

Item F: Fish & Aquatic Life Use Updates

Water Quality Standards Program

November 16, 2023

Portland, OR

Proposed EQC Action

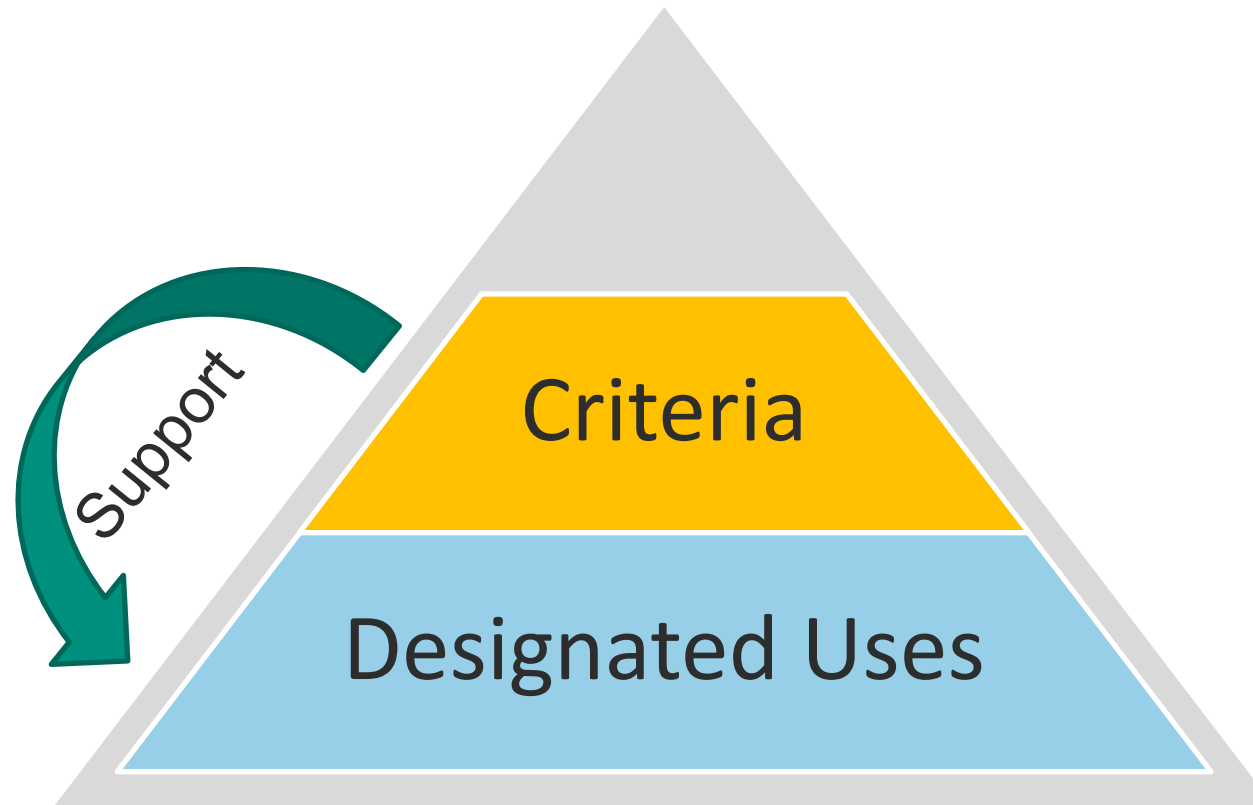
DEQ recommends that the EQC adopt the amendments to Oregon's water quality standards at OAR 340-041-0101 through 340-041-0340 and at OAR 340-041-0002, as shown in Attachment A.

These amendments:

- Update the state's fish and aquatic life use designations for temperature and dissolved oxygen; and
- Clarify two terms in the definitions rule.

Water Quality Standards and Designated Uses

Water Quality Standards:



Use Subcategories and Criteria for fresh waters

Dissolved Oxygen	
Designated Use	Criterion
Cold water aquatic life	8.0 mg/l
Cool water aquatic life	6.5 mg/l
Warm water aquatic life	5.5 mg/l
Seasonal: Salmonid spawning	11.0 mg/l or 8.0mg/l IGDO

Temperature	
Designated Use	Criterion
Bull trout spawning & rearing	12°C
Core cold water habitat	16°C
Salmon & trout rearing	18°C
Migration corridors	20°C
Redband trout	20°C
Cool water species	narrative
Seasonal: Salmon & steelhead spawning	13°C

Why is DEQ updating the use designations?

- Correct and update use subcategories for temperature
- Designate use subcategories for dissolved oxygen
- Incorporate *best currently available data*:
 - 20 more years of data
 - More data on resident trout and cool water species
 - More life-stage timing information

Why is DEQ updating the use designations?

- Improvements in mapping
 - National Hydrography Dataset (NHD)
 - Better delineation of estuaries, lakes and reservoirs
- Fish passage and restoration since 2003
- High stakeholder interest in Triennial Reviews



Rulemaking Process and Public Input

Milestone	Timeline
Technical Work Group	Nov. 2020 – Mar. 2022
Rulemaking Advisory Committee	Jan. – Dec. 2022
EQC Information Item	Apr. 2022
EQC Information Item	May 2023
Public Notice and Comment	May 3 – Jun. 23, 2023
Public Hearing	Jun. 6, 2023
Environmental Quality Commission	Nov. 16, 2023

Technical Advisory Workgroup

- Nine experts
- Met seven times
- Provided data and interpretation
- Reviewed methodology and technical support documents



Technical evaluation process

Information Inputs

Decision Rules/ Methodology

Aquatic Life Use Designations

Regulations



Data

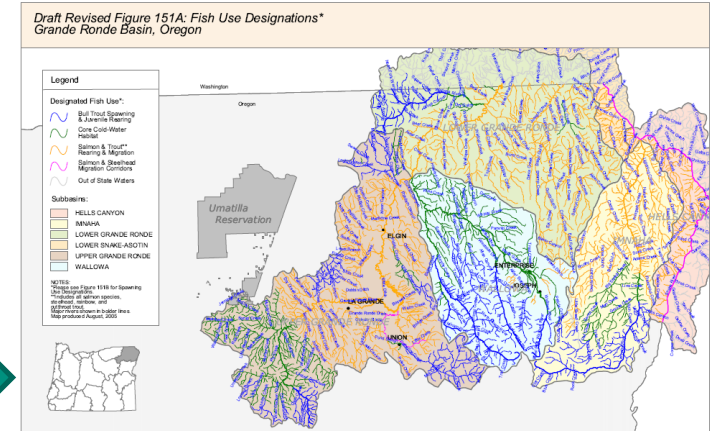
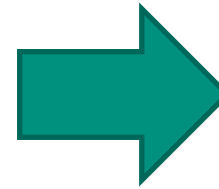
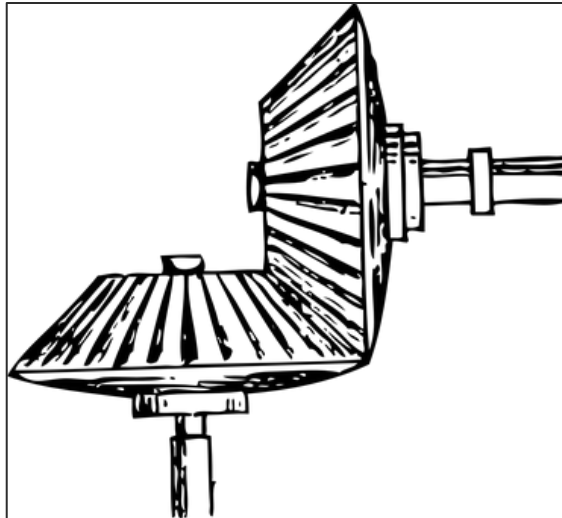
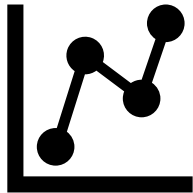


TABLE 121B
BENEFICIAL USE DESIGNATIONS - FISH USES
MAINSTEM SNAKE RIVER

Geographic Extent of Use	Salmon and Steelhead Migration Corridors (20° C)	Redband or Lahontan Cutthroat Trout (20° C)	Salmon and Steelhead Spawning through Fry Emergence
Mainstem Snake River			
Oregon/Washington Border to Hells Canyon Dam (RM 169 to RM 247.5)	X		October 23-April 15
Hells Canyon Dam to Idaho border (RM 247.5 to RM 409)		X	

Table produced November, 2003

Primary Data Sources | Supplemental Data



ODFW

- Fish Habitat Distribution Database
- Life-Stage Timing Tables Database
- Other data sets



U.S. Fish & Wildlife Service

- Final Bull Trout Critical Habitat Designation (2010)
- Biological Opinion (2014)

DEQ

- Monitoring and assessment temperature databases



U.S. Forest Service

- NorWeST Stream Temperature Observations Regional Database



U.S. EPA

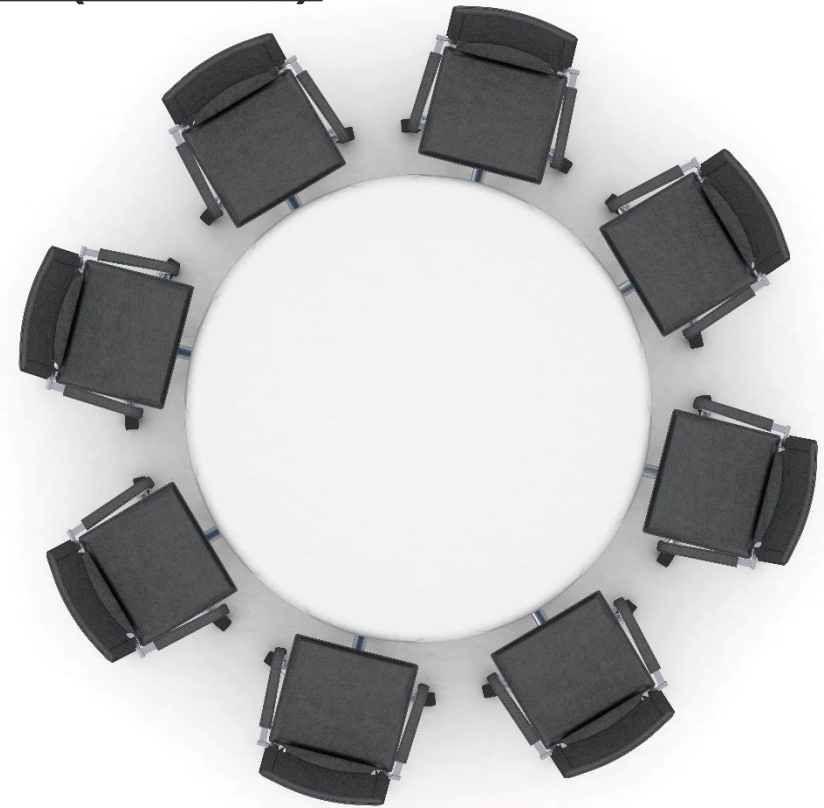
- Region 10, Columbia River Cold Water Refuges Plan



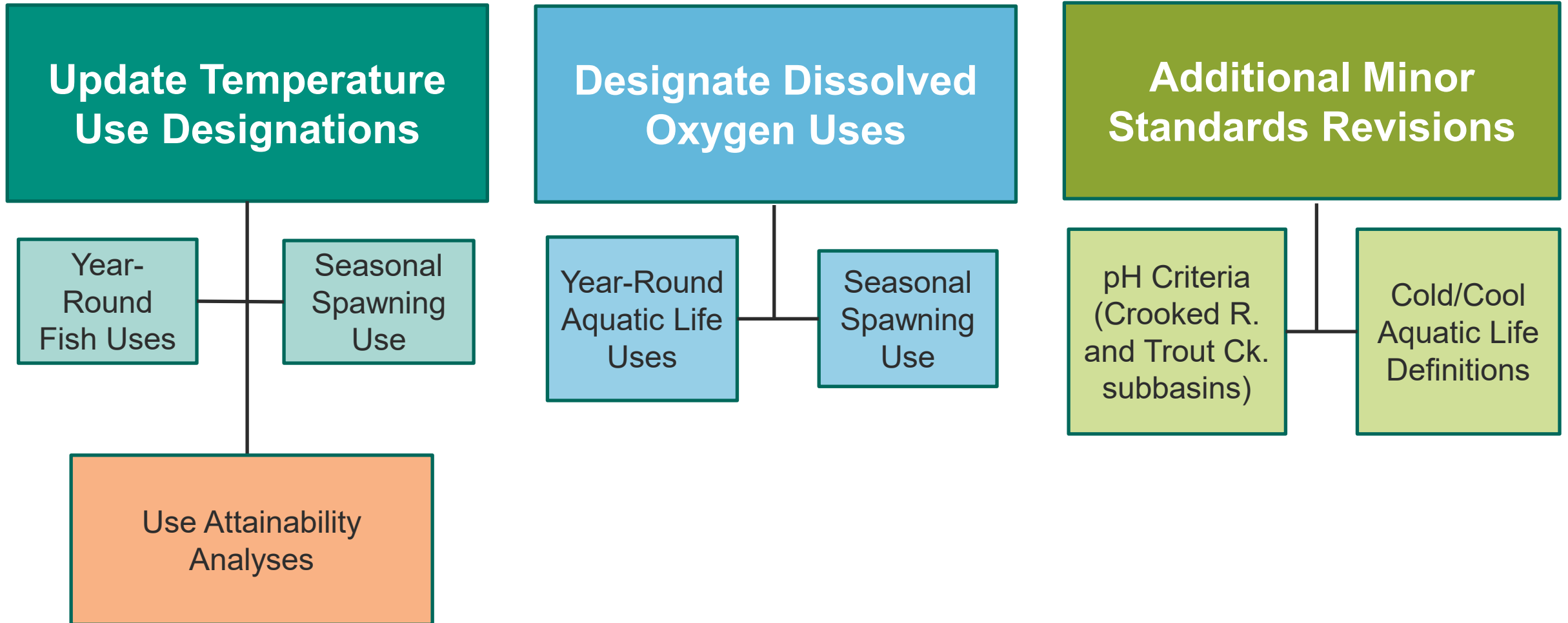
Stakeholder Involvement Process

Rulemaking Advisory Committee (RAC)

- 19 members
- Met 6 times 2022 – 2023
- Inform and evaluate outcomes
- Fiscal impact statement



Scope of Rules Proposed for Public Comment



Summary of Public Comments

- 48 unique comments from 263 individuals or organizations
- 209 individual commenters participated in form emails or postcards

Businesses/Organizations Represented

- Deep Canyon Outfitters (Bend, OR)
- Deschutes River Alliance
- Native Fish Society
- Trout Unlimited
- Portland General Electric
- Oregon Department of Fish & Wildlife
- U.S. Fish and Wildlife Service
- U.S. Environmental Protection Agency

Main Comments from the Public

- General support for proposed statewide Temperature and Dissolved Oxygen Use designations
- More frequent updates to the Fish & Aquatic Life Uses
- Opposition to the proposed pH criteria revision for the Crooked River and Trout Creek Subbasins of the Deschutes Basin
- Specific comments on the use designations for the lower Deschutes River

Comments from Agency Partners

- **ODFW:**
 - Support of Resident Trout Spawning Inventory to document and protect the use
 - Support for other use updates (Bull Trout spawning, estuarine waters, others)
 - Concern about proposed pH criteria for Crooked River and Trout Creek subbasins
 - Concern about Migration Corridor designations on the lower Santiam River and Catherine Creek
- **USFWS:**
 - General support for the technical development process DEQ followed
- **EPA:**
 - Technical comments about the Use Attainability Analysis

Changes in Response to Comments

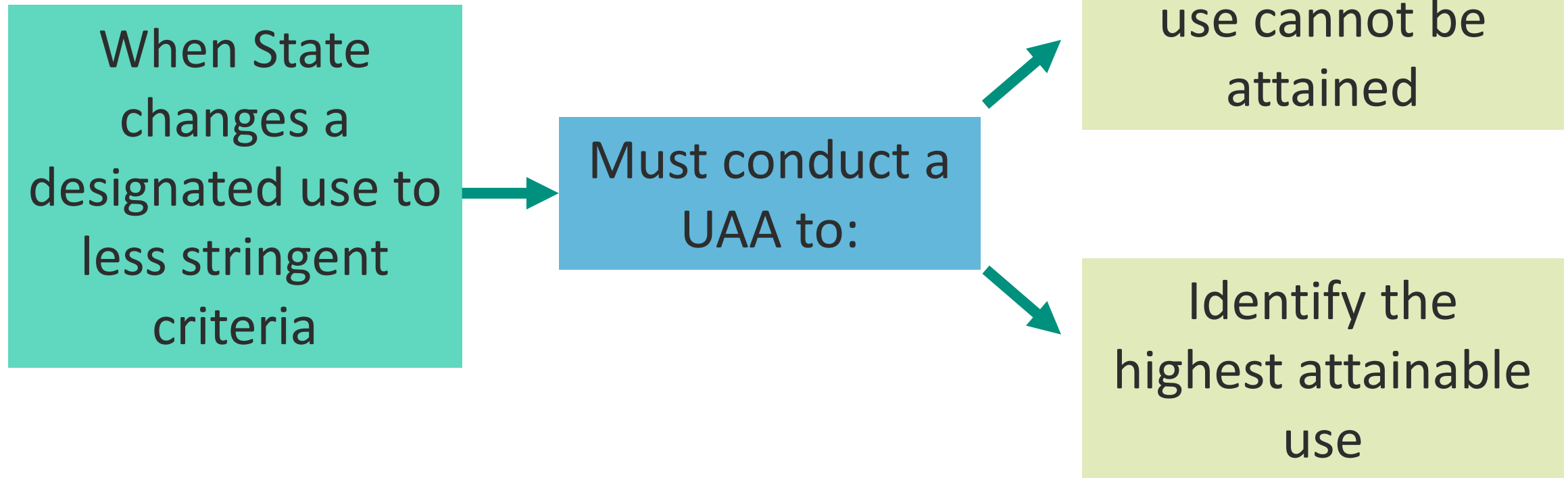
- Carefully considered all comments
- Withdrew pH criteria revision for Crooked R. and Trout Ck. Subbasins
 - evaluate additional data on natural pH levels
- Modified proposed use changes in specific waterbodies in response to ODFW and EPA's technical comments
- Clarified or added information to the supporting documents

Key Policy and Technical Issues

- Ensure uses are accurate and appropriate
- Analyze, document and communicate large amounts of information (72 maps)
- Plan to address ongoing data gaps to identify “active spawning areas” used by resident trout
- Information needed for Use Attainability Analysis for temperature

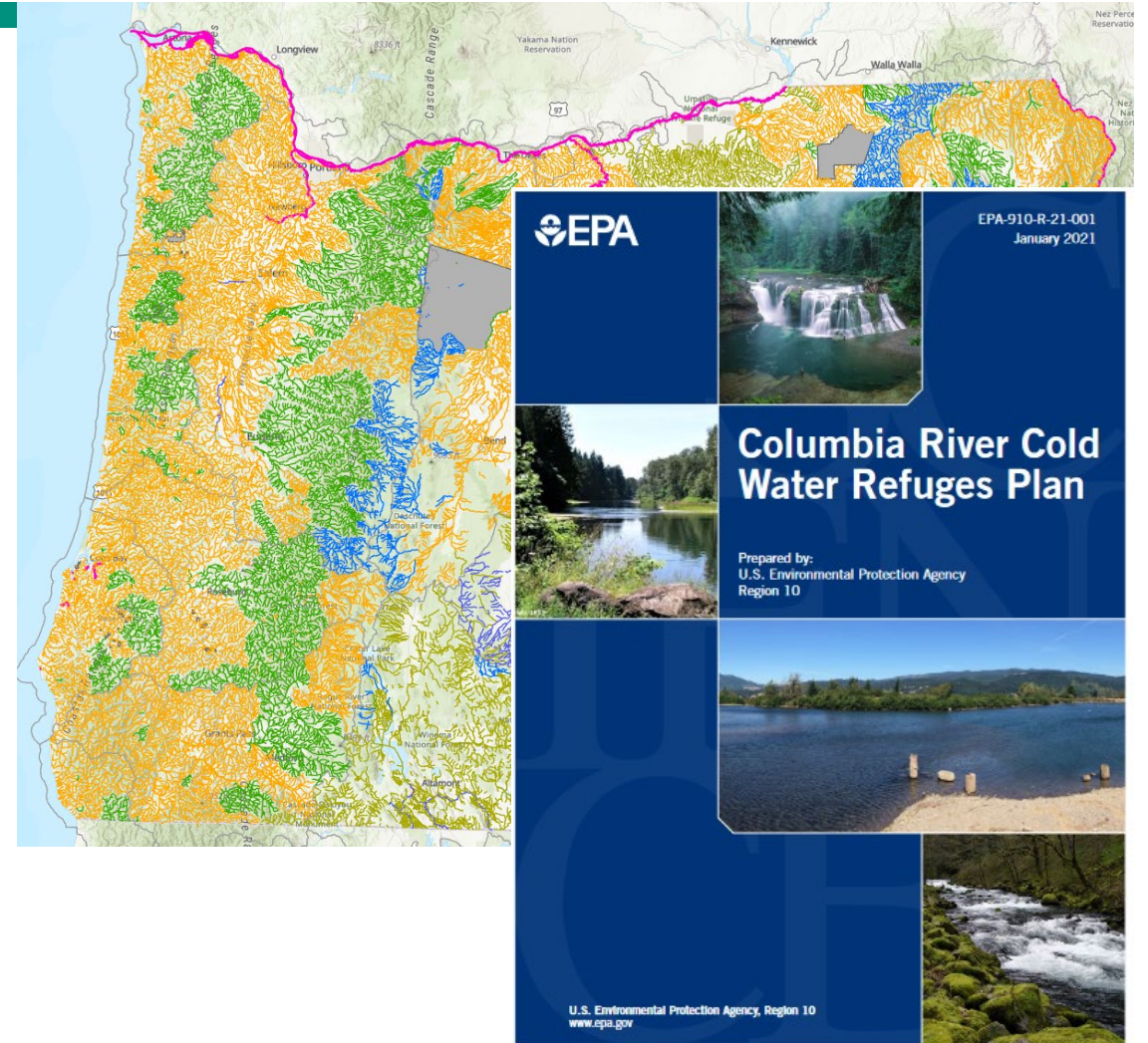
Use Attainability Analyses (UAA)

Federal regulations require:



Proposed Temperature Use Updates

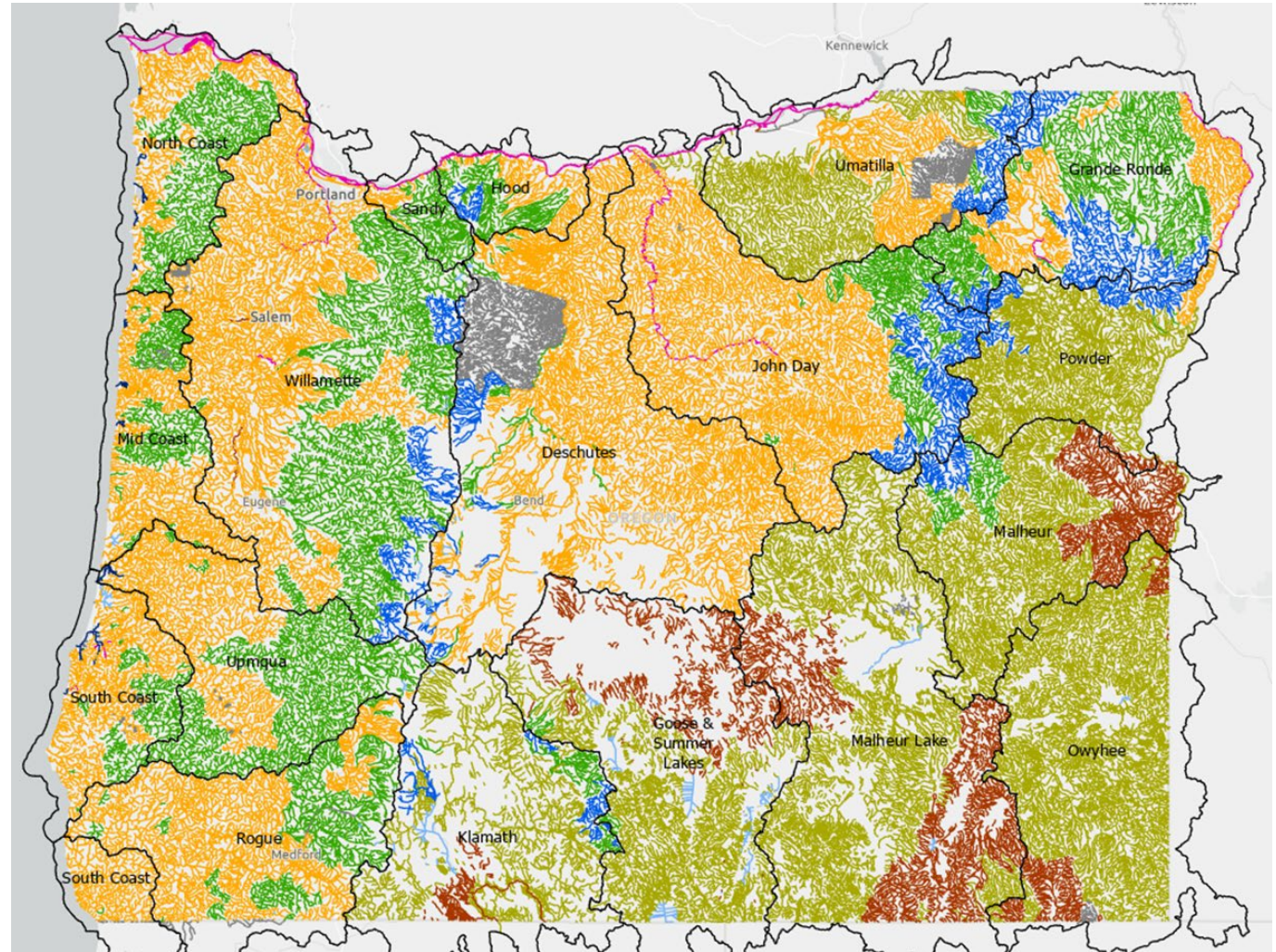
1. Update fish uses statewide based on most current data
2. Revise Bull Trout designations to align with federal critical habitat
3. Expand 'Core-cold Water Habitat' based on additional temperature data
4. Account for habitat restoration and fish passage upgrades



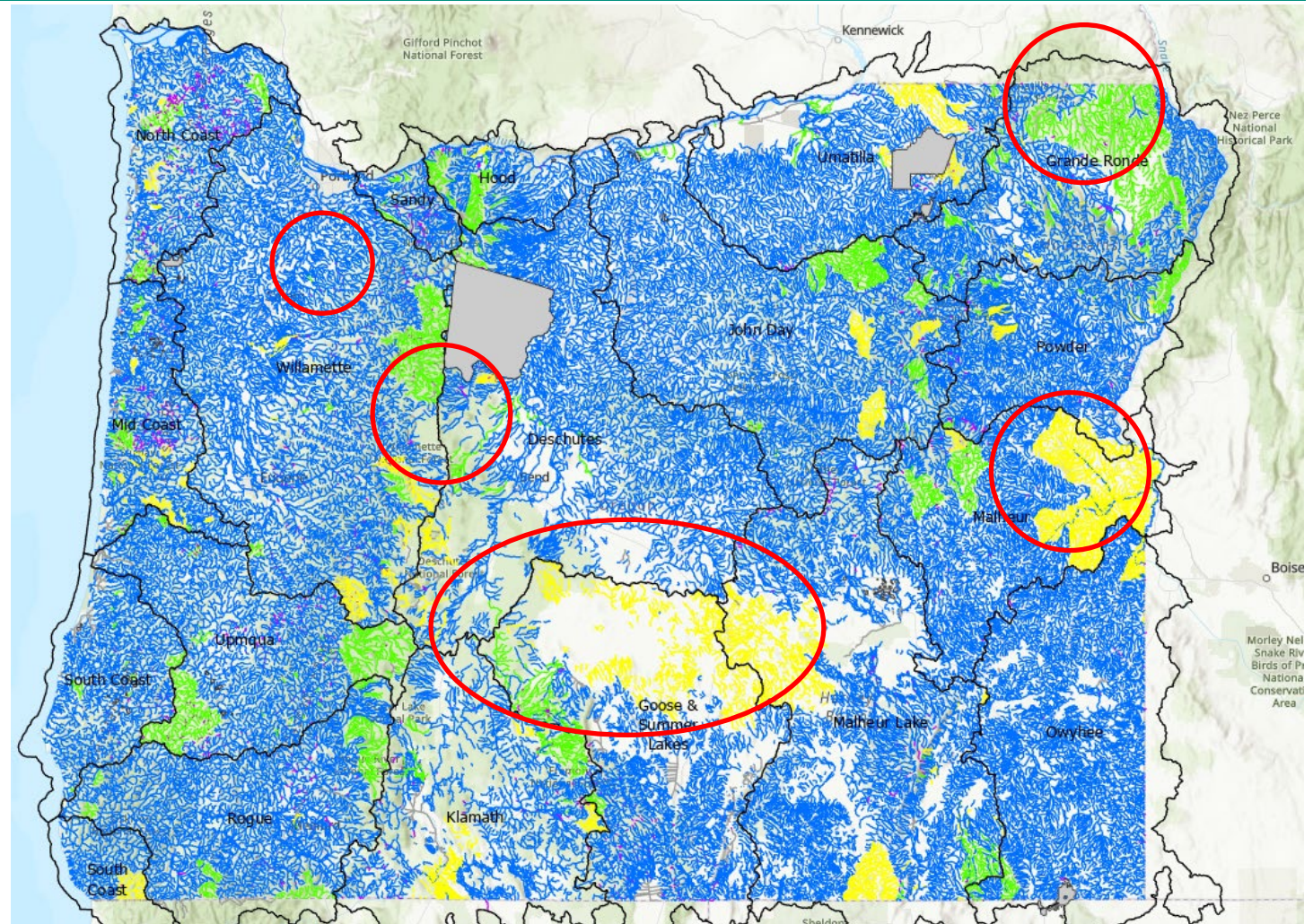
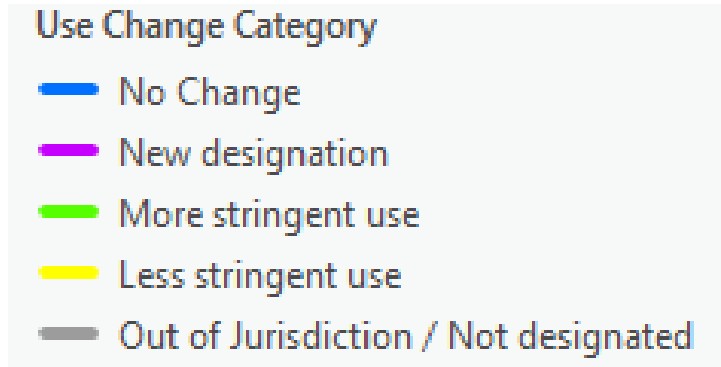
Proposed Temperature Year - Round Use Updates

Use Category

- Blue Bull Trout Spawning & Juvenile Rearing
- Green Core Cold Water Habitat
- Orange Salmon and Trout Rearing & Migration
- Light Green Redband or Lahontan Cutthroat Trout
- Pink Salmon and Steelhead Migration Corridors
- Brown Cool Water Species
- Red Borax Lake Chub (Warm Water Species)
- Grey Out of Jurisdiction / Not Designated



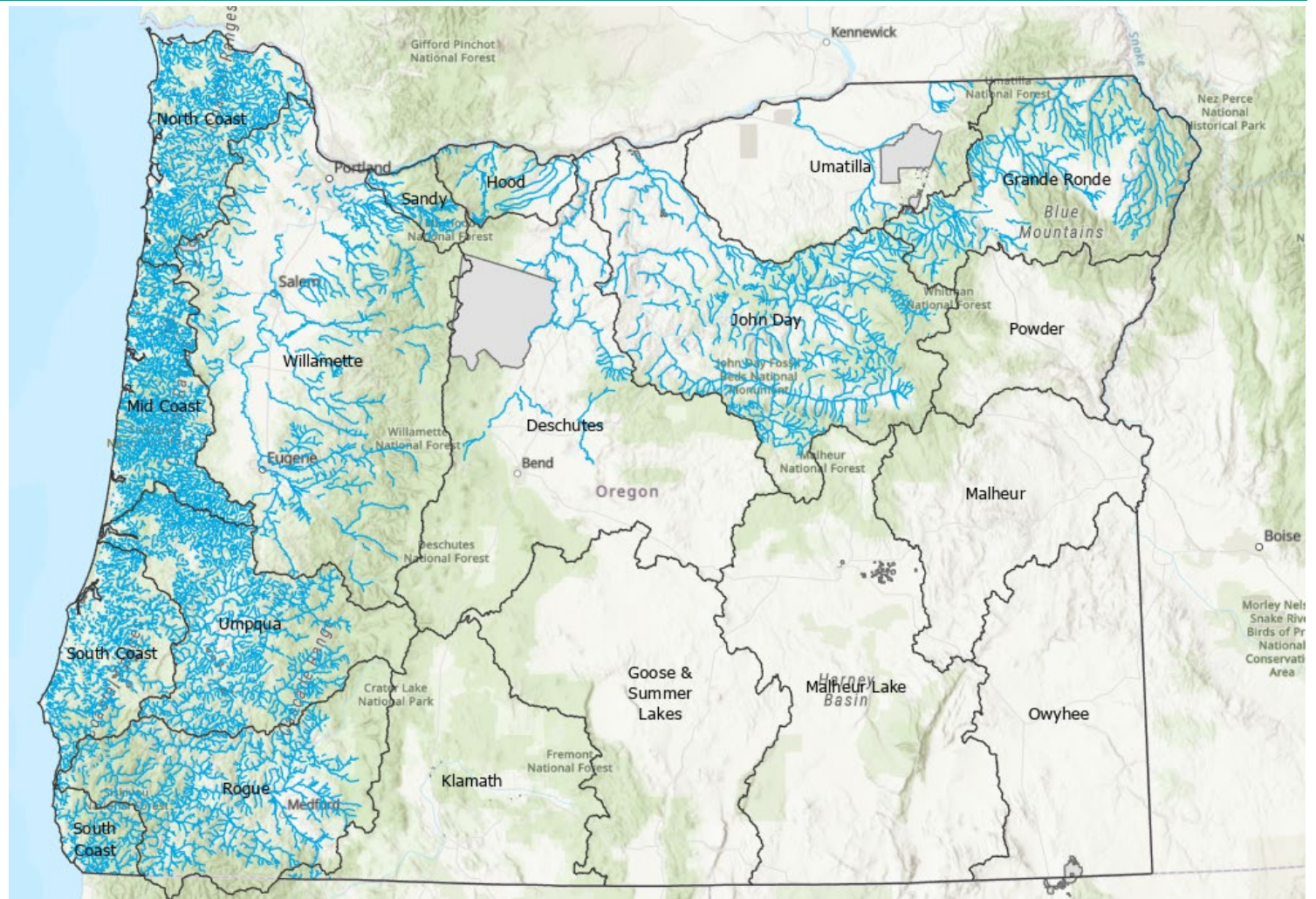
Proposed Temperature Use Changes and Use Attainability Analyses



Temperature - Seasonal Spawning Designations

Seasonal Spawning Uses

■ Salmon & Steelhead Spawning



Proposed Dissolved Oxygen Use Designations

1. Designate aquatic life use subcategories

- Consistent with DEQ's established implementation procedures

2. Salmonid Spawning Use

- Includes resident trout species

TABLE 21
DISSOLVED OXYGEN & INTERGRAVEL DISSOLVED OXYGEN CRITERIA
(Applicable to All Basins)






Class	Concentration and Period ¹ (All Units are mg/L)				Use/Level of Protection
	30-D	7- D	7- Mi	Min	
Salmonid Spawning		11.0 ^{2,3}		9.0 ³ 8.0 ⁴	Principal use of salmonid spawning and incubation of embryos until emergence from the gravels. Low risk of impairment to cold-water aquatic life, other native fish and invertebrates.
Cold Water	8.0 ²		6.5	6.0	Principally cold-water aquatic life. Salmon, trout, cold-water invertebrates, and other native cold-water species exist throughout all or most of the year. Juvenile anadromous
Cool Water					
Warm Water					
No Risk					

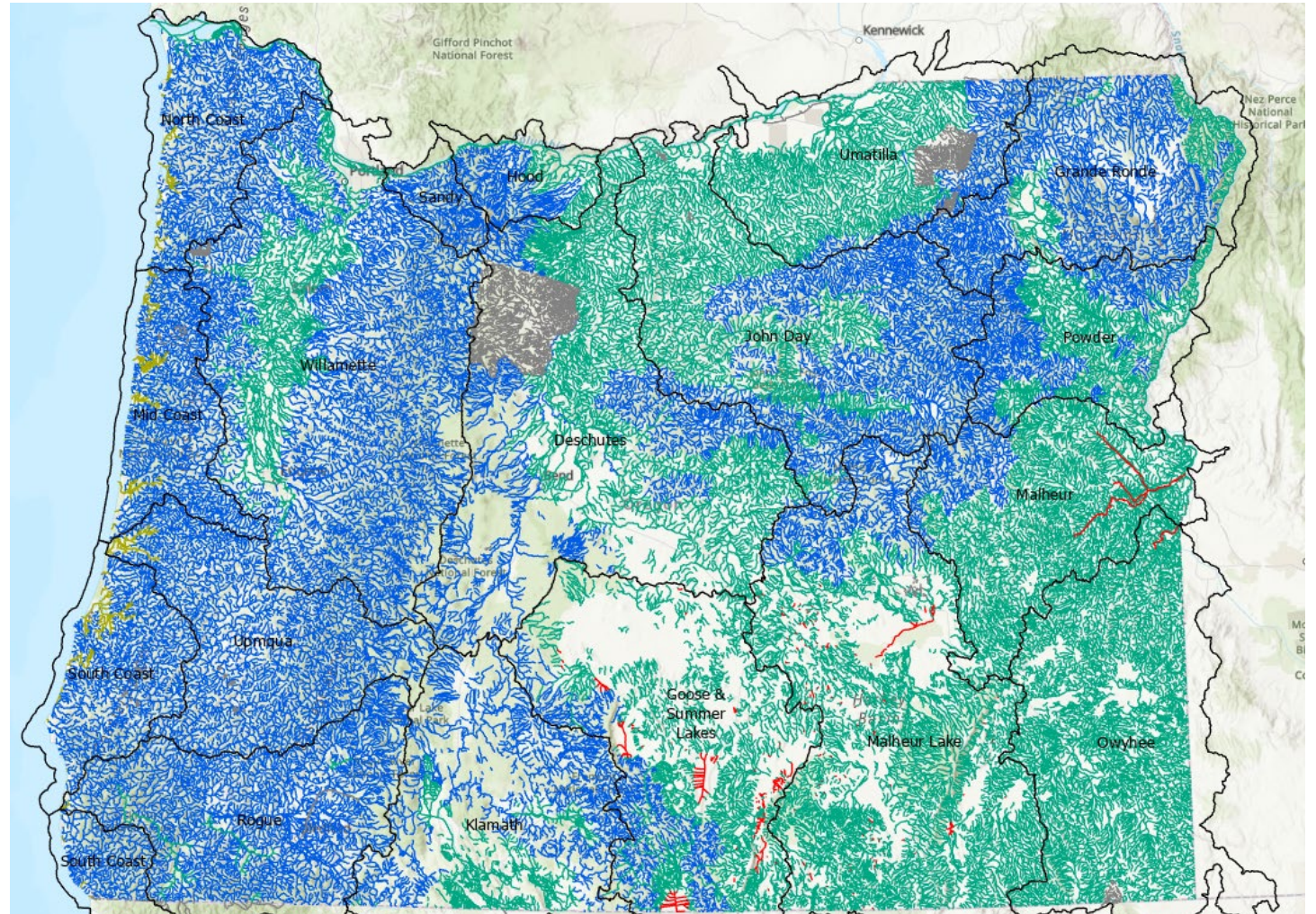


ODFW

Dissolved Oxygen – Year-Round Use Designations

Dissolved Oxygen Use Designations

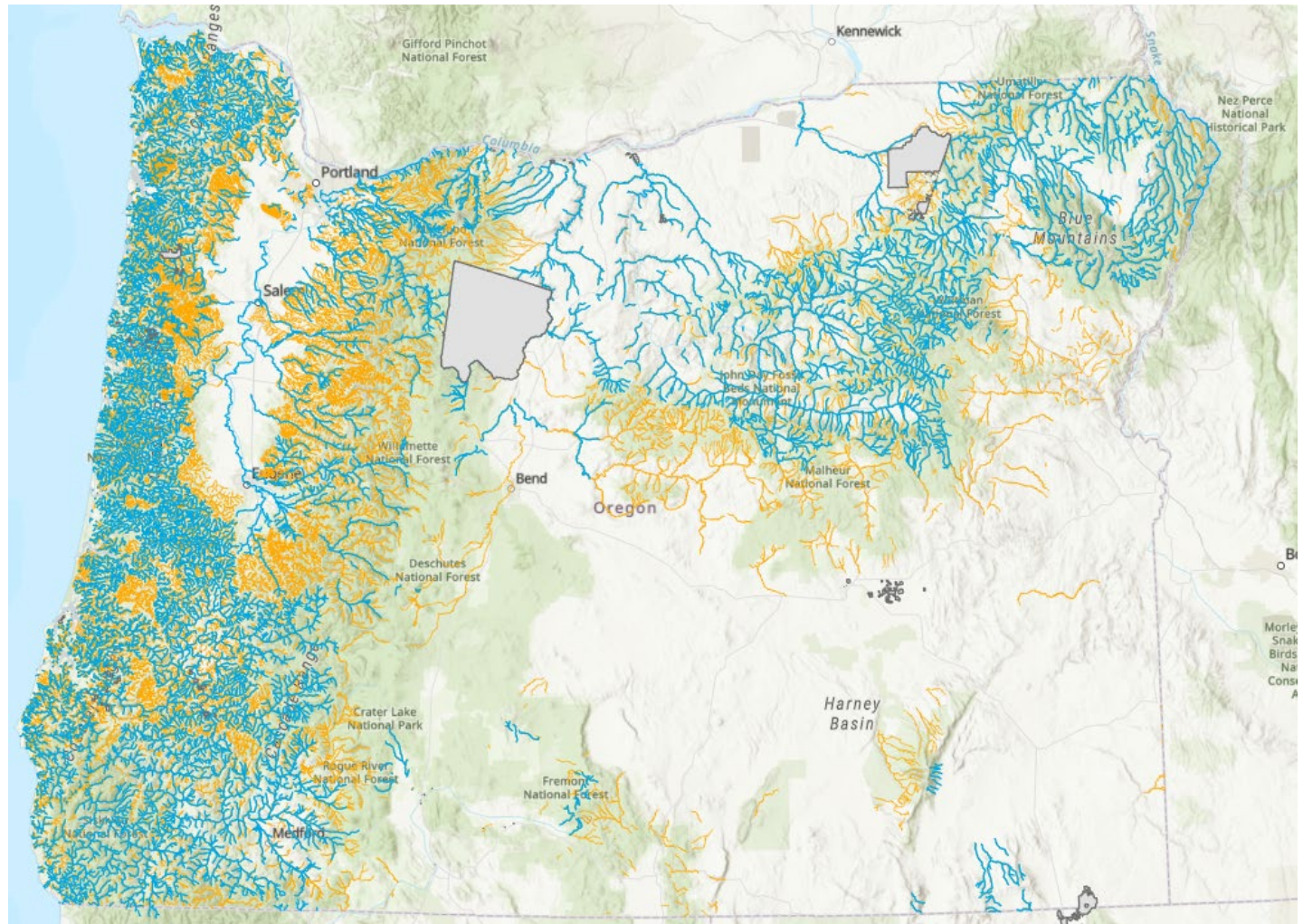
-  Cold-Water Aquatic Life
-  Cool-Water Aquatic Life
-  Warm-Water Aquatic Life
-  Estuarine
-  Out of Jurisdiction / Not Designated



Dissolved Oxygen – Seasonal Salmonid Spawning Designations

Salmonid spawning

- Salmon, Steelhead, Bull Trout, Lahontan Cutthroat
- Additional Resident Trout Spawning



Next Steps



Debra Sturdevant, OR-DEQ

Upper Rogue River, Oregon

Questions or Comments



Connie Dou, OR-DEQ

Metolius River, Oregon

Proposed EQC Action

DEQ recommends that the EQC adopt the amendments to Oregon's water quality standards at OAR 340-041-0101 through 340-041-0340 and at OAR 340-041-0002, as shown in Attachment A.

Title VI and alternative formats

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