Temperature Total Maximum Daily Loads Replacement project: Middle Columbia-Hood (Miles Creeks)

May 27, 2026

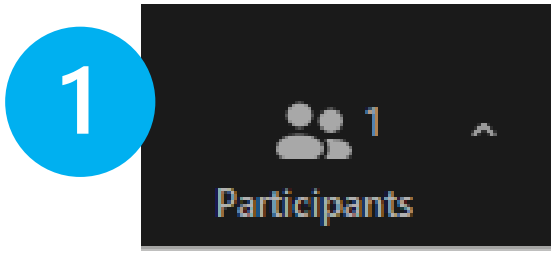
Rule Advisory Committee meeting #1

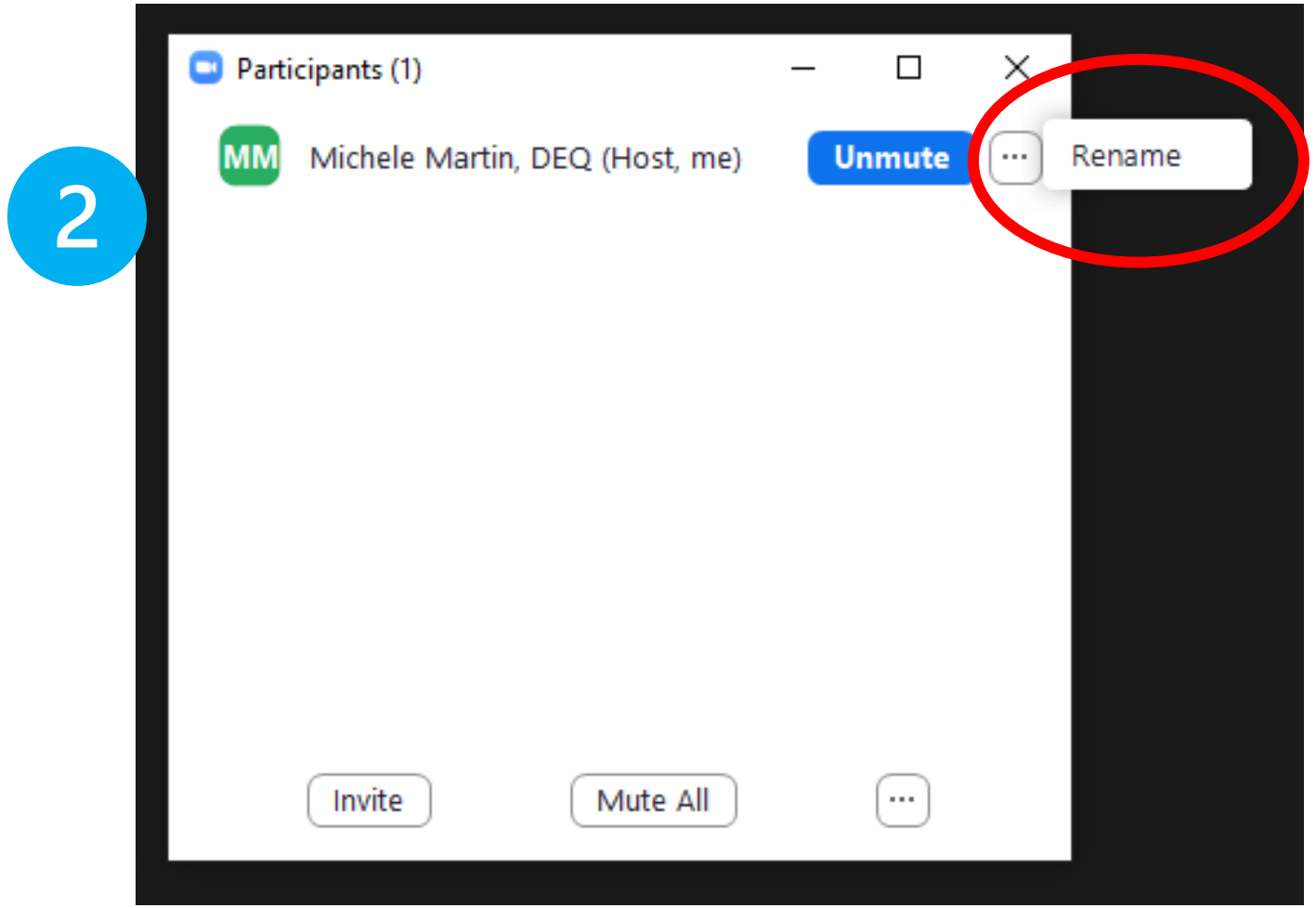
Virtual meeting

Agenda

Time	Topic
10 a.m.	Welcome, introductions, meeting agenda
10:10 a.m.	Rule Advisory Committee Charter review
10:20 a.m.	Draft Total Maximum Daily Load
10:50 a.m.	Draft Water Quality Management Plan, rule
11:20 a.m.	Draft Administrative Rule Language
11:30 a.m.	Draft Fiscal and Economic Impact Statement
11:50 a.m.	Wrap up, next steps
Noon	Adjourn

Add “AC” to your name in Zoom to identify you as an advisory committee member, e.g., **AC** Michele Martin, DEQ





Zoom logistics and meeting ground rules



Raise hand to be recognized for questions



Use chat to: Ask questions



Mute when not speaking



If using phone: press *9 to raise hand, *6 to mute/unmute

Rulemaking Advisory Committee

- ORS 183.333 – to obtain advisory input on fiscal/economic impacts of the proposed rule
- Charter: posted online
- No expectation of group decisions or consensus
- RAC members:
  - Provide input and perspectives
  - Prepare for and attend meeting
  - Consult regularly with constituencies to inform them and gather input
- DEQ: Facilitate, provide info, record input
- Public: Observe only; DEQ may allow brief comments if time allows
- Stay on topic, share research/documentation, be respectful

Temperature TMDL Replacement - litigation background

2012: NWEA vs. USEPA, NMFS, USFWS

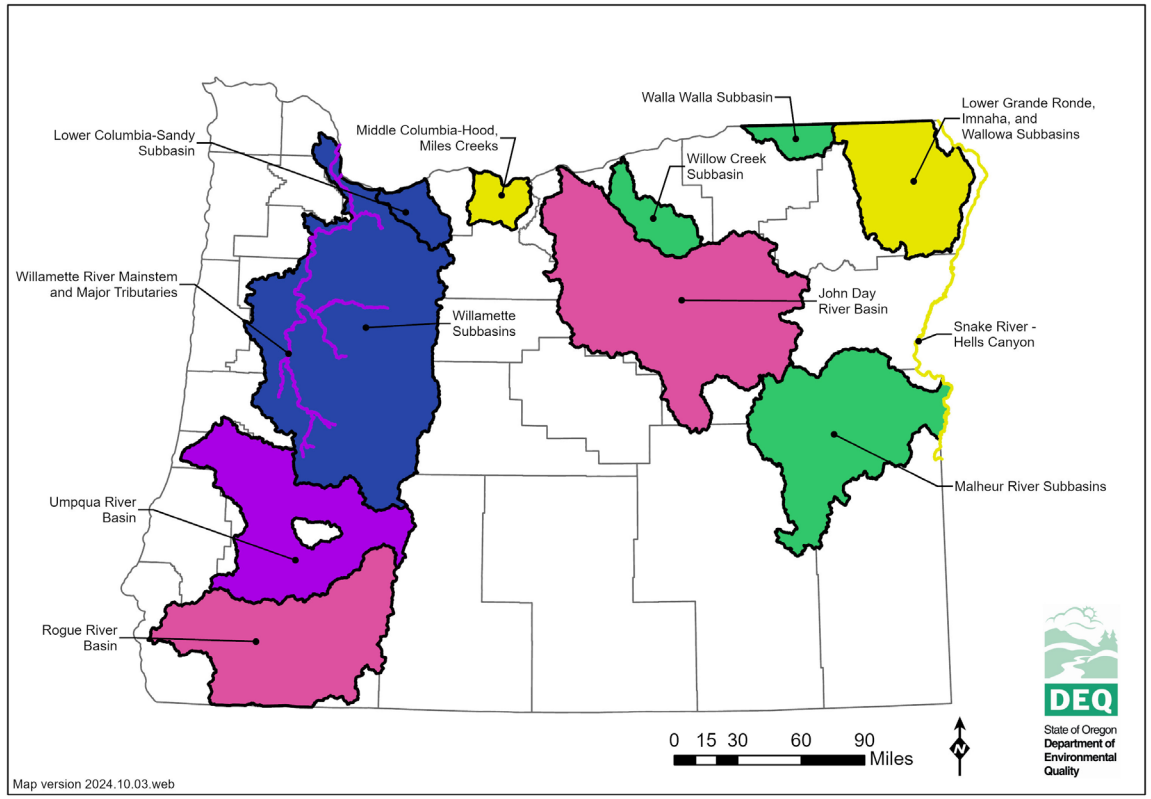
- Lawsuit was seeking judicial review of the EPA's decision to approve Oregon's revised water quality standards (including the Natural Conditions Criteria) and the Services' "no jeopardy" BiOp.
- Judge found “the EPA was unable to articulate a rationale [sic] basis for its approval of the NCC”.
- Court’s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

- 2012 NCC Court Opinion and Order in NWEA vs. USEPA
- 2019 TMDL Court Opinion and Order in NWEA vs. USPA

Temperature TMDLs Replacement project areas

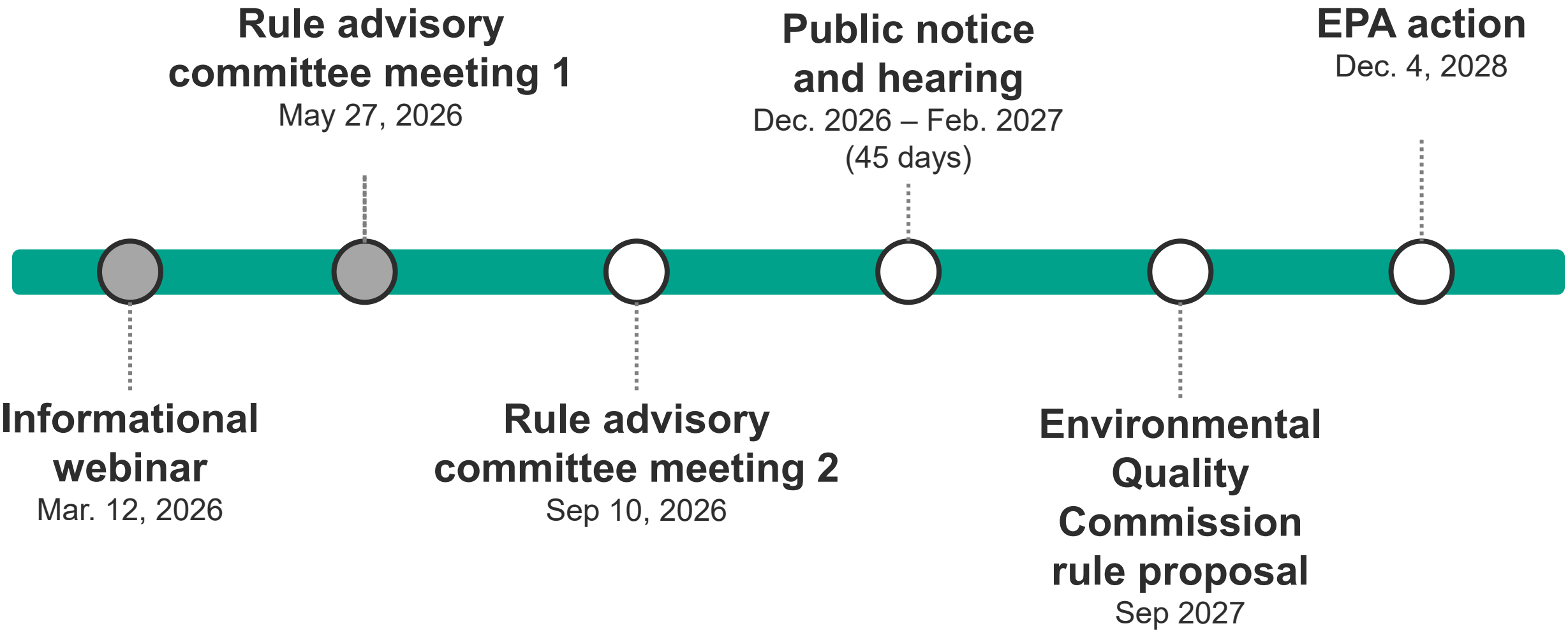


Project website: **https://ordeq.org/tempTMDLs**

Middle Columbia-Hood (Miles Creeks) Subbasin Temperature TMDL Timeline

Sep. 15, 2024	June 28, 2025	Oct. 18, 2027	Dec. 4, 2028	Nov. 29, 2029
✓ Willamette Subbasins ✓ Lower Columbia-Sandy Subbasin	✓ Willamette River Mainstem and Major Tributaries ✓ Umpqua River Basin	• Rogue River Basin • John Day River Basin	• Snake River - Hell's Canyon • Lower Grande Ronde, Imnaha, and Wallowa Subbasins • Middle Columbia-Hood, Miles Creeks	• Walla Walla Subbasin • Willow Creek Subbasin • Malheur River Subbasins

Middle Columbia-Hood (Miles Creeks) Subbasin Temperature TMDL Timeline



Middle Columbia-Hood (Miles Creeks) Subbasin Temperature TMDL elements



Fifteenmile Creek at headwaters

Total Maximum Daily Loads

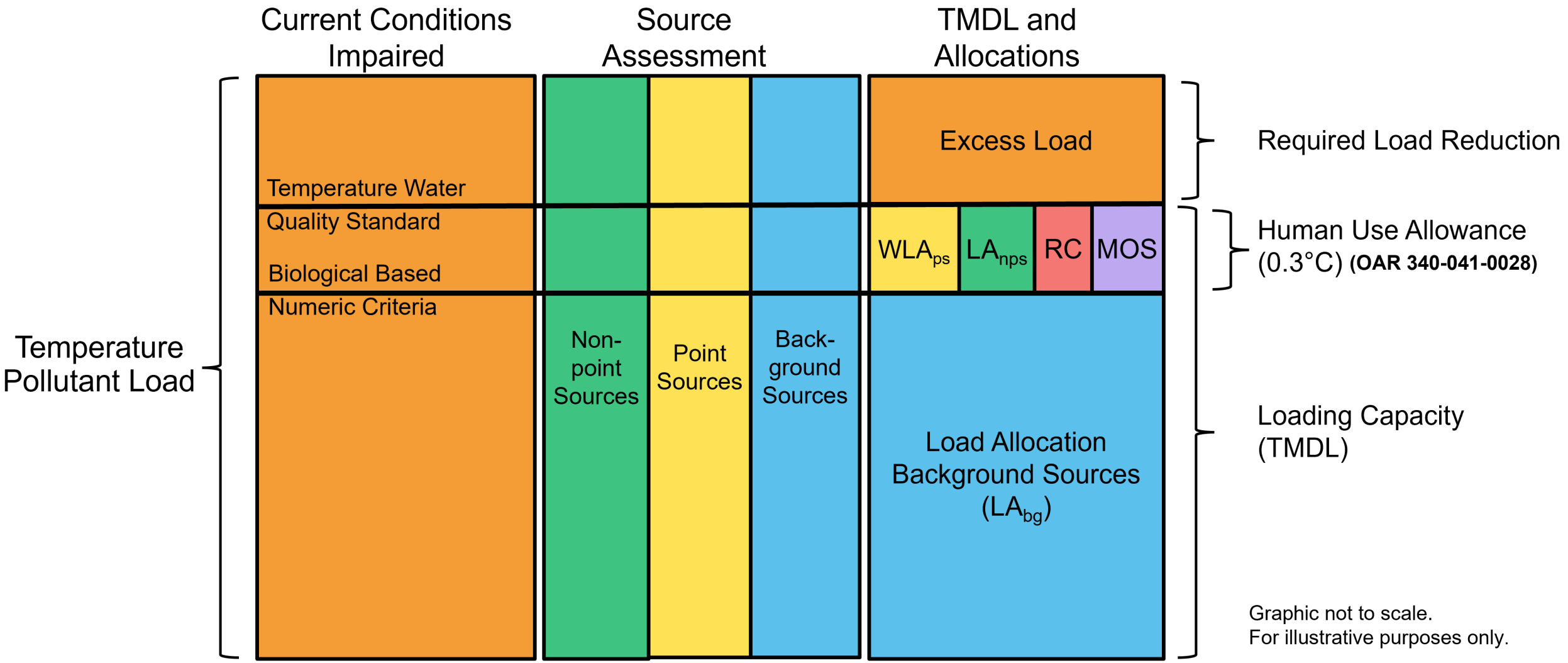


A TMDL, or clean water plan, is a science-based approach to cleaning up polluted water so that it meets state water quality standards.



A TMDL is also a numeric value that represents the maximum amount of a pollutant a surface water body can receive and still meet the standards.

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



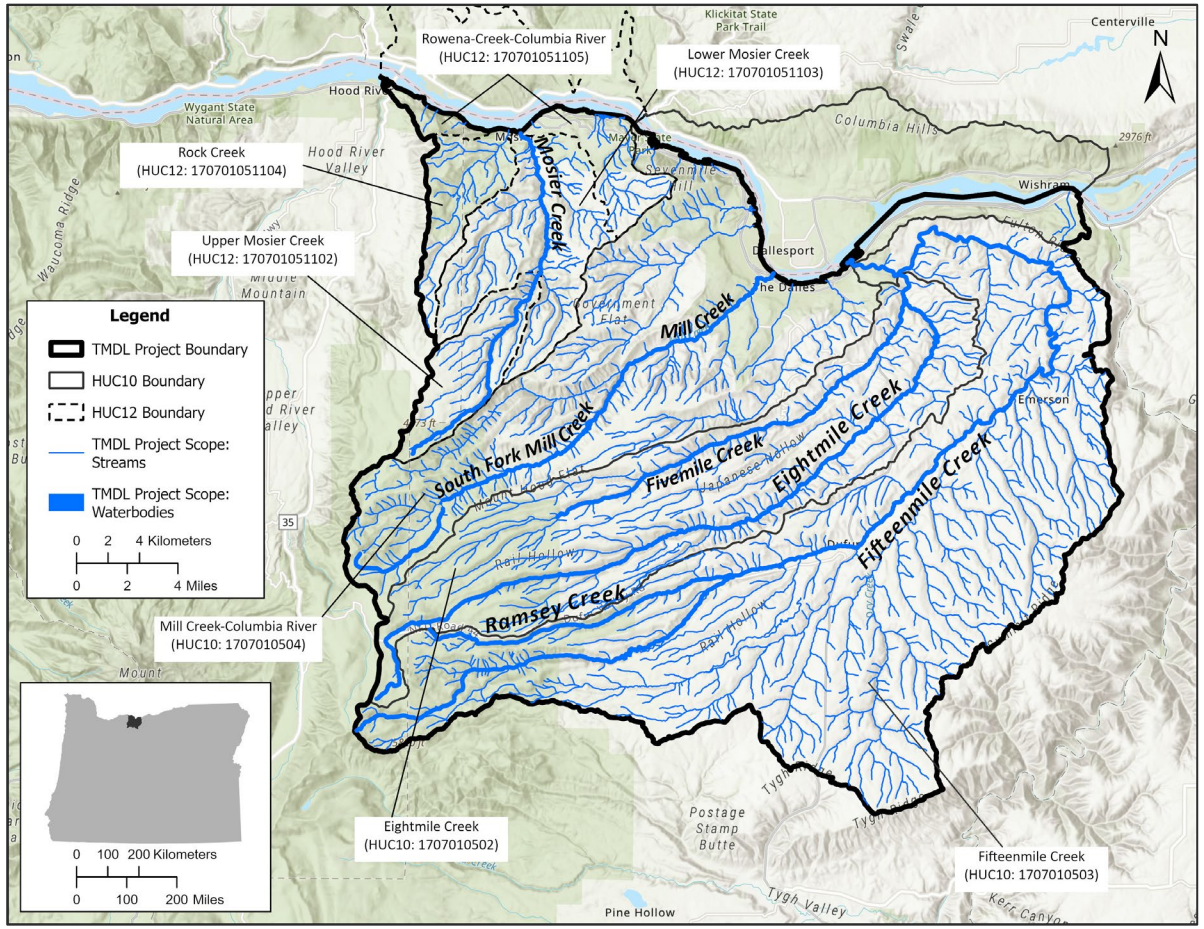
TMDLs include the following elements:

- Waterbody Name and Location
- Pollutant
- Water quality standard and beneficial uses
- Loading Capacity
- Excess Load / Load Reduction
- Sources or Source categories
- Allocations
  - Wasteload Allocations (WLA)
  - Load Allocations (LA)
  - Surrogate Measures
  - Reserve Capacity (RC)
  - Margin of Safety (MOS)
- Seasonal Variation
- Water Quality Management Plan

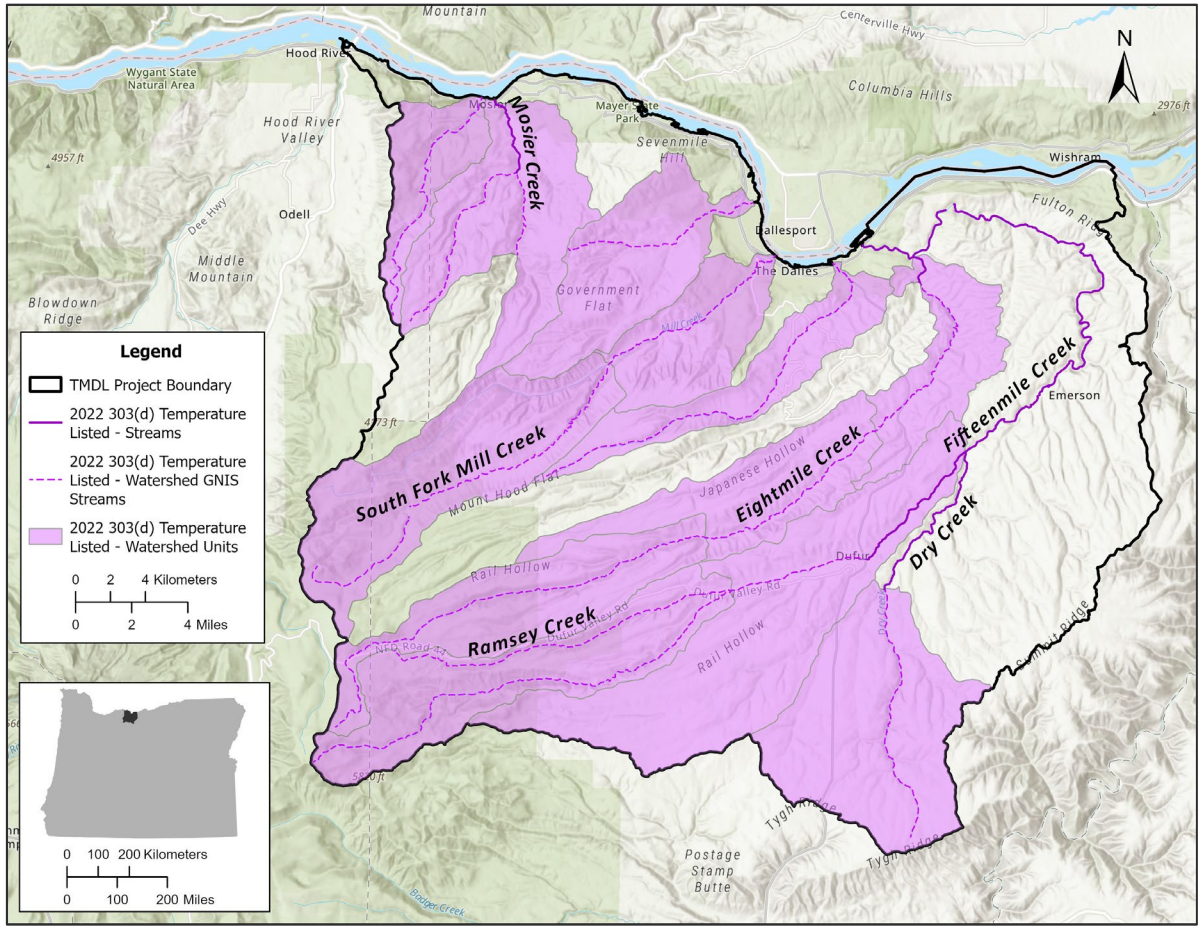
References: OAR 340-042-0040(4) and 40 CFR 130.2 and 40 CFR 130.7

Middle Columbia-Hood (Miles Creeks) TMDL project area

Temperature TMDL project scope



2022 303(d) listed impairments



[2022 Integrated Report]

Middle Columbia-Hood (Miles Creeks) TMDL Assessment units

Example assessment units:

Assessment Unit Name	Assessment Unit Description	Assessment Unit ID
Eightmile Creek	Fivemile Creek to confluence with Fifteenmile Creek	OR_SR_1707010502_02_101504
Dry Creek	Mays Canyon Creek to confluence with Fifteenmile Creek	OR_SR_1707010503_02_101505
Fifteenmile Creek	Dry Creek to confluence with Columbia River	OR_SR_1707010503_02_101506
Fifteenmile Creek	Pine Creek to Dry Creek	OR_SR_1707010503_02_101507
Mosier Creek	West Fork Mosier Creek to confluence with Columbia River	OR_SR_1707010511_02_101513

TMDL elements: The basics

Name and location:

TMDL section 2, pgs. 10-12

Pollutant identification:

Heat or thermal load

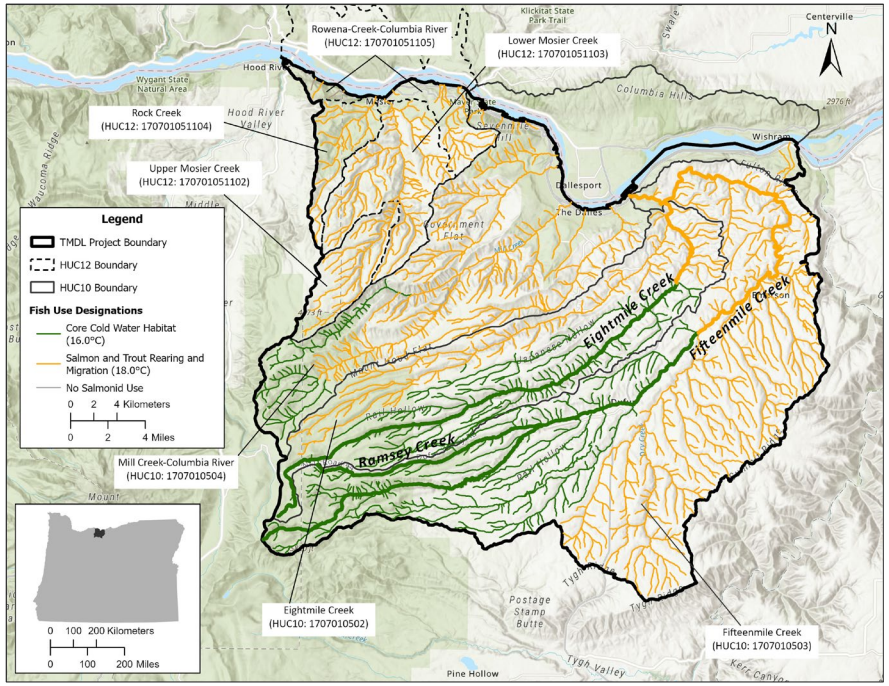
TMDL section 3, pg. 14

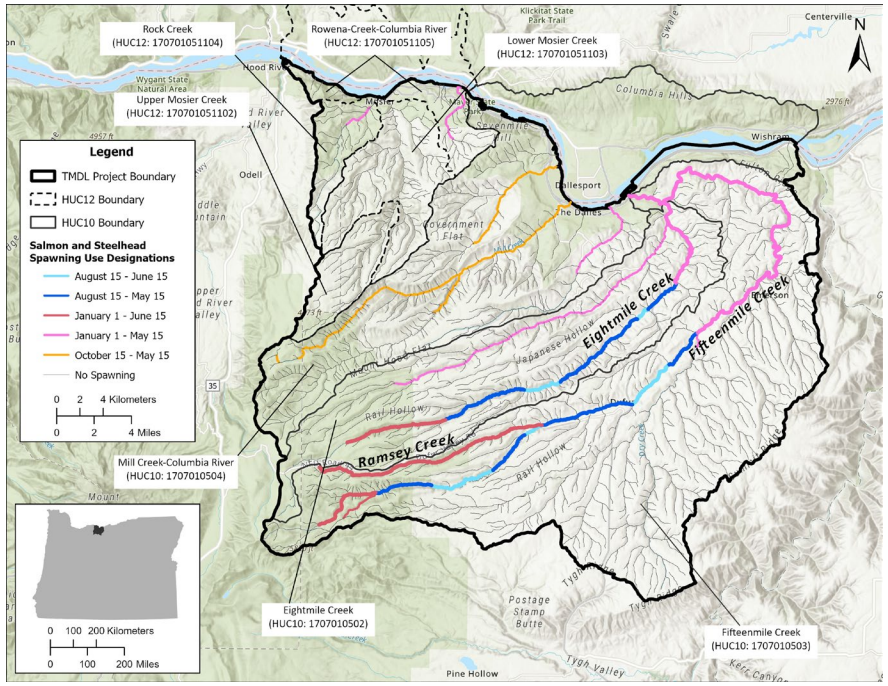
Water Quality standards and beneficial uses:

TMDL section 4, pgs. 14-21

Applicable numeric temperature criteria

Beneficial Use: Designated Fish or Spawning Use	Applicable Criteria For Waters Exceeding the Numeric Criteria	7DADM Temperature Target (°C)
Salmon and steelhead spawning	The spawning criterion with human use allowance applies: OAR 340-041-0028(4)(a) and OAR 340-041-0028(12)(b)	13.0 + 0.3 HUA
Core cold water habitat	The core cold water criterion with human use allowance apply: OAR 340-041-0028(4)(b) and OAR 340-041-0028(12)(b)	16.0 + 0.3 HUA
Salmon and trout rearing and migration	The rearing and migration water criterion with human use allowance applies: OAR 340-041-0028(4)(c) and OAR 340-041-0028(12)(b)	18.0 + 0.3 HUA





TMDL elements: Seasonal variation and critical period

TMDL section 5, pg. 21

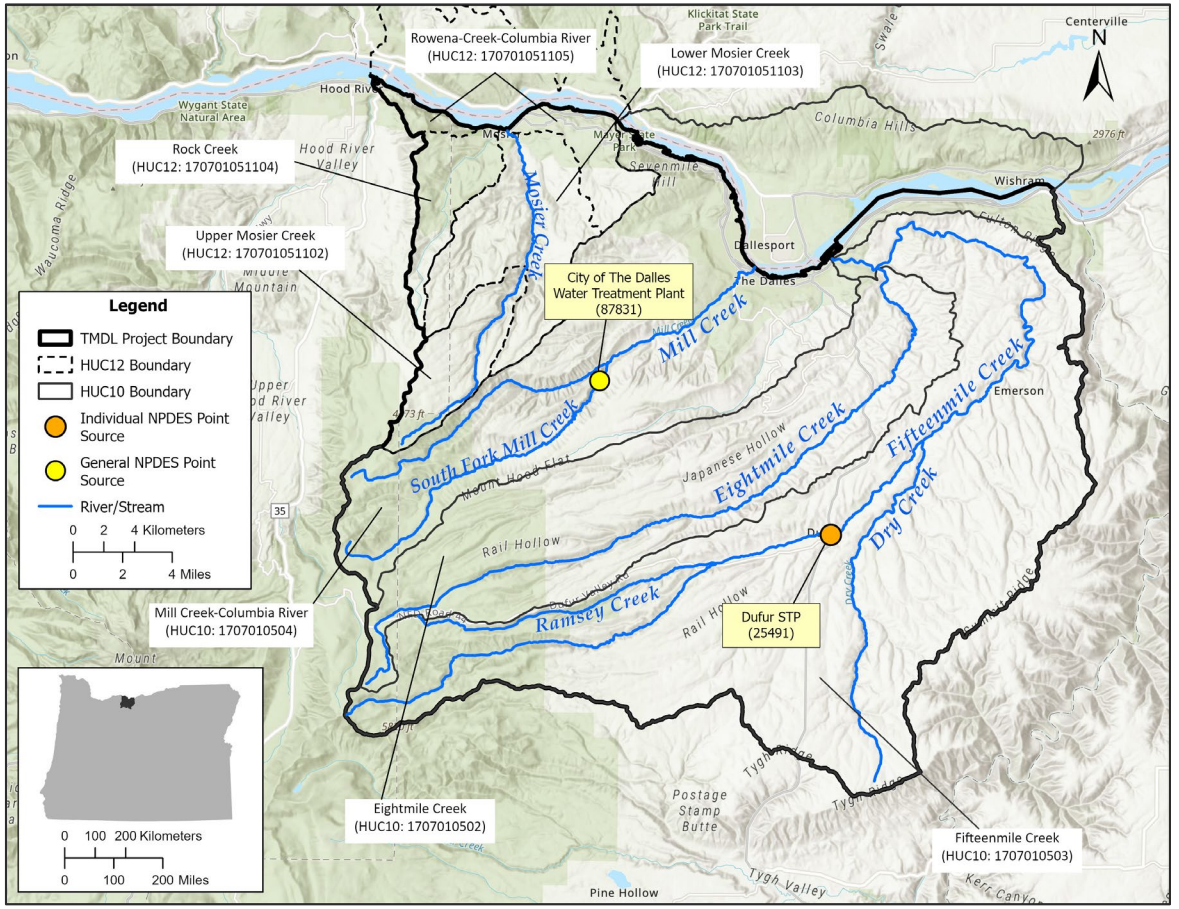
Watershed/Subwatershed	Waterbody Name	Critical Period
Fifteenmile Creek Watershed 1707010503	All waters	March 15 – October 31
Eightmile Creek Watershed 1707010502	All waters	March 15 – October 31
Mill Creek-Columbia River Watershed 1707010504	All waters	May 1 – October 31
Upper Mosier Creek Subwatershed 170701051102	All waters	May 1 – October 31
Lower Mosier Creek Subwatershed 170701051103	All waters	May 1 – October 31
Rock Creek Subwatershed 170701051104	All waters	May 1 – October 31
Rowena Creek-Columbia River Subwatershed 170701051105	All waters	May 1 – October 31

TMDL elements: Point sources or source categories

Point sources

Draft TMDL section 7, pgs. 25-26

- Individual NPDES permits
  - 1 facility (in the process of NPDES permit termination)
- General NPDES permits
  - 1 facility receiving a wasteload allocation



TMDL elements: Nonpoint sources or source categories

Nonpoint sources

TMDL section 7, pg. 26

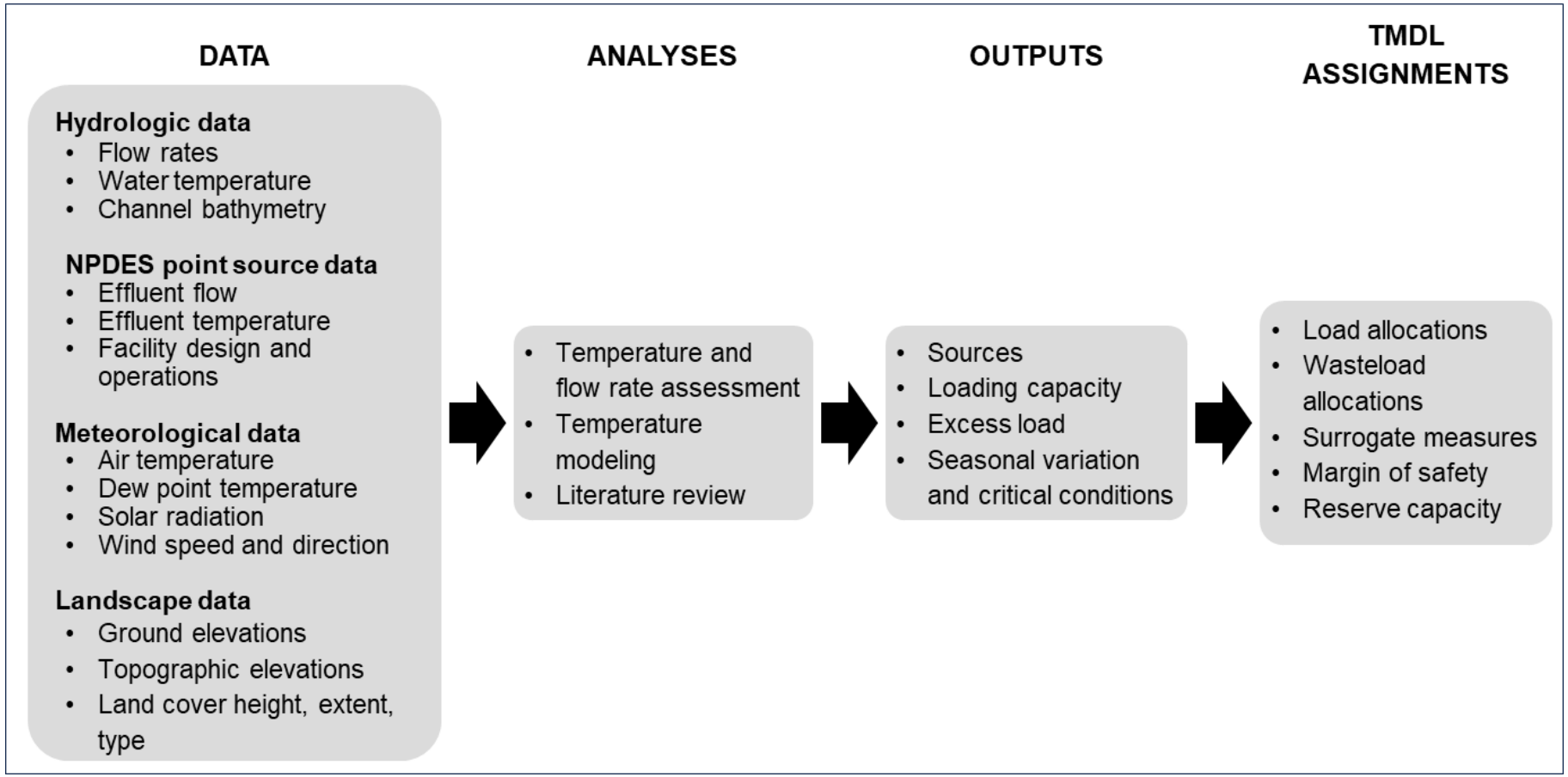
- Background sources
- Solar radiation from the disturbance or removal of near-stream vegetation
- Elevated temperatures from inflowing tributaries
- Dam and reservoir operations
- Activities that modify flow rate or volume

Questions?



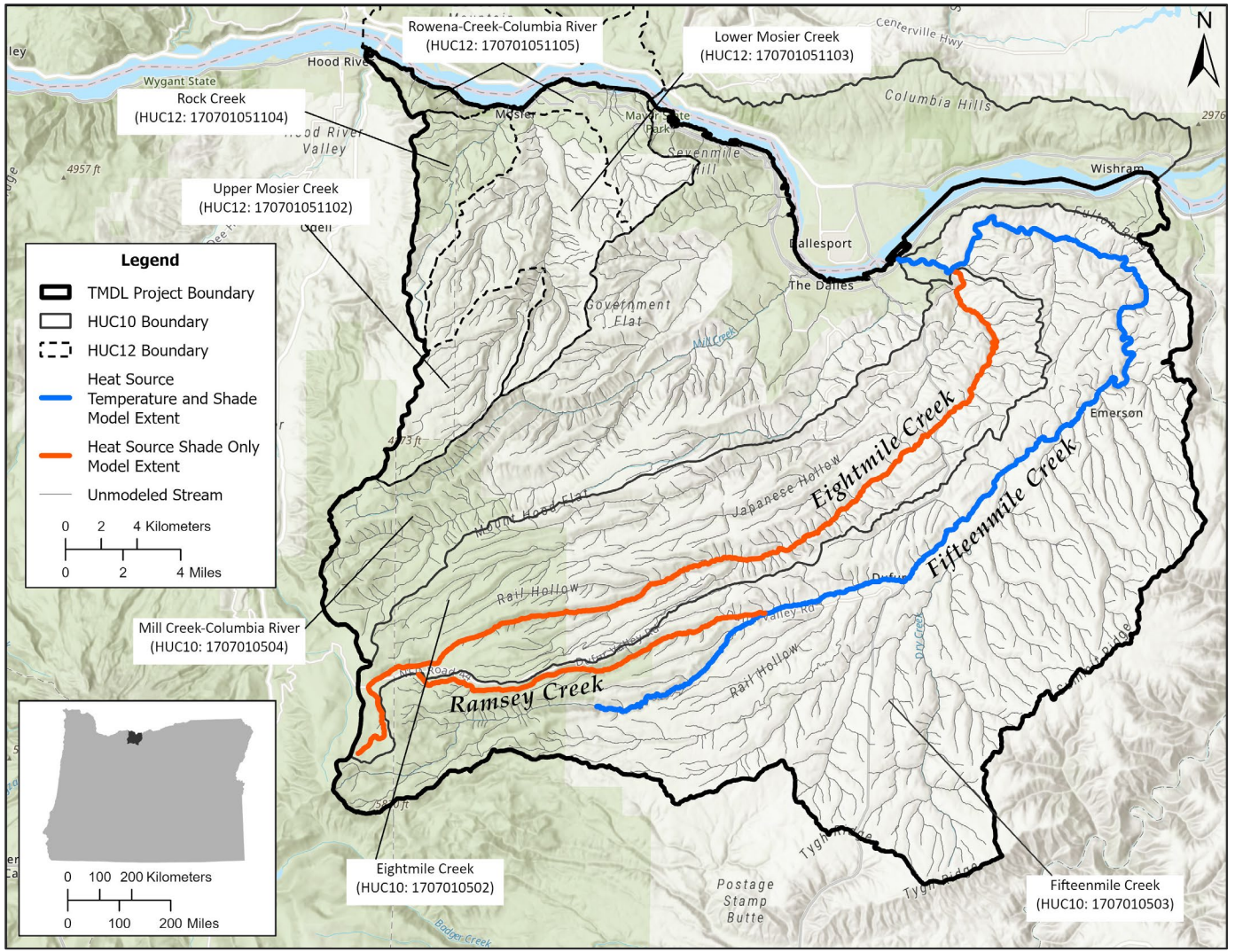
Mill Creek at Thompson Park, The Dalles

Analysis approach



Model scenarios

- Calibration
- Current condition
  - Updated vegetation
- Restored vegetation
- Topographic shade
- Natural flow
- Consumptive use
- Tributary temperatures
- Background
- HUA attainment



Model scenario comparisons

This table is similar to Table 5-1 in TSD Appendix A

Temperature change column = Baseline Scenario temperature MINUS Model Scenario temperature

Baseline Scenario	Model Scenario	Question/topic addressed
Current Condition	Restored Veg A	Effect of fully restored vegetation
Restored Veg B	Restored Veg A	Effect of existing infrastructure (e.g., roads, buildings)
Topographic Shade	Current Condition	Evaluates the amount of effective shade associated with current vegetation
Topographic Shade	Restored Veg A	Evaluates the amount of effective shade associated with restored vegetation
Current Condition	Natural Flow	Effect of permitted water withdrawals
Consumptive Use	Natural Flow	Effect of specific rate of water withdrawal that meets the HUA
Current Condition	Tributary Temps A	Effect of tributary temperature criteria exceedances
Current Condition	Tributary Temps B	Effect of tributary temperatures set at their respective TMDL allocations
Current Condition	Background	Effect of anthropogenic sources that were quantified and represented in the model
HUA Attainment	Background	Effect of point and nonpoint sources set at their respective TMDL allocations

TMDL elements: Loading capacity (LC)

TMDL section 8, pgs. 27-28

- Maximum amount of a pollutant the waterbody can receive and still meet standards
- TMDL provision allows LC recalculation based on river flow or if EPA approves an updated numeric standard

Table 8-1: Thermal loading capacity (LC) for select AUs by applicable fish use period at 7Q10 flow in the Middle Columbia-Hood (Miles Creeks) Subbasin.

AU Name and AU ID	Annual 7Q10 (cfs)	Year-Round Criterion + HUA (°C)	Spawning Criterion + HUA (°C)	7Q10 LC Year-Round (kcal/day)	7Q10 LC Spawning (kcal/day)
Eightmile Creek OR_SR_1707010502_02_101504	0.1	18.3	13.3	4.96E+06	3.61E+06
Dry Creek OR_SR_1707010503_02_101505	0	18.3	13.3	0.00E+00	0.00E+00
Fifteenmile Creek OR_SR_1707010503_02_101506	2.0	18.3	13.3	8.87E+07	6.44E+07
Fifteenmile Creek OR_SR_1707010503_02_101507	1.2	16.3	NA	4.78E+07	NA
Mosier Creek OR_SR_1707010511_02_101513	0.5	18.3	NA	2.23E+07	NA

TMDL elements: Excess load/load reduction

TMDL section 8, pgs. 29-31

- Amount of thermal load reduction required to meet the loading capacity and achieve temperature standards
- Can use excess temperature to calculate percent load reduction

Table 8-2: Excess temperature and percent load reduction for select AUs with available temperature data in the Middle Columbia-Hood (Miles Creeks) Subbasin.

AU Name	AU ID	Maximum 7DADM River Temperature (°C)	Applicable Criterion + HUA (°C)	Excess Temperature (°C)	Percent Load Reduction
Crow Creek Reservoir	OR_LK_1707010504_02_100015	15.3	18.3	0	0.0
Eightmile Creek	OR_SR_1707010502_02_101504	19.5	13.3	6.21	31.8
Eightmile Creek	OR_SR_1707010502_02_101504	25.5	18.3	7.23	28.3
Fifteenmile Creek	OR_SR_1707010503_02_101506	21.2	13.3	7.86	37.1
Fifteenmile Creek	OR_SR_1707010503_02_101506	30.6	18.3	12.34	40.3
Fifteenmile Creek	OR_SR_1707010503_02_101507	26.6	13.3	13.27	49.9
Fifteenmile Creek	OR_SR_1707010503_02_101507	27.1	16.3	10.8	39.9

TMDL elements: Human use allowance (HUA)

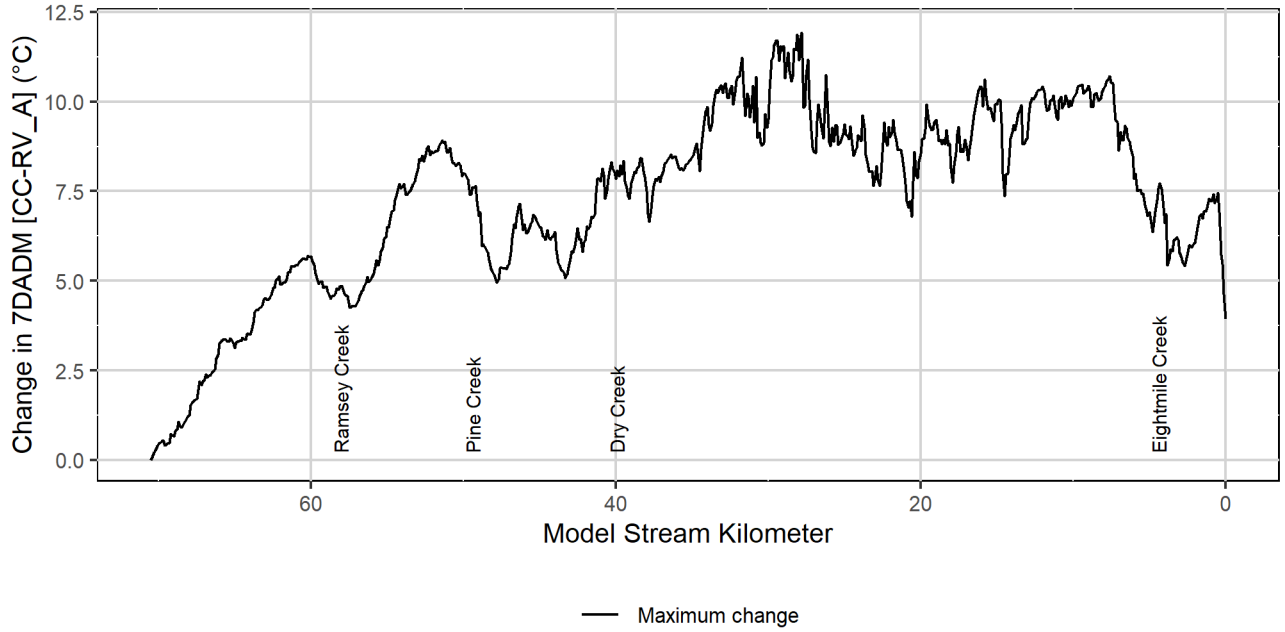
TMDL section 9.1.1 pgs. 31-33

Table 8-2: HUA assignments (°C) in the Middle Columbia-Hood (Miles Creeks) Subbasin.

Assessment Unit	Assessment Unit ID	NPDES point sources	Dam and reservoir operations	Water management activities and water withdrawals	Solar loading from existing transportation, buildings, and utility easements and infrastructure	Anthropogenic warming from tributaries	Other nonpoint sectors	Reserve capacity	Total HUA
South Fork Mill Creek	OR_WS_170701050403_02_101992	0.20	0.00	0.00	0.05	0.00	0.00	0.05	0.30
All other AUs	Applicable AUs are listed in TSD Appendix D	0.00	0.00	0.10	0.05	0.10	0.00	0.05	0.30

Source: Vegetation removal or disturbance

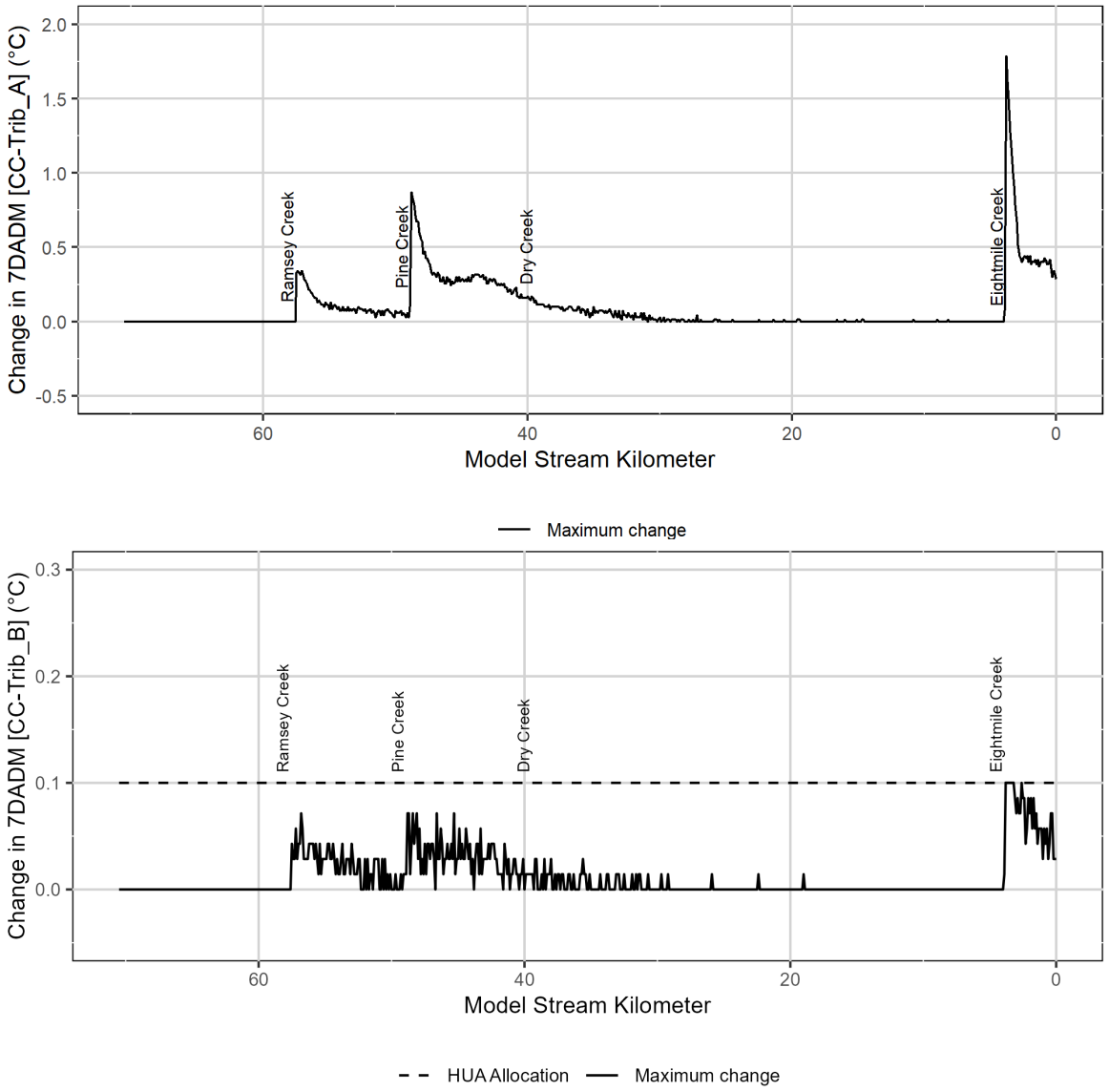
- Vegetation removal or disturbance increases 7DADM stream temperatures by nearly 12°C
- Note: Vegetation changes on tributaries were not assessed in this scenario



Source: Elevated tributary temperatures

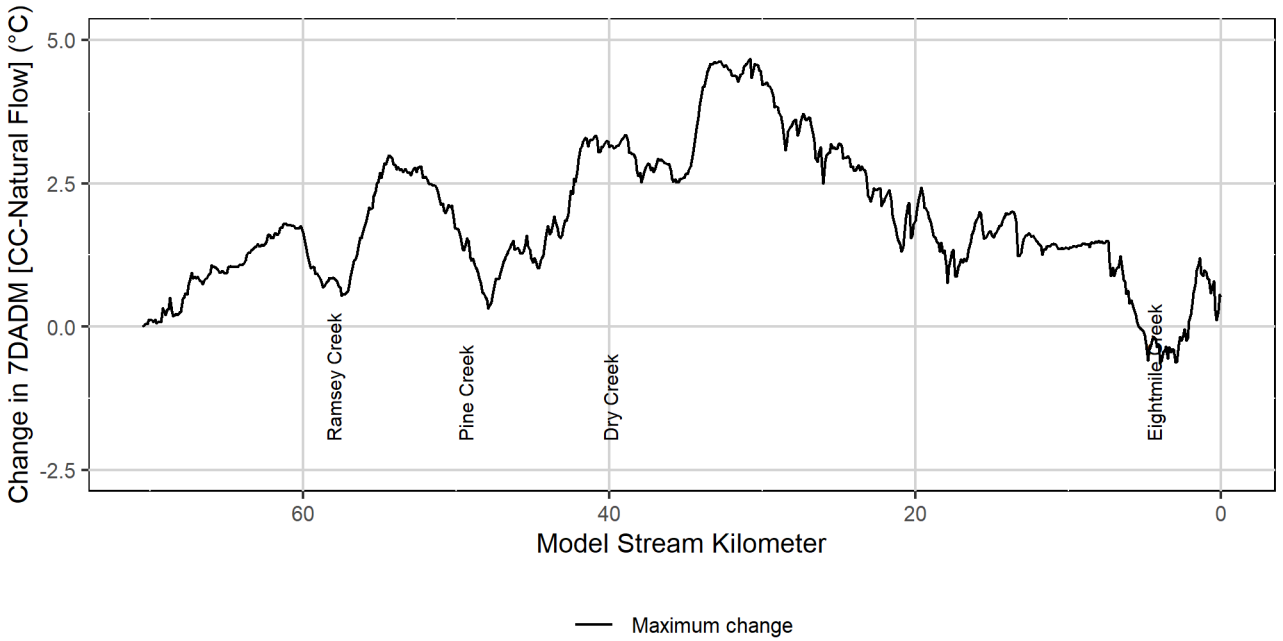
- Tributary temperature exceedances of the standard increase 7DADM stream temperatures by nearly 2°C

- Increasing tributary temperatures by 0.3°C did not result in exceedance of the assigned human use allowance



Source: Consumptive use water withdrawals

- Water withdrawals increase 7DADM stream temperatures by nearly 5°C
- An 8.4% reduction in natural flows would result in stream temperatures achieving the assigned human use allowance



TMDL elements: Wasteload allocations (WLA)

- **TMDL section 9.1.2, pgs. 34-35**
- Can be incorporated into NPDES permit as a static numeric limit, or as a dynamic flow-based limit
- Permit writers are authorized to update 7Q10 or maximum effluent discharge

Table 9-2: Thermal wasteload allocations (WLA) for point sources. Listed WLAs were calculated based on the 7Q10 flow. Note: WLA = wasteload allocation; kcals/day = kilocalories/day.

NPDES Permittee WQ File Number: EPA Number	Assigned HUA ΔT (°C)	WLA period start	WLA period end	7Q10 River flow (cfs)	Effluent discharge (cfs)	7Q10 WLA (kcals/day)
Dufur STP 25491 : OR0029050	0.00	N/A	N/A	1.2	0.00	0.00
City of The Dalles WTP 87831 : ORG387001	0.20	3/15	10/31	0.3	1.380	8.43E+05

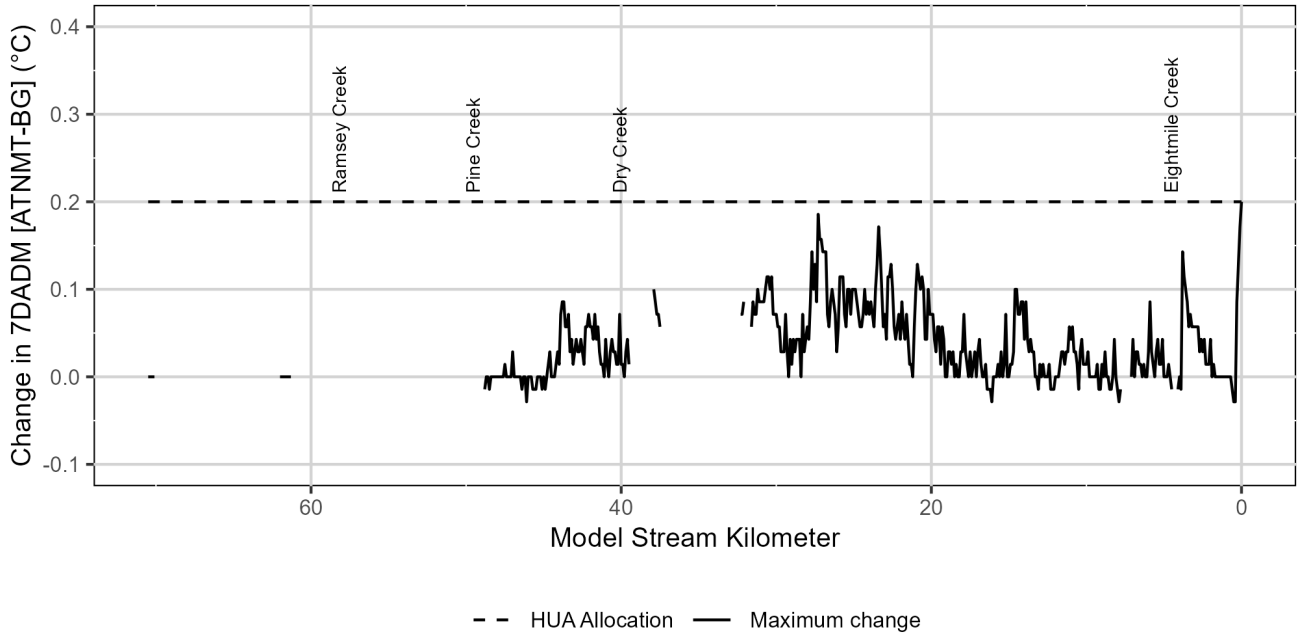
HUA attainment scenario setup

- This scenario confirms that human use allowance assignments will result in attainment of the temperature water quality standard
- Although the total HUA is 0.3°C, the target maximum temperature change for this scenario is 0.2°C

Source Category	HUA Attainment scenario set up description
Vegetation removal or disturbance	Set to system potential vegetation conditions.
Anthropogenic warming from tributaries	Tributary temperatures were increased by the portion of the HUA assigned to sources of warming on each tributary (0.3°C).
Consumptive use water withdrawals	Tributary natural flows were reduced by 8.4% to meet the assigned HUA.

Model scenario comparison: HUA Attainment vs background

- The maximum 7DADM temperature increase from all point and nonpoint sources set at their allocations was 0.2°C
- This shows that Fifteenmile Creek will achieve the temperature standard when the HUA allocations are implemented



Allocation summary

Table 9-2: Allocation summary for Fifteenmile Creek from Dry Creek to confluence with the Columbia River (AU ID: OR_SR_1707010503_02_101506) based on an annual 7Q10 of 1.98 cfs and a year-round criterion of 18°C.

Source or Source Category	Assigned HUA (°C)	7Q10 Allocation Year Round (kilocalories/day)
Background	0.00	87.2E+06
NPDES point sources	0.00	0.00
Nonpoint source dam and reservoir operations	0.00	0.00
Anthropogenic warming from tributaries	0.10	4.84E+05
Solar loading from nonpoint sectors	0.00	0.00
Solar loading from existing transportation corridors, existing utility infrastructure	0.05	2.42E+05
Consumptive use water management and water withdrawals	0.10	4.84E+05
Reserve capacity	0.05	2.42E+05
-	Total Allocated Load:	8.87E+07
-	Loading Capacity:	8.87E+07

Questions on the TMDL?



South Fork Fivemile Creek

Water Quality Management Plan

The Water Quality Management Plan is a required element of a TMDL and describes strategies to achieve allocations identified in the TMDL to attain water quality standards.



Dry Canyon

Goals

- **Who** is responsible for taking actions to implement the TMDL
- **What kinds** of actions responsible persons, including designated management agencies, will take to improve stream temperatures
- **What** the required components of plans and reports will be
- **When** required submittals are due

Who Is a Responsible Person or Designated Management Agency?

- "**Responsible person**" is a broad umbrella term mentioned in OAR 340-042.
- "**Designated management agency**" is a subset of responsible persons defined as a federal, state, or local government agency with legal authority over a sector or pollutant source [OAR 340-042-0030(2)]
- All entities, except for soveriegn nations, that have jurisdiction over land or activities that impact water quality in the TMDL area. (WQMP Sec 5.1)
- Listed in Appendix A of the WQMP



Mill Creek upstream of Skyline

Entities *Not Required* to Submit TMDL Implementation Plans

Narrative Criteria for Exemption from Implementation Responsibilities
De minimis jurisdiction
Responsibilities covered by an existing approved TMDL plan
Unable to implement due to safety/security requirements
Jurisdiction drains directly to another TMDL basin
Small dam owners
Impacts are regulated via permits

(WQMP Sec 5.1.1)

Entities *Required* to Submit Implementation Plans

Federal

- U.S. Bureau of Land Management
- U.S. Forest Service – Mt. Hood NF
- U.S. Forest Service - Columbia River Gorge National Scenic Area

State Agencies

- ODA
- ODF
- DSL
- ODOT (non-MS4)
- OPRD
- ODFW

County & Cities

- Wasco County
- City of The Dalles
- City of Dufur
- City of Mosier

Special Districts

- Port of The Dalles
- Northern Wasco County Parks & Recreation District

(WQMP Sec 5.1.2)

Question on Responsible Persons, including Designated Management Agencies

Question:

Did we miss anyone?

Required Management Strategies

From WQMP Section 2.1 and Table 2:

- Streamside vegetation management
- Flow management
- Channel management
- Monitoring
- Information sharing
- Outreach and education



Rock Creek in Mosier

Question on Management Strategies

Question:

Are we missing any strategies?

Implementation Requirements Vary based on Potential Water Quality Impact (WQMP Sec 5.1.2)

High

- ≥500 acres within 150 ft of streams or jurisdiction over agricultural/forestry activities
- **Mt Hood NF, ODA, ODF**
- Submittals = shade gap analysis, streamside evaluation, implementation plan+
- Implementation = full suite of strategies, performance + effectiveness + water quality monitoring

Medium

- ≥100 acres within 150 ft (and not categorized as high impact)
- **BLM, Columbia River Gorge NSA, OPRD, Wasco County, City of The Dalles**
- Submittals = streamside evaluation, implementation plan+
- Implementation = full suite of strategies, performance + effectiveness monitoring

Low

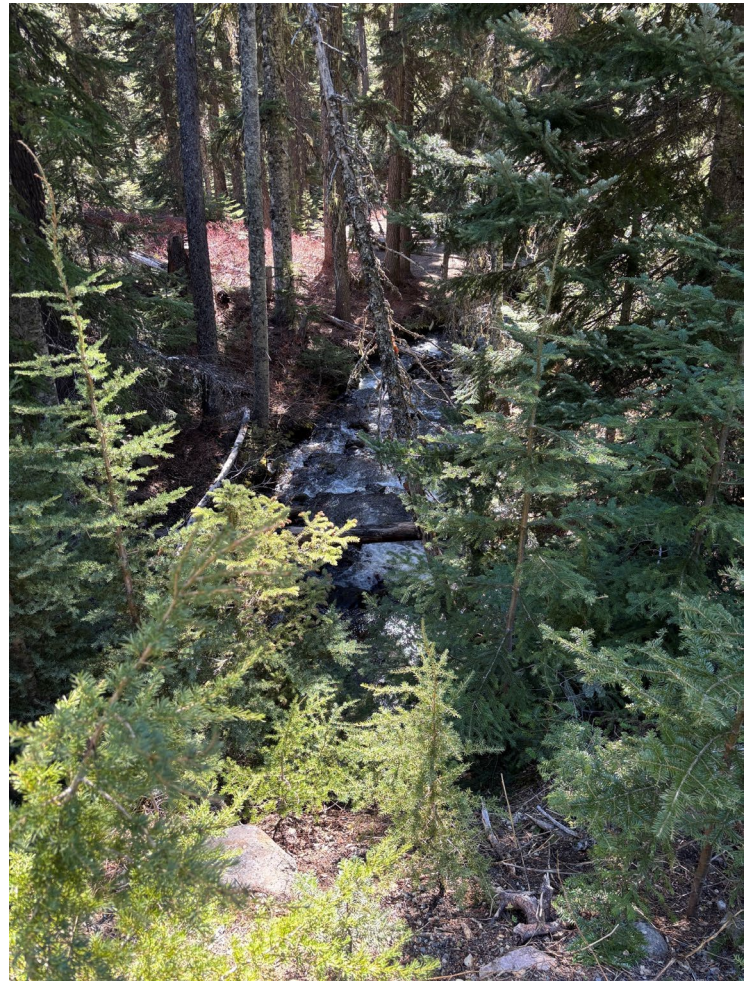
- <100 acres within 150 ft
- Submittals = implementation plan+
- Implementation = information-sharing and outreach strategies only, performance monitoring only

Shade Gap Analysis Requirement (High Potential Impact DMAs Only)

Assessing areas in need of additional shade

- % difference between current and potential shade
- **Mt Hood NF, ODA, ODF** must choose one of 3 options:
  - Use DEQ-provided shade gap analysis (if available)
  - Conduct their own analysis using DEQ-approved methods
  - Establish and protect overstory, woody vegetation in a riparian buffer ≥ site potential tree height (or ≥35 ft, whichever is greater)

(WQMP Sec 5.3.1.2)



Fifteenmile at wilderness boundary

Streamside Evaluation Requirements (Medium & High Potential Impact DMAs) (WQMP Sec 5.3.1.1)



Fifteenmile Creek at Dufur

Prioritizing areas in need of additional shade

- A review of current shade conditions
- identification of appropriate measurable objectives and milestones for implementing priority management strategies

Medium and high potential impact DMAs must prioritize areas based on shade gap, constraints, and ecological benefit. Prioritization may include:

- Quantifying acres needing enhancement or protection
- Identifying areas with physical or jurisdictional constraints
- Identifying opportunities for restoration actions

Implementation Plan Requirements

High, medium, and low potential impact DMAs must submit a plan that includes:

- Identification of lands and activities that can impact water quality
- Management strategies (Section 5.3.1)
- Timelines and measurable milestones
- Performance monitoring plan
- Effectiveness monitoring (if required)
- Public involvement plan
- Cost and funding strategy
- Maintenance of strategies over time

Additional submittals

- Annual reports
- Year five reviews
- Revised implementation plans

(WQMP Sec 5.3)

Question on Implementation Requirements

Question:

Any questions on implementation requirements?

Required Submittals & Due Dates

Requirement	Due Date
Implementation plan	18 months after EQC adoption of the TMDL, revised every 5 years
Annual report	12 months after implementation plan approval, annually
Year five review report	5 years after implementation plan approval, every 5 years
Streamside evaluation	5 years after implemenation plan approval, every 5 years
Shade gap analysis project plan	18 months after EQC adoption of the TMDL
Shade gap analysis or protective buffer	5 years after implementation plan approval

(WQMP Sec 5.4 and Appendix D)

Showing Progress Through Implementation

- **DMAs will not have to monitor water quality to show acheivement of water quality standards.**
  - DMAs will show progress through completing actions in their implementation plan.
  - USFS, ODA, and ODF will collaborate with DEQ to monitor stream temperatures in their jurisdictions.

- **DMAs will not be held responsible for stream temperature impacts from climate change and natural disturbances.**
  - DMAs will revise Implementation plans every 5 years to address changing situations.

- **DMAs will not be held in violation of the TMDL rule for not achieving water quality standards within 5 years.**
  - DMAs show acceptable progress through iterative cycles of planning and implementation

- **DMAs are not responsible for mitigating excess stream temperatures entering their juridiction**
  - DMAs are only responsible for implementing strategies that address the sources of stream warming that arise from within their jurisdiction.

Questions on the Water Quality Management Plan?



Fifteenmile overlook

Draft rule language

Division 42
TOTAL MAXIMUM DAILY LOADS (TMDLS)

340-042-0090
Total Maximum Daily Loads and Water Quality Management Plans

The following TMDLs are adopted by EQC by reference in this rule on the dates indicated. The TMDL documents and supporting information for TMDLs adopted as rule or issued by order are available on DEQ's website.

(9) Middle Columbia-Hood (Miles Creeks) Subbasin (17070105) that includes the Eightmile Creek Watershed (1707010502), Fifteenmile Creek Watershed (1707010503), and Mill Creek-Columbia River Watershed (1707010504), and four subwatersheds within the Mosier Creek-Columbia River Watershed (1707010511), including Upper Mosier Creek Subwatershed (170701051102), Lower Mosier Creek Subwatershed (170701051103), Rock Creek Subwatershed (170701051104), and Rowena Creek-Columbia River Subwatershed (170701051105).
a) TMDL: temperature, MM DD, YYYY
b) WQMP: temperature, MM DD, YYYY

Fiscal, economic, and racial equity impacts

Administrative Procedures Act

- ORS 183.333: DEQ must solicit input from a rule advisory committee on:
  - Whether the rule has fiscal impact, and the extent of that impact
  - Whether the rule will have a significant adverse impact on small businesses
- ORS 183.335(2)(b)(F): how adoption of the rule will affect racial equity
- ORS 182.545: consider the effects of the action on environmental justice

Fiscal impact analysis, questions for feedback

1. Will the draft rule have a significant adverse impact on small businesses?
2. If a significant impact is identified, how could DEQ reduce the fiscal impact on small business (ORS 183.333 and 183.450)
3. Will the proposed rule impact racial equity?
4. What are additional considerations for environmental justice for this draft rule?
5. What types of entities will be impacted by the proposed rule?
6. How and to what extent will the proposed rule have a positive, negative, or no impact on these entities?

Next steps

Input from committee meeting #1. Email feedback to: MiddleColumbia.TemperatureTMDL@DEQ.oregon.gov	Due: Friday, June 12th, 2026
Rule advisory committee meeting #2	Sept. 10, 2026
Public notice (45 days)	Dec. 2026 – Feb. 2027
EQC meeting for proposed adoption	Sept. 2027
EPA action	Dec. 2028

Sign up for email updates on TMDLs:
https://public.govdelivery.com/accounts/ORDEQ/subscriber/new?topic_id=ORDEQ_41

Miles Creeks temperature TMDL contacts

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Title VI and alternate formats

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