Temperature Total Maximum Daily Load Replacement Project

Rogue River Basin

Feb. 26, 2026
Rule Advisory Committee meeting #1
In-person meeting at Rogue Valley Council of Governments in Central Point and virtual meeting

Zoom logistics and meeting ground rules

Raise hand to be recognized for questions or comments

Use chat to:

- Ask questions
- Provide informational resources
- Second good ideas/issues

Mute when not speaking

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

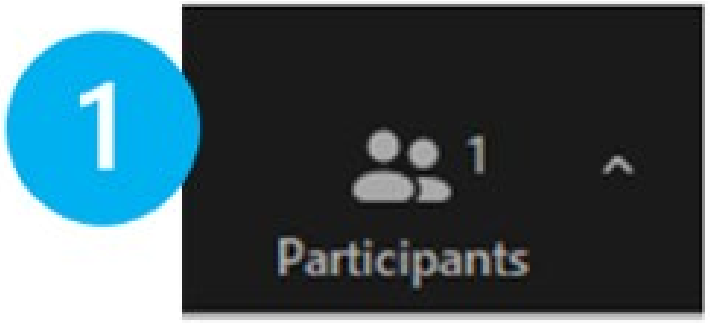
Agenda

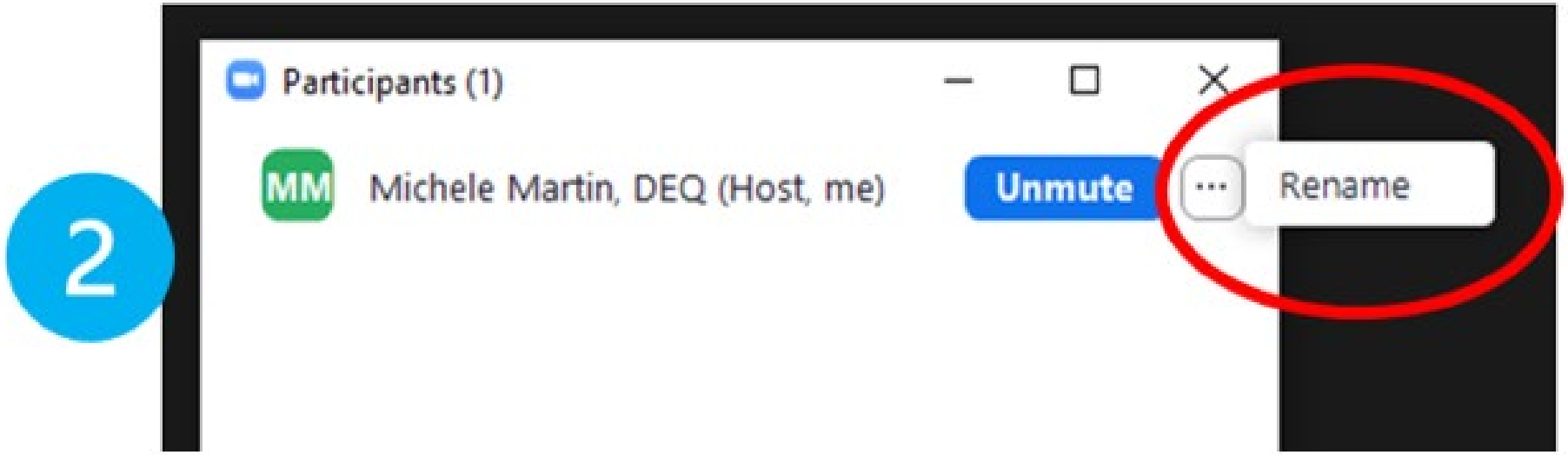
Time	Topic
10 a.m.	Welcome, introductions, meeting agenda
10:10 a.m.	Rule Advisory Committee Charter review
10:20 a.m.	Draft Total Maximum Daily Load
10:50 a.m.	Draft Water Quality Management Plan
11:20 a.m.	Draft Administrative Rule language
11:30 a.m.	Draft Fiscal and Economic Impact Statement
11:50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

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

RAC member roll call





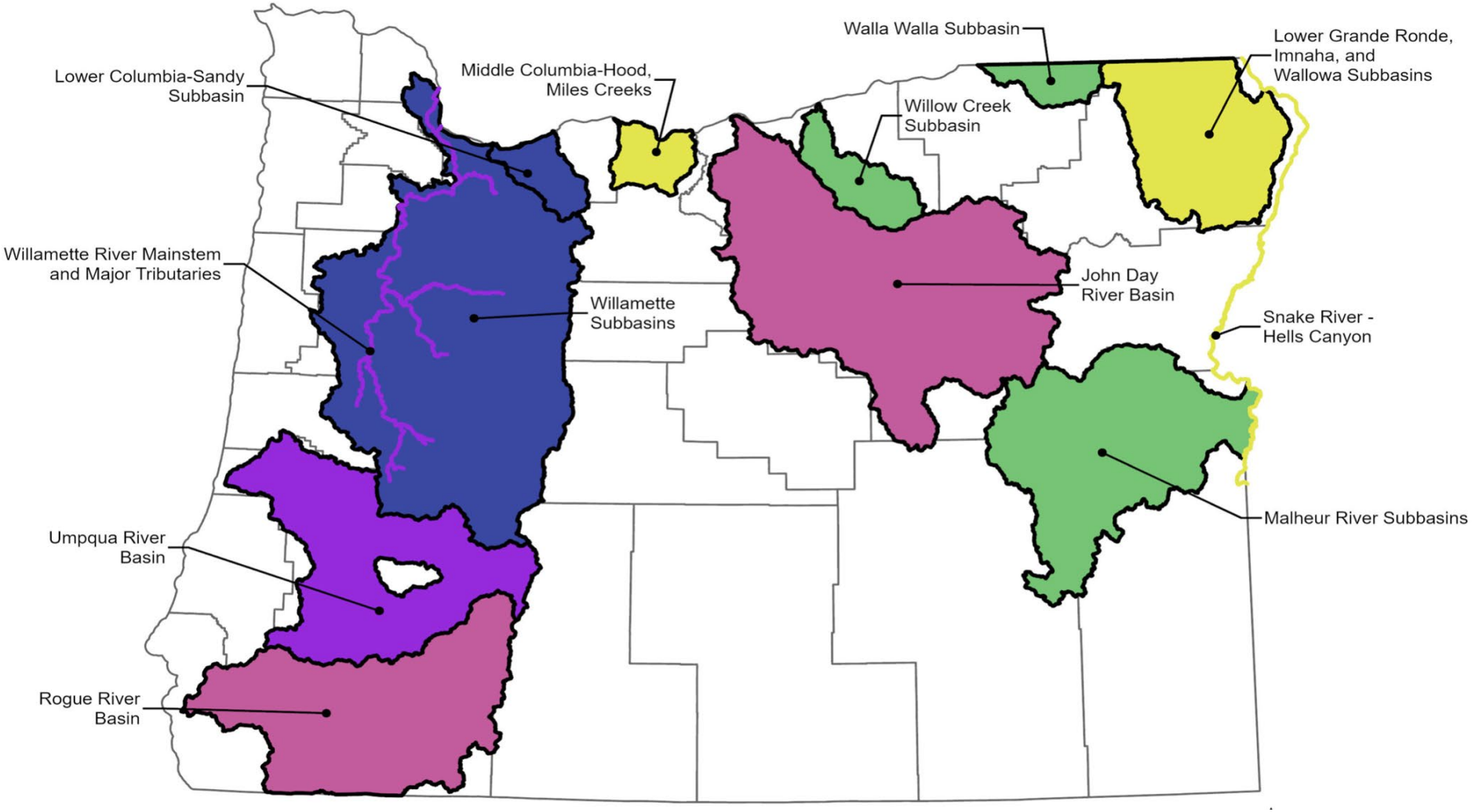
Legal drivers behind temperature TMDL replacements

- **2012: NWEA vs. USEPA, NMFS, USFWS**
  - Challenged EPA's approval of Oregon's water quality standards (including the Natural Conditions Criteria) and the Services' "no jeopardy" BiOp
  - Court found “EPA was unable to articulate a rationale [sic] basis for its approval of the NCC”
  - **Outcome:** EPA later disapproved the Natural Conditions Criteria

- **2019: NWEA vs. USEPA**
  - Claimed EPA unlawfully approved temperature TMDLs based on the disapproved Natural Conditions Criteria
  - **Outcome:** Court ordered DEQ and EPA to replace 15 temperature TMDLs using the remaining temperature criteria (excluding the Natural Conditions Criteria)

DEQ temperature TMDL replacement project page

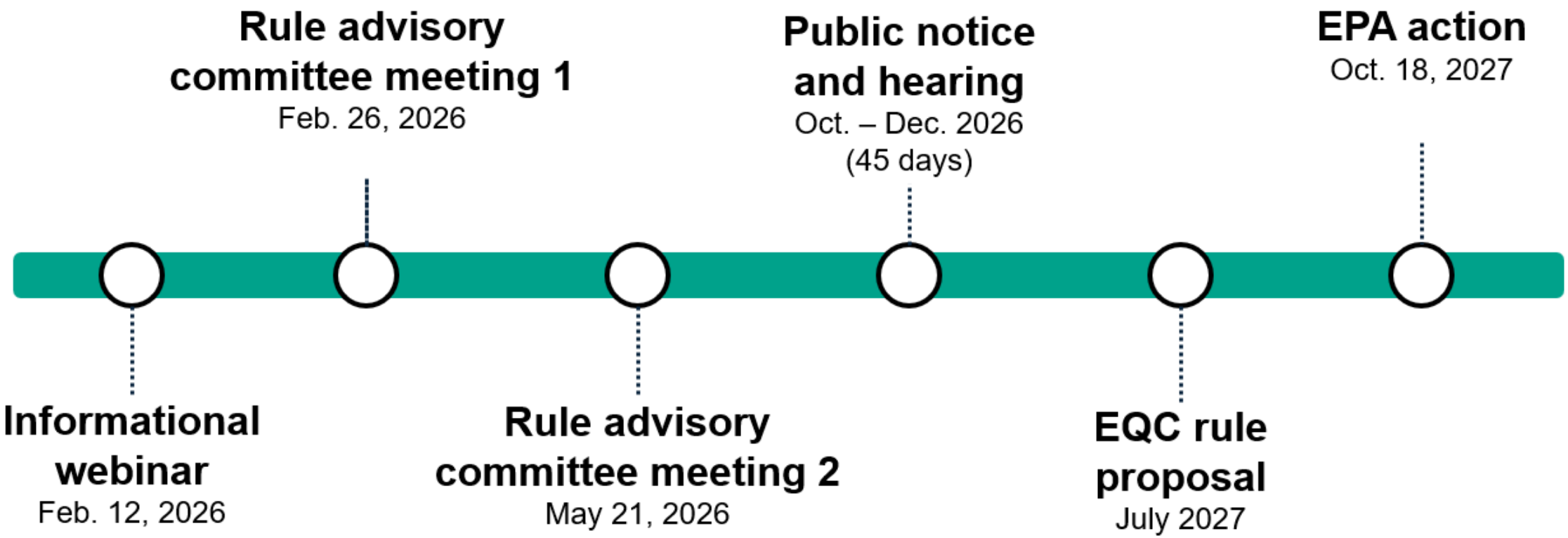
Project geographic scope



Key dates for EPA action

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

Rogue River Basin temperature TMDL project schedule



Rogue River Basin Temperature TMDL elements

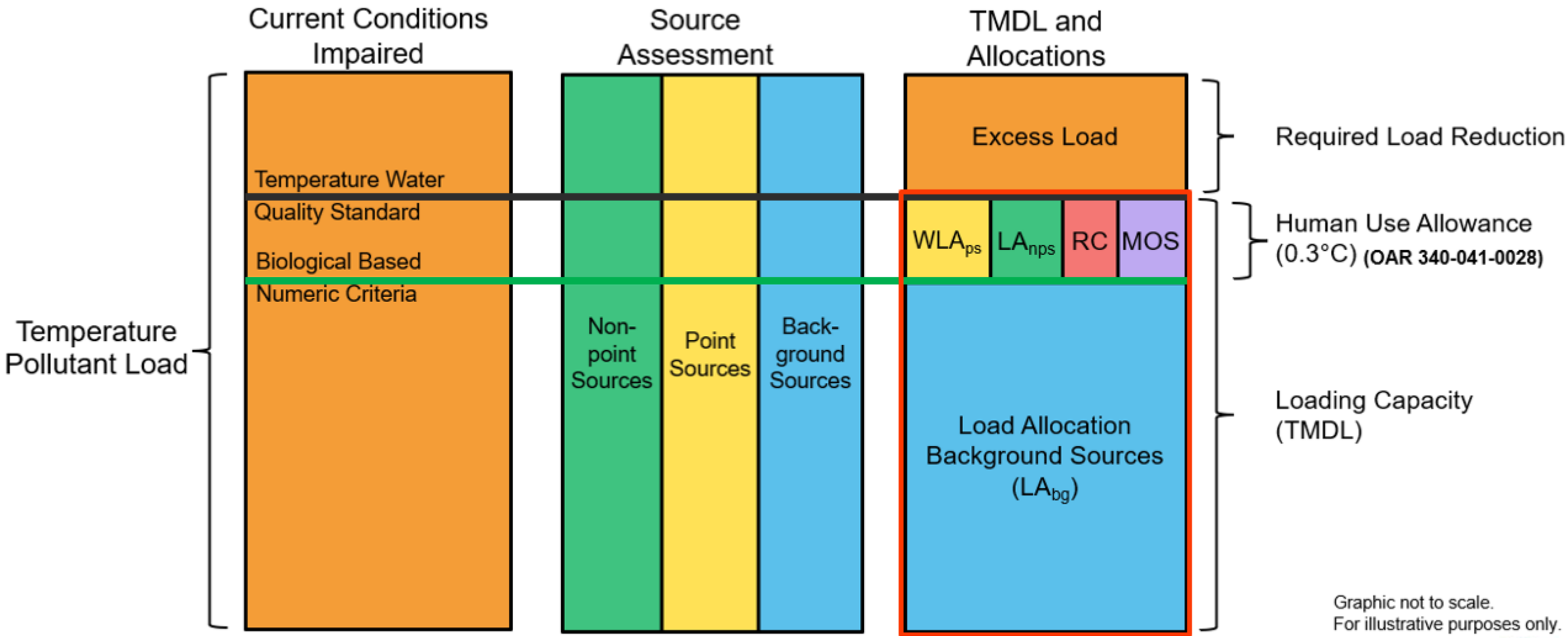
Rogue River

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.

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



Graphic not to scale.
For illustrative purposes only.

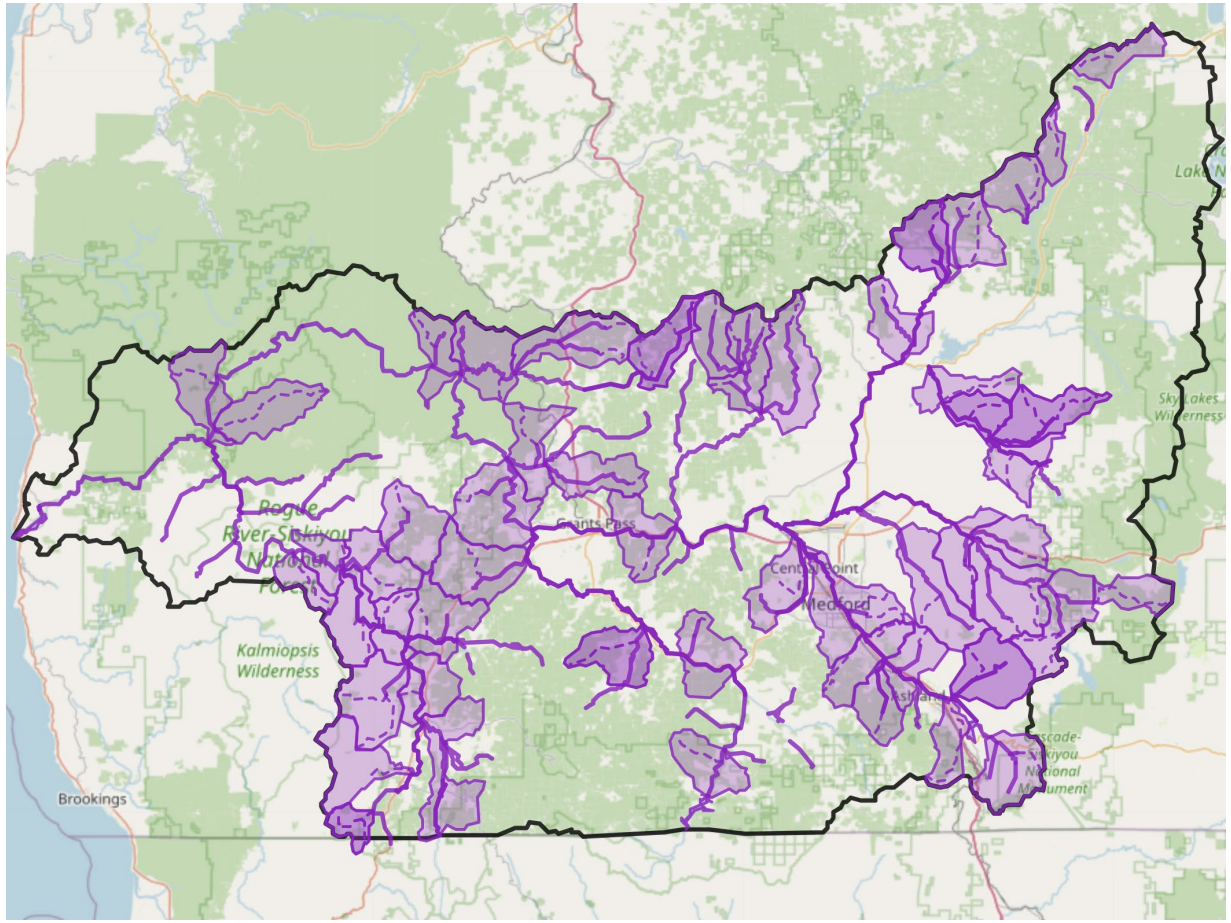
TMDLs include the following elements:

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

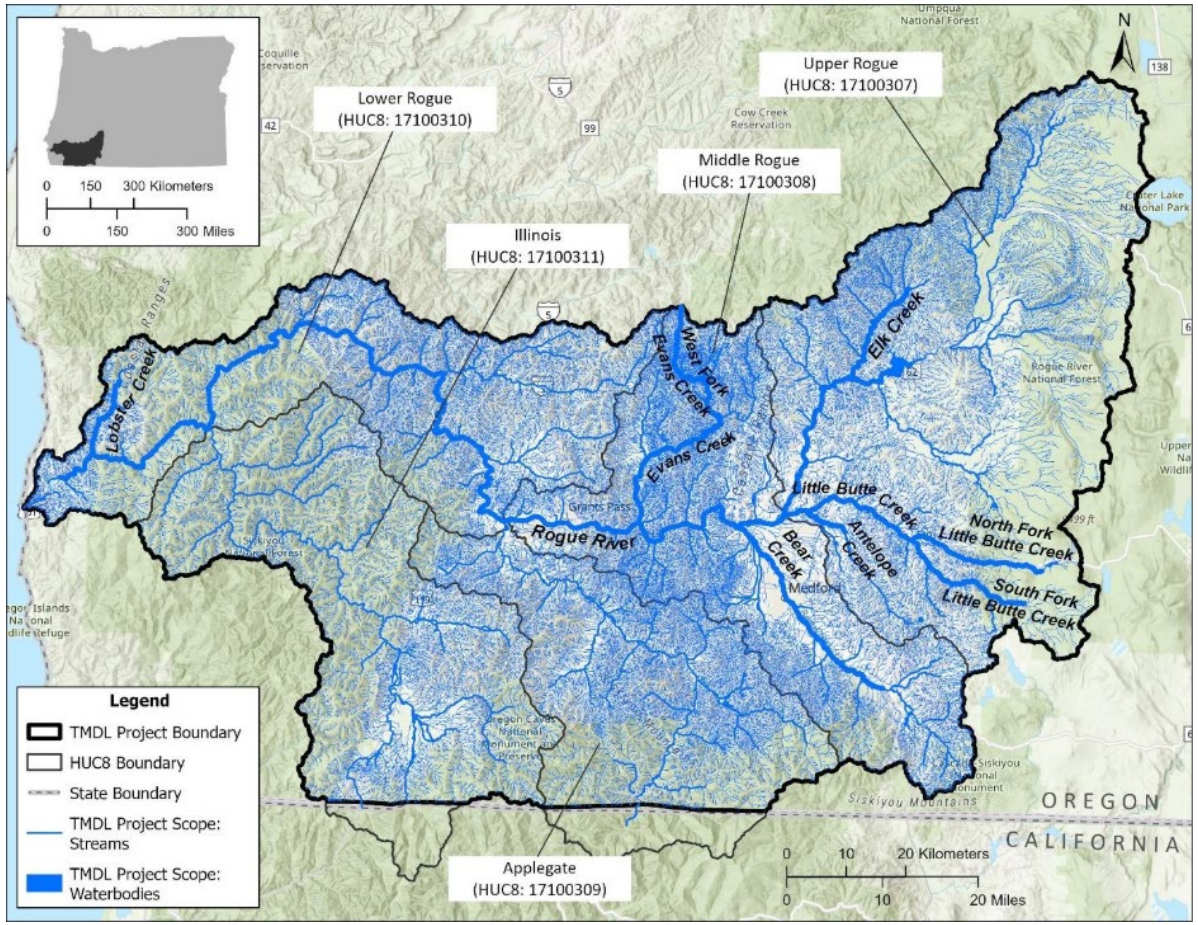
References: OAR 340-042-0040(4) and 40 CFR 130.2 and 40 CFR 130.7

Rogue River Basin Temperature TMDL project area (Draft TMDL section 2, pgs. 1-10)

2022 303(d) listed impairments in the Rogue River Basin



2026 Rogue River Basin Temperature TMDL project scope



[2022 Integrated Report]

Rogue River Basin TMDL assessment units

Example subbasin assessment units

Middle Rogue River Subbasin – HUC 17100308

Assessment Unit (partial listing)	Assessment Unit Description	Assessment Unit ID
Rogue River	Little Butte Creek to Evans Creek	OR_SR_1710030802_04_105816
Rogue River	Evans Creek to Applegate River	OR_SR_1710030804_04_106341
Bear Creek	Emigrant Creek to confluence with Rogue River	OR_SR_1710030801_05_105552
Ashland Creek	Reeder Reservoir to confluence with Bear Creek	OR_SR_1710030801_02_105548

Applicable numeric temperature criteria

Draft TMDL section 4, pgs. 10-17

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: Season variation and critical period

Draft TMDL section 5, pg. 18

Table 5-1: Designated critical periods for waterbodies in the Rogue River Basin.

Subbasin	Waterbody name	Critical period
Applegate Subbasin 17100309	All waters, except those noted in other rows of this table	Mar. 15 – Nov. 15
	Little Applegate Watershed (1710030903)	April 15 – Oct. 31
Illinois Subbasin 17100311	All waters	May 1 – Oct. 31
Lower Rogue River Subbasin 17100310	All waters, except those noted in other rows of this table	April 1 – Oct. 31
	Lobster Creek Watershed (1710031007)	May 1 – Oct. 31
	Rogue River Watershed (1710031008)	May 1 – Oct. 31
Middle Rogue River Subbasin 17100308	All waters, except those noted in other rows of this table	April 1 – Oct. 31
	Bear Creek Watershed (1710030801)	April 1 – Nov. 15
Upper Rogue River Subbasin 17100307	All waters, except those noted in other rows of this table	April 1 – Oct. 31
	Headwaters Rogue River Watershed (1710030701)	May 1 – Oct. 31
	South Fork Rogue River Watershed (1710030702)	May 1 – Oct. 31

TMDL elements: Point sources or source categories

Point sources

Draft TMDL section 7, pgs. 20-22

- NPDES permits (17 facilities, 15 with allocations)
- General NPDES permits (3 types, 9 registrants with allocations/requirements)

TMDL elements: Nonpoint sources or source categories

Nonpoint sources

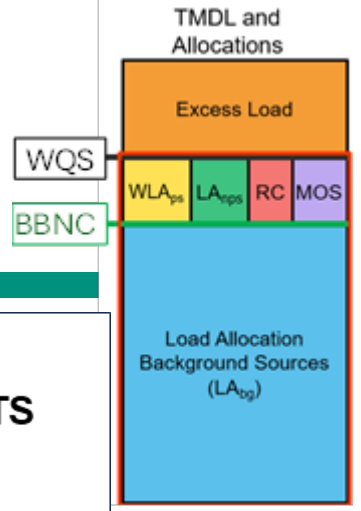
Draft TMDL section 7.2, pgs. 21-22

- Background sources
- Solar radiation from the disturbance or removal of near-stream vegetation
- Channel modification and widening
- Dam and reservoir operations
- Activities that modify flow rate or volume

Questions?

Rogue River in Grants Pass, Oregon

Analysis approach



DATA	ANALYSES	OUTPUTS	TMDL ASSIGNMENTS
Hydrologic data • Flow rates • Water temperature • Channel bathymetry **NPDES point source data** • Effluent flow • Effluent temperature • Facility design and operations **Meteorological data** • Air temperature • Dew point temperature • Solar radiation • Wind speed and direction **Landscape data** • Ground elevations • Topographic elevations • Land cover height, extent, type	• Temperature and flow rate assessment • Temperature modeling • Literature review	• Sources • Loading capacity • Excess load • Seasonal variation and critical conditions	• Load allocations • Wasteload allocations • Surrogate measures • Margin of safety • Reserve capacity

Elements: Loading capacity (LC), and Excess load/load reduction

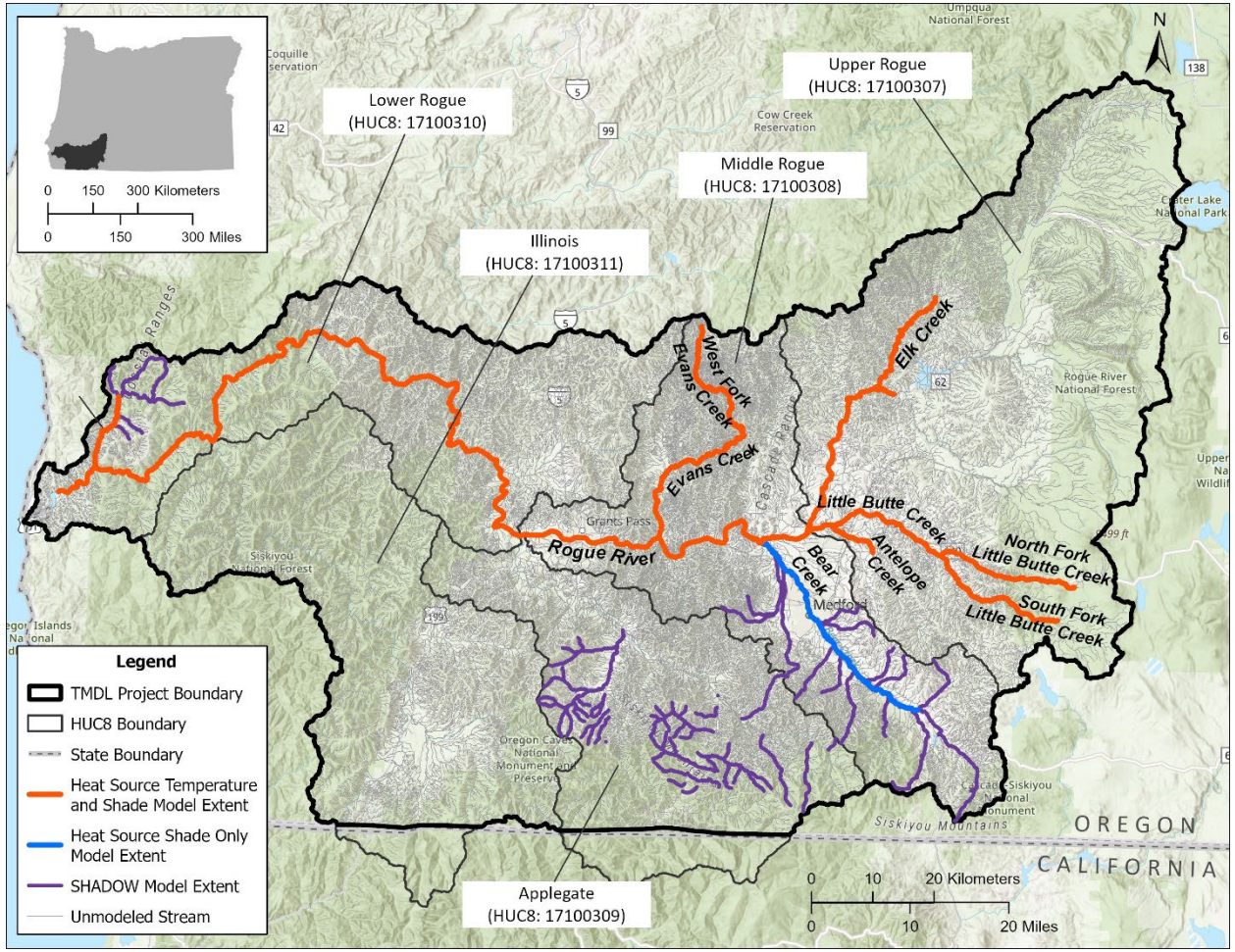
Loading capacity (LC): TMDL section 8, pgs. 23-25, Table 8-1

- The maximum daily pollutant load 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.

Excess load/Load reduction: TMDL section 8, pgs. 26-34, Table 8-2

- The thermal load reduction required to meet the loading capacity and achieve temperature standards.
- **Excess temperature** can be used if excess load cannot be calculated directly.
- Can calculate **percent load reduction** from excess temperature.

Model types and scenarios

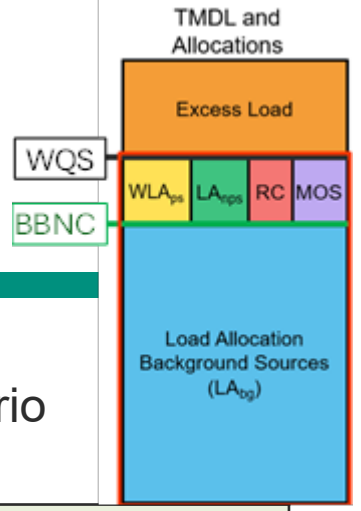


Scenarios include:

- Calibration (current conditions)
- No Point Sources
- Restored Vegetation
- Background
- Topographic Shade
- Restored Flow
- No Lost Creek Dam & Reservoir
- TMDL Wasteload Allocations
- Tributary Temperature Increases
- Cumulative HUA Attainment

Rogue River scenarios are listed. Not all scenarios were completed for all modeled rivers. More info in draft model report (TSD Appendix A).

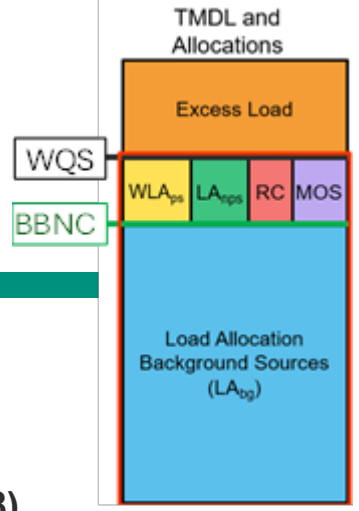
Rogue R. mainstem: model scenario comparisons



Notes: This table is similar to Table 5-1 in TSD Appendix A.
Temperature change column = Baseline scenario temperature MINUS Comparison scenario temperature

Baseline scenario	Comparison scenario	Topic addressed	Max. 7DADM temp. change, Rogue River model extent (°C)
Calibration	No point source	Effect of current NPDES-permitted point source discharges.	0.25
Calibration	Restored vegetation	Effect of fully restored vegetation along the Rogue River mainstem.	3.19
Calibration	Background	Effect of current, modeled anthropogenic sources.	3.23
Topographic shade	Calibration	Effect of shade provided by topographic features only.	0.89
Calibration	Restored flow	Effect of maintaining water withdrawals as instream flow.	1.79
Calibration	No dam	Effect of removing Lost Creek Reservoir dam and reservoir operations.	1.64
Background	BBNC	Does the river under “background” conditions exceed the biologically-based natural condition (BBNC). By how much?	6.25
Tributary temperatures	Background	Effect of model tributary temperatures set at their TMDL allocations.	0.08
Wasteload allocations	No point source	Effect of NPDES-permitted point source discharges at assigned WLAs.	0.23
HUA attainment	Background	Effect of point & nonpoint sources set at their TMDL HUA allocations.	0.24

Elements: Human use allowance (HUA)



Draft TMDL section 9.1, pgs. 35-50

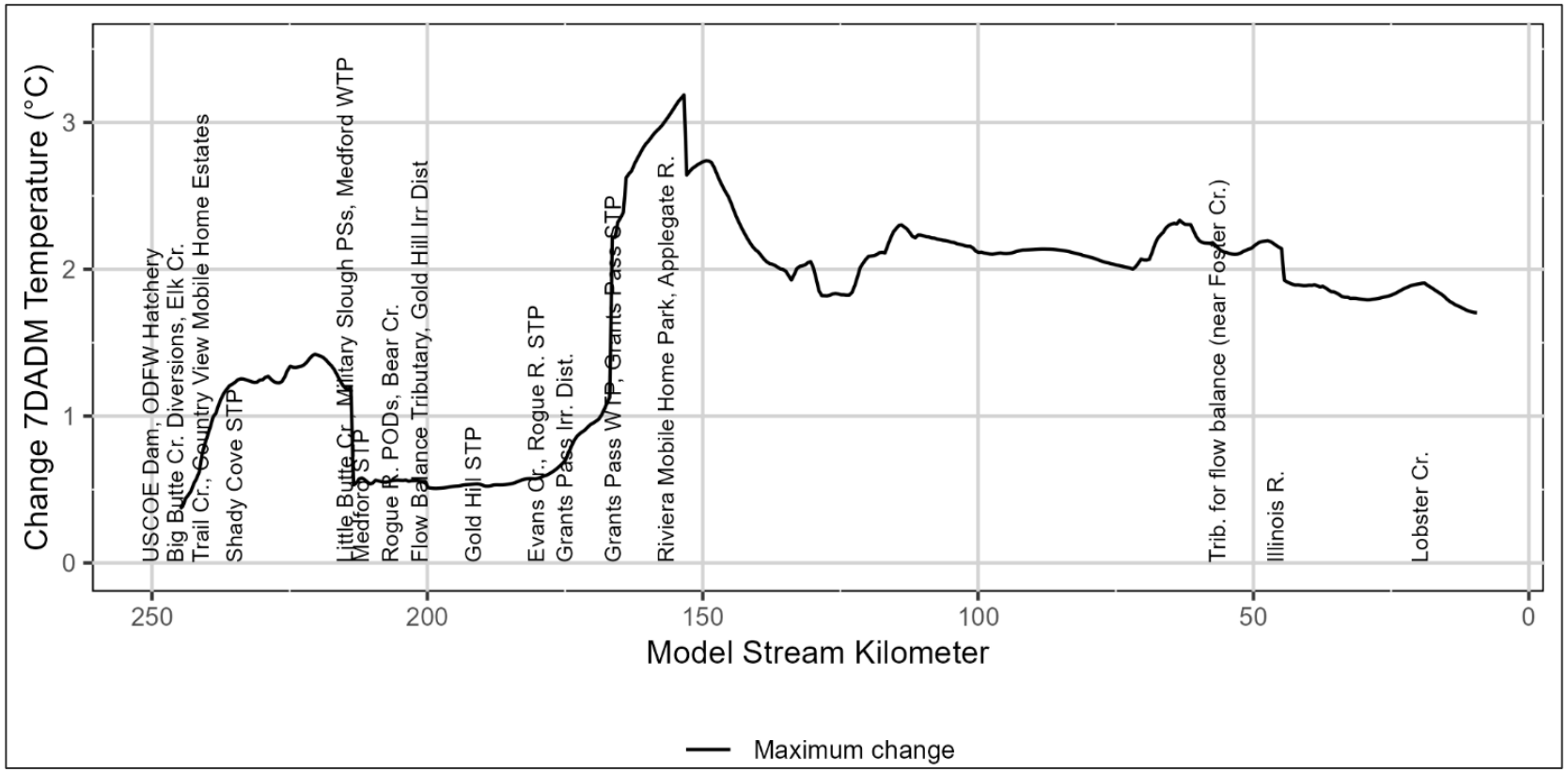
Table 9-4: HUA assignments (°C) for source or source categories on select AUs in the Middle Rogue R. Subbasin (17100308).

AU	Assessment Unit ID	NPDES point sources	NPS dam and reservoir operations	Anthropogenic warming from tributaries	Consumptive use water management & withdrawals	Solar loading: existing transportation corridors, buildings, & utility infrastructure	Solar loading: Other nonpoint sectors	Reserve capacity	Total HUA
Rogue R.	OR_SR_1710030802_04_105816	0.16[a]	0	0.00[a]	0.01[a]	0.04[a]	0	0.09[a]	0.3
		0.19[b]		0.01[b]	0.01[b]	0.04[b]		0.05[b]	
Rogue R.	OR_SR_1710030804_04_106341	0.20[a]	0	0.05[a]	0.01[a]	0.02[a]	0	0.02[a]	0.3
		0.23[b]		0.01[b]	0.01[b]	0.02[b]		0.03[b]	
Bear Cr.	OR_SR_1710030801_05_105552	0.20	0	0.06	0	0	0	0.04	0.3
Ashland Cr.	OR_SR_1710030801_02_105548	0.10	0	N/A	0	0	0	0.2	0.3
All other AUs	Applicable AUs listed in TSD Appendix D	0.075	0	0	0.05	0.05	0	0.125	0.3

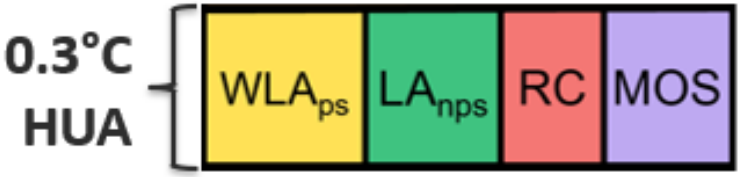
[a] Spawning period
[b] Non-spawning period

Source assessment: NPS vegetation removal/reduction

- The maximum 7DADM temperature increase from vegetation removal and disturbance on the Rogue River was 3.19°C. See figure below.
- Note: Vegetation changes on tributaries were not assessed in this scenario.



Elements: Anthropogenic NPS load allocations (LA_{NPS})



Draft TMDL section 9.1, pgs. 35-50

Table 9-4: HUA assignments (°C) for source or source categories on select AUs in the Middle Rogue R. Subbasin (17100308).

AU	Assessment Unit ID	NPDES point sources	NPS dam and reservoir operations	Anthropogenic warming from tributaries	Consumptive use water management & withdrawals	Solar loading: existing transportation corridors, buildings, & utility infrastructure	Solar loading: Other nonpoint sectors	Reserve capacity	Total HUA
Rogue R.	OR_SR_1710030802_04_105816	0.16[a]	0	0.00[a]	0.01[a]	0.04[a]	0	0.09[a]	0.3
		0.19[b]		0.01[b]	0.01[b]	0.04[b]		0.05[b]	
Rogue R.	OR_SR_1710030804_04_106341	0.20[a]	0	0.05[a]	0.01[a]	0.02[a]	0	0.02[a]	0.3
		0.23[b]		0.01[b]	0.01[b]	0.02[b]		0.03[b]	
Bear Cr.	OR_SR_1710030801_05_105552	0.20	0	0.06	0	0	0	0.04	0.3
Ashland Cr.	OR_SR_1710030801_02_105548	0.10	0	N/A	0	0	0	0.2	0.3
All other AUs	Applicable AUs listed in TSD Appendix D	0.075	0	0	0.05	0.05	0	0.125	0.3

[a] Spawning period
[b] Non-spawning period

Surrogate measure: Shade targets

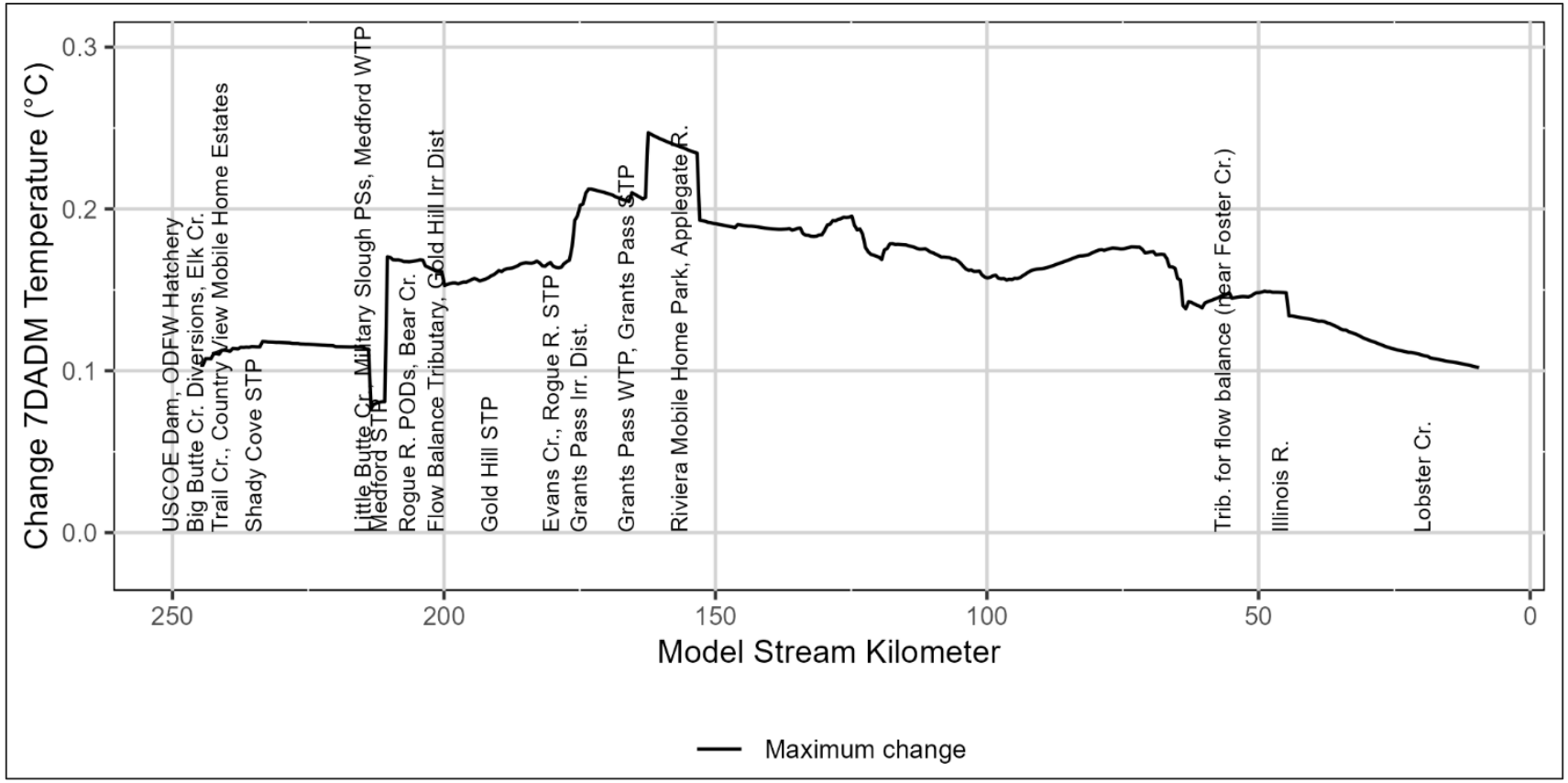
Draft TMDL section 9.4, pgs. 50-70

Table 9-11. Site-specific effective shade surrogate measure targets to meet nonpoint source load allocations for specific model extents.

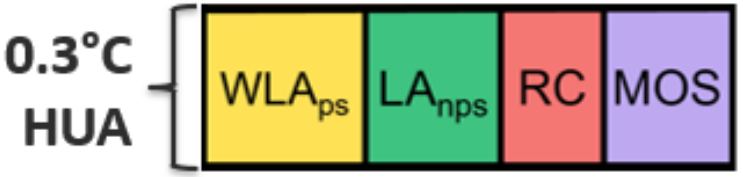
Model stream	Total kilometers assessed	Assessed effective shade (%)	TMDL target effective shade (%)	Shade Gap (%)
Antelope Creek	10.2	42	82	40
Bear Creek	44.6	27	74	47
Elk Creek	22.6	46	81	35
Evans Creek and West Fork Evans Creek	59.7	42	82	41
Little Butte Creek and North Fork Little Butte Creek	54.4	57	83	26
Lobster Creek	15.4	42	73	31
Rogue River	240.0	9	24	15
South Fork Little Butte Creek	28.6	46	79	33

Source assessment: NPDES PS discharges

- The maximum cumulative 7DADM temperature increase from current conditions Rogue River point source discharges was 0.25°C. See figure.
- DEQ also evaluated each facility's temperature increase at its point of discharge. For results, see draft model report.



Elements: NPDES PS Wasteload Allocations (WLA_{PS})



Draft TMDL section 9.1, pgs. 35-50

Table 9-4: HUA assignments (°C) for source or source categories on select AUs in the Middle Rogue R. Subbasin (17100308).

AU	Assessment Unit ID	NPDES point sources	NPS dam and reservoir operations	Anthropogenic warming from tributaries	Consumptive use water management & withdrawals	Solar loading: existing transportation corridors, buildings, & utility infrastructure	Solar loading: Other nonpoint sectors	Reserve capacity	Total HUA
Rogue R.	OR_SR_1710030802_04_105816	0.16[a]	0	0.00[a]	0.01[a]	0.04[a]	0	0.09[a]	0.3
		0.19[b]		0.01[b]	0.01[b]	0.04[b]		0.05[b]	
Rogue R.	OR_SR_1710030804_04_106341	0.20[a]	0	0.05[a]	0.01[a]	0.02[a]	0	0.02[a]	0.3
		0.23[b]		0.01[b]	0.01[b]	0.02[b]		0.03[b]	
Bear Cr.	OR_SR_1710030801_05_105552	0.20	0	0.06	0	0	0	0.04	0.3
Ashland Cr.	OR_SR_1710030801_02_105548	0.10	0	N/A	0	0	0	0.2	0.3
All other AUs	Applicable AUs listed in TSD Appendix D	0.075	0	0	0.05	0.05	0	0.125	0.3

[a] Spawning period
[b] Non-spawning period

Elements: Wasteload allocations (WLA)

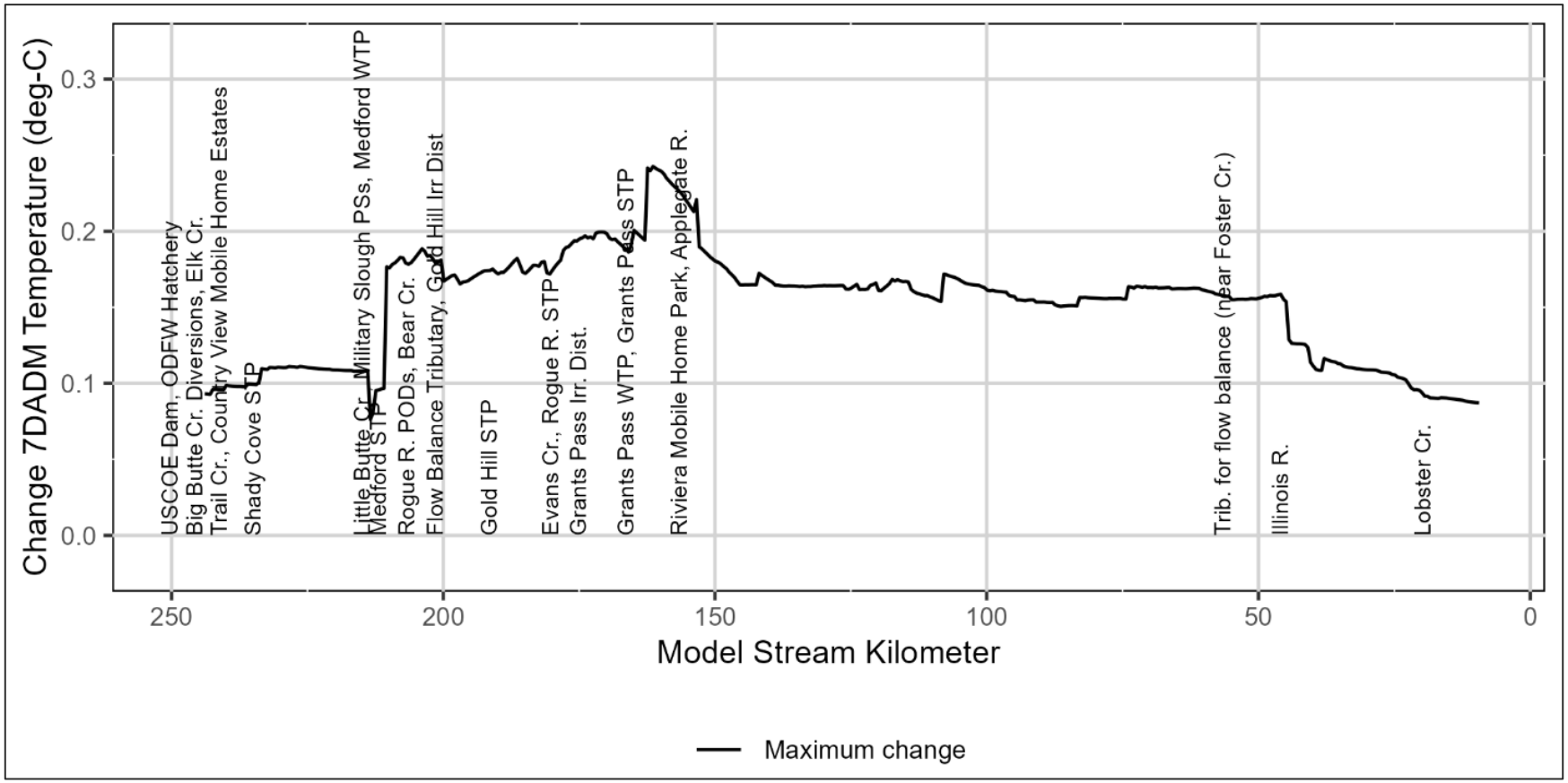
Draft TMDL section 9.2, pgs. 40-43

Table 9-6: Thermal wasteload allocations (WLA) assigned to select point sources.

NPDES Permittee WQ File Number: EPA Number	WLA period	Applicable Temp. criteria (°C)	Assigned HUA ΔT (°C)	Annual 7Q10 river flow (cfs)	Effluent discharge (cfs)	7Q10 WLA (kcal/day)
ASHLAND STP – Outfall 002 (3780: OR0026255)	4/1 – 11/15	13/18	0.20	4.73	3.559	4.06E+6
CASCADE WOOD PRODUCTS (101757: OR0032786)	4/1 – 10/31	13/18	0.075	0	0.014	0.0026E+6
GOLD HILL STP (33901: OR0022594)	4/1 – 10/31	13/18	0.0057	968.6	0.542	13.52E+6
GRANTS PASS STP (34630: OR0028843)	4/1 – 10/31	13/18	0.044	962	33.420	107.12E+6
GRANTS PASS WTP (34631: ORG383508)	4/1 – 10/31	18	0.20	0.0	1.782	0.87E+6
MEDFORD RWRF (55125: OR0026263)	4/1 – 10/31	13/16	0.15	948	67.6	372.63E+6
ROBERT A. DUFF WTP (55370: ORG383504)	4/1 – 10/31	13/16	0.03	948	1.84	69.70E+6
ROGUE RIVER STP (76030: OR0023043)	4/1 – 10/31	13/18	0.0046	969	1.702	10.81E+6

Elements: WLA continued

Figure 5-57: Maximum 7DADM stream temperature change between Wasteload Allocations and No Point Source scenarios for the Rogue River over the entire model period when scenario temperatures exceed the BBNC.



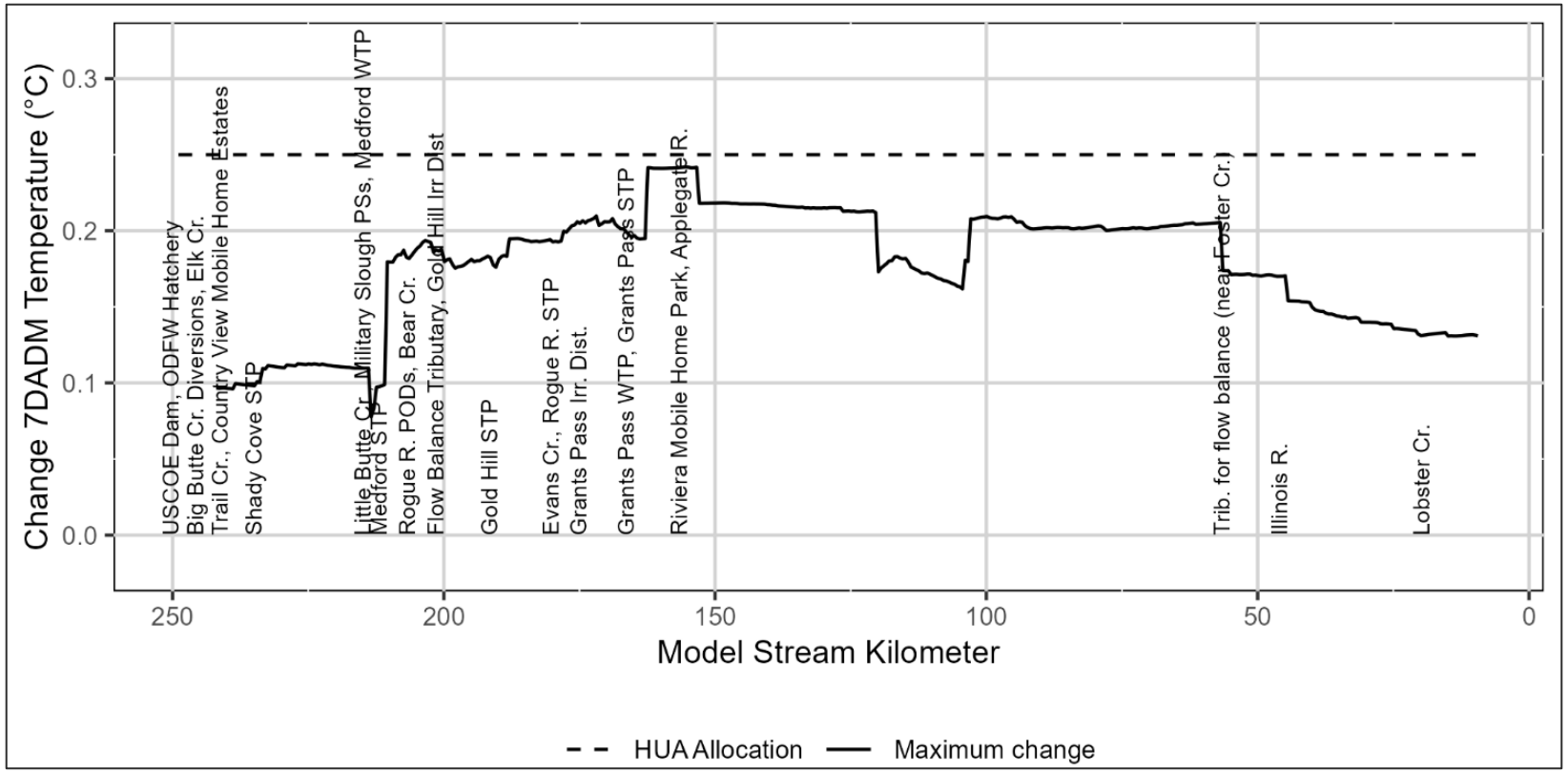
HUA attainment model setup: PS and NPS allocations

- The HUA attainment scenario is used to confirm that the various assignments (WLAs, LAs, RC) will result in WQS attainment when cumulatively implemented in a waterbody.
- Although the total HUA is 0.3°C, the target maximum temperature change for this scenario was 0.25°C because RC and some NPS categories were not included in the model and thus needed external accounting.
- This scenario and results are presented will be available in the draft model report (TSD Appendix A) prior to RAC2.

Source category	HUA attainment model setup approach
NPDES point sources	Set to WLA discharge temperatures
Anthropogenic warming in tributaries to the modeled river	• Modeled tributaries: increased by their total point & non-point source allocations. • Unmodeled tributaries: increased by 0.1°C • Rogue R. model upper boundary: adjusted to account for 0.2°C warming in Big Butte Cr.
Solar loading from existing transportation corridors, buildings, and utility infrastructure; and other NPS sectors	Not adjusted in Attainment model. Instead, this category was given a general allocation based on other modeled rivers, by which the scenario target temperature was adjusted, i.e., reduced from 0.3°C.
Consumptive use water management & withdrawals	Same explanation as row above.
Dam and reservoir operations	Same explanation as row above.

HUA attainment model results: vs. background

- The maximum 7DADM temperature increase from all point and non-point point sources set at their draft WLAs and LAs on the Rogue River was 0.24°C. See figure below.
- This shows that the Rogue River will achieve the temperature standard when the HUA allocations are implemented.



Elements: TMDL allocation summary

Draft TMDL section 9.7, pgs. 74-75

Table: Allocation summary, Rogue R. from Evans Cr. to Applegate R. (OR_SR_1710030804_04_106341).

Source or Source Category	Assigned HUA (°C), Spawning	Assigned HUA (°C), Non-Spawning	7Q10 Spawning Use Allocations (kcal/day)	7Q10 Non-Spawning Use Allocations (kcal/day)
Background	13.00*	18.00*	30,365.34 E+6	42,044.32 E+6
NPDES point sources	0.20	0.23	467.16 E+6	537.23 E+6
NPS Dam and reservoir operations	0.00	0.00	0.00	0.00
Anthropogenic warming from tributaries	0.05	0.01	116.79 E+6	23.36 E+6
Consumptive use water management and withdrawals	0.01	0.01	23.36 E+6	23.36 E+6
Solar loading: existing transportation corridors, buildings, and utility infrastructure	0.02	0.02	46.72 E+6	46.72 E+6
Solar loading: Other nonpoint sectors	0.00	0.00	0.00	0.00
Reserve capacity	0.02	0.03	46.72 E+6	70.07 E+6
Total Allocated	13.30*	18.30*	31,066.08 E+6	42,745.06 E+6
Loading Capacity			31,066.08 E+6	42,745.06 E+6

*Not a HUA. These values include the BBNC.

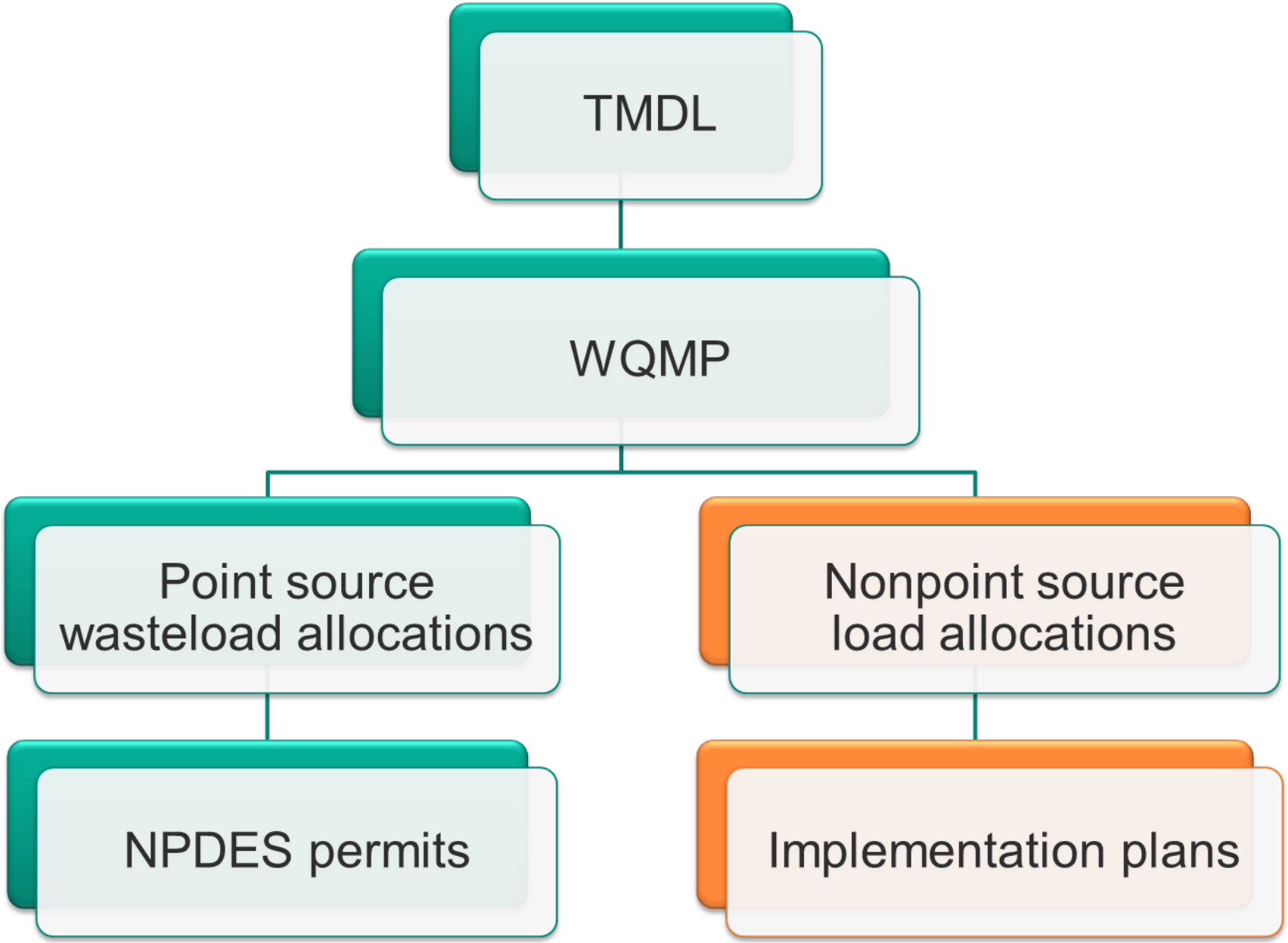
Questions on the TMDL?

Waterfalls on Upper Rogue River in Oregon

Water Quality Management Plan

A **water quality management plan** is the element of a TMDL describing strategies to achieve allocations identified in the TMDL to attain water quality standards.

OAR 340-042-0030(17)


TMDL
WQMP
Point source wasteload allocations
Nonpoint source load allocations
NPDES permits
Implementation plans

Water Quality Management Plan components

- Section 4.2: identify management strategies that responsible persons and DMAs are encouraged to consider to reduce pollutant loading
- Section 5: timeline for strategy implementation and a schedule for completing measurable milestones
- Section 7: name Responsible Persons including Designated Management Agencies
- Section 10: Performance monitoring and a plan for periodic review and revision of implementation plans

Reference: Oregon Administrative Rule 340-042-0040(4)(l)

Responsible Persons include DMAs

Designated Management Agencies (DMAs)

- DMAs are federal, state, or local agencies identified by DEQ that have authority over pollutant sources

Responsible Persons

- a ‘responsible person’ is any entity accountable for sources of pollution addressed by the TMDL
- Includes utilities, railroads, dam and reservoir operators, special districts

“Responsible persons” are entities, including DMAs, accountable for pollution sources addressed by the TMDL.

Reference: OAR 340-042-0030(2)

Responsible Persons identified in the draft WQMP (Draft WQMP Table 3)

Bonneville Power Administration
Central Oregon & Pacific Railroad
City of Ashland
City of Butte Falls
City of Cave Junction
City of Central Point
City of Eagle Point
City of Gold Beach
City of Gold Hill
City of Grants Pass
City of Jacksonville
City of Medford
City of Phoenix
City of Rogue River
City of Shady Cove
City of Talent
Curry County
Jackson County
Josephine County
Klamath County
Oregon Department of Agriculture
Oregon Department of Fish and Wildlife
Oregon Department of Forestry
Oregon Department of Geology and Mineral Industries
Oregon Department of State Lands
Oregon Department of Transportation
Oregon Parks and Recreation Department
Pacific Power and Light
Rogue Valley Terminal Railroad Corporation
U.S. Army Corps of Engineers
U.S. Bureau of Land Management
U.S. Bureau of Reclamation
U.S. Forest Service
Irrigation Districts: Talent, Rogue River Valley, Medford, Eagle Point, Grants Pass, Gold Hill

Screening criteria for the requirement of an implementation plan

Not all Responsible Persons are required to prepare an implementation plan if:

- Covered under another TMDL (e.g., Klamath County)
- No jurisdiction or ownership over streamside areas or reservoirs
- Covered through other implementation pathways, such as:
  - Sources addressed under another entity's implementation plan
  - Permit programs (e.g., DEQ, DOGAMI)
- Limited ability to conduct stream restoration (e.g., railroads)
- Minimal streamside area under jurisdiction
  - Less than 25 acres area measured 100 meters from stream center

Nonpoint source implementation plans

- Persons identified in a Water Quality Management Plan must prepare and submit an implementation plan to DEQ according to the WQMP schedule
- Implementation plans must:
  - **Identify management strategies** to achieve load allocations and reduce pollutant loading
  - Provide a **timeline** and **schedule** for measurable milestones
  - Include **performance monitoring** and a process for periodic review and revision
  - Contain any **additional analyses or information** specified in the WQMP
- The responsible party must **implement and revise** the plan as needed

OAR 340-042-0080(4)

Management strategies to address nonpoint sources

- WQMP links temperature sources to management actions
- Sources:
  - Riparian habitat removal
  - Modification to flow/discharge
  - Channel modification
  - Dam and reservoir operations
- Key strategies listed in the draft WQMP Table 2
- Responsible persons may adapt approaches

Upper Rogue River

Strategies to address riparian habitat removal

- Plant native trees and shrubs
- Protect existing canopy
- Thin dense stands and remove invasives
- Install off-channel watering or fencing
- Apply riparian setbacks or design standards
- Relocate or modify infrastructure
- Support landowners with planting programs, cost-share incentives, and technical assistance

Rogue River above Hellgate Canyon

Strategies to address modifications for flow/discharge

- Improve irrigation efficiency
- Implement municipal water conservation
- Incentivize water conservation
- Restore wetlands and floodplains
- Lease or transfer instream water rights

Soda Springs, South Fork Little Butte

Strategies to address channel modification and widening

- Reconnect incised channels
- Restore side channels and wetlands
- Place large wood or structures
- Stabilize eroding banks
- Remove or modify barriers like levees, berms, culverts, or tide gates
- Support beaver activity
- Protect stable channel areas

Rogue River, Grants Pass

Strategies to address dam and reservoir operations

Draft WQMP section 4.2, pg. 8

- Manage releases
- Retrofit or modify outlets
- Remove or modify small reservoirs or ponds where feasible

Lost Creek Reservoir

Strategies to address climate change and background sources

Draft WQMP section 13.1, pg. 42

- Use adaptive management to build resilience
- Long-term restoration reduces background thermal loading

Bear Creek, River Mile 18 Project, Rogue River Watershed Council

Streamside evaluations

Draft WQMP section 10.2.1.1, pg. 27

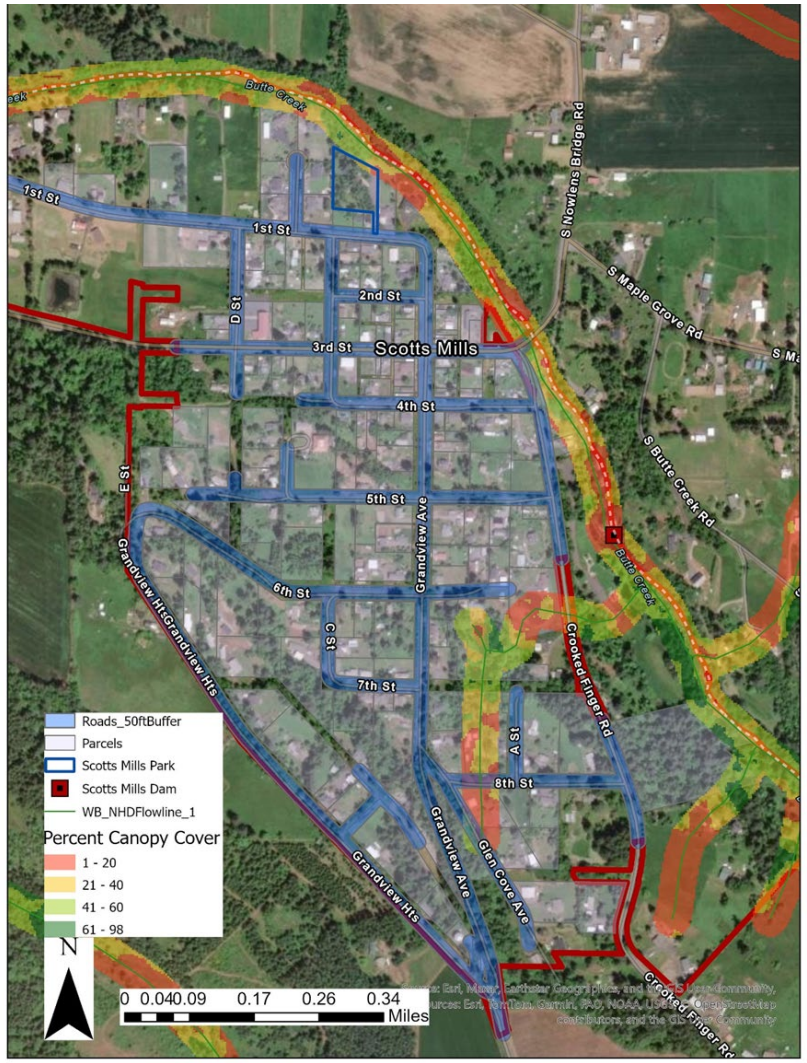
- Classify streamside areas by condition and need
  - Protect, enhance, or maintain
  - Planting or establishment
  - Vegetation management
  - Constraint-limited
  - Alternative strategy
- Identify where shade improvements are most feasible

Rogue River near the Natural Bridge

Streamside evaluations – example

Town of Scotts Mills, population 390, located on Butte Creek in Marion County

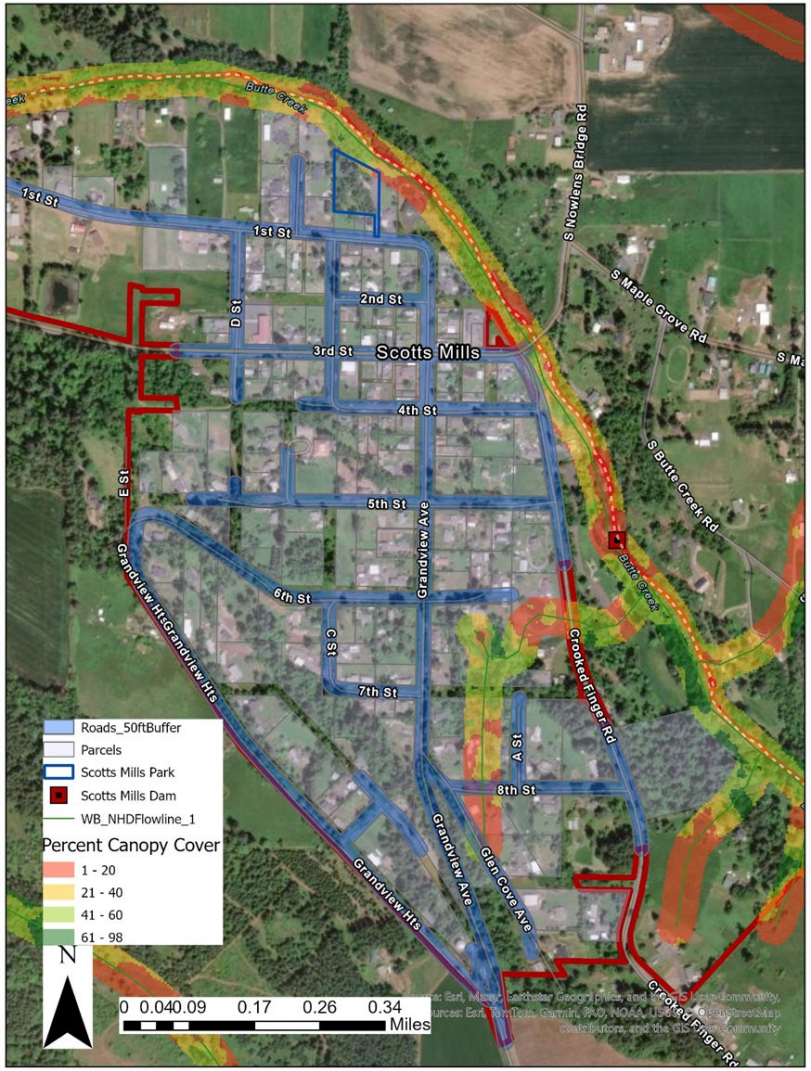
- GIS Exercise implemented by DEQ staff using Planet Data to evaluate current riparian vegetation
- Vegetation cover was measured 50 feet from top of bank
- Vegetation cover was broken into in 20% increments: 0-20%, 21-40%, 41%-60% and from 61% to 98%
- Canopy density over 61% was considered low priority for projects but should be protected and passively managed.



Streamside evaluations – example continued

Resulting actions

- The city will reach out to watershed council and Marion County to evaluate restoration projects adjacent to the Post Office and in Scotts Mills Park.
- The city will identify property owners with land adjacent to Butte Creek with less than 20% estimated canopy cover and will send one direct mailer within the next five-year reporting period.
- The city will participate in the evaluation an in-channel restoration project at the old mill dam site.

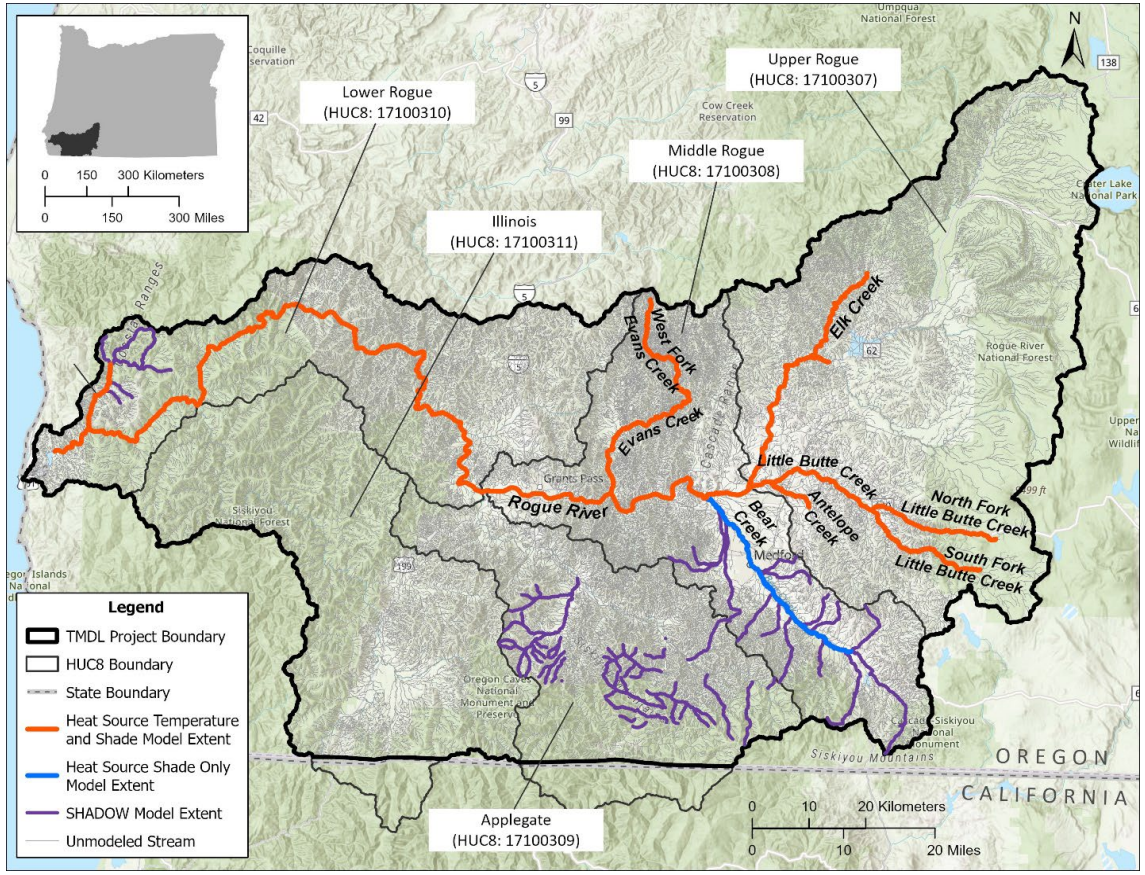


Shade gap analysis

Draft WQMP section 10.2.1.2, pg. 28

- Compares existing shade to TMDL targets = Shade Gap
- Where completed assists jurisdictions in the development of streamside evaluations
- Provides information to ODA, ODF, BLM, USFS who will need to develop shade gap analysis on additional managed lands
- 120-ft buffer allowed as shade-gap alternative

[Rogue River Basin TMDL Replacement project page]



Dams and reservoirs required to implement monitoring and assessment

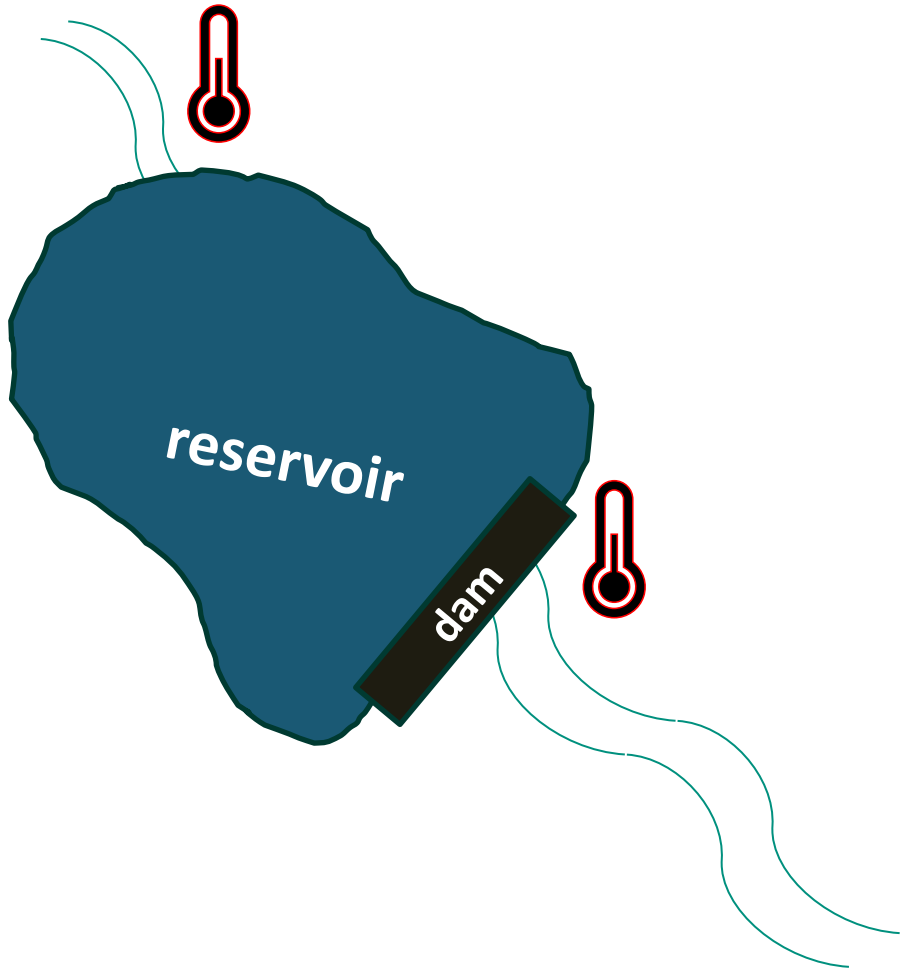
Draft WQMP section 10.2.2, pg. 29

DEQ reviewed a list of 60 reservoirs in the Rogue Basin

- Applied screening criteria to determine if temperature monitoring and assessment will be required.
- Draft list of six reservoirs that will require assessment and monitoring covers over 97% of storage in the Rogue River Basin (Draft WQMP Table 6, pg. 30)
  - William Jess Dam (Lost Creek)
  - Applegate Dam
  - Emigrant Lake
  - Willow Lake
  - Fish Lake
  - Agate Lake

Dam and reservoir monitoring and assessment

- Surrogate Measure: no net warming above inflow temperature
- Develop temperature plans (18 months after EQC)
- Collect continuous data during critical period (Critical period is defined draft TMDL Table 5.1)
- Determine if operations cause measurable warming
- If current operational requirements exist they will be evaluated to determine if they may serve as an implementation plan



Timelines and benchmarks

- Effective shade measures temperature improvement
- Target: 10% cumulative shade gain per decade
- Full attainment expected by mid-2100s

Rough and Ready Creek – Illinois Subbasin

Implementation plan schedules

Draft WQMP Table 7

Requirement	Responsible persons, including DMAs	Submission date or timeframe
Shade gap analysis project plan	ODA, ODF, BLM, USFS	18 months after EQC adoption of the WQMP
Dam and reservoir monitoring and analysis plan	Dam and reservoir operators identified in WQMP Table 6	18 months after EQC adoption of the WQMP
Streamside evaluation	All responsible persons identified in WQMP Table 3 with jurisdiction over streamside lands	Year-four annual report
Shade gap analysis OR adoption of a 120-foot streamside buffer	ODA, ODF, BLM, USFS and any responsible persons not using the TMDL shade gap analysis for their streamside evaluation	Year-four annual report
Dam and reservoir cumulative effects analysis and/or implementation plan updates	Dam and reservoir operators in WQMP Table 6	Following completion of the temperature monitoring and assessment, operator consults with DEQ to set submittal dates

Implementation plan performance monitoring

Draft WQMP section 10.4, pg. 38

- Include performance monitoring in implementation plans
- Submit annual reports to DEQ on actions and results
- Report restoration projects to OWRI
- ODA, ODF, BLM, USFS collaborate in the development of Rogue River Basin temperature monitoring strategy
- Results will guide adaptive management and five-year updates

Lobster Creek Bridge, River Mile 11 Lower Rogue River

Questions and discussion

- Is the evaluation criteria to determine who is a DMA and who is required to develop an implementation plan clear (Draft WQMP Table 3)?
- Are there additional temperature management strategies that should be further explained or added (Draft WQMP Table 2)?
- Are the timelines in Table 7 clear for who needs to do what and when (Draft WQMP pg. 38) ?
- Is there information that would make implementation tracking more efficient?

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.

(8) Rogue River Basin (171003) that includes the Applegate Subbasin (17100309), the Illinois Subbasin (17100311), the Lower Rogue Subbasin (17100310), the Middle Rogue Subbasin (17100308), and the Upper Rogue Subbasin (17100307).
(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?
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

- Email RAC feedback from meeting #1 → March 13, 2026, RogueRiver.TemperatureTMDL@DEQ.oregon.gov
- RAC meeting #2 → May 21, 2026, 10 a.m. to 12 p.m.
- Public notice (45 days) → October – December 2026
- EQC consideration → July 2027
- EPA action → Oct. 18, 2027

Online resources

Temperature TMDL Replacement project page

Rogue River Basin TMDL Replacement project page

Rogue River TMDL Replacement project rulemaking page

Rogue River Basin temperature TMDL contacts

TMDL Development

- Steve Mrazik, Manager Steve.Mrazik@deq.oregon.gov
- David Fairbairn, Analyst David.Fairbairn@deq.oregon.gov
- Rob Burkhart, Analyst Robert.Burkhart@deq.oregon.gov

WQMP Development

- Heather Tugaw, Manager Heather.Tugaw@deq.Oregon.gov
- Bill Meyers, Basin Coordinator Bill.Meyers@deq.oregon.gov

Sign up to receive GovDelivery notifications about the rulemakings online.

Title VI and alternative formats

DEQ does not discriminate on the basis of race, color, national origin, disability, age, sex, religion, sexual orientation, gender identity, or marital status in the administration of its programs and activities.

Visit DEQ's Civil Rights and Environmental Justice page.

Español | 한국어 | 繁體中文 | Русский | Tiếng Việt | العربية
Contact: 800-452-4011 | TTY: 711 | deqinfo@deq.oregon.gov