

Temperature Total Maximum Daily Load Replacement Project: Rogue River Basin

Written Comments

This document provides a compilation of written comments submitted by Rule Advisory Committee members during the designated comment period for RAC Meeting 1. Meeting materials were posted on Feb. 12, 2026, and the RAC convened on Feb. 26, 2026. The comment period was open Feb. 26 through March 13, 2026.

Original comments are on file with DEQ.

Temperature Total Maximum Daily Load Replacement Project: Rogue River Basin	1
Written Comments.....	1
Comment 1: Klamath-Siskiyou Wildlands Center for Rogue Riverkeeper.....	2
Comment 2: Oregon Department of Agriculture	8
Comment 3: City of Medford	9
Comment 4: Oregon Department of Fish and Wildlife.....	24
Comment 5: Jackson Soil and Water Conservation District.....	29
Comment 6: City of Medford	34
Comment 7: Bureau of Land Management	40
Non-discrimination statement.....	42

Comment 1: Klamath-Siskiyou Wildlands Center for Rogue Riverkeeper

March 11, 2026

Sent via email to RogueRiver.TemperatureTMDL@DEQ.oregon.gov

March 9, 2026

RE: 2026 TEMPERATURE TMDL REPLACEMENT RAC MEETING #1 COMMENTS

To DEQ TMDL planners,

Thank you for the opportunity to participate in the temperature TMDL replacement RAC and to submit comments and questions following the first RAC meeting for the 2026 Temperature TMDL replacement process.

DEQ Enforcement is Crucial to Protect Cold-Water Species

At the first RAC meeting, DEQ outlined its authority to enforce violations of water quality standards, including failures to develop implementation plans, failures to implement required measures under the Water Quality Management Plan (WQMP), and failures to comply with established timelines.

There was little apparent enforcement of the prior TMDL and WQMP. After KS Wild first raised concerns regarding Bureau of Land Management (BLM) riparian forest and shade removal, it took nearly a year for DEQ to schedule a field inspection with BLM. The timber sale in question had already been finalized, and logging could have proceeded during that time, potentially resulting in the irreversible loss of stream shade. While KS Wild appreciates that a site visit was ultimately scheduled, such delays are unacceptable. A response time of nearly a year to address a complaint creates a significant risk that the shade will already have been removed and the environmental damage completed before any oversight occurs.

KS Wild and Rogue Riverkeeper urge DEQ to fully exercise its enforcement authority, and in a timely manner, moving forward. Meaningful improvements to water temperature and overall water quality in the Rogue River Basin will not occur without consistent and visible enforcement.

What changes will DEQ implement in its management practices moving forward to address prior inaction? Please address this in the forthcoming WQMP, including the barriers which allegedly prevent timely enforcement measures.

Oregon's temperature criteria establish biologically based temperature limits intended to protect salmon and steelhead during critical life stages. However, these regulatory thresholds exceed the upper range considered optimal for salmonid health. Scientific research shows that chronic exposure to temperatures above approximately 18°C (64°F) can impair growth, reduce immune function, and increase susceptibility to disease, while temperatures approaching 20-22°C (68-72°F) can create migration barriers and reduced dissolved oxygen availability. Acute exposures at higher levels can result in mortality. Importantly, optimal temperature for spawning has been repeatedly confirmed to be around 12°C (54°F), underscoring how even moderate exceedances can compromise reproductive success. Oregon's temperature criteria do not reflect these standards. While we understand DEQ has no control over the regulations in that sense, this

scientific context underscores the necessity of actual, on-the-ground implementation of WQMPs and associated implementation plans, coupled with consistent enforcement of noncompliance.

We urge DEQ to use its full range of enforcement tools in a timely manner to ensure that regulatory standards translate into measurable ecological protections. Without accountability, water quality standards remain theoretical and aspirational rather than protective.

This request also includes the enforcement of the TMDL and WQMPs on the Oregon Department of Agriculture (ODA). In 2023, DEQ and ODA signed a Memorandum of Agreement whereby the two state agencies agree to “work together to protect and improve water quality in Oregon’s streams flowing through agricultural lands or impacted by discharges from agricultural activities.”¹ However, as written, the agreement does not clearly establish accountability measures or consequences in the event that ODA fails to implement the agreement or measures which contribute to maintaining or reducing stream temperature. Without clearer accountability provisions, the effectiveness of the agreement in ensuring consistent water quality protection is limited.

BLM, Timber Harvest, and Riparian Buffers

As a DMA entity which is responsible for management of 28.54% of the streamside area in the Rogue Basin, the Bureau of Land Management (BLM) is “central to achieving load allocations.”²

BLM’s current riparian buffer for intermittent, non-fish-bearing streams is 50 feet.³

At the first RAC meeting, the BLM’s RAC representative argued that a 50-foot timber harvest buffer should be recognized by DEQ as adequate for intermittent streams because seasonally dry streams do not contribute to downstream water temperature increases during the summer.⁴ However, this assertion is not backed by current science. In fact, science indicates that intermittent, non-perennial streams can measurably impact downstream water temperature because (a) when an intermittent reach dries, it no longer contributes cooler upstream water to downstream segments, (b) intermittent reaches can cool downstream water via groundwater exchange, and (c) when an intermittent stream rewets, the first flush can carry warm water from heated dry channels.

A 2014 study indicated the “important ecological function of intermittent and ephemeral stream channels as sources of cold subsurface discharge to downstream waters during the dry season.”⁵ It noted that “hyporheic flow, composed of mixed shallow ground water and river water under and along the channel bed, can continue in these intermittent channels after surface flow has ceased and may often be thermally moderated, buffered from the effects of solar heating by the channel substrate.”⁶ This hyporheic flow “can create thermally distinct habitats where it re-emerges in isolated pools in intermittent streams,” and that “[s]mall, localized refugia created at small nonperennial tributary confluences with larger streams could

¹ [ODEQ & ODA \(2023\) Memorandum of Agreement: Collaboration on Achieving Water Quality Goals Relating to Agricultural Nonpoint Source Pollution.](#)

² ODEQ (2026) Draft Water Quality Management Plan, at p. 11

³ BLM (2016) Southwest Oregon Resource Management Plan, at p. 78.

⁴ Pers. Comm. February 26, 2026, Temperature TMDL RAC Meeting #1,

⁵ Ebersole, J. L. et al. (2014) Predicting the occurrence of cold-water patches at intermittent and ephemeral tributary confluences with warm rivers. *Freshwater Science* 34(1):111-124.

⁶ *Id.*

potentially exist at high frequencies along warm-river profiles.”⁷ The study found that “tributaries with dry channels provided significant cold-water patches in mainstem rivers during the time of the year with the warmest water temperatures.” Ultimately, intermittent and ephemeral stream channels were recognized as providing “cold hyporheic discharge to downstream waters during the dry season,” offering thermally distinct water that supports cold-water fishes even after surface flow ceases.⁸

Similar findings were reaffirmed in a 2021 study which indicated that “[c]hannel subsurface temperature levels from an intermittent flow tributary were generally cooler than those in the perennial stream in the summer and warmed during winter months, indicating that the tributary may have a localized moderating effect on stream temperature.”⁹

In 2022, it was reiterated that “[n]on-perennial rivers and streams transport considerable amounts of sediment and nutrients when flow reactivates, which significantly impact downstream water quality and ecosystem processes.”¹⁰ The authors of the 2022 study warn of the “critical need to integrate non-perennial rivers directly and holistically into the science, policy, and management of our river systems.”¹¹ This need grows as climate change effects worsen as “[c]limate change is shifting precipitation and drought patterns in novel ways, which will have a direct impact on stream drying characteristics that will vary by region,” and shift baselines in a way where “rivers that have never gone dry before will become non-perennial.”¹² DEQ must take these scientific findings into consideration before excluding intermittent, non-perennial streams from buffer protections. The science in fact shows that drying stream channels contribute in a significant way to downstream water quality conditions sufficient to even provide beneficial ecosystem services for cold-water fishes.

Moreover, the BLM’s argument that a 50 feet buffer in the timber harvest context is wide enough to make meaningful water temperature reductions even on perennial streams is unfounded. To the contrary, science repeatedly indicates 50 feet is *not* wide enough: “30 m [98.43 ft] riparian buffers minimized post-harvest temperature increases;”¹³ “buffers begin to reach microclimatic conditions comparable to those of continuous riparian forest at approximately 80 m [262.47 ft] and above, on each side of the river;”¹⁴ “15 m wide buffers are still not enough to protect the entire stream-riparian ecosystem in most situations . . . 30m or even wider buffers have been shown to be necessary;”¹⁵ and “to preserve riparian microclimatic conditions and species dependent on

⁷ *Id.*

⁸ *Id.*

⁹ Durfee, N. et al. (2021) Stream Temperature and Environment Relationships in a Semiarid Riparian Corridor. *Land* 10, 519.

¹⁰ Zimmer, M. A. et al. (2022) The unknown biogeochemical impacts of drying rivers and streams. *Nature Communications* 13:7213.

¹¹ *Id.*

¹² *Id.*

¹³ Yonce, H. N. et al. (2021) Forest riparian buffers reduce timber harvesting effects on stream temperature, but additional climate adaptation strategies are likely needed under future conditions. *Journal of Water and Climate Change*, 12.5.

¹⁴ Williamson, J. et al. (2020) Riparian buffers act as microclimatic refugia in oil palm landscapes. *Journal of Applied Ecology*, 58:431-442.

¹⁵ Myrstener, M. et al. (2025) Riparian buffers mitigate downstream effects of clear-cutting on instream metabolic rates. *Journal of Environmental Management* 379:124740.

those, buffer strips between the stream and the clear-cut should exceed 30 m.”¹⁶ DEQ itself acknowledged in 2008 that trees beyond the immediate streamside area are vital for affecting stream temperature and further, that “forests even beyond the distance necessary to shade a stream can influence the micro-climate, providing cooler daytime temperatures.”¹⁷

While the BLM’s governing resource management plan¹⁸ mandates riparian cut buffers of 120 feet on fish-bearing and perennial streams, the on-the-ground timber harvest buffers often do not meet this requirement, implicating trees for logging within 120 feet from the stream.¹⁹

Further, BLM has noticed its intent to revise its current resource management plan²⁰ and is proposing to remove Riparian Reserve designations intended to protect aquatic habitat and shrinking riparian cut buffers to as little as **25 feet** in favor of maximizing timber harvest at the expense of watershed health.²¹ It is crucial that DEQ holds BLM accountable during this process to ensure the agency complies with Oregon water quality standards and the Clean Water Act.

Please address these concerns in the forthcoming WQMP.

Industrial Wastewater

In DEQ’s Response to Comments during the rulemaking for the 2008 temperature TMDL, it claimed to “not conclude that industrial wastewater is a known source of increased temperatures in the Rogue Basin.”²² It is important to clarify whether this remains DEQ’s position, and if so, whether that implies that industry is not held accountable for discharges that raise stream temperatures. **Please address this in the forthcoming WQMP.**

Regulatory Nexus with Federal Emergency Management Agency (FEMA) Floodplain Requirements and National Flood Insurance Program (NFIP)

A 2016 Biological Opinion (BiOp)²³ from National Oceanic and Atmospheric Administration (NOAA) Fisheries concluded that FEMA’s implementation of the NFIP in Oregon jeopardized listed salmon and steelhead species under the Endangered Species Act (ESA). To remain in the NFIP, communities must ensure that development in the 100-year floodplain does not adversely modify critical habitat or violate water quality standards, such as temperature. Effective December 1, 2024, FEMA requires Oregon communities to adopt “Pre-Implementation Compliance Measures” (PICMs) for floodplain development that specifically aim to protect water quality (including temperature) and salmon habitat to comply with the ESA. The mandated PICMs require “no net loss” of floodplain storage, riparian habitat, and water quality. This directly

¹⁶ Olden, A. et al. (2019) The effect of buffer strip width and selective logging on riparian forest microclimate. *Forest Ecology and Management*, 453:117623.

¹⁷ ODEQ (2008) Rogue River Basin TMDL, Response to Public Comment, p. 35.

¹⁸ BLM, *supra* note 3.

¹⁹ Personal site visits to the Take a Chance timber sale area, Last Chance Forest Management Project, unit 15-9.

²⁰ 91 Fed. Reg. 8017 (February 19, 2026)

²¹ [BLM’s 2026 RMP Revision Planning Criteria](#), at p. 2

²² ODEQ, *supra* note 17, at ps. 37-38.

²³ [NOAA \(2016\) Biological Opinion for the Federal Emergency Management Agency’s National Flood Insurance Program in the State of Oregon.](#)

links to temperature TMDLs, as removing riparian vegetation (shade) in the floodplain increases water temperatures, violating TMDL requirements.

We request that forthcoming WQMPs explicitly state how DMAs will utilize the regulatory nexus with FEMA and ESA within their jurisdictions and specifically implement requirements for temperature. Currently, DMAs have adopted PICMs but there is little to no enforcement by DEQ on implementation as it relates to temperature TMDLs.

2008-2026 Water Temperature Reductions

Please provide an accessible summary of data describing average water temperature reductions since the issuance of the 2008 temperature TMDL for the Rogue River Basin to the present.

Additionally, please summarize the extent to which the proposed replacement is expected to further improve these reductions.

Climate Change

It is important that DEQ recognizes and addresses the fact that climate change is intensifying existing water quality challenges in the Rogue River Basin and compounding the risks addressed by the temperature TMDL. Rising air temperatures, reduced snowpack, earlier spring runoff, prolonged summer low flows, and more frequent drought conditions are contributing to higher stream temperatures, diminished cold-water refugia, and increased seasonal drying of historically perennial or intermittent waterbodies. These trends directly undermine attainment of temperature standards and threaten the ecological integrity of the Rogue basin.

Warmer baseline conditions increase the likelihood that streams will exceed biologically protective thresholds for salmon and steelhead. As flows decline, streams are more susceptible to solar heating, while reduced riparian cover from logging and altered hydrology from damming further amplify warming. Climate change is also contributing to longer and more severe wildfire seasons across southwest Oregon, increasing the frequency and scale of high-severity wildfires in the Rogue basin. Post-fire landscapes are highly vulnerable to erosion, loss of riparian canopy, and altered hydrology. Post-fire runoff carries increased sediment, nutrients, and debris into waterways, further degrading aquatic habitat.

DEQ must incorporate the ecological realities into TMDL planning, implementation, enforcement, and adaptive management to ensure water quality standards remain protective under increasingly altered and continuously changing environmental conditions.

Conclusion

We appreciate being a part of this collaborative process and hope we can contribute to a temperature TMDL replacement that results in meaningful water temperature reductions to benefit the special native aquatic species of the Rogue River basin. Feel free to reach out if there are any questions.

Sincerely,

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Comment 2: Oregon Department of Agriculture

March 12, 2026

Sent via email to RogueRiver.TemperatureTMDL@DEQ.oregon.gov

Draft Water Quality Management Plan

- Reference: Page 5, Table 2, Management strategies to address modifications to flow/discharge.
 - Comment: Reduce or eliminate tailwater from flood irrigation by converting to sprinkler irrigation and other irrigation management improvements.
- Reference: Page 12, Table 3, ODA area of jurisdiction.
 - Comment: Suggested language: "The ODA Agricultural Water Quality Program has jurisdiction over water quality related to agricultural activities on private or state lands, both commercial and non-commercial, including livestock, horses, pastures, hay, vineyards, field crops, hemp, etc., regardless of zoning. The CAFO program is a separate program in ODA that has jurisdiction over dairies and other types of confined animal feeding operations."
- Reference: Pages 15 and 16, Section 8.2, ODA's preparation of an implementation plan.
 - Comment: This is not part of the MOA. The MOA does not state the DEQ gets to make a conclusion of what process ODA will use to address the TMDL.
- Reference: Page 22, Figure 2, Shade gap analysis and streamside evaluation decision tree for responsible persons who are not ODA, ODF, BLM, or USFS.
 - Comment: This is an ongoing conversation between ODA and DEQ. We may be able to complete these analyses in the future in SIAs. ODA is interested in working with DEQ, ODF, and sister agencies to develop solutions to meet these GIS analysis requests. ODA has recently explored obtaining additional staffing and other resources to meet TMDL requests, however current state budgeting is not conducive to fulfilling this request. ODA is interested in ongoing conversations and working with DEQ to create the best available solutions with available resources.

Currently, we do not plan on including Shade Gap Analysis and streamside evaluation or intent to implement a 120-foot streamside buffer into our implementation plans due to a lack of resources and capacity. We are not against the concept of shade gap analysis and streamside evaluation, but we do not have the resources and capacity with existing staff to complete these tasks.

Comment 3: City of Medford

March 12, 2026

Sent via email to RogueRiver.TemperatureTMDL@DEQ.oregon.gov

Comments on Draft Total Maximum Daily Loads for Rogue River Basin – WATER QUALITY MANAGEMENT PLAN for Temperature

Advisory Committee Member – Alena Beltz, City of Medford

March 12, 2026

1 – Why are Native Plants the ONLY option for Vegetation Planting to increase streamside shade? WQMP Page 6.

If overstory riparian vegetation (trees) reduces solar radiation, then why would we need to plant NATIVE trees and also SHRUBS. Whether a plant is Native seems irrelevant within urbanized areas and shrubs don't seem important if shade is the goal. Need to separate the desire to have a "habitat restoration" with the requirement for shade and temperature reduction.

NOTE: This comment was made at the first RAC meeting, but the response didn't seem to directly address the comment. I understand the desire for native habitat restoration, and that we could wait for areas to redevelop, but where we can't do native restoration in the near term, wouldn't DEQ still want us to try to retain and plant shade trees, even non-native ones? Sometimes, in areas where backyards go right up to the creek, a property owner may be willing to plant a large (non-native) tree that provides shade and it would benefit stream temperatures to incentivize those actions.

It seems like there should be a 4th strategy listed in section 4.2.1 – "Creek Shading in Urban Areas: Where existing development has already encroached on the stream corridor, plant trees (native or non-native) or develop alternative means to shade the waterway to reduce temperature increases in the urbanized area, and anticipate future opportunities to regain space and restore a native riparian corridor."

4.2.1 Streamside vegetation

Loss of streamside vegetation is one of the largest contributors to excess solar loading in the basin (TMDL, Section 7.2). **Overstory riparian vegetation** reduces solar radiation by shading streams. Effective shade is the amount of sunlight blocked by vegetation and terrain and serves as the primary surrogate used to express load allocations in the TMDL. Effective shade targets represent another way to express the amount of solar loading that will meet the human use allowance and load allocations for entities managing streamside vegetation. TMDL **Appendix CXX** summarizes the factors that influence effective shade.

The primary vegetation management strategies to meet effective shade targets include:

1. Vegetation planting and establishment

Plant native trees and shrubs in streamside areas with little or no shade-producing overstory to increase effective shade and improve riparian function. Many of these areas are dominated by invasive species that limit natural regeneration and canopy development.

Also, it seems like there should be another management strategy listed in Table 2 for Riparian Habitat Removal:

- Where restoration is not a current option in some urbanized areas, incentivize tree planting along channels to increase shade

2 – HUA for Dams and Reservoirs? WQMP Page 8.

The TMDL tables 9-1 through 9-5 allocate zero HUA for dam and reservoir operations, but the WQMP references a human use allowance which seems inconsistent.

4.2.4 Dam and reservoir operation management strategies

Surface water impoundments contribute to elevated stream temperatures where reservoir operations increase exposure to warm surface water and reduce delivery of cold water during the critical period. The TMDL source assessment and thermal modeling identified large dams and reservoirs as sources of thermal loading under certain conditions. Dams of all sizes can increase stream temperature, depending on dam and stream characteristics, location, and watershed density.

The TMDL allocates a portion of the human use allowance to dam and reservoir operations in some locations and establishes requirements that no net warming occur below the dam beyond the assigned HUA during the critical period, expressed through upstream temperature surrogate measure targets (see TMDL Section 9.1.5.1XX). Implementation strategies include modifying outlet structures for selective withdrawal of cooler water, adjusting release timing and volume to avoid warming, and coordinating operations with downstream conditions.

3 – How does the timing of plantings relate to the effective shade target goal? WQMP Page 9.

If we plant 10% of the unshaded creekside area, and protect all other vegetation from removal, does this assume we are meeting this 10% goal? Or does the creekside vegetation need to grow sufficiently within those 10 years to actually increase shade by 10%?

5.2 Schedule for achieving appropriate incremental and measurable water quality targets

DEQ uses a benchmark of 10% cumulative improvement in effective shade every 10 years to evaluate progress. Annual reports must show how actions contribute toward this target, and DEQ reviews basin-wide progress every five years. Implementation plan revisions are required if monitoring results, changed conditions, or insufficient progress warrant adjustments.

The 10% cumulative improvement in effective shade every 10 years benchmark assumes consistent implementation of the three primary streamside vegetation strategies in Section 4.2.1 and normal vegetation growth rates without major disturbance. Timelines may be affected by restoration site availability, land ownership patterns, project opportunities, impacts from climate change, invasive species, or natural disturbances.

4 – Which streams need a “Streamside Evaluation”? WQMP Page 22 and 23.

Just the 303d listed streams? Or all waters of the US in the DMA’s jurisdiction? Or all waters of the US in a 303d watershed unit? This should be made more clear in the WQMP.

10.2.1.1 Streamside evaluation

Responsible persons in Table 3 with jurisdiction over streamside lands must complete a streamside evaluation as part of the implementation plan according to the schedule in Table 7. The evaluation must classify streamside areas into the following categories:

5 – How do we use the shade gap analysis to “inform the streamside evaluation”? WQMP Page 23.

If we have a shade target of 77%, with current effective shade at 31%, how do we know whether a certain stretch of the creek is meeting the target? Is it assumed to be meeting if there is a certain canopy height and density? It is impossible to know without knowing how the shade target was determined. The WQMP should include more guidance on how the effective shade targets should be interpreted and how they should be used during the streamside evaluation.

10.2.1.1 Streamside evaluation

Responsible persons in Table 3 with jurisdiction over streamside lands must complete a streamside evaluation as part of the implementation plan according to the schedule in Table 7. The evaluation must classify streamside areas into the following categories:

- **Protect/enhance/maintain** – Areas already meeting or trending toward effective shade targets. Actions focus on protecting existing canopy, enhancing stand health, and maintaining conditions that sustain long-term shade.
- **Planting/establishment** – Areas lacking adequate riparian canopy or dominated by non-native vegetation. Actions focus on planting and establishing native species to create new canopy and move conditions toward effective shade targets.
- **Vegetation management** - Areas where selective thinning or other active management is needed to improve long-term canopy development and structure, ensuring healthier stands that provide effective shade.
- **Constraint-limited** – Areas where achieving effective shade targets is not feasible due to physical barriers (e.g., infrastructure, buildings) or jurisdictional limitations (e.g., private ownership without cooperative agreements). Focus is on documenting these constraints and identifying opportunities for future action if conditions change.
- **Alternative strategy** – Areas where streamside shade is not the primary driver of thermal loading. In these cases, non-vegetative practices (e.g., flow augmentation, in-stream restoration, cold-water refuge protection) may provide more effective temperature management.

Responsible persons with a TMDL shade gap analysis, or those required to complete one under Section 10.2.1.2, must use the results to inform their streamside evaluation. Responsible persons not required to complete a shade gap analysis may use TMDL shade gap results or other DEQ-approved sources to inform their evaluation.

6 – For the Streamside Evaluation, how do we summarize the category extent in ACREAGE? WQMP Page 23.

What is the assumed width? Does that width vary by stream? Do we include a portion of the water surface? The WQMP needs to include the assumed width or the calculation method. Or, DMAs should be allowed to report using length instead.

10.2.1.1 Streamside evaluation

Responsible persons in Table 3 with jurisdiction over streamside lands must complete a streamside evaluation as part of the implementation plan according to the schedule in Table 7. The evaluation must classify streamside areas into the following categories:

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- **Vegetation management** - Areas where selective thinning or other active management is needed to improve long-term canopy development and structure, ensuring healthier stands that provide effective shade.
- **Constraint-limited** – Areas where achieving effective shade targets is not feasible due to physical barriers (e.g., infrastructure, buildings) or jurisdictional limitations (e.g., private ownership without cooperative agreements). Focus is on documenting these constraints and identifying opportunities for future action if conditions change.
- **Alternative strategy** – Areas where streamside shade is not the primary driver of thermal loading. In these cases, non-vegetative practices (e.g., flow augmentation, in-stream restoration, cold-water refuge protection) may provide more effective temperature management.

Responsible persons with a TMDL shade gap analysis, or those required to complete one under Section 10.2.1.2, must use the results to inform their streamside evaluation. Responsible persons not required to complete a shade gap analysis may use TMDL shade gap results or other DEQ-approved sources to inform their evaluation.

The evaluation must summarize the extent of each category in acres (or percentage where acreage is not feasible), identify priority areas for protection or restoration based on potential to reduce thermal loading, magnitude of the shade gaps, and feasibility. It must also describe the

7 – Why doesn't the streamside evaluation allow for recognition of areas that have sufficient shade provided by non-native species or urbanized/encroached areas that could be planted with non-native species? WQMP Page 23.

If there is good dense shade cover provided by non-native tree species in existing homeowners backyards, why does it matter if they aren't native? Did the shade gap analysis only consider native trees? What if there are areas where trees could be planted to shade the channel, but they aren't good candidates for native plant restoration because of existing urban encroachment?

The 2nd bullet should be edited and broken into three, for a total of 6 bullets instead of 5:

- Protect/enhance/maintain – keep the same
- Planting/establishment of Native Riparian Area – Areas lacking adequate riparian canopy or invasive species with the space available to restore a native riparian area.
- Actions focus on planting and establishing native species to create new canopy and move conditions towards effective shade targets using restoration.
- Planting/establishment of Vegetation providing Shade – Area lacking adequate riparian canopy without space available to restore a native riparian area due to encroachment by development. Actions focus on planting and establishing vegetation to provide shade including native and non-native tree species, as well as planning for future redevelopment and opportunities to increase space to provide a natural riparian area restoration.

- Vegetation Management – same
- Constraint Limited – same
- Alternative strategy - same

10.2.1.1 Streamside evaluation

Responsible persons in Table 3 with jurisdiction over streamside lands must complete a streamside evaluation as part of the implementation plan according to the schedule in Table 7. The evaluation must classify streamside areas into the following categories:

- **Protect/enhance/maintain** – Areas already meeting or trending toward effective shade targets. Actions focus on protecting existing canopy, enhancing stand health, and maintaining conditions that sustain long-term shade.
- **Planting/establishment** – Areas lacking adequate riparian canopy or dominated by non-native vegetation. Actions focus on planting and establishing native species to create new canopy and move conditions toward effective shade targets.
- **Vegetation management** - Areas where selective thinning or other active management is needed to improve long-term canopy development and structure, ensuring healthier stands that provide effective shade.

9 – Why would 120 feet be required to provide shade over the stream? WQMP Page 25.

Where is the referenced appendix? Seems like 50 ft has been recognized as appropriate for a shade providing buffer, so I'd like to see the referenced literature review.

10.2.1.3 120-foot slope buffer alternative

Responsible persons, including DMAs, that are required to complete a shade gap analysis, and responsible persons who choose not to use DEQ's shade gap results where available, may instead apply a 120-foot slope-distance buffer measured up-slope along the ground's contour from top of bank. The literature review in TMDL Appendix CXX shows that a 120-ft buffer is generally adequate to maintain stream shade and that potential shade loss at this distance is unlikely to cause stream temperature increases for most waterbodies. The buffer must protect overstory and woody vegetation and be enforceable by ordinance or regulation. Responsible persons must ensure that management activities within the buffer result in only limited shade reduction and meet applicable effective shade targets.

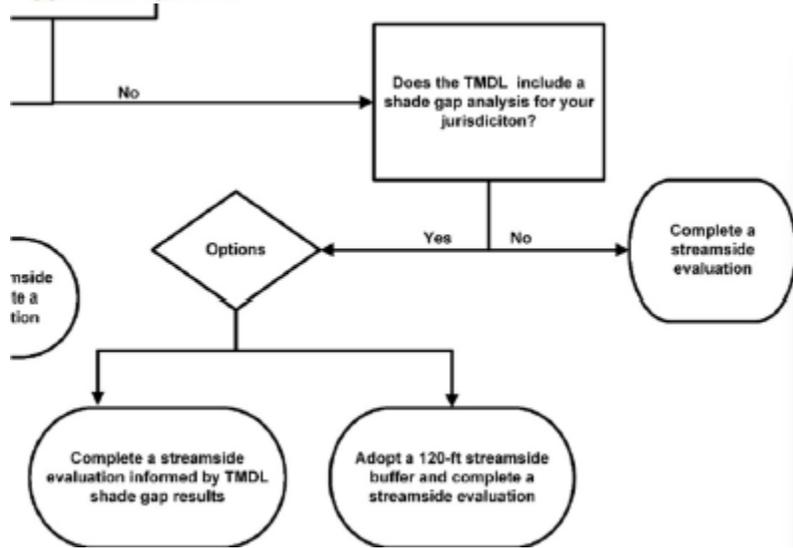
Streamside evaluations are still required to identify locations where restoration or protection actions are needed and to support adaptive implementation. The buffer option may be used alone or in combination with other strategies.

10 – How and when should DMAs use effective shade surrogate curves? WQMP Page 21/22.

In Medford, Bear Creek has a shade gap analysis. So, do we need to use the curves for all the other creeks within our jurisdiction? How is this reflected in the decision tree? How do we use the curves with the streamside evaluation?

It would be good if the WQMP had more information so that the reader isn't left with these questions.

The monitoring and assessments provide the technical basis for implementation plans by evaluating riparian conditions and identifying priority areas for protection or restoration most likely to meet load allocations. They also support tracking progress toward effective shade targets, recovery from natural disturbances, and adjustment of management strategies. To guide these evaluations, the TMDL establishes effective surrogate shade measures to express nonpoint source load allocations. The TMDL includes two types of effective shade surrogate measure targets: site-specific modeled targets (TMDL Section 9.1.5.2) and generalized effective shade curves surrogate measures by stream orientation, channel width, and mapping unit (TMDL Section 9.1.5.3). Responsible persons may use either type of target to conduct a shade gap analysis and inform a streamside evaluation. Alternative targets must be reviewed and approved by DEQ.



Comments on Draft Total Maximum Daily Loads for Rogue River Basin – Temperature

Advisory Committee Member – Alena Beltz, City of Medford

March 12, 2026

[note – comments 1-7, 9, and 10 were made on the WQMP]

8 – How are Bear Creek Shade Gaps divided by DMA? TMDL Page 53.

I-5 runs through Medford along Bear Creek. How did the shade gap analysis differentiate between ODOT and Medford areas along Bear Creek as reported in Table 9-13? How do we know where our target shade areas are located? It would be really helpful to see a map.

DMA	Total kilometers assessed	Assessed effective shade (%)	TMDL target effective shade (%)	Shade Gap
City of Ashland	2.8	36	86	50
City of Central Point	0.6	6	65	59
City of Medford	9.9	31	77	46
City of Phoenix	1.4	43	82	39
City of Talent	1	16	73	57
Jackson County	15	21	67	46
Oregon Department of Agriculture	5.8	31	81	50
Oregon Department of Fish and Wildlife	1	9	55	46
Oregon Department of Transportation	7	31	78	47

11 – How is Effective Shade Target Used? TMDL Page 55/56.

I don't understand how we are supposed to apply the information from the shade curves. As outlined in the example, once the effective shade target is determined to be 83% (height 88.2ft with density 71%) how does that translate into actual requirements on the ground? Are we supposed to try and plant trees to get to an average height of 88.2ft with 71% density? And if so, then why does it matter what the shade target is?

Figure XY: Mapping units in the example area of interest from the Rogue River Basin Interactive TMDL Map.

- Determine the stream aspect from north.

Example: Standing in-stream mid-channel, facing north you determine the river's aspect as 0° or 180° from north (this means the river reach runs south to north).

- Determine the active channel width of the stream reach.

Example: At your location you measure the active channel width using a tape measure or laser range finder and determine that it is 25 ft.

- Use the appropriate mapping unit shade curve, stream aspect line, and active channel width (x-axis), to determine the percent effective shade of your site (y-axis). This is the surrogate measure effective shade target of that stream reach location.

Example: You have determined that the appropriate shade curve mapping unit for your site is Qalc (Figure XX). Since you are located on a tributary with an East-West stream aspect and an active channel width of 25 ft, you use the dotted line to determine the effective shade. By reading the y-axis, you determine that the effective shade to be ~83% when system potential vegetation is applied to the left and right bank of the stream reach. System potential vegetation defines the average riparian vegetation height as 88.2 ft (26.9 m), and the stand density (canopy density) as 71%.

12 – Are There Impacts to the TMDL From Final Drafting of the TSD? TMDL many pages (starting on 21).

The TMDL references the TSD (Technical Support Document) and cannot fully be reviewed without the TSD. The TSD wasn't available for review with the TMDL because it wasn't

ready yet, but shouldn't it have been prepared before the TMDL document because it was used as a basis for the TMDL document? Are final changes to the TSD going to cause changes to the TMDL?

13 – How does the HUA assigned for tributaries relate to the assumptions made for background heating from those tributaries? TMDL Page 36.

Does the 0.3 degree assumption for anthropogenic warming from all tributaries mean that they essentially have a base HUA of 0.3? Where there is a HUA assigned to tributaries (i.e. Table 9-4, does that mean the HUA is actually that value plus 0.3 degrees?

The HUA category "Anthropogenic warming from tributaries" accounts for temperature increases in a stream that are caused by point or nonpoint source anthropogenic warming in tributaries to that stream. This category also includes inflow from canals and drains. For each row in Table 9-1 through Table 9-5, the HUA assignments were derived based on all tributaries to the listed AU(s) having a maximum anthropogenic warming of 0.3°C at their mouth.

Table 9-4: HUA assignments for source or source categories on assessment units in the Middle Rogue River Subbasin (17100308).

Assessment Unit	Assessment Unit ID	NPDES point sources	NPS Dam and reservoir operations	Anthropogenic warming from tributaries	Consumptive use water management and withdrawals	Solar loading: existing transportation corridors, buildings, and utility infrastructure	Solar loading: Other nonpoint sectors	Reserve capacity	Total HUA
Rogue River	OR_SR_1710030802_04_105816	0.16 ^a	0	0.00 ^a	0.01 ^a	0.04 ^a	0	0.09 ^b	0.3
		0.19 ^b		0.01 ^b	0.01 ^b	0.04 ^b		0.05 ^b	
Rogue River	OR_SR_1710030804_04_106341	0.20 ^a	0	0.05 ^a	0.01 ^a	0.02 ^a	0	0.02 ^b	0.3
		0.23 ^b		0.01 ^b	0.01 ^b	0.02 ^b		0.03 ^b	
Bear Creek	OR_SR_1710030801_05_105552	0.20	0	0.06	0	0	0	0.04	0.3

14 – How was the reserve capacity determined? TMDL page 39/71.

Why is it higher for some areas than others? NOTE: This question was asked at the first RAC meeting. Hopefully the TSD will provide more background.

Table 9-4: HUA assignments for source or source categories on assessment units in the Middle Rogue River Subbasin (17100308).

Assessment Unit	Assessment Unit ID	NPDES point sources	NPS Dam and reservoir operations	Anthropogenic warming from tributaries	Consumptive use water management and withdrawals	Solar loading: existing transportation corridors, buildings, and utility infrastructure	Solar loading: Other nonpoint sectors	Reserve capacity	Total HUA
Rogue River	OR_SR_1710030802_04_105816	0.16 ^a	0	0.00 ^a	0.01 ^a	0.04 ^a	0	0.09 ^b	0.3
		0.19 ^b		0.01 ^b	0.01 ^b	0.04 ^b		0.05 ^b	
Rogue River	OR_SR_1710030804_04_106341	0.20 ^a	0	0.05 ^a	0.01 ^a	0.02 ^a	0	0.02 ^b	0.3
		0.23 ^b		0.01 ^b	0.01 ^b	0.02 ^b		0.03 ^b	
Bear Creek	OR_SR_1710030801_05_105552	0.20	0	0.06	0	0	0	0.04	0.3

15 – Why is the HUA assigned to the NPDES point source permittees just a single value and not two values to reflect the spawning and non-spawning periods? TMDL page 43.

NOTE: This question was answered at the first RAC meeting. It would be helpful

NPDES Permittee WQ File Number: EPA Number	WLA period	Applicable Temperature Criteria (°C)	Assigned HUA ΔT (°C)	Annual 7Q10 River flow (cfs)	Effluent discharge (cfs)	7Q10 WLA ¹ (kcal/day)
GOLD HILL STP (33901: OR0022594)	4/1 – 10/31	13 ³ /18	0.0057	968.6	0.542	13.52E+6
GRANTS PASS STP (34630: OR0028843)	4/1 – 10/31	13 ³ /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
HIDDEN VALLEY HIGH SCHOOL STP (38625: OR0030210)	3/15 – 11/15 ⁴	13 ³ /18	0.01	60.5	0.057	1.48E+6
MEDFORD RWRP (55125: OR0026263)	4/1 – 10/31	13 ² /16	0.15	948	67.6	372.63E+6
ODFW - COLE M.						

^a Spawning period
^b Non-spawning period

Table 9-4: HUA assignments for source or source categories on assessment units in the Middle Rogue River Subbasin (17100308).

Assessment Unit	Assessment Unit ID	NPDES point sources	NPS Dam and reservoir operations	Anthropogenic warming from tributaries	Consumptive use water management and withdrawals	Solar loading: existing transportation corridors, buildings, and utility infrastructure	Solar loading: Other nonpoint sectors	Reserve capacity	Total HUA
Rogue River	OR_SR_1710030802_04_105816	0.16 ^a 0.19 ^b	0	0.00 ^a 0.01 ^b	0.01 ^a 0.01 ^b	0.04 ^a 0.04 ^b	0	0.09 ^a 0.05 ^b	0.3
Rogue River	OR_SR_1710030804_04_106341	0.20 ^a 0.23 ^b	0	0.05 ^a 0.01 ^b	0.01 ^a 0.01 ^b	0.02 ^a 0.02 ^b	0	0.02 ^a 0.03 ^b	0.3
Bear Creek	OR_SR_1710030801_05_105552	0.20	0	0.06	0	0	0	0.04	0.3

16 – Location of AUs? TMDL page 38.

This document doesn't include enough information to identify where exactly a particular assessment unit is located. The ID isn't tied to anything and there isn't a map. For example, which assessment unit is the Medford RWRP located in? **NOTE: This comment was made during the first RAC meeting and DEQ said this information was provided in the TSD.**

Table 9-4: HUA assignments for source or source categories on assessment units in the Middle Rogue River Subbasin (17100308).

Assessment Unit	Assessment Unit ID	NPDES point sources	NPS Dam and reservoir operations	Anthropogenic warming from tributaries	Consumptive use water management and withdrawals	Solar loading: existing transportation corridors, buildings, and utility infrastructure	Solar loading: Other nonpoint sectors	Reserve capacity	Total HUA
Rogue River	OR_SR_1710030802_04_105816	0.16 ^a 0.19 ^b	0	0.00 ^a 0.01 ^b	0.01 ^a 0.01 ^b	0.04 ^a 0.04 ^b	0	0.09 ^a 0.05 ^b	0.3
Rogue River	OR_SR_1710030804_04_106341	0.20 ^a 0.23 ^b	0	0.05 ^a 0.01 ^b	0.01 ^a 0.01 ^b	0.02 ^a 0.02 ^b	0	0.02 ^a 0.03 ^b	0.3
Bear Creek	OR_SR_1710030801_05_105552	0.20	0	0.06	0	0	0	0.04	0.3

17 – How was the TMDL target effective shade percentage determined? TMDL page 52.

Does it assume 100% coverage of full height riparian vegetation along all banks? Or?

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

18 – Simultaneous Max HUA? TMDL page 73.

The assumption that the max HUA from each source is occurring simultaneously seems very conservative. Considering how expensive it is for point sources to address a lower temperature standard, is this approach too conservative? Is this the typical approach?

- The cumulative effects modeling applied the maximum assigned HUA to each source category to assess cumulative allocation attainment. Analysis of these model results showed that the maximum temperature increases from various source categories is seasonal in nature with maximum increases limited to short periods of time (typically one or two days and less than 5% of the time) and specific geographical areas. In addition, the maximum warming for different source categories typically occurs at different times. However, the HUA and subsequent allocations are assigned based on the conservative assumption that the maximum warming for each category occurs simultaneously with the other categories. This means that a portion of the loading capacity reserved for human use will go unutilized most of the time. The cumulative effects analysis was performed for modeled reaches and is described in the TSD and modeling reports (TSD Appendices X, Y, and Z).

Comments on FISCAL IMPACT STATEMENT Rogue River Basin Water Quality Management Plan for Temperature

Advisory Committee Member – Alena Beltz, City of Medford

March 12, 2026

[note – comments 1-18 were made on the TMDL and WQMP]

19 – The stated cost of stream restoration doesn’t come close to the cost that the City of Medford has seen for projects in the last 6 years. FIS page 3.

Riparian planting projects within the City of Medford have cost substantially more than the FIS is reporting – **from \$36,000 to \$96,000 per acre for installation and then from \$6,500 to \$15,500 per acre per year for maintenance.** We have also seen that 5 years of maintenance is not sufficient, but instead 10 years needs to be assumed. **10 years of maintenance brings the total cost range for projects to \$101,000-251,000 per acre.**

The costs reported in the FIS may be correct for areas outside of the urban growth boundary, but they do not reflect the costs incurred within the urban environment. Within the city we have to deal with vandalism from homeless, property owner influences, access issues, and other factors that can contribute costs to projects. It would be important for the FIS to reflect these actual costs for cities.

Based on recent project budgets in the Rogue River Basin, the cost of stream restoration typically ranges from **\$10,000 to \$25,000 per acre** (source: 2025 personal communication Rogue River Watershed Council and The Freshwater Trust)

- Projects at the lower end of this range include basic planting, limited fencing, and minimal infrastructure.
- Projects in the middle of this range often include moderate site preparation, invasive species control, fencing, planting, and some engineered features like hardened crossings or livestock watering systems.
- Projects at the higher end of this range generally include more intensive restoration with high planting densities, complex site conditions, engineered infrastructure, and multi-year maintenance commitments.

See the table on the next page for project cost information for Medford’s last 4 projects completed. These projects were contracted and managed out of the Public Works Engineering Division and are separate from the program run by Johnny Leavy for the treatment plant.

Project	Larson Creek at Larson Creek Dr 250 ft South.	Larson Creek @ St. Mary's	Lazy Creek @ RVCC	Bear Creek @ Riverside MURA Project
Project location	250 ft S. of Larson Creek Dr.	Lazy Creek between Black Oak and Ellendale Dr	Lazy Creek from end of Calle Vista Dr 1000 ft West.	Bear creek at the rear of 944 N Riverside
Contractor	RVCOG	Plant Oregon	Plant Oregon	Plant Oregon
Year of Install	2019	2020	2021	2025

Project	Larson Creek at Larson Creek Dr 250 ft South.	Larson Creek @ St. Mary's	Lazy Creek @ RVCC	Bear Creek @ Riverside MURA Project
Total Cost of Project	\$9,700	\$80,000	\$61,685	\$68,130
Cost of Install	\$7,500	\$36,800	\$36,685	\$37,730
Cost of Maintenance	\$2,200	\$43,200	\$25,000	\$30,400
Duration of the maintenance agreement	2 yrs	5 yrs	5 yrs	5 yrs
Whether temp irrigation was included or if permanent irrigation, or no irrigation	Temp Irrigation for 5 years	Temp Irrigation for 5 years	Temp Irrigation for 5 years	Permanent Irrigation for 5 - 10+ years
How was the irrigation provided? New water meter or adjacent property connection, or?	Adjacent Property owner	Not sure	Water connection provided by RVCC	New water meter
Stream Length (ft)	250	1420	1050	330
Width along the creek (avg)	20 ft	Varies from 7 ft up to 30ft+-	Varies, Avg = 10 ft	Varies, Avg = 50 ft.
Total Area Restored (sf)	5000	54614	38884	17382
Total Area Restored (ac)	0.1148	1.2538	0.8927	0.3990
Cost for install / ac	\$65,340	\$29,352	\$41,097	\$94,552
Cost for Maintenance/ ac	\$19,166	\$34,456	\$28,006	\$76,184
Total Cost of Project / ac	\$84,506	\$63,808	\$69,103	\$170,735
Total Cost adjusted for inflation/ac	\$105,863	\$78,644	\$80,488	\$173,572
ENR VALUE	11281	11466	12133	13901
Inflation %	25%	23%	16%	2%
Cost Install per acre Adjusted 2026	\$81,853	\$36,176	\$47,868	\$96,123
Cost Maintenance per acre per year adjusted	\$12,005	\$8,494	\$6,524	\$15,490

20 – Why aren't costs of implementation going to impact Local governments? FIS page 5.

The FIS seems to be saying that local governments will only incur administrative costs. It doesn't say that we will incur costs related to implementing actions to meet the TMDL allocations. But low interest loans are a cost – they need to be paid back. And are there really enough grants out there to pay for all the plantings we will need to do to be in compliance with the new allocations? Are we allowed to avoid planting projects if there's no funding?

Local governments

The rule will have a fiscal impact on seventeen local governments previously named as DMAs. They will likely incur administrative and operational costs to update their existing nonpoint source temperature TMDL implementation plans to comply with the new WQMP requirements.

Jackson, Josephine, and Curry Counties are existing DMAs that currently implement DEQ approved implementation plans to meet current TMDL allocations on lands under county jurisdiction. They will likely incur administrative and operational costs to update their plans and carry out the related management, monitoring, and reporting.

The cities of **Ashland, Butte Falls, Cave Junction, Central Point, Eagle Point, Gold Beach, Gold Hill, Grants Pass, Jacksonville, Medford, Phoenix, Rogue River, Shady Cove, and Talent** are existing DMAs that currently implement DEQ approved implementation plans to meet current TMDL allocations on lands under municipal jurisdiction. They will likely incur administrative and operational costs to update their plans and carry out the related management, monitoring, and reporting.

Financial incentives and technical assistance programs are available to help local governments implement the actions needed to meet TMDL allocations. Grants and low-interest loans can support water quality assessments, pollution control measures, watershed restoration projects, and other landscape improvements necessary to achieve temperature load allocations.

21 – What about the financial impact to property owners along waterways? FIS page 6.

For those landowners who have undeveloped property, they would be financially burdened by new development requirements that include riparian plantings as part of a local jurisdictions strategy, or they will see lost revenue potential for undevelopable area along the waterway. For property owners with developed property, they could be prohibited from cutting down vegetation or using the area along the creek, which is a cost to that landowner in potential lost revenue or reduced property value. **Some of those property owners can be small or large businesses.**

22 – How does a 120ft streamside buffer not impact housing costs? FIS page 9.

Making a portion of currently developable land undevelopable and/or requiring riparian restoration projects for new development definitely has a cost to housing. DEQ has got to

be able to quantify this through existing analysis of developable land inventories and anticipated housing costs.

Housing cost

As ORS 183.534 requires, DEQ evaluated whether the proposed rules would have an effect on the development cost of a 6,000-square-foot parcel and construction of a 1,200-square-foot detached, single-family dwelling on that parcel.

DEQ determined that the proposed rule is unlikely to affect housing costs, because it does not impose direct requirements on residential property owners or developers.

Responsible persons may adopt rules, ordinances, or permitting requirements under TMDL implementation plans, which could impose indirect costs on residential property owners or developers. DEQ cannot quantify these potential impacts.

23 – What about the environmental hazard related to increased density of riparian vegetation within urban areas and the associated costs related to that risk? FIS page 10.

The FIS needs to consider fire risk and the potential for property damage from fires that burn through the riparian zone such as the Alameda Fire. Further protecting riparian areas in the urban growth boundary, and incentivizing restoration projects, will increase fuel loads in these corridors. Medford already hears from property owners concerned about this risk along riparian corridors. The perceived risk impacts property values. Mitigating risks with blackberry removal and replanting activities is costly. This impacts housing costs and costs to local governments.

24 – What about the on-going cost to Local Jurisdictions for maintenance of planted areas? FIS page 5.

The FIS does not mention the on-going maintenance of streamside vegetation areas to make sure invasive blackberries don't choke out growing trees and for replanting work when needed. The City will need to develop and fund a new program to avoid throwing money away on restoration projects that just return to blackberries well after the establishment period of 5 to 10 years is over.

Comment 4: Oregon Department of Fish and Wildlife

March 12, 2026

Sent via email to Michele.Martin@DEQ.oregon.gov

March 12, 2026

Oregon Department of Environmental Quality Attn: Michele Martin
700 NE Multnomah St. Suite 600
Portland, OR 97232

Re: Rogue Basin Temperature TMDL Updates RAC 1 Comments

Dear Ms. Martin,

The Oregon Department of Fish and Wildlife (ODFW) appreciates the opportunity to provide comments on the Draft Temperature Total Maximum Daily Load for the Rogue River Basin and Draft Water Quality Management Plan.

As part of the Lost Creek Project, which was authorized by the 87th Congress of the United States in [House Document 566](#), the US Army Corps of Engineers (USACE) worked with several federal and state agencies to develop an [Environmental Impact Statement](#) (EIS) in 1972 for construction of three dams in the Rogue Basin. Lost Creek (now William Jess Dam) and Applegate Dams were constructed, but Elk Creek Dam was never finished. Since 1970 the USACE has consulted with ODFW to determine fishery mitigation for habitat lost by the inundation of riverine habitats, develop temperature and flow targets for downstream fishery enhancement, and conduct [research](#) which has refined temperature and flow targets during the April – October Conservation Season. Mitigation for fishery habitat lost by constructing Lost Creek Dam included construction and operational funding of Cole Rivers Fish Hatchery, which is staffed by ODFW employees.

ODFW has worked cooperatively with the US Army Corps of Engineers for decades to collect data to refine temperature and flow targets for Lost Creek Dam for fisheries preservation and enhancement. ODFW has prioritized management of Spring Chinook populations, which lost approximately twelve miles (30%) of historically available habitat due to dam construction.

ODFW is concerned that TMDL targets will take precedence over ODFW targets and reduce necessary adaptive management for real-world conditions to the detriment of native salmon and steelhead populations. Rationale behind ODFW temperature and flow recommendations are further outlined in the [Rogue Spring Chinook Salmon Conservation Plan](#) and the [Rogue Fall Chinook Conservation Plan](#).

In addition to adaptive management of temperature and flow targets in the mainstem Rogue River, ODFW is concerned that Cole Rivers Hatchery was not provided with a wasteload allocation (WLA) in the draft TMDL, only the minimum duties provision. Given the available Human Use Allowance available in Upper Rogue Assessment Unit OR_SR_1710030703_04_105475, ODFW requests a WLA in addition to the minimum duties provision, similar to what was done in other basins (i.e. Umpqua, Sandy, Willamette).

In addition to meeting the USACE mitigation requirements for dam construction, the salmon, steelhead, and trout produced by Cole Rivers Hatchery provide numerous educational, ecosystem, and social services in southwest Oregon such as sport fishing opportunities, educational materials, improvement of riparian habitat, and ceremonial fish for multiple tribes in Oregon. Recreational fishing opportunities also provide economic inputs for small businesses in the basin. Cole Rivers Hatchery donates spawned fish carcasses for educational dissection at Salmon Watch and several middle schools and universities each year. Salmon carcasses are also distributed to select streams, in coordination with DEQ, to provide marine-derived nutrients to the system for the benefit of aquatic life and riparian vegetation. Several hundred fresh salmon and steelhead are given to the Cow Creek Tribe of Umpqua Band of Indians, Coquille Indian Tribe, Confederated Tribes of Coos, Lower Umpqua and Siuslaw Indians, Grande Ronde, and Klamath Tribes for ceremonial purposes.

ODFW requests the ability to continue adaptive management of temperature and flow under existing agreements with the USACE to maximize benefits to fisheries. Managing fisheries requires flexibility in response to environmental variability and subsequent water availability, not rigid criteria.

The ODFW also requests a wasteload allocation in addition to the minimum duties provision for Cole Rivers Hatchery. This is consistent with what has been allowed at hatcheries in other watersheds in Oregon.

TMDL General Questions/Comments

TMDL – Page 11 - DEQ identifies beneficial uses for waterbodies within the Rogue River Basin, which includes fishing. How does DEQ account for the fact that Bear Creek mainstem and most of the miles of Rogue and Bear Creek tributaries are closed to sport fishing? Most of the fish produced in the upper basin, however, benefit anglers in downstream fisheries.

TMDL – Page 12 - Lost Creek Lake is given a zero load allocation which essentially means temperature inflow = temperature outflow. How does this reconcile with a WQ standard of 18 degrees Celsius in the inflow and 16 degrees Celsius at the outflow (Figure 4-1)?

TMDL – Pages 24 and 43 - Table 8-1 on page 24 shows the 7Q10 for AU 105475 (Cole Rivers discharges to AU 105475) as 687 cfs. Further in the TMDL on page 43, Table 9-6 identifies the 7Q10 used for Cole Rivers as 502 cfs. Based on USGS Stream Stats, the 7Q10 is 687 cfs, which seems consistent with the District Biologist's knowledge. What is the correct 7Q10 statistic?

TMDL – Page 40 - Table 9-5 identifies an NPDES WLA of 0.2 °C for Assessment Unit OR_LK_1710030703_02_100244. Since NPDES discharges in Oregon typically are not permitted to discharge into lakes and reservoirs and the 2022 EPA NPDES spatial data set does not show an NPDES permit associated with USACE Jess Dam, what is the point source that receives a WLA?

The current DEQ WPCF 600 general permit for small scale mining allows for vegetation removal for metal mining (gold, others) up to the Ordinary High Water (OHW) line with no associated DEQ monitoring or enforcement. How does this align with proposed TMDL riparian requirements and proposed 120 foot riparian buffers?

Will the updated requirements for riparian and stream restoration make previously voluntary projects ineligible for OWEB or other grant funds? ODFW appreciates the effort DEQ has made

to coordinate with OWEB and provide a verbal answer. Written confirmation from OWEB included as appended materials would be appreciated.

Cole Rivers Hatchery

TMDL – Page 43 – ODFW requests that Cole Rivers Hatchery be given a WLA in addition to the Minimum Duties Provision which is consistent with recent TMDLs in other basins. Rock Creek Hatchery was given a 0.30 HUA in the Umpqua Temperature TMDL, and the Sandy River Hatchery was given WLA options of either 0.30 HUA or 0.08 HUA, dependent on receiving stream. Within the Willamette Subbasins TMDL, the following hatcheries were given a numeric HUA: Clackamas, Leaburg, Marion Forks, Minto, McKenzie, Eagle Creek Roaring River, South Santiam, and Willamette (Salmon Creek). The HUA given to these Willamette hatcheries is footnoted: * When the minimum duties provision at OAR 340-041-0028(12)(a) applies, $\Delta T = 0.0$ and the WLA = 0 kilocalories/day. For consistency Cole Rivers should be given a critical period HUA.

Water Quality Management Plan Lost Creek Reservoir

WQMP – Pages 26 and 28 - It is recognized that “reservoir operators may also need to comply with operational requirements beyond the scope of the TMDL surrogate measures.” Does this ensure that ODFW flow and temperature target recommendations to USACE will not be superseded by the TMDL numeric criteria? The first two Congressionally authorized uses of water at Lost Creek Reservoir (HD 566) are flood control and fishery enhancement. Release temperature targets are intended to mimic flows at the Rogue River at Prospect, upstream of the reservoir which assumes that is where spring Chinook and summer steelhead would have been historically. Temperature targets are primarily tailored for spring Chinook since Chinook were the most heavily impacted by habitat loss due to dam construction.

The WQMP indicates some level of flexibility and includes phrases such as “may also need to comply”, “may not be required”, “may be allowed”. However, surrogate measures to reduce thermal loading were cross-referenced and were not described elsewhere (i.e. Section 9.1.5). Regarding alternative or surrogate measures to achieve targets, phrases such as “DEQ will determine”, “with DEQ approval”, “using DEQ approved” are used throughout the document however it is unclear how DEQ will determine or approve these measures. These mechanisms for determination and approval should be documented and be made publicly available. Under this draft TMDL and WQMP, ODFW is concerned about possible scenarios where DEQ would override ODFW recommendations and require USACE to decrease outflow temperature based on temperatures in downstream AU’s.

WQMP General Questions/Comments

WQMP – Pages 12 and 13 – Why are the Department of Corrections (i.e. Foothills Road) and the National Park Service (i.e. Oregon Caves National Monument, Crater Lake) not identified as DMAs even though they are identified landowners on the interactive map? Similarly, why is OWRD not considered a DMA as they are the primary regulator of one of the major causes of increasing water temperature (decreased quantity and storage).

How do the shading and riparian setback requirements align with DLCD's jurisdiction?

WQMP – Page 32 – The WQMP notes that implementation of the WQMP needs to be reported to DEQ in annual reports and to OWEB’s Oregon Watershed Restoration Inventory database, which is duplicative. Is there any way to streamline this requirement with a single report?

ODFW acts as a consultant for cities and counties on dozens of riparian landscape plans each year, free of charge. Will ODFW get any credit toward TMDL implementation for that service, given they are not ODFW owned or managed properties?

ODFW actively participates in habitat improvement projects throughout the Rogue River basin, but not solely on ODFW-owned property. Is there a mechanism to receive “credit” for habitat improvements under surrogate measures on non-ODFW owned lands? ODFW is currently developing a statewide implementation plan and requests clarification of this concept.

Why is progress measured through shade targets rather than stream temperatures (i.e. what happens if stream temperatures meet WQ criteria, but effective shade does not meet targets)?

DEQ asked the RAC to consider whether any significant management strategies should be included in Table 2 of the Water Quality Management Plan. ODFW encourages DEQ to add “identification and protection of cold-water refuge” as an additional management strategy. Shade assessments should be overlaid with areas of cold-water refuge to determine whether temperatures may be met through mechanisms other than shade.

Fiscal Impact

ODFW feels that DEQ has not provided sufficient information in the draft FIS for reviewers to provide reasonable estimates of economic impacts to identified Designated Management Agencies. Cost estimates for implementation for both point and non-point sources is absent from the draft document. The draft FIS states “Entities holding NPDES permits may incur costs to comply with discharge limits that reflect revised TMDL wasteload allocations.....These entities may need to invest in capital improvements, operational changes, or additional monitoring to achieve compliance.” Without a more developed description/definition of what will be required to comply with discharge permits, commenting on potential economic impact(s) is both difficult and subjective.

In addition to potential costs incurred for hatchery modifications, an inability to adaptively manage with the Army Corps of Engineers on Lost Creek reservoir releases would dramatically impact tribal and recreational fisheries in Jackson, Josephine, Curry, Coos, and

Douglas Counties. Recreational fisheries in Jackson, Josephine, and Curry counties alone had an estimated economic input (guides, gas, lodging, groceries, etc.) of

\$16 million annually in 2008 ([Runyon 2009](#)). Adjusting for 2026 inflation (~ 0.51%), this would generate approximately \$32 million annual revenue from fisheries, much of which goes to small businesses in these counties.

To meet TMDL benchmarks for improvement, wildlife area functions such water diversion, impoundment, and/or farming may need to be significantly reduced. This would conflict with ODFW’s operation of the wildlife areas and may decrease waterfowl hunting opportunities, pheasant hunts, etc.

To meet benchmarks for improvements, ODFW would likely need to get cultural clearance to plant riparian vegetation and additional county planning permits to clear blackberries on ODFW owned and managed lands. This could increase the cost of implementation with additional lease and realty costs, county planning fees, cost of labor to plant and maintain riparian vegetation.

Screening and passage is directly beneficial to fish populations, however ODFW would incur cost for replanting due to permanent reduction of riparian areas.

How would monetary penalties for failure to meet improvement benchmarks be assessed and enforced?

ODFW's mission *to protect and enhance Oregon's fish and wildlife and their habitats for use and enjoyment by present and future generations* complements the management actions prescribed in the draft TMDL. ODFW staff are actively engaged in identification of areas of cold-water refuge and temperature monitoring statewide. Grant provisions for state-owned wildlife areas include protection, enhancement, and maintenance of undisturbed vegetated buffer zones along stream channels to reduce sedimentation rates, channel instability, and impacts to aquatic habitat. Consequently, ODFW feels greater effort should be spent on prioritization of efforts such that state resources can be focused towards areas that would provide the greatest benefit for temperature reductions and benefits to aquatic resources.

Although specific costs for compliance cannot be documented at the time of this rulemaking, they are estimated to be significant. ODFW encourages DEQ to consider these costs and proposed modifications to the rule or otherwise allow for increased flexibility for implementation of the revised criteria. ODFW supports a continued collaborative approach to protecting Oregon's aquatic resources and looks forward to working with DEQ to continue to protect Oregon's valuable natural resources.



Frank Drake

Rogue District Fish Biologist

Oregon Department of Fish
and Wildlife 541-857-2409

Francis.W.Drake@odfw.oregon.gov

CC: Tom Stahl – ODFW Deputy Administrator of Inland
Fish Spencer Sawaske – ODFW Deputy Habitat
Administrator

Comment 5: Jackson Soil and Water Conservation District

March 13, 2026

Sent via email to Bill.Meyers@DEQ.oregon.gov

Bill,

Attached are my comments on the Rogue TMDL. My comments are either sticky notes on the PDF, or are highlighted text. Hopefully some of these are considered. Beth, feel free to correct me if I misspoke about anything related to the ODA Ag water quality management area plan.

Mainly worked to include language which allows for flexibility in developing the next ODA Ag water quality plan, flexibility in establishing, or not establishing a 120ft buffer based on local conditions, flexibility in doing a shade-gap analysis and ability to use other surrogates or models for thermal loading. The 'other models' I'm referring to for our region, and as far as ODA is concerned, is for flood irrigation tailwater.

These comments reflect our experience and knowledge of thermal loading from nonpoint sources in Jackson County and what we see as a major strategy to reduce temperatures in streams in the most cost effective way possible. The comments will keep the door open for using DEQ 319 grants, OWEB grants or other where we will be doing flood irrigation management projects to address temperature loading. If my comments are not added, then we run the risk of only being able to use public funding for effective shade, or flow restoration, which in many cases could be a less efficient use of funds and could have unintended consequences.

On this note, I have been in contact with the Nonpoint source management Branch of US EPA office of water to talk about models for flood irrigation tailwater. Models 'Heat Source' and "QUAL2Kw' were suggested. Hope to include some of these tools and models in the next ODA Ag water quality management area plan update as a way to quantify thermal loading improvements from irrigation projects.

Thanks!

Paul DeMaggio
Water Resources Engineer, P.E., CID, CAIS
Jackson Soil and Water Conservation District (JSWCD)
89 Alder St, Central Point, OR 97502
Office: 541-423-6179
Cell: 541-630-0285
Email: Paul.Demaggio@jswcd.org
www.jswcd.org

Draft Total Maximum Daily Loads

- Reference: Page 10, Section 3, Monitoring stream temperature.
 - Comment: Is a surrogate measure being used for stream temperature for dam and reservoir management?

Add: Monitoring stream temperature may also be easier and more meaningful approach for agricultural nonpoint sources, such as flood irrigation tailwater return flows.
- Reference: Page 12, Figure 4-1, Map colors indicating fish use designations.
 - Comment: Difficult to tell what the GREEN is vs the ORANGE?
- Reference: Page 22, Section 7.2, List of nonpoint sources or activities that contribute thermal load and may increase stream temperature.
 - Comment: Add: Agricultural Irrigation Management; Upland and Soil Health Management.
- Reference: Page 22, Section 7.2, List of actions are needed to attain the TMDL allocations.
 - Comment: Add: Management of Agricultural Irrigation Tailwater and Return Flows to minimize temperature warming; Management of Upland soil health to increase cool water baseflows.
- Reference: Page 36, Section 9.1, The HUA category “Anthropogenic warming from tributaries”.
 - Comment: Does it also include inflows from flood irrigation tailwater?
- Reference: Page 36, Section 9.1, Human use allowance assignments.
 - Comment: Agricultural irrigation management effect on nonpoint source temperature impacts is still being assessed for this basin. Flood irrigation tailwater return flows are likely to be a major contributor to temperature loading for streams and tributaries. Further analysis is needed by the appropriate DMA.
- Reference: Page 51, Section 9.4, Surrogate measures
 - Comment: Additional surrogate measures may be proposed by DMAs as appropriate based on identified nonpoint sources of thermal loading.

Draft Water Quality Management Plan

- Reference: Page 5, Table 2, Management strategies to address riparian habitat removal.
 - Comment: [Replace “exclude” with] Manage (managed riparian grazing is an important management tool for maintaining healthy riparian habitat).
- Reference: Page 5, Table 2, Management strategies to address modifications to flow/discharge.
 - Comment: [After “efficiency” add] flexibility, and reliability.
 - Comment: Also Add: Manage flood irrigation tailwater and return flows to reduce thermal loading.
 - Comment: Change [“Provide incentives for water conservation” to]: Provide incentives for agricultural irrigation water conservation and management as outlined in the ODA Inland Rogue Ag Water Quality Management Area Plan. Support water users with education, cost-share incentives, and partner technical assistance.

- Reference: Page 7, Section 4.2.2, Priority actions.
 - Comment: Add: flood irrigation tailwater management improvements, improve upland soil health.
- Reference: Page 10, Section 6.1, First paragraph.
 - Comment: [At end of paragraph add:] Where effective shade is determined to not be the primary contributor of nonpoint source thermal loading for a specific stream, then other surrogates may be developed and utilized.
- Reference: Page 10, Section 6.1, Second paragraph.
 - Comment: [After “flow enhancement” add:] flood irrigation tailwater management.
 - Comment: [At end of paragraph add:] and can be utilized to evaluate whether load allocations are being met in lieu of effective shade analysis.
- Reference: Page 10, Section 6.1, Third paragraph.
 - Comment: [After first sentence add:] Measured and calculated thermal loading reductions from individual project implementation shall be used as much as possible to show success.
 - Comment: Confused about [“based on in-stream temperatures”], is it primarily in-stream temperature measurements, or primarily surrogate measures such as shade...?
- Reference: Page 11, Section 6.1, End of first paragraph.
 - Comment: [Add:] DMAs may utilize secondary measures of load allocations in situations where effective shade increases are not appropriate. Secondary measures may be determined on a case by case basis between the DMA and DEQ.
- Reference: Page 11, Section 6.1, End of second paragraph.
 - Comment: Would like to keep this open. This to me, says that surrogate measure is the only way to demonstrate compliance. Surrogate measure is referring to effective shade only.
 - Comment: [After “surrogate measure targets” add:] , measured stream temperature reductions, calculated thermal load reductions from implemented projects, or other approved surrogates.
- Reference: Page 12, Table 3, ODA area of jurisdiction.
 - Comment: [After “farm-related activities” add:] , including irrigation and livestock management.
- Reference: Page 12, Table 3, Irrigation Districts area of jurisdiction.
 - Comment: What is 'Return flows'? referring to? Individual on-farm flood irrigation return flows are the responsibility of ODA, not the irrigation district. Consider removing this.
- Reference: Page 16, Section 8.2, Streamside vegetation as a top priority.
 - Comment: The DEQ approved ODA plan outlines flood irrigation tailwater as a major contributor to temperature loading in areas where effective shade is present.
- Reference: Page 16, Section 8.2, ODA's Inland Rogue Agricultural Water Quality Management Area Plan.
 - Comment: The ODA plan outlines general strategies for flood irrigation tailwater management, such as installing a tailwater recover pond, retention ponds, improving soil health, improving grazing management, and switching from flood irrigation to a pressurized sprinkler system.

- Comment: [After “riparian conditions” add:] and irrigation water management.
- Reference: Page 16, Section 8.2, Area Rules.
 - Comment: Also Add: The Area Rules in OAR 603-095-0540 (2) states that Irrigation Water Discharge shall not enter waters of the state, if the discharge reduces the quality of such waters below the water quality standards established by rule for such waters by the environmental quality commission.
- Reference: Page 16, Section 8.2, bullets of DEQ’s concerns.
 - Comment: [After “shade targets” add:] and irrigation water discharge targets.
 - Comment: Add another bullet: Irrigation Water Discharge (Tailwater) Standards: Area Rules may not effectively model and show how flood irrigation tailwater relates to TMDL load allocations.
- Reference: Page 22, Figure 2, Shade gap decision tree.
 - Comment: Has a shade gap analysis been done on any streams yet? Flood irrigation tailwater analysis needs to also be done.
- Reference: Page 22, Figure 2, Streamside evaluation decision tree.
 - Comment: Add also to 'Adopt a 120-ft streamside buffer...' and eliminate flood irrigation tailwater return flows.
- Reference: Page 23, Section 10.2.1.1, Fourth paragraph.
 - Comment: [Add:] If an alternative best management practice is identified to provide a more cost effective way to reduce thermal loading in the stream, then that practice will be utilized in lieu of the 120ft buffer or vegetation establishment to increase effective shade. The alternative practice, such as flood irrigation tailwater management, may be compared to effective shade % increase through thermal load calculations.
- Reference: Page 24, Section 10.2.1.2, DEQ determination on existing management.
 - Comment: This seems like it allows for DEQ to determine if flood irrigation tailwater management could meet load allocations for certain stream reaches?
- Reference: Page 25, Section 10.2.1.3, 120-foot slope buffer alternative.
 - Comment: the word 'May' is inconsistent with the flow chart. This should either be a 'shall' or it needs to be explained in this section that the DMA shall provide sound reasoning of the determined adequate buffer needed to prevent stream temperature increases.
 - Comment: [At end of first paragraph add:] The DMA shall provide evidence to DEQ in areas where the 120-ft buffer is not appropriate or feasible and will provide supporting documents to show that the chosen buffer will provide effective shade and will be unlikely to cause stream temperature increases for the reach of stream or waterbody.
 - Comment: May be , or 'Shall be'.
- Reference: Page 25, Section 10.2.1
 - Comment: [Add new subsection:] 10.2.1.4 Flood irrigation tailwater and return flow alternative: When flood irrigation tailwater return flows are identified by the DMA, as the primary contributor of thermal loading to a stream reach, then the DMA must address this first before initiating the shade-gap analysis or buffer alternative.
- Reference: Page 28, Section 10.2.2.3, Third bullet in list of activities.

- Comment: This is not an Irrigation District Operation. Should be removed. The irrigation district does not own the land or manage the irrigation water once it is applied to the field.
- Reference: Page 49, Appendix B, Contacts
 - Comment: [To Oregon 319 Nonpoint Source Implementation Grants contacts add:] SWCDs, Watershed Councils
 - Comment: [To Environmental Quality Incentives Program contacts add:] SWCDs
 - Comment: [To Agriculture Water Quality Support Grant contacts add:] SWCDs
 - Comment: [To Oregon Watershed Enhancement Board contacts add:] SWCDs, Watershed Councils
 - Comment: [To Oregon Watershed Enhancement Board Small Grant Program contacts add:] SWCDs, Watershed Councils

Comment 6: City of Medford

March 13, 2026

Sent via email to RogueRiver.TemperatureTMDL@DEQ.oregon.gov

March 13, 2026

Oregon Department of Environmental Quality

Attn: Rogue River Temperature TMDL Rulemaking Team / Rules Advisory Committee 700
NE Multnomah Street, Suite 600

Portland, OR 97232

Re: City of Medford Comments on Draft Rogue River Basin Temperature TMDL
Replacement and Associated Water Quality Management Plan / Fiscal Impact Statement

Dear Rogue Temperature TMDL Revision Team:

The City of Medford (the City) appreciates the Oregon Department of Environmental Quality's (DEQ) ongoing work to develop a replacement Rogue River Basin Temperature Total Maximum Daily Load (TMDL) and associated Water Quality Management Plan (WQMP) to align with currently approved temperature standards and Clean Water Act requirements.

The City submits the following comments to the TMDL, WQMP, and Fiscal Impact Statement (FIS) to ensure the final TMDL is technically defensible, implementable, and accompanied by transparent analysis of fiscal and equity implications for municipal ratepayers and the broader community. The City's comments are informed by review of the draft TMDL materials available to date; however, DEQ's Technical Support Documents (TSDs) referenced in the draft were not available during this review period.

Thank you for the opportunity to provide comment, I look forward to continuing to serve as a RAC member on this important and impactful TMDL revision.

Sincerely,



Johnny Leavy

Water Reclamation Division Manager

City of Medford Public Works | Water Reclamation Division Medford RWRF, 1100 Kirtland
Road, Central Point, OR 97502

1) Request for Complete Technical Documentation and Adequate Review Time

DEQ's draft TMDL references multiple modeling and technical analyses, but the supporting TSDs and modeling results were not provided with the draft materials. Without these documents, the City cannot fully evaluate key inputs and assumptions that directly affect wasteload allocations (WLAs), compliance pathways, and projected costs for our community.

Requested action: Provide the complete modeling TSDs, calibration results, scenario outputs, and allocation-support documentation to the RAC and permittees with sufficient lead time to allow meaningful review prior to finalizing rulemaking decisions. Given the expected breadth and technical complexity of these materials, the City requests that they be provided at least four weeks prior to the next Rogue TMDL RAC meeting.

2) Transparency and Verifiability of WLA Inputs (Flow Basis and Plant Assumptions)

The draft TMDL establishes a 7Q10-based WLA for the Medford Regional Water Reclamation Facility (RWRF) using an annual 7Q10 Rogue River flow of 948 cfs and an effluent discharge of 67.6 cfs (43.7 MGD). However, the draft does not identify the underlying data sources, period(s) of record, or the technical basis for selecting these values, nor does it explain how the effluent flow assumption was paired with the river low-flow condition in the modeling.

Because these parameters materially affect the WLA, and therefore the City's permit implementation approach and compliance costs for our community, the City requests clarification regarding:

- Hydrologic basis for the 7Q10 river flow: the period of record used to develop the annual 7Q10 flow value (948 cfs) and whether it reflects current conditions and reasonably foreseeable future conditions (e.g., climate variability, upstream demands, and other relevant hydrologic changes).
- Basis and interpretation of the effluent flow assumption: the technical rationale for using 67.6 cfs (43.7 MGD), including whether this reflects design flow, permitted flow, maximum daily flow, a rainfall-driven peak flow condition, seasonal variation, or demonstrated operating conditions under dry-weather low-flow periods.

In particular, it is likely that the 43.7 MGD effluent flow represents a rainfall-driven peak flow condition. If so, the draft should clearly explain how this value is used in the modeling and whether the analysis evaluates concurrent river and effluent conditions (i.e., whether the selected effluent flow is representative of what is reasonably expected to occur at the same time as the 7Q10 low flow in the Rogue River).

In the event DEQ paired river and effluent conditions appropriately, presenting a 7Q10 river flow alongside a maximum or wet-weather effluent flow can reasonably be interpreted to mean these are the flows Medford discharges during low-flow conditions in the Rogue River. That portrayal would not accurately depict typical operating conditions. If the draft presents 7Q10 river flows, it should also present the corresponding dry-weather effluent flows that are representative of the facility's discharge under low-flow river conditions.

Requested action: Provide a clear, documented basis for the river flow and effluent flow assumptions used in WLA calculations, including (1) data sources and periods of record, (2) an explanation of whether and how concurrent river/effluent conditions were evaluated, (3) identification of representative dry-weather effluent flows corresponding to 7Q10 river

conditions, and (4) sensitivity analyses showing how alternative, technically supported assumptions affect WLAs.

3) Human Use Allowance (HUA) Assignments: POMI Clarity and Reconciliation of AU Caps vs Individual WLAs

a) Point of Maximum Impact (POMI) definition and application. The draft framework relies on cumulative warming limits at the point of maximum impact (POMI), yet key questions remain unanswered regarding how the POMI is established and applied across seasons and assessment units (AUs), including whether there are multiple POMIs and whether POMIs vary by time of year.

Requested action: Define and document the POMI location(s), the methodology for determining POMI under current and attainment scenarios, and how POMI determination affects category HUAs and individual WLAs.

b) Reconciliation of AU-level NPDES category caps and individual point source WLAs. For AU OR_SR_1710030802_04_105816 (the AU to which the Medford RWRf discharges), the draft TMDL assigns individual point source WLAs/HUAs to Medford RWRf (0.15°C) and the Robert A. Duff Water Treatment Plant (0.03°C), totaling 0.18°C. However, the draft also indicates seasonal AU-level category caps that appear lower during spawning, and the draft does not explain how these individual allocations reconcile with the seasonal category cap, nor does it provide a narrative or modeling demonstration of attenuation to a smaller cumulative temperature increase at the POMI.

Requested action: Provide a clear accounting and reconciliation demonstrating how individual WLAs/HUAs, AU-level NPDES category caps, and cumulative temperature impacts at the POMI align during both spawning and non-spawning periods.

4) Seasonal Structure and Critical Period: Consideration of Separate Spawning vs. Non-Spawning WLAs

The draft materials acknowledge that full utilization of allocations does not occur simultaneously across categories and sources, and that peak impacts often occur at different times. The TMDL also specifies different allocations for spawning and non-spawning periods (Table 9-4). However, those seasonal distinctions are not carried through to the wasteload allocations for point sources (Table 9-6), which presents a single WLA applicable across the entire TMDL period.

DEQ may want to consider whether separate WLAs (or an alternative seasonal structure) for spawning and non-spawning periods would more accurately reflect timing of risk, actual use of assimilative capacity, and the critical period dynamics—particularly during the transition into spawning periods that frequently drive point source compliance obligations and impact costs to rate payers.

Requested action: Evaluate and document whether separate seasonal WLAs for point sources are appropriate and more representative of actual conditions, including a clear explanation of why seasonal allocations in Table 9-4 are (or are not) reflected in Table 9-6, and a demonstration of how alternative seasonal WLAs would affect cumulative impacts, implementation feasibility, and compliance planning.

5) Reserve Capacity: Technical Basis, Seasonal Timing, and Fiscal Implications

The draft increases reserve capacity in the spawning period (e.g., 0.09°C during spawning vs. 0.05°C during non-spawning within AU OR_SR_1710030802_04_105816), which reduces the allocable portion available to existing sources during the critical spawning period. The available documents do not provide a clear technical basis for this increase, nor an explanation of how the spawning-period reserve was selected relative to demonstrated needs (e.g., growth, uncertainty, future dischargers, or other planning assumptions), and how the change influences the development of individual WLAs and projected compliance costs for our community.

In addition, the transition period in the fall—when conditions shift from non-spawning to spawning—can be a critical operational and compliance time for point sources. In that context, increasing reserve capacity during spawning without a documented technical rationale can materially increase implementation costs at the most limiting time of year. The City requests DEQ evaluate whether allocating a portion of the available reserve capacity during the spawning period (including during the fall transition into spawning) would more accurately balance environmental protection with practical implementation and help reduce the economic burden on the community.

The City recognizes that Medford would still need to implement a water quality trading program to meet the updated TMDL; however, a higher allocation during the fall spawning period would reduce the fiscal and ratepayer impacts associated with compliance planning and trading needs during the most constraining period.

Requested action: Provide (1) the technical justification for the increased spawning-period reserve capacity, (2) an explanation of how reserve capacity was selected relative to demonstrated needs and uncertainties, (3) an evaluation of how the spawning-period reserve affects individual WLAs (including during the fall transition into spawning), and (4) an assessment of fiscal and ratepayer impacts—along with consideration of whether allocating a portion of reserve capacity during the spawning period would reduce economic burden while maintaining attainment and implementation feasibility.

6) Margin of Safety: Quantifying the Combined Effect of Conservative Assumptions

The draft TMDL describes an implicit margin of safety (MOS) relying on multiple conservative assumptions (e.g., 7Q10 flows, maximum effluent temperatures set as high as 32°C, maximum permitted/design flows, and simultaneous maximum warming from all source categories). While individual assumptions may be reasonable, the combined effect is not quantified, and the City is concerned that layering conservative assumptions without quantification may produce an unrealistic composite scenario that materially affects WLAs and compliance costs for our community.

Requested action: Quantify the cumulative effect of the implicit MOS assumptions on WLAs and demonstrate that the combined conservatism is appropriate and not duplicative.

7) Modeling Framework: Representation of Post-2008 Basin Changes, Dam Removal, and Climate Change

a) Post-2008 physical changes (including dam removals)

The City requests clarification regarding how dams removed since the 2008 TMDL are represented in the current modeling framework and scenario structure, as dam removal can materially alter stream temperature dynamics via changes in flow timing, volume, and heating. The available materials also appear to contain inconsistencies regarding whether

“no dam” scenarios are being updated or used as baselines or whether the no dam model was compared to available water temperature data after dam removal to ensure the model is still doing a decent job of accurately simulating water temperature.

Requested action: Document how post-2008 dam removals and other major physical changes are incorporated into the current conditions and attainment scenarios, including any limitations and associated uncertainty.

b) Climate change scenario development

DEQ identifies climate change as a potential source of thermal loading, but available materials suggest no climate change scenario is under development.

Requested action: Clarify whether and how climate change will be incorporated into the technical basis for the replacement TMDL and WQMP implementation planning, including any adaptive management approach for future permit cycles.

8) Fiscal, Small Business, and Equity Considerations: Need for Transparent Quantification and Local Context

The City recognizes DEQ’s efforts to evaluate fiscal impacts; however, the City requests more transparent, Oregon- and basin-specific cost assumptions and clearer quantification of expected costs for municipal permittees.

Based on the City’s review of the draft allocations relative to the 2008 TMDL, the City estimates that revised allocations may increase projected thermal credit needs by approximately 72 Mkal/day, resulting in an estimated additional compliance cost of approximately \$4.2 million. These costs ultimately flow to local utility ratepayers, including lower-income households and small businesses sensitive to rate increases.

Requested action: Strengthen the Fiscal Impact Statement by providing realistic order-of-magnitude cost ranges for common municipal compliance strategies (e.g., water quality trading, recycled water, cooling technologies), and reflect basin-specific credit pricing and demonstrated project-level yields rather than generalized assumptions.

9) Environmental Justice, Tribal Engagement, and Implementation Roles

The City supports robust environmental justice analysis and meaningful government-to-government engagement with Tribal Nations. The City notes the value of geospatial analysis to understand how temperature-impaired reaches overlap with Tribal communities and disadvantaged census tracts, and requests greater clarity regarding the nature and outcomes of DEQ’s Tribal engagement beyond notification. The City also encourages DEQ to clarify how Tribal participation will be incorporated into monitoring strategy development and implementation coordination.

Requested action: Expand environmental justice analysis with spatial tools, clarify Tribal consultation processes and outcomes, and describe how Tribal participation will be integrated into monitoring and implementation coordination.

10) Interaction with Agricultural and Forestry Plans and Availability of Riparian Mitigation Projects

The draft TMDL and WQMP do not appear to evaluate whether sufficient riparian shading or other mitigation projects are available in the basin to meet the level of mitigation implied by the draft allocations. Many compliance strategies rely on thermal credits generated

through riparian restoration, the availability of eligible projects directly affects expected compliance costs.

Some lands may also already be subject to riparian planting or buffer requirements under agricultural or forestry related programs. If those lands are already obligated to implement riparian restoration, they may not represent additional mitigation opportunities available to generate credits for TMDL compliance.

Requested action: DEQ should evaluate the relationship between the mitigation demand created by the TMDL and the realistic supply of eligible mitigation projects in the basin. If the supply of projects is limited relative to the level of mitigation required, competition for projects could increase credit prices and associated compliance costs for permittees, with implications of implementation of the TMDL and the ability of permittees to comply with permit requirements.

Comment 7: Bureau of Land Management

March 13, 2026

Sent via email to RogueRiver.TemperatureTMDL@DEQ.oregon.gov

In Reply Refer to: 7240(ORM000)

March 12, 2026

Bill Meyers

Rogue Basin Coordinator

Oregon Department of Environmental Quality 221 Stewart Avenue, Suite 201

Medford, OR 97501 Bill.MEYERS@deq.state.or.us

Subject: Comments on Draft Water Quality Management Plan – Riparian Vegetation Management Strategies

Dear Bill,

The Bureau of Land Management (BLM) has thoroughly reviewed the draft requirements stipulated within the Rogue River Basin Water Quality Management Plan (WQMP), specifically those pertaining to riparian vegetation management strategies for streamside vegetation. While we appreciate DEQ's efforts to ensure the achievement of Total Maximum Daily Load (TMDL) load allocation and effective shade targets, we wish to address several points where our findings diverge, particularly concerning the management of intermittent, non-fish bearing streams across all BLM watershed classes (pg. 17 opening paragraphs & table 5).

1. Intermittent Streams and Temperature Contribution

We argue that intermittent streams, by their very nature, do not contribute to increased temperature during periods of potential non-attainment. These streams flow only during certain times of the year, primarily in response to precipitation or snowmelt, and thus, during dry periods or drought conditions, they do not flow at all. The concern for stream warming is primarily associated with continuous water flow, where prolonged exposure to sunlight can significantly raise water temperatures. In the case of intermittent streams, the absence of flow during critical warm periods negates the risk of contributing to temperature non-attainment areas. Therefore, the management strategies for these streams should reflect their distinct hydrological characteristics, acknowledging that their impact on overall water temperature and quality is significantly different from that of perennial streams.

2. Analogous Streams in Roon et al. (2021) Study

Secondly, the streams studied in Roon et al. (2021), which DEQ cites to support the management strategies, are not analogous to the headwater intermittent streams managed by BLM. The referenced study focuses on larger, fish-bearing perennial streams, which fundamentally differ in both ecological function and hydrological dynamics from intermittent streams. Perennial streams have continuous flow and support aquatic life year-round, which necessitates different management approaches to maintain temperature and habitat quality. The application of findings from perennial stream studies to intermittent stream management

overlooks critical differences in stream ecology and hydrology, potentially leading to ineffective or inappropriate management prescriptions for intermittent streams.

Furthermore, it's crucial to note that the temperature signal measured in the Roon et al. (2021) study dissipated downstream within 75-200m. (fig. 5) This dissipation suggests that even if temperature increases were to occur due to thinning practices, their impact would be localized and transient, not affecting the broader stream ecosystem or the achievement of TMDL load allocation and effective shade targets over a significant distance.

3. Silvicultural Prescription and No-Cut Buffers

Thirdly, the silvicultural prescription used in the study cited (Roon et al., 2021) is not directly transferable to the context of BLM's management practices, particularly due to our implementation of no-cut buffers along streams. The study's approach involved thinning vegetation up to the stream bank, a practice not permitted under BLM's management policies for streams within our jurisdiction. BLM maintains no-cut buffers (50 feet for intermittent, non fish-bearing), a critical measure to protect water quality and streamside habitat by preserving canopy cover and minimizing direct human impact to the riparian zone. This distinction is crucial as it underscores the differing potential for shade reduction and temperature increase. BLM's management practices are designed to maintain, if not enhance, effective shade and reduce the risk of stream warming, contrary to the implications of applying the study's findings to our context.

4. Stream classification and mapping

Lastly, the Fritz study referenced in the TMDL Technical Support Document used to identify current BLM mapping methods is not reflective of the current dataset and mapping methods being used. Since the Fritz study in 2013, the NHD layer was updated during the hydrography re-delineation process on BLM lands using LiDAR generated streams. As a result of this process, the current NHD layer has a greater level of accuracy when comparing the stream classification and mapping NHD layer referenced in the Fritz study. In addition, stream surveys are completed prior to timber sale implementation to comply with RMP and ESA requirements. Ground truthing LiDAR generated streams has significantly improved stream classification and mapping prior to project implementation and is new information to consider for the final WQMP. In addition, streams identified containing residual pools with fish are classified as fish-bearing Riparian Reserves where no thinning is allowed within 120 feet of streams.

In light of these points, we respectfully request that DEQ reconsider the applicability of the draft requirements to intermittent, non-fish bearing streams within all watershed classes managed by BLM. We believe that a nuanced understanding of the hydrological and ecological characteristics of these streams, along with a careful consideration of BLM's existing management practices, will lead to more effective and appropriate water quality management strategies.

BLM is committed to working collaboratively with DEQ to protect and improve water quality while ensuring that management strategies are based on sound science and reflect the specific conditions of the streams under our management. We are prepared to provide further information and help ODEQ move towards a final WQMP that accurately addresses the unique aspects of intermittent stream management.

We look forward to your response and the opportunity to continue our collaborative efforts towards sustainable water quality management and the BLM requests the opportunity to work with ODEQ staff to resolve this issue.

The BLM is committed to protecting the water quality within the Rogue Basin and ensuring adherence to water quality standards. The BLM will continue our work to educate the public about the vital significance of these lands and the critical need to preserve their environmental integrity. We are requesting the opportunity to work with ODEQ staff to finalize the Rogue Basin Water Quality Management Plan.

Sincerely,

[Digitally signed by ELIZABETH BURGHARD]

Elizabeth R. Burghard District Manager Medford District Office

Non-discrimination statement

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. For translations or alternate formats, visit DEQ's [Civil Rights and Environmental Justice page](#).