Item B: Total Maximum Daily Loads (TMDLs) Temperature TMDL Replacement project

Willamette Subbasins temperature TMDL replacement rule amendment to add Willamette River Mainstem and Major Tributaries

Presenting:
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May 8, 2025

Agenda

Topic
TMDL temperature replacement project background
Willamette Subbasins temperature TMDL amendment to add Willamette River Mainstem and Major Tributaries
Proposed motion

Temperature TMDL Replacement project litigation background

2012: NWEA vs. USEPA, NMFS, USFWS

- Lawsuit was seeking judicial review of the EPA's decision to approve Oregon's revised water quality standards (including the Natural Conditions Criteria) and the Services' "no jeopardy" BiOp.
- Judge found “the EPA was unable to articulate a rationale [sic] basis for its approval of the NCC.”
- Court’s judgment resulted in EPA’s disapproval of the Natural Conditions Criteria.

2019: NWEA vs. USEPA

- Lawsuit asserted the EPA unlawfully approved TMDLs that were based on the now disapproved Natural Conditions Criteria.
- The court issued a judgment on Oct. 4, 2019, requiring DEQ and EPA to replace 15 Oregon temperature TMDLs that were based on the Natural Conditions Criterion and to reissue the temperature TMDLs based on the remaining elements of the temperature criteria.

Total Maximum Daily Loads

A TMDL, or clean water plan, is a science-based approach to cleaning up polluted water so that it meets state water quality standards.

A TMDL is also a numerical value that represents the highest amount of a pollutant a surface water body can receive and still meet the standards. *The numerical value TMDL is also known as a loading capacity.*

Water Quality Trading Restoration Site near Springfield, Oregon

TMDL webpage: https://www.oregon.gov/deq/wq/tmdls/Pages/default.aspx

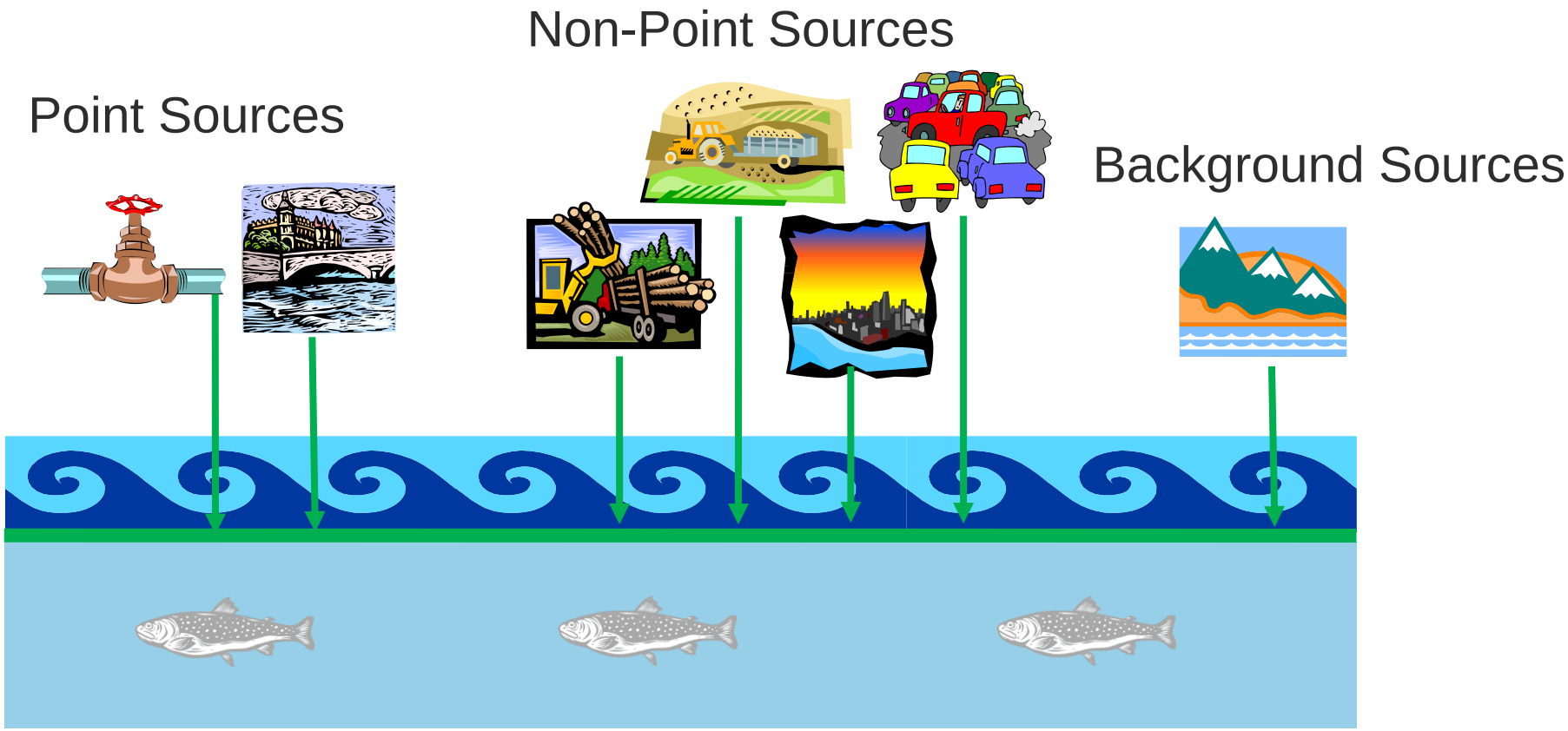
TMDL purpose

- An approach to restore and maintain water quality.
  - Pollutant: Heat
  - Standard for the most sensitive beneficial uses: Aquatic life

- Establishes an allowable limit for pollutants of concern.
  - Point sources (wasteloads)
  - Nonpoint sources (loads)

- Water Quality Management Plan (WQMP) identifies possible sources of pollutants that can be managed.

TMDL source assessment and calculation

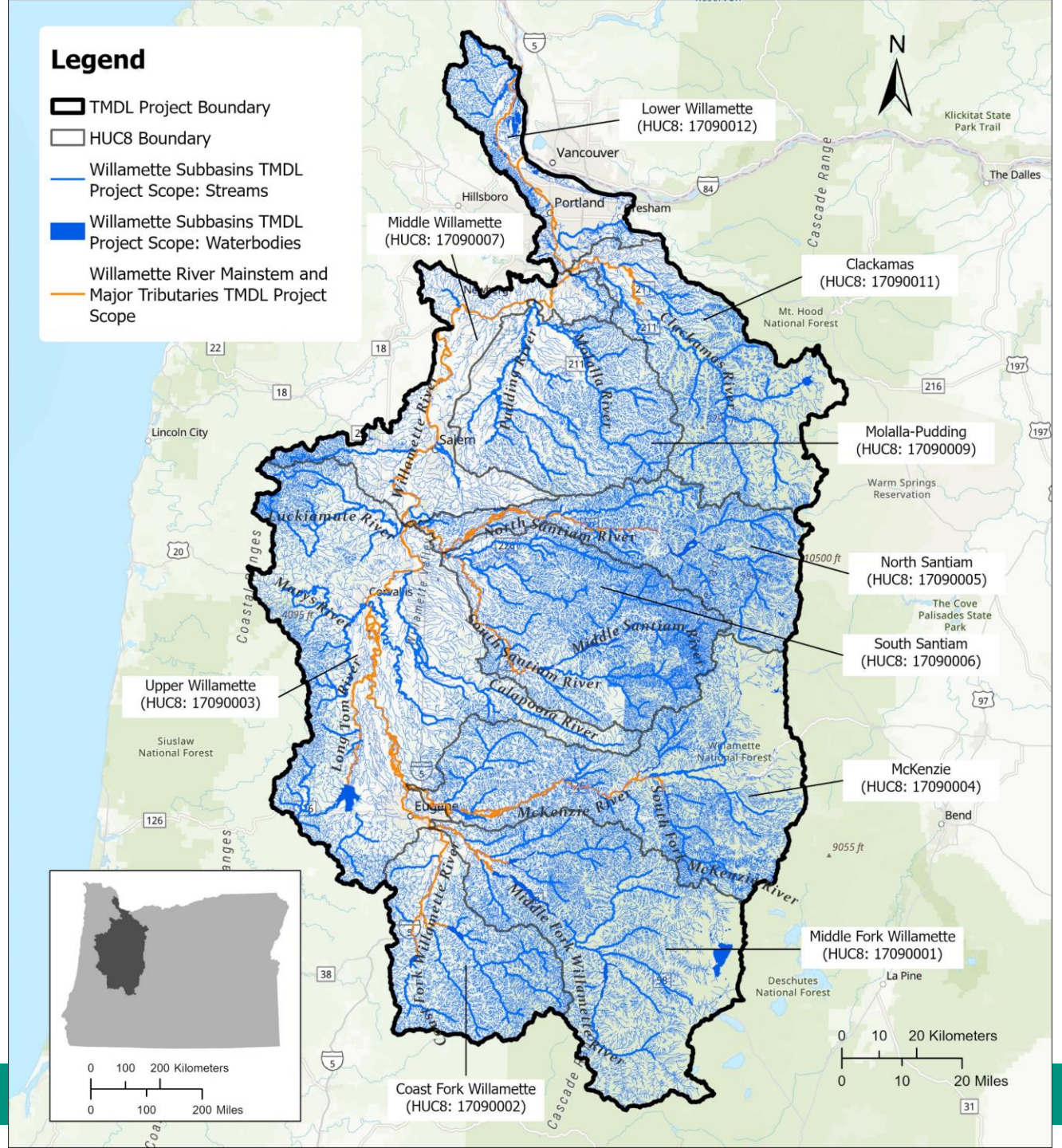


$$TMDL = WLA_{ps} + LA_{nps} + LA_{bg} + MOS + RC$$

- WLA_{ps}: Waste Load Allocation: Point Sources
- LA_{nps}: Load Allocation: Non-Point Sources
- LA_{bg}: Load Allocation: Background Sources
- MOS: Margin of Safety
- RC: Reserve Capacity

Willamette Subbasins (blue)
Willamette Mainstem (orange)

- Mainstem incorporates approximately 560 miles of water and 45 assessment units in the Willamette basin.
- Approximately 498 miles of water and 21 assessment units are impaired for temperature.
- The mainstem project area waters receive discharge from 50 individual NPDES permitted facilities and general permits. Numerous nonpoint source categories conduct activities that influence temperatures in these waters.
- The TMDL establishes numeric temperature targets that implement the narrative cool water species temperature standard on the Long Tom River.



Sources of water temperature warming in the Willamette Subbasins

The TMDL concluded that major sources of temperature warming include:

- Dam and reservoir management
- Disturbance or removal of streamside vegetation
- Activities that modify flow rate or volume
- Channel modification and widening
- Point source discharges
- Climate change
- Background sources (includes natural sources)

Middle Fork Willamette River

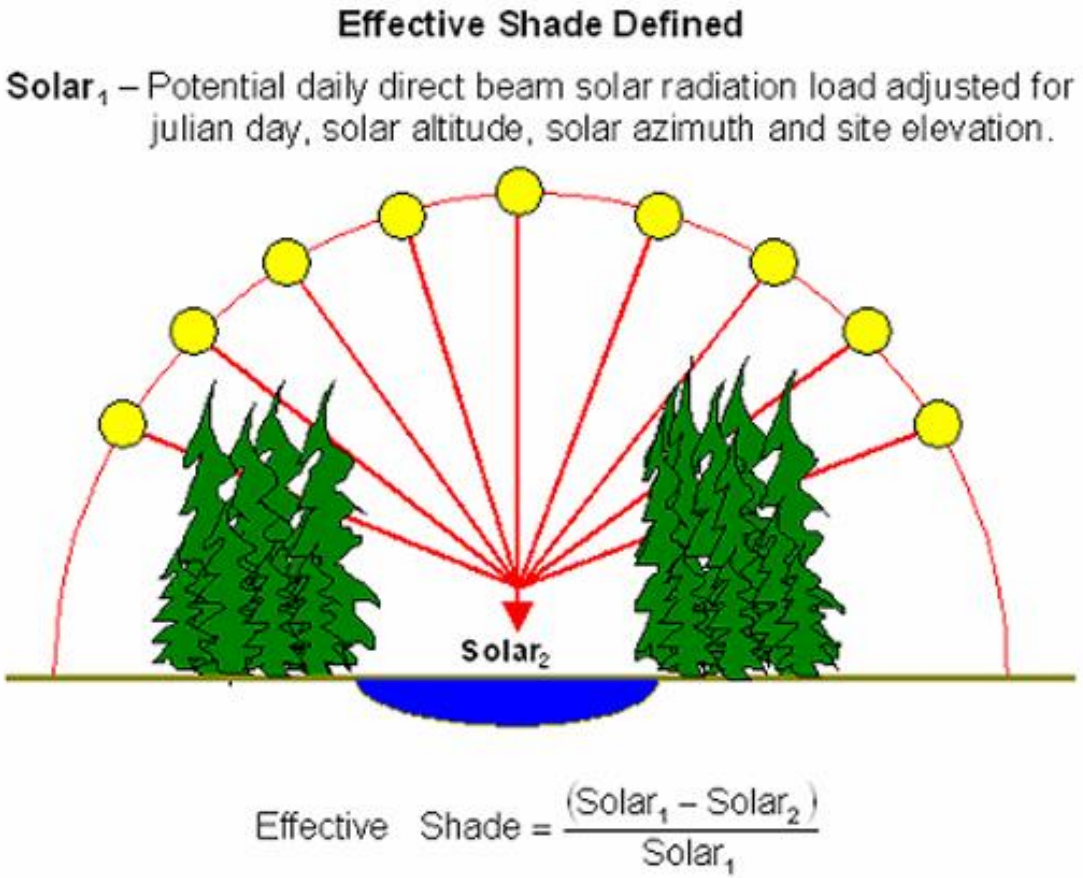
Implementing TMDL allocations

Point sources

- NPDES permits

Nonpoint sources

- Designated management agencies (DMAs)
- Surrogate measures



TMDL rule amendment changes

Examples of substantive changes from page 26 of the staff report.

- Point sources: Human use allowance (HUA) assignments and wasteload allocations to National Pollutant Discharge Elimination System (NPDES) permitted facilities were changed based on public comments received or on updated data and analysis.
- Nonpoint sources: HUA assignments and load allocations to nonpoint sources were changed based on public comments received or on updated data and analysis.
- A statement was added to clarify temperature impacts associated with climate change sources are assigned a zero HUA.
- HUA assignments to reserve capacity were changed based on public comments received or on updated data and analysis.
- Critical periods for the Willamette River, Multnomah Channel, and Clackamas River were changed based on public comments received and further consideration of the data used.

Water Quality Management Plan

A Water Quality Management Plan (WQMP) is the required element of a TMDL that describes strategies to achieve allocations identified in the TMDL to attain water quality standards.

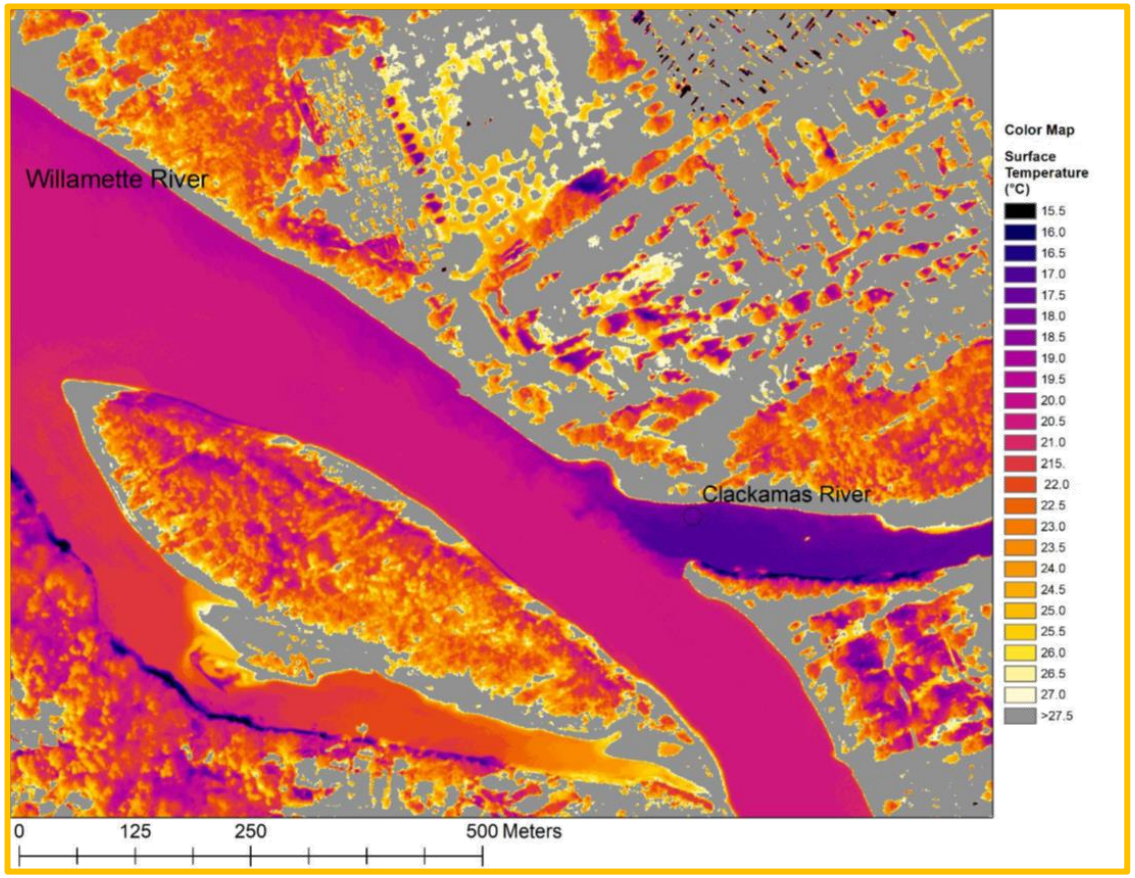
- Designated Management Agencies (DMAs)
- Management Strategies
- Reasonable Assurance

Elements of a WQMP are described in OAR 340-042-0040(4)(l).

Willamette Cove, Portland, Oregon

WQMP rule amendment changes

- No changes were made to the implementation requirements outlined in the Willamette Subbasins WQMP.
- Language was added to address 2006 Willamette TMDL requirements on Cold Water Refugia for DMAs on the lower 50 river miles of the Willamette Mainstem.
- Sections 2.4 and 7.1 of the WQMP to acknowledge climate change impacts.



WQMP requirements for current and proposed rule amendment

- Timelines for implementation plan submission and specific requirements
  - TMDL implementation plans are due 18 months after EQC adoption of the Willamette Subbasins TMDL amendment.
  - 90 DMAs are expected to submit an implementation plan (Subbasins including mainstem).

- Streamside evaluation
  - Assess current conditions to prioritize restoration.
  - Use DEQ shade gap analysis where available.
  - Use results to prioritize areas for restoration and create implementation milestones.
  - Streamside evaluations are due three years after EQC adoption of the Willamette Subbasins TMDL amendment.

Willamette River, near St. Johns in Portland, Oregon

WQMP requirements for current and proposed rule amendment

- Monitoring requirements for large reservoir operators
  - Lebanon Dam was added to the list of large reservoirs for this rule amendment.

- Monitoring and shade gap analysis requirements for ODF, ODA, USFS, and BLM
  - Shade gap analysis not needed in areas with a 120-foot streamside buffer.

Green Peter Reservoir near Lebanon, Oregon

Public engagement

- Three rule advisory committee meetings
- Draft documents discussed:
  - Fiscal and economic impact analysis
  - Environmental Justice and Racial Equity statements
  - TMDL, WQMP, Technical Support Documents, draft rule language
- Public notice and hearing
  August – October 2024

Willamette River, Independence Oregon

Public comment themes

- Specify water quality trading as a compliance option to meet implementation requirements.
- Implementation rates too slow or concerns about meeting the implementation timelines.
- How will future state climate modeling change TMDL development and to what extent were climate change models incorporated?
- Prescribe restoration efforts for natural disasters like wildfires.
- Integrate TMDL reporting requirements with other state and federal reporting.
- Review and consider adjustments to the TMDL allocations.
- Requests to improve documentation of decisions and technical work.

Fiscal impact analysis: Willamette Subbasins TMDL

- Summary: Point and nonpoint sources named in the TMDL may incur potential costs and costs will vary. The Rule Advisory Committee expressed that small businesses may incur additional costs.

- Point sources: The fiscal impact of the new or revised waste load allocations (WLAs) on point source discharge will be variable. Point sources may incur additional capital improvement or other costs necessary to achieve compliance with the new WLA.

- Nonpoint sources: Costs of compliance with this TMDL rule can include administrative and implementation costs. DEQ did not receive specific information for potentially affected operations within the watershed to quantify economic impacts to landowners or business operators.

Racial Equity and Environmental Justice considerations

DEQ expects the proposed rule to have the following results:

- A positive impact on Oregonians, including promotion of racial equity by helping to maintain healthy and abundant fisheries including subsistence salmonid fisheries, and will help to minimize treatment costs of providing fresh, clean, and healthy water supplies to disadvantaged communities.

- Indigenous, rural, minority and poor communities may use salmon as a subsistence food source. Abundant fish would also restore and protect beneficial uses including recreation. The proposed temperature TMDL rule will help address the localized impacts of stream temperature impairments, and potentially improve other related water quality parameters, such as dissolved oxygen.

Proposed motion language: Willamette Subbasins TMDL amendment

"*I move that the Environmental Quality Commission adopt the proposed rules as seen in Attachment A as part of Chapter 340, Division 42 of the Oregon Administrative Rules and to incorporate, by reference, the Total Maximum Daily Loads rule amendments for the Willamette Subbasins (Attachment B) and Water Quality Management Plan (Attachment C) for temperature.*"

Title VI and alternative formats

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