



State of Oregon Department of Environmental Quality
Willamette Basin Five-Year Review
City, County, Special District TMDL Implementation 2013-2018
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2018 survey of TMDL implementation strategies

The Oregon Department of Environmental Quality surveyed Designated Management Agencies, or DMAs, in the Willamette Basin in 2018 to understand Total Maximum Daily Load implementation strategies used during the previous four years. DEQ Basin Coordinators agreed upon the number and breadth of the strategies placed on the survey with the understanding that it would not be possible to know all strategies DMAs are currently using before the survey was distributed. Some of these strategies may be innovative or underused, and therefore important to communicate to other TMDL implementation practitioners. The survey results are the subject of this fact sheet, and were not summarized in the [March 2020 Willamette Basin Five-Year Review Report](#). DEQ hopes that this information can be helpful when management agencies update their nonpoint source TMDL implementation plan matrices.

DMA survey responses

DEQ surveyed DMAs in the Willamette Basin and their responses fit into five categories: Collaboration; Outreach, Education, and Public Involvement; New Strategy Not in Survey for Selection; Commendable Actions; and Proposed TMDL plan updates (see Figure 1).

The survey included a checklist of five stormwater control measures and one riparian program planning control measure. DMAs could select from a list of pre-selected best management practices and strategies associated with each control measure, as well as an “other” category. DMAs used the other category when they wanted to report a strategy that was not included in the list of pre-selected best management practices or highlight additional information about their program. DMAs selected other approximately 120 times, which indicates that DMAs continue to identify and implement new or different best management practices and strategies.

Figure 1. DMA Response Category



Program planning control measure strategies

Control measure grouping is an effective way to address TMDL pollutant load allocations in a nonpoint TMDL implementation plan. [Table A](#) groups the reported strategies and best management practices by the 2018 survey control measures. The table also includes the popular and unique strategies Willamette DMAs reported in the other category.

Table A. Program planning control measure strategies
Construction erosion control
Strengthened grading and erosion control ordinance
Relied on 1200-C permit field inspection manuals and qualified inspectors
Had DEQ agents administer 1200-Z, 1700-A and 1200-C permits
Provided best management practice (BMP) manual to control stormwater runoff, including soil stabilization, vegetation management and spill clean-up
Illicit discharge detection and elimination
Adopted illicit discharge code in jurisdictions without stormwater municipal permits
Held collaborative annual clean-ups with adjacent cities
Used Geographic Information System (GIS) for stormwater conveyance mapping in jurisdictions without stormwater municipal permits
Updated stormwater conveyance map annually or as needed in jurisdictions without stormwater municipal permits
Controlled inputs from commercial properties
Incentivized private drain cleaning via a voluntary program
Hired intern to collect Global Position System (GPS) data for the locations of all private drains; DMAs repair private drains
Established nuisance ordinance for debris, stagnant water and privies
Created fat, oil, and grease program to reduce stormwater impacts
Conducted pilot project with Contech to test a new stormwater quality treatment system
Maintained existing storm drain decals and installed decals at new development
Ran program to control and reduce illegal solid waste dumping
Outreach, education, and public involvement
Conducted annual phone survey
Took part in Big Float event with Willamette River Portland Human Access Project
Partnered with U.S. Environmental Protection Agency on environmental justice messaging through the Clean Rivers Coalition
Joined state-wide campaign for clean water through the Clean Rivers Coalition and Meyer Memorial Trust
Collaborated with Friends of Trees, Northwest Center for Alternatives to Pesticides, U.S. Geological Survey research, SOLVE
Funded local watershed councils, supporting riparian restoration and water protection projects, as well as education and outreach
Created online program and phone app work request form for public use to protect stormwater
Analysed public education effectiveness with the Oregon Association of Clean Water Agencies
Distributed results of Oregon State University well water testing
Utilized social media such as Twitter, Facebook, NextDoor, and Instagram
Had public work departments provide water quality pamphlets in lobbies for visitors
Utilized social media instead of printed materials
Helped watershed councils leverage funding from cities to implement stormwater quality projects
Watershed councils provided garbage cans and signs to keep trash out of the creek

Table A. Program planning control measure strategies (continued)
Pollution prevention municipal operations
Adopted new stormwater manual, outlining BMPs for roads and parks
DEQ agent administered county "on site" program for small cesspools and septic systems
Hired a contractor for technical reports and TMDL compliance regulation assistance
Created new or updated stormwater utility service charge
Provide mercury amalgam program in jurisdictions without municipal stormwater permit
Post-construction
Contracted with watershed councils to implement Low Impact Development (LID) Stormwater Manual
Implement new stormwater and grading design manual emphasizing the use of LID
Implemented LID and BMPs on all new subdivisions and projects within city limits
Developed and implemented stormwater master plan
Built regional stormwater facility to reduce peak flows and sediment load
Created intergovernmental agreement for post construction
Riparian protection and restoration
Worked with Tree City USA to implement yard tree program and tree coupon program
Restarted riparian monitoring project; conduct "ground truthing" for shade opportunity areas
Mapped cold water refugia
Provided backyard habitat certification program; bee stewards pollinator habitat creation and restoration
Removed creek blockage in park; invasive plant removal at riverfront property
Investigated in-stream water transfer for city park
Acquired property along a streambank
Sent mailings to streamside owners to support riparian corridor protection
Removed invasive species and replant native plants to help reduce erosion
Collected LIDAR data to re-evaluate canopy coverage; update and simplify buffer shade models
Provided loans to replace and repair aging drinking water distribution lines
Held urban forestry workshop and conducted wetland restoration project on lake

Contact information and resources

[Locate a Willamette Basin Coordinator](#)
[DEQ TMDL Guidance](#)
[February 2014 Willamette Basin TMDL Five-Year Review](#)
[Willamette Basin TMDLs](#)

Alternative formats

DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email deqinfo@deq.state.or.us.