementation of existing SWMP activities and the activities outlined in Elements 1 through 5.
NPDES SWMP Element #7 - Total Maximum Daily Load Allocations				
7.1 Applicable TMDLs in Appendix 2	S7.A	Comply with requirements of Appendix 2 of the Phase II permit. When monitoring is required, submit a Quality Assurance Project Plan (QAPP) to Ecology.	Variable	Appendix 2 identifies the Swamp Creek TMDL for fecal coliform and lists Mountlake Terrace as a municipal permit holder with implementation responsibilities. Detail of required activities is included in Element 9 - Swamp Creek TMDL.

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Stormwater Program Element	Permit Reference /Rule or Law	Activities/BMPs Needed for Regulatory Compliance	Required Implementation by end of:	Notes/Comments/Overlaps
7.2 TMDLs not listed in Appendix 2	S7.B	Comply with requirements of the NPDES Phase II permit; Keep records and report activities relevant to applicable TMDLs.	N/A	The Lake Ballinger TMDL is not listed but has been included as Element # 10 in our analysis. Compliance is achieved through implementation of activities outlined in Elements 1 through 5 and submittal of annual reports (Element 11.1).
7.3 TMDLs Approved during the Permit Cycle	S7.C	Comply with future permit modifications (if applicable); Permittees are encouraged to participate in developing TMDLs and begin implementation.	N/A	
NPDES SWMP Element #8 - Monitoring				
8.1 Existing Monitoring	S8.B	Describe any stormwater monitoring or studies and type of information gathered; Assess the appropriateness of the BMPs in the SWMP and note any proposed changes.	March 31 Annually Starting 2008	Compliance is achieved through timely submittals of annual reports (Element 11.1). BMPs in the SWMP are based on those in Ecology's model SWMP and by definition are assumed to meet the requirements of the permit.
8.2 Stormwater Monitoring	S8.C.1.a	Prepare for future monitoring by identifying 2 outfalls or conveyances (1 commercial and 1 high density residential) suitable for permanent flow-weighted composite sampling equipment. Document site selection and justify basin size based on times of concentration for typical seasonal storms.	December 31, 2010	
8.3 SWMP Effectiveness Monitoring	S8.C.1.b	Prepare for future monitoring by identifying 2 suitable questions that could be studied through future monitoring; Select sites for future monitoring to explore the answers to the selected questions; Develop a monitoring plan for each question including: -Statement of the problem and why it is significant; -Specific hypothesis about the problem; -Specific parameters of attributes to be measured; -Expected modifications based on outcome of the monitoring.	December 31, 2010	
8.4 Annual Reporting	S8.C.2.a	Describe the status of identifying sites, questions, and development of monitoring plan outlined in Elements 8.2 and 8.3.	Years 3, 4, and 5	Compliance is achieved through timely submittals of annual reports (Element 11.1).

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Stormwater Program Element	Permit Reference /Rule or Law	Activities/BMPs Needed for Regulatory Compliance	Required Implementation by end of:	Notes/Comments/Overlaps
NPDES SWMP Element #9 - Swamp Creek TMDL				
9.1 Pollution Source Control Activities	Appendix 2	Expand the Illicit Discharge Detection and Elimination Program described in Element 3.3 to address commercial animal handling area and commercial composting facilities, including source control BMPs equivalent to the 2005 Ecology Manual, Volume 4.	Not specified	
9.2 Public Involvement	Appendix 2	Prepare a Bacterial Pollution Control Plan (BPCP) as a subsection of the SWMP documenting relevant City activities being taken to reduce bacterial pollution. Evaluate and document applicability of following bacterial pollution reduction approaches: -receiving water sampling; -pet waste ordinance; -enforcement capabilities; -critical areas ordinances; -K-12 educational program; -methods including low impact development retrofitting and strategies to prevent additional stormwater contamination.	Not specified	
9.3 TMDL Activity Documentation and Tracking	Appendix 2	Discuss program changes and BPCP activities during the previous year in annual reports described in Element 10.1.	Not specified	
9.4 Public Outreach and Education	Appendix 2	Expand the Outreach to Target Audiences described in Element 1.1 to integrate increased public awareness of bacterial pollution problems and the need to protect water quality by properly managing animal wastes.	Not specified	Include in Element 1.1.
9.5 Water Quality Monitoring	Appendix 2	Prepare a monitoring Quality Assurance Project Plan (QAPP) and submit to Ecology for approval. Perform or contract out and begin TMDL water quality monitoring by one of two options: Direct measurement of stormwater or indirect measurement of pollution sources.	Within 120 days of permit issuance Within 180 days of permit issuance	The City has developed and submitted their QAPP for the Scriber Creek sampling point. Ecology approval is pending.
9.6 Coordination of SWM Activities	Appendix 2	N/A - Applies to Snohomish County only.	Not specified	
9.7 Illicit Discharge Detection and Elimination	Appendix 2	Water bodies addressed by the TMDL shall be designated as high priority receiving waters as described in Element 3.3 and shall receive field assessments and screening prior to other receiving water bodies unless approved by Ecology. The presence of sewage/septic system sources shall be investigated as part of all screenings.	Not specified	

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Stormwater Program Element	Permit Reference /Rule or Law	Activities/BMPs Needed for Regulatory Compliance	Required Implementation by end of:	Notes/Comments/Overlaps
NPDES SWMP Element #10 - Lake Ballinger TMDL				
10.1	Pollution Source Control Activities	Appendix 2	A Quality Assurance Project Plan (QAPP) was approved by Ecology for Lake Ballinger for total phosphorus in 2006.	Not specified
10.2	Public Involvement	Appendix 2	The Lake Ballinger Volunteer Sampling Program is in place to educate lake and basin residents, lake users, and policy makers. Their goals and objectives are taken from the King County Lake Stewardship Program and are very similar to goals and objectives of the Snohomish County Lake Stewardship Program.	Not specified
10.3	Water Quality Monitoring	Appendix 2	Monitoring will be performed as per the Quality Assurance Project Plan (QAPP) and the QAPP will be submitted to Ecology for approval. TMDL water quality monitoring is being conducted by Mountlake Terrace in conjunction with the County and the Lake Ballinger Volunteer Sampling Program.	Within 120 days of permit issuance Within 180 days of permit issuance
10.4	Coordination of SWM Activities	Appendix 2	Part of King and Snohomish County volunteer sampling programs.	Not specified
10.5	Illicit Discharge Detection and Elimination	Appendix 2	Water bodies addressed by the TMDL shall be designated as high priority receiving waters as described in Element 3.3 and shall receive field assessments and screening prior to other receiving water bodies unless approved by Ecology. The presence of sewage/septic system sources shall be investigated as part of all screenings.	Not specified

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Stormwater Program Element	Permit Reference /Rule or Law	Activities/BMPs Needed for Regulatory Compliance	Required Implementation by end of:	Notes/Comments/Overlaps
NPDES SWMP Element #11 - Reporting				
11.1 Annual Reports	S9.A&B	Submit annual reports each year on the previous year's NPDES Phase II activities. Use reporting forms supplied in Appendix 3 of the Phase II permit and submit applicable supporting documentation.	March 31 Annually Starting 2008	
11.2 Ongoing Tracking	S9.C.2	To support annual report submittal, maintain records of: -Implementation status of each activity in Elements 1 through 5 and 9; -Assessment of progress toward meeting minimum performance measures; -Activities implemented to comply with program requirement (Elements 1 through 5 and 9); -SWMP implementation schedule and plans for meeting future permit deadlines.	Ongoing	Maintaining good records throughout the year will aid in assembling each year's annual report (Element 11.1).
11.3 Maintaining Records	S9.C	Maintain records of final SWMP documentation and permit activities for five years.	Ongoing	
11.4 Public Access	S9.D	Make all records of final SWMP and permit activities available to the public at reasonable times during business hours.	Ongoing	Included with Element 2.2.
SWMP Element #12 - Underground Injection Control (UIC)				
12.1 Register Existing UIC Wells Used for Stormwater	WAC 173-218-070.1.a.i-iv	Complete Ecology Registration forms and submit (WAC 173-218-070.1.a.i-v). Information includes: Operator/owner information; site location; BMPs used to protect groundwater quality, UIC well description; information necessary to demonstrate that the non-endangerment standard (WAC 173-218-080 and WAC 173-218-090) has been met.	February 2, 2009 (WAC 173-218-090.2.a.i)	Requirements listed here apply when less than or equal to 50 Class V UIC wells are operated by the City. According to WAC 173-218-090.2.d, regulated MS4s that apply SWMPs developed to comply with CWA satisfy the non-endangerment standard for existing UIC wells.
12.2 Assess Existing UIC Wells Used for Stormwater	WAC 173-218-070.1.b.i	According to WAC 173-218-090.2.a.ii, the approach to conducting the well assessment will be determined by the owner. The assessment evaluates the potential risks to groundwater from the use of UIC wells. Any assessment that identifies a well as a high threat to groundwater must include a retrofit schedule (WAC 173-218-090.a.iii), and immediate action must be taken to correct the use of a well that is determined to be an imminent public health hazard (WAC 173-218-090.a.iv).	February 2, 2011 (WAC 173-218-090.2.a.ii)	

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Stormwater Program Element	Permit Reference /Rule or Law	Activities/BMPs Needed for Regulatory Compliance	Required Implementation by end of:	Notes/Comments/Overlaps
12.3 Register New UIC Wells Used for Stormwater (built after 2/3/06) Prior to Use	WAC 173-218-070. 1.a.i-iv	Complete Ecology Registration forms and submit (WAC 173-218-070.1.a.i-v). Information includes: Operator/owner information; site location; BMPs used to protect groundwater quality, UIC well description; information necessary to demonstrate that the non-endangerment standard (WAC 173-218-080 and WAC 173-218-090) has been met.	Prior to Use	
12.4 Compliance with the Nonendangerment Standard for New UIC Wells Used for Stormwater	WAC 173-218-070. 1.b.i	Prior to use, new wells must meet the requirements of WAC 173-218-080 and WAC 173-218-090 which call for preventing the movement of fluid containing any contaminant into the groundwater if it may cause a violation of groundwater quality standards. Compliance with the nonendangerment standard can be met through one or a combination of two approaches: presumptive (WAC 173-218-090.1.c.i.A-D) or demonstrative (WAC 173-218-090.1.c.ii.A-E).	Prior to Use	
12.5 Annual Update on Well Status Changes	WAC 173-218-070. 1.b.ii	After initial well registrations have been sent to Ecology, provide an annual update on any well status changes.	Annually	
12.6 UIC Well Decommissioning & Notification Requirements	WAC 173-218-120	Wells must be decommissioned by filling for plugging the well so that it will not result in an environmental, public health or safety hazard, and will not serve as a channel for movement of water or pollution to the aquifer as specified in WAC 173-218-120.3.b.i-ii). Ecology must be notified 30 days prior to decommissioning wells that pose an imminent public health hazard, otherwise notification must occur within one year of closure.	30 days prior to decommissioning or within one year of closure	
SWMP Element #13 - Endangered Species Act (ESA)				
13 ESA Regional Coordination		The City is a member of the Regional Forum which is the successor to the Tri-County ESA effort. See Element 12 WRIA #8 Chinook Salmon Conservation Plan for ESA compliance strategies.	Ongoing	

**ATTACHMENT #1—CITY OF MOUNTLAKE TERRACE
STORMWATER MANAGEMENT PROGRAM REGULATORY REQUIREMENTS AND MILESTONE DATES**

Stormwater Program Element	Permit Reference /Rule or Law	Activities/BMPs Needed for Regulatory Compliance	Required Implementation by end of:	Notes/Comments/Overlaps
SWMP Element #14 - WRIA 8 Chinook Salmon Conservation Plan				
14.1 WRIA Planning	RCW 90.82	Continue participation in WRIA planning and implementation for WRIA #8 in accordance with Regional Forum guidance and interlocal agreements.	Priority for 2006-2011	
14.2 WRIA #8 Plan Implementation		Recommendations from the plan focus on habitat conservation and include land use and stormwater management policies and programs, local protection and restoration projects, and public involvement opportunities. Stormwater management recommendations are expected to be addressed through the NPDES Phase II Permit program.		According to WRIA staff, implementation planning is just starting. During 2007, staff will be working to sort recommendations, identify overlaps and barriers and develop a prioritized implementation strategy. WRIA and King County staff are encouraging a coordinated public education program between implementing agencies.
SWMP Element #15 - 2007-2009 Puget Sound Water Quality Conservation and Recovery Plan				
Regulatory Authority	RCW 90.71			
15.1 Increase Innovative Techniques Known as Low Impact Development		Adopt policy and/or regulation to allow for or encourage the use of low impact development (LID) techniques.	2007-2009	The recommendation is consistent with NPDES Phase II requirements and is addressed in Element 4. WRIA plans also call for LID techniques to manage stormwater from new and (re)development
15.2 Implement Local Comprehensive Stormwater Management Programs		This requirement is partially addressed by NPDES Phase II requirements. The components of local comprehensive stormwater management programs are specified in the 2000 Puget Sound Water Quality Management Plan and are outlined in Element 15.3	2007-2009	
15.3 Local Comprehensive Stormwater Management Program Components from the 2000 Puget Sound Water Quality Management Plan		See comments in Element 14.2. There are 13 components in the plan labeled a-m, which are described here in Elements 15.3 (a) through (m).	2007-2009	

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15.3 (a) Stormwater Controls for New Development and Redevelopment		This requirement is consistent with NPDES Phase II requirements and is addressed in Element 4.	2007-2009	
15.3 (b) Stormwater Site Plan Review		This requirement is consistent with NPDES Phase II requirements and is addressed in Element 4.	2007-2009	
15.3 (c) Inspection of Construction Sites		This requirement is consistent with NPDES Phase II requirements and is addressed in Element 4.	2007-2009	
15.3 (d) Maintenance of Permanent Facilities		This requirement is consistent with NPDES Phase II requirements and is addressed in Elements 4 and 5.	2007-2009	
15.3 (e) Source Control		This requirement is consistent with NPDES Phase II requirements and is addressed in Element 4.	2007-2009	
15.3 (f) Illicit Discharges and Water Quality		This requirement is consistent with NPDES Phase II requirements and is addressed in Element 3.	2007-2009	
15.3 (g) Identification and Ranking of Problems		This requirement is not addressed by NPDES Phase II requirements. Watershed or basin planning is consistent with this requirement. WRIA planning partially fulfills this requirement.	2007-2009	
15.3 (h) Public Involvement and Education		This requirement is consistent with NPDES Phase II requirements and is addressed in Elements 1 and 2.	2007-2009	
15.3 (i) Low Impact Development Practices		This requirement is consistent with NPDES Phase II requirements and is addressed in Element 4. See also Element 15.1.	2007-2009	
15.3 (j) Watershed or Basin Planning		This requirement is not addressed by NPDES Phase II requirements. WRIA planning partially fulfills this requirement. The City may want to consider more rigorous watershed planning as development proceeds.	2007-2009	
15.3 (k) Funding		This requirement is not addressed by NPDES Phase II requirements. The City has implemented a stormwater utility to fund stormwater management program expenses and is currently looking at SWM funding approaches as part of this plan update.	2007-2009	
15.3 (l) Monitoring		This requirement is partially covered for program implementation by NPDES Phase II requirements for tracking and reporting consistent with Element 11. Monitoring of environmental conditions and trends over time is not covered by NPDES Phase II requirements and could be met through WRIA, watershed or basin planning.	2007-2009	

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15.3 (m) Schedule for Implementation		This requirement is partially addressed for components covered by NPDES Phase II requirements. The current SWMP update will include a recommended implementation schedule.	2007-2009	

Notes:

- Activities are based on the *NPDES and State Waste Discharge General Permit for Discharges from Small MS4s in Western Washington*, issued January 17, 2007 and effective February 16, 2007.
- Year 1 ends February 15, 2008. Year 2 ends February 15, 2009; Year 3 ends February 15, 2010; Year 4 ends February 15, 2011; Year 5 ends February 15, 2012
- "Permit End" means 180 days prior to the expiration date of the permit.
- "2005 Ecology Manual" refers to the Washington State Department of Ecology's 2005 *Stormwater Management Manual for Western Washington*.
- Monitoring requirements vary based on City or County population. Guidelines listed here are for small cities (population between 10,000 and 25,000).