

Willamette Basin Mercury TMDL Advisory Committee Meeting

History of Mercury Implementation for Point Sources in the Willamette Basin

March 21, 2018
Linn County Extension Offices

2006 Willamette Mercury TMDL

- ▶ September 2006, Willamette Basin TMDL
- ▶ Point sources account for 4% of the total load of mercury
- ▶ Interim wasteload allocations are assigned to source sector categories over individual sources
- ▶ DEQ proposed an “across the board” reduction of 27% for each source category
- ▶ Waste Load Allocations: Point Sources shall
 - ▶ develop mercury minimization plans (MMPs) and
 - ▶ monitor to facilitate further TMDL study

2010 “Mercury Monitoring Requirements for Willamette Basin Permittees”

- ▶ Implementation memo
- ▶ Purpose was to collect data for Phase 2 of the TMDL development
- ▶ Covered major industrial, major municipal, 27 specific minor industrials and MS4 Phase I Stormwater
- ▶ Monitoring for
 - ▶ total recoverable and dissolved mercury
 - ▶ total recoverable and dissolved methyl-mercury
- ▶ Specified EPA analytical methods and MRL/LOQ of 0.5 ng/l
 - ▶ At that time, it was difficult to find labs that could hit this and the MRL for permitting were at 5 ng/l. Later this was lowered to 1 ng/l
- ▶ Generally required 2 samples per year for 2 years (majors), 2 samples for 1 year (Industrial Minors)
- ▶ Generally, Water Quality Based Effluent Limits (WQBELs) were not being assigned for mercury

2011 Oregon Methyl-Mercury Criterion

- ▶ Adopted in 2011, replacing Total Recoverable Mercury Criterion
 - ▶ Fish tissue based (mg/kg) vs. water column based (ng/l)
- ▶ EPA's 2010 Methylmercury Water Quality Criterion Implementation Guidance
 - ▶ Where no translation factor is available, an alternate Reasonable Potential Analysis (RPA) is authorized
 - ▶ Uses Total Recoverable Mercury as an “indicator”
 - ▶ Facilities with Reasonable Potential (RP) are given a narrative WQBEL
 - ▶ Mercury Minimization Plan (subject to public notice as a permit limit)
 - ▶ Monitoring requirements to determine performance
 - ▶ Permit re-opener clause in event mercury is not reduced
- ▶ Retained the Total Recoverable Mercury Aquatic Toxicity Criteria
 - ▶ Water column based
 - ▶ When RP is determined, permittees are given a numeric WQBEL

2012 to 2017

TMDL and MeHg Criterion Synergy

- ▶ Due to mercury being found in most discharges, Willamette basin point sources generally have the following permit conditions:
 - ▶ Narrative WQBEL for MeHg
 - ▶ Develop Mercury Minimization Plans
 - ▶ Monitor for multiple species of mercury for TMDL Phase 2 and MMP performance evaluation
 - ▶ Total and dissolved Mercury
 - ▶ Total and dissolved Methyl-Mercury
 - ▶ Re-opener clauses for poor performance

2017 Clean Water Services Reconsideration

- ▶ 2017 petition for reconsideration pointed out the “guidance values” in the 2006 TMDL met the description of a water column “translation factor”
- ▶ Therefore a numeric water column based criterion can be calculated and numeric WQBEL assigned
- ▶ Until revised TMDL is complete, permit development will utilize an interim water quality criterion of 0.12 ng/l
 - ▶ Most points sources monitored will have RP and WQBELs will be around 0.12 ng/l (“end of pipe”)
 - ▶ The most sophisticated waste water treatment facility in the state averages 2.0 ng/l
- ▶ The department is using the following tools to help facilities with the challenges of meeting numeric WQBELs
 - ▶ Intake Credits
 - ▶ Compliance Schedules
 - ▶ Individual Variances
 - ▶ Multiple Discharge Variance

Questions?

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