

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 No. 2. Meeting materials were posted on May 7, 2026, and the RAC convened on May 21, 2026. The comment period was open May 21 – June 5, 2026

Original comments are on file with DEQ.

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Comment 1: Klamath-Siskiyou Wildlands Center for Rogue Riverkeeper

June 4, 2026

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

RE: 2026 Temperature TMDL Replacement RAC Meeting #2 Feedback

To DEQ TMDL planners,

Thank you for the opportunity to participate in the 2026 temperature TMDL replacement RAC and to submit comments and questions following the second RAC meeting. We appreciate the extensive effort and collaboration DEQ has committed to during this process.

Public Review and Comment Opportunities for DMA Implementation Plans

KS Wild suggests that DMAs be required to make draft temperature TMDL implementation plans available for public review and comment prior to finalization and publication on respective agency websites. Providing an opportunity for public participation improves transparency, strengthens accountability, and allows affected communities, stakeholders, landowners, and local governments to identify practical concerns and contribute local knowledge that may improve implementation outcomes. A formal public review process would also help ensure that implementation measures are feasible, scientifically supported, and responsive to community and watershed needs before commitments are finalized.

The 2010 Rogue Basin Water Quality Implementation Plan (WQIP) which governs urban jurisdictions and irrigation districts, totaling sixteen DMAs, is heavily abbreviated and illustrates an opportunity for robust public input and inclusion of more meaningful temperature reduction measures. The WQIP relies on vague and discretionary potential “Potential Management Strategies,” none of which are tied to mandatory implementation deadlines, measure temperature reduction targets, enforceable performance standards, or consequences for noncompliance. Implementation plans have the potential to effectively determine whether impaired waterways will see actual temperature reduction progress. Thus, they should be subject to transparent public scrutiny and meaningful opportunities for public comment before approval, rather than negotiated internally between DEQ and regulated entities in a manner that shields deficient plans from accountability and allows agencies to avoid enforceable pollution reduction requirements and other meaningful enforcement mechanisms.

Please Require Monitoring Results & Assessments be Publicly Available

Monitoring results, as described in the draft WQMP at 10.4.1 and 11.1, should also be publicly available where implementation plans are posted to ensure transparency,

accountability, enforcement opportunities, and public participation. Public access to monitoring data allows communities, stakeholders, and partner agencies to evaluate whether implementation efforts are achieving water quality improvements and meeting established temperature targets. Making results available also supports scientific credibility, encourages adaptive management based on measurable outcomes, and helps build public trust by demonstrating how decisions and resulting actions are affecting watersheds

Please Consider OWRD a DMA or Responsible Party

Please consider designating the Oregon Water Resources Department (OWRD) as a DMA. The explicit acknowledgement that water withdrawals constitute a nonpoint source of thermal pollution, and the OWRD's legal authority over water management and withdrawals in the Rogue River basin, warrants the designation and affiliated requirement to prepare an implementation plan. OWRD can directly influence flows and water temperature in many ways, including but not limited to: (a) by adequately conditioning (e.g. by requiring temperature mitigation) or not issuing permits for new water withdrawals and storage that will contribute to warming in the designated waterways; (b) by requiring better measurement and reporting of water withdrawals and water storage to ensure withdrawals and storage are within legal limits; (c) by enforcing laws against withdrawing water without a permit and/or withdrawing more water than legally allowed under a permit or water right; (d) by enforcing instream water rights to protect instream flows; (e) by ensuring forfeiture or unused water rights to prevent resumption of discontinued withdrawals at a future date; and (f) by requiring water conservation and management plans prepared by cities and irrigation districts to demonstrate stronger efforts to conserve water and reduce water withdrawals and possibly convert more water rights to instream rights.

Importance of Native Vegetation

The updated draft WQMP altered requirements regarding planting of streamside vegetation from mandating native vegetation to strongly encouraging it. Native vegetation is especially important for providing effective streamside shade because these plant species are naturally adapted to local climate, soil, and water conditions. Native flora often grows deeper root systems and broader canopies than many non-native species due to their particular adaptations to regional rainfall patterns, soil types, flooding, and drought conditions. Native vegetation is also important for supporting local fauna and pollinators that have evolved alongside these plant communities, ultimately making riparian areas more resilient and persistent over the long-term.

Non-native vegetation may struggle to adapt as well to local habitats as native vegetation, and may prove to be less effective ecologically and economically in the long-run due to more extensive irrigation, maintenance, and replacement needs over time. Non-native species may also provide less consistent shade, spread aggressively, or fail to stabilize streambanks effectively.

We understand that any kind of vegetation or structure provides streamside shade; however we do encourage DEQ to strongly prioritize planting of native streamside

vegetation where possible.

Cold-Water Refugia Identification & Protection Strategies

Climate change and warming global temperatures have significant implications for cold-water salmonid fishes as their thermal environments “strongly affect their metabolic rates, foraging behavior, stress responses, distributions and abundance, life histories, population structure, and evolution.”¹ Identification, protection, and restoration of cold-water refugia and habitat may prove essential in ensuring persistence of local salmonid populations.² The Rogue is home to spring and fall Chinook, coho salmon, summer and winter steelhead, and coastal cutthroat trout. In particular, the Southern Oregon/Northern California Coast (SONCC) coho salmon relies on the Rogue River basin and has been federally protected since 1997. These salmon are a keystone species, supporting countless other wildlife species and ecosystem health, and sustaining indigenous cultural traditions.

Thank you for including cold-water refugia identification and protection as a channel modification management strategy in Table 2 of the updated draft of the WQMP. However, in the corresponding “channel modification” section 4.2.3, there were no new inclusions or direction regarding how this will happen practically. It is important to clearly outline the guidance so that it can be appropriately and effectively implemented by the responsible parties. Please indicate in the final draft of the WQMP how cold-water refugia is to be identified and protected by DMAs and other responsible parties. Please also include a requirement to document locations of such refugia and documentation of cold-water refugia and protection strategies in all implementation plans.

Please consider reviewing and potentially implementing approaches outlined in the USGS suggestions,³ or others like it, for identifying and protecting cold-water refuges. The Willamette and Lower Columbia currently have cold-water refugia standards.⁴ We urge DEQ to establish a regulatory narrative cold water refuge standard for the Rogue basin as well, mirroring the protections implemented in the Willamette and Columbia Rivers to safeguard migrating salmon and steelhead.

Without explicit or clear directives or operational guidelines and standards, agencies are less likely to consistently prioritize, apply, and enforce the strategy in practice. Clearly defined implementation frameworks, management actions, and expectations are necessary

¹ Isaak, D. J. & M. K. Young (2023) Cold-water habitats, climate refugia, and their utility for conserving salmonid fishes. *Can. J. Fish. Aquat. Sci.* 80: 1187-1206.

² See Id.; see also Quilbé, R. et al. (2025) Cold-Water Thermal Refuge Enhancement and Creation for Salmonids: Successes, Failures, and Lessons Learned. *River Research and Applications* 41:1673-1700.

³ Torgersen, C. E. et al. (2012) Primer for identifying cold-water refuges to protect and restore thermal diversity in riverine landscapes. USEPA, Region 10. 910-C-12-001. 91 p. Available at <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100E45N.PDF?Dockey=P100E45N.PDF>; see also Mejia, F. H. et al. (2023) Closing the gap between science and management of cold-water refuges in rivers and streams. *Global Change Biology* 29:5482-5508.

⁴ OAR 340-041-0028(4)(d).

to ensure this management strategy is prioritized during on-the-ground management. If it is not addressed, this issue will cause a gap in adequate implementation of WQMPs and implementation plans. The NFIP remains a reason that DMAs remove streamside vegetation and contradicts WQMP mandates and objectives.

Industrial Wastewater

In the previous feedback submitted by KS Wild following the first RAC meeting, we requested the forthcoming WQMP draft clarify whether DEQ's position remains that "industrial wastewater is [not] a known source of increased temperatures in the Rogue Basin." It doesn't appear this was addressed in the most recent draft WQMP.

Please explain how DEQ came to this conclusion and if this continues to be DEQ's position, please provide any data to support this claim.

2008-2026 Water Temperature Reductions

In the previous feedback submitted by KS Wild following the first RAC meeting, we requested that the forthcoming drafts of either the TMDL or WQMP include an accessible summary of data describing water temperature reductions achieved since the issuance of the 2008 temperature TMDL for the Rogue River Basin to the present. It does not appear DEQ provided this in the drafts. If this is incorrect, please point us in the direction of the data summary. If this is correct and no summary was provided, please provide such described data summary in the final drafts.

Adaptive Management Strategies for Climate Change Realities

The most recent draft WQMP repeatedly references a commitment to adaptive management. However, the document does not outline or identify clear and tangible operational strategies, leaving adaptive management a largely aspirational concept. Please address this in the final draft WQMP by including concrete operational strategies and adaptive management direction.

Conclusion

We appreciate being a part of this collaborative process and hope we can contribute 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. If DEQ chooses not to respond to any of the above requests, questions, or concerns when preparing its final draft TMDL and WQMP, please reach out to me directly rather than simply ignoring the requests. It would be helpful to know how DEQ addresses our questions and concerns whether it implements them into the drafts or not. Thank you so much for all your work and efforts in this process.

Sincerely,

Sydney Wilkins

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Ashland, OR 97520
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Comment 2: Oregon Forest Industries Council

June 3, 2026

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

RE: Rogue River Temperature TMDL RAC2 Comments,

The following comments are being submitted on behalf of the Oregon Forest Industries Council (OFIC) with regard to the discussion during the second meeting of the Rulemaking Advisory Committee (RAC) for the Rogue River Temperature TMDL replacement rulemaking, held on May 21, 2026, and the content of the most recent drafts of the TMDL and the accompanying Water Quality Management Plan (WQMP).

As noted during the meeting, OFIC has concerns with some of the framing of Section 8.1 of the WQMP regarding the adequacy of current Forest Practice Act (FPA) rules to meet the effective shade targets outlined in the draft TMDL, as well as with what it perceives as a misconstrual of current private forest management practices with regard to riparian area disturbance and “restoration.” We also have questions regarding the modeling assumptions underlying the effective shade targets outlined in the draft TMDL.

Statements regarding inadequacy of FPA rules

As drafted, the WQMP presently states that “findings in [TMDL Appendix xxC] indicate that [the revised, expanded FPA] buffers do not provide shade equivalent to a 120-foot noharvest buffer” and that “[a]s required no-harvest buffers decrease with stream type, they are less likely to meet shade targets for fish-bearing and perennial non-fish bearing streams.” These statements are inappropriately conclusory and do not adhere to the standard established by statute in ORS 527.770 that states that a forest operator operating in accordance with current forest management practices shall “not be considered in violation of any water quality standards.”

We would recommend elimination of the first of these two statements (comparing FPA buffers to a 120-foot no-harvest buffer), since the WQMP now makes clear, in section 10.2.1.3, that a 120-foot slope buffer is “not required” to demonstrate compliance with the rule, instead framing a 120-foot buffer as an optional, safe-harbor alternative. If this reflects DEQ’s intent with regard to the function of the 120-foot buffer option, it seems inapposite to maintain comparisons to this option in the manner of the language in Section 8.1. Either the 120-foot buffer is a safe-harbor option or it is the metric against which every alternative strategy must be measured for adequacy. We agree – again, as now articulated in Section 10.2.1.3 – that it should be the former, not the latter. Therefore, it should not be referenced as a standard throughout the other sections of the WQMP, Section 8.1 included.

This would require deletion of the language cited above, as well as the language on p. 26 stating DEQ concern with buffer adequacy. In the same vein, we would also recommend additional language in Section 10.2.1.3 more clearly stating that the 120-foot slope buffer option is a safe-harbor alternative and is not a standard for evaluating the adequacy of other streamside management strategies.

With regard to the second statement identified in Section 8.1 (stating that decreasing buffers are less likely to meet shade targets), we would recommend greater nuance so that, rather than reading as a conclusive finding, it is presented as a question for ODF and DEQ to address through monitoring and evaluation. For example, it could read: “Noharvest buffers decrease with stream type under current FPA rules, and the small forestland option in the FPA further reduces legally-required buffering. ODF’s implementation plan should demonstrate how these buffers, in combination with other regulatory or voluntary standards, are adequate for reducing solar loading in forested stream segments on private forestland.”

Misconstrual of restoration of previously harvested lands

Our second concern is with the statements in Section 8.1 that the FPA rules “do not require retroactive restoration of riparian areas harvested under previous rules” and that therefore “effective shade may not be adequate in riparian areas adjacent to small and medium SSBT/F streams harvested before the new rules took effect” as the “recovery trajectory” for future riparian shade on such stream segments “varies depending on the rules in place at the time of harvest and the replanting timeline.” These statements belie a clear misapprehension of management practices under the FPA, both presently and under former iterations of the law.

The FPA requires replanting of all harvested acres (whether adjacent to streams or otherwise) within two years of harvest, with replanted trees “free-to-grow” (i.e. well distributed, healthy, and clear of competing vegetation) within six years of harvest. This standard remained unchanged from the prior version of the FPA. This means that “retroactive restoration” is not needed as restoration has always been a legal requirement. In other words, not only are previously harvested areas guaranteed to be restored (and in fact are all already in the process of such restoration), but the new rules impose even greater restrictions on harvesting in riparian areas going forward, thereby guaranteeing that the impacts of future harvests will be reduced in the years between harvest and establishment of “free-to-grow” stands of new trees.

For this reason, we would recommend deletion of the statements regarding retroactive restoration of legacy harvest areas on pp. 25-26 of the document.

Modeling assumption questions

Finally, though we don’t presently have access to the modeling data that DEQ used to arrive at the shade targets for various land class categories in the TMDL, given the effective target shade and shade gap values articulated in the draft TMDL (pp. 58-62 (in-document page numbers)), we have concerns that the modeling assumptions being used may be significantly over-estimating effective shade under “restored” conditions. For example, the effective shade target for ODF-private lands in the Evans Creek/West Evans Creek model area is an almost impossibly high 86%.

We have requested access to the modeling data so that we can run our own modeling analysis, and we appreciate DEQ’s willingness to make this data available. Given current

timelines, we will not have our modeling work done prior to the time that comments from RAC members are due, so we will likely have to raise any concerns that surface during public comment on the draft rule once it has been noticed.

Thank you for your attention to these comments. We look forward to reviewing the revised rule.

Sincerely,

Tyler Ernst
General Counsel and Director of Regulatory Affairs
Oregon Forest Industries Council

Comment 3: Oregon Department of Agricultural

June 4, 2026

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

Comments submitted June 4, 2026, by RAC member, Beth Pietrzak, ODA SW Oregon Regional Water Quality Specialist, beth.pietrzak@oda.oregon.gov.

RE: 2027 Rogue River Basin TMDL for Temperature

Fiscal Impact Statement: Page 4:

The correct term for the applicable ODA Plan is the “Inland Rogue Agricultural Water Quality Management Area Plan”. This Plan covers Jackson and Josephine Counties, but not the downstream portion of the Rogue in Curry County, often called the “Lower Rogue”. The portion of the Rogue watershed in Curry County is covered by the Curry County [Agricultural Water Quality Plan and Rules](#).

WQMP: Table 3, page 14

ODA Water Quality Program Area of Jurisdiction suggested language: "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."

WQMP: Section 8.2

This is the language ODA and DEQ finalized recently. It is my understanding that this was created in consultation with DOJ and is the language that should be included in the WQMP.

“The Oregon Legislature passed the Agricultural Water Quality Management Act in 1993, which directed Oregon Department of Agriculture to adopt rules as necessary and to develop plans to prevent water pollution from agricultural activities (ORS 568.900 to 568.933 and ORS 561.191 and OAR chapter 603, division 90 and 95). Subsequently, ODA worked with Local Advisory Committees and Soil and Water Conservation Districts to develop Agricultural Water Quality Area Rules and Area Plans for 38 watershed-based management areas across the state.

The **[insert TMDL basin]** includes **[number of]** ODA Agricultural Water Quality Management Areas that each have an Area Plan (TSD **[section]**). DEQ participates in ODA’s Area Plan review process by providing water quality status and trends for each management area, as well as assessments of land conditions, agricultural activities and implementation gaps that likely contribute to water quality impairments. The Area Plans for the **[number of]** management areas included in this TMDL were reviewed by DEQ within the last **[number of]** years, however not all reviews resulted in Area Plan revisions.

[TMDL basin] streams continue to be identified as impaired by Oregon’s Section 303(d) list for **[parameter]** in part due to inadequate implementation of the protections provided in the Area Plans and Rules. As agreed, in the 2023 Memorandum of Agreement between DEQ and ODA, ODA will either adapt the Area Plan and Area Rules to act as the TMDL implementation plan or develop a separate TMDL implementation plan. The additional measures will subsequently be

incorporated into Area Plans or Area Rules affected by the TMDL. The approach will be decided as part of the TMDL process. In the case of the **[insert TMDL]**, ODA has agreed to develop an implementation plan for DEQ review and approval. DEQ will assist ODA in developing an approvable TMDL implementation plan that includes appropriate measurable objectives and timelines to address identified water quality priorities and allocations (or surrogate measures). In addition, DEQ will work with ODA to identify additional measures that could be implemented by rule revisions, incentive programs, and resources that may be available to help with program and project implementation to provide reasonable assurance of achieving TMDL targets.”

Appendix B: NRCS is not part of the Agricultural Water Quality Support Grant. That is funding allocated by the Oregon Legislature, administered by ODA, to further SWCD efforts to improve Ag Water Quality with an emphasis on SIAs.

Comment 4: Medford Public Works

June 7, 2026

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

RE: City Comments on Draft Rouge River Basin TMDL – Replacement RAC #2

Dear Rogue Temperature, TMDL Revision Team:

Thank you for the opportunity to comment on the revised draft Rogue River Basin Temperature TMDL, Technical Support Document, Water Quality Management Plan, and Fiscal Impact Statement.

The City appreciates DEQ's continued work and the meaningful improvements in the May 2026 draft materials, particularly the more workable seasonal allocation structure for point sources and added flexibility for urban nonpoint source implementation. In that constructive spirit, the City offers the following comments to help strengthen the technical record, improve clarity, and support a more durable final TMDL package for implementation, public understanding, and potential future scrutiny.

Thank you for the opportunity to provide comments and to serve on the Rulemaking Advisory Committee.

Sincerely,

Johnny Leavy | Water Reclamation Division Manager
City Public Works | Water Reclamation Division
Medford RWRP, 1100 Kirtland Road, Central Point, OR 97502

Strengthen documentation of the Current Conditions scenario and point-source allocation methodology

The City appreciates the detailed model calibration information provided for the original model framework. At the same time, the final record would be stronger if it more clearly documented how the Current Conditions model scenario was developed from the calibrated model and how DEQ determined that the modified scenario remained appropriate for allocation and attainment analyses.

Additional explanation in this area would help show how the analytical foundation for the TMDL proceeds from model calibration to the allocation framework ultimately used in the final documents. It would also make the record more transparent with respect to the derivation of facility-specific Human Use Allowances (HUAs) and Wasteload Allocations (WLAs), including how modeled results and other supporting assumptions were translated into final allocation values.

Because point-source allocations are a core component of the TMDL framework, a more explicit explanation of this methodology would strengthen the final Technical Support

Document and reduce the likelihood of later disputes over whether the allocation framework is sufficiently supported in the TMDL.

To strengthen the final documents, DEQ might consider supplementing the Technical Support Document or response-to-comments materials with a more complete explanation of:

- how the Current Conditions scenario was developed from the calibrated model,
- which model inputs or assumptions were modified and why,
- how DEQ evaluated whether those modifications preserved the model's suitability for allocation analysis, and
- the analytical process used to derive individual point-source HUAs and WLAs, including the basis for any changes between draft versions.

Clarify flow assumptions used to derive wasteload allocations

The City believes the final TMDL would be more defensible if it more clearly explained the hydrologic and effluent flow assumptions used to derive point-source wasteload allocations. Thermal loading capacity is highly sensitive to flow assumptions, and the durability of the final TMDL will be improved if the record clearly explains why those assumptions were selected, whether alternatives were considered, and how those assumptions affect the resulting wasteload allocation framework.

This is particularly important where different flow assumptions can materially influence the magnitude of derived WLAs and the interpretation of available assimilative capacity. A clearer explanation of these choices would improve transparency and make the technical basis for the final allocation structure easier to evaluate.

To strengthen the final TMDL, DEQ might consider clearly explaining:

- the basis for the selected river flow assumptions,
- the basis for the selected effluent flow assumptions,
- whether alternative assumptions were evaluated, and
- how those assumptions affect the resulting WLAs

Define the reserve capacity framework more clearly

The City believes the final TMDL would be strengthened by a clearer explanation of how reserve capacity is intended to function over time. The current materials do not yet appear to fully explain the purpose, structure, and administrative framework associated with reserve capacity, including whether DEQ intends to apply a first-come, first-served approach or another allocation method, or whether projected future growth may be considered in some other manner.

A clearer reserve capacity framework would improve predictability and strengthen the administrative record for the final TMDL by demonstrating that DEQ has considered how this component of the allocation framework is expected to function. Because reserve

capacity is closely tied to future growth, uncertainty, and potential error, a more defined explanation would help reduce the risk of later disagreement over the intended implementation of the TMDL.

To improve clarity and strengthen the final TMDL, DEQ might consider describing:

- the intended purpose and function of reserve capacity,
- the principles DEQ expects to use in administering reserve capacity over time,
- whether projected future growth is relevant to that framework, and
- whether reserve capacity is expected to be distributed on a first-come, first-served basis or under another prioritization approach.

Align model result reporting more closely with the seasonal allocation framework

The City appreciates DEQ's use of a seasonal HUA structure, which addresses differing conditions across the year. The final Technical Support Document would be further strengthened if model results, cumulative warming evaluations, and attainment analyses were presented using the same seasonal time periods used to assign HUAs and WLAs. Where the reporting time periods for model output differ from the time periods used for allocation decisions, it becomes more difficult for readers to evaluate whether the allocation framework is fully supported by the underlying analyses. Greater alignment between these time periods would improve transparency and make the basis for the seasonal allocation structure easier to follow.

The City also believes the final TMDL would benefit from a clearer explanation of the basis for the selected TMDL time period. This would help show that the temporal structure of the TMDL is appropriately supported by the technical analysis.

To strengthen the technical record of the TMDL, DEQ might consider:

- presenting model results using time periods consistent with the spawning and non
- spawning periods used to assign HUAs, and
- more clearly explaining the basis for the defined TMDL time period.

Expand discussion of climate change, hydrologic change, and long-term implementation assumptions

The City believes the final TMDL would be more durable if it more directly addressed how modeled future climate and hydrologic changes may affect long-term assimilative capacity and the assumptions underlying the selected framework. The current approach appears to rely substantially on historical flow and temperature conditions. Additional discussion of how modeled future conditions may affect long-term implementation would help strengthen the final record of the TMDL.

This issue is particularly important given the long implementation horizon associated with the TMDL and the use of a 100-year attainment timeframe. A more explicit discussion of whether and how climate projections, hydrologic variability, and future changes in stream

conditions were considered would help demonstrate that DEQ has reasonably evaluated the long-term implications of the chosen WLA framework.

To strengthen the final TMDL, DEQ might consider adding discussion of:

- whether and how climate and hydrologic change were considered in the WLA development,
- the implications of those changes for long-term assimilative capacity,
- the assumptions underlying the 100-year attainment timeframe, and
- DEQ's intended adaptive management approach if future conditions materially differ from the historical basis used to develop the TMDL.

Expand the fiscal discussion to better document realistic municipal compliance pathways

The City appreciates that the revised materials include additional discussion of urban riparian restoration costs and implementation challenges in developed areas. The Fiscal Impact Statement would be further strengthened, however, by a more complete discussion of the realistic compliance pathways available to municipal point sources and the likely order-of-magnitude costs associated with those pathways.

For municipal wastewater utilities, potential compliance strategies may include recycled water programs, technology-based cooling measures, operational changes, trading, instream modifications, and other capital or programmatic actions. A more developed discussion of these pathways would improve the usefulness of the fiscal analysis and better demonstrate that DEQ has considered the practical implementation consequences of the TMDL for local governments and ratepayers.

A fuller fiscal discussion would also strengthen the record against claims that the implementation consequences for municipalities were insufficiently considered.

To strengthen the Fiscal Impact Statement, DEQ might consider including a more complete discussion of:

- the range of likely municipal compliance pathways,
- the extent to which those pathways are currently available or reasonably foreseeable, and
- order-of-magnitude costs associated with common municipal compliance strategies.

Preserve express implementation flexibility for urban settings in the Water Quality Management Plan

The City supports DEQ's revisions recognizing that implementation in developed areas requires flexibility. The final TMDL and Water Quality Management Plan (WQMP) would be stronger if they continue to make clear that urban implementation may require approaches tailored to constrained rights-of-way, existing infrastructure, public safety needs, utility conflicts, and other site-specific realities.

Express recognition of such flexibility helps show that the final TMDL and WQMP framework is designed to be implementable in real-world municipal settings rather than as a one-size-fits-all approach. It also reduces the likelihood of later disagreement regarding whether optional measures have become de facto requirements.

To strengthen the final TMDL, DEQ might consider affirming in the WQMP that local governments may use alternative implementation approaches where those approaches can demonstrate meaningful temperature benefit and are better suited to developed urban settings and municipal operating constraints.

Preserve broad recognition of trading and other alternative compliance tools at the framework level

For the City and similarly situated municipalities, thermal trading and other alternative compliance tools may remain important elements of long-term compliance. The City believes the final TMDL materials would be strengthened by preserving broad flexibility for these approaches and by clarifying that the implementation toolbox is not limited to a narrow set of measures.

If the WQMP discusses trading, the City encourages DEQ to make clear that, where appropriate and consistent with the trading program framework, strategies other than riparian restoration may also be considered. A broader and clearly described implementation toolbox will strengthen the practical defensibility of the final TMDL framework and better support implementation under future growth and changing watershed conditions.

Comment 5: U.S. Bureau Land Management

June 4, 2026

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

Draft Fiscal Impact Statement, P.4

“U.S. Bureau of Land Management is an existing DMA responsible for developing and implementing a TMDL implementation plan to meet TMDL allocations on BLM-managed lands. DEQ found that existing riparian reserve protections in BLM’s Northwestern and Coastal Oregon Resource Management Plans and the Southwestern Oregon Resource Management Plans may not attain are likely adequate to meet TMDL load allocations. BLM may need to take additional management actions to meet TMDL load allocations and effective shade targets. BLM will likely incur administrative and operational costs to develop its plan and carry out the related management, monitoring, and reporting”

I think this sentence “BLM may need to take additional management actions to meet TMDL load allocations and effective shade target.” needs rewording to match the changes to the WQMP. Maybe use this sentence from the WQMP? “BLM’s implementation plan should describe how management strategies will attain load allocations across the District.”

Draft WQMP, P.10

Decision tree (Fig.2) on page 10 of WQMP needs to be updated to match changes made for sufficiency of Class III watersheds to limit solar loading and not increase downstream stream temperatures.

Draft WQMP, P.12

“DEQ recognizes that factors such as climate change, wildfire, Douglas-fir mortality, flood, geology, and legacy impacts may prevent meeting effective shade targets. DEQ will not consider shade reductions caused by natural disturbances as a violation or failure to implement a plan. In such cases, responsible persons should assess and prioritize these areas for restoration or protection following the disturbance.”

I think Doug-fir mortality should be mentioned here since it’s happening at such a large scale, starting in the Applegate, but it’s affecting other watersheds as well. It’s related to climate change, but it’s a big enough issue affecting stream temperatures in the Rogue Basin to list separately. Many of this areas may no longer be able to support Doug-fir and the associated canopies/effective shade in the changing climate.

Draft WQMP, P.20

Table 7. Schedule for implementation plans, monitoring and assessment needs to be updated to match changes not requiring BLM and USFS to complete a Shade gap analysis plan in row 2 of the table.

Comment 6: Oregon Department of Fish and Wildlife

June 5, 2026

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

Re: Rogue Basin Temperature TMDL Updates - RAC 2 Comment

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

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 May – 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. The two Congressionally authorized primary uses of water at Lost Creek Reservoir (HD 566) are flood control and fishery enhancement, protection of water quality is secondary. 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. 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 temperature targets will take precedence over

ODFW and USACE temperature and discharge 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.

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. Managing reservoir outflow to meet numerical criteria may be very achievable in years when inflows allow a reservoir's rule curve to be followed exactly. However, as interannual variability of precipitation patterns become more common, years with limited water availability have also become more common. Low water availability years require careful

planning in order to avoid or minimize thermally induced impacts to salmon, steelhead, and trout. During low water availability years, meeting DEQ's proposed numerical criteria daily throughout the spring and summer of a given year may result in less than desirable temperatures

in the fall and may jeopardize reservoir refill in the subsequent year. When considered over the long term, flexibility—and occasional slight exceedance of proposed DEQ numerical criteria—may be advantageous for fish and aquatic life in the context of Lost Creek and Applegate Reservoir releases.

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.

In conjunction with 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 second draft of the TMDL, only the minimum duties provision. Given the potential for exceedances of the minimum duties provision, especially during low water years that may occur more frequently in the future, ODFW requests a 0.1°C portion of the Human Use Allowance reserve capacity from Upper Rogue Assessment Unit OR_SR_1710030703_04_105475, which is consistent with what has been done in other basins (i.e. Umpqua, Sandy, Willamette) (Table 1).

Table 1. Wasteload allocations for ODFW hatcheries

TMDL	Hatchery	WLA
Willamette – 2025	Clackamas	(4/1 – 6/15) - 0.072 °C (6/16 – 8/31) – 0.261 °C (9/1 – 11/15) – 0.283 °C
Willamette – 2025	Dexter Ponds	(4/1 – 6/15) - 0.036 °C (6/16 – 9/14) – 0.189 °C (9/15 – 11/15) – 0.255 °C
Willamette – 2025	Leaburg	4/1 – 6/15) - 0.074 °C (6/16 – 8/31) – 0.012 °C (9/1 – 11/15) – 0.026 °C
Willamette – 2025	Marion Forks	0.075 °C
Willamette – 2025	McKenzie	4/1 – 6/15) - 0.002 °C (6/16 – 8/31) – 0.033 °C (9/1 – 11/15) – 0.002 °C
Willamette – 2025	Minto	0.03 °C

TMDL	Hatchery	WLA
Willamette – 2025	Roaring River	0.1 °C
Willamette – 2025	South Santiam	0.02 °C
Lower Columbia-Sandy – 2025	Sandy	Option A: 0.3 °C (Cedar Creek) Option B: 0.08 °C (Sandy River)
Umpqua – 2025	Rock Creek	0.3 °C

TMDL General Questions/Comments

TMDL – Pages 26 - Table 8-1 on page 26 identifies the 7Q10 for AU 105475 (Cole Rivers discharges to AU 105475) as 502 cfs. The 7Q10 value was calculated from USGS gage 144335072, Rogue River at Cole M Rivers Fish Hatchery nr McLeod, OR for the period of record 2011-2022. ODFW does not feel that this is an appropriate illustration of dilution flows available above Cole Rivers hatchery. The water year from 2021-2022 was an extremely dry year and Lost Creek Reservoir was operating below rule curve in the spring of 2022. In such cases where storage is not full, ODFW requested that the USACE shut down the outflow from the reservoir during significant storm events in order to catch up on storage and refill the reservoir. During the months of April-May of 2022, ODFW made such a request. The flows from the time period, April 16, 2022 through May 15, 2022 are not reflective of typical seasonal streamflows above Cole Rivers hatchery and should be excluded in the calculation of 7Q10.

Water Quality Management Plan

WQMP – page 42 - states that “***Since 1970 the USACE has consulted with ODFW for William L. Jess and Applegate dams to determine fishery mitigation for habitat lost by the inundation of riverine habitats, to develop temperature and flow targets, and to conduct research which has refined temperature and flow targets during the April – October Conservation Season. These requirements should be further outlined and discussed in monitoring and assessment plans that are submitted to DEQ. DEQ will determine if these alternative operational plans meet the requirements of the TMDL.***”

- What will DEQ use to determine if these operational plans meet TMDL requirements?
- Does DEQ have the authority to override USACE/ODFW operational agreements authorized by U.S. Congress?
- These mechanisms for determination and approval should be documented and be made publicly available.

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.

ODFW operates Cole Rivers hatchery within the geographic scope of the Rogue Basin TMDL. Cole Rivers hatchery plays an important role within the state, including providing hatchery produced fish that have significant cultural value to Oregon tribes. While there are a number of different approaches to reducing or eliminating the heat load impact from typical wastewater effluent to surface water, most, if not all options available are not technically feasible or are cost prohibitive for a state operated hatchery system (i.e., reducing the temperature of water before it reaches the hatchery intake, modifications to hatchery processes within the system, modification of discharge from the hatchery, or direct cooling of the effluent prior to discharge). In addition, some of the options available may not be physically possible due to land use constraints and lack of real estate to house necessary infrastructure.

The costs of compliance with existing temperature criteria are not inconsequential. ODFW is not aware of other hatcheries that have implemented effluent chilling for permit compliance, but a recent climate assessment for ODFW hatcheries estimated it would cost approximately \$19,000 per month to cool ten cubic feet per second by 1° Celsius based on the current cost of electricity at \$0.06 per kilowatt hour. Based on this calculation, Cole Rivers would require a minimum of \$380,000 per month to reduce river temperatures by 1° Celsius. This cost estimate does not include the infrastructure capital costs and ongoing maintenance. ODFW similarly calculated order-of-magnitude cost estimates for chilling water across a representative range of discharge flows for Oregon hatcheries (Table 2). The costs for compliance through active chilling of influent or effluent water could exceed millions of taxpayer dollars in capital and ongoing operation and maintenance costs.

Cooling Method	Capital Cost (per MGD Per °C)	Annual O&M Costs (per MGD Per °C)	3 MGD Facility		16 MGD Facility	
			Capital Cost (Per °C)	Annual O&M (Per °C)	Capital Cost (Per °C)	Annual O&M (Per °C)
Evaporative	\$28K-42K	\$28K	\$84K-126K	84K	\$448K-672K	\$448K
Mechanical	\$70K-167K	\$14K-28K	\$210K-501K	42K-84K	\$1,120K-2,672K	\$224K-448K

Table 2. Order-of-magnitude estimated capital costs and annual operation and maintenance (O&M) costs for evaporative and mechanical cooling. Estimates are per millions of gallons per day, MGD, per °C and then extrapolated to hypothetical 3 and 16 MGD facilities. Cost estimates are from Clean Water Services (2005)⁵, adjusted to per °C from per °F and for inflation from 2005 to 2022 dollars using the Consumer Price Index, U.S. Bureau of Labor and Statistics. Actual costs would depend on the technology used, facility characteristics, energy source and costs, amount of cooling needed, and duration of need.

Costs associated with achieving compliance through implementation of water quality trading programs are also expected to be high because the high rates of flow through hatchery facilities may translate to offset requirements that are similar to other large trading programs implemented in Oregon. For example, capital and operation/maintenance costs for the City of

⁵ <https://cleanwaterservices.org/wp-content/uploads/2022/06/thermal-load-management-plan.pdf>

Medford's thermal trading program are projected to exceed 8 million dollars over nineteen years, averaging \$435,000 annually⁶.

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.

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.

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⁶ City of Medford: <https://www.oregon.gov/deq/FilterDocs/MedfordThermalTrading.pdf>

Comment 7: Rogue River-Siskiyou National Forest

June 5, 2026

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

RE: WQMP Comments/Edits Version 2.0

Please see attached, the latest draft WQMP and Fiscal Impact Statement documents with additional suggested edits from the Rogue River-Siskiyou National Forest. The Redline versions were greatly appreciated for being able to track the edits ODEQ had made from the original version, thank you.

Please don't hesitate to reach out for any needed discussion or review of updated draft language. These comments mostly address what was brought up during the RAC #2 meeting.

We are anticipating a need for more discussion around Implementation Plan development and expectations, and we plan to continue to coordinate with other national forests, especially the Umpqua NF, so we are as reasonably aligned and consistent as possible. Looking forward to further discussion as we move through this process.

Sincerely,



Joni Brazier
Forest Soil Scientist
Forest BAER & BAR Coordinator
Forest Service
Rogue River-Siskiyou National Forest,
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WQMP 8.4 U.S. Forest Service

Clearcutting is prohibited, while thinning and other silvicultural treatments are permitted within Riparian Reserves when intended to promote late-successional forest conditions, improve riparian function, or enhance habitat. Furthermore, to protect Riparian Reserves, the Rogue River-Siskiyou National Forest supplements existing stream mapping with field verification of streams and wetlands, including the documentation of previously unmapped features, correction to stream and wetland locations, and flow permanence characteristics. The Siskiyou National Forest Land and Resource Management Plan (LRMP) include Standards and Guidelines in Chapter IV for the protection of water quality, riparian ecosystems, and the implementation of Best Management Practices for the protection of water quality (USDA USFS, 1989, Chapter IV, p. 45-48; p. 125-128). The Rogue River National Forest LRMP includes similar Standards and Guidelines for each Management Strategy (USDA USFS, 1990, Chapter IV). Forest Plan

Direction and Objectives in both LRMPs include an emphasis on maintaining or reducing stream temperatures (SNF LRMP, Chpt. IV, p. 17; RRNF LRMP Chpt. IV, p 1).

- Suggested edits to provide a little more detail into our guiding docs and practices (also corrected reference section at end of WQMP for both forest plans).

WQMP 10.2.1 Shade monitoring and assessment

Figure 2. Decision tree for streamside shade monitoring and assessment requirements.

- This flow chart needs updating for USFS to align with updated draft language for USFS in the WQMP. Perhaps split USFS out and create a new Box chain, as we are not required to do a shade gap analysis nor adopt a 120 ft streamside buffer, but instead continue to use our Riparian Reserve SPTHs and Aquatic Conservation Strategies from the NWFP, and to complete a streamside eval.

WQMP 10.2.1.1 Streamside evaluation

Multiple land uses can occur in the same streamside area so the jurisdictions may overlap. Responsible persons are required to identify, map, and characterize all streamside areas that fall within their jurisdiction, utilizing the best available data. ~~The evaluation must classify streamside areas into the following categories:~~

- Suggesting this edit, as for responsible agencies with a large land base, the stream mapping is not perfect at a basin to subwatershed scale and is improved at the project level with field surveys.

WQMP 10.2.1.2 Shade gap analysis

The purpose of a shade gap analysis is to determine whether effective shade targets are being met. This WQMP requires ODA and, ODF, ~~BLM, and USFS~~ to complete a shade gap analysis in streamside areas where DEQ did not provide modeled results and where DEQ determined that existing management may not be adequate to meet load allocations (xx TMDL Section 9.1.5.2). These entities must include intermittent streams in their analysis.

- Highlighting deletion to align with Section 8

WQMP 10.3 Timeline for implementing management strategies and schedule for completing measurable milestones

Table 7. Schedule for implementation plans, monitoring and assessment

- Need to strike USFS from the Shade Gap Analysis project plan line item to be consistent with updated draft language for USFS. Confirmed this with Bill at RAC 2.

WQMP 15. References

USFS (U.S. Department of Agriculture). 1989. Siskiyou National Forest Land and Resource Management Plan. Chapter 4, Forest Management Direction.

USFS (U.S. Department of Agriculture). 1990. Rogue River National Forest Land and

- New Corrections/edits

Fiscal Impact Statement - Federal agencies

U.S. Forest Service is an existing DMA responsible for developing and implementing a TMDL implementation plan to meet TMDL allocations on USFS-managed lands. DEQ found that existing riparian reserve protections in USFS's [Northwest Forest Plan](#) are likely adequate to attain TMDL load allocations. USFS may need to take additional management actions to meet TMDL load allocations and effective shade targets to expedite the recovery of shade lost to legacy land use practices and natural disturbances such as wildfire. USFS will likely incur administrative and operational costs to develop its plan and carry out the related management, monitoring, and reporting.

- Suggested edits

Non-discrimination statement

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