

May 2022

# 2022 Water Quality Report and List of Water Quality Limited Waters

Response to Public Comments on Draft Report



This document was prepared by  
The Oregon Department of Environmental Quality  
Program Name  
700 NE Multnomah Street, Portland Oregon, 97232  
Contact: Lesley Merrick  
Phone: 971-323-7228  
[www.oregon.gov/deq](http://www.oregon.gov/deq)



DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email [deqinfo@deq.oregon.gov](mailto:deqinfo@deq.oregon.gov).

# Table of Contents

- 1. Comments from: EPA..... 5
- 2. Comments from: Save Our Siletz River ..... 16
- 3. Comments from: Farmers Irrigation District..... 16
- 4. Comments from: Deschutes River Alliance ..... 19
- 5. Comments from: Clean Water Service ..... 21
- 6. Comments from: Oregon Farm Bureau & Oregon Forest & Industries Council .... 31
- 7. Comments from: David Waltz..... 37
- 8. Comments from: Oregon Coordinating Council on Ocean Acidification and Hypoxia ..... 42
- 9. Comments from: Oregon Department of Fish and Wildlife ..... 46
- 10. Comments from: Willamette Riverkeeper ..... 50
- 11. Comments from: Clackamas Water Environment Services ..... 51
- 12. Comments from: Bureau of Land Management..... 54
- 13. Comments from: Forest Waters Coalition..... 55
- 14. Comments from: Northwest Environmental Advocates ..... 59
- 15. Comments from: Raymond Kinney..... 68
- 16. Comments from: Klamath Irrigation District ..... 70
- 17. Comments from: East Fork Irrigation District..... 70
- 18. Comments from: United State Forest Service, Pacific Northwest Region ..... 73

# Introduction

This Response to Public Comments document addresses comments and questions received regarding the Draft 2022 Water Quality Report and List of Water Quality Limited Waters (2022 Integrated Report). The individuals and organizations shown in Table 1 provided comments on the 2022 Integrated Report during the Public Comment period, which was held from January 12, 2022, through February 11, 2022. All comments received during the public comment period have been reviewed by DEQ and addressed in this document. Comments which required modifications to the report are noted and the 2022 Integrated Report is updated accordingly. In total there were 84 unique comments from 18 entities. DEQ made modifications to the report based on 30 of the comments. The full text of submitted comments can be found at <https://www.oregon.gov/deq/wq/Pages/proposedIR.aspx> "IR 2022 Public Comments".

**Table 1: Commenter on the Draft 2022 Water Quality Report and List of Water Quality Limited Waters**

Commenter #	Commenter	Acronym
1	Environmental Protection Agency	EPA
2	Save Our Siletz River	SOSR
3	Farmers Irrigation District	FID
4	Deschutes River Alliance	DRA
5	Clean Water Service	CWS
6	Oregon Farm Bureau & Oregon Forest Industries Council	OFB & OFIC
7	David Waltz	DW
8	Oregon Coordinating Council on Ocean Acidification and Hypoxia	OCCOAH
9	Oregon Department of Fish and Wildlife	ODFW
10	Willamette Riverkeeper	WR
11	Clackamas Water Environment Service	CWES
12	Bureau of Land Management	BLM
13	Forest Waters Coalition	FWC
14	Northwest Environmental Advocates	NWEA
15	Raymond Kinney	RK
16	Klamath Irrigation District	KID
17	East Fork Irrigation District	EFID
18	United States Forest Service, Pacific Northwest Region	USFSPNR

# 1. Comments from: EPA

## **EPA#1: Suggested Change ID #1**

**Description:** Assessment conclusion- OR\_WS\_170601060206\_02\_103525 delisting

**Comment:** OR\_WS\_170601060206\_02\_103525 is proposed for delisting for temperature. The rationale for delisting indicates that there is one valid excursion of the applicable criteria, but also states there are no 7DADM excursions. ODEQ's temperature methodology describes a "Category 3B: insufficient data; potential concern" determination as resulting, "when temperature data are collected and show at least one instance of the seven-day average daily maximum temperature exceeding the criteria within a three-year period, but data are insufficient to place in Category 5." Please clarify if there is in fact one excursion that would warrant a Category 3B determination, or whether there are no 7DADM excursions and the proposed Category 2 placement is correct.

**Response:** The delisting for OR\_WS\_170601060206\_02\_103525 is a mistake. The one valid excursion at WWNF-022 warrants a 3B designation, rendering the assessment unit ineligible for a temperature delisting. OR\_WS\_170601060206\_02\_103525 has been removed from the delisting list and returned to category 5.

---

## **EPA#2: Suggested Change ID #2**

**Description:** TMDL- OR\_LK\_1707010501\_88\_100139 Temperature

**Comment:** OR\_LK\_1707010501\_88\_100139 is proposed for delisting and placement in Category 4a under the approved Columbia and Lower Snake Rivers Temperature TMDL. The TMDL has been entered as final and approved in ATTAINS, but this AU was not associated with the TMDL. However, a similar AU, OR\_LK\_1707010504\_88\_100139, was associated with this TMDL in ATTAINS but does not appear in ODEQ's database in any category. Please confirm which AU is correct or if they are both correct but have been omitted from either ATTAINS or ODEQ's database.

**Response:** OR\_LK\_1707010501\_88\_100139 is the correct AU for this section of the Columbia River and should be placed in Category 4a for temperature. OR\_LK\_1707010504\_88\_100139 is not an AU ID in Oregon. DEQ requests EPA remove this AU from ATTAINS and add OR\_LK\_1707010501\_88\_100139 under the Columbia and Lower Snake Rivers Temperature TMDL.

---

**EPA#3: Suggested Change ID #3**

**Description:** Assessment conclusion- delist crosswalk errors

**Comment:** Sixty-four AUs are proposed for delisting due to crosswalk errors in the original listing. The listings have been corrected and those AUs listed in error are now marked as “unassessed” and the data incorrectly associated with them has been moved to the appropriate AUs. Please confirm that there are no remaining data that were collected within these sixty-four AUs that would warrant placement in Category 3, rather than a status of “unassessed.”

**Response:** Of the 64 Assessment Units (AUs) proposed for delisting, all but two had no remaining data collected that would warrant placement.

1. OR\_WS\_170900060802\_02\_104396 Year-Round Temperature had additional data that indicated a status of Category 5 and was mistakenly included in the delisting list. The category 5 status was accurately reflected in the web map and online database.
  2. OR\_WS\_171002040707\_02\_106179 Spawning Temperature had additional data that indicates a category 3 placement. The delisting file has been updated to reflect that new final status.
- 

**EPA#4: Suggested Change ID #4**

**Description:** Process - Communications of 4a designations

**Comment:** EPA’s review of the proposed Category 4a AUs is on-going. Comments on the proposed 4a AUs will be transmitted under separate cover as soon as possible, but no later than one week from today’s date. Due to the volume of proposed delistings to Category 4a and the depth of review that is required to confirm inclusion under older TMDL approvals, please consider providing these to EPA during the pre-public draft review period during future listing cycles

**Response:** DEQ will work with EPA on providing a pre-public draft review for future listing cycles.

---

**EPA#5: Suggested Change ID #5**

**Description:** Methodology- temperature delisting methodology

**Comment:** ODEQ’s temperature methodology details the following requirements for category placement:

Category 5: water quality limited, TMDL needed (303(d) list: “When continuous temperature data are collected, any two instances of the seven-day-average daily maximum temperature exceed the applicable criteria within a three-year period.” (emphasis added)

Category 3B: insufficient data; potential concern: “When temperature data are collected and show at least one instance of the seven-day-average daily maximum temperature exceeding the criteria within a three-year period, but data are insufficient to place in Category 5.” (emphasis added)

Category 2: attaining: “When continuous temperature data are collected, no seven-day-average of the daily maximum temperature exceed the applicable criterion. Data represent the duration of the critical warm period or an applicable spawning period. Attainment of the year-round criteria and the spawning criteria shall be listed separately within a waterbody.”

EPA notes the inconsistency with the language of the methodology in that both the Category 5 and 3B methodologies contain the “three-year period” language, whereas the Category 2 language does not. Please consider revising the listing methodology prior to application in the 2024 assessment so that the data period required for delisting is equivalent to the requirement to demonstrate non-attainment or placement in Category 3B.

**Response:** Thank you for bringing this to our attention. DEQ will consider revising the methodology language in future Integrated Report cycles.

---

#### **EPA#6: Suggested Change ID #6**

**Description:** Display- Previous category in database

**Comment:** Please consider adding a field in the on-line database for “status or category during the last listing cycle.” This would add transparency and make it easier for the public to see the changes, if any, to the waters they are interested in when viewing the database.

**Response:** Thank you for the suggestion. DEQ will consider adding that field to the on-line database.

---

#### **EPA#7: Suggested Change ID #7**

**Description:** Display- TMDL name in database

**Comment:** Please consider adding a field in the on-line database with the name of the TMDL or other action for those waters in Category 4a and 4b so the public can easily associate a water they are interested in with the appropriate approved plan.

**Response:** Thank you for this suggestion. DEQ agrees the utility of adding the Total Maximum Daily Load (TMDL) or other action name to the online database and is working in conjunction with EPA to finalize a data layer that more accurately link TMDLs and other actions to assessment units. We will update the online database and web map once that product is finalized.

---

**EPA#8: Suggested Change ID #66**

**Description:** John Day Basin TMDL biological criteria Cat 4a/5 listings

**Comment:** DEQ proposed delisting the following AUs into Category 4a for biological criteria based on the John Day Basin TMDL: OR\_WS\_170702010103\_05\_102017 - HUC12 Name: Corral Creek OR\_WS\_170702010104\_05\_102018 - HUC12 Name: Utley Creek OR\_WS\_170702020907\_05\_102144 - HUC12 Name: Lower Cottonwood Creek

Proposed AU update is considerably larger than AU identified in original TMDL (Fig 1.2-6) and EPA approval letter. TMDL also states that “Future (biocriteria) listings will not be addressed vis this TMDL without further evaluation.” (Section 2.4.1).

**Response:** The John Day Basin TMDL (action ID 39753) addressed 5 listings for biological criteria (Table 1.2.6, page 17):

- Corral Creek (record ID 1530)
- Utley Creek (record ID 1531)
- East Fork Cottonwood Creek (record ID 1532)
- Cottonwood Creek (record ID 1533)
- Pine Creek (record ID 1534)

The Total Maximum Daily Load (TMDL) identified the pollutant cause for these listings as temperature in addition to habitat degradation which is addressed by implementing the temperature TMDL (page 128).

The John Day Basin temperature TMDL applies to all streams in the Basin, year-round (section 2.1.1, page 58). Even though the newer assessment units listed in Table 1 are larger compared to the original segments, any temperature and habitat degradation present in the enlarged assessment unit is still addressed by the temperature TMDL. In addition, DEQ has not determined there to be a biological criteria impairment in other parts of these assessment units. All available data that DEQ has assessed were collected before the TMDL was issued and are within the extent of the older listing segments.

These five waterbodies were first listed on DEQ’s 1998 303(d) list based on data collected in the 1990s. In 2010 EPA added Pine Creek back to the category 5 list for the exact same extent (river mile 0 – 15.8) based on a sample collected in 2001. In 2018 DEQ mistakenly relisted the



other four waterbodies into category 5 based on the older assessment conclusions. No new data were assessed on these Assessment Units (AUs) for the 2018 or 2022 integrated reports.

The statement in the John Day TMDL in section 2.4.1 (page 130) stating “Future listings will not be addressed via this TMDL without further evaluation” was intended to mean that the TMDL would not apply to future biological criteria listings on other waterbodies in the John Day Basin. The reason for this statement was because DEQ believes that for other waterbodies found to have biological criteria impairments there would need to be a stressor assessment to determine the pollutant and then a new TMDL developed if the existing TMDL did not already address that pollutant. We did not intend for this statement to apply to the same waterbody that has already been evaluated and addressed by the John Day Basin TMDL.

Based on the rationale described above, DEQ has determined that the assessment unit for Pine Creek (OR\_SR\_1707020102\_05\_101521) should also be moved from category 5 to category 4a for biological criteria. DEQ missed this one and did not include it on the draft 2022 IR list. In total, DEQ believes the John Day Basin biological criteria TMDL addressed biological criteria listings for the following assessment units listed in the table below.

Record ID	Name	2022 Assessment Unit
1530	Corral Creek	OR_WS_170702010103_05_102017
1531	Utle Creek	OR_WS_170702010104_05_102018
1532	East Fork Cottonwood Creek	OR_SR_1707020209_05_101609; OR_WS_170702020907_05_102144
1533	Cottonwood Creek	OR_SR_1707020209_05_101612
1534	Pine Creek	OR_SR_1707020102_05_101521; OR_SR_1707020404_05_101662; OR_WS_170702040407_05_102210

---

**EPA#9: Suggested Change ID #71**

**Description:** Umpqua Bacteria TMDL E. coli 4a/5 listings

**Comment:** DEQ proposed delisting the following AUs into Category 4a for E. coli based on the Umpqua Basin TMDL: OR\_SR\_1710030110\_02\_105356 - Jim Creek  
 OR\_SR\_1710030111\_02\_105369 - Huntley Creek OR\_SR\_1710030111\_02\_106414 - Sutherlin Creek  
 OR\_SR\_1710030205\_02\_105394 - Canyon Creek OR\_SR\_1710030205\_02\_105397 - Wood Creek  
 OR\_SR\_1710030205\_02\_105398 - Days Creek OR\_SR\_1710030205\_02\_105399 - Days Creek  
 OR\_SR\_1710030210\_02\_105429 - Bilger Creek OR\_SR\_1710030210\_02\_105432 -

South Myrtle Creek OR\_SR\_1710030211\_02\_105087 - Rice Creek  
OR\_SR\_1710030211\_02\_105088 - Clark Branch OR\_SR\_1710030212\_02\_105090 -  
Lookingglass Creek OR\_SR\_1710030212\_02\_105098 - Morgan Creek  
OR\_SR\_1710030213\_02\_105104 - Roberts Creek OR\_SR\_1710030301\_02\_105106 - Cabin  
Creek OR\_SR\_1710030301\_02\_105107 - Williams Creek OR\_SR\_1710030301\_02\_105440 -  
Oldham Creek OR\_SR\_1710030304\_02\_105152 - Sawyer Creek  
OR\_WS\_171003011104\_02\_106426 - HUC12 Name: Sutherlin Creek  
OR\_WS\_171003021001\_02\_105703 - HUC12 Name: Upper South Myrtle Creek  
OR\_WS\_171003021003\_02\_105705 - HUC12 Name: Upper North Myrtle Creek  
OR\_WS\_171003021305\_02\_105321 - HUC12 Name: Newton Creek-South Umpqua River  
OR\_WS\_171003030106\_02\_105275 - HUC12 Name: Williams Creek-Calapooya Creek  
OR\_WS\_171003030201\_02\_105322 - HUC12 Name: Mill Creek-Umpqua River  
OR\_WS\_171003030208\_02\_105318 - HUC12 Name: Mehl Creek-Umpqua River

AU not specifically referenced in TMDL or EPA approval letter by name. Please provide additional information to request AU coverage under approved TMDL.

**Response:** The Umpqua Basin Bacteria Total Maximum Daily Load (TMDL) (Action ID 30358) applies to all the waterbodies included in the Umpqua Basin.

In the TMDL, included in Table 2.1 page 2-1 is the waterbodies element under OAR 340-042-0040(a). OAR 340-042-0040(a) requires the TMDL describe the geographic area for which the TMDL is developed. The TMDL narrative in this table says the bacteria TMDL is developed for “streams providing recreational contact or shellfish harvesting beneficial uses as defined in OAR 340-041-0320(1), Table 320A within the 4th field HUCs (hydrologic unit codes) 17100301, 17100302, and 17100303 (North Umpqua, South Umpqua and mainstem Umpqua Subbasins)”.

The TMDL allocation approach used is a flow duration curve. The flow duration curve approach is described in detail in Appendix 1: Bacteria TMDL Supplemental Information. Using this approach, the loading capacity for any stream is determined as the product of the flow, the water quality standards expressed as concentrations (126 org/mL and 406 org/mL), and a conversion factor (See page 3 Appendix 1). As is the practice with many TMDLs, load duration curves are developed for the waterbodies that were listed and only where flow data is available or can be derived. The TMDL states however that the allocations do apply to all waterbodies within the Umpqua. On page 2-2 the TMDL says “The allocations apply to all anthropogenic sources of bacteria in the Umpqua and South Umpqua Subbasins and will lead to attainment of criteria in all perennial streams”.

In summary, the Umpqua Bacteria TMDL applies to all assessment units within the North Umpqua, South Umpqua, and mainstem Umpqua Subbasins (HUC 17100301, 17100302, and 17100303).

**EPA#10: Suggested Change ID #72**

**Description:** Upper Grande Ronde River Sub-basin TMDL total iron Cat 4a/5 listings

**Comment:** DEQ proposed delisting the following AUs into Category 4a for Iron (total) based on the Upper Grande Ronde River Sub-basin TMDL:

OR\_SR\_1706010403\_02\_103318 - Grande Ronde River OR\_SR\_1706010404\_02\_103553 - Grande Ronde River OR\_SR\_1706010407\_02\_103329 - Grande Ronde River

Not covered by original TMDL or EPA approval letter; no mention of any iron listings in either document. TMDL will need to be updated.

**Response:** These Assessment Units (AUs) were listed as category 4a by mistake. DEQ agrees the total iron listings were not addressed by the Upper Grande Ronde River Sub-basin TMDL (action ID 489) and has moved them into category 5.

---

**EPA#11: Suggested Change ID #73**

**Description:** Upper Grande Ronde River Sub-basin TMDL E. coli Cat 4a/5 listing

**Comment:** DEQ proposed delisting the following AU into Category 4a for E. coli based on the Upper Grande Ronde River Sub-basin TMDL:

OR\_SR\_1706010409\_02\_103336 - Grande Ronde River

EPA approval letter explicitly states no 303(d) action taken on bacteria listings. TMDL needs to be updated.

**Response:** OR\_SR\_1706010409\_02\_103336 was listed as category 4a by mistake. DEQ agrees the E. coli listing was not addressed by the Upper Grande Ronde River Sub-basin TMDL (action ID 489). This listing was moved into category 5.

---

**EPA#12: Suggested Change ID #74**

**Description:** Upper Grande Ronde River Sub-basin TMDL Biological Criteria Cat 4a/5 listings

**Comment:** DEQ proposed delisting the following AUs into Category 4a for biological criteria based on the Upper Grande Ronde River Sub-basin TMDL:

OR\_SR\_1706010401\_02\_103311 - Limber Jim Creek OR\_SR\_1706010402\_02\_103312 - McCoy Creek OR\_SR\_1706010402\_02\_103313 - Meadow Creek

EPA approval letter explicitly states no 303(d) action taken on habitat (i.e., Biocriteria) listings. TMDL needs to be updated.

**Response:** These Assessment Units (AUs) were listed as category 4a by mistake. DEQ agrees the biological criteria listings were not addressed by the Upper Grande Ronde River Sub-basin TMDL (action ID 489) and has moved them into category 5.

---

**EPA#13: Suggested Change ID #75**

**Description:** North Coast Subbasins TMDL shellfish toxins 4a/5 listings

**Comment:** DEQ proposed delisting the following AUs into Category 4a for shellfish toxins based on the North Coast Subbasins TMDL:

- OR\_CL\_1710020102\_106224 - Ecola State Park
- OR\_CL\_1710020102\_106225 - Cannon Beach
- OR\_CL\_1710020102\_106226 - Del Rey Beach State Recreation Site
- OR\_CL\_1710020102\_106227 - Tolovana State Park Beach
- OR\_CL\_1710020102\_106228 - Arcadia State Park Beach
- OR\_CL\_1710020102\_106229 - Cape Falcon Shoreside Marine Protected Area
- OR\_CL\_1710020102\_106230 - Devils Cauldron
- OR\_CL\_1710020102\_106231 - Manzanita Beach
- OR\_CL\_1710020102\_106232 - Nehalem Bay State Park Beach
- OR\_CL\_1710020102\_106267 - Fort Stevens State Park Beach
- OR\_CL\_1710020102\_106268 - Sunset Beach
- OR\_CL\_1710020102\_106275 - Seaside Beach
- OR\_CL\_1710020102\_106276 - Indian Beach at Ecola State Park
- OR\_CL\_1710020102\_106277 - Oswald West State Park
- OR\_CL\_1710020102\_106278 - Hug Point State Park Beach
- OR\_CL\_1710020102\_106279 - Short Sand Beach

Shellfish toxins are not mentioned in the TMDL or approval letter. Please provide additional information documenting how that pollutant is addressed in the approved TMDL.

**Response:** These Assessment Units (AUs) were listed as category 4a by mistake for this assessment cycle. DEQ is working with EPA reconcile Total Maximum Daily Load (TMDL) applicable to the new assessment unit framework and may be able to provide additional for delisting in the next assessment cycle.

---

**EPA#14: Suggested Change ID #76**

**Description:** Spencer Creek dissolved oxygen 4a/5 listings

**Comment:** DEQ proposed delisting the following AU into Category 4a for dissolved oxygen for both spawning and year-round periods (2 listings) based on the Willamette Basin TMDL:

OR\_SR\_1709000301\_02\_103801 - Spencer Creek

Page 10-162 states necessary reductions despite AU not being listed at the time the TMDL was written. Additional information needed to request coverage under approved TMDL.

**Response:** DEQ agrees the listings were not fully addressed by the Willamette Basin Total Maximum Daily Load (TMDL). DEQ has moved these listings into category 5. Below is a summary of DEQ's findings after review of the TMDL.

Spencer Creek, tributary to Coyote Creek, is in the Upper Willamette subbasin and is listed for dissolved oxygen for spawning and year-round. The listings were added to the 2012, 303(d) list by EPA based on data collected in 2001 and 2002.

Included in chapter 10 of the Willamette Basin TMDL (action ID 30674) is a TMDL to address a dissolved oxygen listing for Coyote Creek. The relevant information about Spencer Creek is included in this section of the TMDL. Spencer Creek was not formally listed when the Willamette Basin TMDL was developed but the data that were used for listing was evaluated and discussed in the TMDL. Page 10-162 states: "...even though Spencer Creek is currently not included on the 303(d) list, data collected in 2001 and 2002 shows that it fails to meet DO standards...". The Willamette Basin TMDL includes additional discussion on this data on Page 10-118 and in Table 10.48 of the document.

The TMDL identified temperature (solar loads), ammonia toxicity, biochemical oxygen demand (BOD), nutrients, and sediment oxygen demand (SOD) causing volatile suspended solids as the pollutant causing the dissolved oxygen violations. Temperature increases from solar loading was the primary pollutant to control dissolved oxygen. On page 10-158 the TMDL states "Modeling indicates that if shade is improved to system potential levels, standards for DO should be met without the need for additional reductions in BOD, nutrients, or sediment oxygen demand. However, in order to provide for a margin of safety to account for uncertainty the loading capacity for these pollutants is set to a 20% reduction from current levels in the lower reaches below Spencer Creek."

The TMDL loading capacity for solar loading is based on the allowed 0.3 deg-C warming (page 10-27) and the surrogate effective shade levels from the temperature TMDL (page 10-158 and pages 10-34 to 10-46). The TMDL loading capacity for ammonia is based on a target concentration of 0.8 mg/L as N (page 10-160). The TMDL loading capacity for nutrients was set to a 20% reduction from current concentrations based on the maximum exceedances observed in lower Coyote Creek (page 10-159).

The temperature TMDL allocations for solar loads and effective shade already apply to Spencer Creek (Page 10-10 and starting on page 10-34) as do the other pollutants. Page 10-162 of the TMDL states “The 20% reduction in BOD, nutrients, and SOD causing volatile suspended solids concentrations also applies to Spencer Creek”.

Even though the allocations established to control dissolved oxygen apply in Spencer Creek, DEQ would like to review the most recent data and determine if the loading capacity that was developed for Coyote Creek is also appropriate for Spencer Creek. DEQ will likely address Spencer Creek in a future TMDL submittal to EPA.

---

**EPA#15: Suggested Change ID #77**

**Description:** Molalla-Pudding Subbasin TMDL dieldrin and chlordane 4a/5 listings

**Comment:** DEQ proposed delisting the following AU into Category 4a for dieldrin and chlordane (2 listings) based on the Molalla-Pudding Subbasin TMDL and WQMP:

OR\_WS\_170900090204\_02\_104467 - HUC12 Name: Brandy Creek-Pudding River

Partially covered by a dieldrin and chlordane TMDLs in the original document (Zollner Creek RM 0-7.8), but the proposed AU also covers many other streams. Additional information needed to explain why the same curve is valid at all points along the proposed AU.

**Response:** The Molalla-Pudding Subbasin Pesticide Total Maximum Daily Load (TMDL) (Action ID 35888) applies to the entire extent of assessment unit OR\_WS\_170900090204\_02\_104467 in addition to the entire Pudding River watershed and numerous tributaries on the west side of the Upper Pudding River. In the TMDL, included in Table 4-1, page 4-1 is the waterbodies element under OAR 340-042-0040(a). OAR 340-042-0040(a) requires the TMDL describe the geographic area for which the TMDL is developed. The TMDL narrative in this table says the pesticide TMDL is developed for “Perennial and intermittent streams, as identified in OAR 340-041- 0340; Figures 340A & 340B, streams in the Molalla-Pudding Subbasin, HUCs 1709000902, 1709000903, 1709000904 and the 6th field HUCs 170900090108, 170900090109 and 170900090110.”

The load duration curves presented in the TMDL (pages 4-25 to 4-30) are developed using equations shown on page 4-24. The loading capacity equation is essentially the product of the pesticide loading capacity concentration, the flow rate, and a conversion factor. The TMDL loading capacity concentration was set based on the numeric chlordane and dieldrin aquatic life chronic toxicity concentrations established in the water quality standards (page 4-22). The chronic aquatic life criterion and loading capacity concentration for chlordane is 0.00046 ug/L and for dieldrin is 0.000052 ug/L (Table 4-14, page 4-24).

The TMDL only presents load duration curves on the listed streams at locations where continuous flow data were available. This does not mean that the curves represent the only loading capacity values applicable at other locations in the watershed or assessment unit where the expectation is the flow duration might be different. DEQ's intent is that the loading capacity for any given location within the TMDL scope is determined using the equations on page 4-24. This is appropriate for other locations because the loading capacity concentration values were based upon the values in the water quality standard and would not change based on location (such as might be the case with nutrient related pollutants).

---

**EPA#16: Suggested Change ID #78**

**Description:** Blue Lake and Fairview Lake chlorophyll-a and pH 4a/5 listings

**Comment:** DEQ proposed delisting the following AUs into Category 4a for chlorophyll-a and pH (4 listings total) based on the 1998 Columbia Slough TMDL:

OR\_LK\_1709001202\_02\_100854 - Blue Lake OR\_LK\_1709001202\_02\_100858 - Fairview Lake

Not covered by original TMDL or EPA approval letter. Fairview Lake (and by extension adjacent Blue Lake) is consistently identified in the TMDL document as beyond the scope of the TMDL and not part of the Columbia Slough AU.

**Response:** The placement of Blue Lake and Fairview Lake into category 4a was a mistake and DEQ agrees these listings should be moved to category 5.

The 1998 Total Maximum Daily Load (TMDL) did include Fairview Lake within the scope of the TMDL but the resulting allocations and loading capacity were set at a level that addressed pH and chlorophyll-a listings in the Columbia Slough. The TMDL determined that control of total phosphorus would address the pH and chlorophyll-a listings in the Columbia Slough and the TMDL allocations do apply to Fairview Lake and the jurisdictions and sources surrounding the lake (noted as Reach 4 in the TMDL – page 26 and page 27). The TMDL allocations and total loading capacity established for total phosphorus were based on an instream total phosphorus concentration of 0.1549 mg/L. At this level the model demonstrated attainment of the water quality standards in the Columbia Slough (page 23).

While these allocations will result in total phosphorus reductions to Fairview Lake the TMDL and supporting water quality model developed by Portland State University were not used to evaluate if the allocations would also result in pH and chlorophyll-a attainment in Fairview Lake.

The current water quality model does include Fairview Lake and a scenario evaluating the performance of these allocations could be conducted in the future as time and resources allow. Currently Fairview Lake is a low TMDL priority.

## 2. Comments from: Save Our Siletz River

**SOSR#1: Suggested Change ID #8**

**Description:** Other- TMDL and OHA Cancer Registry

**Comment:** We PROPOSE and REQUEST that DEQ Water Quality program partner and help the OHA Cancer Registry, by completing the Siletz TMDL's and any further testing which the OHA Cancer Registry needs to complete the above assessment. Our Communities matter, our babies, children and future generations matter, we pay taxes, yet our Siletz River continues to be postponed for DECADES

**Response:** DEQ is committed to completing development and implementation of all needed Siletz TMDLs. DEQ will also continue to coordinate, share data, and align monitoring needs with Oregon Health Authority, in consideration of the resources and relevant program needs of both agencies.

## 3. Comments from: Farmers Irrigation District

**FID#1: Suggested Change ID #9**

**Description:** Watershed Units- Commendation of mapping

**Comment:** The District would like to commend DEQ for the inclusion of some mapped waterways within the watershed assessment units. This is a significant step towards improved understanding of the data available and the status of different waterways within the watershed assessment units.

**Response:** Thank you for your support of DEQ's continued efforts to provide clarity to the Integrated Report.

---

**FID#2: Suggested Change ID #10**

**Description:** Watershed Units- Map display vs online database



**Comment:** The detail contained within the online map (e.g., specific waterways within a watershed assessment unit containing different statuses) combined with the lack of detail in the database creates confusion about what is impaired or listed in a watershed assessment unit. A review of the database would suggest that all waterways within a watershed assessment unit are considered/listed as impaired, while a review of the online map would suggest that only some waterways within a watershed assessment unit are considered/listed as impaired. Feedback from DEQ staff in the January 19th webinar suggested that only waterways highlighted as impaired in the online map would be considered impaired. While the Frequently Asked Questions suggests that waterways hydrologically connected to the waterway highlighted as impaired may also be considered impaired. All of this creates confusion for the public and other users of the Integrated Report on how to read/interpret the report and its associated listings.

The District again notes that DEQ's assertion in its Frequently Asked Questions that "the report/list does not, unto itself, specify or determine any regulatory actions or consequences", while technically true with regards to DEQ's regulatory authority, significantly overlooks the permitting, funding, certification, and public perception impacts to the many entities working within or around Oregon's waterways. Numerous other state and federal agencies, non-profits, and third-party certifiers use the 303(d) list in their work with on-the-ground entities; and the simple act of a waterway being listed can result in serious increases in costs, delays in implementation, lost revenue, and/or other operational challenges. These challenges and hardships occur upon listing, not during or after a TMDL process. As such, the District would ask DEQ to better clarify which waterways within a watershed assessment unit are actually considered impaired/listed and how outside users of the Integrated Report should interpret waterways within an "impaired" watershed assessment unit that are not directly colored as impaired within the online map. Very clear instructions on how to determine impairment with a watershed assessment unit attached to the Integrated Report, database, and online map would be a helpful first step towards this goal.

**Response:** Thank you for this feedback on DEQ's Integrated Report tools. In response to feedback on the 2018/2020 Integrated Report, DEQ modified how watershed units are assessed to include a more detailed representation of where impairments exist. The web map application provides the detailed conclusions of assessments within the watershed assessment unit; however, an overall status of the watershed assessment unit must still be reported to EPA. DEQ recognizes the complexity this additional level of reporting creates for users and provided an interactive story map to help guide through the assessment process and addressed the topic in frequently asked questions document on DEQ's website for this draft report. If a waterbody within a watershed assessment unit is not display with a dashed line, it is considered unassessed. DEQ will continue to work to improve and clarify reporting in future Integrated Reports.

### **FID#3: Suggested Change ID #11**

**Description:** Watershed Units- Inclusion of Irrigation Canals

**Comment:** Concern with irrigation canals being combined into HUC-12 watershed assessment units, especially when the canals are not hydrologically connected with the natural waterways within those watershed assessment units.

**Response:** DEQ water quality programs are implemented for waters of the state, which has a broad statutory definition in Oregon Statutes (ORS 468B.005): “Waters of the state” means lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters) that are located wholly or partially within or bordering the state or within its jurisdiction”.

To assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. For the 2022 Integrated Report, DEQ added localized information in the watershed unit by displaying the specific waterbodies within a watershed unit where water quality exceedances occur. The web map (on DEQ’s website for this Integrated Report) will display the canal with a dashed line when water quality data exists within a canal.

DEQ used the High Resolution National Hydrography Dataset to draw its assessment units and georeference its water quality standards. The NHD is the federal and state standard and represents the water drainage network of the United States with features such as rivers, streams, canals, lakes, ponds, coastline, dams, and stream gages. The National Hydrography Dataset (NHD) is developed and maintained by a partnership between the USGS and EPA. The dataset intended to “develop nationally-consistent geospatial datasets for the Nation” and provide agencies and organizations a common baseline for mapping aquatic resources. If the commenter has concerns with the base hydrography data, a user can report suspected errors to the NHD Markup App at <https://edits.nationalmap.gov/markup-app>. This tool allows users to suggest edits, or “markups”, to the NHD. Suggested edits are reviewed by the USGS and the NHD state stewards before they are approved for incorporation into the NHD or WBD datasets.

## 4. Comments from: Deschutes River Alliance

### **DRA#1: Suggested Change ID #14**

**Description:** TMDL- Prioritization process

**Comment:** First, the draft TMDL Priorities and Schedule document should better explain how each TMDL Project was categorized. As presented, impacted stakeholders are largely left to guess about DEQ’s prioritization decisions. While the Department did provide the factors it used, listing the factors, alone, fails to tell the whole story. DEQ should explain how these factors were used to determine each TMDL Project’s priority. That explanation should include the weight each factor was given as well as a clearer quantification of factors like “severity of the water quality problem” and “input from the public.” A ‘decision matrix,’ for example, could be used to act as a report card for each TMDL Project and would clearly lay out how each Project’s priority was reached.

Without clearer explanations, the prioritization process is opaque, vulnerable to shifting agency concerns, and is unhelpful for stakeholders and the public. At least three factors – “severity of the issue,” “public input,” and “DEQ resources” – are subjective or overly vague. With no further explanation, different DEQ staff could interpret these factors’ purposes differently and unevenly prioritize TMDL Projects. In future years, as current DEQ staff leave and are replaced, uneven application is likely to worsen. Transparent explanations will help ensure those factors are applied consistently over the years while also making the Priorities and Schedule document more useful to potentially impacted stakeholders.

**Response:** DEQ prepared the priority ranking of Total Maximum Daily Loads (TMDLs) to be developed as part of the biennial submittal to EPA of Oregon’s Integrated Report, as required by 40 CFR § 130.7(b)(4) and 40 CFR § 130.7(d)(1). In keeping with these regulations, DEQ identified priority ranking of all assessment units needing TMDL development and identified waters targeted for TMDL development in the next two years. Although not required by state or federal regulations, DEQ’s report also provided a summary of criteria used to determine TMDL projects priority rankings. DEQ clarified that the multi-level evaluation focused on severity of pollution and uses of the waters, as required by CWA § 303(d)(1)(A) and 40 CFR § 130.7(b)(4), but also included consideration of additional factors.

DEQ appreciates the thoughtful approach presented in the comments aimed at making the TMDL prioritization process clearer to the public. DEQ will consider the suggestions in undertaking on-going program improvements, which strive to efficiently use limited resources while improving public engagement and environmental outcomes.

**DRA#2: Suggested Change ID #15**

**Description:** TMDL- prioritizations and court orders

**Comment:** Second, perhaps the biggest issue that transparent DEQ explanations would resolve is how “TMDLs with deadlines established via court order” are prioritized. As currently presented, it seems that this factor alone automatically results in a “high priority” ranking. This is extremely concerning, as it creates a clear incentive for concerned parties to forego DEQ consultation and communication in favor of immediately filing lawsuits against the Department – increasing both the financial cost and time burden of TMDL planning on DEQ. Likewise, it essentially penalizes parties that have undertaken efforts to work with the Department on TMDL-related issues by ensuring the Projects receive a less-urgent response. With more DEQ clarification, this potential misperception could be resolved. However, if a court order does automatically result in a “high priority” ranking, DEQ must change this prioritization factor to avoid the incentives it inadvertently creates.

**Response:** DEQ prepared the priority ranking of Total Maximum Daily Loads (TMDLs) to be developed as part of the biennial submittal to EPA of Oregon’s Integrated Report, as required by 40 CFR § 130.7(b)(4) and 40 CFR § 130.7(d)(1). In keeping with these regulations, DEQ identified priority ranking of all assessment units needing TMDL development and identified waters targeted for TMDL development in the next two years. Although not required by state or federal regulations, DEQ’s report also provided a summary of criteria used to determine TMDL projects priority rankings. DEQ clarified that the multi-level evaluation focused on severity of pollution and uses of the waters, as required by CWA § 303(d)(1)(A) and 40 CFR § 130.7(b)(4), but also included consideration of additional factors. DEQ’s prioritization incorporates legally binding court-ordered deadlines for issuance of specific TMDLs bound by those orders. DEQ does not have discretion to alter these deadlines. However, DEQ agrees with the commenter that additional factors are important in determining priorities. DEQ has incorporated those factors for TMDLs not bound by court orders and will continue to weigh and consider multiple factors for the prioritization of additional TMDLs.

---

**DRA#3: Suggested Change ID #16**

**Description:** TMDL- Finer detail of prioritizations

**Comment:** The Department should explain its prioritization within each larger category. Currently, TMDL Projects are not ranked within their category. This does little to help impacted stakeholders prepare for the TMDL process. For example, under current estimations, a “medium priority” Project could be completed anywhere between May 2024 and December 2029 – a more than five years difference. This provides very little regulatory certainty in this important process.

The lack of in-category rankings also leaves the potential for certain TMDL Projects to languish for years, especially if re-prioritization takes place. Without in-category rankings or clearer factor explanation, prioritization is left vulnerable to changing political or Departmental attention rather than the stated prioritization factors. As stated above, expanded justifications, like a ‘decision matrix,’ for each TMDL Project would help prevent this potential outcome by further clarifying DEQ’s decision making process for stakeholders while also holding DEQ to its state goals.

**Response:** While DEQ appreciates the thoughtful approach presented in the comments regarding additional specificity regarding timelines for TMDL development and completion, this level of detail is not required. Further, due to the level of effort and complexity of TMDL development, and recognizing that data and information that are constantly being produced regarding water quality, priorities and timelines may appropriately need to shift over time based on evolving data and understanding of water quality needs in various parts of the state. DEQ will consider the suggestions in undertaking on-going program improvements, which strive to efficiently use limited resources while improving public engagement and environmental outcomes.

---

## 5. Comments from: Clean Water Service

### **CWS#1: Suggested Change ID #17**

**Description:** WQ Standards- applicability of spawning in specific areas

**Comment:** The 2022 WQ Assessment Methodology states that DEQ will identify spawning areas using the tables and figures of OAR 340-041-0101 to OAR 340-041-0340. The salmon and steelhead spawning use designations in OAR 340-041-0340 – Figure 340B indicate “no spawning use” in the Tualatin River segments or in the Dairy Creek segment (OR\_SR\_1709001002\_02\_104104, OR\_SR\_1709001004\_02\_104139, OR\_SR\_1709001005\_02\_104018, OR\_SR\_1709001003\_02\_104120).

The Dairy Creek segment (Highway 6 to confluence with Tualatin River) is a combined segment of Dairy Creek and the lower West Fork Dairy Creek, all of which are indicated as “no spawning use” habitat. The 2022 Assessment Methodology also states DEQ will identify “any active spawning area used by resident trout species ... during the time trout spawning through fry emergence occurs.” The District is not aware of any information indicating resident trout spawning occurring in the Tualatin River or Dairy Creek segments. cursory observation does not indicate suitable habitat in these areas. Snorkeling surveys conducted

in the upper sections of the basin for the Tualatin River Watershed Council and Clean Water Services found juvenile cutthroat trout, indicating successful spawning occurred in the upper tributaries. The District questions how DEQ determined that the Tualatin River or Dairy Creek segments provide spawning habitat. These segments should not be evaluated for spawning dissolved oxygen.

**Response:** DEQ agrees that the mainstem Tualatin River (Assessment Units OR\_SR\_1709001002\_02\_104104, OR\_SR\_1709001004\_02\_104139, and OR\_SR\_1709001005\_02\_104018) and a portion of AU OR\_SR\_1709001003\_02\_104120 (Dairy Creek from the mouth to RM 10.1) are not suitable spawning habitat for resident cutthroat trout. A 2014, memo from the Oregon Department of Fish and Wildlife confirmed the absence of suitable habitat for resident trout spawning in these reaches. Category 5 dissolved oxygen spawning listings for these stream reaches will be corrected (see table), and the Water Quality Standards layer will be corrected to reflect the correct spawning designations. Scoggins Creek (AU ID: OR\_SR\_1709001002\_02\_104109) and the East and West Forks of Dairy Creek (AU IDs OR\_SR\_1709001003\_02\_104114 and OR\_SR\_1709001003\_02\_104123) still retain a resident trout spawning use from January 1 through May 15th. These assessment units are now in Category 5 based on new data assessed in the 2022 Integrated Report.

AU_ID	AU_Name	AU_Description	Previous DO Spawning Status	2022 IR DO Spawning Status
OR_SR_1709001002_02_104104	Tualatin River	Wapato Creek to Dairy Creek	Unassessed	Unassessed
OR_SR_1709001004_02_104139	Tualatin River	Dairy Creek to McFee Creek	Unassessed	Unassessed
OR_SR_1709001005_02_104018	Tualatin River	McFee Creek to confluence with Willamette River	Unassessed	Unassessed
OR_SR_1709001003_02_104120	Dairy Creek	Highway 6 to confluence with Tualatin River	Unassessed	Unassessed
OR_SR_1709001002_02_104109	Scoggins Creek	Henry Hagg Lake to confluence with Tualatin River	Category 2	Category 5
OR_SR_1709001003_02_104114	East Fork Dairy Creek	Denny Creek to confluence with Dairy Creek	Category 4A	Category 4A
OR_SR_1709001003_02_104123	West Fork Dairy Creek	Williams Creek to Highway 6	Unassessed	Category 5

DEQ is in the process of an Aquatic Life Use rulemaking to update its aquatic life use designations for temperature and dissolved oxygen with an anticipated completion date of winter 2022 and will review the streams in question. Opportunities to comment on the proposed rule revisions will be provided. Sign up for DEQ's opt-in GovDelivery

notifications for rulemakings and other information here:

[https://public.govdelivery.com/accounts/ORDEQ/subscriber/new?topic\\_id=ORDEQ\\_387](https://public.govdelivery.com/accounts/ORDEQ/subscriber/new?topic_id=ORDEQ_387)

---

### **CWS#2: Suggested Change ID #18**

**Description:** WQ standards- AL use information and updates

**Comment:** Accurate application of criteria and the presence of beneficial uses are critical to generating an Integrated Report that can be effectively used to describe water quality issues and priorities. The District encourages DEQ to provide an evaluation, maps, and a description of habitat characteristics of resident trout spawning distribution and life cycle timing. This could help local agencies understand potential spatial distribution and when resident trout spawning through fry emergence occurs. The District also encourages DEQ to undergo a public process, such as rulemaking to update Aquatic Life Uses, so that public comments can be provided to help guide listings or refinements of the maps used to describe spawning distributions and timing.

**Response:** DEQ is currently undergoing an Aquatic Life Use update public rulemaking process. The outcome of this process will be updates to the fish and aquatic life use designations in Oregon’s water quality standards. DEQ will update the georeferenced Water Quality Standards GIS layer, which is used as the foundation of the Water Quality Assessment, to be consistent with the updated standards once they are effective under the Clean Water Act. DEQ anticipates this effort will address the District’s comments on this topic.

---

### **CWS#3: Suggested Change ID #19**

**Description:** Methodology- Iron

**Comment:** The District agrees that the Category 5 listings for aquatic life iron in the Tualatin Basin are correctly categorized. District data confirm Category 5 listings in the segments shown in the Table 2 below. In order to reduce confusion and build trust in the WQ Assessment process, the District describes the following inconsistencies between our understanding of the WQ Assessment Methodology and the seven listings in Table 2 below with rationales that begin with “Insufficient data”:

- For the rationales stating “Insufficient data,” the rationales show sample sizes sufficient for evaluation of aquatic life toxics (i.e., two samples or more), according to Table 6 of the WQ Assessment Methodology. The Category 5 listings added in 2022 had not been previously listed, so they do not need to meet the delisting sample size in Table 10 of the

WQ Assessment Methodology (i.e., 18 samples or more needed to delist for aquatic life toxics).

- Using the data sets in the rationale, these segments should be evaluated to Category 2 instead of Category 5, as shown in Table 5 of the WQ Assessment Methodology, because there are less than 5% excursions with 90% confidence according to the binomial test (i.e., less than two excursions).
- DEQ’s supporting data combined dissolved and total iron values, while the criterion is for total iron only. For toxic substances, the WQ Assessment Methodology states “A dissolved sample result less than a total recoverable criterion is not considered valid for determining attainment of the criterion, and the samples may be used to assign Category 3, but not Category 2, unless there are enough valid total recoverable samples to assign Category 2.” While the District does not dispute the finding of Category 5, the application of the dissolved samples to a total recoverable criterion seems inconsistent with the methodology in these cases.

**Response:** Please see table below for a response to each of the identified listings.

<b>AU_ID</b>	<b>Rationale</b>	<b>Notes</b>
OR_SR_1709001001_02_104096	Insufficient [sic] data: 0 excursion of criteria with 6 total samples	AU was listed in 2012. only 6 samples in IR data window, need minimum of 18 to delist, as described in Table 10 of methodology.
OR_SR_1709001003_02_104112	Insufficient data: 1 excursion of criteria with 3 total samples	AU was listed in 2012. Only 3 samples in IR data window, need minimum of 18 to delist, as described in Table 10 of methodology.
OR_SR_1709001004_02_104133	Insufficient data: 0 excursion of criteria with 3 total samples	AU was listed in 2012. Only 3 samples in IR data window, need minimum of 18 to delist, as described in Table 10 of methodology.
OR_SR_1709001004_02_104134	Insufficient data: 0 excursion of criteria with 5 total samples	AU was listed in 2012. Only 5 samples in IR data window, need minimum of 18 to delist, as described in Table 10 of methodology.
OR_WS_170900100501_02_104512	Record ID: 25245- 2012 Data: [USGS] STATION 14206750 at RM 2 for 44 samples from 05/09/2006 to 12/01/2010, 35 of 44 valid samples exceed the 1000 ug/L criteria. [USGS] STATION 452109122531101 at RM 4.5 for 44 samples from 05/09/2006 to 12/01/2010, 27 of 44 valid sample	No new data from this assessment unit analyzed.
OR_SR_1709001002_02_104104	Impaired: 2 excursions of criteria with 5 total samples	AU was listed in 2018-2020. Data in IR data window indicates 2 excursions of criteria with 5 samples. Impairment is reaffirmed as described in Table 6 of assessment methodology



<b>AU_ID</b>	<b>Rationale</b>	<b>Notes</b>
OR_SR_1709001003_02_104120	Impaired: 2 excursions of criteria with 3 total samples	AU was listed in 2012. Data in IR data window indicates 2 excursions of criteria with 3 samples. Impairment is reaffirmed as described in Table 6 of assessment methodology
OR_SR_1709001004_02_104137	2018: 19 of 21 samples > 1000 µg/L	No new data from this assessment unit analyzed.
OR_SR_1709001004_02_104139	Insufficient data: 1 excursion of criteria with 2 total samples	AU was listed in 2018-2020. Only 2 samples in IR data window, need minimum of 18 to delist, as described in Table 10 of methodology.
OR_SR_1709001005_02_104018	Impaired: 6 excursions of criteria with 15 total samples	AU was listed in 2012. Data in IR data window indicates 6 excursions of criteria with 15 samples. Impairment is reaffirmed as described in Table 6 of assessment methodology
OR_SR_1709001005_02_104140	Insufficient data: 1 excursion of criteria with 3 total samples	AU was listed in 2018-2020. Only 3 samples in IR data window, need minimum of 18 to delist, as described in Table 10 of methodology.
OR_SR_1709001005_02_104141	Insufficient data: 1 excursion of criteria with 3 total samples	AU was listed in 2012. Only 3 samples in IR data window, need minimum of 18 to delist, as described in Table 10 of methodology.

For toxic substances assessments with a criterion expressed as a total fraction, DEQ considers the dissolved fraction only when there is no total fraction result on the same day. Following the methodology, dissolved fraction samples that exceed criteria are considered towards a category 5 evaluation. As the dissolved fraction of a substances is somewhat lower than the total fraction, DEQ is confident that a dissolved fraction exceedance would also result in a total fraction exceedance.

---

#### **CWS#4: Suggested Change ID #20**

**Description:** Assessment Conclusions- HH Arsenic

**Comment:** The District appreciates the ability to examine the supporting data. When searching for the supporting data for the two 2012 Category 5 human health arsenic listings on McKay Creek (OR\_SR\_1709001003\_02\_104116) and Upper McKay Creek watershed (OR\_WS\_170900100306\_02\_104503), there were no data returned. However, the supporting arsenic data seem to be associated with the assessment unit named lower McKay Creek (OR\_SR\_1709001003\_02\_104112). The supporting data has the same station number as stated in the 2012 listings rationale (USGS 453158123001701). However, the lower McKay Creek assessment unit was listed this year as Category 2 (“attaining”) for human health arsenic (record ID: 2022-104112-9-16).

It also appears that the 2012 human health arsenic listings were evaluated against the aquatic life criterion. In the listing rationale, both listings state “Record ID: 25843- 2012 Data: [USGS] STATION 453158123001701 at RM 1.2 for 36 samples from 05/06/2008 to 12/01/2010, 6 of 36 valid samples exceed the 2.1 ug/L criteria. [USGS] STATION 14206180 at RM 2.1 for 23 samples from 05/03/2006 to 04/08/2008, 1 of 22 valid samples.” For human health toxics, the geometric mean of the data should be compared to the numeric criterion instead of counting the number of exceedances (the aquatic life criterion). Reevaluating the District’s data for McKay Creek at Hornecker Road, which are stored in and available from the USGS NWIS database (called “McKay Creek near Hillsboro”) from 2006 to 2008, the geometric mean is 0.97 ug/L of inorganic arsenic, which is less than the human health criterion of 2.1 ug/L. DEQ’s data set (n=7) in the lower McKay Creek unit is sufficient (minimum of five samples needed to delist for human health toxics) to “delist” the 2012 listings from Category 5 to Category 2 (“attaining”).

The District’s total arsenic data (transformed to inorganic values by multiplying by a factor of 0.80) at McKay Creek at Padgett Road since May 2008 (n=86) has a geometric mean of 1.4 ug/L, using the 2018 WQ Assessment Methodology for censored data (Attachment 1). The geometric mean is less than the human health criterion of 2.1 ug/L of inorganic arsenic and supports delisting. The District requests DEQ review the 2012 upper McKay listings for potential update to Category 2.

**Response:** In the 2012 Integrated Report cycle, McKay Creek was added to the 303(d) for having arsenic values that do not meet the Table 40 Human Health Criteria for Toxic Pollutants values. The data from this listing came from USGS stations 453158123001701 and 14206180. When DEQ created assessment units for the 2018/2020 Integrated report process, previous listings were “cross-referenced” from old listings to new assessment units. It appears that this 2012 listing was accidentally cross referenced to both OR\_SR\_1709001003\_02\_104116 and OR\_WS\_170900100306\_02\_104503. DEQ will delist OR\_WS\_170900100306\_02\_104503 for human health arsenic due to a cross reference error.

If the district has data that indicates any impaired waterbodies are currently meeting water quality standards, DEQ encourages submittal through the 2024 Integrate Report Call for Data process. Sign up for notifications about current and future Integrated Reports online:

[https://public.govdelivery.com/accounts/ORDEQ/subscriber/new?topic\\_id=ORDEQ\\_382](https://public.govdelivery.com/accounts/ORDEQ/subscriber/new?topic_id=ORDEQ_382)

---

#### **CWS#5: Suggested Change ID #21**

**Description:** Assessment Conclusions- Methylmercury and Total Mercury TMDL

**Comment:** The Tualatin River methylmercury (OR\_SR\_1709001005\_02\_104018) and Fanno Creek watershed total mercury (OR\_WS\_170900100502\_02\_104513) listings should be recategorized from Category 5 (“water quality limited, TMDL required”) to Category 4A (“water quality limited,

TMDL approved”), as the Willamette Basin Mercury Total Maximum Daily Load was published in 2019.

**Response:** DEQ agrees. The revised Willamette Basin Mercury TMDL (action IDOR\_TMDL\_20191230) addressed the assessment units listed below for total mercury or methylmercury. These listings were mistakenly placed into category 5 and will be moved into category 4a.

Mercury (total) OR\_WS\_170900100502\_02\_104513 - HUC12 Name: Fanno Creek  
OR\_WS\_170900120202\_02\_104555 - HUC12 Name: Balch Creek-Willamette River  
OR\_LK\_1709000203\_02\_100706 - Cottage Grove Lake

Methylmercury OR\_LK\_1709000203\_02\_100706 - Cottage Grove Lake  
OR\_SR\_1709000608\_02\_103925 - South Santiam River OR\_SR\_1709001005\_02\_104018 -  
Tualatin River OR\_SR\_1709001106\_02\_104597 - Clackamas River

---

#### **CWS#6: Suggested Change ID #22**

**Description:** Assessment conclusion- Fanno Creek Hexavalent Chromium

**Comment:** Fanno Creek (HUC 12) includes Category 5 listings for hexavalent chromium (Assessment ID: OR\_WS\_170900100502\_02\_104513). The Integrated Report notes that hexavalent chromium was not assessed in 2022; the listing for hexavalent chromium has been carried forward since 2002. The Fanno Creek (HUC 12) listing for hexavalent chromium is likely based on data collected in the early 1990s at the Koll Wetlands. The District has previously commented on the listing for the Koll Wetlands, where data were collected for three months in 1992. The data are of poor quality, and the information regarding the purpose of the monitoring and sampling procedures are lacking. Additionally, the monitoring appears to be related to a remedial investigation, complaint, or spill and is not part of a representative, ambient monitoring program to assess water quality.

The District monitored for chromium in Fanno Creek at Durham. 145 dissolved chromium results from 2003-21 were evaluated (Attachment 2). The maximum dissolved chromium value was 1.97 ug/L; there were no exceedances of the hexavalent chromium criteria (CMC = 16 ug/L, CCC = 11 ug/L) even if all the dissolved chromium is assumed to be in the hexavalent form. As in 2019, the District requests that DEQ recognize the poor data quality that triggered the initial listing, the substantial representative data collected by the District, and remove the Category 5 listing for hexavalent chromium in the Fanno Creek watershed.

**Response:** Based on guidance from EPA, all Category 4 and 5 listings must be carried forward unless it is demonstrated that water quality standards are being attained. The 2012 Category 5 listing for hexavalent chromium was carried forward on the Fanno Creek watershed assessment unit AU ID: OR\_WS\_170900100502\_02\_104513 (further clarified in 2022 to

OR\_WS\_170900100502\_02\_104513; Knoll Wetland). The listing was based on data collected in the early 1990s at the Koll Wetlands. To delist WS\_170900100502\_02\_104513 for Chromium VI, we would need current information showing that water quality standards are being met. The method for delisting this substance is described in the “Delisting water bodies” section of the 2022 Integrated Report Methodology (online [here](#)), beginning on page 18. In this case, we would need at least 18 samples in the Integrated Report data window and the number of excursions would need to be less than the number indicated in Table 10 on page 21 of the Methodology.

The data the District provided in both the 20218/2020 and 2022 comment letters was not submitted during the public Call for Data process or in the required format for use in DEQ’s water quality assessment as outlined in the Submission Guidelines. The District can submit data indicating that the assessment unit is no longer impaired for any substance through the 2024 Integrated Report Call For Data process. Sign up for notifications about the 2024 Integrated Report Call for Data online:

[https://public.govdelivery.com/accounts/ORDEQ/subscriber/new?topic\\_id=ORDEQ\\_382](https://public.govdelivery.com/accounts/ORDEQ/subscriber/new?topic_id=ORDEQ_382)

---

#### **CWS#7: Suggested Change ID #23**

**Description:** Assessment conclusion- Gales Creek Hexavalent Chromium

**Comment:** Gales Creek includes a Category 5 listing for hexavalent chromium (Assessment ID: OR\_SR\_1709001001\_02\_104096). The 2022 Integrated Report did not assess the hexavalent chromium listing; the previous listing has been carried forward since 2012. The District conducts water quality monitoring at two locations on Gales Creek: Gales Creek at Stringtown Road (RM 7.0) and Gales Creek at new Highway 47 (RM 1.5). 206 dissolved chromium results from 2006-21 were evaluated (Attachments 3 and 4). The maximum dissolved chromium value was 1.34 ug/L; there were no exceedances of the hexavalent chromium criteria (CMC = 16 ug/L, CCC = 11 ug/L) at either location even if all the dissolved chromium is assumed to be in the hexavalent form. As in 2019, the District requests that DEQ remove the Category 5 listing for hexavalent chromium in Gales Creek.

**Response:** Based on guidance from EPA, all Category 4 and 5 listings must be carried forward unless it is demonstrated that water quality standards are being attained. To delist OR\_SR\_1709001001\_02\_104096 for Chromium VI, we would need current information showing that water quality standards are being met. The method for delisting this substance is described in the “Delisting water bodies” section of the 2022 Integrated Report Methodology (online [here](#)), beginning on page 18. In this case, we would need at least 18 samples in the Integrated Report data window and the number of excursions would need to be less than the number indicated in Table 10 on page 21 of the Methodology.

The data the District provided in both the 20218/2020 and 2022 comment letters was not submitted during the public Call for Data process or in the required format for use in DEQ’s water

quality assessment as outlined in the Submission Guidelines. The District can submit data indicating that the assessment unit is no longer impaired for any substance through the 2024 Integrated Report Call For Data process. Sign up for notifications about the 2024 Integrated Report Call for Data online:

[https://public.govdelivery.com/accounts/ORDEQ/subscriber/new?topic\\_id=ORDEQ\\_382](https://public.govdelivery.com/accounts/ORDEQ/subscriber/new?topic_id=ORDEQ_382)

---

**CWS#8: Suggested Change ID #24**

**Description:** TMDL- Biocriteria to 4A

**Comment:** DEQ is carrying forward Category 5 listings for biocriteria for a number of streams in the Tualatin Basin. Since a TMDL cannot be developed for biocriteria, DEQ should focus its efforts to identify the underlying pollutants causing the impairment. Since 2000, the District has conducted macroinvertebrate monitoring in the Tualatin River watershed. The macroinvertebrate studies have included an assessment of the stressors in the Tualatin River watershed (2018 Tualatin River Basin macroinvertebrate Assessment, Cole Ecological, ~May 2019). Temperature and dissolved oxygen were identified as the primary stressors for macroinvertebrate communities in the Tualatin River watershed. Thus, biocriteria impairment should be addressed and resolved through listings for these pollutants. This is consistent with the approach noted in the PREDATOR model report, which states that “knowing a site is in poor biological condition is useful, but unless we are able to identify the cause(s) of impairment, we are at a loss for how to most effectively go about improving the stream.” The 2001 and 2012 Tualatin TMDLs include allocations to address impairments from temperature, dissolved oxygen, and nutrients. As in 2019, the District requests that DEQ recategorize the biocriteria listings in the Tualatin Basin as “water quality limited, TMDL approved” (Category 4A) or “water quality limited, not needing a TMDL” (Category 4B). The District would appreciate any opportunity to work with DEQ to develop biological metrics designed for valley bottom streams, which are prevalent in our service area.

**Response:** DEQ appreciates the efforts Clean Water Services has taken to utilize various approaches to identifying causes of biological impairment. For these listings to be moved into category 4a, a complete stressor analysis must be completed and development of TMDLs for pollutants not already addressed by an existing TMDL. DEQ agrees that the general approach in the Cole 2019 report is scientifically sound and that there are existing TMDLs that may address some of the identified stressors. DEQ also believes additional stressor identification is needed. The Cole 2019 report states that other stressors (e.g., nutrients, metals) were not examined due to a lack of available data; additionally, the report identifies two sites in the higher gradient reaches with signals of excess fine sediments as a cause of biological impairment. While macroinvertebrate fine sediment models were not applied to lower gradient reaches, the habitat surveys showed 5-6 sites with measurements of embeddedness, fines, and sand at high levels (> 40%). Fine sediments may be a cause of macroinvertebrate community impairment at these sites

and should be investigated further. If sedimentation is found to be a stressor a sediment TMDL would need to be developed.

**CWS#9: Suggested Change ID #25**

**Description:** TMDL- Ammonia applicability

**Comment:** The Integrated Report includes a Category 4A (water quality limited, TMDL approved) listing for ammonia for seven assessment units shown in Table 3 below. There is no established TMDL for ammonia in these streams. As in 2019, the District requests that DEQ remove the Category 4A listings for ammonia for these streams.

Table 3 OR\_WS\_170900100501\_02\_104512 - HUC12 Name: Chicken Creek  
 OR\_SR\_1709001002\_02\_104109 - Scoggins Creek OR\_SR\_1709001003\_02\_104112 - McKay Creek OR\_SR\_1709001003\_02\_104120 - Dairy Creek OR\_SR\_1709001004\_02\_104133 - Rock Creek OR\_SR\_1709001004\_02\_104136 - Rock Creek OR\_SR\_1709001005\_02\_104140 - Cedar Creek

**Response:** These listings have a complicated history. A summary is below.

The first Tualatin Total Maximum Daily Load (TMDL) was issued in 1988 (action ID 2043) to address dissolved oxygen listings in the Tualatin River. In that TMDL ammonia was identified as the pollutant and the TMDL included instream ammonia concentration targets and allocations to various tributaries.

The Environmental Quality Commission (EQC) adopted the TMDL ammonia targets into rule the same year at OAR 340-041-470 (9)(b).

DEQ added five segments to category 4a on the 1998 integrated report based on data that showed these segments exceeded the TMDL ammonia rules. The segments were placed in category 4a because they were linked to the TMDL that addressed dissolved oxygen. The added segments are listed below.

AU_ID	Stream	Extent	Category
22M-CHIC0	Chicken Creek	Mouth to Headwaters	4A
22M-DAIR0	Dairy Creek	Mouth to East/West Forks	4A
22M-ROCK0	Rock Creek	Mouth to Headwaters	4A
22M-MCKA0	Mckay Creek	Mouth to East Fork McKay Creek	4A
22M-SCOG0	Scoggins Creek	Mouth to Hagg Lake	4A
22M-FANNO	Fanno Creek	Mouth to Headwaters	4A

These listings have been carried forward in every integrated report since 1998, although the TMDL ammonia rule was rescinded by the EQC in 2001 after the revised 2001 Tualatin TMDL was issued.

In 2018 these listings were mistakenly placed into Category 5 based on the incorrect assumption that the assessment was based on the Table 30 aquatic life ammonia criteria and not the older TMDL ammonia rule that had been rescinded.

DEQ reassess the data used to list these assessment units for ammonia in the 1998 Integrated Report against the Table 30 aquatic life ammonia criteria and all are attaining that criteria (Appendix B). Therefore, these assessment units will be delisted for ammonia.

---

## 6. Comments from: Oregon Farm Bureau & Oregon Forest & Industries Council

### **OFB&OFIC#1: Suggested Change ID #41**

**Description:** Watershed Units- Grouping

**Comment:** While we understand that comments directed toward the Assessment Unit Framework were reviewed as part of the Methodology comments and will not be considered as part of the broader integrated report comments, we continue to believe that moving to watershed scale assessment units for stream order 4 or less streams does not represent sound agency policy or standards for scientific rigor. Decisions to list waterbodies as impaired should be based on water body specific data. Although DEQ has updated the 2022 IR Methodology to evaluate watershed AUs based on data for monitoring stations within each AU, applying impairment status to an entire watershed AU can result in an impairment status in tributary waterways for which there is no data. We urge you to address this issue.

**Response:** For the 2022 Integrated Report, DEQ displays the specific streams and monitoring locations within a watershed unit where data and information suggest a water quality impairment. Due to EPA reporting requirements, DEQ must report assessment conclusions at the assessment unit level. For smaller order streams (Strahler Stream Order 4 or less), this means that assessment conclusions are reported at the watershed unit scale, or HUC-12 level. The 2022 water quality assessment was conducted at the monitoring station level for watershed assessment units. Decisions to list waterbodies were based on waterbody specific data and information. Consequently, watershed assessment units identified as impaired indicate that one

or more waterbodies within the assessment unit (HUC-12) are impaired based on the data that were assessed, not that all the waterbodies within the watershed are impaired.

---

**OFB&OFIC#2: Suggested Change ID #42**

**Description:** Data- Map filtering

**Comment:** The 2022 Integrated Report Map Viewer Instructions for Use document notes that you can use the Interactive Map query tool to filter Assessment Units by parameter. This feature is a good enhancement that will allow for more utility of the Interactive Map. This could be further improved by the addition of more search categories, such as the assessment or beneficial use. Being able to find water bodies that are listed for the same beneficial uses or parameters would clarify precedents for establishing water quality standards, developing TMDLs, delisting segments, and implementing point and non-point source pollutant controls. Please add this functionality to the existing filter option.

The 2018/2020 Integrated Report Interactive Map provided a breakdown of parameters for each category and noted if there were any active TMDLs for the AU. This format has been partially implemented for the Draft 2022 Integrated Report Interactive Map through the impaired, attaining, and insufficient parameters lists. However, the TMDL status of AUs has been removed, reducing the information accessible on the updated map. Having the TMDL status helps differentiate between the impaired parameters that have and have not been addressed. Please add back the TMDL status for the Interactive Map quick view.

To properly use the Interactive Map, the location or name of the waterway must be known. Search options can be improved. For example, typing “Florence” returns a search result that leads to Lake Florence, in Alaska. Please limit search results to Oregon and enhance the ease of searching by geographical areas that would be commonly used by Oregonians.

**Response:** Thank you for providing feedback on DEQ’s updated Interactive web map application. This is a new platform for the agency and the assessment team is working to determine the best ways to use the software in a way that appropriate for all levels of user engagement. We appreciate the specific recommendations and will continue to improve all reporting tools and evaluate how to provide additional information while maintaining the usability of the tool. One tip for searching for a particular location is to include “Oregon” in the search. For example, typing in “Florence, Oregon” will take you to the town of Florence on the Oregon coast.

DEQ and EPA are in the process of verifying the geographic extent for TMDL applicability statewide. Once this project is complete, DEQ will add this information to the web map and online database.

---



### **OFB&OFIC#3: Suggested Change ID #43**

**Description:** Methodology- Assessment Unit types

**Comment:** The 2022 Methodology specifies that Oregon waters are separated into five AU types; 1) river and streams 2) lakes, reservoirs, and estuaries 3) Columbia and Snake River 4) beach and coastal 5) ocean. Although a description of watershed assessments was provided, watershed AUs were not specified as an AU type. Please confirm whether this is simply a typing error (i.e., a section header was removed accidentally) or a removal of watershed AUs from the IR consideration. If watershed AUs have been removed as an AU type, which would be our preference, please explain why they have been included on the Interactive Map and in the Database.

**Response:** The omission of watershed as an assessment type in the 2022 Methodology is believed to have been an error in an earlier draft of the document. The 2022 Methodology (online [here](#)) released with the draft 303(d) list and TMDL priority ranking corrects this error and states in Section 3.3.3 Assessment Units, DEQ portioned Oregon's waterbodies into five types of assessment units. These five types are: 1) river and stream, 2) lakes, reservoirs, and estuaries, 3) watershed, 4) beach and coastal, and 5) ocean. The subsequent subsection of the Methodology included a description of the separate classification scheme used for the Columbia and Snake rivers. The final version of the document will clarify this distinction.

---

### **OFB&OFIC#4: Suggested Change ID #44**

**Description:** Data- Data completeness

**Comment:** Our comparison of the data downloaded from the draft 2022 Integrated Report Database and the data available on the AWQMS web portal indicates that the draft 2022 Database does not include all the data that are available for an AU, and more specifically, all the data that have been evaluated for attainment status. Importantly, data that were not on the draft 2022 Database were the data that led to a Category 5 determination for several AUs. All data that lead to categorizations of AUs should be publicly accessible without the need to access a Database outside of the Integrated Report, such as the AWQMS.

**Response:** The data files made available for download on DEQ's Integrated Report searchable online database represent data evaluated in the current listing cycle for ease of review. Where available, older data from DEQ's online database that have been used in past listing cycles are available via AWQMS <https://orwater.deq.state.or.us/Login.aspx>. Following EPA guidance, previous Category 5 listings must be carried forward, until it can be demonstrated that water

quality criteria are being met. When moving to the new assessment framework in the 2018/2020 reporting cycle, DEQ migrated all Category 5 listings and as much associated data as possible to the AWQMS data systems.

---

**OFB&OFIC#5: Suggested Change ID #45**

**Description:** Data- Link to map

**Comment:** The analytical data represented in the Integrated Report are not accessible via the Interactive Map. Updating the Integrated Report Database to include all information present in the AWQMS and linking the Interactive Map to the Database download would provide an easier mechanism to review specific sample data evaluated as part of the assessment. Without being able to efficiently link a water quality categorization to the data that were used in the Integrated Report, users cannot effectively verify that 303(d) listings are fair and accurate. The inaccessibility of the data that underlie the Draft 2022 IR should be rectified.

**Response:** The draft 2022 Integrated Report is available [online](#) in four different formats based on needs of various users and underlying web platform performance. The online searchable database provides what the commenter is looking for by providing a more detailed parameter specific categorical assessment conclusions for all assessment units and raw data for the assessment cycle being evaluated can be downloaded through the on-line database. DEQ is continually working to upgrade and improve these tools and will work towards one tool that can fit all needs. Assessment data can be accessed via the online database or [AWQMs](#) database.

---

**OFB&OFIC#6: Suggested Change ID #46**

**Description:** TMDL- rationales of prioritizations

**Comment:** In the Draft TMDL Priorities and Schedule document, factors that informed the prioritization of future TMDLs are described generally, but the rationale for the prioritization of specific TMDLs is not presented. Can this be provided?

**Response:** DEQ prepared the priority ranking of TMDLs to be developed as part of the biennial submittal to EPA of Oregon's Integrated Report, as required by 40 CFR § 130.7(b)(4) and 40 CFR § 130.7(d)(1). In keeping with these regulations, DEQ identified priority ranking of all assessment units needing TMDL development and identified waters targeted for TMDL development in the next two years. Although not required by state or federal regulations, DEQ's report also provided a summary of criteria used to determine TMDL project priority rankings. DEQ clarified that the multi-level evaluation focused on severity of pollution and uses of the waters, as required by CWA § 303(d)(1)(A) and 40 CFR § 130.7(b)(4), but also included consideration of additional factors. DEQ did not prepare further details on the rationale of TMDL-specific prioritization.

---

---

**OFB&OFIC#7: Suggested Change ID #47**

**Description: Methodology- category 2 designations**

**Comment:** We appreciate the Excel file that lists explicitly the AUs proposed for delisting from the 2018/2020 303(d) list. However, the reasoning leading to the assignment of AUs to Category 2 is not entirely clear. Could DEQ please provide a brief written description (or provide linked reference within the Excel file for these details) to remind readers of data required for delisting for each water quality criterion (or a reference describing where to find this description) and then provide additional information in this Excel file to explain how these criteria were met. For example, over what date range were data collected? How many samples were collected? What are the coordinates of the sampling location(s)? Which entity collected and which entity submitted the data? This information will help provide positive examples for members of our organization who seek to initiate data collection to remove additional AUs from the 2022 303(d) list.

**Response:** The methods to delist waterbodies are outlined in section 3.3.5. of Delisting water bodies in the Draft Methodology for Oregon’s 2022 Water Quality Report and List of Water Quality Limited Waters ([online](#)). DEQ appreciates the suggestions for providing clarity to the proposed delisting spreadsheet and will attempt to expand upon the information that is already provided in the future.

---

---

**OFB&OFIC#8: Suggested Change ID #48**

**Description: Data- Use of narrative data**

**Comment:** In the accompanying document that describes the use of narrative data, data sources 19, 31, and 38 mention narrative data pertaining to algal blooms, aquatic invasive species, and aquatic weeds, respectively. For each of these, DEQ states that data on these topics is considered as part of DEQ’s assessment methodology. We request that DEQ clarify this in two ways. First, are narrative data on these topics used for water quality assessments, are narrative data disregarded in favor of numerical data, or are both used when available? Second, narrative data are not mentioned in the IR Assessment Methodology. Can this accompanying document be updated to mention the section or page of the methodology document that corresponds to the use of data on these topics?

**Response:** The referenced document “Water Quality Assessments, Narrative Data Submittals” was written in response to non-numeric data DEQ received during the 2022 Integrated Report Call for Data. Responses are specific to the information referenced. The submittals of non-

numeric data DEQ received during the Call for Data can be found in Appendix B of the 2022 Assessment Methodology at <https://www.oregon.gov/deq/wq/Pages/proposedIR.aspx>. In the context of this document, narrative data refers to non-numeric data which could not be submitted to DEQ electronically via spreadsheet template. Examples of these data types includes but are not limited to non-numeric data that includes journal articles; state, federal or other government agency reports; Oregon Health Authority advisories; and study findings and observations.

The Aquatic Weeds or Algae parameter chapter which begins on page 26 of the 2022 Assessment Methodology (online [here](#)) documents data and methods used in these assessments. For Harmful algal blooms (HABs), DEQ uses Oregon Health Authority public health advisories in conjunction with numeric cyanotoxin data. For aquatic invasive weeds, DEQ uses the Oregon Aquatic Invasive Species hotline reporting as a source for documented reports of species on the Oregon Department of Agriculture Noxious Weed Policy and Classification System designated as “A”, “B”, or “T” weeds or those covered by a quarantine in OAR 603-052-1200.

---

#### **OFB&OFIC#9: Suggested Change ID #49**

**Description:** Data- Use of modeling

**Comment:** In the accompanying document that describes the use of narrative data, data sources 13 and 26 appear to present redundant and unclear descriptions of the use of model output. With respect to data source 13 (“Modeling done for state waters”), DEQ states, “Modeling alone is not enough information to base an assessment conclusion on. ... absent any data, [model results] would not be the sole reason for listing.” With respect to data source 26 (“Results of predictive and simulation modeling for state waters”), DEQ states, “Predictive simulation modeling may be used in conjunction with data collected, but would not be used as the sole basis for an impairment listing.” We request that DEQ combine these two lines in its table and unify the resulting language. We also request that DEQ clarify how model results will aid its development of a water quality determination. In addition, model results are mentioned with respect to impairment listings. Could model results be used for delisting or to maintain the assignment of an AU in Category 2?

**Response:** The referenced document “Water Quality Assessments, Narrative Data Submittals” (online [here](#)) was written in response to non-numeric data DEQ received during the 2022 Call for Data. Responses are specific to the information referenced. Both responses state that based on DEQ’s current assessment methodology, modeling alone will not be used as the sole basis for an impairment listing.

DEQ does not use model outputs in lieu of collected data. In this instance, the reference to “modeling” relates to the assessment of collected macroinvertebrate data. As outlined in the Biocriteria chapter of the 2022 Assessment Methodology, DEQ currently uses a multivariate

predictive model (PREDATOR) to predict the number and types of macroinvertebrates that are expected to be in a least disturbed condition stream. Site specific sampled macroinvertebrate data are compared to expected assemblage predicted by the PREDATOR model to determine an overall value of percent taxa loss. Site specific taxa loss values are categorized into attainment status based on peer reviewed benchmarks. For example, an assessment unit with a single macroinvertebrate sample in the western side of the state with <8% taxa loss is considered Category 2.

---

## 7. Comments from: David Waltz

### DW#1: Suggested Change ID #62

**Description:** Data - Continuous Dissolved Oxygen Sensors

**Comment:** DO Year-round (Technology issue #2 above): For the Siuslaw (see attached Excel file), there is substantial indication that the daily minimums results in AWQMS used to compare with the assessment criterion are potentially due to device errors. I worked with the SWC on these projects and we never observed (nor were notified about) an indication of DO “starvation” (dead fish, device audit grab monitoring results, etc) such as those associated with results < 6.0 mg/L. In addition, no field audit results indicated DO depressions in this range. Adding up the total “excursions” relative to total number of days of minimum results, this represents about 3.3% of daily minimums reported as failing. Example: Tab N: Yr Rnd Cont Other AU Cat\_MID AU ID: OR\_SR\_1710020602\_02\_105057 AU Name: Wildcat Creek Review Comment: vol mon data - 8 excursions of abs. min out of 103 results. lowest min =2.7

This is an example of probable device data quality issue (Technology) rather than actual water column conditions. Conclusion: I don’t have great suggestions for dealing with results from these extended Onset U26 deployments that Steve Hanson, Dan Sobota and others haven’t considered, other than using BPJ to evaluate the daily mins that are extremely low (or high). It may be that these devices are not the appropriate technology to collect CDO for these periods and use the results for Assessment with a huge amount of manual review and “BPJ” in removing or qualifying suspect data.

**Response:** DEQ Laboratory and Volunteer Monitoring programs have been using continuous dissolved oxygen data loggers for over five years. As with all continuous data used in the water quality assessment, the confidence in the data can only be assured if the results are reviewed and suspect values are downgraded or removed. DEQ uses a rigorous multipart review procedure to assign data quality levels to each logged result that includes automated precision and accuracy checks, followed by a manual review where the analyst can use best professional judgement to manually downgrade data. Any logged result that is not assigned a Data Quality Level (DQL) of A or B will be removed from the calculation of summary statistics and eliminated from the water

quality assessment. In investigating this comment, DEQ found an error in assignment of DQLs to raw continuous dissolved oxygen data loaded to [AWQMS \(online\)](#) for our volunteer monitoring partner Siuslaw Watershed Council (Organization ID = SIUSLAW). As a result, these data have been removed from the 2022 Integrated Report and the status of the assessment units below will move back that reported in 2018/2020 cycle. The DEQ laboratory has initiated a data correct process and the SIUSLAW will be used in the 2024 Integrated Report.

AU_ID	Assessment	2022 IR Category	Previous Category	Rational
OR_SR_1710020602_02_105057	Dissolved Oxygen - Year Round	Unassessed	Category 2	Impaired: 4 excursions of alternate minimum criteria. 1 valid excursions of 7-mi metric. 0 valid excursions of 30-D metric
OR_SR_1710020603_02_105061	Dissolved Oxygen - Year Round	Unassessed	Category 3	Attaining: 0 excursions of alternate minimum criteria. 0 valid excursions of 7-mi metric. 0 valid excursions of 30-D metric
OR_SR_1710020603_02_106410	Dissolved Oxygen - Year Round	Unassessed	Category 2	Attaining: 0 excursions of alternate minimum criteria. 0 valid excursions of 7-mi metric. 0 valid excursions of 30-D metric
OR_SR_1710020606_02_106412	Dissolved Oxygen - Year Round	Unassessed	Category 2	Attaining: 0 excursions of alternate minimum criteria. 0 valid excursions of 7-mi metric. 0 valid excursions of 30-D metric
OR_SR_1710020607_02_106405	Dissolved Oxygen - Year Round	Unassessed	Unassessed	Impaired: 5 excursions of alternate minimum criteria. 0 valid excursions of 7-mi metric. 0 valid excursions of 30-D metric
OR_SR_1710020607_02_106413	Dissolved Oxygen - Year Round	Unassessed	Unassessed	Impaired: 4 excursions of alternate minimum criteria. 0 valid excursions of 7-mi metric. 0 valid excursions of 30-D metric
OR_SR_1710020608_02_105077	Dissolved Oxygen - Year Round	Unassessed	Category 2	Attaining: 0 excursions of alternate minimum criteria. 0 valid excursions of 7-mi metric. 0 valid excursions of 30-D metric

**DW#2: Suggested Change ID #63**

**Description:** Methodology – Consideration of Percent Saturation for Assessment Dissolved Oxygen for Spawning

**Comment:** Issue #2: 2022 IR Methodology impact on categorization decision: There are two DO assessment periods, with different issues.

Spawning period (cold water) and intragravel (inter-) dissolved oxygen (IGDO): The 2022 Assessment methodology applies a stricter (narrower) interpretation of the spawning criteria than 2018. Meaning that percent saturation is no longer being considered if concentration is below the Table daily minimum (and lacking data that shows IGDO > 8 mg/L). Addition of the “= 2

daily minimum values...” decision box represents a significant change to Figure 6. The decision tree for assessment of the dissolved oxygen spawning criteria. This change can (and will) move certain AUs where continuous data were collected and saturation values were met into Category 5 based on no new data. Has Standards made an official determination that OAR 340-041-0016(1)(a) supersedes OAR 340-041-0016(1)(b)? For many years these were interpreted as parallel criteria, rather than hierarchical decisions. This decision change also meant that a thorough review of the 2022 draft IR required a re-review of the 2018/2020 assessment in order to compare to 2022 to determine what information changed, if anything, and confirm what data (or statistics) were now used to determine “excursions” and identify the root basis for the change in assessment category. One basic concern with intragravel dissolved oxygen (IGDO) monitoring data as the “alternative” tool to meet criteria is difficult to obtain and repeatable studies are virtually unknown in Oregon and rare nationally. Literature reviews show IGDO conditions are spatially variable (WA DOE, 2009). The WA DOE review also concluded: “Oregon’s criteria include several exceptions and are more complex than others reviewed” “Oregon also includes an exception to both water column and intra-gravel numeric criteria. When barometric pressure, altitude, and temperature preclude achievement of these criteria, the waterbody must meet at least 95% DO saturation.” This is the framework we previously used. Although theoretically IGDO is accurately measurable over a period of time, in stable conditions, DEQ has no standard “off-the-shelf” methods to perform these measurements. We lack reliable and repeatable methods to compare ambient conditions with this aspect of the standard. In lieu of IGDO, DEQ is now applying a stricter interpretation based on a minimum number of samples that no longer considers percent saturation (= 95%) to be a key component of water quality condition. Since water column DO concentration is directly related to water temperature and pressure in naturally flowing waters (in absence of oxygen-demanding compounds or situations elevating dissolved gas), the 11 mg/L water column criterion will be exceeded and are therefore unattainable for many waters in the coast range in mid-October (onset of spawning period for many streams). Example File: DO Spawn.xlsx Focus on: DO new Cat 5 Spawning: For 2022 Methodology: Revised interpretation of spawning minimum criteria (9 mg/L; ignores DOSat%) OR\_SR\_1710020408\_02\_105994 Salmon River Headwaters WA Unit to Slick Rock Creek OR\_SR\_1710020408\_02\_105997 Salmon River Slick Rock Creek to Willis Creek Stations: 34449-ORDEQ; 38593-ORDEQ & 35485-ORDEQ; 33099-ORDEQ; 35487-ORDEQ; 38588-ORDEQ For DO-Spawn: Effect: resulted in multiple new Cat 5 AUs that were ID’d as Cat 2 in 2018.

**Response:** DEQ did not change the assessment methodology for dissolved oxygen between the 2020 and 2022 Integrated Report assessment cycles. The assessment code used to assess dissolved oxygen in 2022 was modified slightly. Percent saturation was only included in the assessment if it invalidated a criteria excursion. To address this concern, DEQ reran all dissolved oxygen spawning assessments with the assessment code used in 2018 and found no change in categorical conclusions. In presentation of this information to the DEQ commenter, the commenter acknowledged their earlier incorrect understanding of the assessment and confirmed the assessment determination decision.

Regarding intragravel dissolved oxygen measurements (IGDO), DEQ agrees that there is no recognized, standard “off-the-shelf” method to perform these measurements. As a result, DEQ has not received or assessed IGDO data either the 2018/2020 or the draft 2022 Integrated Report.

---

**DW#3: Suggested Change ID #64**

**Description:** Assessment Conclusions - Spawning period decisions for specific AUs

**Comment:** The revised methodology produced a Category 5 AU in the coldest waters monitored in the Siletz subbasin. The spawning period for the Siletz River starts Sept 1, the earliest of the freshwater segments in the MidCoast Basin. In most years, temperatures even in the upper gorge will not be achieving applicable temperature criterion in early Sept, but show healthy levels of % Sat (see 2017 continuous data reported to the Lab; AWQMS missing reported %Sat values). This change also reverses spawning period assessment decision Category 2 (2018) for these AUs: OR\_SR\_1710020405\_02\_105978 • OR\_SR\_1710020407\_02\_106452

**Response:** Data used in the 2022 assessment confirm Category 5 impairments for both assessment units. A shift to a Category 5 designation likely means these assessment units are on the borders of impairment. The creation of a more rigorous delisting methodology for dissolved oxygen in 2022 seeks to remedy the situation of an assessment unit moving on and off the 303(d) list due to reasons besides water quality improvement.

---

**DW#4: Suggested Change ID #80**

**Description:** Missing Data - Salmon-Drift Creek WSC

**Comment:** Example: For OR\_SR\_1710020407\_02\_106452: it does not appear that Assessment evaluated the August-Sept 2016 continuous monitoring data generated by the Salmon-Drift Creek WSC (VM\_SDCWC\_AW) in collaboration with the Siletz Tribes for either the 2018 IR or the current assessment. The temperature and CDO data is in AWQMS, but the reported DOSat% values calculated using local barometric pressure data are missing. See Stations: 38920-ORDEQ 40227-ORDEQ 40228-ORDEQ 40229-ORDEQ 40230-ORDEQ

**Response:** DEQ will load dissolved oxygen percent saturation values calculated with known methods to the AWQMS database. At this time, DEQ is uncertain of the method this organization used for calculating percent saturation and is working to obtain this information.

---

**DW#5: Suggested Change ID #81**



**Description:** Missing Data - Alsea-Beaver Creek and Big Elk Creek Continuous Dissolved Oxygen

**Comment:** CDO data (WR/LSWCD 2018): Continuous data template submitted to Lab (WQ-TMDL); submitted 4/21/2021: No results are in AWQMS at this time. Assessment does not appear to include any data from these two related, but separate projects. If possible, we would like to get it to Assessment Team for the 2022 IR and make decisions about WQ status before assigning WQ Analyst.

Big Elk Creek Big Elk Creek CDO data: OR\_SR\_1710020402\_02\_105954 Big Elk Creek Sugarbowl Creek to Devils Well Creek LSWCD (CDO-2016): Continuous Temp & DO data submitted to Lab (WQ-TMDL) in May 2021; data not in AWQMS; not assessed

**Response:** Dissolved oxygen data for Alsea and Beaver Creeks were submitted to the DEQ laboratory after the Call for Data window had closed on Apr. 2, 2021. Data were also submitted outside of routine data submittal processes (either Call for Data or Volunteer Monitoring) and were therefore not analyzed in the 2022 Integrated Report assessment.

---

---

**DW#6: Suggested Change ID #82**

**Description:** Missing Data - OR\_SR\_1710020401\_02\_105950

**Comment:** File: AU\_all.xlsx AU: OR\_SR\_1710020401\_02\_105950 Little Elk Creek Headwaters WA Unit to confluence with Yaquina River Column M (assessed\_2022): Indicates not assessed in 2022. However, the 2016 spawning period DOSat% results for station 36912-ORDEQ were re-calculated using local barometric pressure data and re-submitted to the DEQ Lab for review. These Results were accepted by Lab and were scheduled to be revised in AWQMS in 2021 and we request data for this AU be re-assessed.

**Response:** In researching this assessment unit, DEQ found a filter inadvertently applied at the time of the original data pull from [AWQMS](#) whereby some DEQ and Volunteer Monitoring data with a data quality level of B was left out of the 2022 assessment. DEQ has fixed this issue and a table of assessments conclusions that are changed after removing this filter can be at <https://www.oregon.gov/deq/wq/Pages/proposedIR.aspx> under submittal documents.

---

---

**DW#7: Suggested Change ID #83**

**Description:** Missing Data - LSWCD VM (Siletz CDO 2017)

**Comment:** AWQMS does not appear to contain results for the DOSat% (for continuous data) that was reported and submitted by LSWCD to VM Program (in March 2018 for 2017). Missing DOSat% results appear to be the basis for two new Cat 5/303d listed AUs (OR\_SR\_1710020405\_02\_105978 and OR\_SR\_1710020407\_02\_106452).

**Response:** DEQ will only load dissolved oxygen percent saturation values calculated with known methods to the [AWQMS](#) database. At this time, DEQ is uncertain of the method this organization used for calculating percent saturation and is working to obtain this information. In the dissolved oxygen assessment, when no percent saturation data is available in AWQMS, percent saturation is calculated based on Equation 1 on page 49 of the Draft Assessment Methodology for Oregon’s 2022 Water Quality Report and List of Water Quality Limited Waters (online [here](#)). When corresponding water temperature data is available, percent saturation is calculated and used.

---

**DW#8: Suggested Change ID #84**

**Description:** Missing Data - SDCWC VM (CDO 2017)

**Comment:** AWQMS does not appear to contain results for the DOSat% (for continuous data) that was reported and submitted by SDCWC. We discussed this during our meeting on January 27, 2021. At that time, we discussed Lab/VM re-evaluating this issue, but not sure of the subsequent steps or outcome. I can’t tell from the IR database whether the lack of DOSat% data was one basis for the 2018/2020 decision to identify the AU (OR\_SR\_1710020408\_02\_105997) as Cat 5 (Spawning), but that’s a factor we need to consider since the data isn’t in AWQMS.

**Response:** DEQ will load dissolved oxygen percent saturation values calculated with known methods to the AWQMS database. At this time, DEQ is uncertain of the method this organization used for calculating percent saturation and is working to obtain this information. AU ID OR\_SR\_1710020408\_02\_105997 was identified as Category 5 for dissolved oxygen – spawning due to 15 of 90 7DADMean values were both below 11 milligrams/liter concentration and 95% saturation.

---

## 8. Comments from: Oregon Coordinating Council on Ocean Acidification and Hypoxia

**OCCOAH#1: Suggested Change ID #50**

**Description:** Methodology- OAH prioritization

**Comment:** With Oregon’s 2018/2020 Integrated Report, the State became the first in the Nation to identify coastal marine waters as waters of potential concern due to impacts from ocean acidification and hypoxia (both as 3B categorization – Insufficient data but of potential concern). This has been a critical step for Oregon in the ongoing efforts to combat OAH. We would like to acknowledge ODEQ’s deliberate strides forward in actively reaching out to the scientific community to build the cross disciplinary knowledge of oceanography and water management needed to assess our dynamic Oregon coastal systems. This work was highlighted by ODEQ in the 2021 OAH Council Multiagency Report on Programs and Needs and should continue to be a priority.

**Response:** Thank you for the acknowledgement of DEQ’s efforts to address ocean acidification and hypoxia. These efforts are continuing with the initiation of the 2022 Ocean Acidification and Hypoxia (OAH) Technical Work Group process to develop an assessment methodology for marine waters. Information about the OAH Technical Work Group is [online](https://www.oregon.gov/deq/wq/Pages/WQ-Assessment.aspx) (<https://www.oregon.gov/deq/wq/Pages/WQ-Assessment.aspx>).

---

#### **OCCHOAH #2: Suggested Change ID #51**

**Description:** Data- Use of oceanographic data formats

**Comment:** Incorporate multiple oceanographic data formats into Integrated Assessment Reports analysis. These data could be in the form of fixed depth sampling (e.g., moorings, benthic platforms), vertical depth sampling (e.g., CTD sampling, vertical profiler), and spatial sampling where data are collected at multiple depths along a transect (e.g., underwater glider). Many of these platforms can collect several different types of marine data simultaneously including dissolved oxygen, pH, salinity, temperature, and pCO<sub>2</sub>. These new data will require ODEQ staff to consider new analysis procedures, not commonly used in freshwater systems, but standard practice within oceanographic data processing. The OAH Council offers our support in these efforts by connecting ODEQ with regional experts that can assist.

**Response:** DEQ has begun an ocean acidification and hypoxia (OAH) technical work group to develop an assessment methodology for marine waters. Information about the OAH Technical Work Group is [online](https://www.oregon.gov/deq/wq/Pages/WQ-Assessment.aspx) (<https://www.oregon.gov/deq/wq/Pages/WQ-Assessment.aspx>). Part of this process will be identifying indicators (chemical and/or biological) which we can incorporate into assessments. DEQ will look to this group of experts and the OAH Council to better understand how existing depth gradients and marine water quality data formats can be aggregated or summarized in a way that would facilitate use in the assessment.

---

#### **OCCHOAH #3: Suggested Change ID #52**

**Description:** Data- AWQMS

**Comment:** Invest in updating the current data input website, which will likely need forward planning and strategic investment by ODEQ. The Ambient Water Quality Monitoring System (AWQMS), the current website, does not support input of several key marine parameters (e.g., aragonite, pCO<sub>2</sub>, etc.) or commonly used oceanographic data formats (e.g., continuous data sets over vertical or spatial scales). AWQMS also does not have a clear way for marine biological data to be submitted. These marine parameters and oceanographic data formats will be critical in ODEQ's ongoing methodology development. Additionally, AWQMS is extremely tedious for researchers to input key data sets (e.g., Ocean Observatories Initiative, NOAA ERDDAP Oregon Glider Data, Newport Hydrographic Line, Partnership for Interdisciplinary Studies of Coastal Oceans PISCO, etc.) – many of these data sets are already publicly available. We would like to remind ODEQ of their obligation to find and review all publicly available data sets during the development of Integrated Reports (per federal mandate under the Clean Water Act [40 CFR §130.10 (d)(6)]), and that the researchers that are volunteering their time to assist ODEQ in their mandate should have a website that allows them to efficiently input state needed data. The OAH Council offers our assistance to ODEQ in working with these researchers to streamline the process for data submittal prior to the next data call.

**Response:** During the 2022 Call for Data process, DEQ received ocean and estuarian data which included partial pressure CO<sub>2</sub> and other marine parameters. DEQ's laboratory team worked to load these data to [AWQMS](#). DEQ has begun OAH Technical Work Group process to develop an assessment methodology for marine waters. Information about the OAH Technical Work Group is [online](https://www.oregon.gov/deq/wq/Pages/WQ-Assessment.aspx) (<https://www.oregon.gov/deq/wq/Pages/WQ-Assessment.aspx>). Part of this process will be identifying indicators (chemical and/or biological) which we can assess against. Once chemical and/or biological indicators are selected DEQ will evaluate AWQMS and current data submission templates to determine what upgrades are needed to ease data sharing.

DEQ would like to point out that many of the organizations and datasets mentioned in this comment are collected by or in collaboration with federal agencies. Currently the federal database Water Quality Portal does not store continuous or time series data. These datasets are often only available through academic data sharing platforms which do not have set data formats, valid values, or consistently required metadata. Given the two-year turnaround time for developing, assembling data, assessing and reporting Integrated Reports that are submitted to EPA and limited staffing in the Water Quality Assessment program, DEQ does not consider these platforms readily available data. DEQ welcomes any assistance the OAH Council can provide to assist in making oceanographic data more accessible in a centralized database for use in the Integrated Report assessments.

---

#### **OCCHOAH #4: Suggested Change ID #53**

**Description:** Data- temporal and spatial variability in marine water

**Comment:** Incorporate temporal and spatial variability in marine water, a unique consideration compared to most freshwater environments. This need was highlighted by ODEQ in the Marine dissolved oxygen water assessment document, and will continue to be a consideration for most current and future marine parameters (e.g., pH, aragonite, DO, pCO<sub>2</sub>, etc.) especially across depth gradients. The continuous nature of marine assessment units, which do not have clearly defined boundaries, should be another consideration for ODEQ. Specifically, regarding how data gaps are assessed and if data from one assessment unit can be used for an adjacent unit (while considering regional bathymetry and current patterns). This is important as Oregon experiences seasonal shifts in duration and magnitude of coastal upwelling, which mixes bottom surface waters in nearshore systems, and will likely be a central topic for discussions at the OAH Technical Work Group workshops.

**Response:** DEQ has begun an ocean acidification and hypoxia (OAH) technical work group to develop an assessment methodology for marine waters. Information about the OAH Technical Work Group is [online](https://www.oregon.gov/deq/wq/Pages/WQ-Assessment.aspx) (<https://www.oregon.gov/deq/wq/Pages/WQ-Assessment.aspx>). Part of this process will be identifying indicators (chemical and/or biological) which we can assess against. DEQ will look to this group of experts and the OAH Council to better understand how existing temporal and spatial variability in marine water quality data can be aggregated or summarized in a way that would facilitate use in the assessment.

---

#### **OCOA #5: Suggested Change ID #54**

**Description:** Data- derived data and modeling

**Comment:** Consider marine derived data and model output in Integrated Assessment Report analysis. Several marine carbon parameters could be used moving forward to assess ocean acidification (pH, pCO<sub>2</sub>, total Dissolved Inorganic Carbon (DIC), or Total Alkalinity (TA)), and if two of the four are measured, then the other two can be derived. In addition, aragonite is rarely directly measured, and is derived from DIC and TA, considering regional temperature and salinity. Output from numerical ocean models are also available to assess the coastal marine system, and newly created regional coastal models such as J-SCOPE (and its various smaller scale regional model runs) provide seasonal forecasts of aragonite and oxygen levels at surface and bottom waters. This model covers both State (3 nautical miles offshore) and Federal waters. These data sets and model output are central to our understanding of OAH in Oregon coastal systems from a scientific standpoint and should be incorporated into discussions at the OAH Technical Work Group workshops.

**Response:** Modeling is often done for predictive purposes which may be helpful for identifying areas of concern. Model conclusions may be used to develop assessment methodologies and/or support an assessment determination, but absent any data, is not likely to be the sole reason for listing. DEQ will work with the 2022 Ocean Acidification and Hypoxia (OAH) Technical Work Group to address these constraints and better understand where model outputs can fit into the

process. Information about the OAH Technical Work Group is [online](https://www.oregon.gov/deq/wq/Pages/WQ-Assessment.aspx) (<https://www.oregon.gov/deq/wq/Pages/WQ-Assessment.aspx>)

---

#### **OCCHOAH #6: Suggested Change ID #55**

**Description:** Process- Advertise call for data

**Comment:** Effectively advertise future calls for data to help facilitate more inclusive data submission from the wider marine community. This would not only increase regional participation in assessing the status of Oregon’s marine waters but could provide ODEQ with needed data in areas where there are currently gaps. Through the OAH Council’s role as a coordinating body, we offer our ongoing assistance to ODEQ in this process.

**Response:** During this assessment, DEQ held a statewide data call and assessed over 7.7 million rows of data from over 101 organizations. Four organizations with marine and estuarian data are included in these numbers. DEQ has begun an ocean acidification and hypoxia (OAH) technical work group process to develop an assessment methodology for marine waters. Information about the OAH Technical Work Group is [online](https://www.oregon.gov/deq/wq/Pages/WQ-Assessment.aspx) (<https://www.oregon.gov/deq/wq/Pages/WQ-Assessment.aspx>). Part of this process will be identifying indicators (chemical and/or biological) which we can assess against which will provide clarity to data providers. DEQ will continue to make improvements on our process for soliciting data and welcome the assistance in reaching out to data holders that are not traditionally reached through regular channels.

---

## **9. Comments from: Oregon Department of Fish and Wildlife**

#### **ODFW#1: Suggested Change ID #56**

**Description:** Methodology- Freshwater Temperature

**Comment:** ODFW urges DEQ to modify its temperature assessment methodology to remove the air temperature exclusion. OAR 340-041-0028 (12)(c) Air Temperature Exclusion states that “A water body that only exceeds the criteria set out in this rule when the exceedance is attributed to daily maximum air temperatures that exceed the 90th percentile value of annual maximum seven-day average maximum air temperatures calculated using at least 10 years of air temperature data, will not be listed on the section 303(d) list of impaired waters and sources will not be considered in violation of this rule.” While ODFW understands that the current exclusion

may be applicable to permitted discharges, ODFW does not agree that it should be applicable to water quality assessment and impairment determinations. Projected increases of 1.5° to 2.0° Celsius in global surface temperatures provide the foundation for associated increases in water temperatures and exceedances of criteria that have detrimental impacts to aquatic life. ODFW would encourage DEQ to make the necessary modification to its methodology in the next Integrated Report cycle and associated clarification in OAR 340-041-0028 (12)(c) rule language during DEQ's proposed aquatic life use updates.

ODFW would also encourage DEQ to revise its temperature delisting methodology to include greater than one year of data to remove a waterbody from the 303(d) list of impaired waters. Inherent variability in climate patterns make the need for multiple years of data more essential.

**Response:** Thank you for the suggestion. The air temperature exclusion is part of the EPA approved water quality standard for temperature and DEQ will continue to use it to assess beneficial use support. DEQ is plans to update the temperature delisting methodology for the 2024 Integrated Report cycle.

---

---

**ODFW#2: Suggested Change ID #57**

**Description:** Assessment conclusion- 100177 temperature

**Comment:** The Category 5 temperature listing on Tahkenitch Lake (AU ID: OR\_LK\_1710020701\_02\_100177) appears to be an error in the 2012 303(d) list crosswalk. The original listing was based on data collected at the sampling location, monitoring location ID 33417, Fivemile Creek

**Response:** Thank you for submitting this correction. DEQ agrees the year round temperature listing for Tahkenitch Lake (AU ID: OR\_LK\_1710020701\_02\_100177) was an error in the 2012 303(d) list crosswalk. The original temperature listing based on monitoring location ID 33417-ORDEQ (Fivemile Creek) is retained on AU\_ID: OR\_SR\_1710020701\_02\_104922 (Fivemile Creek). The temperature listing for AU ID: OR\_LK\_1710020701\_02\_100177 will be removed as no new data is available to assess temperature in this AU.

---

---

**ODFW#3: Suggested Change ID #58**

**Description:** Methodology- Pesticide benchmarks

**Comment:** The 2022 Integrated Report assessment fails to adequately capture the impacts to aquatic ecosystem beneficial uses due to pesticide application. Oregon is home to a bountiful agricultural industry and is the nation's largest producer of hazelnuts and cranberries and one of the largest producers of Christmas trees, nursery stock and grass seed. In addition to agricultural

crops, Oregon is the largest lumber producer in the United States with approximately 50% of the total landmass of Oregon covered in forests. Pesticide use in these industries threatens aquatic ecosystems and pesticide runoff can disrupt hormonal, reproductive, and developmental processes in aquatic organisms.

The Environmental Protection Agency's Office of Pesticide Programs (OPP) develops aquatic life benchmarks which are estimates of the concentrations below which pesticides are not expected to represent a risk of concern for aquatic life. The benchmarks are based on toxicity values from scientific studies that EPA reviewed and used to estimate risk to freshwater organisms from exposure to pesticides and their degradates in their most recent publicly available ecological risk assessments and preliminary Problem Formulations written in support of pesticide registration or registration review. Out of 720 published aquatic life benchmarks for registered pesticides, only nine of those have approved aquatic life criteria (approximately 1%). Of those pesticides with approved aquatic life criteria, only four have not been phased out of use which means that 99% of registered pesticides currently in use are not being considered in DEQ's Integrated Report water quality assessments. ODFW encourages DEQ to consider using current use pesticide aquatic life benchmarks in their Integrated Report water quality assessment. Comparing measured concentrations of pesticides in surface water with an aquatic life benchmark can inform future monitoring and aid in identifying and prioritizing sites that may require further investigation.

**Response:** DEQ is in the process of setting priorities for the 2024 and 2026 assessment methodology updates. The Water Quality Standards Triennial Review Report and 2021–2024 Work Plan includes a timeframe of 2024 to begin work on interpretation of narrative toxics standard. The assessment team will be assisting this process and may have updated methodologies for the 2026 Integrated Report cycle.

---

#### **ODFW#4: Suggested Change ID #59**

**Description:** Assessment conclusion– Shellfish toxin correction

**Comment:** The 2022 Integrated Report assessment identifies sixteen coastline assessment units proposed to be delisted because a TMDL has been developed. To ODFW's knowledge, no TMDLs have been developed to date to address impairment from shellfish toxins. This unwarranted downgrading in impairment has clear impacts to ODFW constituents, who recreationally, commercially, and subsistence, harvest shellfish along our coastal systems and expect Oregon agencies to be monitoring these resources for ecosystem and human health.

As ocean conditions continue to change with changing climate, it will be important for the state to continue to consider the compounding effects on marine water quality of HABs, ocean acidification, and hypoxia. Several research studies suggest that as ocean conditions increase in



intensity and duration, this could have a direct effect on the concentration and toxicity of HABs within our coastal waters.

The following assessment units should be returned to Category 5: • OR\_CL\_1710020102\_106224 Ecola State Park • OR\_CL\_1710020102\_106225 Cannon Beach • OR\_CL\_1710020102\_106226 Del Rey Beach State Recreation Site • OR\_CL\_1710020102\_106227 Tolovana State Park Beach • OR\_CL\_1710020102\_106228 Arcadia State Park Beach • OR\_CL\_1710020102\_106229 Cape Falcon Shoreside Marine Protected Area • OR\_CL\_1710020102\_106230 Devils Cauldron • OR\_CL\_1710020102\_106231 Manzanita Beach • OR\_CL\_1710020102\_106232 Nehalem Bay State Park Beach • OR\_CL\_1710020102\_106267 Fort Stevens State Park Beach • OR\_CL\_1710020102\_106268 Sunset Beach • OR\_CL\_1710020102\_106275 Seaside Beach • OR\_CL\_1710020102\_106276 Indian Beach at Ecola State Park • OR\_CL\_1710020102\_106277 Oswald West State Park • OR\_CL\_1710020102\_106278 Hug Point State Park Beach • OR\_CL\_1710020102\_106279 Short Sand Beach

**Response:** Thank you for this correction. DEQ agrees these 16 assessment units were incorrectly delisted for shellfish toxins. Corrections will be made to the final list to place these waters back on the 303(d) Impaired Waters list.

---

---

#### **ODFW#5: Suggested Change ID #60**

**Description:** Methodology- OAH prioritization #2

**Comment:** ODFW would like to acknowledge DEQ's progress in actively reaching out to the scientific community to build the cross disciplinary knowledge of oceanography and water management. ODFW is excited by the opportunity to continue to work alongside DEQ staff and managers, as well as regional scientific experts, in the upcoming Ocean Acidification and Hypoxia Technical Work Group meetings (scheduled to start in February 2022). These meetings, co-facilitated by the Environmental Protection Agency, are an important process for state marine water quality management and will be precedent setting for Oregon and the Nation. This work was highlighted by DEQ in the 2021 OAH Council Multiagency Report on Programs and Needs and should continue to be a priority.

**Response:** Thank you for your support of DEQ's continued improvements to Water Quality Assessment and the Integrated Report.

---

---

# 10. Comments from: Willamette Riverkeeper

**WR#1: Suggested Change ID #26**

**Description:** Methodology- CAFO

**Comment:** In the last year alone, Willamette Riverkeeper has received information from numerous communities in the Willamette River Basin that factory farms, or concentrated animal feeding operations (“CAFOs”) are expanding into their watershed. The Santiam Basin, for example, has several that the local community members and Willamette Riverkeeper are opposing. This includes but is not limited to the J-S Ranch in Scio on the North Santiam, the Hiday Poultry Farms in Aumsville, and yet another one on the pristine Thomas Creek. We have argued that these facilities are completely inappropriate on these waterways. Additionally, CAFOs are point sources under the Clean Water Act, and subject to NDPES and WPCF permitting requirements. From what we have seen thus far, neither local or state level authorities are taking the “no discharge” requirements of the Clean Water Act seriously. This failure is even more shameful when CAFOs are proposing to be sited on 303(d) waters. As DEQ is well aware, the activities of constructing and operating CAFOs are sources of numerous kinds of pollution. We are baffled that DEQ is even reviewing permits for CAFOs along these waters, and also baffled that the Draft Integrated Report ignores the waters’ need for protection by failing to list these waters. The additional pollutants from factory farms, combined with the effects on our waters from the 2020 wildfires, suggests more aggressive monitoring is required. The goal and purpose of the CWA is to protect and restore water, and the antidegradation policy requires keeping waters clean; why would DEQ wait until pollution happens before providing further protection for these waters?

**Response:** The 2022 draft Impaired Waters List or 303(d) list includes Thomas Creek, Santiam River, North Santiam, South Santiam, and many tributaries. To assess waters, DEQ must have high quality data (numeric or narrative) referenced to a specific waterbody.

The Oregon Department of Agriculture (ODA) issues a Confined Animal Feeding Operation (CAFO) permit to livestock owners so that manure does not pollute ground and surface water. Oregon’s CAFO’s have permit coverage under CAFO NPDES General Permit #01-2016, which has a term of five years or CAFO WPCF Permit #01-2015, which has a ten-year term. Permit’s for CAFO operations are issued by ODA in coordination with DEQ. In addition to the general NPDES and WPCF permits, the program also issues individual permits, which gives the state the ability to customize the permit for the specific operation. Typically, an individual permit is issued instead of the general permit when the operation has had a history of compliance issues, is utilizing experimental technology, or is in an environmentally sensitive location.

Issuance of these NPDES and WPCF permits for CAFO operations ensures that each of the facilities is operated and monitoring appropriately according to both state and federal regulations for environmental protection. Through these permits, and combined with the Integrated Report, water quality is continuously monitored and protected.

Oregon's antidegradation rules provide a means for maintaining and protecting water quality of surface waters by requiring that all activities with the potential to affect existing water quality undergo review and comment prior to any decision to approve or deny the activity. ODA and DEQ staff review and apply the anti-degradation criteria to all new NPDES and WPCF General and all NPDES and WPCF Individual Permits when developing the permits.

---

**WR#2: Suggested Change ID #27**

**Description:** Methodology- Toxics monitoring

**Comment:** Willamette Riverkeeper has been involved in freshwater mussel studies for years. Recently we have been finding populations in streams in different spots throughout the Willamette River Basin waters. We wish DEQ would take a more assertive step on toxic pollutant monitoring in a wider array of streams to help us identify and protect freshwater mussel populations and their vulnerabilities.

**Response:** Thank you for this suggestion. DEQ must use all readily available data either submitted during the Call for Data process or retrieved from publicly available databases. DEQ Laboratory transitioned the Toxics Monitoring Program from the rotating basin basis used since 2008 to a network basis. The initial network consists of 60 sites statewide. This change allows the program to collect data from across the state more frequently, identify trends at selected sites, and apply the most current analytical methods in each basin. Past data, land use, assessment unit overlap, 303(d) listing status and spatial coverage are all factored into the selection of network sites.

---

## 11. Comments from: Clackamas Water Environment Services

**CWES#1: Suggested Change ID #28**

**Description:** Assessment conclusions- Carry forward previous listings

**Comment:** The Lower Willamette River has numerous category 5 listings for pollutants, which were not detected in the river's water. An example is the reach of the Willamette River from Champoeg Creek to the Clackamas River. Several pollutants here – including dieldrin and DDE 4,4'

– are on the list with a category 5 designation – which means a TMDL is needed – yet the website says “All results are non-detects with detection limits above criteria”. Another example is aldrin in the reach of the river from the Clackamas River to Johnson Creek. Because these pollutants were not detected, why would DEQ assume that the pollutant was actually present in a harmful concentration, and then put that water body on the 303(d) list with a category 5 designation? DEQ should re-designate all of these listings in all water bodies in Oregon as category 3 (“not enough information...”).

**Response:** The category 5 assessment conclusion referenced in the comment were carried forward from previous lists. In the 2022 assessment cycle, there was not enough data and/or information indicating water quality standards are being met to be removed from the 303(d) list. Section 3.3.5 of the Draft Methodology for Oregon’s 2022 Water Quality Report and List of Water Quality Limited Waters (online [here](#)) describes the minimum data requirements needed to delist the assessment unit. For the substances mentioned to be delisted, there would need to be at least 18 samples in the Integrated Report data window and the number of excursions would need to be less than the number indicated in Table 10 on page 21 of the Methodology. DEQ will work to clarify this in the rationales for listing.

---

#### **CWES#2: Suggested Change ID #29**

**Description:** Assessment conclusion- toxic cat 5

**Comment:** The Lower Willamette River has numerous category 5 listings for pollutants which had “zero excursions of criteria”. An example is the reach of the Willamette River from the Clackamas River to Johnson Creek. At least two pollutants here – cyanide and ethylbenzene – are on the list with a category 5 designation – which means a TMDL is needed – yet the measured amount of the pollutant was below the criteria. DEQ should redesignate all of these types of listings in all water bodies in Oregon as category 3 (“not enough information...”).

**Response:** Please see response to comment CWES#1 above.

---

#### **CWES#3: Suggested Change ID #30**

**Description:** Watershed Units- Names of units

**Comment:** In many instances, DEQ chose to combine two or more smaller streams into sub-watershed-size groupings, which are based, to the best of our knowledge, on the U.S. Geological Survey’s HUC-12 classification, the smallest federally-derived hydrologic classification available in Oregon at this time. For listings of interest to WES, in many instances, all of the water quality data from several different creeks were pooled together into a single Assessment Unit (unit) and an assessment conclusion was then drawn for the unit as a whole. This is a loss of detail

compared to older 303(d) lists/integrated reports, when creeks weren't combined into a larger units with one or more other creeks for 303(d) listing purposes. An example is Sieben Creek, a tributary in the lower Clackamas River's watershed. In previous integrated reports, Sieben Creek had its own 303(d) listings (dissolved oxygen, for example). But Sieben Creek is now in a larger assessment unit with Rock Creek and maybe other creeks and this unit's name is "HUC12 Name: Rock Creek-Clackamas River". This loss of detail creates challenges from a water quality management perspective, in part because creeks at this scale and particularly in urban environments can have drastically different water quality characteristics. If DEQ continues to combine several different creeks into the same assessment unit, an appropriate name should be used minimize confusion. For example, the Rock-Sieben Creek unit's name could be changed to "Rock and Sieben Creeks-Clackamas River".

**Response:** DEQ developed several types of assessment units based on the nationally recognized hydrography dataset. In addition to assessment units established for segments of larger streams and rivers, the methods also established an assessment unit referred to as a "watershed unit," which collectively represents small streams within a sub-watershed (HUC-12). These watershed units capture the smallest stream hydrologic classification areas in Oregon and provide a tractable method for conducting a statewide assessment. For these watershed assessment units, the name is derived from the sub-watershed (HUC-12) name. DEQ adds the prefix "HUC12 Name:" in an attempt to make that clearer.

In response to feedback on the 2018/2020 Integrated Report, DEQ modified how watershed units are assessed to include a more detailed representation of where impairments exist. For the 2022 Integrated Report, DEQ added localized information in the watershed unit by evaluating data on a station basis and displaying the specific waterbodies within a watershed unit where water quality exceedances and impairments occur. However, an overall status of the watershed assessment unit must still be reported to EPA. DEQ recognizes the complexity this additional level of reporting creates for users and provided an interactive story map to help guide through the assessment process. DEQ will continue to improve and clarify future reporting.

---

#### **CWES#4: Suggested Change ID #31**

**Description:** Display- Provide supporting information

**Comment:** As recently as a few years ago, DEQ's 303(d) list/Integrated Report website provided a detailed summary of the supporting information for the water quality data which was used by DEQ to support listing and delisting decisions. Having this data and supporting information on the website was very helpful to WES staff as they conducted reviews of previous 303(d) lists. Unfortunately, some of this data isn't on the DEQ's website at this time, or if it is available, it requires significant additional effort to find, and when it can be found, the data/information can be confusing or cryptic. Examples of supporting information which should be provided is the name of the organization who collected this data, when it was collected, and additional

information about where it was collected, such as a nearby street address or the nearest intersection of streets. Note that our January 6, 2020, comment letter – which was submitted for the draft 2018-2020 Integrated Report – included a similar comment. During our review over the past few weeks, WES staff have been able to obtain most of the supporting information needed, but the data and information they wanted wasn't always obtained. We urge DEQ to make it easier to obtain the water quality data, and the full summaries of supporting information for water quality data, on the website again when the 303(d) list/Integrated Report is updated in the future.

**Response:** Thank you for these suggestion on ways to improve DEQ's Integrated Report tools. Based on the 2020 comments, DEQ added rationales for the listing and made the raw data used in the assessment available for download on our online database. With each reporting cycle, DEQ works to improve the report and make the assessment conclusions accessible to a variety of audiences.

---

## 12. Comments from: Bureau of Land Management

### **BLM#1: Suggested Change ID #32**

**Description:** Assessment conclusion- BLM biocriteria

**Comment:** The HUC 12s Town of La Pine- Long Prairie (OR\_WS\_170703020609\_05\_102365 ) and West Long Prairie (OR\_WS\_170703020606\_05\_102362) and waterways Long Prairie Slough and Unnamed Trib to Long Prairie Slough have proposed water quality listings based on sample points OSF-02 and OSF-09. These locations should not be listed. The rationale given for listings at these locations is due to biocriteria. This determination is based on a sample of aquatic macro-invertebrates taken at these sites compared to a modeled expectation of macro-invertebrate presence.

It was brought to my attention (Anna Smith, BLM Hydrologist, personal communication) that the sampling method used by the BLM (Reachwide) at several locations does not fit the criteria for the PREDATOR model, which the listing is based on. Out of a subsample of monitoring locations that was done on BLM lands, only OSF-07 (where the Targeted Riffle sampling method was used) fits the criteria of the model (Table 1). Any sampling that uses the Reachwide method should not be used as criteria for impairment listing.

This situation may occur for other potential listing locations.

**Response:** Thank you for bringing these corrections. DEQ agrees with the comment and will remove all Reachwide BLM samples from the 2022 water quality assessment.

---

**BLM#2: Suggested Change ID #33**

**Description:** Assessment conclusion- irrigation infrastructure

**Comment:** The Unnamed Trib to Long Prairie Slough is in reality the Finley Ditch. The water delivered via the Walker Basin Canal originates from the Little Deschutes River in the adjacent watershed. Also, Monitoring Stations OSF-09 and OSF-02 both appear to be on irrigation ditches (Figure 1).

Neither of these two HUC12 watersheds, nor the irrigation infrastructure should currently be listed as impaired.

**Response:** Thank you for bringing this correction to our attention. DEQ agrees with the comment and will remove all Reachwide BLM samples from the 2022 water quality assessment.

---

## 13. Comments from: Forest Waters Coalition

**FWC#1: Suggested Change ID #35**

**Description:** General Support- Methodology updates

**Comment:** We appreciate the changes undertaken by the Department of Environmental Quality in the creation of the 2022 report, especially as they pertain to an added level of localized monitoring and recording of information at the monitoring station level. We appreciate the move to more clearly identify where impairments are occurring by assessing and reporting at individual monitoring stations rather than just by watershed assessment units. In general, we support more site specific monitoring and would like to encourage the agency to continue growing in this direction. We also appreciate that the agency expanded on rationales supporting assessment conclusions, and would like to encourage more transparency around assessment reports and conclusions therein.

**Response:** Thank you for your support of DEQ's continued improvements to the Water Quality Assessment and the Integrated Report.

---

## **FWC#2: Suggested Change ID #36**

**Description:** Assessment conclusion- Overwhelming Evidence

**Comment:** Uplist waterways with sufficient evidence of impairment—Although we believe more should be done in the outreach stage, we do believe DEQ has sufficient evidence to meet requirements to list the waterways discussed above on the 303(d) list as impaired for sedimentation. We believe the standard for overwhelming evidence has been met for Jetty Creek given the long list of water quality alerts and other known issues. We also believe the standard for overwhelming evidence has been met in the case of the Yamhill River and Panther Creek since both of those communities had to upgrade their water treatment systems due to sedimentation and turbidity concerns. If a waterway that has witnessed as robust attention as Jetty Creek did not make it onto the list for sedimentation, then we are concerned about how many other waterways are currently missing from this list.

**Response:** DEQ reviewed the submitted documentation for the proposed “uplist” (move from unassessed to Category 5) of Jetty Creek for turbidity based on overwhelming evidence. Jetty Creek assessment unit (OR\_SR\_1710020206\_05\_105856) was added to the 303(d) Impaired Waters list for fecal coliform in 2004. The assessment unit was last assessed in 2020 for Human Health and Aquatic Life uses for over 30 toxics pollutants based on data from DEQ’s Toxics Monitoring program. No additional pollutant was added to the 303(d) in 2020.

The following methodology is used to list a waterbody as Category 5 for turbidity for the domestic water supply beneficial use.

For impairments to beneficial use as drinking water supply, Public Water System operator indicates that high turbidity days (days with turbidity = 5 NTU) are causing operational difficulty and source water data validate this impairment. The data are considered to validate an impairment if more than 45 high turbidity days per year occur for any year for which data are available.

The Oregon Health Authority has regulatory authority over public drinking water systems in Oregon and does not require reporting of raw turbidity data. During the Integrated Report Call for Data, DEQ reaches out to public water systems and requests these data on a voluntary basis. DEQ reached out to Rockaway Beach Water Department but did not receive data from the public water system to be used in this assessment cycle. DEQ does however believe the information provided in the Jetty Creek for this assessment time window supports for a Category 3B: insufficient data; potential concern based on the definition in the assessment methodology and will pursue obtaining sufficient data from the water system for the 2024 assessment cycle.

For beneficial use as drinking water supply, available data are not sufficient to determine if the use is impaired, but indicate a potential concern. The Public Water System operator indicates that high turbidity days are causing operational difficulties, and there are no turbidity data of source water available to validate this impairment.



Without supporting data and information such as that provided for Jetty Creek, DEQ is not able to make any changes to Panther Creek or South Yamhill for turbidity assessment (both of which are listed as impaired for other pollutants). Both public water systems were contacted during the Call for Data, but no turbidity data of source water was received. DEQ will continue to reach out and request the data for the 2024 assessment cycle.

---

**FWC#3: Suggested Change ID #37**

**Description:** Methodology- Sedimentation monitoring locations

**Comment:** Monitoring methodology—We implore the DEQ to monitor for sedimentation and turbidity at individual assessment units in order to identify where exactly the problems are arising. The DEQ should conduct ongoing monitoring for sedimentation and turbidity along numerous testing locations, in the same way the agency is undertaking monitoring for pH, dissolved oxygen and temperature—in such a way that assists the agency and community members in determining the sources of the problems coming out of our taps.

**Response:** DEQ’s Water Quality Monitoring program routinely samples for turbidity in most monitoring programs. While turbidity data are available in many assessment units around the state, the assessment methodology for determining impairments of domestic water supply systems is specific to a two-part analysis: 1) Public Water System operation difficulties due to elevated turbidity, and 2) validation of elevated raw water turbidity of the source water. For the 2022 assessment, DEQ was able to assess areas where drinking water providers submitted data to the Drinking Water Protection program. The assessment unit is considered impaired when the Public Water System operations indicate that high turbidity (more than 45 days per year turbidity greater than or equal to 5 NTU) are causing operational difficulty and source water turbidity data validate this measurement.

---

**FWC#4: Suggested Change ID #38**

**Description:** Methodology- sedimentation prioritization

**Comment:** Future prioritization of monitoring sites—We would like to see the DEQ prioritize the coastal watersheds that are dominated by private industrial timberlands in steep slope geographies with documented landslides and sedimentation concerns. The DEQ should further focus its monitoring in waterways that function as surface drinking watersheds for Oregon’s communities. We request that the DEQ dedicate special attention to watersheds with disproportionately large populations of poor, low-income and communities of color, to ensure considerations for environmental justice are at the forefront of source water protection.

**Response:** Thank you for this suggestion. DEQ uses all available data either submitted during the Call for Data process or retrieved from publicly available databases. DEQ’s drinking water source water protection program provides both proactive and reactive technical assistance to public water systems using surface water sources with a focus on smaller systems. DEQ has also prioritized a focus on environmental justice and appreciates the acknowledgement of this important topic. DEQ makes an effort to contact coastal water systems to request that public water system operators voluntarily share their raw turbidity and related water quality data during the Integrated Report Call for Data. DEQ has assisted a number of these system operators in formatting raw data for submission.

---

**FWC#5: Suggested Change ID #39**

**Description:** Data- Publish water utility data

**Comment:** Data transparency— Please ensure public-facing and transparent reporting of raw water data before treatment by the water utility. Water utilities are required to record this raw water data, but are not required to publish it, which functions as a roadblock to public engagement and outside analysis of water quality issues. In conjunction with its bi-annual reports, we request that the DEQ work with local water authorities to publish raw water data from monitoring done at water plants, before water is treated.

**Response:** The Oregon Health Authority has regulatory authority over public drinking water systems in Oregon and does not require reporting of raw turbidity data. In the last two assessment cycles, DEQ Drinking Water Source Water Protection program staff have reached out to public water systems and request them to voluntarily share their raw turbidity data during the Integrated Report Call for Data. Recognizing potential resource limitations of smaller public water systems, DEQ Drinking Water Source Water Protection and laboratory staff have formatted the raw data and reconciled monitoring location information to upload to our public facing water quality database [AWQMS](https://orwater.deq.state.or.us/Login.aspx) (<https://orwater.deq.state.or.us/Login.aspx>). Once in AWQMS, these data are available for use in the Integrated Report. DEQ is also working in collaboration with the Oregon Health Authority to make sampling data for toxins associated with harmful algal blooms and PFAS chemicals publicly available through AWQMS.

---

**FWC#6: Suggested Change ID #40**

**Description:** Process- Data engagement

**Comment:** Community engagement —The DEQ should work with community members and organizations to identify watersheds that require the most attention and develop a plan for ongoing monitoring of surface watershed across the state. Rather than simply open a comment period, or make a call for data, DEQ should proactively reach out to water managers, grassroots

organizations and community members to conduct interviews and request input and data on impacted waterways. Please start with the communities like Rockaway Beach who have already worked to engage with the DEQ on water quality issues for over a decade, and prioritize outreach efforts to the dozens of communities who have reached out to the Department with concerns about logging in their drinking water supplies.

**Response:** Thank you for this recommendation. DEQ’s Drinking Water Source Water Protection program is available to provide technical assistance to public water systems and their communities and regularly reaches out to offer technical assistance, provide outreach materials, and alert water systems when grant applications are being accepted. This collaborative approach relies on public water system staff responses and capacity. In addition, DEQ currently has a very active community-based Volunteer Monitoring Program. The goal of this program is to involve Oregonians in identifying and solving the state’s water quality problems. The program provides support including technical assistance in monitoring design, equipment use, data management and analysis. Volunteer groups participating in the program are eligible to receive high quality monitoring equipment on loan. More information on that program can be found at <https://www.oregon.gov/deq/wq/Pages/WQ-Monitoring-Volunteer.aspx>.

DEQ has also prioritized environmental justice and appreciates the acknowledgement of important topic.

---

## 14. Comments from: Northwest Environmental Advocates

### **NWEA#1: Suggested Change ID #65**

**Description:** Methodology - Questions on Assessment Methodology Improvements

**Comment:** DEQ has provided the document entitled Assessment Method Improvements Inventory 2022 – Draft Inventory of Potential Methodology Updates (March 10, 2020) (hereinafter “Inventory”) in which it lists a number of water quality standards violations that it has no intention of assessing. These include: marine dissolved oxygen; biocriteria to assess ocean acidification; the Oregon narrative criterion on “fungi, algae growths”; harmful algal blooms to address cyanotoxin test results from drinking water facilities; the Oregon narrative criterion on “bottom sludge, organic and inorganic deposits” and “Sedimentation”; the Oregon narrative on toxics to address fish tissue data, sediment data, and use of benchmark data where no numeric criteria exist; the statewide narrative criterion as it pertains to microplastics; aluminum using its numeric criterion.

Commenter poses numerous specific questions related to this topic, which are listed in the original comment letter posted on DEQ's [webpage](#).

**Response to questions on Assessment Method Improvements:** The Inventory document is a strategic vision for potential assessment methodology updates in the Water Quality Assessment program. The document is composed of input and feedback from DEQ's internal and external stakeholders. The website describes a subset of the possible assessment methodology updates in terms of short term (current listing cycle in progress) and long-term (future listing cycles). DEQ included several topics from the inventory list for the 2022 assessment methodology update including minimum data requirement for attainment and use of continuous data for pH. DEQ is working with an ocean acidification and hypoxia technical workgroup to develop assessment methodology for marine dissolved oxygen and ocean acidification. Due to the limited staffing resources and two-year reporting cycle, DEQ cannot address all topics in the inventory at once. DEQ is in the process of setting priorities for the 2024 and 2026 assessment methodology updates in conjunction with timeframes laid out in the Water Quality Standards Triennial Review Report and 2021–2024 Work Plan. Potential updates will be selected from the Inventory. Once these priorities are set, DEQ will update this webpage to reflect the current timeline. DEQ provides opportunity for public comment on draft methodologies prior to conducting the assessment. The comments on the Inventory document are related to assessment methodology prioritization and update, which is a separate process.

---

### **NWEA#3: Suggested Change ID #67**

**Description:** Data - Assessments Narrative Data Submittals and Other Sources

**Comment:** Oregon DEQ has provided a description of the data and information that were not used in proposing its 303(d) list: Oregon DEQ, Water Quality Assessments, Narrative Data Submittals (undated) (hereinafter "Narrative Submittals"). In this document, DEQ notes that it "used a five-year data window for the 2022 cycle." *Id.* at 2. And it states that the agency "prioritizes assessment of those parameters with an assessment methodology." *Id.*

Commenter poses numerous specific questions related to this topic, which are listed in the original comment letter posted on DEQ's [webpage](#).

**Response:** In this section of the letter, the commentor poses over sixty questions, many of which are outside of the scope of the draft 2022 Integrate Report. DEQ has grouped the questions into themes listed below which are relevant to the draft report and has provided responses accordingly. Themes outside of the scope of the draft list include questions pertaining to DEQ's perspectives on implementing federal and state requirements in carrying out the Integrated Report, and using the assessment process for purposes outside of interpreting water quality standards.

**Response to questions on use of a five-year data window for the draft 2022 Integrated Report:**

The Integrated Report provides the most current water quality status report to EPA every two years. Establishing a period of record or "data window" for which the report applies is a standard practice for assessment purposes. In a recent memo from EPA titled "Information Concerning 2022 Clean Water Act Section 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions", EPA recommended that "Establishing a reasonable "cut-off" date can be a useful approach for timely completion of an Integrated Report. For example, setting a "cut-off" date for data and information used in preparation of a draft CWA\_303(d) list, after which no additional data or information would be considered in preparing the draft Clean Water Act 303(d) list, can encourage third-parties to submit data and information early. If electing to use a "cut-off" date, a state should clearly explain that data and information submitted after that date would be considered during the next listing cycle."

**Response to questions on the use of narrative data submittals for the draft 2022 Integrated Report:** Data sources such as fish passage barriers, fish deformities and lesions, native species (parasites and weeds) and aquatic animal invasive species are not considered a pollutant, or pollution, therefore they are not regulated under the Clean Water Act and were not evaluated in this report.

DEQ would use studies to support other findings of impairment. Additionally, if data were provided that indicates a specific reach did not attain water quality standards according to DEQ's 2022 assessment methodology, the study would be used as a basis for an impairment listing. The Mann study cited by the commenter (*R.D. Mann, et al., Migration Behavior and Spawning Success of Spring Chinook Salmon in Fall Creek and the North Fork Middle Fork Willamette River: Relationships Among Fate, Fish Condition, and Environmental Factors*) does not directly link elevated levels of parasites in returning Chinook salmon to water quality in those specific reaches. However, both the mainstem and Middle Fork of the Willamette River have been identified as temperature impaired. Elevated levels of parasites are often associated with elevated stream temperatures.

While extirpation of an aquatic species such as the Oregon spotted frog may indicate an impact on "wildlife" the information provided by the commenter lacks a direct linkage to waterbody conditions. If a decline in species at a particular location were directly linked to a specific water quality condition, it could be used in an Integrated Report assessment. Additionally, the studies cited by the commenter are regional studies that do not meet DEQ's 2022 data submission guidelines for non-numeric data.

**Response to questions related to data solicitation efforts for the draft 2022 Integrated Report:**

DEQ used numerous means to advertise and reach out to government agencies and organization to advertise the 2022 Call for Data, including GovDelivery, press releases, webinars, social media, and direct communication with stakeholders, other state natural resource agencies, and federal agencies. The 2022 Call for Data was held for 60 days and DEQ received data from 14 separate organizations including several municipalities, drinking water providers, federal agencies,

research organizations and environmental groups. Submittal to DEQ is on a voluntary basis. DEQ considers the Call for Data process to be very important part of the assessment process which results in an extensive body of relevant data and information. In addition, DEQ obtained data from EPA's water quality portal, USGS's NWIS database, and DEQ's AWQMS database.

Data and information used in the 2022 Integrated Report is available in Appendix B of the 2022 Assessment Methodology at <https://www.oregon.gov/deq/wq/Pages/proposedIR.aspx>.

DEQ assessed data from 101 organizations and over 7.7 million numeric data points for the 2022 Integrated Report. DEQ does not consider the information cited in journal articles or contacting authors as readily available data sources. Instead, DEQ relies on those generating data of known quality (federal partners and academics) to submit during the Call for Data or upload to EPA's water quality portal. DEQ encourages the commenter to submit the data and information through the Call for Data process or encourage submittal directly to EPA's water quality portal.

DEQ has made significant improvements in soliciting data starting with the 2018/2020 Integrated Report. DEQ is committed to continuing to improve how it solicits and incorporates data. The draft 2022 Integrated Report includes high quality ambient data collected for the purpose of establishing effluent limitations which has been entered into our AWQMS database. DEQ will coordinate future efforts with DEQ's 401 and NPDES programs to target any high quality ambient water quality data and information related to hydroelectric dams or collected by permittees outside of mixing zones that have not already been acquired from AWQMS or other publicly available databases.

With regard to drinking-water related data, DEQ's does not assess drinking water quality post-treatment. DEQ assessed the beneficial use support of public and private water supply by using methodologies for assessing ambient water quality for harmful algal blooms, turbidity, and Toxic Substances - Human Health (water plus organism, only). See Oregon Administrative Rules Chapter 340-041-8033, Table 40 [online](#).<sup>1</sup>

DEQ only use of models in developing the Integrated Report is the use of a multivariate predictive model (PREDATOR) to predict the number and types of macroinvertebrates that are expected to be in a stream, if the stream is in least disturbed conditions as outlined in the Biocriteria chapter of the 2022 Methodology [online](#).<sup>2</sup> DEQ does not have an assessment method that uses modeling to assess predicted water quality conditions for purposes of the Integrated Report.

The draft 2022 Integrated Report includes assessment of fish tissue data that meets the objectives defined in the Oregon's 2022 Integrated Report Call for Data Submission Guidelines.

---

<sup>1</sup> <https://www.oregon.gov/deq/wq/Pages/WQ-Standards-Toxics.aspx>

### **Response to questions on methods outside of 2022 Assessment Methodology**

The basis of the Integrated Report is to assess designated use support based on water quality standards. DEQ's 2022 assessment methodology includes the evaluation of beneficial use support. Table 1 on page 11 of the methodology document outlines the link between parameters, including narrative criteria, and beneficial uses.<sup>2</sup>

The Clean Water Act (CWA) section 303(d)(1)(A) requires states to assess water quality against approved water quality standards and determine whether beneficial uses are supported. DEQ currently uses established assessment methodologies which have gone through a public comment process to assess against EPA approved water quality standards. There are three parts to a water quality standard: 1) designated uses of the waterbody; 2) criteria to protect those designated uses; and 3) antidegradation requirements to protect existing uses. Designated use support is assessed by comparing ambient water quality data against EPA approved water quality standards (narrative and numeric) derived to protect species listed under the Endangered Species Act according to its Assessment Methodology.

All methods used in the draft Integrated Report can be found in 2022 Assessment Methodology.<sup>2</sup>

Oregon Revised Statute (ORS) 468B.039 requires peer review and public notice during methodology updates for complex issues. Revising existing methods or developing new assessment methods to incorporate the use of alternative methods, such as semipermeable membrane devices, remote sensing and sediment toxics data would be new interpretations of narrative standards. DEQ has not developed such methods and if it were to pursue such methods, DEQ would need to conduct peer review and meet the public notice components as required in section 2 of the statute.

For the 2022 draft Integrated Report, DEQ assessed designated use support through methodologies outlined in its 2022 Methodology [online](#).<sup>3</sup> EPA's 2002 Consolidated Assessment and Listing Methodology documents addresses the assessment of designated use support through their explanation of numeric and narrative criteria. "States, territories, and authorized tribes adopt numeric and narrative water quality criteria to protect designated uses. ... Narrative criteria are descriptions of the conditions necessary for a waterbody to attain its designated use, whereas numeric criteria are values expressed as chemical concentrations, toxicity units, aquatic community index levels, or other numbers deemed necessary to protect designated uses."<sup>4</sup> DEQ's assessment of beneficial use support in the Integrated Report was performed through the assessment of their numeric and narrative criteria in Oregon Administrative Rule (OAR) 340-041. Table 30 Aquatic Life Water Quality Criteria for Toxic Pollutants, as described in

---

<sup>2</sup> <https://www.oregon.gov/deq/wq/Pages/proposedIR.aspx>

<sup>3</sup> <https://www.oregon.gov/deq/wq/Documents/2022-IR-FAQ.pdf>

<sup>4</sup> <https://www.epa.gov/waterdata/consolidated-assessment-and-listing-methodology-calm>

OAR 340-041-8033, apply to waterbodies where the protection of fish and aquatic life is a designated use. These criteria protect aquatic species that either have complete or partial life stages in the water.

For the 2022 draft Integrated Report, DEQ assessed pH, dissolved oxygen, and chlorophyll-a as indicators of nutrient impairments. DEQ does not have a numeric criterion specific to nitrogen or any implementation of narrative standard that addresses nitrogen to use in the 2022 Integrated Report. DEQ will set loading reductions for nutrients when addressing other impaired pollutants, such as dissolved oxygen and pH.

**Response to questions on specific assessment conclusions:** DEQ has assessed the Columbia River for toxics based on available water quality standards and data in all assessment cycles. The draft 2022 303(d) list includes Columbia River assessment units previously listed for arsenic, DDT, DDE, DDD, dioxin, mercury, PCBs and PAHs. For the 2022 cycle, DEQ assessed cadmium, copper, chlorpyrifos, guthion, malathion, and lead in the Columbia River assessment units from the mouth to Longview, WA. These pollutants were determined to be in category 2 or category 3D for both aquatic life and fishing (human health) beneficial uses.

Regarding aluminum, the draft 2022 Integrated Report includes the assessment of 238 unique assessment units for aluminum. The 2022 assessment methodology for aluminum can be found on page 73 of the assessment methodology.<sup>5</sup>

---

#### **NWEA#4: Suggested Change ID #68**

**Description:** Reporting - Spreadsheet and Webmap

**Comment:** All proposed listings for aquatic weeds are lakes or reservoirs with the exception of three river segments. Omitted are listings based on the reports prepared by the City of Medford's consultant and the NWEA rebuttal report, both of which were sent to Oregon DEQ and both of which discussed the excess growth of the aquatic weed *Cladophora*. Stillwater Sciences, Nutrient Discharge Limit Assessment for the Rogue River in the Vicinity of the City of Medford Regional Water Reclamation Facility (March 2020); JoAnn M. Burkholder, Ph.D., et al., Rebuttal of the Report, "Nutrient Discharge Limit Assessment for the Rogue River in the Vicinity of the City of Medford Regional Water Reclamation Facility," by Stillwater Sciences (March 2020) Report for Plaintiff Northwest Environmental Advocates (Revised May 30, 2020).

Commenter poses numerous specific questions related to this topic, which are listed in the original comment letter posted on DEQ's webpage <https://www.oregon.gov/deq/wq/Pages/proposedIR.aspx>.

---

<sup>5</sup> <https://www.oregon.gov/deq/wq/Pages/proposedIR.aspx>



**Response:** The commentor poses a number of questions outside of the scope of the draft 2022 Integrated Report. DEQ provides responses below for those comments relevant to the draft report. These responses include addressing questions on use of narrative data sources, biocriteria, clarification on use of water quality standards and differences between web map and online database reporting structure.

DEQ does not consider biocriteria a pollutant but refers to the criteria prompting the impairment in this case as is also the approach taken by EPA in their ATTAINS database. DEQ is in the process of developing a method for stressor identification with the intent of updating causes for biocriteria listings when possible.

The Rogue River (OR\_SR\_1710030802\_04\_105816) was originally listed for biocriteria in the 2012 Integrated Report based on studies available at that time. The current method for listing based on excessive algae as described in the 2022 assessment methodology states, *“Documented evidence that algae, including periphyton (attached algae) or phytoplankton (floating algae), are causing other standards to be exceeded (e.g. pH, chlorophyll a, or dissolved oxygen) or impairing a beneficial use”*. This assessment unit was assessed for pH, dissolved oxygen (spawning and year-round) and chlorophyll a in 2022 and all were found to be attaining. The current biocriteria and temperature impairments identify this unit as not fully supporting fish and aquatic life use. Once DEQ has a formal process for identifying potential causes of biological impairment in place, the reporting will be updated to reflect those findings.

The Lundin paper (*J.I. Lundin, et al., Decreased Growth Rate Associated with Tissue Contaminants in Juvenile Chinook Salmon Out-Migrating through an Industrial Waterway*, Environ. Sci. Technol. 2021, 55.) and supporting data was not submitted to DEQ during the call for data. DEQ encourages the commentor to submit this study for evaluation in the 2024 assessment cycle.

The Lower Columbia estuary assessment units referencing bald eagle reproduction were originally listed in 1998 using a different assessment methodology for interpreting the narrative toxics criteria. The Toxic substances parameter chapter of 2022 Assessment Methodology (page 66-82) describes the current use of numeric criteria for assessing toxics for the aquatic life use.

Table 1 of the 2022 Assessment Methodology documents all water quality standard(s) (narrative and numeric) against which individual parameters are assessed.<sup>6</sup> The information is also cited in the parameter chapters. DEQ will consider revising the online database to include the water quality standard information in the rationale in the future cycles.

Table 30 Aquatic Life Water Quality Criteria for Toxic Pollutants (OAR 340-041-8033) has numeric criteria for elemental phosphorus.

---

<sup>6</sup> <https://www.oregon.gov/deq/wq/Pages/proposedIR.aspx>

In response to feedback on the 2018/2020 Integrated Report, DEQ modified how watershed units are assessed to include a more detailed representation of where impairments exist. The 2022 Integrated Report web map application provides the detailed conclusions of assessments within the watershed assessment unit; however, an overall status of the watershed assessment unit must still be reported to EPA. DEQ recognizes the complexity this additional level of reporting creates for users and provided an interactive story map to help guide through the assessment process and the addressed the topic in Frequently Asked Questions document.<sup>7</sup> DEQ will continue to work to improve and clarify reporting.

---

#### **NWEA#5: Suggested Change ID #69**

##### **Description:** Reporting - Comments on the List

How does DEQ differentiate between “data” and “information” as those terms are used in 40 C.F.R. § 130.7(b)(5)? Does DEQ have a method of determining designated use impairment that is based on the principle of “independent applicability” of designated uses? Does DEQ have a method of assessing whether waters are “threatened” and has DEQ proposed to list any waters that are “threatened”? How does DEQ reflect this requirement to protect downstream uses in developing its 303(d) list in either its listing methodology and/or its proposed list?

Commenter poses numerous specific questions related to this topic, which are listed in the original comment letter posted on DEQ’s webpage  
<https://www.oregon.gov/deq/wq/Pages/proposedIR.aspx>.

**Response:** The commentor poses a number of questions outside of the scope of the draft 2022 Integrate Report. DEQ provides responses below for those comments relevant to the draft report.

Questions regarding data solicitation efforts are addressed in **Description: Data - Assessments Narrative Data Submittals and Other Sources** section of DEQ’s responses.

DEQ use of the term “data” in the context of the assessment refers to numeric or quantitative results related to water quality. Numeric data must be submitted in electronic format using the templates provided on the call for data website. DEQ’s use of the term “information” refers to non-numeric data which include journal articles, state and federal reports and findings and observations. DEQ’s 2022 [Call for Data Submission Guidelines](#) describes this in more detail.<sup>8</sup>

In the 2022 Integrated Report, DEQ assessed pollutants separately according to the assessment methodology document. If one pollutant is determined to be not supporting a particular

---

<sup>7</sup> <https://www.oregon.gov/deq/wq/Documents/2022-IR-FAQ.pdf>

<sup>8</sup> <https://www.oregon.gov/deq/wq/Documents/irDataSubGuide.pdf>

beneficial use, that assessment unit is considered impaired even if the other pollutants are attaining.

Oregon does not have any waterbody segments listed specifically as threatened, as opposed to impaired, on its draft 2022 303(d) list. DEQ used data and information identifying waters that do not meet water quality standards to develop Oregon's 303(d) list of impaired waters according to the 2022 Integrated Report assessment methodology. The draft 2022 Integrated Report includes assessments that are not based on numeric criteria and a pollutant is not known, these include biocriteria and listing based in advisories.

Listing determinations and subsequent Total Maximum Daily Loads or other management plans on upstream waters will also protect downstream uses. Waters do not have to be included on the 2022 303(d) list to benefit from upstream actions.

All methods used in the draft Integrated Report can be found in 2022 Assessment Methodology.<sup>9</sup>

---

## **NWEA#2: Suggested Change ID #70**

**Description:** TMDL - Proposed TMDL Priorities

**Comment:** The only TMDLs that DEQ proposes for High or Medium priority that are not under current court order for completion are: Coquille Subbasin TMDL (Dissolved Oxygen, E. coli, Fecal Coliform, pH, Temperature); Powder, Burnt, and Brownlee Subbasins Bacteria TMDL; Upper Yaquina Watershed TMDL (Dissolved Oxygen, E. coli, Fecal Coliform); Lower Deschutes, Crooked, Beaver - South Fork, and Trout Subbasins TMDL (E. coli, Dissolved Oxygen, Harmful Algal Blooms, pH, Temperature, Total Phosphorus); Powder, Burnt, and Brownlee Subbasins Nutrient TMDL (Dissolved Oxygen, pH, Total Phosphorus); Rogue River Basin Nutrient and Biocriteria TMDL (Biocriteria, Chlorophyll-a, Dissolved Oxygen, Harmful Algal Blooms, pH, Total Phosphorus); Schooner Creek Turbidity TMDL; Siletz River Turbidity TMDL; and the Snake River-Hells Canyon Mercury TMDL.

Commenter poses numerous specific questions related to this topic, which are listed in the original comment letter posted on DEQ's <https://www.oregon.gov/deq/wq/Pages/proposedIR.aspx>.

**Response:** The commentor poses a number of questions outside of the scope of the draft 2022 Integrated Report and TMDL priority ranking. DEQ provides responses below for those comments relevant to the draft report.

DEQ prepared the priority ranking of Total Maximum Daily Loads (TMDLs) to be developed as part of the biennial submittal to EPA of Oregon's Integrated Report, as required by 40 CFR §

---

<sup>9</sup> <https://www.oregon.gov/deq/wq/Pages/proposedIR.aspx>

130.7(b)(4) and 40 CFR § 130.7(d)(1). In keeping with these regulations, DEQ identified priority ranking of all assessment units needing TMDL development and identified waters targeted for TMDL development in the next two years.

Although not required by state or federal regulations, DEQ's report also provided a summary of criteria used to determine TMDL projects priority rankings. DEQ clarified that the multi-level evaluation focused on severity of pollution and uses of the waters, as required by CWA § 303(d)(1)(A) and 40 CFR § 130.7(b)(4) and included consideration of point source discharges and cross-program processes discussed in the commenter's questions.

---

## 15. Comments from: Raymond Kinney

### **RK#1: Suggested Change ID #61**

**Description:** Assessment conclusion- lead toxics

**Comment:** As salmon continue to decline, the State of Oregon very carefully avoids toxic contaminant pollution in the Siuslaw river. Six publicly-owned railroad bridges, built around 1912, were supposed to be repainted every four years to protect the base coat of pure red lead from degrading into the stream, this was not done, and massive lead contamination is entering the water via particulate and dissolved lead. The state refuses to even begin to look at this pollution, that is a well-known toxicant for fish population viability. Many millions of dollars are spent each year on salmon population recovery efforts, yet this blatant threat to these fish are totally ignored.

This problem is further aggravated by the very low hardness water in the river, spiking the massive lead pollution adverse effects, leaving the fish damaged even before reaching the ocean phase of their life cycle, they are less fit to survive. Scientific integrity is avoided, is fiscally irresponsible, and a tragic misguidance of the recovery effort. This is all because the state agencies for responsible for water quality do not do due diligence, the result is badly misinformed fisheries managers, and squandered millions of dollars each year.

This problem is even further aggravated by the state totally ignoring the toxicologic dangers of lead use in fishing methodologies that pollute these same streams with lost fishing sinks and lead boat anchors. The low calcium waters dissolve the lead faster than almost all other surface waters in the nation, resulting in much increases adverse toxic effects on the young salmon and species that support these fish. Sinkers get ground up in the hydrologic action of riverine potholes that exponentially increase surfaces to dissolve. The particulate contacts fish gill and gut, directly exposing the fish. The dissolved colloidal sized particulate combines with iron oxyhydroxides colloid to stay suspended far downstream to further expose the stream biota. The

scientific literature documenting these toxicologic adverse effects is extensive, well known, and devastatingly descriptive of the state of Oregon irresponsible regulatory outcomes.

The 303d process is invalid on this pollution assessment shortfall, and USEPA regulatory oversight is almost nonexistent. All the while, each acidic rainfall causes water rivulets running off of these bridges to commonly reach many thousands of times the water quality criteria as this pollution hits the hardness 11 water the fish are swimming in, and the fine particulate reaches fish gill and gut to dissolve in direct contact to sensitive tissue for a high dose. The larger paint flakes falling into the water distinctly appear just like fishing lures, silver on one side and ironically salmon color on the other side, how often are large flakes ingested directly?

The State of Oregon has substantial water quality protective regulations, and enforcement is happening on some other less harmful parameters, but the toxic contaminant assessment irresponsibility is devastatingly damaging to the scientific integrity, and to the legislators being severely misinformed. Legislators want to take their grandchildren out in the boat to teach them how to fish, yet they are totally ignorant about how contaminated their tackle boxes are with fine lead powder that gets on wet hands, on sandwiches passed to the children, and on cooler ice and the body surfaces of the fish taken home to the frying pan. Every exposure route is blatant, and is blatantly ignored by the state, and countless children suffer decreased abilities as a result. The science is right there for the reading! We are poisoning the things we love the most! Agencies are NOT doing their jobs protecting these children. and the legislature is NOT doing the job they are supposed to ensure gets done to protect the children we borrow this world from or the salmon we desperately want to recover.

**Response:** Thank you for your comment regarding the lead contamination in Oregon waters. DEQ has set water quality standards for lead to protect fish and aquatic life. For the 2022 Integrated Report, DEQ assessed 2487 individual results (representing 268 assessment units) for lead statewide. In addition, 118 assessment units did not have any new data in the current data window, so their status carried forward from previous listings.

For this assessment cycle, data indicates that two assessment units are impaired, 151 assessment units attain water quality criteria, and 115 assessment units have insufficient data to determine status. The majority of insufficient data designations for lead in this reporting cycle was due to the lack of the minimum sample numbers as described in Table 10 of [Methodology for Oregon's 2022 Water Quality Report and List of Water Quality Limited Waters](#) or <https://www.oregon.gov/deq/wq/Documents/IR22AssessMethod.pdf>.

---

# 16. Comments from: Klamath Irrigation District

**KID#1: Suggested Change ID #34**

**Description:** Irrigation Infrastructure- Reclamation Project

**Comment:** In looking at the areas in Klamath listed. Please remove Reclamation's #1 Drain from the report. This is a piece of the Reclamation Project infrastructure. The #1 Drain is the east/west purple line just north of the listed LRDC.

For note: the LRDC is also a manmade structure for flood control purposes under O&M by Reclamation.

**Response:** DEQ reviewed the request to remove Klamath #1 Drain from the report and concludes that #1 should be split from the Lost River Diversion Channel (OR\_SR\_1801020412\_05\_106990) assessment unit due to lack of hydrologic connectivity. The high-resolution National Hydrography Dataset (NHD) flowline depicting #1 Drain will be added to the watershed assessment unit OR\_WS\_180102041201\_05\_107131 and be considered unassessed.

---

# 17. Comments from: East Fork Irrigation District

**EFID#1: Suggested Change ID #9**

**Description:** Watershed Units- Commendation of mapping

**Comment:** The District would like to commend DEQ for the inclusion of some mapped waterways within the watershed assessment units. This is a significant step towards improved understanding of the data available and the status of different waterways within the watershed assessment units.

**Response:** Thank you for your support of DEQ's continued efforts to provide clarity to the Integrated Report.

---

**EFID#2: Suggested Change ID #10**

**Description:** Watershed Units- Map display vs online database

**Comment:** The detail contained within the online map (e.g., specific waterways within a watershed assessment unit containing different statuses) combined with the lack of detail in the database creates confusion about what is impaired or listed in a watershed assessment unit. A review of the database would suggest that all waterways within a watershed assessment unit are considered/listed as impaired, while a review of the online map would suggest that only some waterways within a watershed assessment unit are considered/listed as impaired. Feedback from DEQ staff in the January 19th webinar suggested that only waterways highlighted as impaired in the online map would be considered impaired. While the Frequently Asked Questions suggests that waterways hydrologically connected to the waterway highlighted as impaired may also be considered impaired. All of this creates confusion for the public and other users of the Integrated Report on how to read/interpret the report and its associated listings.

The District again notes that DEQ's assertion in its Frequently Asked Questions that "the report/list does not, unto itself, specify or determine any regulatory actions or consequences", while technically true with regards to DEQ's regulatory authority, significantly overlooks the permitting, funding, certification, and public perception impacts to the many entities working within or around Oregon's waterways. Numerous other state and federal agencies, non-profits, and third-party certifiers use the 303(d) list in their work with on-the-ground entities; and the simple act of a waterway being listed can result in serious increases in costs, delays in implementation, lost revenue, and/or other operational challenges. These challenges and hardships occur upon listing, not during or after a TMDL process. As such, the District would ask DEQ to better clarify which waterways within a watershed assessment unit are actually considered impaired/listed and how outside users of the Integrated Report should interpret waterways within an "impaired" watershed assessment unit that are not directly colored as impaired within the online map. Very clear instructions on how to determine impairment with a watershed assessment unit attached to the Integrated Report, database, and online map would be a helpful first step towards this goal.

**Response:** Thank you for this feedback on DEQ's Integrated Report tools. In response to feedback on the 2018/2020 Integrated Report, DEQ modified how watershed units are assessed to include a more detailed representation of where impairments exist. The web map application provides the detailed conclusions of assessments within the watershed assessment unit; however, an overall status of the watershed assessment unit must still be reported to EPA. DEQ recognizes the complexity this additional level of reporting creates for users and provided an interactive story map to help guide through the assessment process and the addressed the topic in Frequently Asked Questions document. If a waterbody within a watershed assessment unit is not display with a dashed line, it is considered unassessed. DEQ will continue to work to improve and clarify reporting.

---

### **EFID#3: Suggested Change ID #11**

**Description:** Watershed Units- Inclusion of Irrigation Canals

**Comment:** Concern with irrigation canals being combined into HUC-12 watershed assessment units, especially when the canals are not hydrologically connected with the natural waterways within those watershed assessment units.

**Response:** DEQ water quality programs are implemented for waters of the state, which has a broad statutory definition in Oregon Statutes (ORS 468B.005): “Waters of the state” means lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters) that are located wholly or partially within or bordering the state or within its jurisdiction.

To assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. The web map will display the canal with a dashed line when water quality data exists within a canal.

---

### **EFID#4: Suggested Change ID #12**

**Description:** Watershed units- map vs database

**Comment:** The detail contained within the online map (e.g., specific waterways within a watershed assessment unit containing different statuses) combined with the lack of detail in the database creates confusion about what is impaired or listed in a watershed assessment unit. A review of the database would suggest that all waterways within a watershed assessment unit are considered/listed as impaired, while a review of the online map would suggest that only some waterways within a watershed assessment unit are considered/listed as impaired.

**Response:** In response to feedback on the 2018/2020 Integrated Report, DEQ modified how watershed units are assessed to include a more detailed representation of where impairments exist. The web map application provides the detailed conclusions of assessments within the watershed assessment unit; however an overall status of the watershed assessment unit must still be reported to EPA. DEQ recognizes the complexity this additional level of reporting creates for users and provided an interactive story map to help guide through the assessment process. DEQ will continue to work to improve and clarify future reporting.



---

**EFID#5: Suggested Change ID #13**

**Description:** Mapping- Inclusion of certain canals

**Comment:** EFID is concerned with the mislabeling or reference that our Main Canal and Eastside canal are mapped as waterways on the map, this adds confusion and should not be. This could pose problems with future projects in these areas with regards to DEQ's regulatory authority, significantly overlooks the permitting, funding, certification, and public perception impacts to the many entities working within or around Oregon's waterways.

**Response:** DEQ water quality programs are implemented for waters of the state, which has a broad statutory definition in Oregon Statutes (ORS 468B.005): "Waters of the state" means lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters) that are located wholly or partially within or bordering the state or within its jurisdiction.

In response to feedback on the 2018/2020 Integrated Report, DEQ modified how watershed units are assessed to include a more detailed representation of where impairments exist. When water quality data is available and deemed appropriated for use in the assessment, DEQ represents these waters on the web map as determined by the National Hydrography Dataset (NHD) Geographic Names Information System (GNIS) Name, and are represented as dashed lines on the map.

---

## 18. Comments from: United State Forest Service, Pacific Northwest Region

**USFSPNR#1: Suggested Change ID #79**

**Description:** Assessment Conclusions - 2012 Crosswalk omission

**Comment:** This is a follow up on a correction that was supposed to adjusted in the new integrated report but appears to be incorrect still. Becky Anthony provided an email to us

acknowledging the error. Dec 11, 2020 (see below). I am not sure if the FS will provide official comment on the current list due to work loads of the forests and lack of time for review.

Since we had already provided comment on this site, I want to make sure it is corrected. Bluebucket Creek on the Malheur NF.

It appears that Arsenic and Dissolved Oxygen dropped off the Malheur River, and Temperature dropped off for Bluebucket Creek. See tables below.

**Response:** Thank you for providing this clarification. DEQ confirmed the Category 5 temperature listing for Bluebucket Creek (Record ID 12064) was inadvertently left off the 2018/2020 and 2022 draft 303(d) list due to a 2012 crosswalk error. The final 2022 303(d) list will include Category 5 temperature-year round for OR\_WS\_170501160106\_05\_102974;Bluebucket Creek.

---