



## **Review of Oregon's Statewide Water Quality Standard for Turbidity**

Planned Process and Schedule

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## Agenda

- Overview of water quality standards and current turbidity standard
- Overview of scope and process
- Questions



## Water Quality Standards

- Foundation of ODEQ water quality programs
  - Permitting
  - Assessment
  - Total maximum daily loads (TMDLs)
- Protect fish and wildlife, recreation, and other beneficial uses
- Require U.S. EPA approval to be effective under the Clean Water Act



## Water Quality Standards

- Designated uses (fish and wildlife, recreation, public water supply, etc.)
- Criteria to protect those uses (concentration, duration, frequency)
- Antidegradation policy
- Implementation policies related to the above



## Turbidity

- Measure of “cloudiness” of water
- Measured by turbidimeters, which analyze light penetration and scatter





## Current Standard (OAR 340-041-0036)

“Turbidity (Nephelometric Turbidity Units, NTU):  
No more than a ***ten percent cumulative increase*** in natural stream turbidities may be allowed, as measured relative to a control point immediately upstream of the turbidity causing activity...”



## Current standard

- Allows “limited duration” activities to address an emergency or to accommodate certain actions
  - Requires application of turbidity control techniques
  - Emergency activities require approval by ODFW
  - Dredging and other activities require Army Corps certification



## History of current standard

- Adopted in 1977
- Based on 1976 EPA recommendation
- Only substantive change: change in 1990 from Jackson Turbidity Units to Nephelometric Turbidity Units
- Does not incorporate most recent science about effects of turbidity on beneficial uses



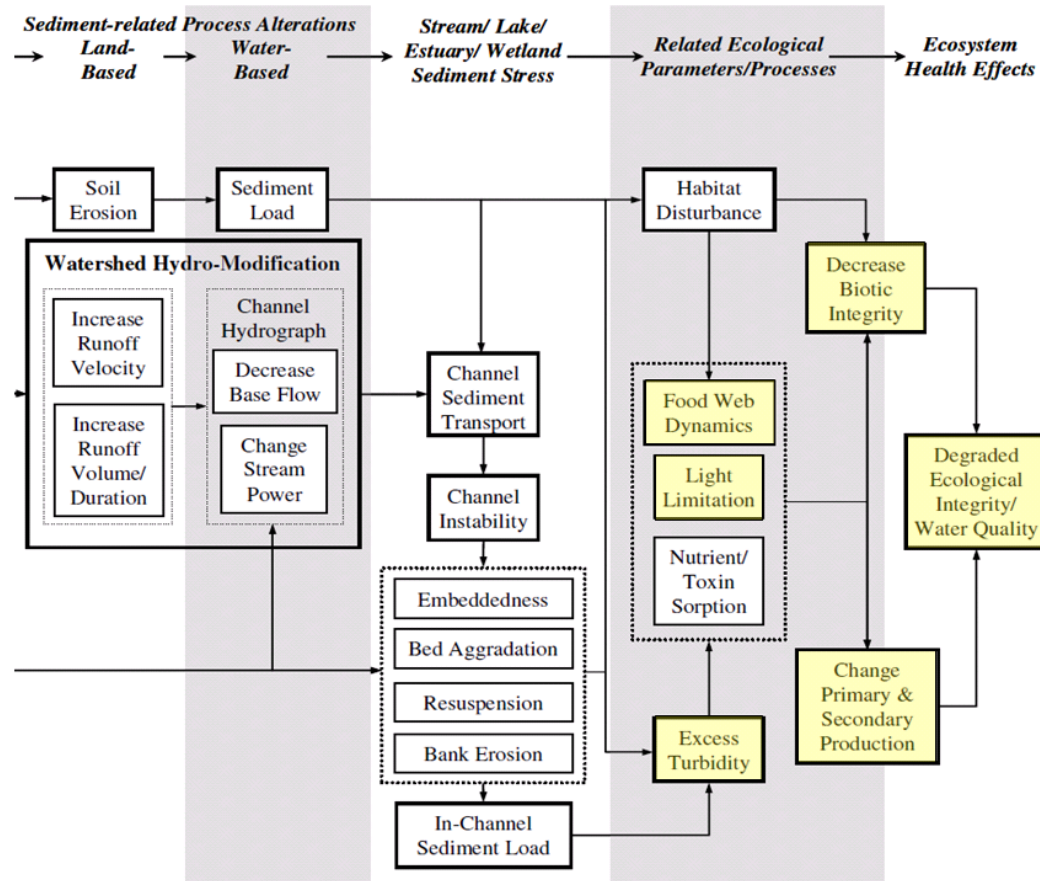
## Why is DEQ revising the WQS for turbidity?

- Implementation is inconsistent because:
  - Hard to measure 10% increase at low turbidities
  - Hard to measure cumulative impacts
  - Naturally-fluctuating turbidities
  - Difficult to determine when a violation occurs (i.e., duration and frequency)
  - No definition of “limited duration” for authorized exceedances
  - Significant differences in turbidimeter measurements

# Water Quality Standard for Turbidity



## Scope of revision



From U.S. EPA. 2006. Framework for developing suspended and bedded sediments (SABS) water quality criteria. EPA-822-R-06-001. Office of Water and Office of Research and Development, Washington, DC.



## Scope of revision

- Focused on effects of turbidity (i.e., reduced light penetration)
- Revisions not including other potentially related issues:
  - Sedimentation
  - Nutrients
  - Toxics



## Effects of turbidity on beneficial uses

- Reduced growth of algae and other aquatic vegetation
- Reduced ability for fish to see/catch prey
- Impaired fishing, swimming, aesthetics
- Higher water treatment costs
- Also considering effects in estuaries





## Overall process

Jan. – May 2010	Technical Review
May – June 2010	Peer Review
June – Sept. 2010	Stakeholder Workgroup
Aug. 2010 – July 2011	Rulemaking and Submittal to EPA



## Technical Review (Jan. – May 2010)

- Update 2005 “Draft Technical Basis”
  - Incorporate more recent literature and relevant information received through “Call for Data”
  - Address Independent Multidisciplinary Science Team comments
  - Present effects literature and come to general conclusions
  - Discuss areas of uncertainty



## Peer review panel (May – June 2010)

- Targeted input on technical review
- Specifically address areas of uncertainty
- Variety of disciplines
  - Hydrology
  - Stream ecology
  - Limnology
  - Marine/Estuarine Ecology
  - Biology



## **Stakeholder Workgroup (June – Sept. 2010)**

- 3-4 meetings
- Focused set of topics to discuss
- Providing input, not reaching consensus
- Implications of rule options
- Invitations to be sent out in April/May



## Rulemaking (Aug. 2010 – July 2011)

Aug. – Dec. 2010	Prepare Notice of Proposed Rulemaking
Jan. 2011	Public Hearings and Comment Period
Feb. – Jun. 2011	Response to Comments and Final Rule
June 2011	Final Rule Adoption by EQC
July 2011	Submit to EPA for approval



## For more information

- <http://www.deq.state.or.us/wq/standards/turbidity.htm>
- GovDelivery list (link on top left of website)
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**Questions?**

