



Public Works Department
PO Box 7
555 S. Main Street
Independence, OR 97351
Phone: (503) 838-1212
Fax: (503) 606-3282

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Nancy Gramlich (via email)
DEQ Western Region – Salem
Nancy.h.gramlich@deq.oregon.gov

RE: Willamette Basin Mercury Total Maximum Daily Load, City of Independence – Plan updates

City of Independence staff have reviewed the highlights of the following documents:

- 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.
- DEQ email dated August 12, 2022, which

The City of Independence is updating its plan for mercury and sediment reduction strategies and milestones identified Section 13.3.1 - *DEQ Revised Mercury TMDL Section 13 WQMP* Section 13.1.1 - 13.3.1, pages 68-221 – 124-221. The September 15, 2022, plan updated mercury requirements were compared against the 2008 plan and 2018-2023 TMDL matrix to update it for 2023-2028 to meet the revised mercury requirements.

The City of Independence proposes to use the 2008 plan in conjunction w/a cover letter, as the revised mercury plan. The items outlined in this letter and the enclosed updated matrix for 2023-2028 list the components that supplement the reference to and actions for the 2008 TMDL adopted and approved by the Oregon Department of Environmental Quality as part of the City's 2008 Willamette Basin TMDL Implementation Plan (enclosed) that was required to incorporate the 2006 Mercury TMDL. Items below supersede references to mercury in the 2008 plan.

2022 Mercury Plan Updates

The items outlined below are the components that supplement the 2008 Plan for meeting the DEQ Revised Mercury TMDL Section 13 WQMP and EPA load allocations.

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 Independence, along with approximately 189 other DMAs/RPs, was identified in the Mercury TMDL WQMP by DEQ and issued notification of the requirements in March 2021.

Summary of plan development and implementation requirements

The City of Independence is required to develop and implement a nonpoint source TMDL implementation plan that includes mercury and sediment reduction strategies that must be met by September 3, 2022. The plan must 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 twenty-three 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 = Waste Load 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 matrix outlines the stormwater best management practice activity that aligns with the stormwater program in the DEQ 2019 WQMP.

Voluntary actions and existing programs

Focus of this plan is on mercury and sediment reduction, however, strategies being implemented under the 2008 TMDL also benefit surface water quality overall for other parameter limitations, such as, bacteria, nutrients, and temperature.

Mercury reductions

The EPA Willamette Basin TMDL has reduction targets for mercury at the Middle Willamette Subbasin level. Reductions of 97% from nonpoint source urban stormwater are needed to eliminate fish consumption advisories. These percent reductions apply to all waters of the Middle Willamette Subbasin:

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.

Derived from EPA TMDL - Load allocations for Middle Willamette Subbasin 17090007

Category	% contribution*	EPA 2019 allocated reduction
Non-Permitted Urban Stormwater	4%	97%

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 Independence is already required to submit under the 2008 plan and 2018-2023 matrix. The City of Independence will continue to annually report on progress in implementing nonpoint source strategies identified in the TMDL implementation plan, including any delays or challenges DMAs had in implementing strategies (2019 DEQ mercury WQMP page 125-221). Independence will participate in five-year review in 2023.

Legal Authority - Ordinance and Standards

The City of Independence has adequate legal authority, through ordinance or other means, such as master plans and comprehensive plans and permitting, to implement the provisions of this plan. The matrix activities used to carry out the management strategies include:

- Annual budget approval by City council for general fund, contracts, interagency agreement.
- Annual costs and funding analysis to determine extent of TMDL matrix for stormwater program measures.
- Land Use Planning and Codes – Public involvement natural resource protection

[INDEPENDENCE MUNICIPAL CODE | Code of Ordinances | Independence, OR | Municode Library](#)

See Chapter 26, Article 1, Section 26 for enforcement, water quality protection, construction, and post construction design standards.

[Public Works Design Standards | The City of Independence Oregon - Official Website](#)

See Public Works Design Standards Section Design plans for water quantity and water quality requirements.

[Public Works Master Plans | The City of Independence Oregon - Official Website](#)

See 2003 Stormwater Master Plan for capital improvement plan.

Cost and funding

As a DMA, the City of Independence provides a fiscal analysis of the resources needed to develop, execute, and maintain the programs described in their Implementation plan (refer to 2018-2023 matrix for funding and stormwater program measure best management activities for budget strategies) overtime. Like most small city systems, the biggest challenges are budget, and lack of employees to do everything on our own. Annual costs and funding are established to determine approximate extent of BMP activity for sustaining the stormwater program measures outlined in the matrix “resources required” column.

Public Involvement and Participation

Independence has a public involvement and participation program that provides opportunities for

the public to effectively participate in the development of stormwater control measures (matrix). Independence utilizes 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.

TMDL plan and progress reports will be posted on a publicly accessible website. The Public education and outreach and public involvement and participation program measures are outlined in the City's matrix.

Some of the current Public Participation and Involvement and Education and Outreach website resources identified in 2022 include:

- [Nearby Nature | The City of Independence Oregon - Official Website](#)
- [Public Works Reports and Resources | The City of Independence Oregon - Official Website](#)
- [Storm Water Management | The City of Independence Oregon - Official Website](#)
- [Independence Adopt-A-Street | The City of Independence Oregon - Official Website](#)

Independence assessed existing programs (or evaluated existing 2008 and most current plan matrix) and identified gaps in existing pollution control programs and strategies to address these gaps.

The City of Independence was identified as having a population greater than 10,000 in the 2019 WQMP.

The attached Independence matrix for 2018-2023 includes the management strategies, timeline and schedule and performance initiatives that will be implemented by the City of Independence under this plan to mitigate the potential nonpoint sources of mercury and sediment. Staff compared the current TMDL Implementation Plan and Matrix to the table below to develop the matrixes with the revised mercury. The table was developed based off the DEQ 2019 WQMP Tables 13-11 and 13-14:

Stormwater Measure	Requirements	Greater than 10,000 population
1 Pollution Prevention Municipal Operations	<p>DMA's 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.</p> <p>DMA's 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 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>	18 months – 9/3/2022

<p>2. Public Education and Outreach</p>	<p>DMAs 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>DMAs 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>	<p>18 months – 9/3/2022</p>
<p>3. Public Involvement and Participation</p>	<p>DMAs 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>	<p>18 months – 9/3/2022</p>
<p>4. Illicit Discharge Detection and Elimination</p>	<p>DMAs 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 the stormwater conveyance system.</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>3 years – Mar 3, 2024</p>
<p>5. Construction Site Runoff Control</p>	<p>DMAs must refer project sites to DEQ, or the appropriate DEQ agent, to obtain NPDES 1200-C Construction Stormwater Permit coverage for construction projects that 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, DMAs must require construction site operators to complete and implement an Erosion and Sediment Control Plan for construction project sites in its jurisdictional 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>4.5 years – Sept 3, 2025</p>

	<p>Through ordinance or other regulatory mechanism, to the extent allowable under state 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 enforcement and 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 towards implementing its construction site runoff program's control measures.</p>	
<p>6. Post-Construction Site Runoff for New Development and Redevelopment</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>4.5 years – Sept 3, 2025</p>

Attached to this letter are the updates and modifications to Section 2.5 of the Independence Total Maximum Daily Load Implementation Plan. The city intends to update its TMDL plan and submit with its 5-year plan review in 2023. Please let me know if you have any questions or comments.

Respectfully,

Gerald Fisher, Public Works Director

Cc: Kenna West, City Manager