

Rulemaking for Aquatic Life Use Updates

Aquatic Life Use Updates

Rulemaking Advisory Committee Meeting #3

April 29, 2022, 9 a.m.
Virtual Meeting (Zoom)

List of Attendees

Advisory Committee Members: Sarah Cloud, James Fraser, Liz Hamilton, Megan Hill, Chris McCabe, Sharla Moffett, John Runyon, Susie Smith, Glen Spain, Mike Eliason, Liane Davis (for Portland Water Bureau), Rich Wildman (for Oregon Farm Bureau and Oregon Forest & Industries Council).

Agency Advisors: Rebecca Anthony, Brian Bangs, Lynne Krasnow, Greg Sieglitz, Michelle Maier

DEQ Staff: James McConaghie, Debra Sturdevant, Connie Dou, Trina Brown, Angela Rowland, Aron Borok, Mailea Miller-Pierce,

Interested Persons: Amanda Ondrick, Julia Crown, Kalman Bugica, Kathryn Tackley, Rachel McCoun, Ben Kirsch, Thomas Hafen, Chris Desiderati, Gordon Kurtz, Cathy Kellon, Heather Tugaw

List of handouts and presentation notes

- 2022 Technical Support Document Excerpt: Dissolved Oxygen Decision Rules
- Preliminary Dissolved Oxygen Use Designations Web Map
- Presentation Slides

Agenda

Time	Topic
9 a.m.	Welcome and Introduction, Follow-Up from Meeting #2
9:40 a.m.	Dissolved Oxygen Standard Implementation History
10 a.m.	Dissolved Oxygen Decision Rules and Designation Methods
10:30 a.m.	Break
12 p.m.	Lunch Break
1:00 p.m.	Introduction to Fiscal and Economic Impact Analysis
1:30 p.m.	Break
2 p.m.	Aquatic Life Use Definition Revisions
2:30 p.m.	Wrap-Up
3:00 p.m.	Adjourn Meeting



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DEQ is a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.

Meeting Summary

I. Introduction and Welcome Presentation

Reviewed meeting objectives, agenda and ground rules; no suggestions.

II. Follow Up from Meeting #2

ODFW is currently updating the fish habitat distribution database (FHD) and the associated life stage timing tables. DEQ will update the draft maps to incorporate any changes to designations resulting from this update. These base data will be available to the stakeholders before DEQ finalizes the draft rule.

The Statewide Bull Trout Working Groups have provided DEQ with updated 'potential spawning habitat' to be included in the use designation maps. DEQ is working on incorporating the new potential habitat areas into the next draft of the maps.

DEQ requested comments on the Temperature Methods for the decision rules following the last RAC meeting. The RAC will be given an opportunity to view the committee discussion draft. Several questions from the comments were reviewed. These questions included:

- “What/how many years of data are the fish habitat distribution and timing information based on?” A graph was provided on data distribution for direct surveys/studies. Documented data ranged from 1967-2021. These studies did not include the time periods where knowledge about habitat distribution is incorporated in professional judgement.
- “How are uses determined for waters that are not mapped on the fish use maps?” DEQ looks at upstream waters to determine what the criteria should be.
- “How will the temperature use categories protect other T & E and sensitive species?” In general, when the most sensitive species are protected generally the other less sensitive species are also protected. This information and background will be provided in the appendices of the technical support document.
- “How is DEQ justifying changes to less stringent subcategories?” DEQ is following the requirements of federal regulations.

There is an adjustment to the Rulemaking Schedule. DEQ has had to shift some of the schedule items to account for the EQC meeting date change, additional time to work with EPA on the use attainability process, and allow sufficient time to respond to public comments, which are expected to be substantial. The new planned timeline was discussed. The fourth RAC meeting was planned for late June and a poll will be sent to schedule a specific meeting date.

Debra Sturdevant presented on the history and overview of the dissolved oxygen standard. There was a revision of the DO standard in 1996 and the use subcategories were based on the aquatic life community. The use subcategories were not designated in rule. In 2003 the Intergravel Dissolved Oxygen (IGDO) criterion was revised to 8 mg/l. This was in response to Endangered Species Act consultation and approved by EPA in 2004. DEQ is designating DO uses in rule to clarify when and where DO criteria apply. This was a request by EPA and has been determined to be a priority on the last few Triennial Reviews by DEQ.

There was a question from the RAC how DEQ functioned without the DO use designations in rule since 1996? The department has had a consistent implementation policy to determine which waterbodies fit each use subcategory since 1998, it was just not in rule.

There was a follow up question from the RAC about how that was decided? The way the interpretation of the Clean Water Act has progressed it is not preferred to identify uses this way. That is why DEQ is designating waterbodies for the DO use subcategories in rule now. The designations for the temperature rule were adopted into rule in 2003. DEQ was not required to adopt the DO uses into the rule when adopted in 1996 and had not been able to prioritize adopting them into rule until now.

III. Dissolved Oxygen Use Subcategory Methodology and Updates

DEQ gave a presentation on the DO use subcategory methodology and updates.

Identification of DO uses partially relies on the temperature use designations, although there is not necessarily a one-to-one relationship of each category between the different standards. Because the use categories for temperature and dissolved oxygen are different, DEQ cannot only use the temperature uses to apply the DO standards. DEQ has developed and documented a consistent implementation procedure for determining where and when the DO criteria apply. It is basing the formal designations on those established procedures to the greatest extent possible.

There was another question from the RAC whether the DO designation rule would be structured similar to the temperature rule- with maps and tables? DEQ will designate waterbodies in the rule through maps, tables, and is investigating options to adopt a methodology. That would allow for site specific determinations in area where there is a lack of sufficient data about the habitat so that these might be incorporated when specific information becomes available without requiring additional rulemaking. There are still many data gaps for some types of habitat that DEQ will address later in the discussion.

Year-round uses were presented in the following sections:

Cold Water Aquatic Life

This use subcategory principally includes waters where salmon, trout, cold-water invertebrates, and other native cold-water species that exist throughout all or most of the year. Juvenile anadromous salmonids may rear throughout the year. There may be no measurable risk level for these communities. There was a question on where exactly the definition of cold water is in the document. Decision rules were included in the meeting materials. There are some undesirable edge effects when the EPA ecoregions don't match hydrologic boundaries well. For example, streams that are oriented along a boundary might alternate between the 'cold' and 'cool' ecoregion even though the habitat and aquatic community really reflects one or the other. This confuses efforts to implement Clean Water Act programs and assess attainment of standards for the waterbody. DEQ is proposing to slightly modify the 'Cold' and 'Cool' boundaries based on the EPA Ecoregions using the NHD-Plus hydrologic catchment basins to make the boundaries hydrologically consistent.

There was a question from the RAC about what 'cold' and 'cool' Ecoregions refer to. These Ecoregion boundaries refer to the type of aquatic communities that are expected to exist in those areas. They are used to assign waterbodies to either of the use categories if there is not specific information about the community composition. A follow up question was what if some disturbance has extirpated those species

from an area assigned to their designated category? If cold water species were extirpated from a portion of a 'cold' ecoregion, DEQ would still assign waterbodies within the ecoregion boundary to the 'cold water aquatic life' use because that was the expected community the waterbody should support.

Cool Water Aquatic Life

This use subcategory refers to mixed native cool-water aquatic life, such as sculpins, smelt and lampreys. Waterbodies include estuaries. Salmonids and other cold-water biota may be present during part or all of the year but do not form a dominant component of the community structure.

There are numerous native 'cool' community indicator species that for which the more recent versions of ODFW's FHD have distribution data. DEQ is using this data to better identify waters where 'cool' communities occur. Multiple cool water species overlap in their distributions. These areas may be where salmonid species are absent or present only part of the year. A lack of salmonid spawning or rearing use in July-August can indicate waters where sensitive life stages of salmonids are not present at critical parts of the year, or the 'cool' community is dominant. DEQ proposes to designate these waters for Cool Water Aquatic Life even if they are otherwise within a 'cold' ecoregion.

Warm Water Aquatic Life

This use subcategory includes waterbodies whose aquatic life beneficial uses are characterized by introduced or native, warm water species. Salmonids and other cold-water species are absent from these waters. Waters fitting this category were identified by name in a 2004 memorandum to the EPA. Natural, alkaline and saline lakes referred to in the memorandum are identified using the NHD high resolution waterbodies dataset and Oregon Lakes Atlas.

Estuarine Waters Criteria

"Estuarine water" means all mixed fresh and oceanic waters in estuaries or bays from the point of oceanic water intrusion inland to a line connecting the outermost points of the headland or protective jetties. For the decision rules, DEQ uses the estuarine waterers delineated from the Oregon Department of Land Conservation and Development estuary classification based on the federal Coastal Marine Ecological Classification System (CMECS). DEQ has been using the CMECS standard to apply toxics and DO criteria since 2017.

Ocean Waters Criteria

For ocean waters, no measurable reduction in DO may be allowed. "Ocean waters" means all oceanic offshore waters outside of estuaries or bays and within the territorial limits of Oregon. This is currently applied and will be designated for all offshore waters of Oregon. It excludes estuaries and bays.

Seasonal Aquatic Life Uses were presented in the following categories:

Salmonid Spawning Criteria

This use subcategory applies seasonally to water bodies identified as active salmonid spawning areas and includes spawning habitat for anadromous salmon, steelhead, and resident trout and salmonid species.

Spatial components include suitable and actively used spawning habitat areas. Identification of unsuitable spawning habitat as well helps discern waters in this use subcategory. ODFW identifies areas in the FHD as

'primary spawning'. The spawning habitat for anadromous salmon and steelhead and bull trout are already mapped for DEQ's temperature use subcategory designations.

There are few waterbodies in the FHD specifically classified as 'primarily spawning' for resident trout. Most resident trout habitat is classified by ODFW for 'Resident – Multiple Uses' or 'Unknown' which indicates presence but no information about what habitat use occurs there. Many, but not necessarily all, of these waters could be expected to include spawning. DEQ and ODFW don't always have good data on specific waters where resident trout spawning habitat occurs. DEQ's current implementation is highly conservative and presumes all waters of the state in basins with trout support spawning. This is a broad assumption. There are exceptions where DEQ has specific information that resident trout spawning is NOT an existing use. To date there are only three specific areas where this has been determined: the Lower Tualatin River, Fern Ridge Reservoir, and the Lower Coquille River.

DEQ is proposing to limit the area of presumed resident trout spawning to the waters where ODFW indicates they are 'Resident' and where present, but the habitat use is 'Unknown'. DEQ will use readily available data to refine which of these waters would not support resident trout spawning habitat based on incompatible physical habitat characteristics such as within lakes or reservoirs, estuaries, or where ODFW has documented that spawning is not a habitat use by resident salmonid populations. DEQ is also proposing to adopt a methodology into the rule to allow for site-specific determination of whether waters where resident trout spawning is presumed can actually support resident trout spawning as new information becomes available.

There was a question from the RAC about how the method for site-specific determination of habitat would be structured. DEQ would base the method on ODFW's field methodology for surveying resident trout habitat. DEQ needs to follow up with ODFW and EPA to develop a potential policy further.

There was a follow up question from the RAC about how stakeholders can determine whether DEQ is applying the resident trout spawning criteria to waters that are different from where it has applied them in the past. DEQ is mapping the changes of the proposed DO designations from where they have been applied in Oregon's Clean Water Act programs up until now. A map layer that highlights the differences in the proposed DO designations from the status quo is included in the DO discussion draft web map.

There was a question from the RAC about how DEQ is distinguishing existing uses from current uses? If there is professional knowledge about where uses historically occurred, we try to use that. For many waters there is no information about where active spawning habitat currently is. Habitat suitability models are being looked at as a possibility to incorporate more information.

There was a question from the RAC that stated previously the entire state was considered as resident trout spawning habitat. How different will the new designations be? Because DEQ is limiting the amount of presumed spawning habitat to the waters where ODFW indicates resident trout species are actually resident, it will include somewhat fewer waters. But many of the waters where they are resident should be presumed to include spawning use until more site-specific information is available. At a later time, DEQ will provide a map of both the designated and presumed salmonid spawning habitat.

Spawning Timing Criteria

The **temporal component** of Salmonid Spawning is the information that determines when the seasonal criteria need to be applied. DEQ gets this information from ODFW's life stage activity timing tables. These are based on surveys but include a large component of professional judgement about the timing of spawning activity throughout the entire state. For simplicity, start of peak spawning for resident trout is no later than January 1. For bull trout it is August 15 or September 1 designated by basin. For Lahontan Cutthroat trout it is April 15. For steelhead it is January 1. For anadromous salmon it is two weeks after start of lesser use or start of peak use, whichever is earliest and no later than November 1.

There was a question from the RAC whether it is common for Winter Steelhead to Spawn in the Spring and for Spring Chinook to Spawn in the fall? DEQ clarified that these are the common names given because of the times of year the populations migrate. Some populations migrate then hold in waters months earlier than they spawn. Salmon species spawn in the fall; steelhead and trout species spawn in the spring.

There was a question from the RAC asking if bull trout are not spawning after their last indicated end date, May 15, are they rearing and does it become a different use? The spawning criteria are seasonally applied, so the criteria only gets applied during the specific date required to protect spawning activity and egg incubation. After May 15 it reverts to the year-round DO criteria designated for bull trout spawning and rearing habitat, which is the Cold Water Aquatic Life use for DO. That reflects use by juveniles rearing in those areas outside the spawning time periods.

The RAC asked for clarification on the difference in protection between year-round and seasonal uses. Year-round use subcategories are designated for both temperature and DO and apply at all times of the year. A more stringent seasonal spawning use is applied to a subset of waters during times of year when spawning and egg incubation occur.

End date proposals for DO were presented. Waters designated as Salmon and Trout rearing and migration and Redband and Lahontan cutthroat trout have spawning criteria applied until May 15. Waters designated under the temperature standards for Core Cold water habitat are extended until June 15. These dates are used for simplicity and are conservative for when egg incubation concludes statewide. Waters designated as Bull trout spawning and juvenile rearing are designated by basin for dates between March 31-May 31. Spawning uses for Lahontan cutthroat trout are applied until July 15.

There was a question from the RAC whether DEQ's spawning habitat designations would be consistent with the Department of State Land's (DSL) Essential Salmonid Habitat designations. DEQ does not use the DSL's designations directly, but both Department's designations are based on ODFW's fish habitat distribution data. The purpose of both Department's designations are not the same, but since they both rely on the same data from ODFW they should be compatible.

There was a question from the RAC about whether DEQ's designations are taking into account impacts from climate change. The way DEQ understands the substance of the updates to ODFW's fish habitat distribution database, they are mostly replacing professional judgement with survey data. DEQ showed at the start of the meeting that the observational data in ODFW's FHD represents studies and surveys conducted from 1967-2021, with the bulk occurring around 2003. While the impacts from climate change accrued on fish habitat distribution and timing to date is not known at this time, most of the information and professional judgement in the FHD is based on where they been distributed up to this point. DEQ is unlikely to change

the classification in the future if climate change causes some populations to shift timing or location. There would need to be some discussions between the state and Federal government about the policy implications for the Clean Water Act if climate change makes some existing uses unattainable in their present locations. It is DEQ's hope that this aquatic life use update represents the most complete baseline of where the aquatic life uses in Oregon can be considered existing uses for Clean Water Act purposes.

IV. Introduction to Fiscal Impact Analysis

Aron Borok introduced the fiscal impact analysis. The main goal is to get feedback from the RAC on any possible fiscal impacts before it goes to the public.

There are also additional racial equity statements and land use compatibility statements that will be included as part of the fiscal impact statement for the RACs review. DEQ is working internally with the NPDES permitting program to gather information on where permit holders may be affected by uses updated to more stringent criteria. This will help determine costs of compliance.

Questions to guide for feedback were proposed to the RAC specific to the fiscal and economic impact statement. These questions will also be emailed out for requested information. A timeline was presented on the plan for the fiscal impact statement.

- What types of entities will be impacted by the proposed rule?
- How and to what extent will the proposed rule have a positive, negative, or no impact on these entities?
- To what extent will the proposed rule affect cost of compliance for small businesses?
- Will the proposed rule impact positively or adversely racial equity? How and what is the extent of that impact?

A question was asked whether the fiscal impact statement analysis also addresses the proposed pH standard change for the crooked river and trout creek? Yes, any changes to the rules that result from this rulemaking have to be addressed in the fiscal impact statement.

A member of the RAC expressed appreciation for the timeline for providing comments and asked if the feedback for the racial equity statement and fiscal impact statement would be required at the same time; with concerns about sufficient time to respond. DEQ will make sure that there is sufficient time to provide input on both.

There was another question from the RAC about when DEQ could provide a list of the NPDES permittees expected to be impacted by the rule. That would help the RAC provide input on fiscal impacts to POTWs and ratepayers. DEQ will compile this information and make it available to the RAC before the next meeting.

V. Wrap up and Adjournment

James McConaghie gave a brief presentation on how to use the Discussion Draft of the DO Maps online. The goal is to add all the updated information from ODFW and make final proposed use maps available to the RAC by the end of May.

After the meeting DEQ will send Fiscal impact questions and specific prompts. A draft meeting summary will be provided to the group soon. The RAC can provide any advanced comments on the DO decision rule methods by May 17. Comments can be sent to aquaticlife.2022@deq.oregon.gov.

Before the next RAC meeting which will occur in June, DEQ will send the final draft of the TSD for review and comment. There will be 2 weeks allotted to review. The draft fiscal analysis document and a final draft of the proposed use subcategory maps for review will also be provided.

There was a question from the RAC on when the timing table data from ODFW will be available. DEQ is providing updated maps which accounts for new updated timing table data from ODFW. However, DEQ cannot redistribute ODFW's data. ODFW will post this timing data on their website. The updated FHD data was posted to ODFW's website on April 5. DEQ is coordinating with ODFW and our understanding is that the timing table database will be published before DEQ goes to public comment.

The next RAC meeting (meeting #4) will be in late June. That meeting will include information on the draft fiscal statement, review of use change justifications, aquatic life use definitions, and potentially review of the TSD. If there is a need for additional discussion with the RAC after June, DEQ will propose to schedule a fifth and final RAC meeting over the summer.

DEQ will exchange the following feedback and information with the RAC prior to the next meeting:

- May 17 – Please provide any advanced comments on the general approach for designating dissolved oxygen use subcategories
- May 26 - Please provide general input on the potential fiscal impact of draft use designations by end of business day so these can be incorporated into the draft fiscal impact statement.
- May 31 - DEQ will provide a final draft of the temperature and D.O. use maps. Provide any additional specific input on local or regional fiscal impacts to specific facilities or sectors based on the final proposed use maps.
- Mid-June - DEQ will provide a discussion draft fiscal statement incorporating your input for your review.
- July - DEQ will prepare a final draft fiscal statement incorporating any additional input provided at the 4th RAC meeting and provide this to the RAC for any final comments. Input will be accepted for an additional 2 weeks after the 4th RAC meeting.

Alternative formats

DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email deqinfo@deq.state.or.us.