

Oregon's 2024 Integrated Report – Assessment Methodology

Environmental Quality Commission

September 14, 2023

Water Quality Standards, Source Water Protection and Assessment

Presentation overview

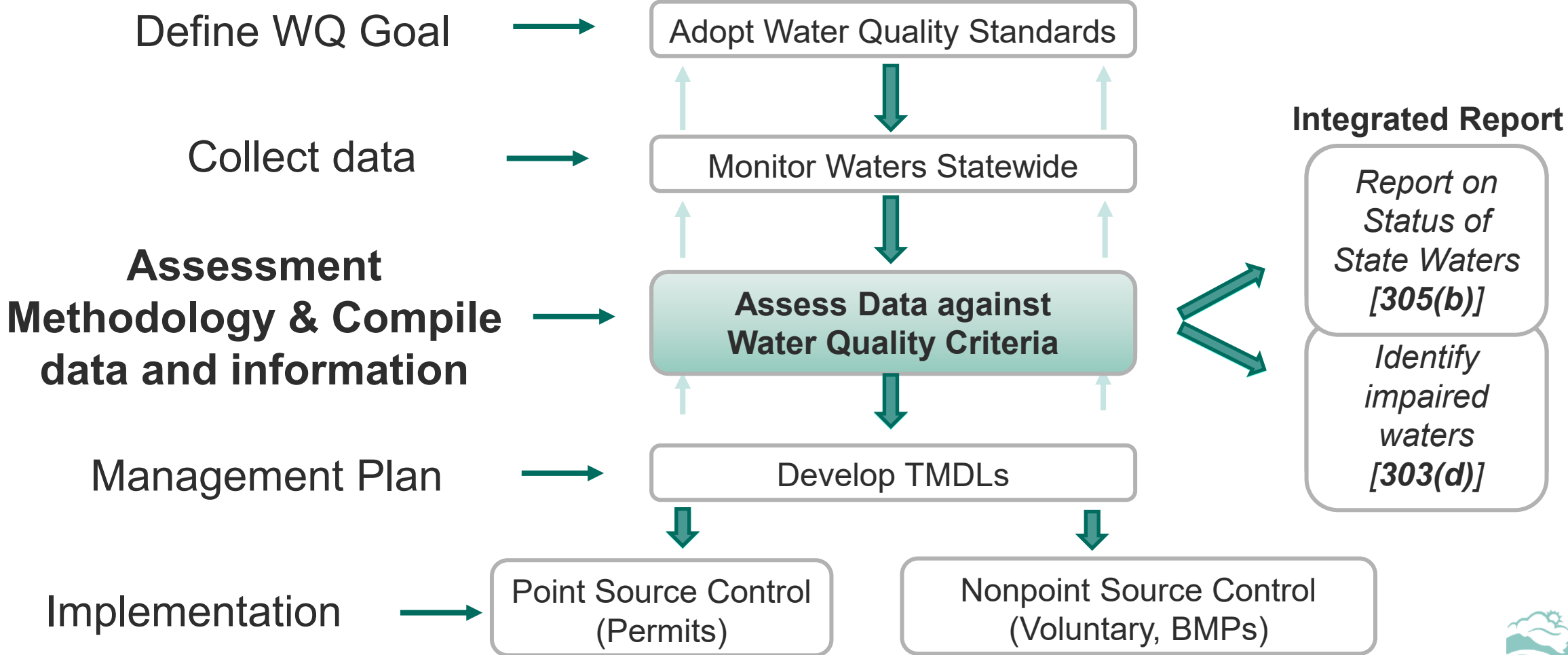
- Clean Water Act Framework
- Integrated Report process
- 2024 Methodology updates
- Public engagement
- 2024 Integrated Report schedule



Wallowa River, Oregon



Clean Water Act Framework



Integrated Report Requirements



State Requirements for assessment methodology

- Assess attainment of beneficial uses of Waters of the State
 - Assessment Methodology updates
 - Peer review of substantive methodologies
 - Public comment
- EQC informational overview

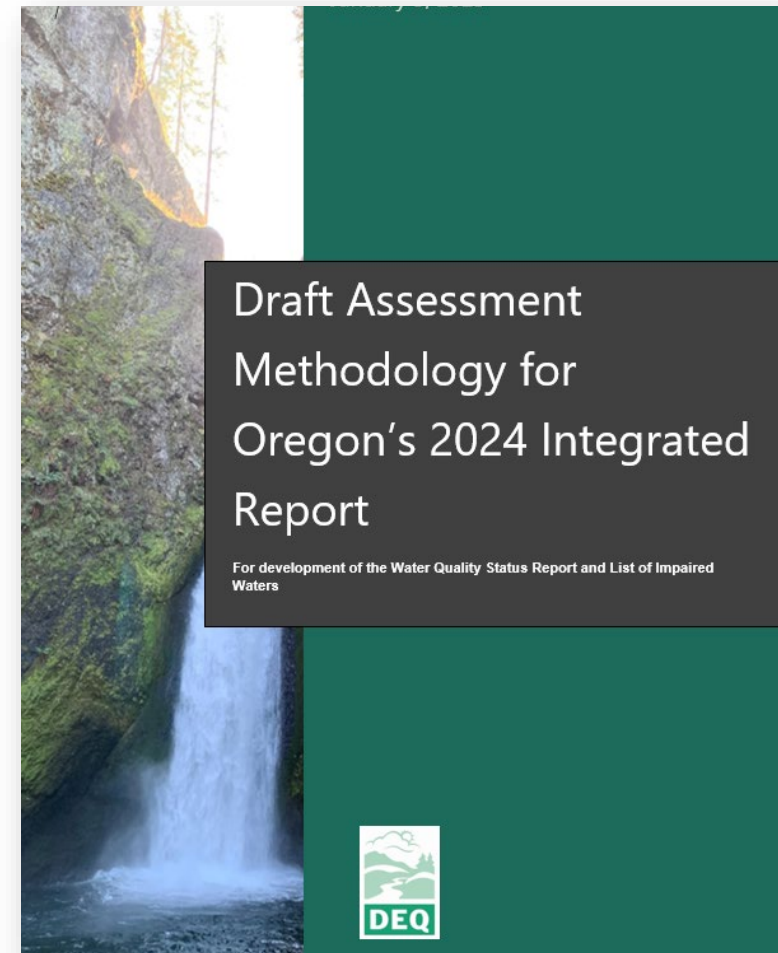


Federal Requirements for Integrated Report

- Assess Oregon's waters every two years
 - Overall condition of Oregon's waters
 - Water quality impairment
 - Public comment on report
- Submit to EPA for approval

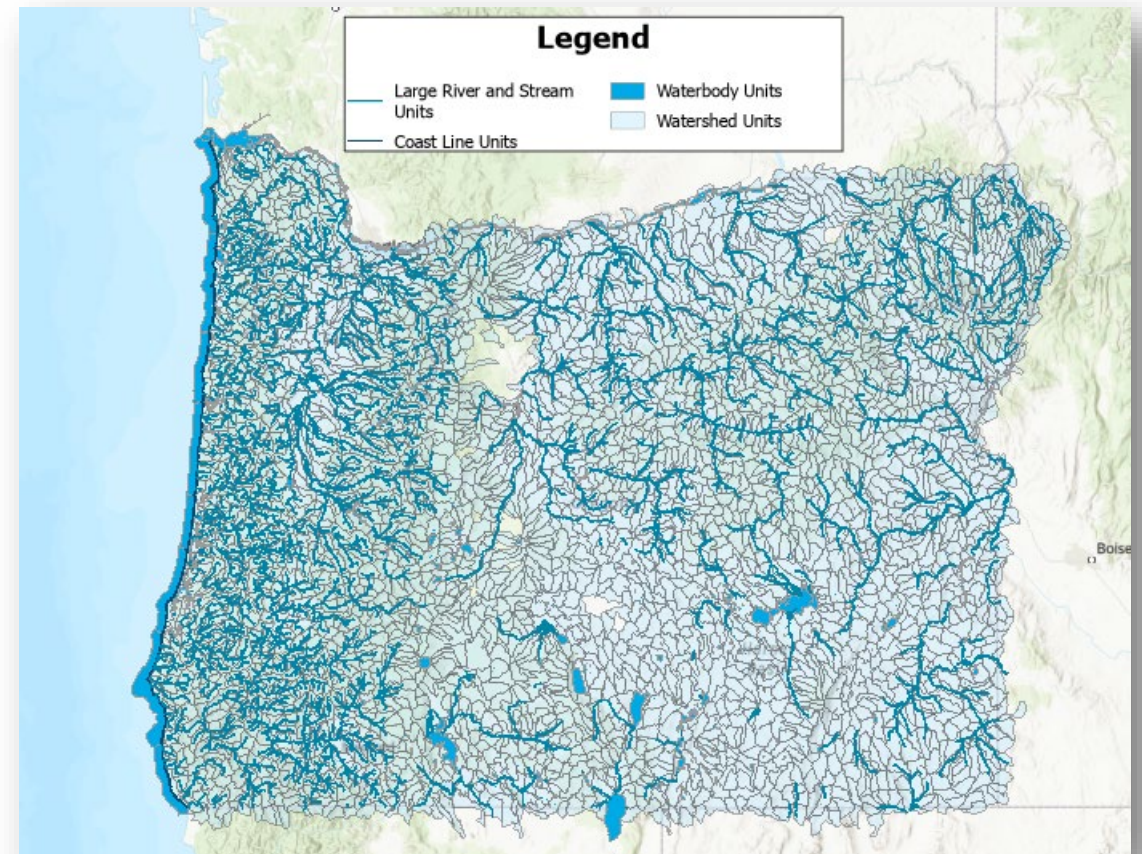
Assessment Methodology

- Documents the "decision rules" DEQ will use to compare data and information to existing water quality standards to determine status
 - Parameter level
 - Assessment unit level
- Assess against numeric and narrative criteria
- Scientifically and technically defensible



Oregon's Assessment Units

- River and Stream - Medium to large streams
- Watershed - Small, typically headwater streams
- Waterbodies
 - Lakes, reservoirs and estuaries
- Coastline - beaches
- Oregon territorial marine waters



2024 Assessment Methodology Updates

- **Inland and estuarine**
 - Robust methodology to delist for temperature impairments using continuous data
 - Revisions to bacteria-based water contact recreation assessments
- **Marine waters**
 - New Ocean Acidification and Hypoxia methodologies
- Updated look and structure of the document



https://www.dfw.state.or.us/fish/local_fisheries/rogue_river/updates/2017/09/index.asp

Robust Temperature Delisting Procedure

- In 2022, 50% of all temperature delistings were based on ≤ 2 years of data
- New procedure requires:
 - Minimum of 3 years of data that
 - Include the months that we expect excursions of the water quality standard
- **Greater confidence in delisting conclusions**



Water contact recreation assessments

- Freshwater

- Expanded use of enterococcus indicator in small freshwater streams that flow directly into the ocean
- **Allow utilization of more data in these streams**

- Coastal

- Use same statistical test to determine impairment as other freshwater parameters
- **Greater confidence in listing and delisting conclusions**



Inland and Estuarine - Public Engagement

Draft Assessment Methodology

- Information webinar on 2024 updates
 - Technical support documents
 - Informal input and comments
- Formal 45-day public comment
- EQC update
 - Public comment period following



Comments Received and Response

Key issues raised in comments

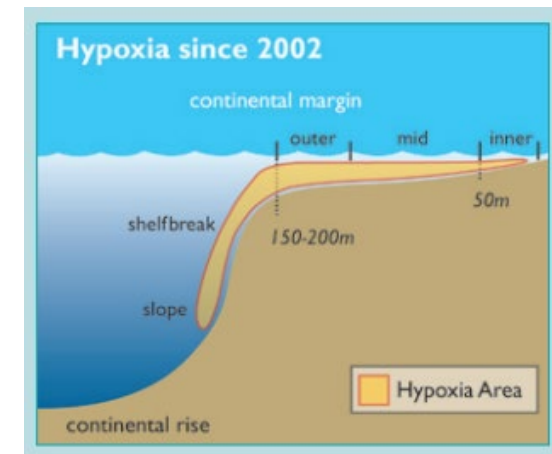
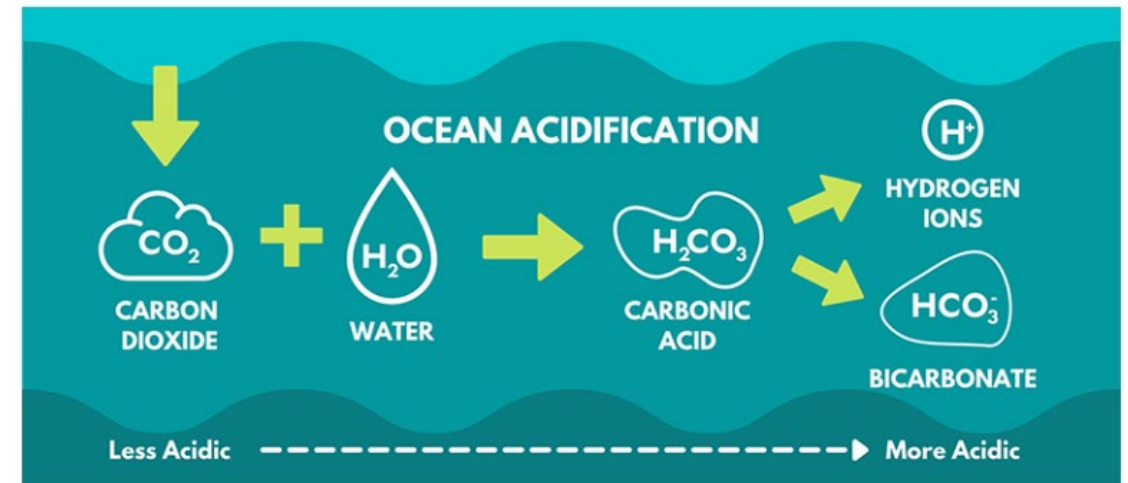
- Request for clarity on proposed 2024 updates
- Support of Aluminum Assessment Methodology
- Data sources
- TMDL priority ranking
- Request for reporting updates

DEQ's response

- Update the methodology document in response to questions and requests for additional clarity on proposed updates
- Continue to monitor and assess bioavailable aluminum
- Make requested updates to reporting tools

Background of OAH assessment in Oregon

- Emerging issues in Oregon's territorial sea
- DEQ has received comments and data since 2010
- 2020 – Identified marine waters as potential concern for OAH
 - No assessment methodology
 - Committed to forming a technical workgroup
- Oregon is the first state to address this in the IR process



DEQ Scientific/Technical Workgroup

2022 – DEQ formed a Technical Workgroup – 40+ participants

State Agencies	Federal Agencies	Academic & Research
Oregon Department of Environmental Quality	Environmental Protection Agency	Oregon State University
Oregon Department of Fish and Wildlife	National Oceanic and Atmospheric Administration	University of Washington - NANOOS
Oregon Dept. of Land Conservation and Development		University of Connecticut
Southern California Coastal Water Research Project		Monterey Bay Aquarium Research Institute
California State Water Board		Oregon Sea Grant
Washington Department of Ecology		
Alaska Department of Environmental Conservation		

Scope of work



Our goal: develop assessment methodologies to interpret existing narrative Water Quality Standards

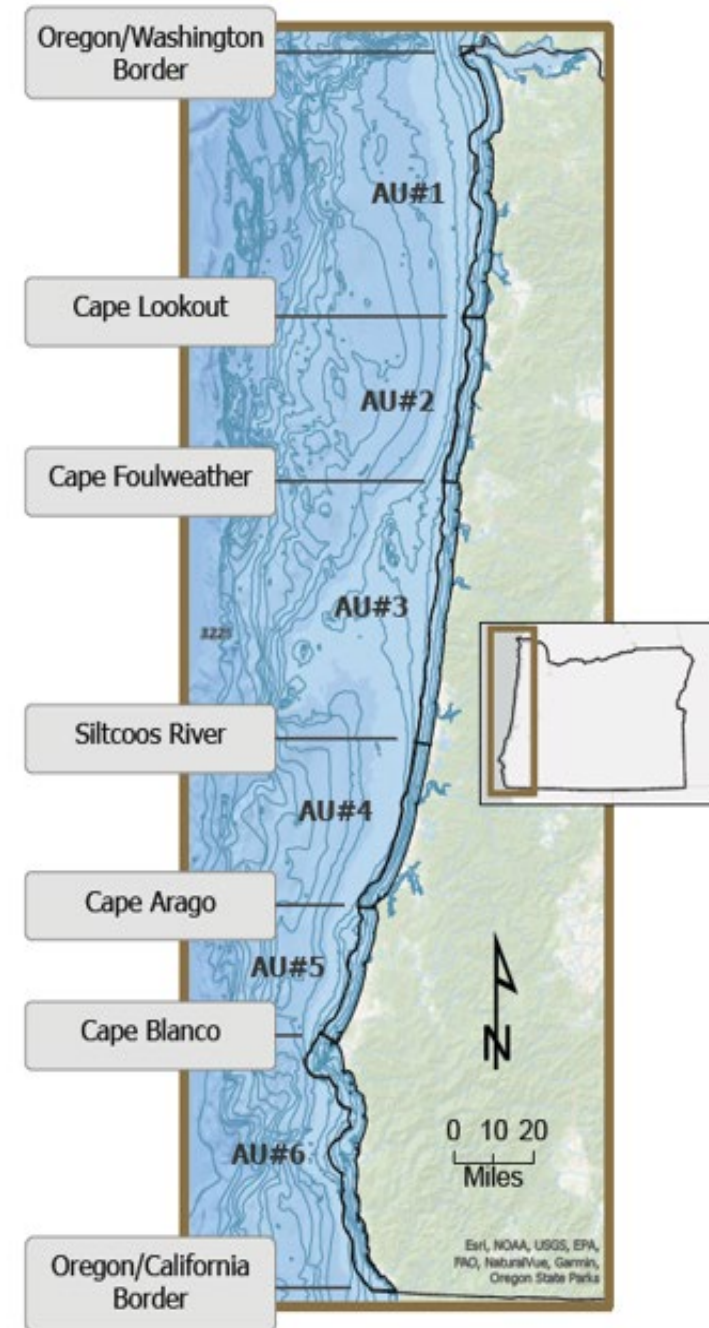
- Assess aquatic life beneficial use support within state waters (0-3 nautical miles)

Technical Workgroup assistance:

- Use multiple lines of evidence to determine impairment
- Identify suitable indicators of biological impact
- Recommend ecologically relevant assessment benchmarks
- Identify approaches to incorporate natural background condition

Technical Workgroup Outcomes

- Updated marine assessment units
- Hybrid Assessment Framework
 - Used to interpret narrative water quality standards
- Advised on development of draft assessment documents
- Provided scientific review
 1. Draft Methodologies
 2. Technical support document



Ocean Acidification Methodology

- Uses the Narrative Biocriteria Water Quality Standard
 - Beneficial use = Fish and Aquatic Life
- Multiple lines of evidence approach
 - biological indicator = shell dissolution
 - chemical indicator = carbonate chemistry
- Natural background condition
 - pre-industrial estimations of carbonate chemistry



David Liittschwager and National Geographic Images.

Hypoxia Methodology

- Hypoxia = low oxygen conditions
 - Impacts to marine environment
 - Crab die offs
- Uses the narrative marine Dissolved Oxygen Water Quality Standard
 - Beneficial use = Fish and Aquatic Life
- Multiple lines of evidence for impairment
 - Measurable reduction (changes over decades) &
 - Amount of time below the hypoxia benchmark

Dead zone off Central Oregon Coast is one of the worst in a decade

It stretches from Newport to Florence.



Author: Keely Chalmers (KGW)
Published: 10/11/2017 10:52:23 AM
Updated: 10:52 AM PDT October 11, 2017



<https://www.kgw.com/article/news/local/central-coast/dead-zone-off-central-oregon-coast-is-one-of-the-worst-in-a-decade/283-482392480>

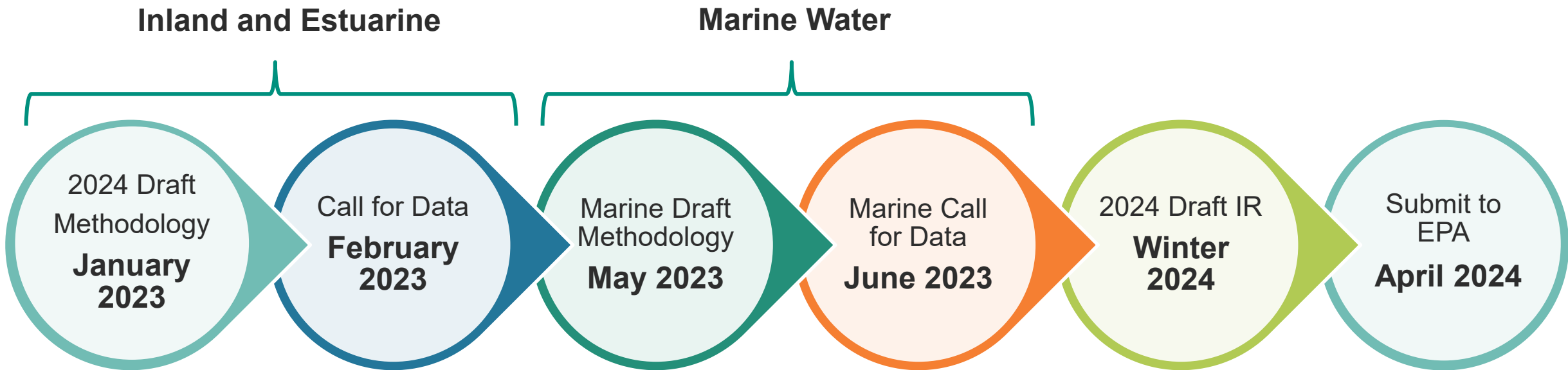


Marine Waters - Public engagement

Draft Assessment Methodology

- Information webinar on 2024 updates
 - Technical support documents
 - Informal input and comments
- 45-day public comment
 - DEQ received one comment letter expressing concern over the lack of an assessment benchmark to identify waterbodies that are attaining
 - DEQ provided response to address concern based on using the best available data
- EQC update
 - Public comment period following

2024 Integrated Report Schedule



Questions

- Program Contacts
 - Connie Dou - Water Quality Standards, Source Water Protection and Assessment Manager
 - Lesley Merrick – Water Quality Assessment Program Lead
 - Travis Pritchard - Water Quality Assessment Analyst



<https://www.oregon.gov/deq/wq/Pages/WQ-Assessment.aspx>