



September 2, 2022

Nancy Gramlich
Willamette Basin Coordinator
DEQ Western Region – Salem
4026 Fairview Industrial Dr. SE
Salem, OR 97302
Nancy.h.gramlich@deq.oregon.gov

RE: Willamette Basin Total Maximum Daily Load Update for Mercury

City of Dundee staff reviewed the following:

- DEQ 2019 *Final Revised Willamette Basin Mercury Total Maximum Daily Load (TMDL) and Water Quality Management Plan (WQMP)*.
- The U.S. Environmental Protection Agency Feb 4, 2021, *Total Maximum Daily Load for Mercury in the Willamette Basin, Oregon*
- The TMDL issuance date was March 3, 2021, which makes the 18-month implementation deadline September 3, 2022.
- The City of Dundee is updating the TMDL plan to help the City be successful in reducing mercury releases including sediment reduction strategies and milestones as identified in Section 13 of the Final Revised Willamette Basin Mercury TMDL and WQMP.

The items outlined in this letter and incorporated into the updated TMDL matrix (Attachment B) include the components that supplement and/or replace the actions in the 2006 TMDL plan adopted and approved by the Oregon Department of Environmental Quality as part of the City's 2009 TMDL Implementation Plan (Attachment C). Upon review of the City's TMDL matrix and 2009 Plan, the City had already incorporated all of the overall measures identified for the 2019 Mercury TMDL.

Although the overall measures for the 2019 Mercury TMDL were already included in the City's 2009 Plan, some of the actions identified in the 2009 Plan have been revised as shown in the City's current TMDL plan matrix (Attachment B). The actions were revised to better align with the 2019 Mercury TMDL guidance and overall TMDL goals, to align with City staffing and funding capabilities and to help the City be successful in achieving the TMDL goals.

2022 TMDL Implementation Plan Updates for Mercury TMDL

Introduction

On Nov. 22, 2019, DEQ issued the [Final Revised Willamette Basin Mercury Total Maximum Daily Load](#) that was submitted to the U.S. Environmental Protection Agency for action. EPA disapproved DEQ's TMDL on Dec. 30, 2019,



and issued their final TMDL on Feb. 4, 2021, following a public comment period. EPA notified DEQ that, "EPA has established this TMDL and is hereby providing it to the State for implementation." EPA's TMDL states that reasonable assurance for their TMDL relies on DEQ's Water Quality Management Plan (WQMP). The WQMP was issued on Nov. 22, 2019, as part of the EPA TMDL. EPA and DEQ expect that, with implementation of the WQMP, mercury water quality standards will be met.

The WQMP describes a multi-faceted approach that requires implementation of management practices through development of nonpoint source TMDL implementation plans (clean water plans) by Designated Management Agencies (DMAs) and Responsible Persons (RPs) across the entire Willamette Basin to reduce human-caused sources of mercury. The City of Dundee, along with approximately 189 other DMAs/RPs, was identified in the Mercury TMDL WQMP by DEQ and issued a notification letter indicating the requirements in March 2021 (Attachment A).

Summary of plan development and implementation requirements

The City of Dundee is required to develop and implement a nonpoint source TMDL implementation plan that includes mercury and sediment reduction strategies (Appendix 2 DEQ Nov 2019 Mercury Water Quality Management Plan Summary) that must be met by September 3, 2022. The plan will need to be approved by DEQ.

Overview of Mercury TMDL

Mercury overview below was extracted from the 2019 WQMP Mercury TMDL:

<https://www.oregon.gov/deq/wq/Documents/willHgtmdlwqmpF.pdf>

The Willamette River and many of its tributaries do not currently meet water quality standards for mercury and are included on Oregon's list of impaired waters under Clean Water Act §303(d). Mercury fish consumption advisories are in place throughout the Willamette Basin.

Water quality standards are in place to protect people from high levels of mercury exposure when eating fish and shellfish. The fish tissue criterion allows Oregonians to safely consume higher amounts of fish (approximately 23 8-oz fish meals a month) caught in Oregon waterways. Among those who rely on Willamette Basin fish and shellfish as a food source are tribal, immigrant and low-income communities and other historically marginalized communities.

A TMDL is a planning tool designed to restore and maintain the quality of waters that have been identified as not meeting applicable water quality standards (USEPA, 1991). A TMDL is typically expressed as:

$TMDL = \sum WLA + \sum LA + MOS \leq LC$ where:

WLA = Wasteload Allocation – the portion of the loading to the water body assigned to each permitted point source of the pollutant.

LA = Load Allocation – the portion of the pollutant loading assigned to nonpoint sources of the pollutant.



Σ = Summation across multiple items

The TMDL identified sources of mercury and how much mercury needs to be reduced to meet water quality standards. The TMDL used linked models and significantly more data than the 2006 TMDL. The greatest source of mercury in the basin is from atmospheric deposition, which is mercury in the air falling onto the land or into the water. The mercury in air originates mainly from national and global sources rather than from sources in Oregon.

Once mercury is deposited on the landscape, the major pathways to streams are erosion of sediment-bound mercury and surface runoff. Of the many different types of land use that exist within the Willamette Basin, forestry, agriculture, and urban uses comprise most of the area within the basin. Management actions on these land uses influence the amount of mercury from these sources that reach streams and rivers in the basin. Point source discharges, such as sewage treatment plants or industries, contribute significantly less mercury to streams than nonpoint sources, such as runoff from logging roads and agricultural fields.

General approach for mercury reductions

This plan update is focused on the TMDL for mercury and sediment reduction to improve water quality. Stormwater management is the key activity for reducing nonpoint source inputs of mercury. The City's TMDL matrix outlines the stormwater best management practice activity that aligns with the stormwater program in the DEQ 2019 WQMP (Attachment B)

Voluntary actions and existing programs

Focus of this plan is on mercury and sediment reduction, however, strategies being implemented under the 2006 TMDL also benefit surface water quality overall for other parameter limitations, such as, bacteria, temperature, etc.

Mercury reductions

The EPA Willamette Basin TMDL has reduction targets for mercury at the Subbasin level. Reductions of 75% from nonpoint source urban stormwater are needed to eliminate fish consumption advisories in the Yamhill River and 97% for the Middle Willamette. See Table 3 that follows. The City of Dundee drainage flows to the Middle Willamette as well as tributaries of the Middle Willamette as described in the attached TMDL Implementation Plan (Attachment C)

The information below was derived from Appendix C from EPA TMDL:

U.S. EPA Total Maximum Daily Load (TMDL) for Mercury in the Willamette Basin, Oregon

<https://www.epa.gov/sites/production/files/2021-02/documents/tmdl-willamette-mercury-final-02-04-2021.pdf>

In compliance with the provisions of the Clean Water Act, 33 U.S.C. 1251 et seq., as amended by the Water Quality Act of 1987, P.L. 1004, the Environmental Protection Agency is hereby establishing a TMDL to address discharges of mercury to the waters of the Willamette Basin, Oregon. Allocations are the same as in ODEQ's 2019 TMDL except for atmospheric deposition which is increased for all subbasins to 35% based on re-assessment of predicted reductions



in atmospheric deposition.

Table 3 from EPA TMDL - Load and wasteload allocations for Middle Willamette and Yamhill

Category for EPA Allocated Reduction	Reduction
Non-Permitted Urban Stormwater – Middle Willamette	97%
Non-Permitted Urban Stormwater - Yamhill	75%

Plan monitoring and reporting requirements

The DEQ 2019 TMDL Mercury WQMP describes DEQ's plan for implementing actions to reduce mercury in fish tissue. Effectiveness of these measures will be tracked, evaluated, and improved, as warranted, to meet the standards.

Monitoring will be documented in reports that the City is already required to submit under the 2009 plan and 2018-2023 matrix. The City of Dundee will continue to annually report on progress in implementing nonpoint source strategies identified in the TMDL implementation plan, including any delays or challenges in implementing strategies. These reports will contain the implementation matrix with information on the progress of each stormwater quality measure.

The City will evaluate the Implementation Plan (Attachment C) every five years following submittal. The evaluation will include a review of the effectiveness of the Plan relative to the pollution reduction goals. The report will describe what information was used in the evaluation, findings of the evaluation, and the basis for this reasoning. If the evaluation indicates that the Plan is not likely to be adequate to meet the pollution reduction goals, The City will describe how the Plan will be modified or undertake other efforts to achieve these goals, and the timeline for accomplishing this. In addition, the City of Dundee will review and revise this Implementation Plan as needed.

Management strategies related to mercury will be included in the next five-year review for the Willamette Basin TMDL (currently scheduled for 2023), even though five complete years of mercury implementation based on the updated WQMP will not have occurred by then. The City of Dundee will address progress in implementing mercury reduction strategies, in addition to other nonpoint source pollutants established under previous Willamette TMDLs for which they were named a DMA.

The implementation timelines established for Dundee are as follows:

1. Begin Plan implementation: 09/03/2022
2. Annual progress reports. Each report should cover the previous 12 months of plan implementation for Jan through Dec
 - a. Submit to DEQ: Due 02/28 in the following years: 2024, 2025, 2026, 2027
3. Five-Year review report. This report is more comprehensive than annual progress and is for documenting compliance with implementation of the DEQ-approved TMDL plan and plan updates for the next five-year cycle for continuation of implementation and reporting.
 - a. Submit to DEQ: Due 02/28/2023 and 02/28/2028. The 02/28/2023 report is an exception and will



only cover 9/3/2022 through 12/31/2022 under the revised mercury TMDL. The 2006 Mercury TMDL plan and matrix applies to 9/1/2018 through 9/2/2022.

b.

Land Use Compliance and Citation of Legal Authorities

The City of Dundee has the legal authority, through ordinance and other means, such as establishing contracts, to implement the provisions of this plan. Activities used to carry out the management strategies include:

- Annual budget approval by City council including a dedicated stormwater fund, general funds, contracts, interagency agreements and grants
- Land Use Zoning & Planning Codes including Sustainability Feature requirements promoting stormwater management features: [Chapter 17.202 ZONING REGULATIONS](#)
- City Standards for Stormwater including Water Quality and Detention Requirements: [Division 5 - Stormwater Management](#)
- City codes including:
 - Stormwater Management Code: [Chapter 13.20 STORMWATER MANAGEMENT](#)
 - Request for Service/billing
 - Stormwater service charges
 - Regulations and Requirements
 - Prohibitions
 - On-site Mitigation
 - Right of Access
 - Tampering with system
 - Compliance
 - Violations-Penalties
 - System Development Charges: [Chapter 15.16 SYSTEM DEVELOPMENT CHARGES](#)
 - Billing and Collection of Utility Charges: [Chapter 13.04 BILLING AND COLLECTION OF UTILITY CHARGES](#)
- The City's permitting approval process requires the maintenance of privately-owned stormwater controls and reporting of annual maintenance to the City for inclusion in the City's annual TMDL report.
- The City has developed Stormwater service Charges to generate revenue to support the maintenance of your post-construction stormwater controls and/or administration of your post-construction stormwater control program. The ordinance allows for reduction of the charge if City Standards for water quality and detention are implemented which support the TMDL plan measures to improve water quality and reduce sediment discharges. [466-2008 Stormwater Service Charges](#)

Costs and Funding

Identifying estimated costs and demonstrating there is sufficient funding available to begin and sustain reasonable implementation of the plan is essential for developing and sustaining the clean water plan overtime. Oregon Administrative Rule 340-042-0040(4)(I)(N) establishes requirements for costs and funding for implementing management strategies in the nonpoint source TMDL implementation plan.



The City of Dundee performs a fiscal analysis of stormwater needs during the annual budget process and has a dedicated revenue stream and stormwater fund to support the TMDL implementation plan. See [Chapter 13.20 STORMWATER MANAGEMENT](#). Staff salaries, supplies, volunteer coordination, regulatory fees, installation, operation, and maintenance of management measures are considered. Due to the lack of staff, outside contracts are also utilized to support the implementation plan

Public Involvement and Participation

The City of Dundee has implemented a public involvement and participation program that provides opportunities for the public to effectively participate in the development of stormwater control measures. See Minimum measure 3 of the TMDL Matrix in Attachment B. The City complies with their public notice requirements when implementing a public involvement participation process and maintains a publicly accessible website with information on the city’s TMDL Plan Matrix and progress reports, contact information (staff contacts) and educational materials (newsletters). DundeeCity.org

DEQ 2019 WQMP - Evaluation of existing programs

The City of Dundee now has approximately 3,243 people and therefore falls into the category of Less than 5,000 population implementation measures and timelines listed in Table 13-11 and 13-14 summary below.

Staff compared the current TMDL Matrix to the tables. Upon evaluation of the City’s existing programs, it appears that the City’s current TMDL Matrix (Attachment B) and associated measures/programs currently address the minimum requirements of Table 13-11 and timelines of Table 13-14 after some minor revisions/clarifications. The TMDL matrix includes the management strategies, timeline, schedule and performance initiatives that will be implemented by the City of Dundee under this plan to mitigate the potential nonpoint sources of mercury and sediment.

Based on the evaluation of the existing TMDL Matrix (Attachment B), the matrix has been updated to include all six mercury stormwater control measures, and are proposed for partial implementation at this time. Each measure along with the reference to the City’s current actions described in the TMDL Matrix is listed in Table 13-11 that follows.

DEQ 2019 WQMP Table 13-11

Stormwater Measure	Requirements	< 5K population
1 Pollution Prevention Municipal Operations City’s Actions: See Minimum Measure 1 (Attachment B)	DMAs must properly operate and maintain its facilities, using prudent pollution prevention and good housekeeping to reduce the discharge of mercury-related pollutants, such as sediment, through the stormwater conveyance system to waters of the state. DMAs must ensure that DMA-owned or operated facilities with industrial activity identified in DEQ’s 1200-Z Industrial Stormwater General Permit have coverage under this permit. The DMA must also conduct its municipal operation and maintenance activities in a manner that reduces the discharge of	As determined by DEQ based on information provided by DMA



	<p>pollutants to protect water quality.</p> <p>DMA's must maintain records for activities to meet the requirements of the Pollution Prevention and Good Housekeeping for Municipal Operations program requirements and include a descriptive summary of their activities in the TMDL Annual Report.</p>	
<p>2. Public Education and Outreach</p> <p>City Actions: See Minimum Measure 2 (Attachment B)</p>	<p>DMA's must conduct an ongoing education and outreach program to inform the public about the impacts of stormwater discharges on waterbodies and the steps that they can take to reduce mercury-related pollutants in stormwater runoff. The education and outreach program must address stormwater issues of significance within the DMA's community.</p> <p>DMA's must track implementation of the public education and outreach requirements. In each corresponding TMDL Annual Report, the DMA must assess their progress toward implementation of the program, including a qualitative evaluation of at least one education and outreach activity corresponding to the reporting timeframe for the associated TMDL Annual Report. The evaluation should be used to inform future stormwater education and outreach efforts to most effectively convey the educational material to the target audiences.</p>	As determined by DEQ based on information provided by DMA
<p>3. Public Involvement and Participation</p> <p>City Actions: See Minimum Measure 3 (Attachment B)</p>	<p>DMA's must implement a public involvement and participation program that provides opportunities for the public to effectively participate in the development of stormwater control measures. The DMA must comply with their public notice requirements when implementing a public involvement participation process, including maintaining and promoting at least one publicly accessible website with information on the city's stormwater control implementation, contact information and educational materials.</p>	As determined by DEQ based on information provided by DMA
<p>4. Illicit Discharge Detection and Elimination</p> <p>City Actions: See Minimum Measure 4 (Attachment B)</p>	<p>DMA's must implement and enforce a program to detect and eliminate illicit discharges into the stormwater conveyance system. An illicit discharge is any discharge to a stormwater conveyance system that is not composed entirely of stormwater. The DMA must develop and maintain a current map of their stormwater conveyance system. The stormwater conveyance system map and digital inventory must include the location of outfalls and an outfall inventory, conveyance system and stormwater control locations. The DMA must make maps and inventories available to DEQ upon request. When in digital format, the DMA must fully describe mapping standards in the TMDL implementation plan or other city planning document.</p> <p>The IDDE program must prohibit non-stormwater discharges into the stormwater conveyance system through enforcement of an ordinance or other legal mechanism, including appropriate enforcement procedures and actions to ensure compliance. The ordinance or other regulatory mechanism must also define the range of illicit discharges it covers, including those discharges that are conditionally allowed, such as groundwater and lawn watering discharges. The IDDE program must also maintain a procedure or system to document all complaints or reports of illicit discharges into and from</p>	As determined by DEQ based on information provided by DMA



	<p>the stormwater conveyancesystem.</p> <p>The DMA must track implementation of the IDDE program requirements. In each TMDL Annual Report, the DMA must assess their progress towards implementation of the program.</p>	
<p>5. Construction SiteRunoff Control</p> <p>City Actions: See Minimum Measure 5 (Attachment B)</p>	<p>DMA's must refer project sites to DEQ, or the appropriate DEQ agent, to obtain NPDES 1200-C Construction Stormwater Permit coverage for construction projectsthat disturb one or more acres (or that disturb less than one acre, if it is part of a "common plan of development or sale" disturbing one or more acres).</p> <p>In addition, DMA's must require construction site operators to complete and implement an Erosion and Sediment Control Plan for construction project sites in itsjurisdictional area that result in a minimum land disturbance of 21,780 square feet (one half of an acre) or more, and are not already covered by a 1200-C permit.</p> <p>Through ordinance or other regulatory mechanism, to the extent allowable understate law, the DMA must require erosion controls, sediment controls, and waste materials management controls to be used and maintained at all qualifying construction projects (as described above) from initial clearing through final stabilization to reduce pollutants in stormwater discharges to the stormwater conveyance system from construction sites.</p> <p>The DMA must develop, implement and maintain a written escalating enforcementand response procedure for all qualifying construction sites. The procedure must address repeat violations through progressively stricter response, as needed, to achieve compliance.</p> <p>The DMA must track implementation of its construction site runoff program required activities. In each TMDL annual report, the DMA must assess their progress towardimplementing its construction site runoff program's control measures.</p>	<p>As determined by DEQ based on information provided by DMA</p>



<p>6. Post-Construction Site Runoff for New Development and Redevelopment</p> <p>City Actions: See Minimum Measure 6 (Attachment B)</p>	<p>DMA's must develop, implement, and enforce a program to reduce discharges of pollutants and control post-construction stormwater runoff from new development and redevelopment project sites in its jurisdictional area.</p> <p>Through ordinance or other regulatory mechanism, the DMA must require the following for project sites discharging stormwater to the storm water conveyance system that create or replace 10,890 square feet (one quarter of an acre) or more of new impervious surface area:</p> <p>(A) The use of stormwater controls at all qualifying sites. (B) A site-specific stormwater management approach that targets natural surface or predevelopment hydrological function through the installation and long-term operation and maintenance of stormwater controls. (C) Long-term operation and maintenance of stormwater controls at project sites that are under the ownership of a private entity.</p> <p>The DMA must target natural surface or predevelopment hydrologic function to retain rainfall on-site and minimize the offsite discharge of precipitation utilizing stormwater controls that infiltrate and evapotranspire stormwater. For projects that are unable to fully retain rainfall/runoff from impervious surfaces on-site, the remainder of the rainfall/runoff from impervious surfaces must be treated prior to discharge with structural stormwater controls. These stormwater structural controls should be designed to remove, at a minimum, 80 percent of the total suspended solids.</p>	<p>As determined by DEQ based on information provided by DMA</p>
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DEQ 2019 WQMP Table 13-14 Summary

Stormwater Control Measures	Implementation Deadlines from TMDL Issuance Date		
	City Population		
	Less than 5,000	5,000 to 10,000	Greater than 10,000
1. Pollution Prevention and Good Housekeeping for Municipal Operations	As determined by DEQ based on information provided by DMA	3 years	18 months
2. Public Education and Outreach	As determined by DEQ based on information provided by DMA	3 years	18 months
3. Public Involvement and Participation City Actions: See	As determined by DEQ based on information provided by DMA	3 years	18 months



4. Illicit Discharge Detection and Elimination	As determined by DEQ based on information provided by DMA	4.5 years	3 years
5. Construction Site Runoff Control	As determined by DEQ based on information provided by DMA	9.5 years	4.5 years
6. Post- Construction Site Runoff for New Development and Redevelopment	As determined by DEQ based on information provided by DMA	9.5 years	4.5 years

As shown in Attachment B, City of Dundee prepared a TMDL implementation approach that meets the requirements for a small municipality (<5000) by incorporating all six TMDL measures identified in the 2019 Mercury TMDL. The City is actively working to help reduce water quality impacts including mercury associated with nonpoint sources. The City will review these measures and actions to evaluate the effectiveness and make adjustments on an annual basis moving forward to help meet TMDL goals.

Greg Reid, City Engineer (city.engineer@dundeecity.org)

Alternative Contact: Steve Dahl, City Administrator (steve.dahl@dundeecity.org)



Attachment A

DEQ Mercury TMDL Notification Letter (March 2021)



Oregon

Kate Brown, Governor

Department of Environmental Quality

Agency Headquarters

700 NE Multnomah Street, Suite 600

Portland, OR 97232

(503) 229-5696

FAX (503) 229-6124

TTY 711

Certified Mail 7017 0530 0000 7760 7466

March 3, 2021

Dundee City Council
620 SW 5th St.
Dundee, OR. 97115

Re: EPA takes final action on *Revised Willamette Basin Mercury Total Maximum Daily Load*

Dear City Council Members:

This letter provides notification that the U.S. Environmental Protection Agency (EPA) released the *Total Maximum Daily Load (TMDL) for Mercury in the Willamette Basin, Oregon* on Feb. 4, 2021. EPA notified DEQ that, "EPA has established this TMDL and is hereby providing it to the State for implementation."

The EPA's TMDL says that the required reasonable assurance of implementation for the TMDL relies on DEQ's Water Quality Management Plan. The WQMP was issued on Nov. 22, 2019 as part of the DEQ *Final Revised Willamette Basin Mercury Total Maximum Daily Load*. You received this letter because DEQ listed the City of Dundee as a Designated Management Agency in the WQMP. Therefore, the City of Dundee is responsible for implementing strategies to reduce mercury according to requirements identified in the WQMP that are specific to the City of Dundee.

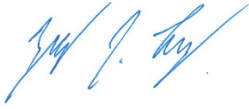
DEQ submitted its TMDL and associated documents to EPA for review and action on Nov. 22, 2019. EPA disapproved DEQ's TMDL on Nov. 29, 2019. On Dec. 30, 2019, EPA established the Willamette Basin Mercury TMDL, which was in effect until EPA released the revised TMDL on Feb. 4, 2021. EPA's 2019 TMDL, as revised in Feb. 2021, and DEQ's 2019 TMDL WQMP are in effect and apply to the City of Dundee. DEQ's WQMP and additional information can be accessed at: <https://www.oregon.gov/deq/wq/tmdls/Pages/willhgtmdlac2018.aspx>

As a DMA, the City of Dundee is required under OAR 340-42-080 to prepare a TMDL implementation plan to incorporate implementation requirements in the WQMP based on several criteria. TMDL implementation plans must be submitted to DEQ for review and approval by Sept. 3, 2022, which is 18 months from the date of this letter. Should the City of Dundee fail to submit the plan by this date, this matter may be referred to the Department's Office of Compliance and Enforcement for formal enforcement action, including the assessment of civil penalties and/or a Department Order. Please note that civil penalties can be assessed for each day of violation.

Please contact your basin coordinator, Nancy Gramlich, to determine what your specific requirements are and to discuss any questions you may have. Your basin coordinator will work closely with you to support your submittal of all TMDL- required documents and reports.

We appreciate the City of Dundee involvement in TMDL implementation to reduce mercury in the Willamette Basin in order to protect people who regularly eat fish and shellfish from streams and lakes across the basin.

Sincerely,



Zach Loboy
Water Quality Manager DEQ, Western Region
(541) 687-7425, Zach.LOBOY@deq.state.or.us
165 E. 7th Ave. Ste. 100, Eugene, OR. 97401

Nancy Gramlich
Willamette Basin Coordinator DEQ, Western Region
(503) 378-5073, Nancy.H.GRAMLICH@deq.state.or.us
4026 Fairview Industrial Dr. SE, Salem, OR. 97302

ec: Rob Daykin, City Administrator, City of Dundee
Greg Reid, City Engineer, City of Dundee



Attachment B

City of Dundee TMDL Matrix

MINIMUM MEASURE # 1 - MUNICIPAL OPERATIONS AND MAINTENANCE BMPS						
SOURCE	ACTIVITY	POLLUTANT ADDRESSED	FUNDING	TIMELINE	MILESTONE/REPORTING METRIC	STATUS
Hot water discharges, sanitary spill wash-downs, waste disposal	BMP - 1: Continue to implement Discharge and Spill Prevention Procedures (attached)	Temperature, Bacteria, Mercury	Public Works Utility Funds	Implement procedures throughout year	Annually report date, time and procedures followed for discharges	
Hot water discharges, sanitary spill wash-downs, waste disposal	BMP - 2: Employee Training on potential hot water sources and prevention.	Temperature, Bacteria, Mercury	Public Works Utility Funds	Employee Training - Twice per Year minimum	Annually report date, time & topic of training performed;	
Sediments in catch basin sumps, Animal waste, sediments and waste on streets.	BMP - 2 Monitor sediment accumulation, identify, clean-up, and enforcement actions for illicit discharges (trigger MM #4 BMP-3) & clean stormwater inlets; Perform Street Sweeping	Bacteria, Mercury	Public Works Utility Funds (Parks, Streets & Stormwater)	Inspect stormwater inlets annually & maintain log of findings & cleaning; Street Sweeping Monthly	Submit log of inlets inspected and cleaned; Submit invoices identifying street sweeping; Submit log of illicit discharges and actions taken.	
Park/Open Space Maintenance	BMP - 3: Maintain landscaping by weeding watering & trimming while minimizing fertilizers and other chemicals; Track, type, amount, location and effectiveness of fertilizers and chemicals used. Identify and reduce chemicals or replaced with more organic/natural chemicals where possible and monitor effectiveness?	Mercury (Sediment Reduction)	Public Works Utility Funds (Streets & Stormwater)	Maintain landscaping twice per year and log chemicals used and effectiveness	Maintain and annually report log of chemicals used, location, quantity & effectiveness. Document attempts to reduce chemicals and/or use of organic chemicals.	
Water Quality Facility Maintenance	BMP - 4 Maintain Water Quality Facilities including filter inlets, jellyfish manhole and vegetated swales/ponds and log inventory of facilities, inspections and maintenance performed.	Bacteria and Mercury	Public Works Utility Funds (Streets & Stormwater)	Maintain inventory of facilities to track maintenance and cleaning activities;	Complete inventory of existing facilities by end of 2021; Annually report updates to inventory, inspections, maintenance and/or cleaning of facilities;	
MINIMUM MEASURE # 2 - PUBLIC EDUCATION						
SOURCE	ACTIVITY	POLLUTANT ADDRESSED	FUNDING	TIMELINE	MILESTONE/REPORTING METRIC	STATUS
Activities affecting Stormwater discharges including impacts from yard maintenance & vegetation removal.	BMP - 1: Continue Public Education Activities by providing articles on stormwater issues within newsletter distributed with utility bills	Bacteria, Mercury	Stormwater Utility Fund	Quarterly (4 times/year) Newsletter Inserts	Annually report date and topic of each newsletter article or provide web link w/ report; Annually report the results of a qualitative evaluation of educational outreach effectiveness.	
Activities affecting Stormwater discharges including impacts from yard maintenance & vegetation removal.	BMP - 2: Collaborate with local and state agencies to educate residents and public on stormwater issues	Bacteria, Mercury	Stormwater Utility Fund	Coordinate one educational activity per year	Annually report the name and date of the activity & coordination performed (agency, date, time & issues discussed)	

Dumping of waste into inlets.	BMP - 3: Inspect stencil (No Waste Dumping, Drains to River) during inlet inspections, replace as needed and report on maintenance log	Bacteria, Mercury	Stormwater Utility Fund	Inspect during annual inlet inspection and replace where needed	Annually report on inlet inspections, identify inlets needing stencil and record date installed/maintained	
Pet Wastes	BMP - 4: Continue to maintain pet waste stations & signage at designated pet areas (3); Log date and maintenance activity performed.	Bacteria	City General Fund	Stations maintained weekly; signage inspected weekly and replaced as needed	Annually submit report for log of weekly inspections and maintenance and repairs needed	
MINIMUM MEASURE # 3 PUBLIC INVOLVEMENT AND PARTICIPATION						
SOURCE	ACTIVITY	POLLUTANT ADDRESSED	FUNDING	TIMELINE	MILESTONE/REPORTING METRIC	STATUS
Stormwater discharges	BMP - 1: Public Participation in Stormwater Program Development, implementation & funding needed through presentations to City Council regarding updated TMDL plan and obtain Council approval; periodic City Council updates on progress, and post TMDL Implementation Matrix and reports to City Web Site	Bacteria, Mercury	Stormwater Utility Fund	Present all TMDL docuemtns and reports-for approval by City Council; Quarterly updates including reports submitted and improved enforcement actions and ongoing activities or issues	Approval of TMDL docuemntation - Annually submit report date, time and topic of Council presentations and actions; Annually report location of information posted to City Web Site	
Stormwater discharges including removal of trees and vegetation in riparian areas.	BMP - 2: Public Participation in Ordinance Development related to riparian habitat protection and restoration through City Council meetings or other stormwatwer program measures	Temperature, Bacteria, Mercury	Stormwater Utility Fund	Develop and present ordinance concept and obtain public and council input - June 2023; Further develop ordinance and revise per public & Council comments - November 2023; Present ordinance for Council to consider adoption - March 2024	Annually submit a report w/date, topic and feedback from council/public presentations for ordinance develop	
Stormwater discharges. Including removal of trees and vegetation in riparian areas.	BMP - 3: Public Reporting of Stormwater Concerns; Maintain log stormwater concerns made by public to City Hall via phone call, in person or via email.	Bacteria, Mercury	Stormwater Utility Fund, General fund	Ongoing	Annually submit log of concerns	
MINIMUM MEASURE # 4 ILLICIT DISCHARGE DETECTION AND ELIMINATION						
SOURCE	ACTIVITY	POLLUTANT ADDRESSED	FUNDING	TIMELINE	MILESTONE/REPORTING METRIC	STATUS
Discharges into storm sewers.	BMP - 1: Maintain Storm Sewer Map;	Bacteria, Mercury	Stormwater Utility Fund	Annually update storm sewer map with new construction;	Provide updated storm plan annually	

Discharges into storm sewers.	BMP - 2: Develop and implement updated Storm Drainage Master Plan (SDMP)	Bacteria, Mercury	Stormwater Utility Fund	Council adopt and begin implementing SDMP - 4th Qtr 2024	Report adoption of SDMP and annually report storm projects completed/implemented	
Illicit construction activities, illegal dumping, illicit sanitary discharges.	BMP - 3: Continue to implement ordinance and enforcement procedure prohibiting illicit discharges. City staff to monitor construction sites and City infrastructure during daily rounds; log illicit discharges and implement corrective and enforcement actions	Mercury, Bacteria	Stormwater Utility Fund, General fund	Annually report log of illicit discharges including corrective/enforcement actions taken	Annually report	
Illicit discharges (private), illegal dumping, illicit sanitary discharges.	BMP - 4: Detect and Address Non-Stormwater Discharges into the System; Continue working with public, employees, industries, businesses and residents to minimize identify and address illicit discharges	Mercury, Bacteria	Stormwater Utility Fund	Ongoing; See Minimum Measure #1 BMP - 2; Minimum Measure #3 BMP - 3	Annually report logs	
Non-stormwater discharges into the storm system.	BMP - 5: Educate Public Employees, Businesses and the General Public about Hazards Associated with Illicit Discharges & associated Best Management Practices	Bacteria, Mercury	Stormwater Utility Fund, General fund	Ongoing through Public Works coordination meetings and newsletters in utility bills; See Minimum measure #1, BMP - 1 & Minimum measure #2, BMP - 1	Annually report	
MINIMUM MEASURE # 5 - CONSTRUCTION SITE STORMWATER RUNOFF CONTROL						
SOURCE	ACTIVITY	POLLUTANT ADDRESSED	FUNDING	TIMELINE	MILESTONE/REPORTING METRIC	STATUS
Sediments from construction or other soil disturbing activity.	BMP - 1: Continue to implement City Codes 13.20.080 Prohibitions & 13.20.130 Violation - Penalty with enforcement features & erosion control standards	Bacteria, Mercury	Stormwater Utility Fund, General fund	Annually	Annually report log of violations	
Sediments from construction or other soil disturbing activity.	BMP - 2: Continue to implement requirements for Construction Site Operators to use BMPs for erosion and Sediment control; Log construction projects not regulated by 1200C, inspections performed and issues/corrective measures	Bacteria, Mercury	Stormwater Utility Fund, General fund	Develop and implement log - 2020	Annually report log of projects and inspections	

Erosion sediments and waste associated with development washed to the storm system.	BMP - 3: Continue to implement Site Plan review procedures to address water quality issues and compliance with 1200C requirements; Log projects requiring 1200C permit (Area >= 1 acre), inspections and issues/corrective measures	Bacteria, Mercury	Stormwater Utility Fund, General fund	Ongoing program triggered during development	Annually describe the number of site plan reviews that triggered referral to DEQ for 1200C site plan reviews triggering 1200C referral report log of projects	
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MINIMUM MEASURE #6 - POST CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

SOURCE	ACTIVITY	POLLUTANT ADDRESSED	FUNDING	TIMELINE	MILESTONE/REPORTING METRIC	STATUS
Sediments and impervious surface runoff into the stormwater system.	BMP - 1: Continue to Implement and Enforce a Program to Ensure Reduction of Pollutants in Stormwater Runoff from New Development and Redevelopment; Identify post construction stormwater facilities and log inspections and corrective actions	Bacteria, Mercury	Stormwater Utility Fund, General fund	Develop log - 2020	Annually submit report log of facilities, inspections and actions effective 2020	
Sediments and impervious surface runoff into the stormwater system.	BMP - 2: Update stormwater SDC to reflect updated project priorities identified in the updated Storm Drainage Master Plan, SDMP (4th Qtr 2024) or other programs for water quality that trigger SDC review and update	Bacteria, Mercury	Stormwater Utility Fund, General fund	Ongoing program Propose updated SDC to City Council by 2025 per updated SDMP	Annually report a description of SDC updates and approvals	

MINIMUM MEASURE #7 - STREAM AND RIPARIAN AREA PROTECTION

SOURCE	ACTIVITY	POLLUTANT ADDRESSED	FUNDING	TIMELINE	MILESTONE/REPORTING METRIC	STATUS
Stream and River warmed by insolation due to vegetation removal.	BMP - 1: Adopt Ordinance with enforcement features for stream, wetland and riparian area protection.	Temperature	Stormwater Utility Fund, General fund	See Stream and Riparian Protection Plan for timeline of activities	See Stream and Riparian Protection Plan; Annually report update of milestones performed	
River warmed by insolation due to vegetation removal.	BMP - 2: Adopt ordinance providing for protection of the Willamette Greenway	Temperature	Stormwater Utility Fund, General fund	Code reviewed, modified and adopted by 2023	Review code, determine modifications needed and adopt updated ordinance; Annually report update of milestones performed	



Attachment C

City of Dundee TMDL Implementation Plan

CITY OF DUNDEE TMDL IMPLEMENTATION PLAN

DATE: April 30, 2008

DMA: City of Dundee

SUBBASIN: Middle Willamette, Willamette River/Chehalem Creek

WATERSHED: Hagey Creek

COUNTY: Yamhill

APPROXIMATE CITY CENTER:

5th St. & Hwy. 99W – Long. 123° 00' 40", Lat. 45° 16' 40"

CONTACT INFORMATION:

Name: ~~Dave Monson~~[Greg Reid](#)

Title: City Engineer

Telephone: ~~(971) 226-7568~~[\(503\) 577-0493](#)

E-mail: ~~davlor~~[davlorn@easystreet.net](mailto:davlor@easystreet.net)city.engineer@dundeecity.org

ALTERNATE:

Name: ~~Rob Daykin~~[Steve Dahl](#)

Title: City Administrator

Telephone: (503) 538-3922

E-mail: steve.dahl@dundeecity.orgdundeerob@comcast.net

CITY OF DUNDEE TMDL IMPLEMENTATION PLAN

I. INTRODUCTION

The Willamette River and numerous tributaries do not currently meet several water quality standards as identified in the Willamette River Water Quality Management Plan (WQMP). The specific standards not being met are for mercury, bacteria, and temperature. These standards assure that beneficial uses of the river and tributaries, such as swimming, fish consumption, fish rearing, and provision of municipal drinking water are protected. When water quality standards are not met, the Federal Clean Water Act requires a Total Maximum Daily Load (TMDL) to be established. A TMDL determines how much pollution can be added to the river without exceeding water quality standards.

On September 21, 2006, the Oregon Department of Environmental Quality (DEQ) issued the Willamette Basin TMDL as an Order, and submitted the TMDL to the Environmental Protection Agency (EPA) for approval. As part of the Willamette Basin TMDL, DEQ developed a Water Quality Management Plan (WQMP) to describe the overall framework for implementing the Willamette Basin TMDL. The WQMP includes a description of activities, programs, legal authorities, and other measures for which DEQ and other designated management agencies (DMAs) have regulatory responsibility.

A DMA is a “federal, state, or local governmental agency that has legal authority of a sector or source contributing pollutants, and is identified as such by the Department of Environmental Quality in a TMDL.” TMDL implementation activities will be carried out under existing regulatory authorities, programs, and water quality restoration plans as well as by TMDL implementation plans that certain DMAs will develop in fulfillment of the requirements of this TMDL.

Along with other cities and agencies in the Willamette Basin, The City of Dundee has been named by the DEQ as a Designated Management Agency in that it has legal authority over a sector or source contributing pollutants on the approximately 875 acres within the City limits, and in that it operates a sewage treatment plant with a permit to discharge treated effluent into the Willamette River, which flows for about 0.54 miles along the south east side of the City. The Willamette River is currently listed as a water quality limited river due to elevated temperature, elevated bacteria, and elevated mercury levels. As such, Dundee is required to develop a TMDL Implementation Plan for review and approval of the Oregon Department of Environmental Quality.

TMDLs, the Willamette WQMP, and associated implementation plans and activities are designed to restore water quality to comply with water quality standards. In this way beneficial uses such as aquatic life, drinking water supplies, and water contact recreation will be protected. When implemented, the TMDL will result in a cleaner, healthier Willamette River for current and future generations.

The purpose of this TMDL Implementation Plan is to bring the City of Dundee into compliance with OAR 340-042-0080.

All of the existing and planned activities addressed in this plan are compliant with the City of Dundee Comprehensive Land Use Plan and the City of Dundee Development Code.

This Plan embodies the concept of “Adaptive Management Strategies” in achieving compliance with the TMDLs established for the Willamette River.

The Plan anticipates the requirement for an annual report to the DEQ describing the status of the various implementation strategies contemplated. The Plan also anticipates the requirement for the 5 year evaluation report describing the effectiveness of the contemplated strategies and adaptations to the Plan, if strategies are not effective. Exhibit 1 – Tracking Matrix provides a “Status Column” to assist with required annual and five year reporting to the DEQ. Exhibit 1 – Tracking Matrix shows elements of the Plan to be tracked for reporting under the “Timelines, Milestones / Measures, and Status” columns.

II. WATER QUALITY ASSESSMENT

The Main Stem of the Willamette River is currently listed by the Oregon Department of Environmental Quality (ODEQ) as a water quality limited stream due to elevated summer temperatures, elevated bacteria levels, and elevated mercury levels. The City of Dundee is drained by Hagey Creek and by overland flow into the Willamette. City stormwater drains to Hagey Creek and the Dundee Wastewater Treatment Plant discharges to the Willamette River.

The following TMDL listed pollutants and potential sources of pollutants are of concern within the City of Dundee:

- Warmer Instream Temperatures – Caused by historic removal of shade producing vegetation along streams.
- Fecal Coliform Bacteria – Likely sources include domestic animal waste carried in stormwater runoff and illicit cross connections between sanitary and stormwater systems.
- Mercury – Found in sediments. A likely source is erosion from construction sites not covered by a DEQ permit (i.e., sites with disturbed ground surface of less than 1 acre).

Concerns Associated With Pollutants Include:

- Temperature – At times the Willamette River and its tributaries are too warm to support healthy salmon and trout. Some of these cold water fish including lower Columbia Coho, spring Chinook, winter steelhead, and bull trout are threatened with extinction and elevated stream temperatures have contributed to their decline. Warm water interferes with adult salmon and trout migration and spawning. Warm water also decreases chances of juvenile survival, affects egg and embryo development, alters juvenile fish growth rates, and decreases their ability to compete with temperature-tolerant fish species for habitat and food. Salmon and trout are also more susceptible to disease when water temperatures are warmest.
- Bacteria – people can be affected by bacteria present in water when engaged in water activities such as swimming, wading, windsurfing, water skiing, boating, or fishing. Ingestion or contact with water contaminated with bacteria can cause skin and respiratory ailments, gastroenteritis in humans. Bacteria may also degrade water sources used for potable water provided to municipal systems.
- Mercury – The accumulation of mercury in fish is a well recognized and documented environmental problem throughout the United States. Mercury is a potent toxin that

can cause damage to the brain and nervous system. Small children and the developing fetus are most sensitive to mercury toxic effects. The primary way that humans are exposed to mercury is through the consumption of fish or seafood containing elevated levels of mercury.

CITY OF DUNDEE ACTIONS

Minimum Measure #1 – Operations and Maintenance Best Management Practices

Requirement: Dundee is required to develop and implement Best Management Practices to prevent or reduce contamination of stormwater by their operations and maintenance activities. This element must include employee training.

Dundee O & M Best Management Practices:

Operations and Maintenance BMP-1: Develop O & M Stormwater BMP Manual and Train Employees

Operations and Maintenance BMP-2: Clean Stormwater Inlets and Street Sweeping

Operations and Maintenance BMP-1: Develop O & M BMP Manual and Train Employees

Responsible City Department: Public Works

Existing Conditions: Dundee's Public Works staff are careful to prevent stormwater contamination by their operations and maintenance activities. However the City does not have formal system of best management practices.

Proposed Activities: During the 2009 plan-year, the City will inventory all operations and maintenance activities and develop a Best Management Practice manual that will describe methods of preventing or reducing stormwater contamination by Public Works employees performing operations and maintenance work.

During the 2010 plan year the City will train their Public Works employees in the contents of the manual, and how to apply the BMPs to their operations and maintenance work.

Measurable Outcomes:

1. The O & M BMP manuals will be completed by the end of the 2009 plan year.
2. All public works employees will be trained in the BMPs relevant to their work and the BMPs will be applied to operations and maintenance activities by the end of the 2010 plan year.

Operations and Maintenance BMP-1: Develop O & M Stormwater Protection Best Management Practices Manual and Train Employees

Plan Year	Activity
2008	
2009	Develop O & M BMP Manual
2010	Train Public Works Employees
2011	Fully Implement the O & M BMPs in Public Works operations
2012	-Operate using the O & M BMP Manual -Review the Manual and Modify BMPs As Needed by the end of the plan year

Operations and Maintenance BMP-2: Clean Stormwater Inlets and Street Sweeping

Responsible City Department: Public Works

Existing Conditions: The City currently cleans some stormwater inlets each year. The City currently sweeps all curbed streets one time a month with a vacuum sweeper.

Proposed Actions: Dundee will inspect all stormwater inlets each year and clean those with debris. This action will provide an inspection to alert Dundee to illicit dumping and will remove sediment and waste from the inlets to prevent it from being carried to nearby streams or the Willamette River.

Dundee will power-sweep all curbed streets at least one time a month. Sweeping removes fine particulates that accumulate on the street pavement before it can be mobilized by rainfall and moved through the storm drainage system to streams and the Willamette River. Sweeping is not effective on streets without curbs because any debris or sediment on the pavement is moved to the unpaved shoulder by traffic where it is not accessible by sweeping.

Measurable Outcomes:

1. Number of stormwater inlets inspected and cleaned.
2. Number streets power swept at least one time a month.

Operations and Maintenance BMP-2: Clean Stormwater Inlets and Street Sweeping

Year	Activity
2008	-Inspect all stormwater inlets and clean as needed - Power Sweep all streets at least one time a month
2009	-Inspect all stormwater inlets and clean as needed - Power Sweep all streets at least one time a month
2010	-Inspect all stormwater inlets and clean as needed - Power Sweep all streets at least one time a month
2011	-Inspect all stormwater inlets and clean as needed - Power Sweep all streets at least one time a month
2012	-Inspect all stormwater inlets and clean as needed - Power Sweep all streets at least one time a month

Minimum Measure #2 – Public Education

Requirement: Dundee must implement public education and outreach activities to describe for its residents how their activities may affect stormwater quality and actions they can take to reduce stormwater pollution.

Dundee Public Education Best Management Practices:

Public Education BMP-1: Implement Stormwater Educational Activities

Public Education BMP-2: Coordinate Stormwater Educational Activities with Local Agencies

Public Education BMP-3: Stencil Storm Drains

Responsible City Department: Administration

Existing Conditions: The City currently mails a quarterly newsletter to all residents.

Proposed Actions: During the 2008 plan year, Dundee will develop educational inserts to educate residents about stormwater issues, and to provide information on actions they can take to reduce stormwater pollution, and mail inserts in at least two newsletters each year. The first educational insert may be one describing the TMDL Implementation and why it is required. Dundee will continue to add inserts related to stormwater issues to at least two of its quarterly newsletter each year thereafter.

During the 2009 year of the plan, Dundee will add information on its website regarding stormwater quality issues and prevention of stormwater pollution. Dundee will maintain the stormwater information and add additional educational materials about stormwater to its website as desirable.

In 2010 plan year and following years, Dundee will consider developing a school outreach program, and providing stormwater fact sheets at locations, such as City Hall, businesses, and the Fire Station, and will investigate other educational programs and approaches.

Measurable Goals:

1. Educational inserts will be mailed with the quarterly newsletter twice a year.
2. Stormwater educational materials will be added to the City website.
3. Measurable goals in following years will depend on the activities that the City selects.

Public Education BMP-1: Implement Stormwater Educational Activities

Year	Activity
2008	Develop and mail educational inserts in quarterly newsletter twice a year
2009	-Add stormwater information to the Dundee website -Develop and mail educational inserts in quarterly newsletter twice a year
2010	-Develop additional stormwater educational activities -Maintain website information and add information to address developing stormwater issues -Develop and mail educational inserts in quarterly newsletter twice a year
2011	-Implement additional stormwater educational activities -Maintain website information and add information to address developing stormwater issues -Develop and mail educational inserts in quarterly newsletter twice a year
2012	-Operate additional stormwater educational activities -Maintain website information and add information to address developing stormwater issues -Develop and mail educational inserts in quarterly newsletter twice a year



Public Education BMP-2: Coordinate Stormwater Educational Activities with Local Agencies

Responsible City Department: Administration

Existing Conditions: Dundee currently provides financial support to the Yamhill Basin Council, the watershed council for the Yamhill basin, Chehalem Valley and Red Hills, including Dundee. Newberg has recently submitted its TMDL Implementation Plan to DEQ. Yamhill County and the cities in Yamhill County will be required to submit TMDL Implementation Plans in the future.

Proposed Actions:

Starting in the 2008 plan year, Dundee will provide a representative to the Yamhill Basin Council.

During the 2009 plan year, Dundee will seek opportunities to coordinate its educational activities with the City of Newberg.

During the following years, as the Yamhill County and the cities in the county are required to develop TMDL implementation plans, Dundee will seek opportunities to combine their activities with those of other agencies.

Measurable Goals:

1. Starting in 2008 the City will have a representative attend and participate in the Yamhill Basin Council meetings.
2. Measurable goals in the following years will be determined by opportunities for coordination with Newberg, Yamhill County and the cities in the county.

Public Education BMP-2: Coordinate Stormwater Educational Activities with Local Agencies

Year	Activity
2008	-Dundee will have a representative attend and participate in Yamhill Basin Council meetings
2009	-Dundee will have a representative attend and participate in Yamhill Basin Council meetings -Seek coordination with Newberg on common educational activities and approaches
2010	-Dundee will have a representative attend and participate in Yamhill Basin Council meetings -Seek coordination with Yamhill Co. and cities as they develop their TMDL implementation plans
2011	-Dundee will have a representative attend and participate in Yamhill Basin Council meetings -Coordinate activities with local agencies as opportunity develops
2012	-Dundee will have a representative attend and participate in Yamhill Basin Council meetings -Coordinate activities with local agencies as opportunity develops

Public Education BMP-3: Stencil Storm Drains

Responsible City Department: Public Works

Existing Conditions: Dundee currently has an informal program for Public Works employees to stencil stormwater inlets “No Dumping Flows to River” or similar messages. Some inlets remain to be stenciled. Engaging civic groups, such as youth groups, Boy Scouts and church groups to volunteer to place stencils, can make stenciling stormwater inlets an excellent educational activity. Since Dundee has a relatively small number of stormwater inlets, this activity would only continue until all the inlets are stenciled.

Proposed Actions:

Starting in the 2008 plan year, Dundee will coordinate with local civic groups to seek volunteers to stencil inlets and provide materials and training for the volunteers.

As Dundee development standards are reviewed in the future, the City will add a requirement for a permanent stencil to the standard plans for stormwater inlets.

Measurable Goals:

1. The number of volunteers trained, and the number of volunteer events.
2. Standard plan will be modified to require a permanent stencil on all new stormwater inlets.

Public Education BMP-3: Stencil Storm Drains

Year	Activity
2008	Coordinate with local civic groups to stencil stormwater inlets
2009	Coordinate with local civic groups to stencil stormwater inlets
2010	-Coordinate with local civic groups to stencil stormwater inlets, if needed -Modify standard plans for stormwater inlets to include a permanent stencil
2011	Stencil any stormwater inlets found without stencils
2012	Stencil any stormwater inlets found without stencils

Minimum Measure #3 – Public Involvement and Participation

Requirement: For the TMDL Implementation Plan to be effective, it has to be useful and understandable to the residents of Dundee. To achieve this, Dundee will create opportunities for public involvement in the development and implementation process.

Dundee Public Involvement and Participation Best Management Practices

Public Involvement and Participation BMP-1: Public Participation in Stormwater Program Development

Public Involvement and Participation BMP-2: Public Participation in Stormwater Ordinance Development

Public Involvement and Participation BMP-3: Public Reporting of Stormwater Concerns

Public Involvement and Participation BMP-1: Public Participation in Stormwater Program Development

Responsible City Department: Administration

Existing Conditions: The stormwater program is a new program.

Proposed Actions: Dundee will present the stormwater program to the City Council at a meeting open to the public. Any public comments will be considered.

Measurable Outcomes: Presentation of stormwater program at a public meeting.

Public Involvement and Participation BMP-1: Public Participation in Stormwater Program Development

Plan Year	Activities
2008	Present the stormwater program to the City Council at a public meeting.
2009	
2010	
2011	
2012	Evaluation and modifications to the stormwater program will be presented to the City Council at a public meeting.

Public Involvement and Participation BMP-2: Public Participation in Ordinance Development

Responsible City Department: Administration

Existing Conditions: When new or modified ordinances are developed, the City Council discusses these ordinances at a public meeting. The public may comment at those meetings.

Proposed Actions: The City Council will continue to receive public comment at public meetings when new or modified stormwater-related ordinances are considered

Measurable Goals:
Stormwater-related ordinances will be considered at public meetings of the City Council.

Public Involvement and Participation BMP-2: Public Participation in Ordinance Development

Plan Year	Activity
2008	Continue considering new and modified ordinances at public meetings
2009	Continue considering new and modified ordinances at public meetings
2010	Continue considering new and modified ordinances at public meetings
2011	Continue considering new and modified ordinances at public meetings
2012	Continue considering new and modified ordinances at public meetings

Public Involvement and Participation BMP-3: Public Reporting of Stormwater Concerns

Responsible City Department: Administration

Existing Conditions: Currently, any resident with concerns about stormwater can report their concerns and information to the City at City Hall.

Proposed Actions: During the 2009 plan year of the plan, Dundee will develop a formal method for resident reporting of stormwater concerns directly to the City website by e-mail and by telephone. This plan will be operational by the 2010 plan year.

For a formal reporting system to be effective, the means of communication must be advertised. Dundee will advertise the phone number and e-mail address for reporting in its quarterly newsletter.

Measurable Outcomes:

Residents will be able to report stormwater concerns by e-mail and telephone.

Public Involvement and Participation BMP-3: Public Reporting of Stormwater Concerns

Public Involvement and Participation BMP-3: Public Reporting of Stormwater Concerns

Plan Year	Activity
2008	
2009	Develop and implement approaches for resident reporting of stormwater concerns
2010	Operate and advertise approaches
2011	Operate and advertise approaches
2012	Operate and advertise approaches

Minimum Measure #4 – Illicit Discharge Detection and Elimination

Requirement: Dundee must implement and enforce a program to detect and eliminate illicit discharges (as defined in 40 CFR 122.26(b)(2)) into the Dundee storm water system.

Dundee Illicit Discharge Elimination:

Discharge Elimination BMP-1: Develop Storm Sewer System Map

Discharge Elimination BMP-2: Develop an ordinance and enforcement procedure prohibiting illicit discharges into the storm sewer system.

Discharge Elimination BMP-3: Detect and address non-stormwater discharges to the Dundee stormwater system.

Discharge Elimination BMP-4: Educate public employees, businesses and the general public about hazards associated with illegal discharges and improper disposal of waste.

Discharge Elimination BMP-5: Identify and address other sources (substantial contributors) of illicit discharges to the storm sewer system.

Discharge Elimination BMP-6: Develop a process to receive, respond to, and document complaints relating to illicit discharges to the storm sewer system.

Discharge Elimination BMP-1: Develop Storm Sewer System Map

Responsible City Department: Public Works

Existing Conditions: The City has developed a Storm Sewer System Map

Proposed Actions: Maintain existing mapping with periodic “As Built” updates.

Measurable Goals:

1. Maintain records demonstrating map updates every two years.

Discharge Detection and Elimination BMP-1: Implement Stormwater Educational Activities

Year	Activity
2008	Update storm sewer system map to reflect new construction.
2010	Update storm sewer system map to reflect new construction.
2012	Update storm sewer system map to reflect new construction.

Discharge Elimination BMP-2: Develop an ordinance and enforcement procedure prohibiting illicit discharges into the storm sewer system.

Responsible City Department: Administration

Existing Conditions: Dundee does not currently have an ordinance prohibiting illicit discharges into the storm sewer system.

Proposed Actions: Starting in the 2009 plan year, Dundee will DRAFT an ordinance prohibiting illicit discharges into the storm sewer system with associated penalties for violations for consideration by the City Council.

Measurable Goals:

1. Adoption of an ordinance prohibiting illicit discharges into the storm sewer system.

Discharge Detection and Elimination BMP-2: Develop Ordinance and Enforcement Procedure Prohibiting Illicit Discharges.

Year	Activity
2008	
2009	DRAFT ordinance prohibiting illicit discharge into the storm sewer system and present it to the Council for adoption.
2010	Enforce Ordinance
2011	Enforce Ordinance
2012	Enforce Ordinance

Discharge Detection and Elimination BMP-3: Detect and address non-stormwater discharges to the Dundee stormwater system.

Responsible City Department: Public Works

Existing Conditions: The Public Works Department is careful about discharges into the storm sewer system but has no specific policy regarding flushing or other non storm water discharges into the system. There are currently no ordinances, policies, or regulations through which the City manages said discharges.

Proposed Actions: Starting in the 2009 plan year, Dundee Public Works and Engineering staff will work to identify non-stormwater discharges into the system. Non stormwater discharges generated by the Public Works Department will then be addressed within the development of the Public Works Procedures manual. Other non stormwater discharges will be addressed in Public Education Elements of this Plan and/or within the context of ordinance development (see Illicit Discharge BMP -2)

Measurable Goals:

1. Inclusion and implementation of non-stormwater discharge policy into the Public Works Procedures Manual.
2. Inclusion of non-stormwater discharge impact information into the Public Education Element of this Plan.

Discharge Detection and Elimination BMP-3: Detect and Address Non-Stormwater Discharges

Year	Activity
2008	
2009	Identify non-stormwater discharges into the system by Public Works activities and provide policy in P.W. Procedures Manual
2010	Identify non-stormwater discharges to the system and incorporate information into Public Education Element materials.
2011	Enforce ordinance & maintain educational activities.
2012	Enforce ordinance & maintain educational activities.

Discharge Detection and Elimination BMP-4: Educate / Inform Public Employees, Businesses, and the General Public of Hazards Associated With Illicit Discharges.

Responsible City Department: Administration

Existing Conditions: No current activity. This is a planned activity to be incorporated into the Public Education element of this Plan.

Proposed Actions: Incorporate information about the consequences and hazards associated with illicit and improper discharges into the storm sewer system into the Public Education Element of this Plan.

Measurable Goals:

1. Development and dissemination of educational materials relating to illicit and improper discharges into the storm sewer system in the Public Education element of this Plan.

Discharge Detection and Elimination BMP- 4: Educate / Inform Public Employees, Businesses, and the General Public of Hazards Associated With Illicit Discharges.

Year	Activity
2009 through 2012	Incorporate Discharge Elimination information into the Public Education Element of the Plan

Discharge Detection and Elimination BMP-5: Identify and Address Other Sources (substantial contributors) of Illicit Discharges to the Storm Sewer System.

Responsible City Department: Administration

Existing Conditions: No current activity. This is a planned activity

Proposed Actions: Develop a program to identify likely “substantial contributors of illicit or non storm water discharges into the storm sewer system. Address the identified sources within the context of BMP- 2 and BMP-4 of this Minimum Measure.

Measurable Goals:

1. Documentation of likely “substantial contributors”.
2. Documentation of enforcement or other activities to eliminate the illicit discharges.

Discharge Detection and Elimination BMP-5: Identify and Address Other Sources (substantial contributors) of Illicit Discharges to the Storm Sewer System.

Year	Activity
2008	
2009	
2010	Identify likely “substantial contributors” of illicit or non stormwater discharges into the storm sewer system.
2011	Address / eliminate discharges from “substantial contributors” through enforcement or other action.
2012	Address / eliminate discharges from “substantial contributors” through enforcement or other action. Evaluate the effectiveness of actions taken to address and eliminate discharges, and make any needed changes.

Discharge Detection and Elimination BMP-6: Develop a Process to Receive, Respond to, and Document Complaints Relating to Illicit Discharges to the Storm Sewer System.

Responsible City Department: Administration

Existing Conditions: The City has complaint procedures in place. There is no specific policy or procedure regarding stormwater complaints regarding water quality.

Proposed Actions: Develop policy and procedure to receive and respond to water quality / illicit discharge complaints. The procedure will include maintenance of documentation regarding the complaint and its’ resolution.

Measurable Goals:

1. Complaint procedure and documentation will be in place.

Discharge Detection and Elimination BMP-6: Develop a Process to Receive, Respond to, and Document Complaints Relating to Illicit Discharges to the Storm Sewer System.

Year	Activity
2008	Develop a process to receive and document complaints relating to illicit discharges.
2009	Maintain records of complaints relating to illicit discharges
2010	Develop a process to address illicit discharge to the storm sewer system complaints.
2011	Operate process to address illicit discharge complaints.
2012	Operate process to address illicit discharge complaints. Evaluate process to address illicit discharge complaints and make changes as necessary.

Minimum Measure #5 – Construction Site Storm Water Runoff Control

Requirement: Dundee must develop, implement, and enforce a program to reduce pollutants in any storm water runoff to the storm sewer system from construction activities that result in the disturbance of greater than or equal to one acre. Storm water discharges from disturbances of less than one acre must be included in the City’s program if that disturbance is part of a larger plan or develop activity that would disturb one acre or more.

Construction Site Storm Water Runoff Control:

Construction Site Storm Water Runoff Control BMP-1: Adopt an ordinance with appropriate enforcement features to require erosion and sediment controls for all activities which disturb soils and create sediment...

Construction Site Storm Water Runoff Control BMP-2: Develop and implement requirements for construction site operators to implement appropriate erosion and sediment control best management practices (BMPs).

Construction Site Storm Water Runoff Control BMP-3: Develop and implement requirements for construction site operators to prevent or control waste that may cause adverse impacts to water quality such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site.

Construction Site Storm Water Runoff Control BMP-4: Develop and implement procedures for site plan review that incorporate measures to prevent or control potential water quality impacts.

Construction Site Storm Water Runoff Control BMP-5: Develop procedures for receipt and consideration of information submitted by the public.

Construction Site Storm Water Runoff Control BMP-6: Develop and implement procedures for site inspection and enforcement of erosion and sediment control measures.

Construction Site Storm Water Runoff Control BMP-1: Adopt an Ordinance with Appropriate Enforcement Features to Require Erosion and Sediment Controls.

Responsible City Department: Administration

Existing Conditions: The City currently does not have an erosion control ordinance.

Proposed Actions: Draft an Erosion Control Ordinance and present it to the Council for consideration and adoption.

Measurable Goals:

1. Adopted Erosion Control Ordinance.

Construction Site Storm Water Runoff Control BMP-1: Erosion Control Ordinance

Year	Activity
2009	Draft and present an Erosion Control Ordinance to the City Council for consideration...

Construction Site Storm Water Runoff Control BMP-2: Develop and Implement Requirements for Construction Site Operators to Implement Appropriate Erosion and Sediment Control Best Management Practices (BMPs).

Responsible City Department: Administration

Existing Conditions: Dundee currently has procedures to monitor and enforce erosion control requirements of the 1200C permit.

Proposed Actions: Starting in the 2009 plan year, Dundee will monitor and enforce compliance with its' own erosion control ordinance in addition to requirements of the 1200C permit.

Measurable Goals:

1. Implementation of inspection and enforcement of the erosion control ordinance.

Construction Site Storm Water Runoff Control BMP-2: Develop and Implement Requirements for Construction Site Operators to Implement Appropriate Erosion and Sediment Control Best Management Practices (BMPs).

Year	Activity
2008	
2009	
2010	Implement requirements for site operators to implement BMPs.
2011	Maintain implementation of site operators BMPs.
2012	Maintain implementation of site operators BMPs.
	Evaluate effectiveness of site operator BMP requirements.

Construction Site Storm Water Runoff Control BMP-3: Develop and Implement Requirements for Construction Site Operators to Prevent or Control Waste.

Responsible City Department: Public Works

Existing Conditions: The City does not have specific requirements regarding management of construction site waste which may cause adverse impacts to water quality.

Proposed Actions: Starting in the 2009 plan year, Dundee Public Works and Engineering staff will implement requirements for construction site operators to control waste which may impact water quality of flows entering the storm water system. This will include requirement for approved construction drawings to have construction notes relating to management of waste at the site.

Measurable Goals:

1. Implementation of requirements for construction site operators to manage and control waste at the site.

Construction Site Storm Water Runoff Control BMP- 3: Management of Construction Site Waste

Year	Activity
2008	
2009	Require approved construction plans to include construction notes relating to the management of on site waste materials. Provide site inspection with specific intent to enforce waste management requirements.
2010	Maintain BMP - 3
2011	Maintain BMP - 3
2012	Maintain BMP – 3 Evaluate the effectiveness of BMP – 3 and make changes as necessary.

Construction Site Storm Water Runoff Control BMP-4: Develop and Implement Procedures for Site Plan Review that Incorporate Measures to Prevent or Control Potential Water Quality Impacts.

Responsible City Department: Administration

Existing Conditions: Currently staff reviews construction drawings and provides comments on erosion control plans required by 1200C permits. Construction drawings must address comments to receive approval.

Proposed Actions: Plan review will incorporate features of the City’s Erosion Control Ordinance in addition to 1200C permit requirements.

Measurable Goals:

1. Implementation and enforcement of the City’s erosion Control Ordinance.

Construction Site Storm Water Runoff Control BMP-4: Develop and Implement Procedures for Site Plan Review that Incorporate Measures to Prevent or Control Water Quality Impacts.

Year	Activity
2008	
2009	Incorporate City Erosion Control Measures into plan review activities.
2010	Enforce City Erosion Control Measures.
2011	Enforce City Erosion Control Measures.
2012	Enforce City Erosion Control Measures.
	Evaluate effectiveness of City Erosion Control Measures and make changes as appropriate.

Construction Site Storm Water Runoff Control BMP-5: Develop Procedures for Receipt and Consideration of Information Submitted by the Public.

Responsible City Department: Administration

Existing Conditions: Currently the City routinely receives and addresses complaints within the context of existing policy and regulations.

Proposed Actions: Develop procedures to route information or complaints from the public, specific to storm water quality and the management of waste at construction sites to the Public Works Superintendent and to the City Engineer for investigation and remedial (enforcement) action as appropriate.

Measurable Goals:

1. Procedures in place to receive, verify, and address information and complaints from the public regarding water quality issues and waste management at construction sites.

Construction Site Storm Water Runoff Control BMP-5: Develop Procedures for Receipt and Consideration of Information Submitted by the Public.

Year	Activity
2008	
2009	Develop procedures for receipt and routing of information from the public
2010	Develop procedure for Public works and/or the City Engineer to address information/complaints.
2011	Maintain process to address information / complaints.
2012	Maintain process to address information / complaints.
	Evaluate effectiveness of process and make changes as appropriate.

Construction Site Storm Water Runoff Control BMP-6: Develop and Implement Procedures for Site Inspection and Enforcement of Erosion and Sediment Control Measures.

Responsible City Department: Administration

Existing Conditions: Currently the City provides periodic inspections of construction sites and enforces requirements of erosion control plans associated with 1200C permits.

Proposed Actions:

Develop and implement procedures for routine inspections of construction sites to enforce the erosion control ordinance. Require developer’s engineers to provide inspections and inspection reports addressing erosion control and waste management issues at construction sites.

Measurable Goals:

1. Inspection and enforcement procedures in place.

Construction Site Storm Water Runoff Control BMP-6: Develop and Implement Procedures for Site Inspection and Enforcement of Erosion and Sediment Control Measures.

Year	Activity
2008	
2009	Develop and implement procedures for routine inspection and enforcement of erosion control and waste management requirements.
2010	Maintain implementation of procedures for routine inspection and enforcement of erosion control and waste management requirements.
2011	Maintain implementation of procedures for routine inspection and enforcement of erosion control and waste management requirements.
2012	Maintain implementation of procedures for routine inspection and enforcement of erosion control and waste management requirements. Evaluate effectiveness of procedures and make changes as appropriate.

Minimum Measure #6 – Post-Construction Storm Water Management in New Development and Redevelopment.

Requirement: a. Dundee must develop, implement, and enforce a program to ensure reduction of pollutants in storm water runoff from new development and redevelopment projects that disturb one acre or more, or less than one acre if the project is part of a larger common plan of development or sale, and discharge into the Dundee storm sewer system. Dundee’s program must ensure that controls are in place that would prevent or minimize water quality impacts.

b. Dundee must develop and implement strategies that include a combination of structural and/or non structural BMPs appropriate to the community, and

- i. Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects.
- ii. Ensure adequate long-term operation and maintenance of BMPs; and

- iii. Ensure adequate enforcement of ordinance or alternative regulatory program.

Post-Construction Storm Water Management in New Development and Redevelopment.

Post-Construction Storm Water Management BMP-1: Dundee must develop, implement, and enforce a program to ensure reduction of pollutants in storm water runoff from new development and redevelopment projects that disturb one acre or more, or less than one acre if the project is part of a larger common plan of development or sale, and discharge into the Dundee storm sewer system. Dundee’s program must ensure that controls are in place that would prevent or minimize water quality impacts.

Post-Construction Storm Water Management BMP-1: Develop, Implement, and Enforce a Program to Ensure Reduction of Pollutants in Storm Water Runoff from New Development and Redevelopment Projects that Disturb One Acre or More, or Less than One Acre if the Project is Part of a Larger Common Plan of Development or Sale, and Discharge into the Dundee Storm Sewer System. Dundee’s Program Must Ensure that Controls are in place that would Prevent or Minimize Water Quality Impacts.

Responsible City Department: Administration

Existing Conditions: The City currently does not have a post construction storm water quality management program in place.

Proposed Actions: Develop, implement, and enforce a post-construction water quality management program to ensure ongoing reduction of pollutants entering the storm sewer system from new development or redevelopment.

Measurable Goals:

1. Implementation of post-construction program limiting pollutants entering the storm sewer system.

Post-Construction Storm Water Management BMP-1: Develop, Implement, and Enforce a Program to Ensure Reduction of Pollutants in Storm Water Runoff from New Development and Redevelopment

Year	Activity
2008	
2009	
2010	
2011	
2012	Develop and implement post-construction program.

Minimum Measure #7 – Stream and Riparian Area Protection

Requirement: a. Dundee must develop, implement, and enforce a program to ensure stream bank and riparian area protection to preserve or reestablish vegetation and trees to provide shade and reduce water temperature.

Stream and Riparian Area Protection BMP-1: Develop, Implement, and Enforce an ordinance to limit removal of trees and vegetation along stream banks and riparian areas and encourage replanting and restoration of riparian habitat.

Responsible City Department: Administration

Existing Conditions: The City currently has limited stream protection language..

Proposed Actions: Develop, implement, and enforce ordinances to protect stream bank vegetation and riparian areas.

Measurable Goals:

1. Adoption and implementation of ordinances providing for stream bank and riparian area, protection..

Stream Bank Protection BMP-1: Develop, Implement, and Enforce an Ordinance to Ensure Protection and / or restoration of Stream Bank Vegetation

Year	Activity
2009	Review existing code for stream bank protection language.
2010	Adopt stream bank and riparian area protection ordinances as appropriate.

Stream and Riparian Area Protection BMP-2: Develop, Implement, and Enforce an ordinance to limit protect the Willamette Greenway.

Responsible City Department: Administration

Existing Conditions: The City currently has Greenway Protection provisions.

Proposed Actions: Review, modify, implement, and enforce the existing ordinance to protect the Willamette Greenway.

Measurable Goals:

1. Adoption and implementation of ordinances providing for protection of the Willamette Greenway.

Stream Bank Protection BMP-1: Develop, Implement, and Enforce an Ordinance to Ensure Protection and / or restoration of Stream Bank Vegetation

Year	Activity
2009	Review existing code for Willamette Greenway protection language.
2010	Modify the Willamette Greenway protection ordinance as appropriate.