

Oregon Aquatic Life Use Updates – a Status Report

Environmental Quality Commission meeting
Item I: Informational
May 20, 2022

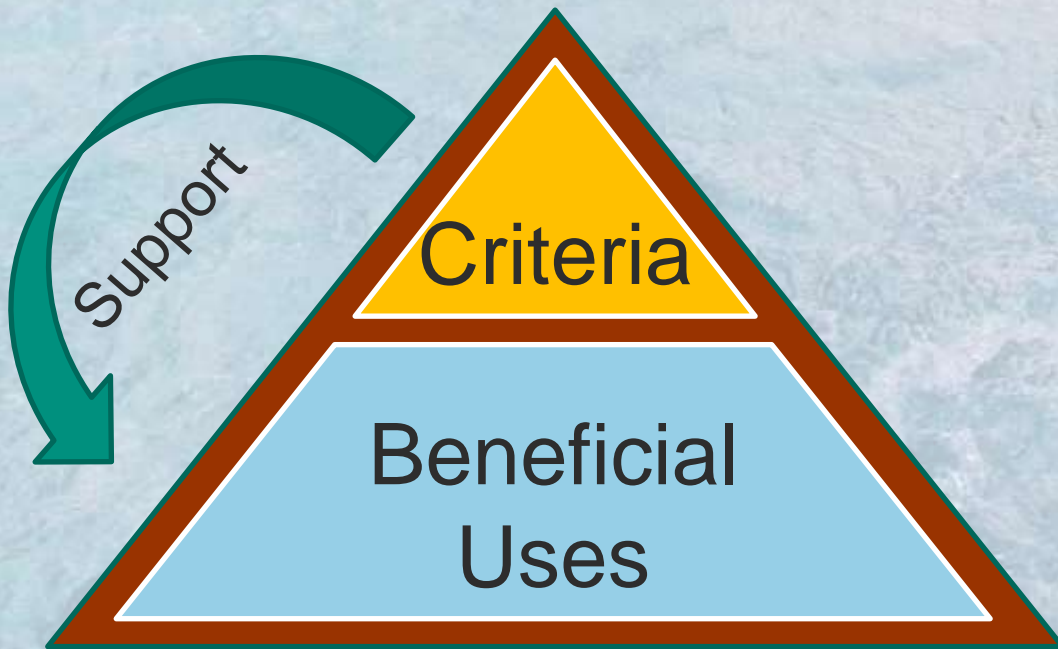
Rulemaking Objectives

- *To update the aquatic life use designations associated with Oregon's temperature and dissolved oxygen standards based on the best data available .*
- *To ensure that DEQ applies the correct water quality criteria to protect Oregon waters.*



Beneficial Uses

Water Quality Standard:



Designated uses:

- Set water quality goals for the water body.
- Determine **where** and **when** the water quality criteria apply.

Fish and Aquatic Life Uses

Use Subcategories for fresh waters

Dissolved Oxygen	
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
	8.0 IGDO

Temperature	
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 and Steelhead Spawning	13°C

Why is DEQ updating the use designations?

- Correct and update temperature uses
- Designate dissolved oxygen uses in rule
- Incorporate *best currently available data*:
 - 18 more years of data
 - Broader statewide coverage
 - More data on resident trout, other 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 restoration
- 2017 & 2021 Triennial Review Priority



Process

Technical Development & Workgroup

Data acquisition
Methods review
GIS analysis
Technical support documentation
Produce maps & tables

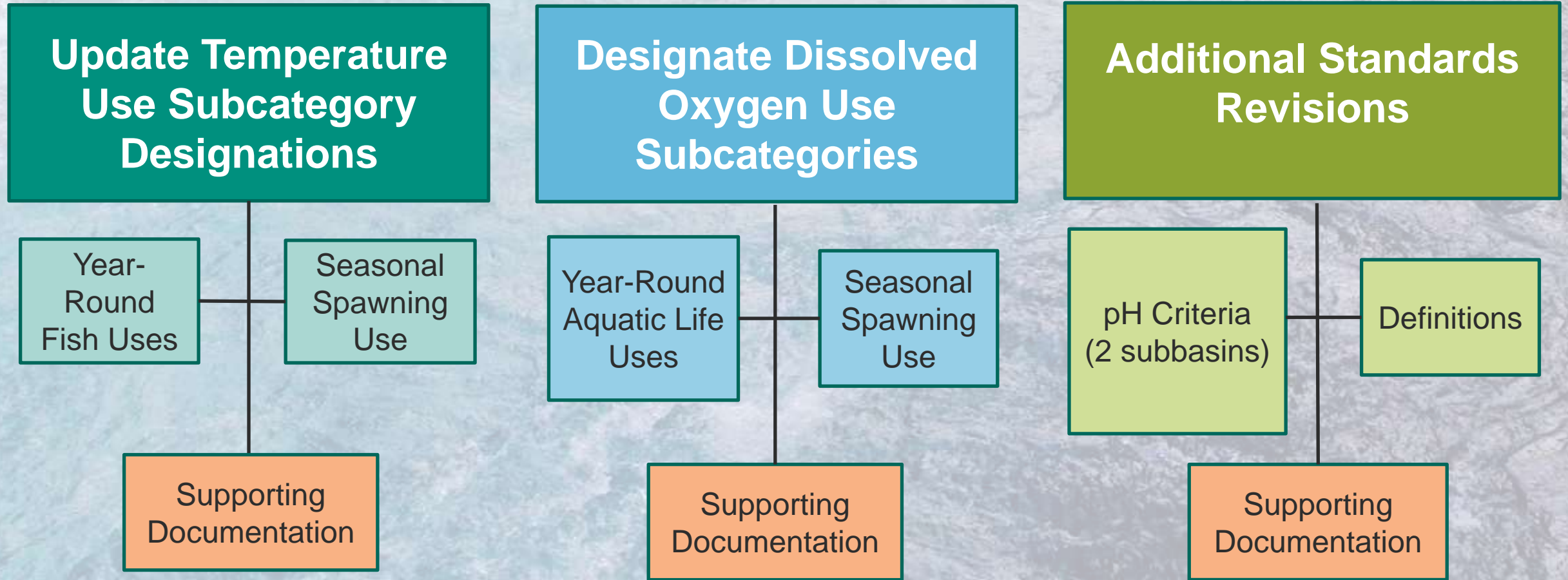
Policy Review & Public Involvement

Rulemaking advisory committee
Use attainability analysis; required documentation
Fiscal & economic impact statement
Public hearing & comment

Rule Adoption & Approval

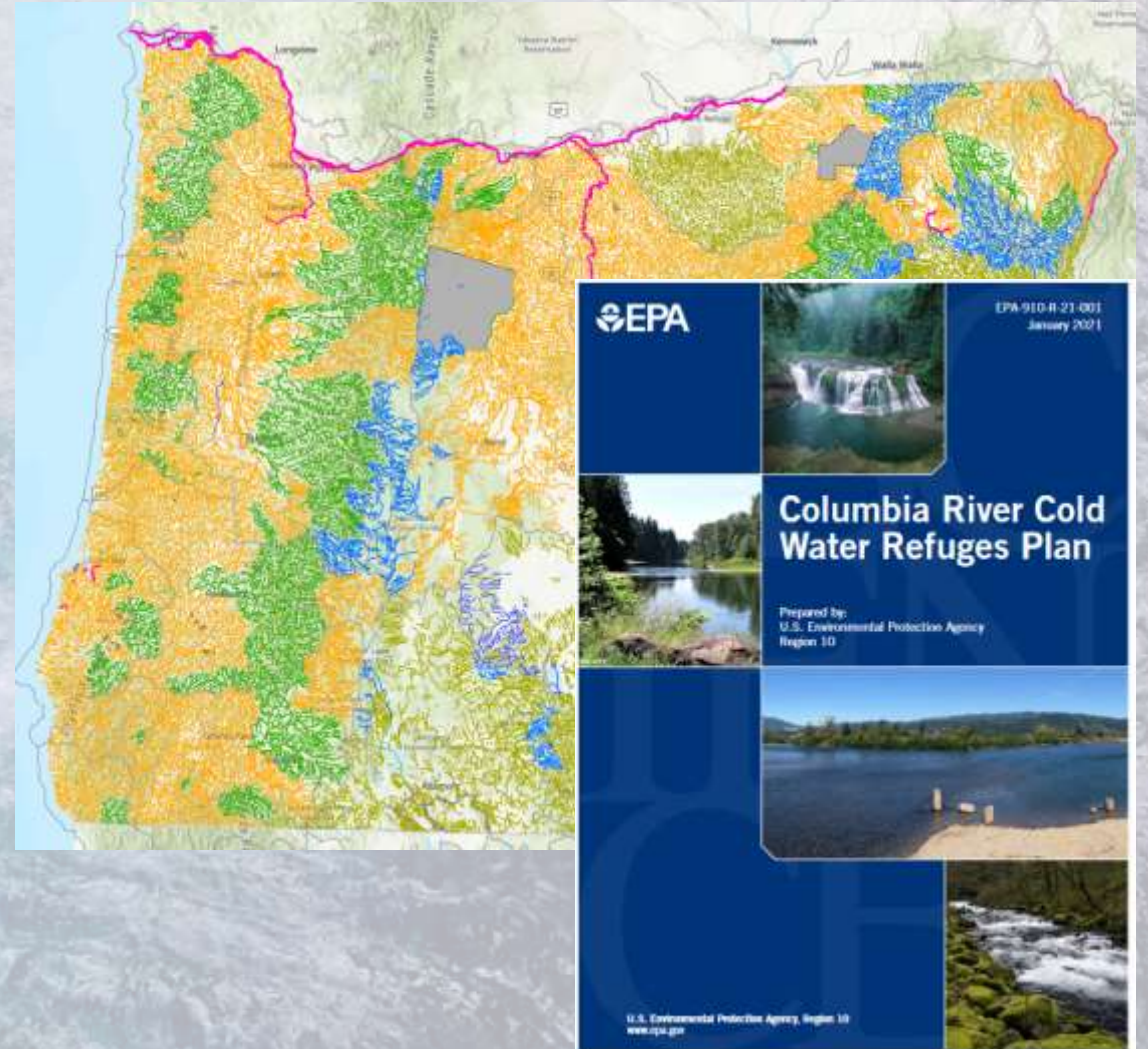
Oregon Environmental Quality Commission
EPA:
ESA consultation
Tribal consultation
Approval decision

Project Scope



Temperature use updates

1. Update fish uses statewide based on ODFW data
2. Revise Bull trout use designations to align with federal critical habitat designations
3. Expand 'Core-cold Water Habitat' based on additional temperature data



Dissolved oxygen use designations

1. Designate aquatic life use subcategories.

- Consistent with DEQ's established implementation procedures.
- Amends basin-specific beneficial use rules.

2. Identify resident trout spawning areas.

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

Class	Concentration and Period ^d (All Units are mg/L)				Use/Level of Protection
	30-D	7-D	7-Mi	Min	
Salmonid Spawning		11.0 ^{a,b}		9.0 ^b	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.
				8.0 ^d	
Cold Water					Principally cold-water aquatic life. Salmon, trout, cold-water
Cool Water					
Warm Water					
No Risk					



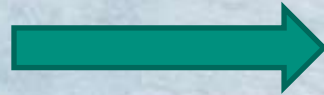
Technical evaluation process

Information Inputs

Decision Rules/ Methodology

Aquatic Life Use designations

Regulations



Data

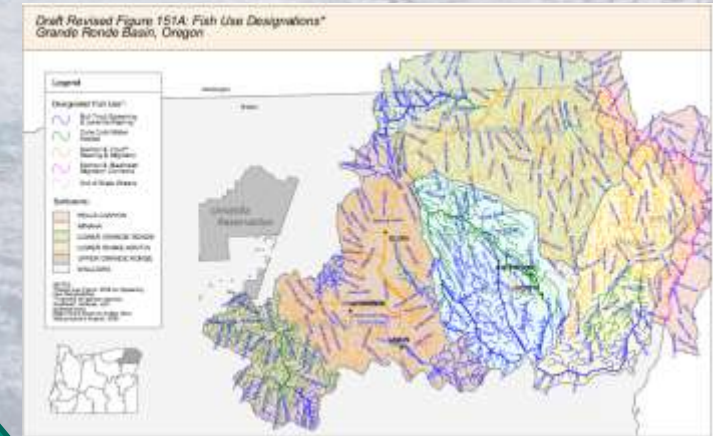
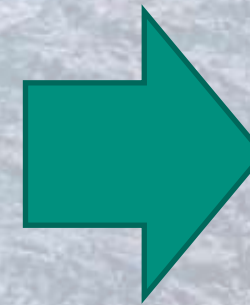
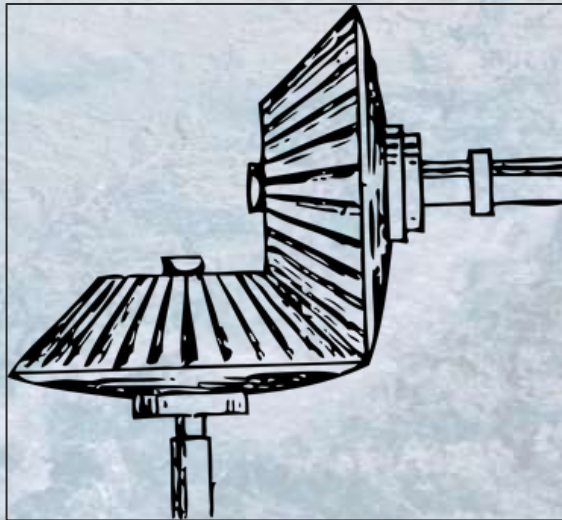
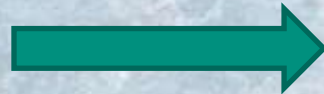
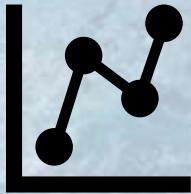


TABLE 121B
BENEFICIAL USE DESIGNATIONS - FISH USES
MAINSTEM SNAKE RIVER

Geographic Extent of Use	Salmon and Steelhead Migration Corridors (20°C)	Redhead 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 400)		X	

Table produced November, 2007

Primary Data Sources

Supplemental Data



ODFW

- Fish Habitat Distribution Database
- Life-Stage Timing Tables Database



U.S. FWS

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

DEQ

- AWQMS statewide temperature database



U.S. Forest Service

- NorWeST Stream Temperature Observations Regional Database



U.S. EPA

- Region 10, Columbia River Cold Water Refuges Plan



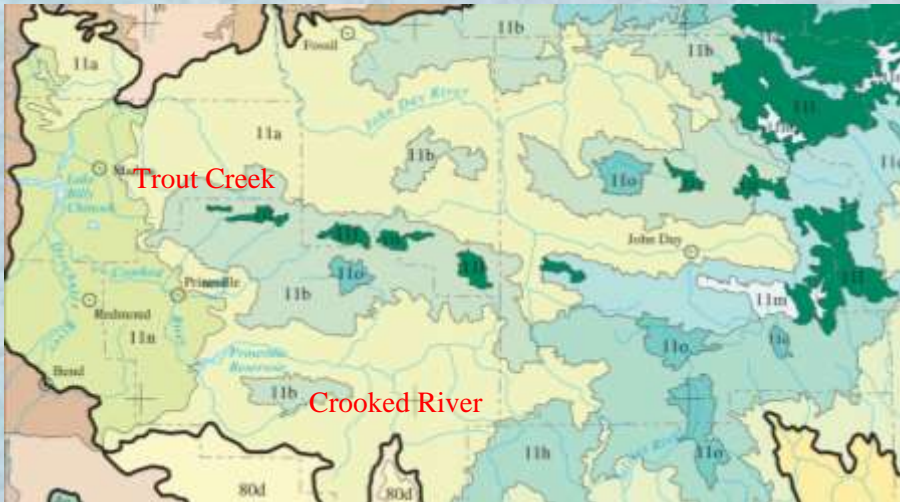
What will the results look like?

- Updated or new fish use maps and tables
- Majority of waters likely to stay the same
- Some waters will change to more stringent use
 - restored passage or reintroductions
 - more temperature data for core cold water habitats
- Some waters will change to less stringent use
 - initially based on incomplete or provisional data
 - hydrography errors

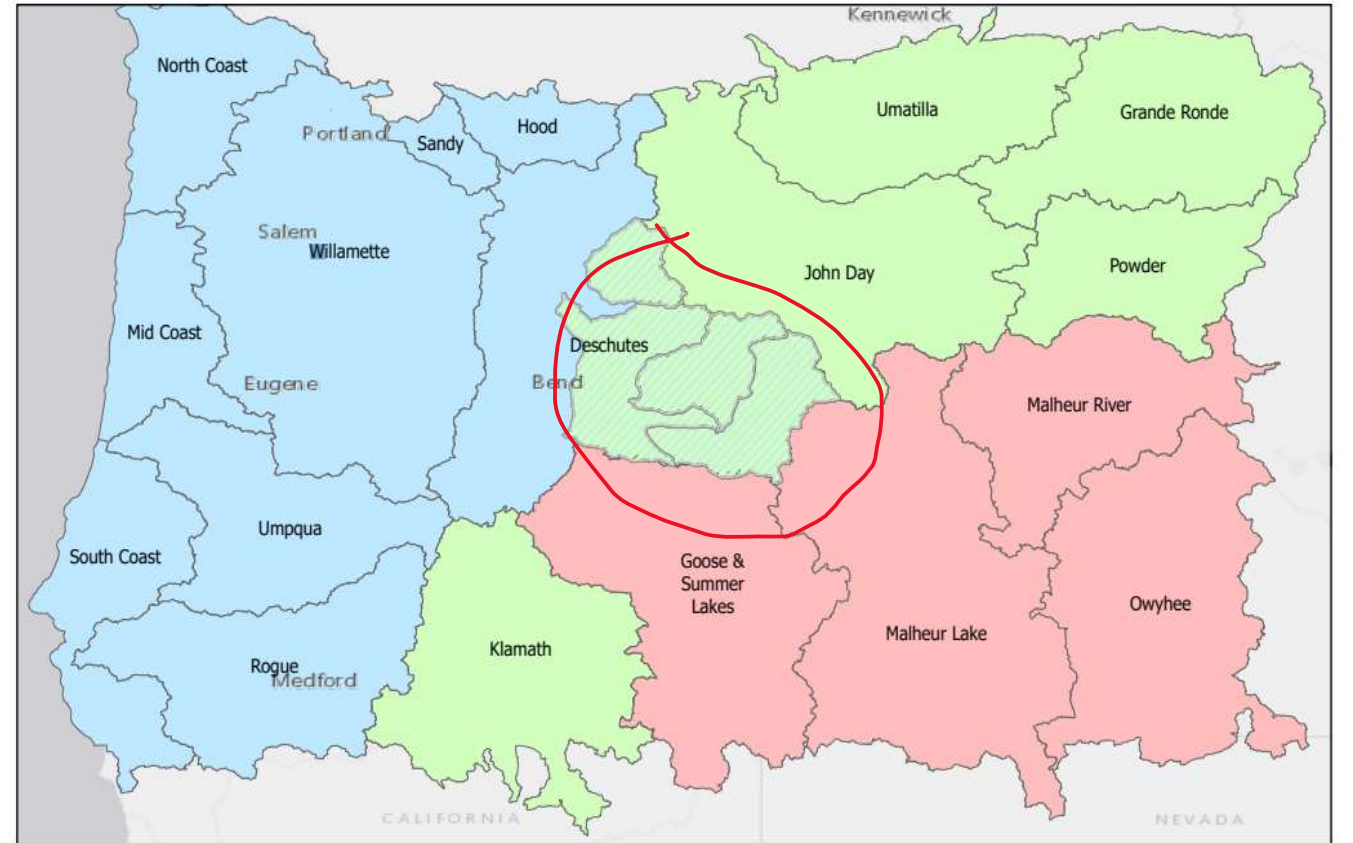


Additional Revisions

1. Clarify or remove conflicting definitions for Cold-, Cool- and Warm-water aquatic life
2. Revise pH Criteria for Crooked R. and Trout Creek Subbasins, Deschutes Basin



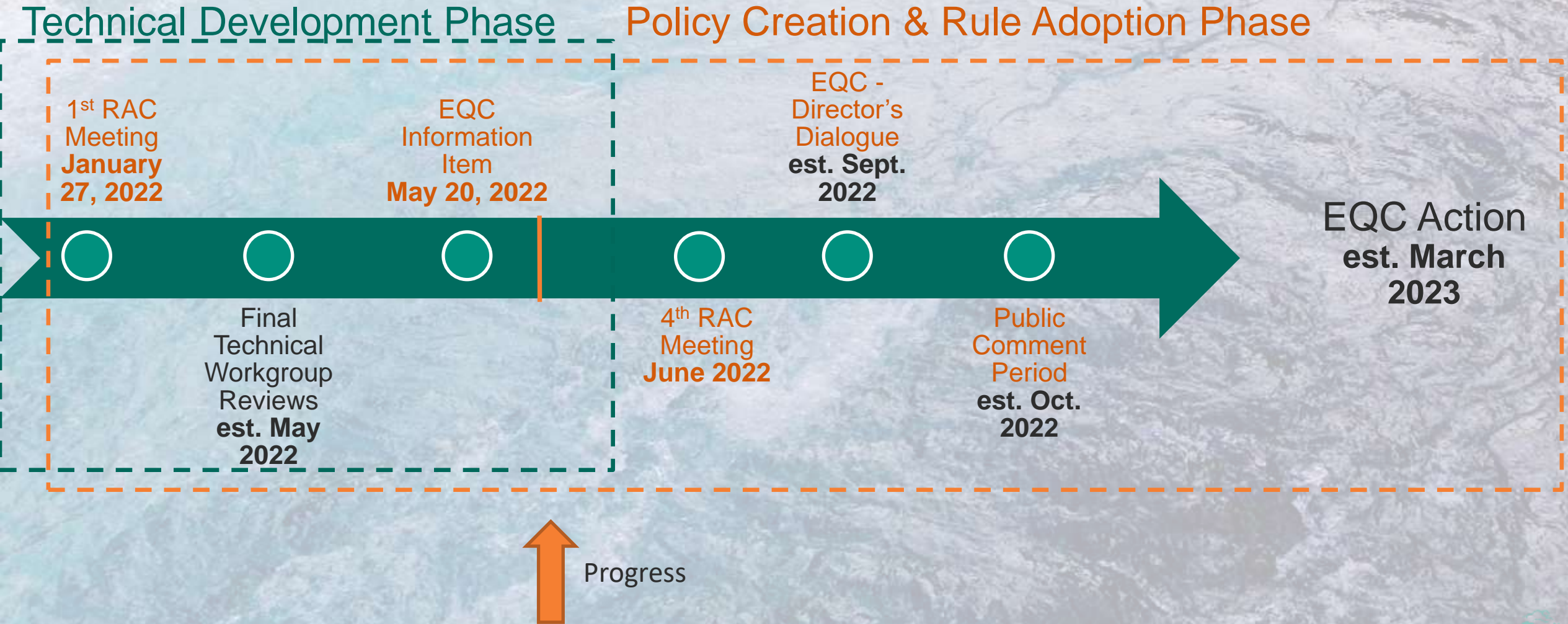
pH Criteria: Coded by Oregon Basin



Key Issues

- Working to ensure the use designations are accurate
 - Based on best available data
 - To apply correct and appropriate criteria
- Documentation to support use updates
 - Working with EPA on the supporting data needed
- Documentation to support dissolved oxygen uses
 - Data for dissolved oxygen uses less complete
 - Working on methods to address data gaps or uncertainty

Project Schedule



Questions?



Metolius River, Oregon

Rulemaking Resources:

Website: <https://www.oregon.gov/deq/rulemaking/Pages/aquaticlife2022.aspx>

Rulemaking Email: aquaticlife.2022@deq.oregon.gov

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