

Date: May 18, 2023

To: Environmental Quality Commission

From: Leah Feldon, Director

Subject: Item F: Status Report on Rulemaking to Update Oregon's Aquatic Life Use Designations (Informational)

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. DEQ is updating and correcting the aquatic life use designations based on the best available and up to date data. 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 aquatic life. 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 in Clean Water Act programs 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. These designations have not been updated since, with the exception of a few error corrections to the maps in 2007. DEQ presented information about this project to the commission on May 20, 2022.

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. 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.

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,
- TMDLs, including the establishment of load and wasteload allocations, and
- issuing water quality certifications for federal hydroelectric project licenses and fill and removal permits.

The last statewide update to Oregon's fish and aquatic life use designations was completed in 2003. 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 the U.S. EPA, National Marine Fisheries Services (NMFS), US Fish and Wildlife Service (USFWS) and Oregon Department of Fish and Wildlife (ODFW) based on the best information available at that time. In some cases, DEQ designated more sensitive uses where data was lacking, as a conservative measure. DEQ is correcting some of these designations where data is now available. The 2003 designations also designated uses for habitat for some highly sensitive and endangered species in some waterbodies where they did not occur at that time but could potentially occur in the future if restoration or species reintroduction was successful. 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.

Several data improvements have occurred since 2003. ODFW's fish habitat distribution database (FHD) and life stage timing data has improved and is more complete than in 2003. The original emphasis of the FHD was on anadromous species distribution due to Endangered Species Act listings. Now there is data for more streams and species, especially resident species, and there is more accurate life stage timing data as well. In many cases, habitat distribution that was originally based on professional opinion has been either confirmed or replaced with data from stream surveys. In addition, the USFWS completed its critical habitat designations for Bull Trout in 2010, which is another important source of information. Finally, DEQ's GIS mapping capabilities have improved since 2003. DEQ now uses the National Hydrography Dataset (NHD), which is more accurate and has a higher resolution than the stream layer used for the 2003 maps.

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 November 2023.

**Rulemaking
Description
and Status**

This report describes the purpose and scope of the rulemaking, the process DEQ is using to accomplish this work, a summary of the proposed updates, and the key issues and challenges.

Purpose and Scope of the Rulemaking

The purpose of this rulemaking is to ensure that Oregon's use designations and water quality standards are accurate and based on the best available scientific information and the GIS mapping hydrography standard now used by other Oregon state agencies. The rulemaking corrects and updates Oregon's fish and aquatic life use designations statewide using the best available data and information on fish habitat distribution and timing. DEQ is proposing to revise and clarify the fish use subcategory designations

associated with the temperature standard, and to designate use subcategories associated with the dissolved oxygen standard for the first time. The use designations are identified in the administrative rules in the format of maps and tables. Neither the temperature nor dissolved oxygen water quality criteria are being amended at this time, only the basin-specific use designations, which are contained in administrative rules OAR 340-041-0101 through 340-041-0340.

The rulemaking package 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 includes a proposed revision to the pH criteria in 340-041-0135(1) for the Crooked River and Trout Creek subbasins in the Deschutes River Basin. The revision makes the pH criteria for these subbasins consistent with the pH criteria for nearby 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. DEQ met with the technical workgroup 7 times between 2020 and 2022. The Technical Workgroup includes biologists from ODFW, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, the U.S. Forest Service, Tribes, and staff from EPA (see Appendix A).

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 to designate uses from the data, but is proposing some adjustments, which are explained in the technical support document.

Second, with guidance from the Technical Workgroup, DEQ staff identified and acquired the necessary data on fish habitat distribution and life stage timing. DEQ relies primarily on ODFW's fish habitat distribution database and timing tables as an authoritative data set for the state. This is ODFW's area of expertise, and the database is maintained and updated by ODFW with consultation of scientists from Federal agencies and Tribes. DEQ also used data from the USFWS for Bull Trout and some other resident species. Finally, DEQ consulted with biologists from ODFW, Federal agencies, Tribes, academic institutions and industry on potential habitats for future

restoration and recovery of Bull Trout spawning and the spawning distribution of resident trout species.

DEQ convened a Rulemaking Advisory Committee for six meetings between January and December 2022. RAC membership represents a variety of interests, including 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 also presented draft proposed rule amendments to the RAC for discussion and input. The RAC provided DEQ with information to develop the associated fiscal and economic impact statement and provided comment on the draft fiscal statement.

The proposed rules will be published for public comment in May, 2023. DEQ expects to propose the final rule amendments to the EQC for adoption in November 2023.

Summary of the Proposed Updates

For the uses associated with the **temperature standard**, DEQ will propose updates to the use designations in OAR-340-041-0101 to OAR-340-041-0135. DEQ will amend the use designations where new data or information indicate a change to the current use designation is necessary to ensure water quality standards are accurate and appropriate. The majority of the aquatic life use subcategories associated with the temperature standard will remain the same as currently designated. Where the amendments change a current use, it will result in either a more stringent or less stringent criteria being applied to those waterbodies.

For the uses associated with the **dissolved oxygen standard**, DEQ will propose new use designations to be added to OAR-340-041-0101 to OAR-340-041-0135 for the first time. These designations will be consistent with the Department's policies for implementation of the dissolved oxygen criteria developed since 1998.

For the **water quality standards definitions**, DEQ will propose to change the terms "Cold-Water Aquatic Life" to "Cold-Water Species" and "Cool-Water Aquatic Life" to "Cool-Water Species" in OAR 340-041-0002 while retaining the respective definitions. This amendment will remove inconsistency and avoid confusion with the terms "Cold-Water Aquatic Life" and "Cool-Water Aquatic Life" used to define aquatic life use subcategories in the dissolved oxygen standard OAR 340-041-0016, Table 21.

For the **pH criteria** in the Crooked River and Trout Creek subbasins of the Deschutes River Basin, DEQ will propose to adjust the pH range from 6.5 – 8.5 to 6.5 – 9.0. The new upper pH range of 9.0 is proposed because it protects the aquatic life use, including salmonids and because pH levels in eastern Oregon basins can naturally rise

above 8.5. This amendment will make the pH criteria in the Crooked River and Trout Creek subbasins consistent with the criteria in adjacent basins with similar geology, hydrology, and aquatic life.

Key issues

1. Where DEQ proposes to amend the use designations resulting in a less stringent criteria being applied to a waterbody, a structured scientific Use Attainability Analysis is required under the Clean Water Act. DEQ is developing this analysis in consultation with the U.S. EPA. DEQ will provide sufficient information through the Use Attainability Analysis to demonstrate that changes resulting in application of less stringent criteria are based on the best scientific data available, represent the water quality goals of the state, and meet federal regulations. Conducting these analyses increases the complexity of the rulemaking process and the amount of documentation required.

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

3. This project is complex and includes reviewing, incorporating, and displaying a significant amount of detailed data and information. At a high level, the new data and information affirm the location and timing of most of the state's current 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 and when they occur.

EQC involvement

DEQ plans to bring proposed rule amendments to the commission for action at the EQC meeting in November 2023.

Supporting materials

A. Appendix A. Technical Workgroup membership
B. Rulemaking Advisory Committee membership, meeting summaries and additional information is available on the [Fish and Aquatic Life Use Updates](#) rulemaking website.

Appendix A: Aquatic Life Use Updates Technical Workgroup

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