

**Date:** May 6, 2022

**To:** Environmental Quality Commission

**From:** Richard Whitman, Director

**Subject:** Item I: Status Report on Rulemaking to Update Oregon's Aquatic Life Use Designations (Informational)  
May 19-20, 2022, EQC Meeting

**Why this is Important** DEQ will provide a status report to the commission about the water quality standards rulemaking to update Oregon's aquatic life use designations. The use designations are part of the water quality standards; they set the protection goals for the waterbody and determine where and when temperature and dissolved oxygen criteria apply to a waterbody to protect the designated use. It is important that the use designations are accurate and based on the best available information so that DEQ applies the correct water quality criteria to protect Oregon waters.

**Prior EQC Involvement** The commission last adopted statewide updates to Oregon's fish and aquatic life use designations in 2003 as part of the temperature standard revision rulemaking. DEQ made a few error corrections to the fish use maps in 2007.

**Background** Under the Clean Water Act, states are required to establish water quality standards to protect the beneficial uses of the state's waters. The water quality standards include the designated beneficial uses to be protected and the water quality criteria necessary to protect those uses. Designated beneficial uses can include:

- Fish and aquatic life
- Water contact recreation
- Fishing
- Domestic water supply
- Industrial water supply
- Boating
- Irrigation
- Livestock watering
- Aesthetic quality

- Wildlife and hunting
- Hydropower
- Commercial navigation and transportation

Water quality standards are the basis of DEQ's Clean Water Act programs, including:

- Wastewater discharge permit limits,
- Assessments of waters of the state, which includes identifying waters that are impaired,
- Total Maximum Daily Loads (TMDLs), including the establishment of load and wasteload allocations, and
- Issuing water quality certifications for federal hydroelectric project licenses and fill and removal permits.

In addition, states can establish use subcategories for classes, species or life stages of aquatic life that have different water quality sensitivities or requirements. Oregon's temperature and dissolved oxygen standards each have multiple criteria that apply to different fish and aquatic life use subcategories.

The last statewide update to Oregon's fish and aquatic life use designations was completed in 2003. In that update, DEQ developed maps and tables specifying where and when the fish use subcategories associated with the temperature standard occurred for all waters of the state in a very short timeframe due to a court ordered deadline. DEQ developed the use designations in cooperation with Environmental Protection Agency (EPA), National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFWS) and Oregon Department of Fish and Wildlife (ODFW) based on the best available data at that time. These designations also included uses that do not currently occur but might be attainable in the future. For example, some of the bull trout use designations are based on the need to expand the habitat for recovery of the population, even though the use does not currently occur in that location.

DEQ is updating the fish and aquatic life use designations to correct errors and to incorporate additional data that have become available since 2003. This rulemaking will update the use designations based on best available data. ODFW's fish distribution and timing data has improved and become more complete since 2003. The original emphasis was on anadromous species distribution due to Endangered Species Act listings; however, there is data now for more streams and species, especially resident species, and there is more timing

data. In some cases, habitat distribution that was based on professional opinion has been either confirmed or replaced with stream survey data. In addition, the USFWS completed its critical habitat designations for bull trout, which is another important source of information. DEQ's Geographic Information Systems mapping capabilities have also improved since 2003. In 2003, DEQ had not yet transitioned the National Hydrography Dataset, which is more accurate and has a higher resolution than the stream layer used for the 2003 maps.

Updated aquatic life use designations are needed to ensure that Oregon's use designations and water quality standards are accurate, based on the best available scientific information, and based on the GIS hydrography standard now used by Oregon agencies. In addition, the aquatic life use updates were identified as a high priority for water quality standards work in the 2018-2020 Triennial Review workplan. DEQ began work on this project in 2020 and expects to propose rule amendments to the commission for adoption in early 2023.

**Rulemaking  
Description  
and Status**

The purpose of this rulemaking is to update Oregon's fish and aquatic life use designations based on the best available scientific data and current GIS mapping capabilities and standards. Using the best available data and information, DEQ will revise and clarify the fish use subcategory designations associated with the temperature standard and designate use subcategories associated with the dissolved oxygen criteria for the first time. The use designations are identified in the format of maps and tables. In some cases, data regarding the use, for example trout spawning habitat, is not available. Therefore, DEQ is considering adopting a procedure that would allow site-specific use determinations where data is not available. Neither the temperature nor dissolved oxygen criteria are being amended at this time, only the use designations, which are contained in administrative rules OAR 340-041-0101 through 340-041-0340.

The rulemaking proposal will also include minor revisions to the water quality standards definitions in OAR 340-041-0002. DEQ added definitions for cold water aquatic life, cool water aquatic life and warm water aquatic life in 2003, with the temperature standard revisions, to provide information regarding which species are typically classified as cold, cool and warm water. However, the definitions are inconsistent with the meaning of the terms as used in the dissolved oxygen standard. The proposed revisions will eliminate this inconsistency.

Lastly, this rulemaking will include a proposed revision to the pH criteria for the Crooked River and Trout Creek subbasins in the Deschutes Basin. The revision would make the pH criteria for these subbasins consistent with the criteria for other Eastern Oregon basins with similar geology and hydrology.

Process for Development and Review

Throughout the research and development process, DEQ presented the options considered and our proposals to a Technical Workgroup that provided input on the methods and the best available data. The Technical Workgroup includes biologists from ODFW, USFWS, U.S. Forest Service, Tribes and staff from EPA, and the membership of the workgroup is listed below.

<b>Name</b>	<b>Organizational Affiliation</b>	<b>Title</b>
<b>Jon Bowers</b>	Oregon Department of Fish and Wildlife	ODFW GIS Coordinator; Fish Habitat Distribution Data Steward
<b>Anne Hayden-Lesmeister</b>	Oregon Department of Fish and Wildlife	Instream Flow Specialist
<b>Brian Bangs</b>	U.S. Fish and Wildlife Service	Biologist, Oregon Fish and Wildlife Office
<b>Barbara Adams</b>	U.S. Forest Service	Threatened & Endangered Species Aquatic Biologist
<b>Tom Skiles</b>	Columbia River Intertribal Fish Commission	Fisheries Biologist
<b>Craig Contor</b>	Confederated Tribes of the Umatilla Indian Reservation	Fisheries Habitat Project Leader
<b>Joe Ebersole</b>	U.S. EPA, Pacific Ecological Systems Division	Research Fisheries Biologist
<b>Michelle Maier</b>	U.S. EPA, Region 10	Water Quality Specialist
<b>John Palmer</b>	U.S. EPA, Region 10	Senior Policy Advisor

The use updates rulemaking includes several phases of research, information development and review. First, staff reviewed the methods (decision rules) developed by the state/federal interagency workgroup in 2003. DEQ is primarily using the same decision rules, but is proposing some adjustments, which will be detailed and explained in the technical support document.

Second, staff identified and imported the data on fish habitat distribution and life stage timing. DEQ relies primarily on ODFW's fish distribution database and timing tables as the authoritative data set for the state. This is ODFW's area of professional expertise, and the database is maintained and updated by ODFW. DEQ also used data from the USFWS for bull trout and some other resident species, although in most cases that data is also included in ODFW's database as well.

DEQ convened a Rulemaking Advisory Committee (RAC) in January 2022. The RAC is composed of regulated parties, forest and agriculture interests, fishing interests, environmental groups, Tribes, and others with an interest in Oregon's water quality standards related to fish and aquatic life. Once the credible scientific methods and the best available data were in draft form, DEQ presented this information to the RAC for their input. DEQ will continue to solicit input from the RAC to help DEQ understand the implications of the rulemaking and will use information from the RAC to develop the associated fiscal and economic impact statement.

#### Major Milestones and Timeline

For the uses associated with the **temperature standard**, DEQ has developed draft updates to the uses, received input from the Technical Workgroup, and presented the results to the RAC. We are in the process of receiving and responding to final comments from the workgroup on the methodology and to comments from the RAC.

For the uses associated with the **dissolved oxygen standard**, DEQ has developed draft methods and data sources to designate the use subcategories, received input from the Technical Workgroup, and recently presented the information to the RAC. In parallel to the temperature standards discussion, DEQ is in the process of receiving and responding to comments from the workgroup and receiving initial comments from the RAC.

DEQ expects to complete the RAC process in June or July 2022. DEQ will then publish the proposed draft rules for public comment in late summer or fall of 2022. DEQ intends to propose rule amendments to the EQC for adoption in late winter or spring of 2023.

#### **Key Issues**

There are three key issues associated with this rulemaking: Ensuring that changes to uses are based on current best science; the methodologies for dissolved oxygen and temperature standards are very similar but remain distinct

analyses; and the accuracy and validity of data is critical to positive outcomes for Oregon's fish and aquatic life.

1. The aquatic use updates include changes to uses that will result in more stringent or less stringent criteria, depending on the location. The type and amount of data and documentation required to support the updates is currently being identified and discussed with EPA. DEQ will provide sufficient information to demonstrate that the changes are based on the best scientific data available, represent the water quality goals of the state, and meet federal regulations.

2. The use subcategories for temperature and dissolved oxygen (DO) are different yet overlap. DEQ has implemented the DO criteria since they were adopted in 1996 with the approach outlined in a memo to EPA in 1998. The current methods to designate the DO use subcategories will codify that standard practice and incorporates some adjustments based on the temperature fish use designations adopted in 2003 as well as new scientific data.

3. This project is complex and includes reviewing and incorporating a significant amount of detailed information. At a high level, data and information continue to affirm the location and timing of most use designations. However, it is important to update the uses where data and information indicate they are inaccurate so that DEQ applies the correct criteria to protect the appropriate beneficial uses where they occur.

**EQC  
Involvement**

DEQ plans to bring proposed rule amendments to the commission for action at an EQC meeting in late winter 2023. In addition, DEQ will provide an informational item or director's report update to the commission prior to publishing the proposed rule amendments for public comment.

**Supporting  
Materials**

[Fish and Aquatic Life Use Updates 2022](#) rulemaking website, with rulemaking advisory committee membership, meeting summaries and additional rulemaking information

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