Willamette Basin Five Year Review 2013-2018

Designated Management Agency TMDL Implementation

Dec. 12, 2019 Wilsonville City Hall, Second Floor



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Today's Overview

- TMDL urban/rural nonpoint source implementation
 - Background
 - Five year status 2013-2018
 - Data comparisons 2014 and 2019
 - -Water quality status and trends
- Questions ???
- Conclusions



Willamette TMDLS

- Goal
 - Achieve TMDL allocations over time to meet water quality standards
 - -TMDLs
 - Primary: Bacteria, Mercury, Temperature
 - Dissolved Oxygen, Pesticides,Phosphorus, Turbidity



OAR 340 Division 42 TMDLs

- 340-042-0040 Establishing
- 340-042-0060 Issuing Order
- 340-042-0080 Implementing



340-042-0080(4)(a)

- Prepare an implementation plan
 - Identify the management strategies
 - Timeline for implementing strategies
 - Performance monitoring
 - Compliance with land use requirements
 - Other analyses or information specified in the WQMP
- DEQ for review and approval
- Implement and revise the plan as needed



Monitoring and Evaluation

- Three broad components
 - Selection and implementation of effective strategies in TMDL implementation plans
 - Strategy effectiveness monitoring and,
 - Assessment of water quality or surrogate measures improvement



Timeline and Reporting Process





Willamette Basin DMAs

Willamette Basin TMDL DMA Total



- Urban/Rural Cities, Counties, Special Districts
- Federal & State Agencies, Water Conveyance, Special Districts



Willamette Basin Urban/Rural DMAs

Five Year Review Reporting Timelines



- 2018 Willamette 2006 and Tualatin
- 2019-2021 Willamette 2006 Other
- 2021 Molalla-Pudding
- Yamhill No requirements





Control Measures Stormwater Program Planning



Example: Differences in Program Elements

	Percent of DMAs Implementing Construction SW Program	Percent of DMAs Implementing Construction Site Inspections	Percent of DMAs Implementing Employee Training on Construction and Maintenance Practices to Protect WQ
Phase I	100	93	87
Phase II	100	100	11
≥ 10,000	100	80	100
< 10,000	65	48	39



Pollution Prevention in Municipal Operations



Percent DMAs - All MS4 Phase I MS4 Phase II ■>=10K



Pollution Prevention in Municipal Operations





Illicit Discharge, Detection and Elimination





Illicit Discharge, Detection and Elimination





Post-Construction to Control Stormwater

System development charges to fund stormwater infrastructure

Stormwater fee for maintenance and administration of post-construction program

System for documenting the performance of scheduled maintenance of stormwater controls

This jurisdiction does not have LID requirements

Requirement for maintenance of private stormwater controls

Requirements for post-construction plans review and approval

List of approved structural stormwater controls including green infrastructure controls

Allowance for stormwater mitigation when a requirement to retain stormwater cannot be met



0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%



Post-Construction to Control Stormwater

Requirement to prioritize use of stormwater controls that infiltrate and evapotranspirate

Performance standard for the level of stormwater treatment

Performance standard to prevent stream bed and bank erosion

Off-site mitigation of stormwater when a retention requirement cannot be met

Specified volume of stormwater that must be retained on a developed site

Specified volume of stormwater that must be treated prior to discharge

Post-construction stormwater control program limited to MS4 Permit boundary

Code review to identify barriers to stormwater controls

Code to administer post-construction program



 $0\% \ 10\% \ 20\% \ 30\% \ 40\% \ 50\% \ 60\% \ 70\% \ 80\% \ 90\% \ 100\%$



Public Outreach, Education and Involvement





Public Outreach, Education and Involvement



0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%



Top 10: DMA- Reported Strategies



Percent DMAs - All MS4 Phase I MS4 Phase II >= 10K



Top 10: DMA- Reported Strategies Cont.

A program to minimize inflow and infiltration (I/I) into your wastewater collection system causing sanitary sewer overflows

Minimize the use of deicing agents

Inspection of construction sites to determine non-stormwater discharges

Employee training on construction and maintenance practices to protect water quality

Determination for NPDES 1200-C Construction Stormwater Permit



0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Percent DMAs - All MS4 Phase I M

■ MS4 Phase II ■ >

■>= 10K ■ < 10K



Restoration Projects Implemented or Funded in Last Four Years







Stormwater, Riparian, and Water Quality Strategies



DE

Erosion Control, Public Outreach and Education





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Questions?



Conclusions

- Implementation tracking
 - -Plans
 - -Reporting
- Selection and implementation of effective strategies
- Positive change 2014 vs 2018



Conclusions

- BMP/Strategy effectiveness
- Water quality analysis status and trends
- Post-Construction and IDDE
- Riparian protection and restoration

