

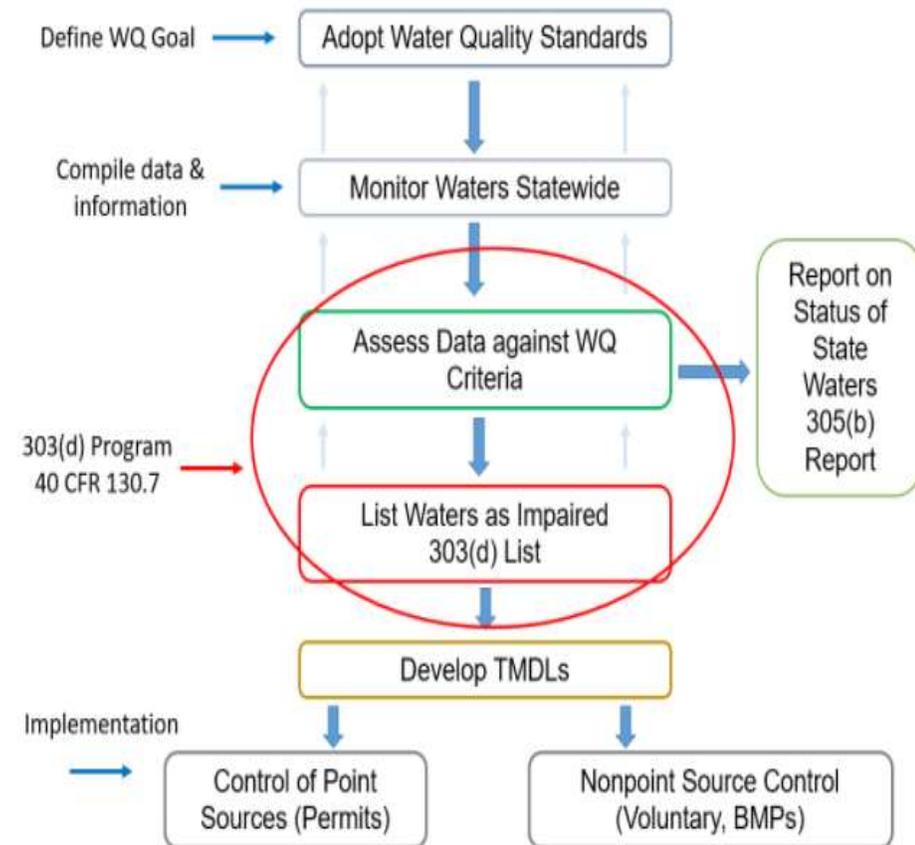
# Oregon's 2022 Integrated Report

## **Environmental Quality Commission meeting**

Item J: Informational  
May 20, 2022

# What is the Integrated Report?

- Clean Water Act requirement
  - 305(b) – status assessment
  - 303(d) – list of impaired waters
- Required every two years
- Submitted to EPA for final approval



# 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

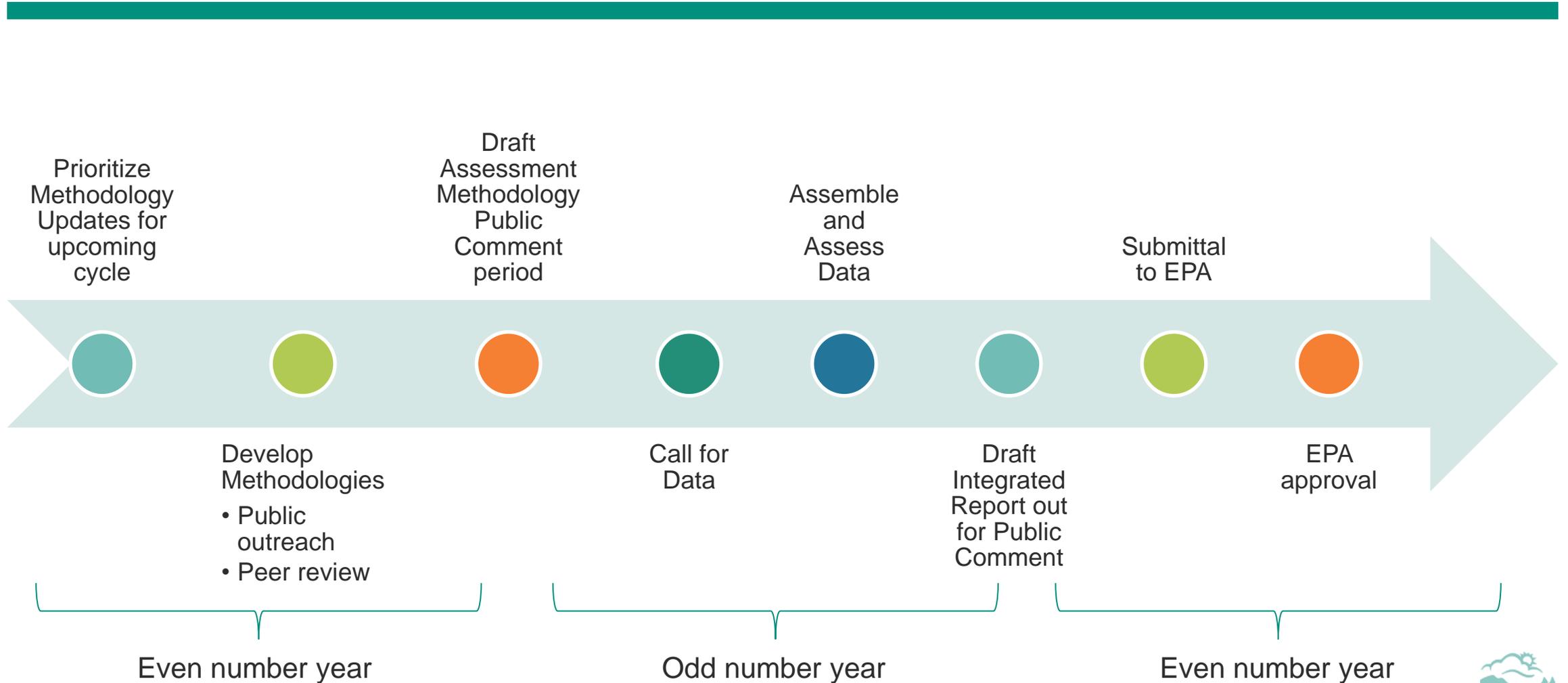


## Federal Requirements for Integrated Report

- 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

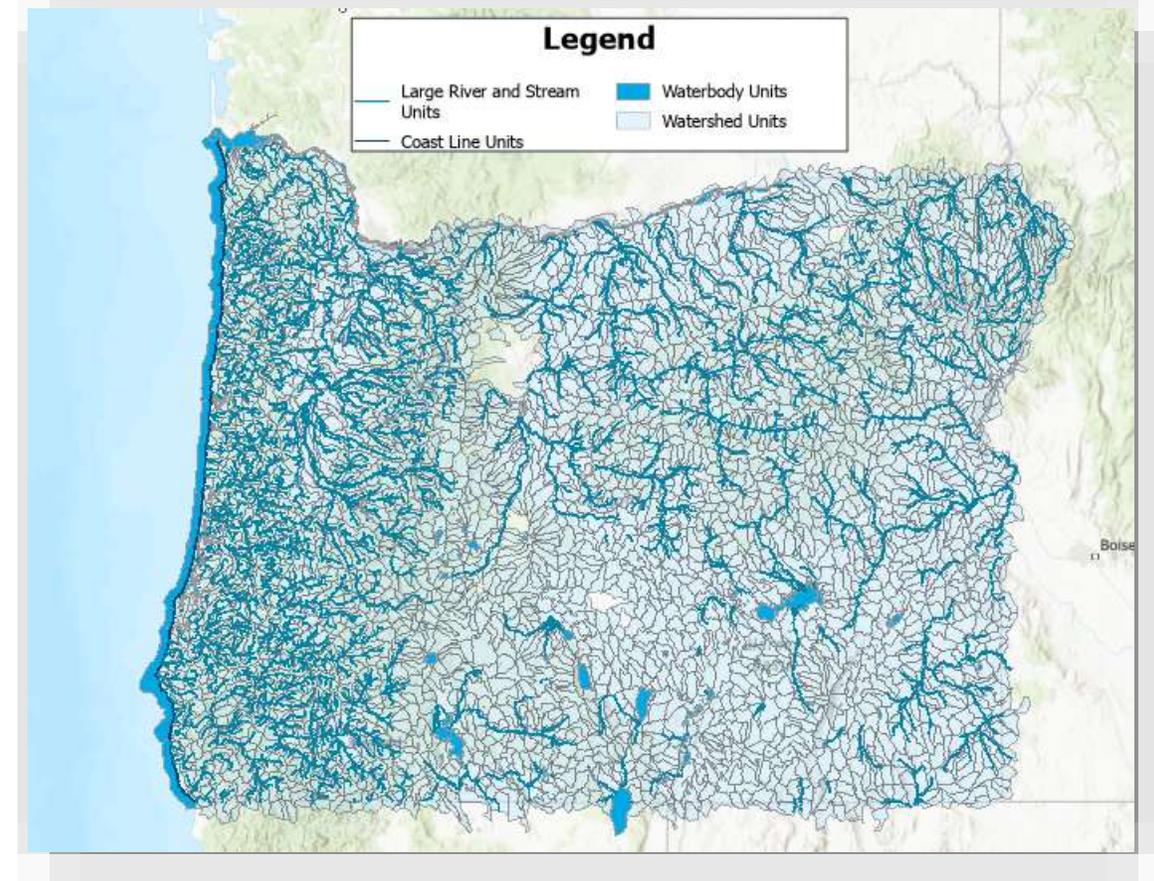


# Oregon's Integrated Report Timeline



# Oregon's Assessment Units

- River and Stream - Medium to large streams ( $\geq 5^{\text{th}}$  Order)
  - Average size 8 miles
- Watershed - Small, typically headwater streams ( $\leq 4$  Order)
  - HUC-12 (Sub-watershed)
  - Average size 20 miles
- Waterbodies
  - Lakes, reservoirs and estuaries
- Coastline
- Oregon territorial marine waters



# 2018/2020 IR Foundational Improvements

- Modernized Infrastructure
  - Data management
  - Data processing
- Improved Process
  - Efficiency, sustainability and consistency
  - Improved Call for Data process to expanded ability incorporate 3<sup>rd</sup> party data
  - On time reporting to EPA
- Increased Transparency
  - Including access to data



# 2022 IR Methodology Updates

- Increased use of continuous data
  - Marine waters
  - Temperature, dissolved oxygen and pH
- Clarity of assessment conclusions at local scale
- Ability to track changes assessment status over time
- Ongoing improvements to data access and display



# 2022 IR Public Engagement

- Draft Assessment Methodology
  - Three webinars during development of methodologies
  - Informal input and comments
  - 45-day public comment period
- 60-day Call for Data
- Webinar for draft report release
- Public comment period for draft report Jan. 12 – Feb. 11, 2022
- Submittal to EPA May 2022



# Summary of Comments Received

- 18 individual commenters
- 84 unique comments
- Majority of comments focused on:
  - Assessment methodologies – include assessing ocean acidification and hypoxia
  - Assessment conclusions
  - Underlying data
  - TMDL priority ranking
  - Visual representation of impairment – support and confusion
  - Alternative ways to evaluate beneficial use support



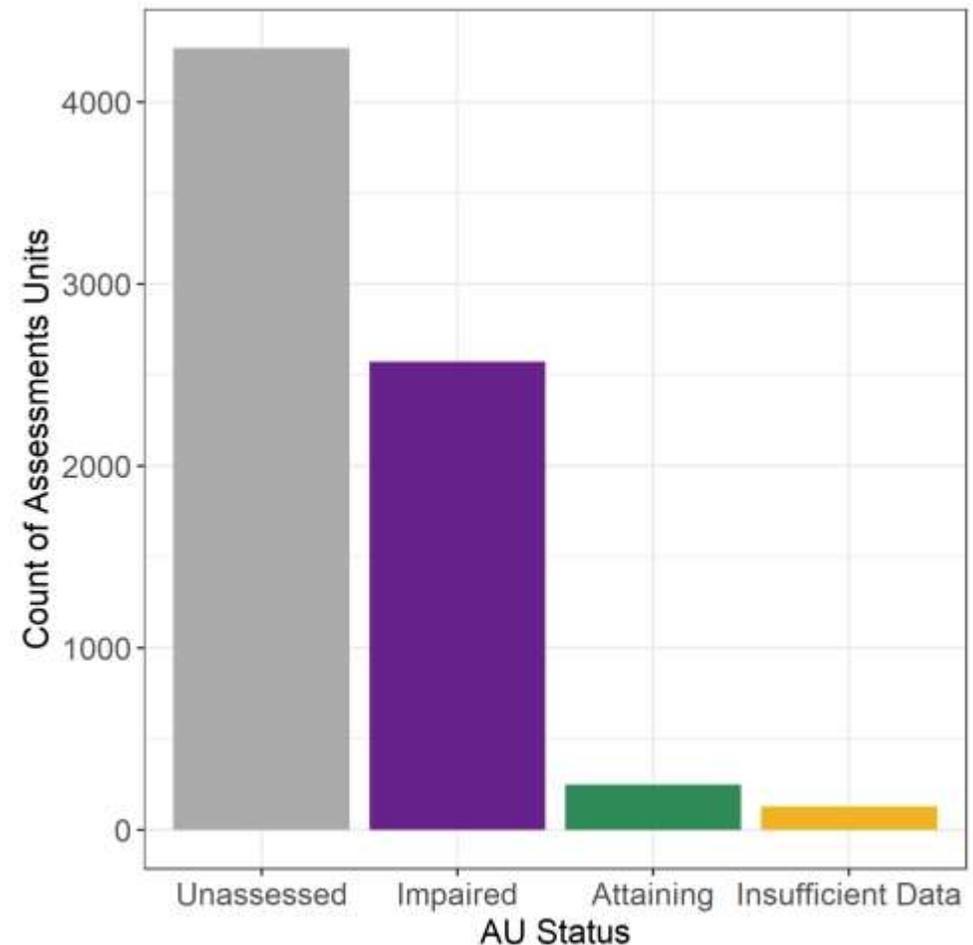
# 2022 IR Data Analyzed

- 3,280 unique monitoring locations statewide
- 7.6 million numeric results
- 101 organizations
  - 14 submitted data (grab, continuous, and biological) through the Call For Data process.

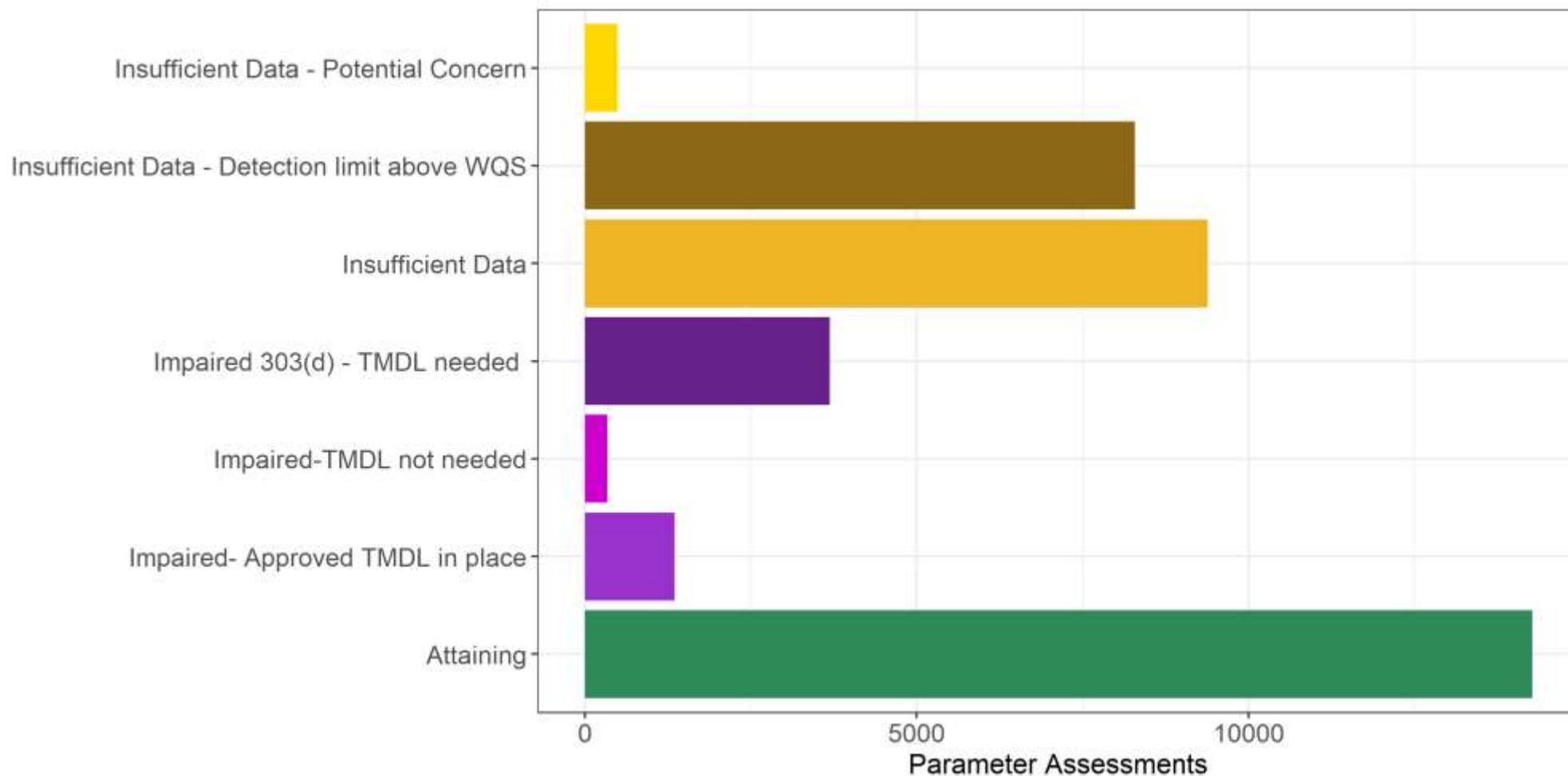


# Summary of Findings – High Level Overview

- Statewide, DEQ has assessed 41% of all assessment units
- Of those assessed units 87% are impaired for one or more pollutants
- EPA’s approach: all individual parameter assessment conclusions are rolled up to overall assessment unit status



# Parameter Assessment Status



# Impaired Waters - Category 5 (303(d))

## Leading causes of impairment

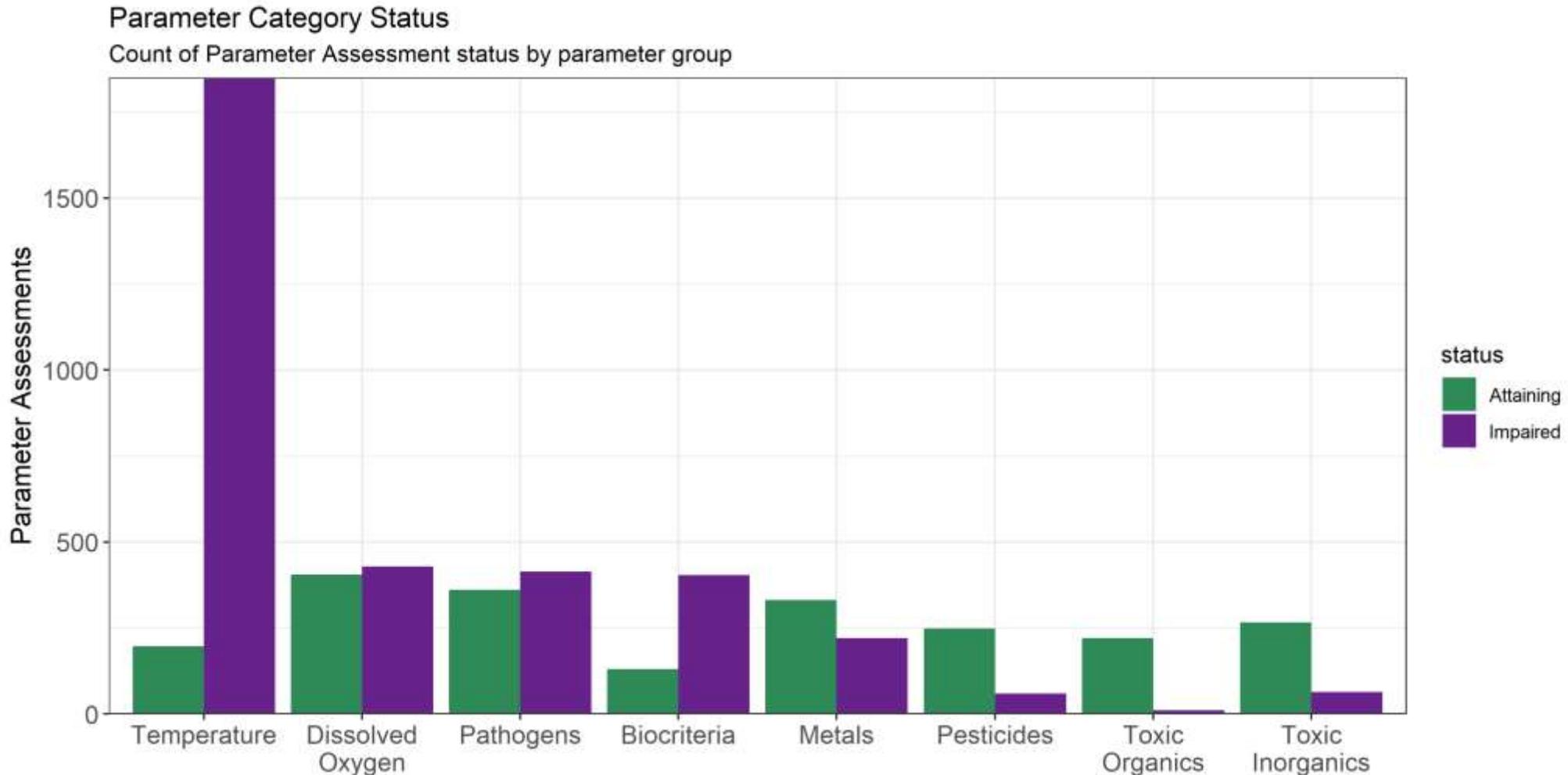
1. Temperature
2. Dissolved oxygen
3. Biocriteria
4. E. coli
5. Sedimentation



[https://www.dfw.state.or.us/fish/local\\_fisheries/rogue\\_river/updates/2017/09/index.asp](https://www.dfw.state.or.us/fish/local_fisheries/rogue_river/updates/2017/09/index.asp)



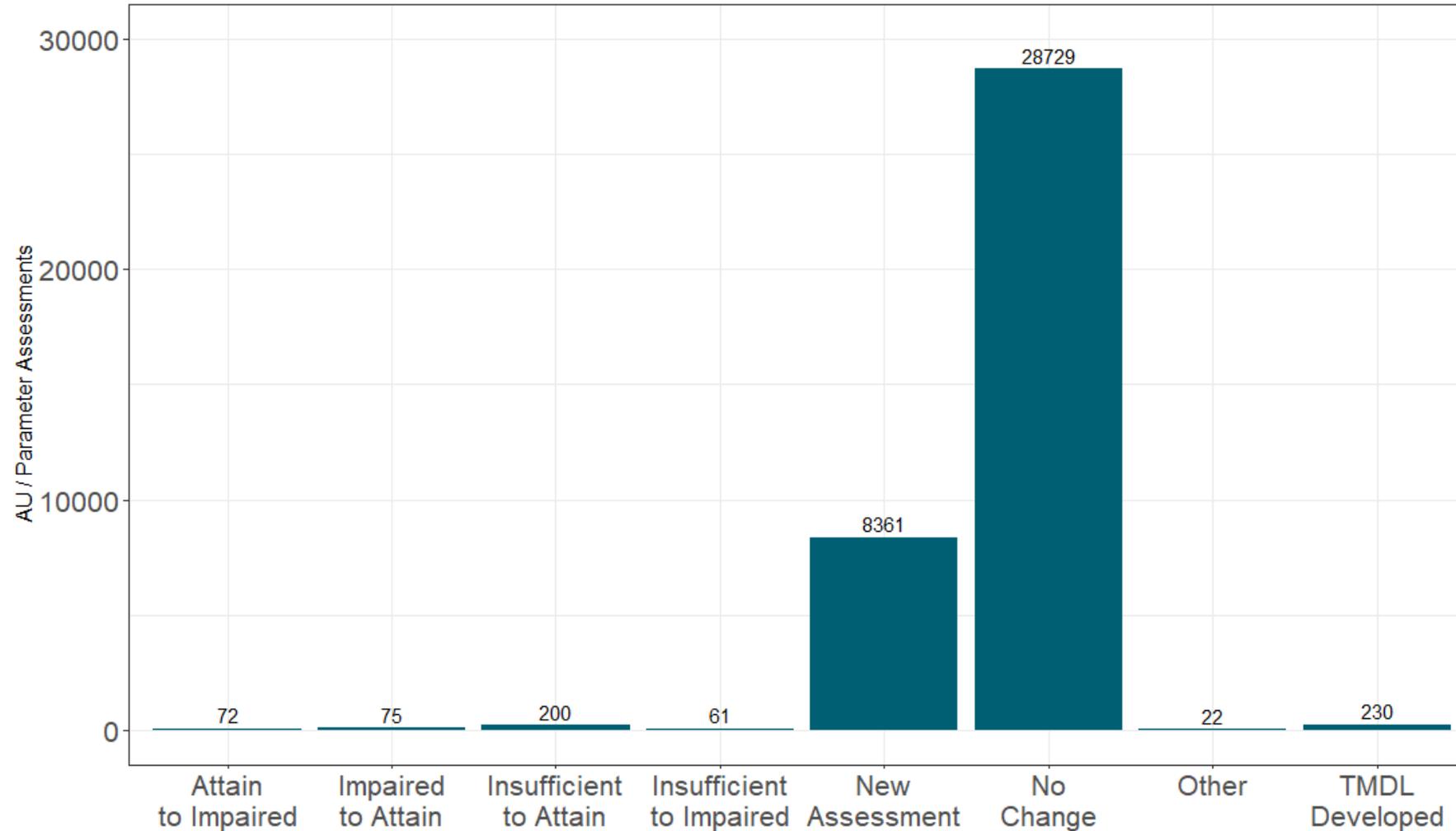
# 2022 Results – Select groups



# Change in Assessment Status

## Status Change

Assessment Unit/ Parameter Assessment Changes from 2018/2020 to 2022



# Statewide Delistings for 2022 IR

Parameter	Number of Assessment Unit/Parameter Delistings
Temperature	28
Bacteria	20
Human Health Toxics	6
pH	5
Chlorophyll	4
Aquatic Life Toxics	4
Biocriteria	2
Dissolved Oxygen	1
Turbidity	1
<b>Total</b>	<b>71</b>



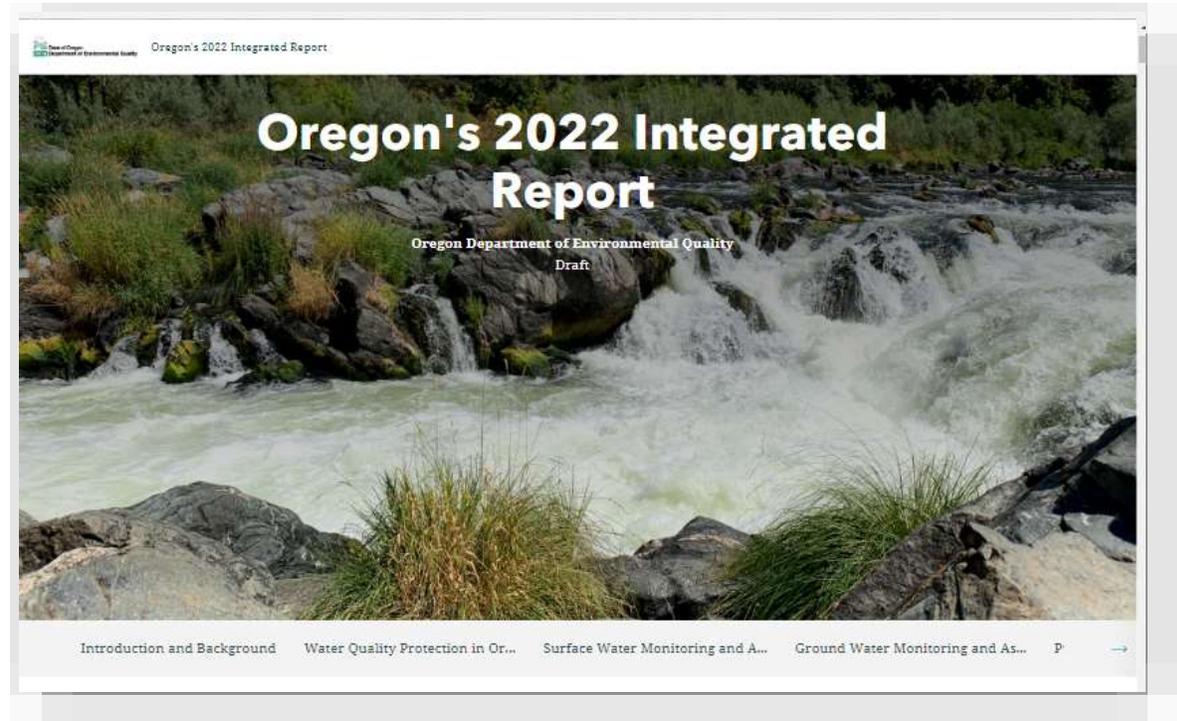
# Reporting Tools

- DEQ's display broken into three components
  - Interactive 305(b) Story map
  - Interactive Web Map
  - Interactive Database
- Report will be uploaded to EPA's ATTAINS database
  - Assessment and TMDL information will be accessible in new federal website How's My Waterway



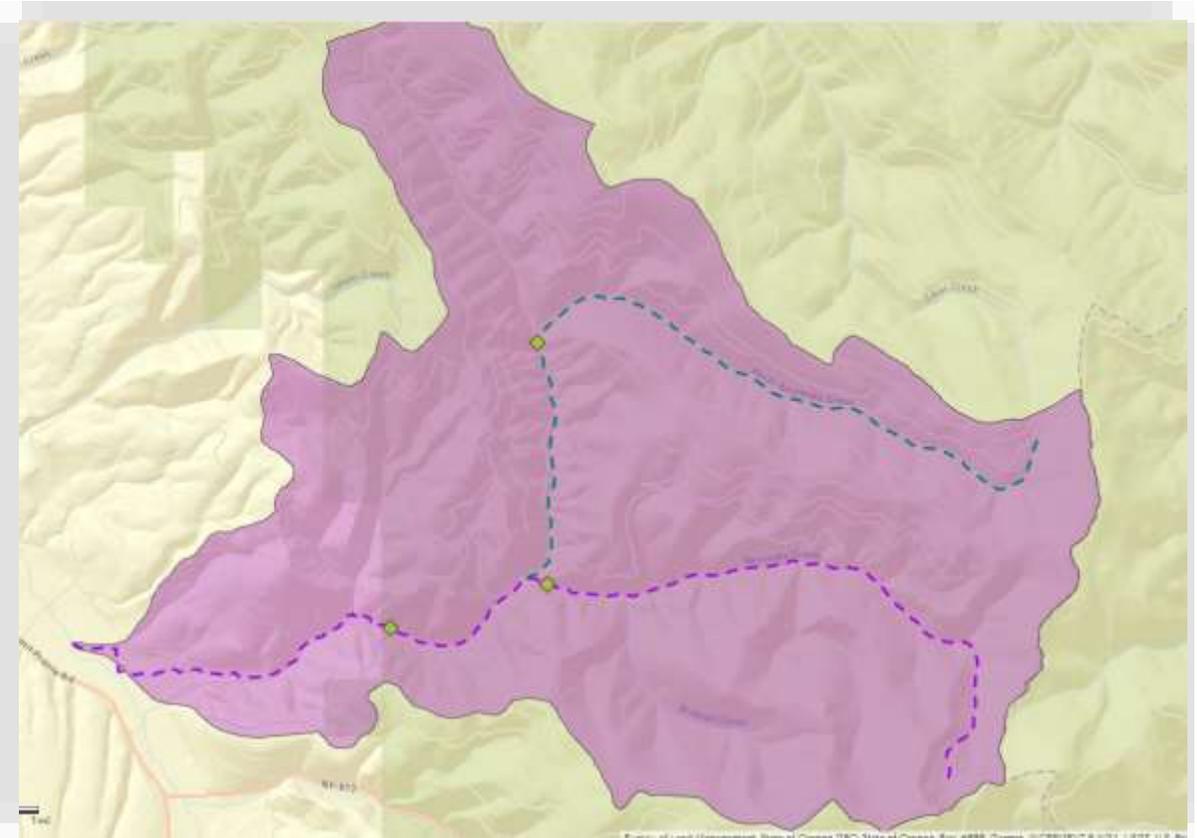
# 305(b) Interactive Story Map

- Tells the story of water quality in Oregon
- Links to other water quality assessments
- Displays conclusions by beneficial use



# Interactive Web Map – Spatial Representation

- Display high level overview of results
- Consistent with EPA reporting style
- Includes more details in watershed units by displaying conclusions at both the stream and watershed unit scales



# Online database – Deep Dive

- Download conclusions and raw data
- Provides the results of individual parameter assessment conclusions
- Includes detailed rationales explaining assessment conclusions

Pollutant	period	DO_Class	stations	Parameter_category	Rationale
pH			10508-ORDEQ; 35896-ORDEQ; 10509-ORDEQ; 10510-ORDEQ; 35893-ORDEQ; DR 163.25; DR 160.00; DR 160.25; DR 164.75	2	Attaining: 82 daily time series measurements fall outside range of criteria (82 above criteria, 0 below criteria) 876 total days of continuous data. 4 grab samples fall outside criteria range (4 above criteria, 0 below criteria). 43 total grab samples.



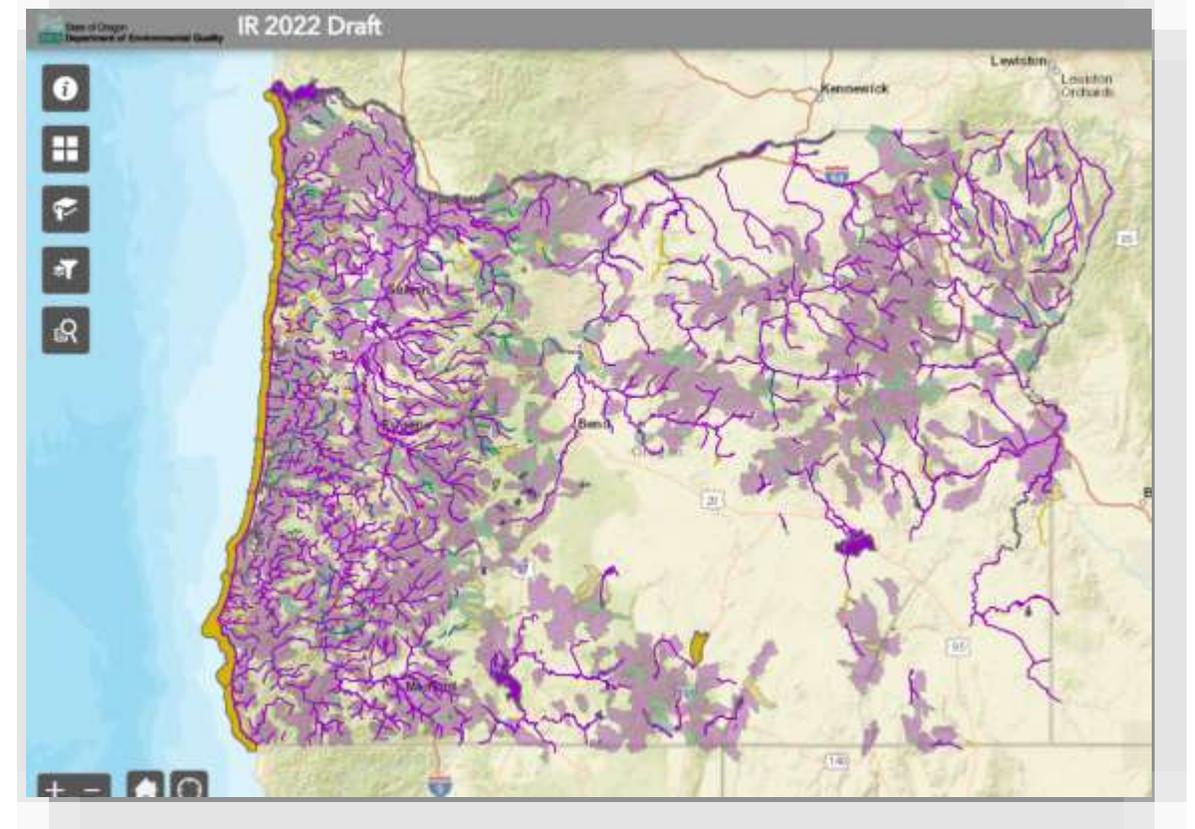
# Oregon's Approach - Strengths

- Water Quality Standards
  - Designated uses broadly applied
  - Protective of all life stages
- Assessment Methodology
  - Use of continuous data
  - Data assembly – lots of data!
  - Robust methodologies
  - Inclusive assessment units



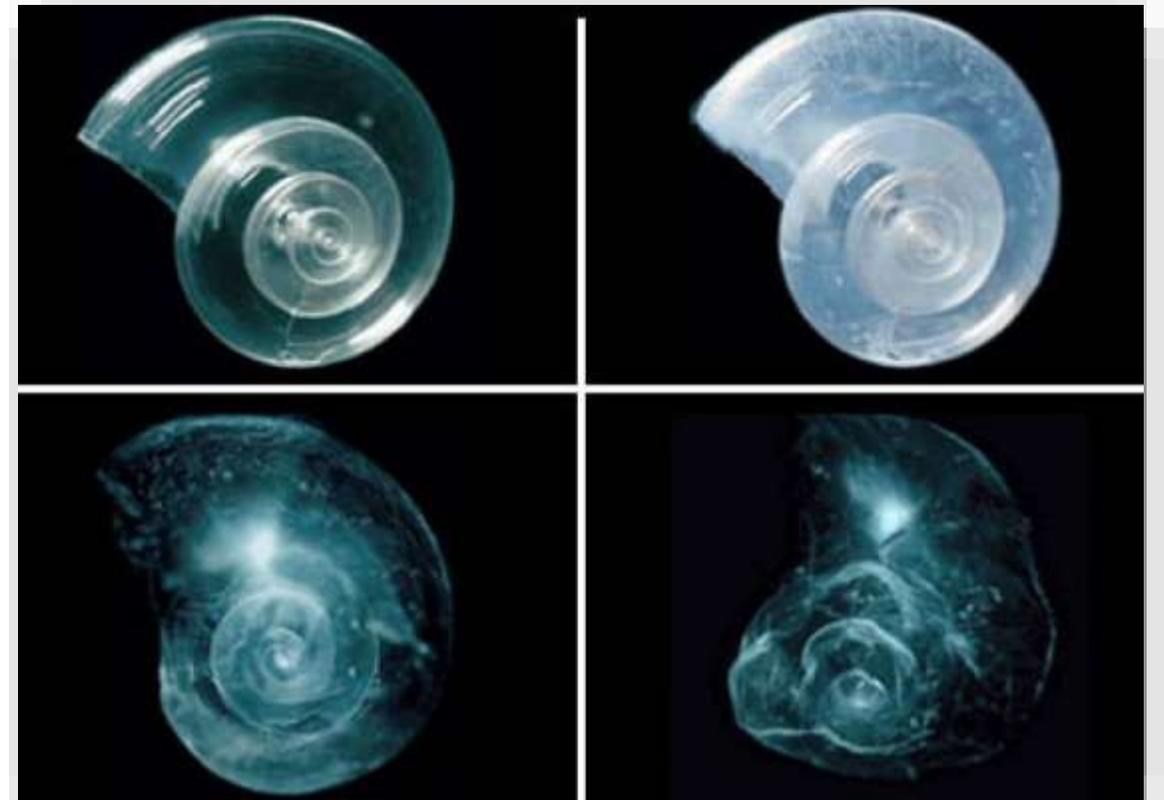
# Oregon's Approach - Challenges

- Communication – looking beyond purple
- Integrated Reports are not directly comparable among states and tribes
  - Different water quality standards
  - Different methodologies
  - Different scales for reporting (assessment units)



# Ocean Acidification and Hypoxia

- Complex topic outside of traditional freshwater focus of the Integrated Report
- DEQ formed a technical workgroup
  - Develop assessment methodology
  - Requires peer review
- Ready for next reporting cycle



David Liittschwager and National Geographic Images.

# Next Steps

- Awaiting EPA approval for the 2022 Integrated Report
- Identify and prioritize updates to 2024 assessment methodology
- Continue to work with Ocean Acidification and Hypoxia (OAH) Technical Work Group
- Continued efforts to provide clarity to report tools



# Questions

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



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

