

Total Maximum Daily Loads (TMDLs): Temperature
TMDL Replacement project: **Lower Columbia-Sandy
Subbasin**

Feb. 22, 2023, 10 a.m. PT

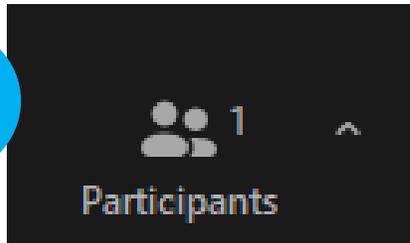
Rule Advisory Committee meeting #1

Agenda

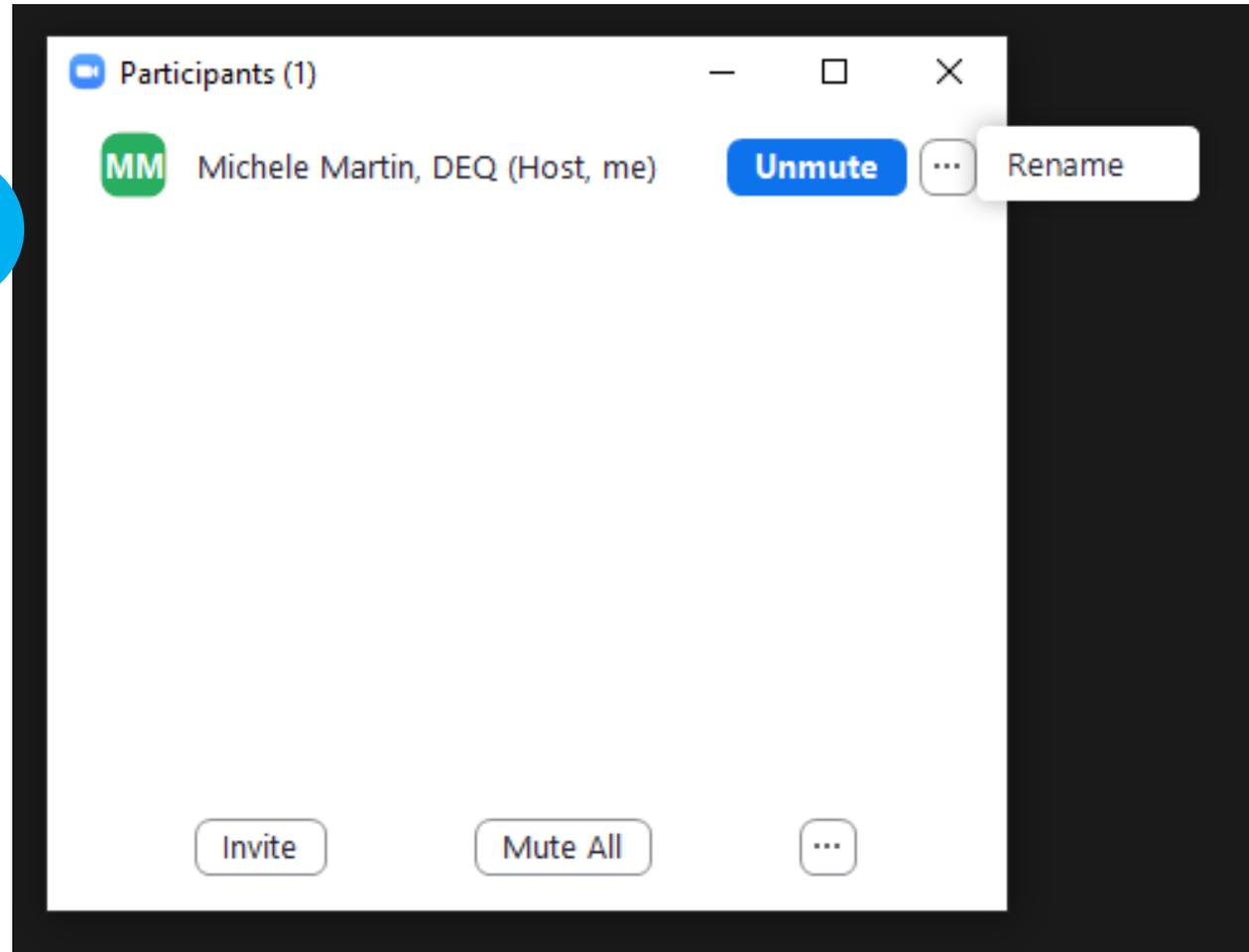
Time	Topic
10 a.m.	Welcome
10:05 a.m.	Agenda, and introductions
10:10 a.m.	Zoom logistics, ground rules, meeting materials, and charter
10:15 a.m.	Project overview and Total Maximum Daily Load (TMDL)
11:10 a.m.	Break – 5 min.
11:15 a.m.	Water Quality Management Plan (WQMP)
11:45 a.m.	Fiscal Impact Statement and OAR language
12:25 p.m.	Next steps
12:30 p.m.	Adjourn

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

1



2



Zoom logistics and meeting ground rules



Raise hand to be recognized for questions or comments; please speak for yourself when recognized, let others speak without interruptions



Use chat to:

Ask questions

Provide informational resources

Second ideas/issues



Mute when not speaking



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

Rule advisory committee meeting materials

1. Agenda
2. Rule Advisory Committee Charter
3. **Rule** Draft Total Maximum Daily Loads for Lower Columbia-Sandy Subbasin, Temperature
4. **Rule** Draft Water Quality Management Plan, Lower Columbia-Sandy Subbasin, Temperature
5. **Rule** Draft Oregon Administrative Rule Language
6. Lower Columbia-Sandy Subbasin Quality Assurance Project Plan:
<https://www.oregon.gov/deq/wq/tmdls/Pages/tmdlRlc-sandy.aspx>
7. Lower Columbia-Sandy Subbasin draft Fiscal and Economic Impact Statement
8. **Not included (not in rule): TMDL Technical Support Document (TSD)**

Meeting materials are online:

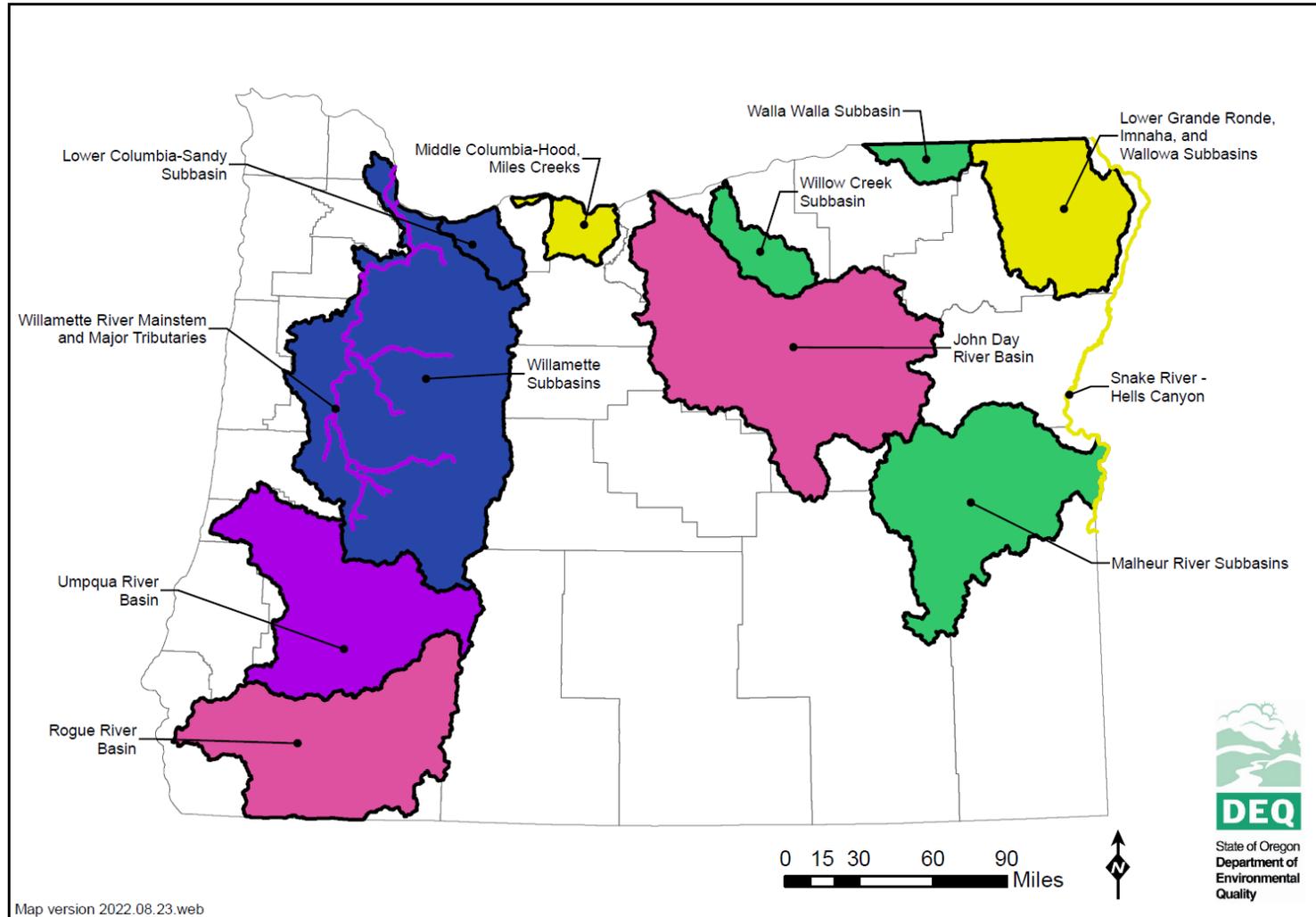
<https://www.oregon.gov/deq/rulemaking/Pages/sandytempTMDL.aspx>

Rule advisory committee charter

- Prepares for and sets aside time for the meetings;
- Provides DEQ staff with copies of relevant research and documentation cited during the meeting;
- Stays focused on the specific agenda topics for each meeting;
- Consults regularly with constituencies to inform them on the process and gather their input;
- Is courteous by not engaging in sidebar discussions; and
- Avoids representing the views of any other committee member or the entire committee to the public or media.

Webpage: <https://www.oregon.gov/deq/rulemaking/Pages/sandytempTMDL.aspx>

Temperature TMDL Replacement project areas



Project website: <https://www.oregon.gov/deq/wq/tmdls/Pages/tmdlreplacement.aspx>

Key dates for EPA approval or disapproval of Temperature TMDLs

January 15, 2024

- Willamette Subbasins*
- Lower Columbia-Sandy Subbasin

February 28, 2025

- Willamette River Mainstem and Major Tributaries*
- Umpqua River Basin

April 17, 2026

- Rogue River Basin
- John Day River Basin

June 4, 2027

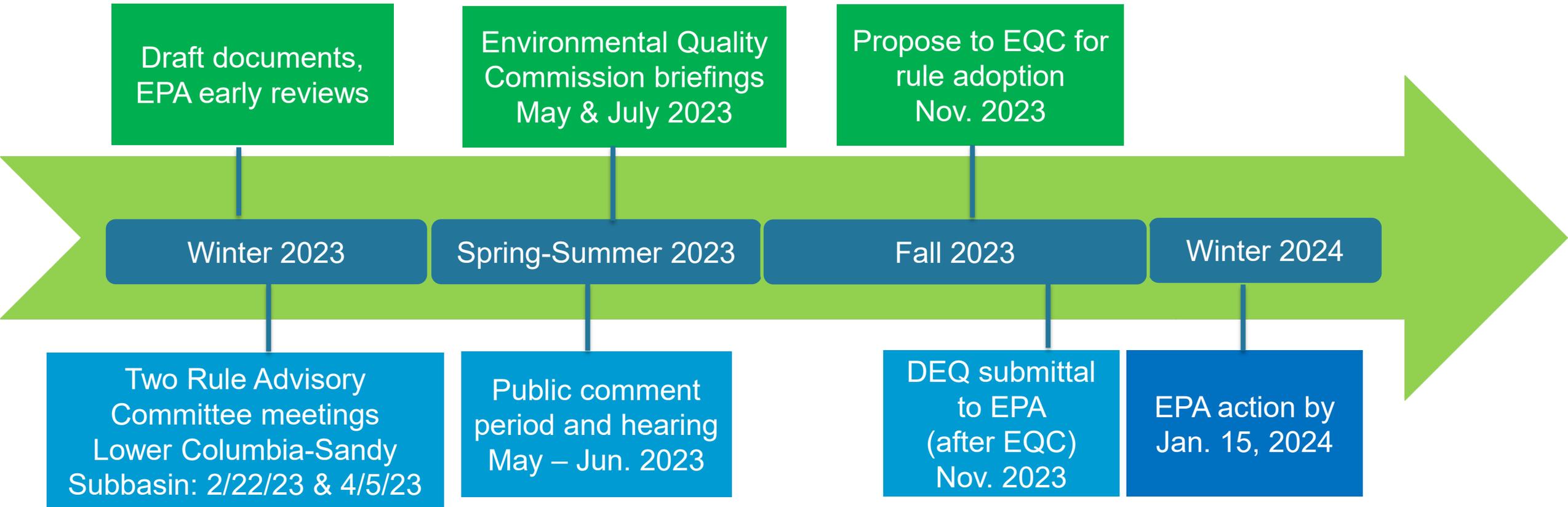
- Snake River - Hell's Canyon
- Lower Grande Ronde, Imnaha, and Wallowa Subbasins
- Middle Columbia-Hood, Miles Creeks

May 29, 2028

- Walla Walla Subbasin
- Willow Creek Subbasin
- Malheur River Subbasins

*The Willamette temperature TMDL replacement will occur in two waves: Jan. 15, 2024, and Feb. 28, 2025

Lower Columbia-Sandy Subbasin Temperature TMDL Replacement rulemaking milestones



Project website: <https://www.oregon.gov/deq/wq/tmdls/Pages/tmdlreplacement.aspx>

Total Maximum Daily Load: Lower Columbia-Sandy Subbasin



Sandy River – photo credit: Susan Barnes, ODFW

TMDLs include the following elements:

- TMDL name and location
- Pollutant ID
- Water quality standards and beneficial uses
- Loading Capacity (LC)
- Excess Load / Load Reduction
- Pollutant 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 (WQMP)

Reference: [Oregon Administrative Rule 340-042-0040\(4\)](#) and federal regulations: 40 CFR 130.2 and 40 CFR 130.7

TMDL elements: the basics

Name and location: Sandy River Basin Total Maximum Daily Load (TMDL)
TMDL section 2, pgs. 1-2

Pollutant identification:
TMDL section 3, pgs. 3-5

Water quality standards and beneficial uses:
TMDL section 4, pgs. 6-7

Seasonal variation:
TMDL section 5, pg. 7 (more to come)

TMDL elements: sources or source categories

Point sources

TMDL section 7, pgs. 8-9

- Individual permittees
- General permittees
 - 300-J fish hatcheries



TMDL elements: sources or source categories

Nonpoint sources

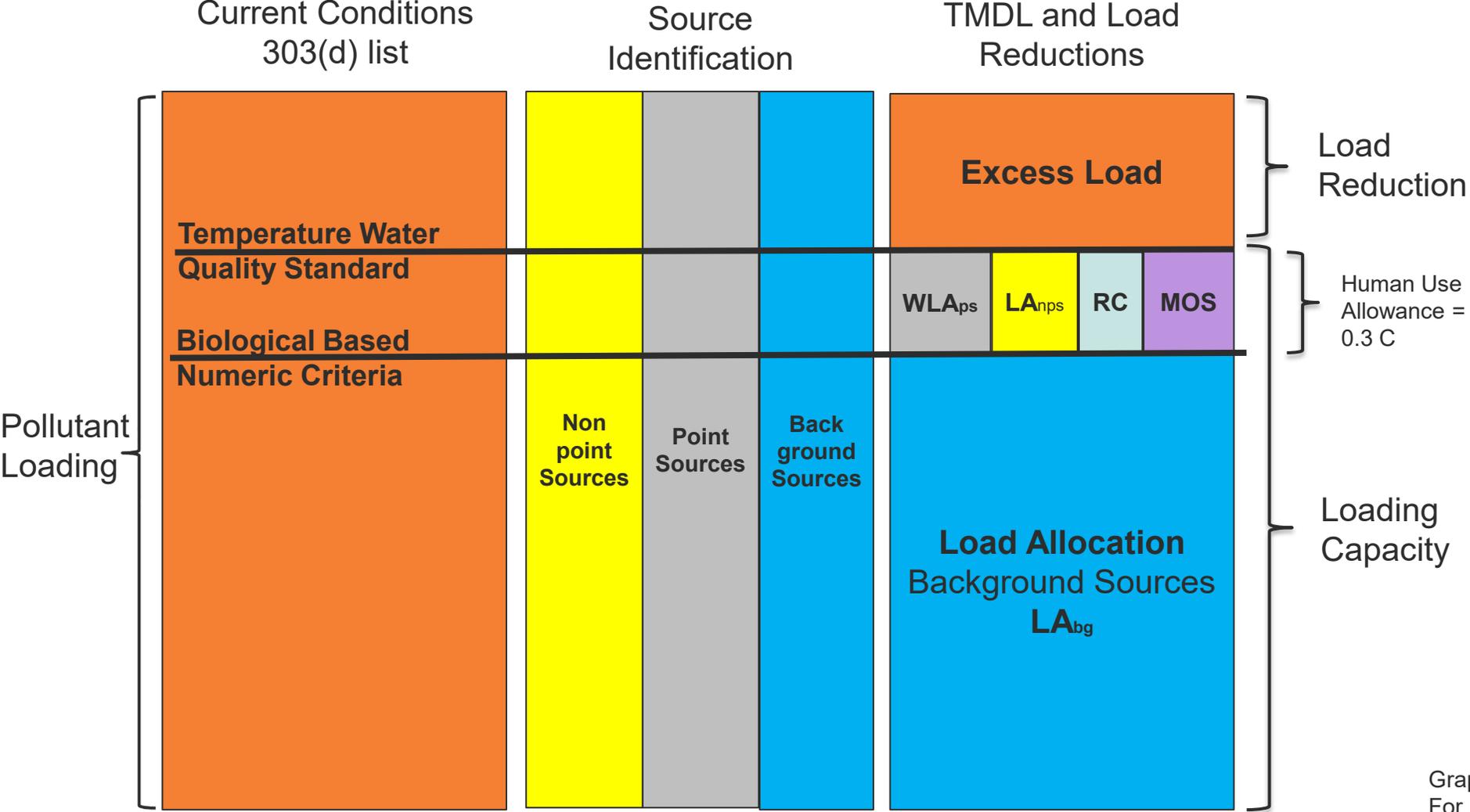
TMDL section 7.2, pgs. 9-10

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

Background sources

TMDL section 7.3, pg. 10

$$\text{TMDL} = \text{WLA}_{ps} + \text{LA}_{nps} + \text{LA}_{bg} + \text{MOS} + \text{RC}$$



Graphic not to scale.
For illustrative purposes only.

TMDL elements: loading capacity (LC)

TMDL section 8, pgs. 10-11

A provision allows LC recalculation if the numeric standard is updated and approved by EPA.

LC calculated by **Equation 1** (in TMDL report): $LC = (T_C + HUA) \cdot Q_R \cdot C_F$

Q_R = daily mean river flow. If $day_x Q < 7Q_{10}$, $Q_R = 7Q_{10}$ for day_x

C_f = unit conversion factor. T_c = temp criterion

Table 8.1. Minimum thermal loading capacity (kcal/day) for select AUs by applicable fish use period

AU ID and Extent	Annual 7Q10 (cfs)	Non-Spawning Criterion + HUA (°C)	Spawning Criterion + HUA (°C)	Min. LC, Non-Spawning	Min. LC, Spawning
Bull Run R. - Bull Run Reservoir #2 to confluence w/Sandy R. OR_SR_1708000105_11_103611	3.6	16.3	13.3	$1.44 \cdot 10^8$	$1.17 \cdot 10^8$
Cedar Cr. - Beaver Cr. to confluence w/Sandy R. OR_SR_1708000104_02_103607	4.9	18.3	N/A	$2.19 \cdot 10^8$	N/A
Salmon R. – S. Fork Salmon R. to confluence w/Sandy R. OR_SR_1708000103_02_103606	174	16.3	13.3	$6.94 \cdot 10^9$	$5.66 \cdot 10^9$
Sandy R. - Clear Fork to Zigzag R. OR_SR_1708000101_02_103599	50.3	18.3	13.3	$2.25 \cdot 10^9$	$1.64 \cdot 10^9$
Sandy R. - Zigzag R. to Bull Run R. OR_SR_1708000104_02_103608	216.9	16.3	13.3	$8.65 \cdot 10^9$	$7.06 \cdot 10^9$

TMDL elements: excess load/load reduction

TMDL section 8, pgs. 10-13

Excess load = (actual pollutant load – loading capacity) for a waterbody. (OAR 340-042-0040(4)(e))

- Then it's translated to the required *percent load reduction*
- Flow data that are required to calculate loads were n/a at most temp. monitoring sites
- Instead, DEQ calculated: *Excess temp. → percent temp. reduction, which = percent load reduction*

Table 8.2. Excess temperature and percent for various assessment units in the L. Columbia-Sandy Subbasin

Assessment Unit Name	Assessment Unit ID	Max. 7DADM River Temp. (°C)	Applicable Criterion + HUA (°C)	Excess Temperature (°C)	Percent Load Reduction
Clear Fork	OR_SR_1708000101_02_103596	14.7	13.3	1.4	9.2
Clear Fork	OR_SR_1708000101_02_103596	14.9	16.3	0.0	0.0
Clear Creek	OR_SR_1708000101_02_103597	17.4	13.3	4.1	23.5
Clear Creek	OR_SR_1708000101_02_103597	17.8	16.3	1.5	8.2
Lost Creek	OR_SR_1708000101_02_103598	13.6	13.3	0.3	2.1

TMDL elements: allocations

Human Use Allowance (HUA)

TMDL section 9.1 pgs. 13-15

Table 9.1 Sandy River human use allowance allocations

Portion of HUA (°C)	Source or source category
0.13*	NPDES point sources
0.05	Dam and reservoirs
0.05	Water management activities and water withdrawals
0.02	Solar loading from existing transportation corridors and utility infrastructure
0.00	Solar loading from other NPS sectors
0.05	Reserve capacity
0.30	Total
*NPDES permitted point source discharges to the Sandy River are each allowed up to 0.07°C at the point of discharge and 0.13°C cumulatively at the point of maximum impact.	

TMDL elements: allocations

Wasteload allocations (WLAs)

TMDL section 9.1.1, pgs. 15-16

- For NPDES-permitted point sources
- Table 9.6 calculations based on average dry-weather design flow
 - Except ODFW Sandy R. Fish Hatchery based on reported max. discharge data

Table 9.6 Thermal wasteload allocations (WLAs) for point sources

Permittee WQ File#: EPA #	HUA (°C)	Applicable criterion (°C)	WLA period start	WLA period end	Annual 7Q10 river flow (cfs)	Eff. discharge (cfs)	Min. WLA (kcal/day)
Gov't Camp STP 34136: OR0027791	0.20	16.0 13.0	6/1	10/31	5.6	0.4	2.94*10 ⁶
Hoodland STP (WES) 89941: OR0031020	0.07	16.0 13.0	6/1	10/31	80.3	1.4	1.39*10 ⁷
City of Troutdale WPCF 39750: OR0020524	0.07	18.0 13.0	6/1	10/31	277.3	4.6	4.83*10 ⁷
City of Sandy WWTP 78615: OR0026573	0.07	18.0 13.0	6/1	10/31	56.5	1.9	1.00*10 ⁷
ODFW Sandy R. Fish Hatchery 64550: ORG130009	0.30*	18.0 13.0	6/1	10/31	4.9	3.5	6.17*10 ⁶

Notes: Applicable criterion = Biologically-based numeric criteria (BBNC)

* When the minimum duties provision at OAR 340-041-0028(12)(a) applies, ODFW Sandy River Fish Hatchery $\Delta T = 0.0 \rightarrow WLA = 0$ kcal/day.

TMDL elements: allocations

Wasteload Allocations

TMDL section 9.1.1, pgs. 15-16

$WLA = (\Delta T) \cdot (Q_E + Q_R) \cdot C_F$		Equation 2
<u>where,</u>		
$WLA =$	Waste load allocation (kilocalories/day).	
$\Delta T =$	The maximum temperature increase ($^{\circ}\text{C}$) above the applicable river temperature criterion using 100% of river flow not to be exceeded by each individual source from all outfalls combined. When the minimum duties provision at OAR 340-041-0028(12)(a) applies, $\Delta T = 0.0$.	
$Q_E =$	<p>The daily mean effluent flow (cfs).</p> <p>When effluent flow is in million gallons per day (MGD) convert to cfs:</p> $\frac{1 \text{ million gallons}}{1 \text{ day}} \cdot \frac{1.5472 \text{ ft}^3}{1 \text{ million gallons}} = 1.5472$	
$Q_R =$	<p>The daily mean river flow rate, upstream (cfs).</p> <p>When river flow is $\leq 7Q_{10}$, $Q_R = 7Q_{10}$. When river flow $> 7Q_{10}$, Q_R is equal to the daily mean river flow, upstream.</p>	
$C_F =$	<p>Conversion factor using flow in cubic feet per second (cfs): 2,446,665</p> $\frac{1 \text{ ft}^3}{1 \text{ sec}} \cdot \frac{1 \text{ m}^3}{35.31 \text{ ft}^3} \cdot \frac{1000 \text{ kg}}{1 \text{ m}^3} \cdot \frac{86400 \text{ sec}}{1 \text{ day}} \cdot \frac{1 \text{ kcal}}{1 \text{ kg} \cdot 1^{\circ}\text{C}} = 2,446,665$	

TMDL elements: allocations

Minimum Duties Provision

TMDL section 9.1.1, pgs. 15-16

OAR 340-041-0028(12)(a): “...no duty for anthropogenic sources to reduce heating of the waters of the State below their natural condition. Similarly, each anthropogenic point and nonpoint source is responsible only for controlling the thermal effects of its own discharge or activity in accordance with its overall heat contribution.”

- Minimum duties applies to NPDES “flow through” facilities where river water moves through the facility and is not processed.
- Minimum duties applies ONLY when the daily max. effluent temp. allowed under the WLA (T_{E_WLA}) < the daily max. influent temp. (T_i)
- When the provision applies, the facility’s $\Delta T = 0$ and WLA = 0.
 - I.e., If their effluent doesn’t increase temp., they’re in compliance when min. duties applies.
 - i.e. Effluent cannot increase temp. above influent temp.
- Not expected to remove more heat than they add.

TMDL elements: allocations

Load Allocations (LAs)

TMDL section 9.1.2, pgs. 16-18

- For nonpoint sources
- TMDL report Tables 9.7 – 9.11

Table 9.8 Thermal load allocations (LAs) for anthropogenic nonpoint sources on the Sandy River.

Nonpoint source or source category	Annual 7Q10 (cfs)	HUA (°C)	LA period start	LA period end	Min. LA (kcal/day)
City of Portland Bull Run Dam and Reservoir operations	277.3	0.05	6/1	10/31	3.39*10 ⁸
Diversions and water withdrawal activities	277.3	0.05	6/1	10/31	3.39*10 ⁸
Anthropogenic solar loading from existing buildings & existing transportation/utility corridors	277.3	0.02	6/1	10/31	1.36*10 ⁸
Other anthropogenic nonpoint sectors	277.3	0.00	6/1	10/31	0.0

TMDL elements: allocations

Load Allocations (LAs)

TMDL section 9.1.2, pgs. 16-18

- For nonpoint sources

Equation 3	$LA = (\Delta T) \cdot (Q_R) \cdot C_F$
where,	
$LA =$	Load allocation (kcal/day).
$\Delta T =$	Max. allowed temp. increase ($^{\circ}\text{C}$). When the minimum duties provision at OAR 340-041-0028(12)(a) applies, $\Delta T = 0.0$. For background nonpoint sources, $\Delta T =$ applicable temp. criteria.
$Q_R =$	The daily average river flow rate (cfs).
$C_F =$	Conversion factor using flow in cfs: 2,446,665 $\frac{1 \text{ ft}^3}{1 \text{ sec}} \cdot \frac{1 \text{ m}^3}{35.31 \text{ ft}^3} \cdot \frac{1000 \text{ kg}}{1 \text{ m}^3} \cdot \frac{86400 \text{ sec}}{1 \text{ day}} \cdot \frac{1 \text{ kcal}}{1 \text{ kg} \cdot 1^{\circ}\text{C}}$ $= 2,446,665$

TMDL elements: surrogate measures

Surrogate Measures

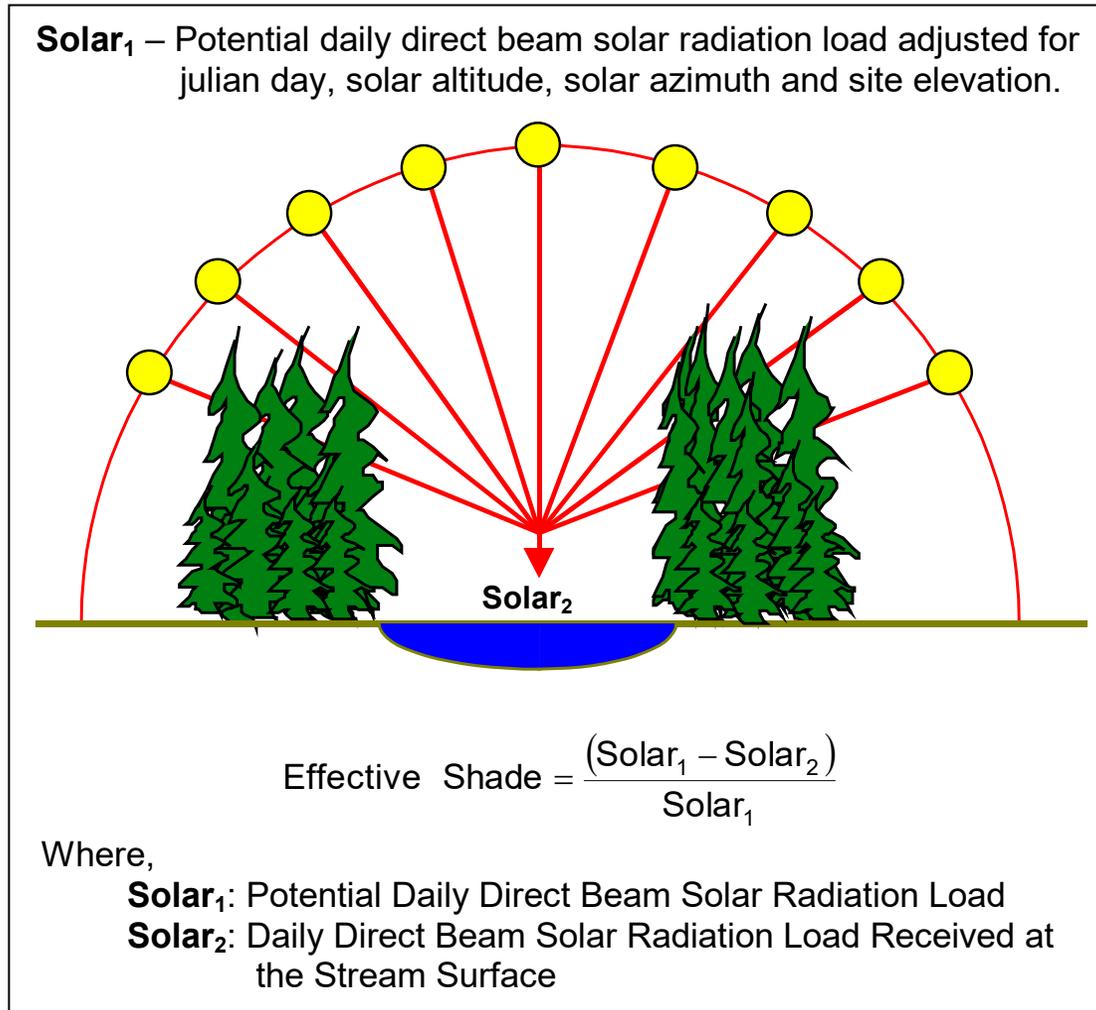
TMDL section 9.1.2.1, pgs. 18-36

Effective Shade

- By Designated Management Agency (DMA)
- By river
- General shade curves

TMDL elements: surrogate measures

Effective shade conceptual figure



TMDL elements: surrogate measures

Site-Specific Effective Shade

TMDL section 9.1.2.1.2 pgs. 19-20

Table 9.11 Shade surrogate measure targets to meet nonpoint source load allocations on model stream extents

DMA	Stream name	Assessed effective shade (%)	TMDL target effective shade (%)	Shade gap (%)
Multiple	Little Sandy River	64	69	5
Multiple	Zigzag River	46	60	14
Clackamas County	Salmon River	24	37	13
Oregon Department of Forestry - Private	Salmon River	26	40	14
Oregon Department of Transportation	Salmon River	10	48	38
U.S. Bureau of Land Management	Salmon River	26	35	9
U.S. Forest Service	Salmon River	49	59	10
City of Portland	Sandy River	8	12	4

TMDL elements: surrogate measures

General Effective Shade

TMDL section 9.1.2.1.2 pgs. 20-36

Table 9.12 Vegetation height, density, overhang, and horizontal distance buffer widths used to derive generalized effective shade curve targets.

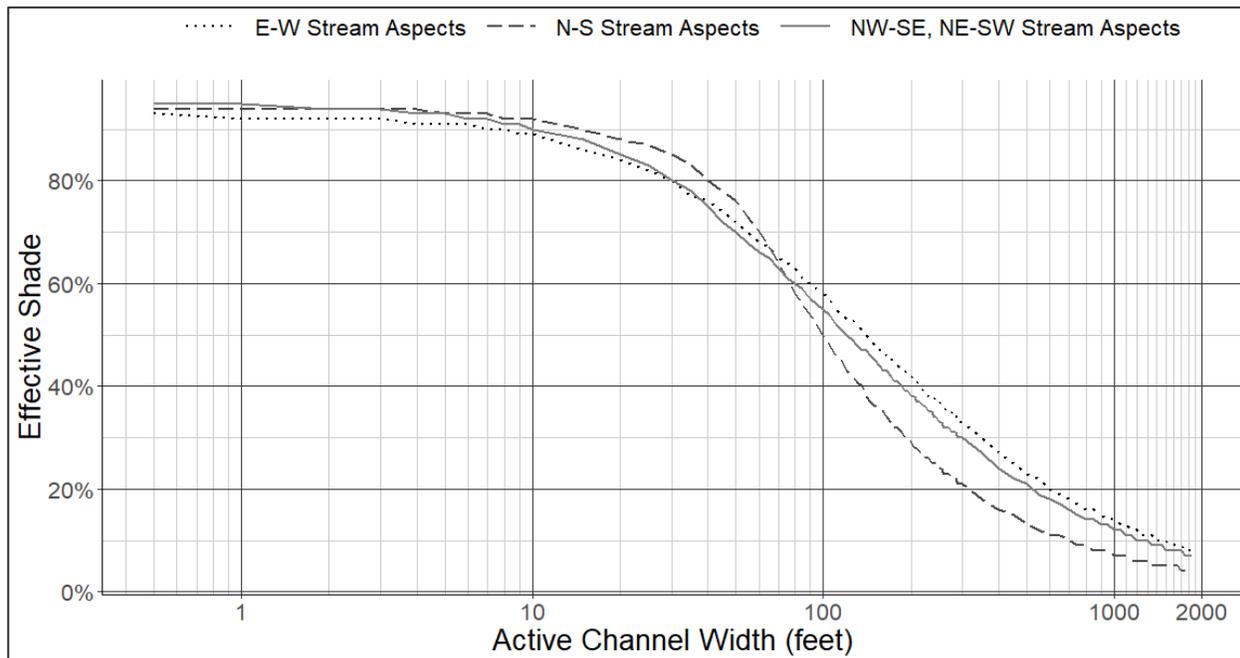


Figure 9.1. Effective shade targets for high-density conifer-dominated stream sites.

Landcover Code*	Vegetation Type	Height (m)	Height (ft)	Density (%)	Overhang (m)	Buffer Width (m)
348	Mixed Conifer/ Hardwood - High Density	26.7	87.6	60	3.3	36.8
550	Mixed Conifer/ Hardwood – Med. Density	26.7	87.6	30	3.3	36.8
600	Hardwood - High Density	20.1	65.9	75	3.0	36.8
700	Conifer - High Density	35.1	115.2	60	3.5	36.8
750	Conifer - Low Density	35.1	115.2	30	3.5	36.8

*For display purposes, not all land cover types are represented.

TMDL elements: surrogate measures

Flow Surrogate

TMDL section 9.1.2.1.3 pg. 36 Table 9.18

Table 9.18 Target maximum percent flow rate reduction relative to the median natural flow at the stated reference flow monitoring site.

Maximum flow rate reduction (%)	Reference Monitoring Site
1.75	USGS 14142500 – Sandy River below Bull Run

TMDL elements: surrogate measures

Note: Content on this slide was discussed during the meeting. DEQ added this information on the presentation after the meeting for the online posting of these slides, for clarity about this topic.

Bull Run Dam and Reservoir Temperature Surrogate

TMDL section 9.1.2.1.1 pg. 19

Temperature target is the higher of either

- estimated free flowing (no dam) 7-day average daily maximum temperatures at the lamprey barrier; or
- the most restrictive temperature criteria plus 0.3 human use allowance
 - 16.3 degrees Celsius June 16 - August 14; or
 - 13.3 degrees Celsius May 1 - June 15 and August 15 - November 15

Equation 4, the TMDL model, or with DEQ approval an alternative approach can be used to estimate the free flowing no dam temperature.

TMDL elements: reserve capacity

Reserve Capacity (RC)

TMDL section 9.1.3 pg. 36

- Explicit RC allocations are set aside for allocation to new/increased thermal loads or previously unidentified source(s)
- Tables 9.1-9.5

Table 9.1 Sandy River human use allowance allocations

Portion of HUA (°C)	Source or source category
0.13	NPDES point sources*
0.05	Dam and reservoirs
0.05	Water management activities and water withdrawals
0.02	Solar loading from existing transportation corridors and utility infrastructure
0.00	Solar loading from other NPS sectors
0.05	Reserve capacity
0.30	Total

*NPDES permitted point source discharges to the Sandy River are each allowed up to 0.07°C at the point of discharge and 0.13°C cumulatively at the point of maximum impact.

Total Maximum Daily Load: Lower Columbia-Sandy Subbasin

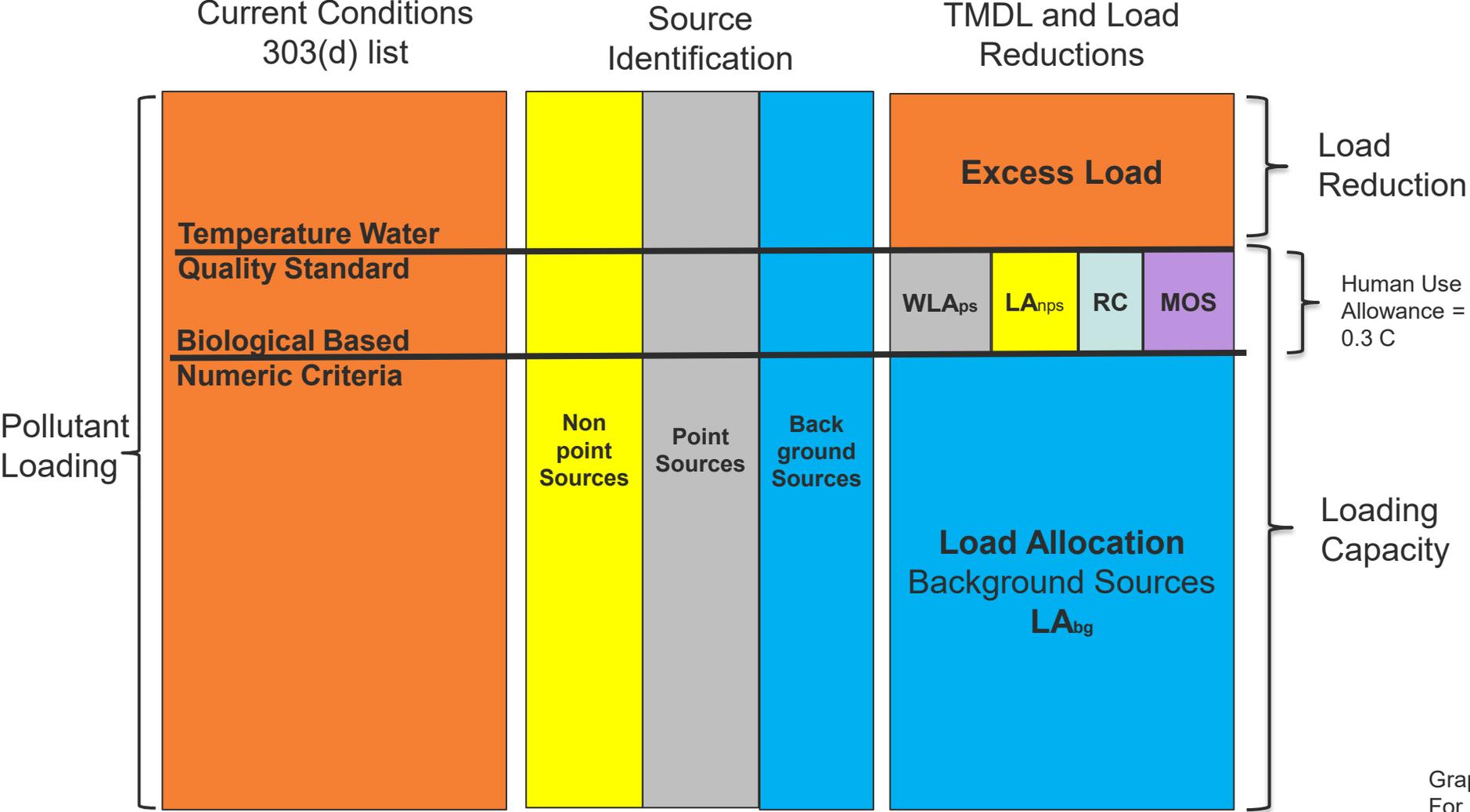
Lower Columbia-Sandy Subbasin technical informational webinar

Tuesday, March 14, 2023, 10 a.m. to 11:30 a.m. PT

Webinar registration on the rulemaking page under public involvement:

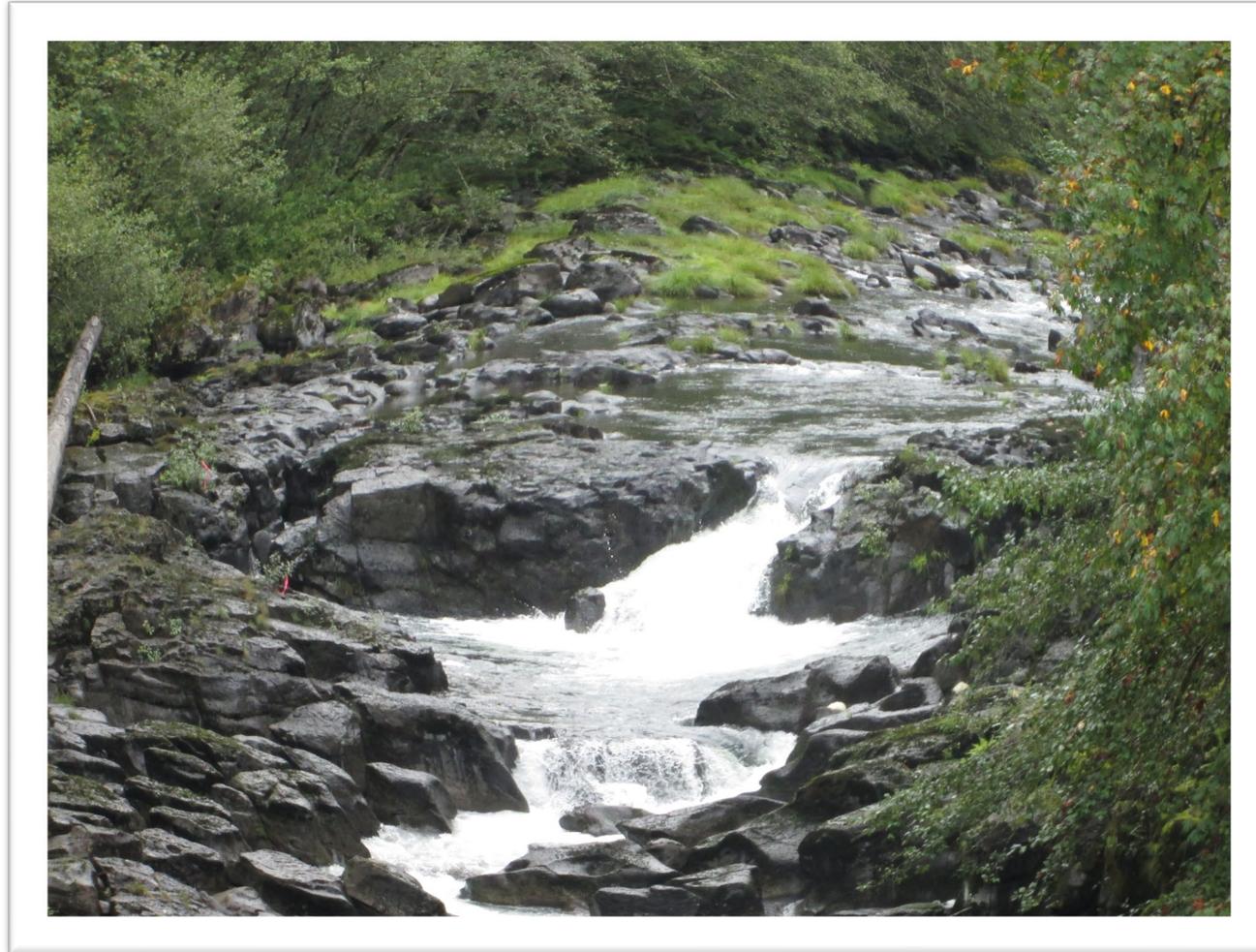
<https://www.oregon.gov/deq/rulemaking/Pages/sandytempTMDL.aspx>

$$\text{TMDL} = \text{WLA}_{ps} + \text{LA}_{nps} + \text{LA}_{bg} + \text{MOS} + \text{RC}$$



Graphic not to scale.
For illustrative purposes only.

Break – back at 11:15



Water Quality Management Plan: Lower Columbia-Sandy Subbasin



Water Quality Management Plan components

WQMP Section 5.3 Implementation plan requirements, page 11

- Name Responsible Persons, including Designated Management Agencies
- Management strategies that the entity will use to achieve load allocations and reduce pollutant loading
- Timeline for strategy implementation and a schedule for completing measurable milestones
- Performance monitoring and a plan for periodic review and revision of implementation plans

Reference: Oregon Administrative Rule [340-042-0040\(4\)\(I\)](#)

Proposed List of Responsible Persons and Designated Management Agencies

Entity	Jurisdiction	Approximate percentage of total subbasin area	Approximate percentage of acreage within 150' of streams
US Forest Service	USFS managed lands and roads	68.62%	73.44%
Oregon Department of Forestry	Non-federal forestlands: State and private forest operations, practices and activities (including roads)	13.33%	12.68%
US Bureau of Land Management	BLM managed lands and roads	4.42%	4.62%
Oregon Department of Agriculture	Agricultural lands and activities	3.95%	2.81%
Clackamas County	County-owned lands, county roads and rural land use	3.54%	1.93%
Multnomah County	County-owned lands, county roads and rural land use	1.18%	0.63%
City of Portland	City-owned lands, parks, facilities and roads	0.88%	0.95%
Oregon Parks and Recreation Department	State park lands and facilities	0.82%	0.69%
Oregon Department of Transportation	Highways, rights-of-way and facilities	0.77%	0.51%
City of Gresham	City-owned lands, parks, facilities and roads	0.74%	0.37%
City of Troutdale	City-owned lands, parks, facilities and roads	0.50%	0.21%
City of Sandy	City-owned lands, parks, facilities and roads	0.17%	0.12%
Union Pacific Railroad	Rail lines and rights-of-way	0.14%	0.12%
Oregon Department of Fish and Wildlife	State-owned/operated refuges	0.06%	0.07%
Port of Portland	Port-owned/operated facilities and roads	0.03%	0.03%

**WQMP Section 5.1
Identification of
implementation
responsibilities,
page 8**

Rationale for being named as Responsible Person/Designated Management Agency in WQMP

- DEQ developed initial list from a DMA mapping exercise
 - Included any entity that has ownership or jurisdiction within the project area
- DEQ is still evaluating which responsible persons, including DMAs need to develop an implementation plan
 - Small or no ownership/ jurisdiction in riparian area
 - Cannot implement management strategies for specific reasons

Rationale for being named as Responsible Person/ Designated Management Agency

Question:

What additional evaluation criteria should be considered?

Management strategies

WQMP table 2, page 2

Priority Planting and Management Strategies

- Insufficient height and density of riparian vegetation
- Water withdrawals
- Channel morphology and hydromodification

Riparian vegetation

WQMP table 2, page 2

- Riparian tree and vegetation planting, riparian vegetation management, voluntary riparian tree retention, riparian invasive plant control, riparian fencing or other livestock riparian exclusion methods
- Increase site effective shade through streamside vegetation management strategies using regulatory programs and voluntary activities
- Maintain plants until free to grow; monitor survival rates
- Develop, update and/or enforce riparian code/ordinance to ensure streamside native vegetation is protected or restored, acquire or designate conservation easements along riparian areas

Water withdrawals

WQMP table 2, page 2

- Pursue instream water right transfers and leases; state agency water right application reviews
- Irrigation conservation and management
- Repair or replace leaking pipes and infrastructure
- Implement water consumption restrictions during summer months and provide incentives for water conservation

Channel modification

WQMP table 2, page 2

- Conduct whole channel restorations
- Riparian road re-construction/obliteration activities
- Riparian fencing or other livestock exclusion methods
- Protect and enhance cold water refuges
- Dam management strategies
- Remove in-channel ponds or modify pond structures



Western Oregon

Management strategies

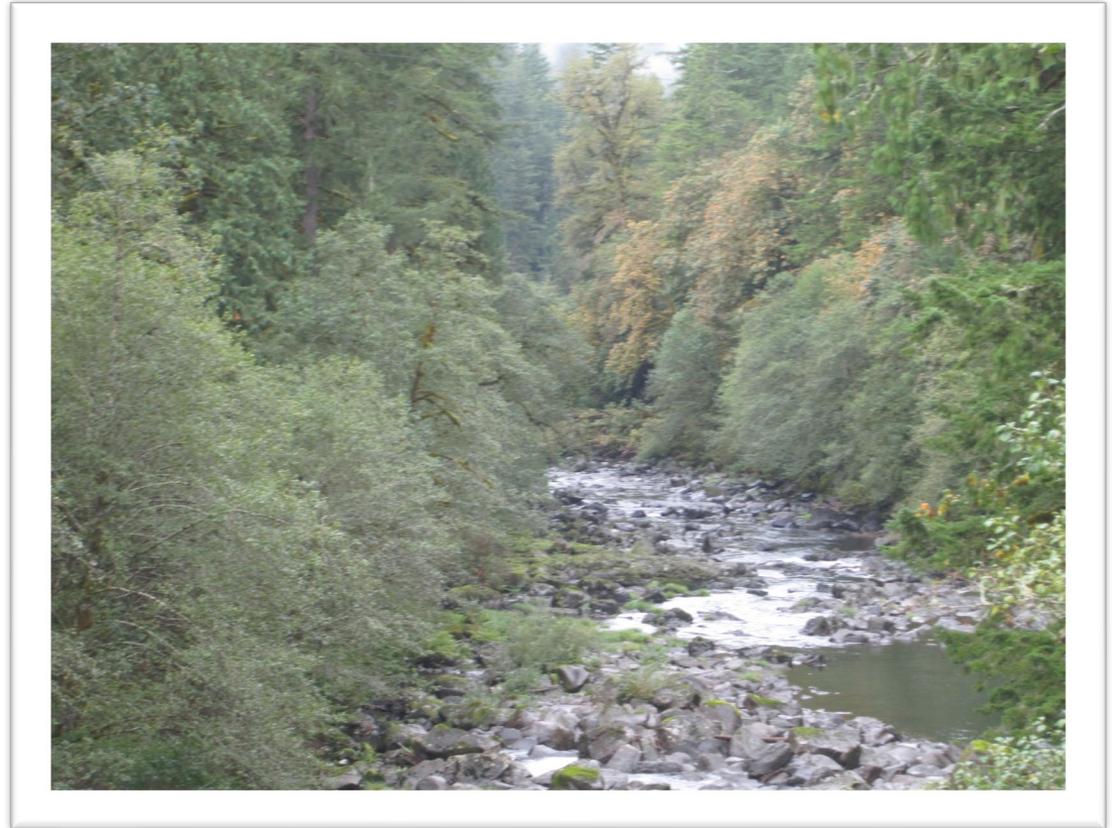
Question:

Are there additional specific management strategies that should be added to the WQMP in table 2?

Prioritizing areas for restoration/ protection

WQMP section 5.3.2, page 12

- Shade gap - percent difference between current effective shade and site potential effective shade (restored condition)
- Compare current riparian vegetation characteristics to a restored riparian condition



Bull Run River, Oregon

Proposed shade assessment tools

WQMP section 5.3.2, page 12

- Measure effective shade at the stream surface using standard stream monitoring equipment, such as the Solar Pathfinder™, or advanced methods using hemispherical imagery. Determine vegetation type, canopy density, stream width and stream orientation.
- Confirm and protect or establish overstory, woody vegetation in a 120-foot width buffer zone from the stream bank.
- Conduct modeling using the Heat Source model (as used in this TMDL) or another method approved by DEQ through the implementation plan approval process.

Prioritizing implementation and assessing shade

Questions:

- What additional prioritization methods should DEQ consider?
- What other location-specific assessment methods should DEQ consider?

Designated Management Agency required monitoring and reporting

WQMP section 5.3.3.1, page 13

Question:

Should responsible persons and Designated Management Agencies be required to enter restoration data into Oregon Watershed Restoration Inventory (OWRI)?

Reference: Oregon Watershed Enhancement Board

<https://www.oregon.gov/oweb/data-reporting/Pages/owri.aspx>

Designated Management Agency required monitoring

WQMP section 4.2, page 7; section 6.1, page 17

- DEQ monitors and assesses stream temperatures over time to determine water quality status
- DEQ anticipates developing a temperature monitoring plan with DMAs to assess progress attaining temperature standards over time
- Some DMAs named in Section 5 will be required to undertake monitoring actions in areas within their jurisdiction or ownership to help determine the status of instream water quality and landscape conditions associated with water quality
- DEQ is currently evaluating which responsible persons and DMAs will be responsible for water quality monitoring

Schedule for implementation plan submittal

WQMP section 5.4, page 16

Plans proposed to be due 18 months after EPA approval of Willamette Mainstem Temperature TMDL and must include:

- Management strategies that the entity will use to achieve load allocations and reduce pollutant loading
- Timeline for strategy implementation and a schedule for completing measurable milestones
- Performance monitoring and a plan for periodic review and revision of implementation plans
- Any other analyses or information specified in the WQMP

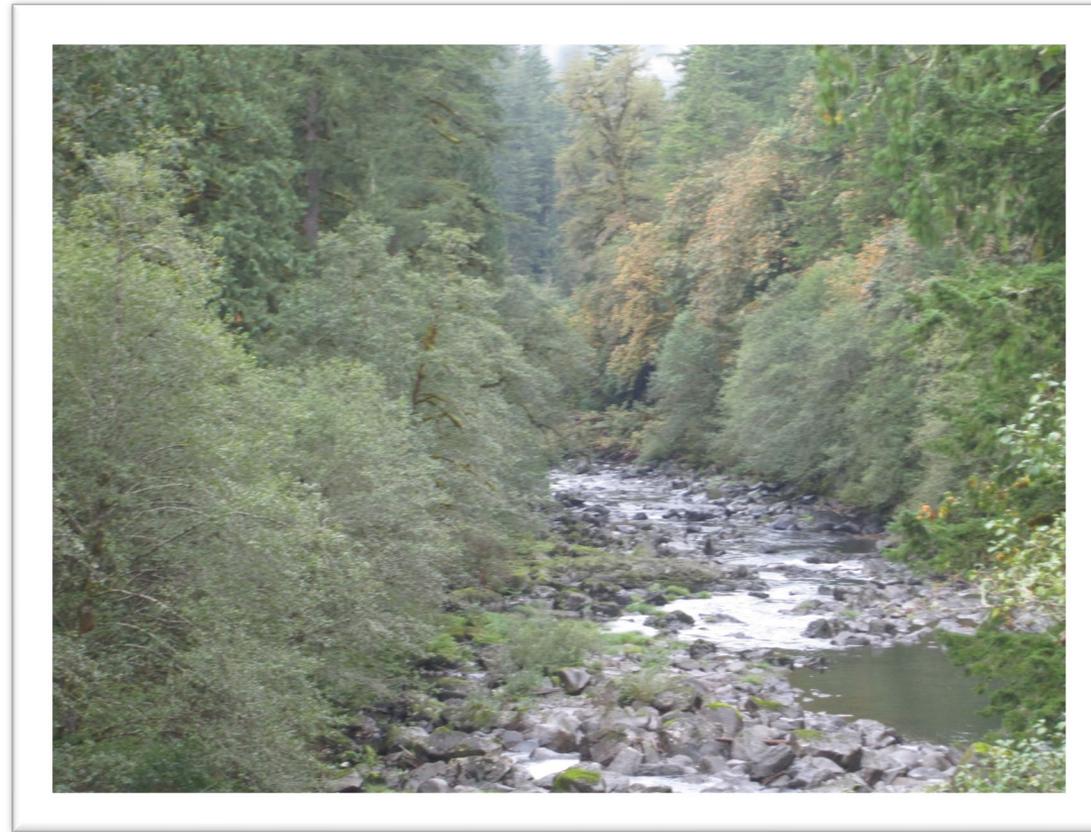
Updating 2005 WQMP - Bacteria

- DEQ's goal is to include bacteria specific information from the 2005 WQMP in the updated WQMP
- No new assignment of responsible persons/ Designated Management Agencies
- Carry forward management strategies included in the existing WQMP
- If achievable, WQMP with bacteria information will be prepared for Rule Advisory Committee meeting #2

Water Quality Management Plan: Lower Columbia-Sandy Subbasin

Questions?

Draft fiscal impact statement: Lower Columbia-Sandy Subbasin



Fiscal impact analysis

Oregon APA (ORS Chapter 183)

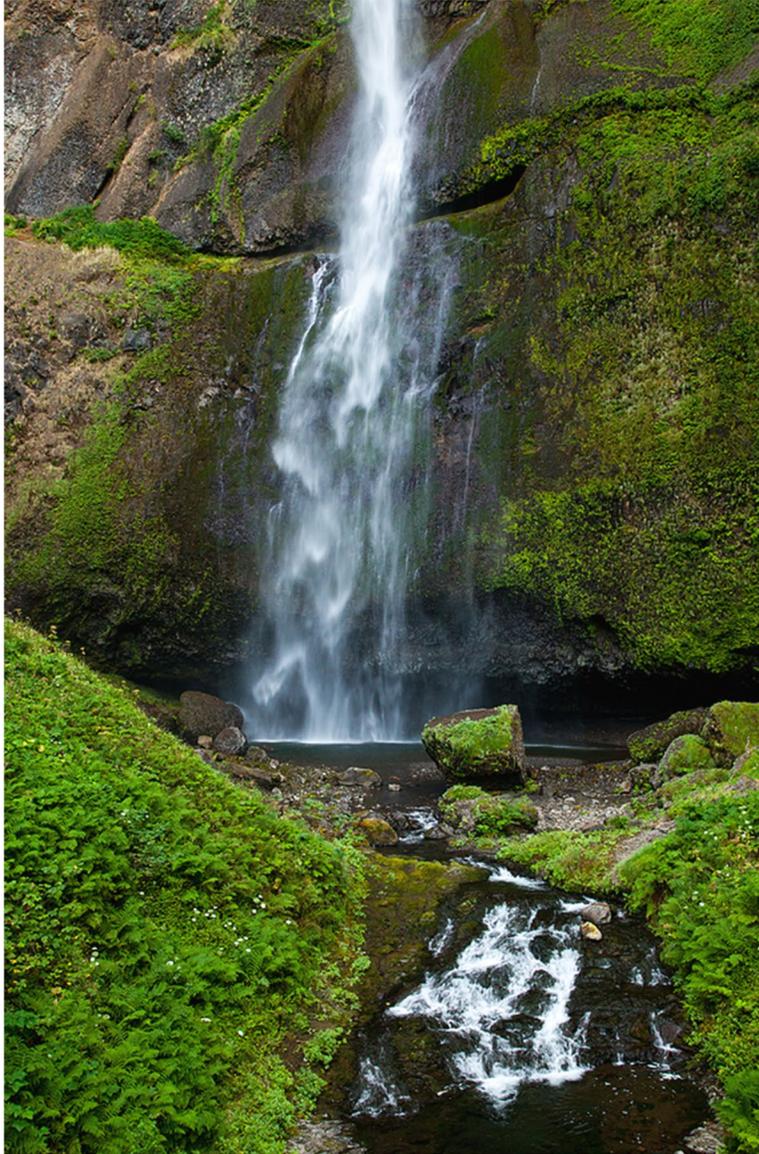
- Public notice must include a Statement of Fiscal Impact
- DEQ must solicit input from a rule advisory committee on:
 - Whether the rule has fiscal impact
 - The extent of that impact
 - Whether the rule will have a significant adverse impact on small businesses
- Racial equity statement ORS 183.335(2)(b)(F)
https://www.oregonlegislature.gov/bills_laws/ors/ors183.html
- Environmental justice consideration ORS 182.545
https://www.oregonlegislature.gov/bills_laws/ors/ors182.html
- Land use compatibility statement

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

Rule advisory committee input after meeting #1 email Sandy.SubbasinTMDL@DEQ.oregon.gov	Due Mar. 3, 2023
Rule advisory committee input on meeting #1 summary	Due Mar. 9, 2023 (approx.)
Webinar for technical information	Mar. 14, 2023
Rule advisory committee #2 meeting materials posted online	Mar. 22, 2023 (approx.)
Rule advisory committee meeting #2	Apr. 5, 2023, at 10 a.m.
Rule advisory committee input after meeting #2 email Sandy.SubbasinTMDL@DEQ.oregon.gov	Due Apr. 13, 2023
Public notice and public hearing (45 days)	May 2023 – Jun. 2023



Contacts and resources

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Web pages (links to rulemaking pages, Quality Assurance Project Plans, more)

Project page: <https://www.oregon.gov/deq/wq/tmdls/Pages/tmdlRlc-sandy.aspx>

Rulemaking webpage:

<https://www.oregon.gov/deq/rulemaking/Pages/sandytempTMDL.aspx>

Committee input and rulemaking email:

Sandy.SubbasinTMDL@DEQ.oregon.gov