

Rulemaking: Willamette Basin Mercury Multiple Discharger Variance and Variance Rule Amendments

Water Quality Standards and Assessment

Jan. 24, 2020
Hillsboro, OR

Today's action

- Here today to recommend that the EQC take action on two proposed rule amendments:
 1. Adopt proposed amendments to the State Variance Authorization Rule at OAR 340-041-0059 and associated definitions at OAR 340-041-0002.
 2. Adopt proposed amendments to OAR 340-041-0345 establishing a multiple discharger variance for mercury for the Willamette Basin.

Outline

- Background and Variance Basics
- Willamette Basin MDV
 - Justification
 - Dischargers, requirements and term of the variance
 - Public comments
- Variance Rule Amendments
- Questions

Methylmercury Criterion

- Protects high level of fish consumption.
- Expressed as fish tissue concentration.
- For permits, implemented through mercury minimization programs.

Why a Mercury Variance for the Willamette Basin?

- TMDL: ~0.14 ng/L water column target.
- Permit limits based on standard unattainable dischargers throughout basin.
- Variance needed to issue permits and reduce mercury from point sources.
- Relationship to TMDL.

Variance - definition

- Time-limited alternative standard for specified discharger(s) or waterbody.
- For purpose of wastewater discharge permits and 401 certifications only.
- Does not change underlying standard.
- Effective upon EPA approval.

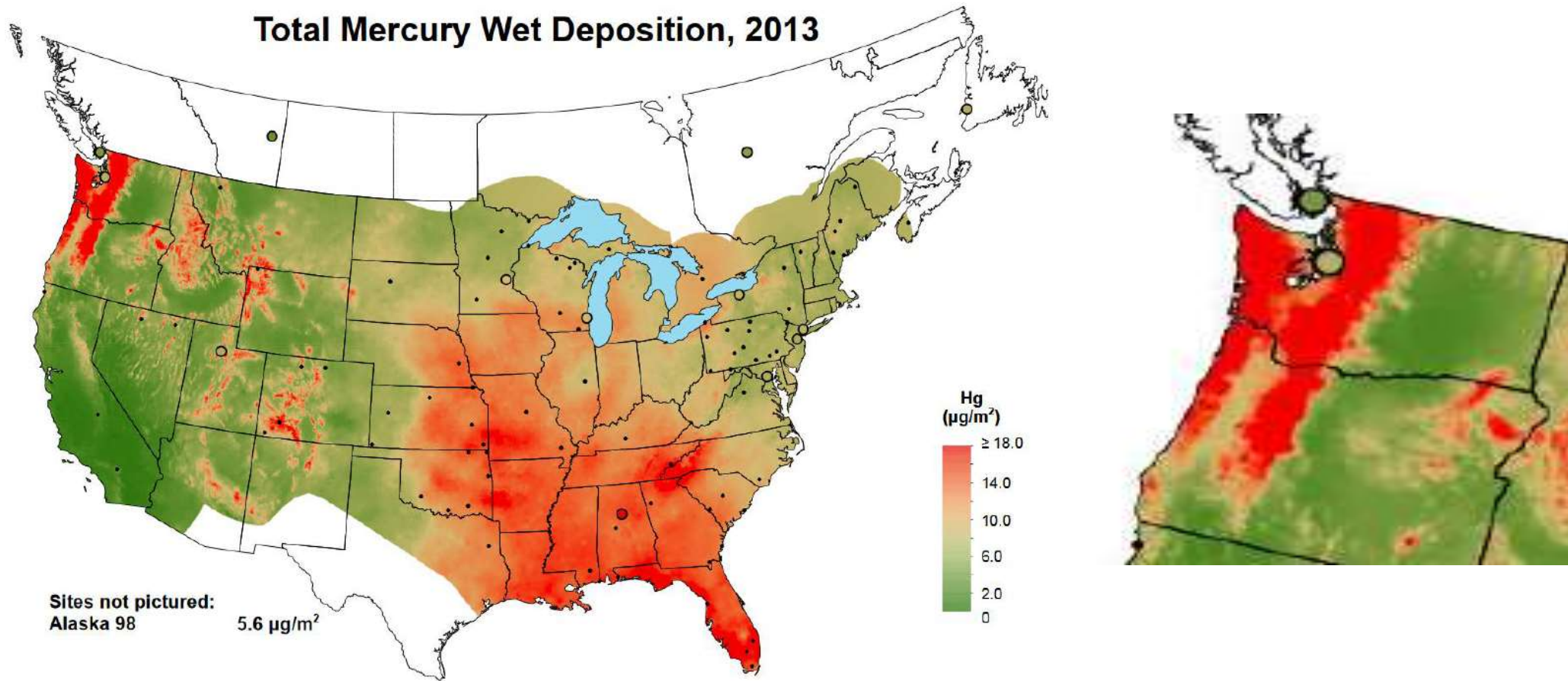
Variance - purpose

- Appropriate Clean Water Act tool to:
 - Provide a path for issuing permits
 - Make all feasible progress in reducing pollutant loadings during the variance.
 - Ensure that the process is transparent.

Mercury Variance - Need

“Human-caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied *or* would cause more environmental damage to correct than leave in place.”

Atmospheric Mercury Deposition



Technology cannot achieve criterion

Treatment Technology	Effluent Volume Range	Treatment Ability	In-stream Target
Current Treatment (Secondary, Advanced Secondary, Tertiary)	Up to 25 MGD	1-20 ng/L	0.14 ng/L
Membrane Filtration	Low volume	Bench scale to 0.26 ng/L	
Ion Exchange	0.015 MGD	1 ng/L	
Precipitation and filtration	Low volume	Bench scale to 0.17 ng/L; full scale to 25 ng/L	
Adsorption	Low volume	Bench scale to 0.08 ng/L; full scale to 25 ng/L	

Dischargers Subject to Variance

- 64 individual NPDES permit holders listed in rule.
 - Major wastewater treatment plants.
 - Industrial facilities likely to discharge mercury.
 - Minor WWTPs that would otherwise obtain permit limits based on the water quality standard.

What will the variance require?

- Meet effluent mercury limits achievable with current, well-operated and maintained treatment system.
- Mercury minimization program, with minimum elements included in rule.
- Monitoring and reporting

Proposed 20-year term of the variance



- Provides time for dischargers to implement required mercury minimization activities.
- Provides time to collect and evaluate data.
- DEQ will assess path forward at end of variance.

Five-year re-evaluation

- Evaluate progress in achieving mercury reductions.
- Re-evaluate feasibility of mercury removal technology.
- Public comment and EPA submittal.

Major comments

- Multiple discharger variance vs. waterbody variance.
 - DEQ clarified that this is a MDV.
 - Included list of facilities in rule.
- Activities the state is implementing to make progress toward methylmercury criterion.
 - No new requirements, but acknowledges existing programs.

Changes to draft variance authorization rule

- Purpose:
 - Consistency with 2015 federal regulations
 - Clarity and administrative efficiency
- Types of variances and authorization.
 - Individual
 - Multiple discharger and waterbody

Changes to draft variance authorization rule

- Removes provisions prohibiting variances if the variance is likely to:
 - Jeopardize ESA species; or
 - Result in an unreasonable risk to human health.
- Removes section regarding variance renewals.

Proposal

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