Oregon Department of Environmental Quality

Meeting Summary

Temperature Total Maximum Daily Load Replacement: Willamette Subbasins Rule Advisory Committee Meeting #1

Feb. 23, 2023, virtual meeting (Zoom)

List of attendees

Rule advisory committee members:

April Snell (absent)	Oregon Water Resources Congress
Becky Anthony	Oregon Department of Fish and Wildlife
Carrie Sanneman	Multnomah County Drainage District
Dave Gilbey	City of Corvallis
Jackie White	Northwest Pulp and Paper Association
Al Johnson	U.S. Forest Service
Julia Bond	City of Portland Bureau of Environmental Services
Kathryn Tackley (absent)	U.S. Army Corps of Engineers
Lauren Poor	Oregon Farm Bureau
Mike Brown	Bureau of Land Management
Rich Wildman	Geosyntec Consultants for Oregon Forest & Industries Council and Oregon Farm Bureau
Marganne Allen	Oregon Department of Agriculture (representative for Olivia Jasper)
Rebecca McCoun	Oregon Department of Forestry
Sharla Moffett (absent)	Oregon Business and Industry
Susie Smith	Oregon Association of Clean Water Agencies

DEQ staff

Ryan Michie, Andrea Matzke, Priscila Woolverton, Nancy Gramlich, Evan Haas, Alex Liverman, Gene Foster, Michele Martin, Trina Brown, Valerie Thompson

Agenda

Time	Topic
1 p.m.	Welcome
1:05 p.m.	Agenda, and introductions
1:10 p.m.	Zoom logistics, ground rules, meeting materials, and charter
1:15 p.m.	Project overview and Total Maximum Daily Load (TMDL)
2:10 p.m.	Break – 5 min.
2:15 p.m.	Water Quality Management Plan (WQMP)
3 p.m.	Fiscal Impact Statement and OAR language
3:25 p.m.	Next steps
3:30 p.m.	Adjourn

Meeting summary

Michele Martin started the meeting introductions and roll call of rule advisory committee members, reviewed logistics and ground rules for the meeting and discussed meeting materials that were sent on Feb. 9, 2023, in advance of the meeting and the committee charter. Michele mentioned the Technical Support Document that is not going to be in the rule and was not provided to the rule advisory committee for this meeting but will plan on providing the document in time for rule advisory committee meeting #2 in April. Michele continued with the project history and schedule. The meeting was opened for questions and there were no questions.

Ryan Michie: Overview of the TMDL document and rule. Ryan covered the TMDL elements, focusing on the elements for the allocations. Waterbodies downstream of the U.S. Army Corp of dams or PGE's River Mill Dam are not included in the Willamette Subbasins TMDL project and will be included in the next TMDL project for the Willamette mainstem. There is a map on the website for more details.

Rich Wildman: Water Quality Standards and beneficial uses – DEQ is wrapping up the temperature subcategories for the Aquatic Fish Life uses, but those are not adopted by the Environmental Quality Commission yet. How does that mesh with this effort? TMDL states the applicable standards. What is the impact of that process on these TMDLs?

Ryan Michie: Yes, DEQ is currently going through a rulemaking to revise the designated beneficial uses for aquatic life. The standards themselves, the numbers, the criteria are not changing, but DEQ is evaluating changes to where those aquatic life use criteria are applied, and when they are applied. In developing the TMDL, we use standards approved by EPA. We are not able to put them into the TMDL until EPA approves them. We are tracking that process closely. We have included language in the TMDL that if the standards change and are approved by EPA, the Allocations can be recalculated with the new numbers. We don't know how the aquatic life use criteria approval process will align with the TMDL process, but as soon as the numbers are approved, DEQ will update the TMDL if the time allows before we submit the TMDL to EPA.

Rich Wildman: Thank you.

Ryan Michie: TMDL elements regarding point sources that are National Pollutant Discharge Elimination permits and general permittees including cooling water, filter backwash, and fish hatcheries. Nonpoint sources are identified in the TMDL including background sources, solar radiation from the disturbance or removal of near-stream vegetation, channel modification or widening, dam and reservoir operation, and activities that modify flow rate or volume.

Ryan shared a conceptual diagram of the TMDL for temperature (see presentation slide 15). In Oregon's standards, there is a rule that defines a specific component of the loading capacity called the human use allowance. For the Willamette Subbasins, the human use allowance is equal to 0.3 Celsius. This means that all anthropogenic sources (point sources and nonpoint source) can't contribute more than 0.3 °C increase cumulatively anywhere at the point of maximum impact. DEQ divides up the 0.3 °C into allocations. Waste Load Allocations that go to point sources, load allocations go to anthropogenic nonpoint sources, reserve capacity that goes to future or unidentified sources, and a component of margin of safety in this TMDL is implicit. The remaining component is reserved for background sources that is also background sources that is also a load allocation. The component above the standard is the portion above the thermal load that must be reduced called excess load or load reduction.

Ryan described the equation for the loading capacity (see presentation slide 16). The flow value that DEQ is using for the loading capacity is called a 7Q10, which is a low flow metric. The low flow is the most critical period when there is the least amount of thermal loading that could be received by the stream. The loading capacity of a stream will vary daily. DEQ provided a provision in the TMDL that the loading capacity can be recalculated daily using the actual river flow as well as if the numeric standard is updated and approved by EPA.

Rich Wildman: Is the use of the 7Q10 standard way of writing TMDLs or is that an element of conservativism that is part of the implicit margin of safety?

Ryan Michie: In Oregon, we typically use the 7Q10s as the low flow metric for temperature. That is not always the case for TMDLs that address other parameters. The 7Q10 is referenced in DEQ rules. We reference most of the low flow critical periods to that number.

Rich Wildman: Thank you.

Ryan Michie: Once DEQ calculates the loading capacity, then DEQ determines the excess load. For most of the locations in the Willamette Subbasins, there is a lack of flow data collected at the same time as the temperature data were collected. Therefore, DEQ represented the excess load as an excess temperature and from there DEQ can calculate the equivalent percent load reduction. They are mathematically equivalent.

The rules require that DEQ provides the human use allowance up to 0.3 °C cumulative. DEQ proposed to divide that among the different anthropogenic sources (see presentation slide 18).

Ryan continued with describing waste load allocations for point sources. The 7Q10 value in the table in the TMDL section 9.1.1 pages 29-34, would be a static limit and would not change, or the waste load allocations could be calculated daily using the river flow and the effluent flow on the day. This provides more flexibility for those sources that need that but does require more monitoring. Similar to the loading capacity, DEQ based the static limit on the 7Q10 and a maximum effluent discharge. The TMDL rule authorizes DEQ to recalculate the 7Q10 and maximum effluent flow if DEQ didn't get it right if there is better information than was available at the time of the TMDL, those numbers can be updated. Some facilities have a human use allowance of zero. For those NPDES permittees, the current NPDES permit does not allow discharge during the summer. For those facilities that are not authorized to discharge during the TMDL period, approximately May 1 through the end of Oct. DEQ is writing the waste load allocations to be consistent with the permit, which means the human use allowance is zero.

For waste load allocations for fish hatcheries, there is a minimum duties provision. This is a provision in rule that says point and nonpoint sources are only responsible for controlling the thermal effects of its own discharge or activity. DEQ does not require sources to control thermal loading that is not their own. For NPDES cases, DEQ applies the minimum duties provision to flow through facilities. Fish hatcheries are an example of a flow through facility. They do not do any processing or mechanical treatment of the water. They have flow through the facility and back into the river. DEQ treats the flow through as a discharge. When the minimum duties provision applies, the effluent cannot increase temperature above the influent temperature.

Ryan Michie: The Clean Water Act in Oregon's rules allow for pollutants to be measured as surrogate measures. There are several surrogate measures for effective shade included in the TMDL. Effective shade targets have been identified by Designated Management Agency, by river, or by general shade curves. Ryan showed a visual representation to describe effective shade on presentation slide 25. Effective shade is the proportion of the daily solar flux that is blocked by vegetation or topography. The equation to calculate that is on the slide. The metric captures the thermal loading that would be received by the stream.
Rich Wildman: What is the name of the model DEQ uses to calculate this?

Ryan Michie: DEQ used a model called heat source.

Ryan Michie: DEQ had some formatting issues with the TMDL and there is a table in the TMDL that has effective shade for the Lower Columbia-Sandy Subbasin, which is a mistake. You can cross out that table and this will be fixed by the next rule advisory committee meeting version of the TMDL.

Ryan provided an example of the of the surrogate measures from the TMDL and described how the examples was modeled and calculated. The targets to meet the nonpoint source load allocation for specific model extents were carried over from the previous TMDL.

Rich Wildman: When you have the rivers described in the table and some amount of kilometers have been assessed, are those used as being representative of the entire river or the entire DMA area of responsibility?

The shade gap applies to the entire river or DMA or is that specifically for these kilometers and other shade curves are used for other portions of the rivers and DMAs that are not assessed.

Ryan Michie: It's the latter. The places where DEQ modeled, site-specific modeling is what the tables in the TMDL reference. For example, on the Pudding River, DEQ has a map that shows that location. The map is online and on the Quality Assurance Project Plan on the project webpage: https://www.oregon.gov/deq/wq/tmdls/Pages/tmdlRwillamette.aspx (*included in the rule advisory committee meeting materials).* This value is essentially a summary down to the mean across the entire extent. If someone were doing projects on that part of the stream, there may be site specific information, but generally DEQ is using the mean. For everywhere else, where DEQ does not have site-specific modeling, DEQ has a shade curve, developed the same way as the site-specific model, but are more generalized. Ryan describes the mapping for this on presentation slide 27.

Ryan Michie: The last element discussed was the reserve capacity. The reserve capacity is reserved for future sources, like a new point source, or an existing source that requires an increase in load above and beyond the allocation they have now, or for a source that DEQ inadvertently missed.

There will be a Willamette Subbasins technical informational webinar to be held on Wednesday, March 15, 2023, to go over the TMDL technical approach in detail.

Carrie Sanneman: In table 3.1 the TMDL, the Columbia Slough has a year-round use period. There are passage barriers for that section of the slough. Are those things incompatible because they are passage barriers? We don't have use of anadromous fish in Columbia Slough because of passage barriers.

Ryan Michie: Typically, we apply the criteria to all places that have a designated beneficial use. As far as I'm aware, the entire Columbia Slough has a fish and aquatic life designated use, and the temperature standard is applied. If there is something that doesn't seem right about that or. if you have any questions about how the designated beneficial uses apply to different water bodies, I can make sure you are connected with our standards team.

Rich Wildman: The part I'm not fully understanding is that the one table that has the reductions in temperature that need to be achieved, the excess load table, shows each assessment unit and the percent load reduction and you describe the human use allowance allows for humans to warm the river by a total of 0.3 °C, but when the rivers are already too warm, and we need a percent load reduction, how do you know which human use needs to decrease. How do those two tables talk to each other?

Ryan Michie: Reference presentation slide 17. This table represents the maximum monitored river temperature as a seven-day average daily maximum. The applicable criteria plus the human use allowance, includes the component reserved for anthropogenic loading, and the excess above that and the corresponding load reduction. How do we know which sources need to be reduced? We know that where we have modeled or done a shade assessment. Generally, we think about meeting the allocation in terms of what is authorized under the allocation. The division of the human use allowance is what determines the allocation. Any activity by any of those sources must meet the human use allowance allocation. If these different sources are meeting the allocations, we know they are meeting the requirements of the TMDL. We look at it from the perspective of what activities need to be implemented to meet that allocation.

Rich Wildman: You look at the first line (TMDL section 8, pages 22-27, table 8.2) and you see that the temperature needs to come down, by 1.1 degrees or 8.1 percent and you check for this assessment unit, how different thermal load dischargers are doing relative to the their human use allowance and if they are doing okay in reference to the their human use allowance, then you say they are doing good and then you look other ways the temperature can be reduced.

Ryan Michie: That is right.

Becky Anthony: Watershed assessment units, how the percent load reduction was calculated. Was that in the watershed as a whole, or is that for a specific stream where the temperature was or how is that done?

Ryan Michie: In the same way as the Integrated Report, all the temperature stations on the assessment unit are evaluated individually and we determine the maximum temperature from the collection of the stations and the monitoring data that is available on that specific assessment unit.

Becky Anthony: We may only have data for a couple of streams within that assessment unit.

Ryan Michie: Yes.

Michele Martin: Five-minute break and then we will talk about the Water Quality Management Plan. DEQ will send a notification through GovDelivery for the webinar and webinar information is online.

Andrea Matzke: Water Quality Management Plan is a required component of the TMDL and is the action plan for the allocations stated in the TMDL. Andrea discussed the required components of the WQMP. Andrea reviewed the proposed Responsible Persons and Designated Management Agencies named in the WQMP in Appendix A. The DMAs are expected to change with any input from the rule advisory committee or public comment. The rationale for being named a DMA in the WQMP for temperature started with the existing Responsible Persons and DMAs already named in the previous TMDLs. DEQ also used a DMA mapping exercise that was used and looks at a certain distance related to ownership and jurisdiction in the area to determine respective DMAs who would be responsible for that area. Acres are also associated with each DMA and how many acres does that DMA have ownership for jurisdiction in the entire subbasin, including how many acres that DMA owns within 150 ft. of a riparian area. DEQ expects to include this information in rule advisory committee meeting #2.

DEQ is still evaluating which DMAs are responsible to develop an implementation plan. Andrea reviewed the criteria DEQ is evaluating to make these determinations.

Question: What additional evaluation criteria should be considered? Did DEQ miss something like adding a DMA on the list that is not currently identified?

No comments.

Andrea Matzke: Discussed management strategies in the WQMP, see presentation slide 36 – 38. Most people working in the Willamette Subbasins are most likely familiar with these types of management strategies. Water withdrawals were discussed and are in the WQMP in table 2 on page 6 and ways to keep water in-stream. Andrea continued describing channel morphology and hydromodification to address temperature impacts and implementation activities (presentation slide 39).

Rebecca McCoun: In the WQMP, it mentions the width and depth of the channel, but not sidebar parameters. Suggest getting a steam size and if it's unshaded stream that is wide and shallow - that mitigation action may be acceptable. The WQMP language sounds now like it's a blanket statement whether the stream is shaded or not. It should be noted that altering stream bed may be a mitigation action only in certain circumstances. My observation is the WQMP language should have more sidebars on hydrogeology components.

Andrea Matzke: Yes, there are different naturally occurring channel types. Focus is on human causes that could contribute to channel morphology changes, like livestock grazing causing changes to the channel that make it wider than it was in the past. What human caused activities are causing channel changes that impact temperature. There will be differences in different areas. Sounds like we need to include additional language in the WQMP regarding this issue to make it clearer.

Carrie Sanneman: Similar question about water withdrawals. In some places in the state system that may be water limited or have water withdrawals being as source of temperature issues, our flood district moves a lot of water when we have too much. Throughout the table, it might be good to have qualifiers about when these strategies are most appropriate. Flood control districts have been criticized for creating deep fast-moving channels, and so we need to recognize where strategies will be most effective, echoing Rebecca's comments.

Andrea Matzke: Table 2 is not meant that all these strategies are going to be applicable to every DMA. We could think about adding additional language for context.

Marganne Allen: Priorities – riparian is a big issue. Instead of everything everywhere all the time, when we think about reporting, what to report and what to narrow down on, is there guidance and thoughts on that?

Andrea Matzke: Primary implementation strategy is about riparian vegetation. The purpose of Table 2 is the recognition that it's not always about riparian vegetation. There can be other types of activities too. Each DMA will focus on their primary strategy.

Carrie Sanneman: There are opportunities in our area to encourage and enhance riparian vegetation and our primary charge is to maintain our primary flood control facilities. I had the experience going through a 401 certification that if any repairs to or made inside the flood control facility would involve impacting woody vegetation that we would need to go through a standard water quality review that is about $10,000 more and significantly more of a process. Long-term issue – both this and that are meant to push folks toward riparian vegetation. But the 401 experience made me think that there may be places we shouldn't plant because it could create a longer and more challenging permit process if we need to repair them in the future. Flagging for future conversations, understand the intent of both and keep the intent of both and figure out how to make it so that if we need to do work, we aren't seeing these two pieces work counter to each other.

Andrea Matzke: Concerned about 401 certifications around planting?

Carrie Sanneman: Around vegetation removal – so if we revegetate areas and then later, we need to maintain infrastructure, it's an inherent disincentive to be expansive with revegetation if something comes up later and we need to remove it.

Andrea Matzke: Question about what, if any, additional specific strategies should be added to the WQMP in table 2: list of priority management strategies? (WQMP, page 6). Is there anything we are missing?

Rebecca McCoun: Possibly including stream size qualifiers with some of the listed strategies, because putting large wood in large stream may not be as effective as putting a large wood structure in a small stream. Again, providing additional information so people understand where some activities fit.

Andrea Matzke: What I'm hearing you say is that DEQ could add additional context or information around when to use some of these strategies it would be helpful.

Rebecca McCoun: Yes. As it reads now, it's sounds like all of these strategies are available to everyone and I understand that you mentioned the WQMP is the idea of being broad and details may be in the technical document, but ensure these details are referenced somewhere for the reader to access.

Andrea Matzke: Explained prioritizing areas for restoration and protection in the WQMP. The goal is for DMAs in their plans to have some sort of priorities. Many DMAs already have a prioritization scheme in their plans. Andrea provided a few ways that DMAs could focus (presentation slide 41). Part of the prioritization could be done on proposed location-specific shade assessment. There are assessment tools that can be used to determine effective shade to meet the current targets (presentation slide 42). For DMAs that cannot do a shade assessment, a protective buffer can be used. It's not a requirement to have a 120-foot buffer, it's an option for DMAs that might not want to or cannot complete a shade assessment at the stream.

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

Mike Brown: Backing up – not sure if this was for the WQMP or the technical support document, but it would be nice to have acknowledgement if there were short-term increase in solar radiation for some of these management strategies to achieve a long-term reduction. The temporal aspect – some acknowledgement would be important.

Andrea Matzke: Are you thinking about a thinning in a riparian area that may let in more light in the short-term, but might allow for more shade quality in the future?

Mike Brown: What I had in mind was a stage zero restoration efforts where we are trying to enhance flood plains and connectivity - with those types of restoration projects, there is often a short-term increase in solar radiation. Ultimately with riparian plantings, five years down the line we would have solar radiation reduction.

Rebecca McCoun: Regarding prioritization ODF encourages DMAs to work with local NGOs, watershed councils, and SWCD. They have done a lot of that work. Good resource for fish streams – good idea to work with them. The other one is that with the option for the 120 ft. buffer option, are there sidebars, because for folks who are not going to use the other methods, a 120 ft. buffer may be overkill. Add some guidance on the 120 ft. buffer.

Andrea Matzke: I understand what you are saying. If you can't do a site assessment for shade, in those cases there might be some characteristics of a stream where, as you said, a 120 ft. buffer may be too much and, in those cases, DMAs could do a shade assessment to determine what an effective buffer would be to meet the shade targets. There is always that ability to do that. We can talk internally if there is other guidance DEQ can provide.

Rebecca McCoun: Exactly. There may be folks who default to that because they don't have the capacity – communication would be key for those cases for people to not do more than is necessary. . Be targeted. I know it's DMAs reasonability, but is there a way to guide that targeted outreach?

Michele Martin paused to read chat from Marganne Allen: Agree with Rebecca, where is the biggest bang for the buck? Is modeling information that refined? Ryan Michie responded in chat: Marganne - DEQ can provide model results to help determine priorities. The shade or temperature results are quantified every 50 - 200 meters along various streams.

Susie Smith: Overlaying the prioritization of shade exercise with protecting cold water refuges, a key aspect. Practically or trying to assess and put resources where they will do well if there is a way to skip the shade assessment part. If we know there is identified cold water refuges, and we know from site inspections there is removed riparian shade there, it seems from a practical view where we are trying to improve the river conditions and we know shade would help, is there a way for that kind of boots on the ground, field observation shade is missing and it's been identified as an opportunity for cold water refuge protection, can that be considered an appropriate prioritization method?

Andrea Matzke: As some DMAs are developing their implementation plans, they can work with their basin coordinators about what makes sense for them in terms of what the DMAs have already done. We can be flexible.

Andrea continued to presentation slide 44. Question – should responsible persons for DMAs be required to enter restoration data into Oregon Watershed Restoration Inventory (OWRI)?

Rebecca McCoun: I know it is voluntary, unfortunately, OWRI is cumbersome. If there was a streamline process for landowners to enter the data – for DMAs who enter information for a lot of private landowners, if there were a way to upload batch data – if there were flexibility for this, because it could take a lot of time.

Marganne Allen: Rebecca touched on a few things I was thinking about. Having something spatial would be important – I have not been hands on with OWRI other than to consume what comes out of it. I've heard it's cumbersome. Having something spatial – is there something with what we already do with GIS? The notion is excellent, the question is how.

Mike Brown: Instead of using OWRI, can we be specific with the data requirements, and they could be the same as OWRI, if we could give DEQ the information in a different form? BLM works with a variety of agencies and giving every agency exactly what they need, instead giving them exactly what they need with the data requirements, it would be easier for BLM to meet, but we can make OWRI work as well.

Andrea Matzke: Fair comment. We can put some language in there to be more flexible so it's not necessarily OWRI. The point is to find a centralized point where people can put their information that is accessible to the public as well.

Marganne Allen: There may be some circumstances where landowner's privacy is going to come into play. NRCS funding for example, we would not be able to get data and privacy issues are to be considered.

Rebecca McCoun: Privacy is key. At minimum, if the private landowner can give general information. Batch approach – if the data could be points on a map with some project information; but privacy is an issue.

Andrea Matzke: DMA required monitoring is in the WQMP but is not completed in the current draft WQMP. DEQ does some monitoring across the state. DEQ is moving toward having a temperature monitoring plan as part of the WQMP. DEQ would like to have DMAs participate in the temperature monitoring plan. In the WQMP, DEQ intends to complete section 5 for the next committee meeting. To be clear, this assessment and monitoring plan, would not be part of the WQMP. It would be outside of the WQMP to accommodate any changes over time. That would likely be developed after the TMDL is final. DEQ is evaluating which DMAs would make sense to help monitor.

The schedule for the implementation plan for submittal (presentation slide 46), DEQ is proposing that plans for the Willamette Subbasins TMDL to be due 18 months after the next TMDL rulemaking in this court order, for the Willamette Mainstem Temperature TMDL Replacement. EPA approval of the Willamette Mainstem TMDL is February 2025. Delaying implementation plans for the Willamette Subbasins until after the Willamette Mainstem rulemaking would mean that the Willamette Subbasins and the Willamette Mainstem implementation plans would be due around Aug. 2026.

Rich Wildman: Speak at high level what is different for this WQMP from the WQMPs that are already in place?

Andrea Matzke: Generally, it's very similar. The draft currently contains additional requirements--Prioritization – making sure that plans will have a prioritization strategy and how DMAs will assess their current shade in their jurisdictions. It may not be a big change for those folks already doing this. DEQ may have potential timelines to do the shade assessment. That is currently under evaluation.

Rich Wildman: When this TMDL is approved by EPA, then it replaces the old ones, and they are no longer in effect. Do you expect that to be true with the implementation plans as well? Each DMA's existing implementation plans may be replaced with a similar plan or not – when they are required to write that in a new WQMP.

Andrea Matzke: Don't throw out your old implementation plans. DMAs should keep their current plans. They may have to change some things, but DMAs should work with their basin coordinators to ensure their plans meet the updated WQMP requirements.

Marganne Allen: Working on finalizing the mercury plan and there is so much overlap. Is there opportunity to roll everything together? Does that become problematic for reporting? It's an idea we would like to pursue with DEQ.

Andrea Matzke: They can be consolidated into one plan. Please work with DEQ basin coordinators on that.

Michele Martin: Agenda item regarding the draft fiscal impact statement and draft Oregon Administrative Rule language draft.

No comments on the draft Oregon Administrative Rule language.

Michele Martin provided information about the draft fiscal impact statement. Asked for input and feedback on the drat fiscal impact statement.

Rebecca McCoun: It did seem that the number for forest landowners – that may or may not be registered, and if not registered may not be included in the total of businesses in the draft fiscal impact statement, for both agriculture and forestry, there are potentially, with 120 ft. buffer, I highly encourage DEQ to work with OWEB to possibly have special grant programs outside of FSA/CREP to help landowners meet these TMDLs. I know that right now, some of the riparian restoration funding is tied to federal programs, like CREP, that landowners are deterred to apply for because of the many program restrictions. A conversation between DEQ and OWEB would be good.

Michele Martin – No other comments on the draft fiscal impact statement.

Michele Martin provided next steps and estimated schedule and asked for any further questions.

Meeting adjourn: 12:30 p.m.