

March 17, 2025

Response to Comments on Oregon's Draft 2024 Integrated Report

For Development of the Water Quality Status
Report and List of Impaired Waters

Pursuant to Clean Water Act Sections 303(d) and 305(b) and OAR 340-041-0046



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Introduction

This Response to Public Comments document addresses comments and questions received regarding the Draft 2024 Water Quality Report and List of Water Quality Limited Waters (2024 Integrated Report). The individuals and organizations shown in Table 1 provided comments on the 2024 Integrated Report during the Public Comment period, which was held from April 18, 2024, through July 1, 2024. 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 2024 Integrated Report is updated accordingly. In total there were 49 unique comments from 53 entities. DEQ made modifications to the report based on 9 of the comments. The full text of submitted comments can be found at [Public Comments Received](#).

| Commenter # | Commenter | Acronym |
|-------------|--|--------------|
| 1 | City of Portland Bureau of Environmental Services | BES |
| 2 | Columbia Riverkeeper | CRK |
| 3 | Clean Water Services | CWS |
| 4 | Deschutes Redbands Chapter of Trout Unlimited | DRCTU |
| 5 | National Association of Clean Water Agencies and California Association of Sanitation Agencies | NACWA-CASA |
| 6 | Northwest Environmental Advocates | NWEA |
| 7 | Oregon Association of Clean Water Agencies | O-ACWA |
| 8 | Oregon Department of Fish and Wildlife | ODFW |
| 9 | Special Districts Association of Oregon, the League of Oregon Cities and the Oregon Association of Water Utilities | SDAOLOC-OAWU |
| 10 | U.S. Environmental Protection Agency | USEPA |
| 11 | UCLA's Institute of Environment and Sustainability 2024 Ocean Acidification and Hypoxia Practicum Team | UCLA |
| 12 | Willamette Riverkeeper | WRK |
| 13 | Bill Obrien | BO |
| 14 | Charles Loos | CL |
| 15 | Celeste Wolf | CW |
| 16 | Chris Shults | ChS |
| 17 | Cory Starr | CrS |

| Commenter # | Commenter | Acronym |
|-------------|--------------------------------------|---------|
| 18 | David Kenney | DK |
| 19 | Dennis Pennell | DP |
| 20 | Emily Platt | EP |
| 21 | Glenn Gibson Creek Watershed Council | GGCWC |
| 22 | Inga Fisher Williams | IFW |
| 23 | Ignacio Gonzalez | IG |
| 24 | John Cluskey | JC |
| 25 | Jamie Knight | JK |
| 26 | Judith Lienhard | JL |
| 27 | Jim Stuller | JS |
| 28 | Jeff Malmquist | JfM |
| 29 | Jeff Malmquist | JfM.1 |
| 30 | John Maroney | JhM |
| 31 | Kristy Overton | KO |
| 32 | Linda Leyva | LL |
| 33 | Lucinda Pierpont | LP |
| 34 | Lydia Stivers | LS |
| 35 | Mariam Higgins | MH |
| 36 | Melody Long | ML |
| 37 | Marilyn McWilliams | MM |
| 38 | Michael Kipley | M |
| 39 | Michael Schilmoeller | McS |
| 40 | Mark Scantlebury | MrS |
| 41 | Nikki Dennis | ND |
| 42 | Nora Stern | NS |
| 43 | joziedonaghey | Nj |
| 44 | perpetuatetruth@proton.me | Np |
| 45 | Roger Kofler | RK |
| 46 | Roberta Schwarz | RS |
| 47 | Ray Thomas | RT |
| 48 | Susan Huston | SH |
| 49 | Sarah Wetjen | SW |
| 50 | Tammie Bardowell | TB |
| 51 | Theo Cantalupo | TC |
| 52 | Tom Fawell | TmF |
| 53 | Teresa Frye | TrF |

Comments from: City of Portland Bureau of Environmental Services

CPBES#1: Suggested Change ID #18

Description: Data- Tanner Creek

Comment: DEQ should remove the Tanner Creek assessment unit (OR_SR_1709001202_02_104174) and all associated determinations from the Integrated Report. The Tanner Creek assessment unit included in the draft Integrated Report is not a surface waterbody and the samples used in the assessment were collected from stormwater pipes in the City's Collection System. This assessment unit should be removed.

Response: DEQ agrees that the Tanner Creek AU (OR_SR_1709001202_02_104174) is a stormwater drainage system. As the water samples were collected in the city's stormwater collection system, DEQ will remove this AU and all associated assessment conclusions from the 2024 Integrated Report.

These assessments are based on data collected and submitted by the City of Portland Bureau of Environmental Services from monitoring locations classified as River/Stream (PDX_BES-TC1, PDX_BES-TC2, PDX_BES-TC3). DEQ requests that BES send a formal request to have these monitoring locations reclassified as stormwater sewer in the AWQMS database.

Changes were made based on this comment.

CPBES#2: Suggested Change ID #19

Description: Mapping- Columbia Slough

Comment: DEQ should update the watershed boundaries for the two Columbia Slough assessment units to distinguish between the lower (OR_WS_170900120201_02_104554.1) and upper (OR_WS_170900120201_02_104554.2) watersheds. The current GIS layer has the same watershed boundary for the two assessment units.

Response: DEQ agrees that maintaining the original extent of the HUC12 watershed boundary to present the watershed area assessment after splitting the Columbia Slough into two separate units may cause additional confusion. For this reason, DEQ will split the watershed area as requested.

Changes were made based on this comment.

CPBES#3: Suggested Change ID #20

Description: Category determination- alkalinity

Comment: Alkalinity Category 5 designations should be Category 3B designations as per the methodology

Response: Thank you for pointing out this inconsistency with the draft conclusions and the [Assessment Methodology for Oregon's 2024 Integrated Report](#). DEQ agrees with the comment and will update parameter assessments for Alkalinity from Category 5 to Category 3B.

Changes were made based on this comment.

CPBES#4: Suggested Change ID #21

Description: Category determination- Willamette DO spawning

Comment: The Category 2 determination for dissolved oxygen spawning for the Willamette River (OR_SR_1709001202_88_104175, from Johnson Creek to the Columbia River) should be removed. This assessment unit should not be assessed for dissolved oxygen spawning as the Salmon and Steelhead Spawning Use Designation map for the Willamette basin (Figure 340B) notes that there is "no spawning use" for this assessment unit.

Response: Thank you for the comment. DEQ has reviewed the assessment for dissolved oxygen spawning in OR_SR_1709001202_88_104175 and agrees with the comment. The spawning assessment conclusion will be removed for this assessment unit.

Changes were made based on this comment.

Description: Online database issue- duplicate entries

Comment: DEQ should consolidate the duplicate determinations in the assessment database or provide information to explain the distinction between the different entries. In the Portland area, there are two identical Category 3 entries in the assessment database for the Columbia River (OR_SR_1708000302_88_100670) for aluminum aquatic life, but with different rationales and stations.

Response: Thank you for the comment. The inclusion of multiple rows for a given AU/parameter/assessment combination is a mistake. The duplicate entries have been cleaned up.

Changes were made based on this comment.

Description: Category determination- BES data submitted but not used

Comment: Where more extensive datasets are readily available and accepted, but were not used, DEQ should re-assess the assessment units using the full set of records to evaluate attainment of water quality standards. In the Portland area DEQ should reassess the Lower Johnson Creek HUC12 (OR_WS_170900120103_02_104552) for ammonia, chloride, copper, dissolved oxygen, E. coli, lead, mercury, pH, and zinc. BES provided DEQ with monitoring data for all of these parameters for the following monitoring stations located in the assessment unit: PDX_BES-0380, PDX_BES-0428, PDX_BES-0940, PDX_BES-1148, PDX_BES-P0060, PDX_BES-P0828, PDX_BES-P1148, PDX_BES-P1292, PDX_BES-P1552, and PDX_BES-P1916. These data were accepted by DEQ and are available in AWQMS, but no assessment is included in the assessment database for these parameters.

Response: In some limited instances relating to watershed assessment units with multiple assessed streams, the rationale, stations, and status change columns in the online database did

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not populate with new data and appear as if assessment conclusions were carried forward from previous list. The assessment conclusions shown in final_AU_cat column, however, remains correct. Data from PDX_BES-0380, PDX_BES-0428, PDX_BES-0940, PDX_BES-1148, PDX_BES-P0060, PDX_BES-P0828, PDX_BES-P1148, PDX_BES-P1292, PDX_BES-P1552, and PDX_BES-P1916 were used in the assessment and the categorization remains correct. See the online database for updated information. DEQ appreciates pointing out the error in the data display.

There is a small amount of data from site PDX_BES-P0060 within the data window that did not make it into this assessment cycle. Data collected on 08/04/2022 and 10/04/2022 were submitted to DEQ through routine MS4 permit reporting on 10/31/23 and uploaded to AWQMS in February 2024, after the assessment team's data pull in early October of 2023. This data will be used in the 2026 Integrated Report cycle.

CPBES#7: Suggested Change ID #24

Description: Category determination- Ethylhexyl Phthalate bis 2

Comment: The Category 5 determination for Ethylhexyl Phthalate bis 2 (human health) for the Oswego Creek-Willamette River HUC12 assessment unit (OR_WS_170900120104_02_104553) should be changed to Category 3D. DEQ's 2024 Assessment Methodology specifies that "Water bodies will be assessed as Category 3D; Not Technologically Feasible to Assess where samples have been collected but all values are reported below the lowest available QL, and the QL is greater than the numeric criteria." (p. 36) The rationale included in the assessment database ("Tryon Creek: All results are non-detects with detection limits above criteria- 35 total samples") is consistent with a Category 3D determination.

The Category 3 determination for Ethylhexyl Phthalate bis 2 (human health) for the Willamette River assessment unit (OR_SR_1709001202_88_104175) should be changed to Category 3D. DEQ's 2024 Assessment Methodology specifies that "Water bodies will be assessed as Category 3D; Not Technologically Feasible to Assess where samples have been collected but all values are reported below the lowest available QL, and the QL is greater than the numeric criteria." (p. 36) The rationale included in the assessment database ("All results are non-detects with detection limits above criteria- 3 total samples") is consistent with a Category 3D determination.

Response: DEQ has reviewed the assessment conclusions identified by the commenter and agrees with the recommendations. The assessment conclusions have been changed to the correct category 3D designation.

Changes were made based on this comment.

CPBES#8: Suggested Change ID #25

Description: Online database- missing information

Comment: DEQ should update the assessment database to include the 2024 rationale and station list to support the determinations listed in table.

Response: DEQ apologizes for the missing information in the online database. The database has been updated to reflect the correct information.

Changes were made based on this comment.

CPBES#9: Suggested Change ID #45

Description: TMDL applicability

Comment: The Category 4A determination for pH for the Oswego Creek-Willamette River HUC12 assessment unit (OR_WS_170900120104_02_104553) should be changed to Category 5. The assessment database includes the Tualatin Subbasin Total Maximum Daily Load and Water Quality Management Plan (DEQ, 2012) as the applicable TMDL for this parameter and assessment unit, however, the Tualatin TMDL does not cover any of the surface waters located in the Oswego Creek-Willamette River HUC12 assessment unit.

Response: The Oswego Creek-Willamette River HUC12 assessment unit (OR_WS_170900120104_02_104553) is not technically part of the Tualatin Subbasin but the pH impaired waters in the watershed and the Lake Oswego assessment unit (OR_LK_1709001201_02_100853) are addressed by the [2012 Tualatin Subbasin TMDL](#) because of the importance of Tualatin River water to the water quality of the lake and Oswego Creek. Tributaries that do not flow to Lake Oswego are not included. The waterbodies element in Table 2-1 (TMDL page 24), states the TMDL is applicable to all stream segments in the "Oswego Lake Draft 2024 Integrated Report – Response to Comments

subbasin including tributaries to the Lake". A similar statement is made on TMDL page 26. Wasteload allocations to the NPDES permitted sources are included on TMDL pages 48 and page 49 Table 2-12. Load allocations for nonpoint sources are included on TMDL page 55 Table 2-17.

Comments from: Columbia Riverkeeper

CRK#1: Suggested Change ID #28

Description: TMDL- EJ considerations in priority schedule

Comment: On March 29, 2023, the EPA issued an important guidance document, "Information Concerning 2024 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions." This document includes a range of topics and recommendations relevant to the 2024 reporting cycle, including clarification regarding priority rankings, TMDL submission schedules, and ways to better integrate environmental justice principles into the 303(d) process. The DEQ apparently failed to review and account for the recommendations contained in this guidance document, as the EPA's 2023 Guidance is not reflected in the Draft Integrated Report or Draft 303(d) List of Impaired Water and TMDL Priority Rankings. The 2023 Guidance was also not referenced at all in any of the Draft Integrated Report documents. As noted in the 2023 Guidance, poor water quality can have disproportionate impacts on communities that are predominantly people of color, Indigenous, low-income, rural, linguistically isolated, or impacted by other compounding environmental and economic stressors. Including environmental justice perspectives and the realities of community health are vital to a functioning, meaningful water quality and TMLD program.

EPA's 2023 Guidance "encourages states, territories, and authorized tribes to incorporate environmental justice considerations as they carry out water quality monitoring, assessments listing, and TMDL programs." Incorporating environmental justice concerns starts with examining where monitoring and TMDL development occurs. Working closely with communities

most in need of water quality management and helping to eliminate barriers to participation in decision-making processes and data collection are all ways Oregon can better integrate environmental justice into DEQ's TMDL prioritization.

Appendix B of the EPA's 2023 Guidance has numerous recommendations DEQ can use to create and maintain its 303(d) list to make it more protective of community realities, human health, and environmental health. While this would take time and resources, it is effort well spent. The DEQ's water quality decisions—especially this Draft Integrated Report, Draft 303(d) List, and the other accompanying documents—should aim to eliminate disparities leading to disproportionate burdens of cumulative pollution impacts for communities along the Columbia River and throughout Oregon. Thus far, this approach is severely lacking.

As the 2023 Guidance states, “the needs of communities with the most significant pollution burden and/or communities with environmental justice concerns should be considered when prioritizing resources for water quality monitoring and TMDL development.” The DEQ's water quality division should strive to use its time and resources in ways that lead to equitable water quality outcomes and increased community and environmental health. Columbia Riverkeeper strongly urges DEQ to consider the EPA's 2023 Guidance in this reporting cycle as it develops Oregon's TMDL priorities for a more protective stance on water quality.

Response: DEQ appreciates the importance emphasized in the comments aimed at incorporating the EPA's environmental justice guidance into DEQ's Integrated Report and TMDL prioritization. DEQ is committed to environmental justice and responding to requirements in Oregon Revised Statute 182.545.

For the 2024 Integrated Report, DEQ conducted a statewide Call for Data and used data collected by 141 organizations including data from tribal governments at over 3,000 unique locations statewide. For the outreach of the draft assessment results, DEQ conducted two webinars, one during daytime and another one in the evening to encourage public participation.

The Integrated Report also provides valuable datasets for environmental justice screening applications used by DEQ's water quality programs. DEQ continues to evaluate different tools on how the Integrated Report data can be used for environmental justice considerations, and how to incorporate the Integrated Report data into the Oregon Environmental Justice screening mapping tool currently under development.

Description: TMDL- priority rationale

Comment: As the 2023 Guidance states, “the needs of communities with the most significant pollution burden and/or communities with environmental justice concerns should be considered when prioritizing resources for water quality monitoring and TMDL development.” The DEQ’s water quality division should strive to use its time and resources in ways that lead to equitable water quality outcomes and increased community and environmental health. Columbia Riverkeeper strongly urges DEQ to consider the EPA’s 2023 Guidance in this reporting cycle as it develops Oregon’s TMDL priorities for a more protective stance on water quality.

Many Oregonians enjoy fishing and eating locally caught fish; however, growing evidence suggests that many fish in Oregon’s waters may contain unhealthy levels of toxic contaminants from pollution. This pollution along the Columbia River also has a disproportionate impact on people of color, which underscores the importance of viewing water quality issues through an environmental justice lens. Studies show that Native Americans in the Columbia Basin eat significantly more locally caught fish and shellfish than non-tribal members. Further, according to both Oregon and Washington’s environmental agencies, recreational fishers may consume more fish than the general population, and some population groups consume especially large amounts of fish and shellfish as part of traditionally influenced diets, including Native Americans and Asian and Pacific Islanders.

As highlighted above, considering environmental justice considerations with the development of TMDL priorities and schedules is vital. Doing so will not only improve the functionality of the TMDL program but also improve its real-time impacts on human and environmental health.

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. DEQ’s report also provided a summary of criteria used to determine TMDL project priority rankings. DEQ also provided additional detail regarding the multi-level analysis conducted in the context of ranking development that focused on severity of pollution and beneficial uses of the waters, as required by CWA § 303(d)(1)(A) and 40 CFR § 130.7(b)(4).

Description: Delisting- explanations

Comment: There are three proposed de-listings for portions of the Columbia River for pH, bacteria, and dissolved oxygen respectively. Please provide more information and complete explanations for the proposed de-listings and supporting rationale, including what new data determined these portions to be categorized as "in Attainment."

Response: The rationale for delisting is included in the draft delisting spreadsheet available [here](#). Additionally, the raw data used in the assessment is [available for download](#). A more detailed explanation is also provided.

AU: OR_LK_1707010504_88_100137 - Columbia River - Lake Bonneville (upstream from Rowena Creek) is being delisted for pH, based on 36 grab samples collected between 2/17/2019 to 10/22/2022. There were two excursions of the upper end of the pH criterion (8.5) on 9/4/2019 (8.53) and 4/8/2020 (8.52). The [Assessment Methodology for Oregon's 2024 Integrated Report](#) Table 11 - Maximum number of sample excursions to delist as impaired for conventional pollutants (page 42) shows less than or equal to 5 for a sample size of 33-40. Therefore, the AU met the delisting methodology. Nineteen samples were collected at *Dalles_Ambient* station by the City of the Dalles and the remaining were collected at 35594-ORDEQ by Northwest Cherry Growers. All samples were submitted by the permittee and validated by DEQ staff.

AU: OR_LK_1707010511_88_100135 - Columbia River - Lake Bonneville (upstream from Wind River) is being delisted for E. coli based on 442 total samples at collected at stations 34161-ORDEQ; 34516-ORDEQ; 35264-ORDEQ; 35559-ORDEQ; 35562-ORDEQ; 41070-ORDEQ; 41071-ORDEQ by the Columbia Riverkeeper. There were 18 excursions of the statistical threshold value of 406 CFU/100 mL. The delisting section of Bacteria Chapter in [Assessment Methodology for Oregon's 2024 Integrated Report](#) (page 55) states that, "Assessment units with sufficient data in the data window to meet the Delisting – statistical methods requirements for conventional pollutants and all available geometric means are less than the critical metric value (Table 12)." According to the binomial delisting procedures for conventional pollutants on page 42, based on a sample size of 442, waters are delisted if the number of sample excursions are \leq 53. Therefore, the AU met the delisting methodology. These data were collected by Columbia Riverkeeper under DEQ's volunteer monitoring program which follows the same quality control procedures as DEQ generated data.

AU: OR_LK_1708000605_04_100323 - Columbia River - Estuary: Mainstem-lower was delisted for Dissolved Oxygen- Year Round based on an error in the original listing. In the 2020 Integrated Report, DEQ updated the approach to reporting from a waterbody segment to fixed assessment units. In this process, the dissolved oxygen listing for the Skipanon Waterway (Record ID 21131 - was incorrectly assigned to the Columbia River. The original listing is retained on AU OR_SR_1708000602_05_103678 - Skipanon River. DEQ does not currently have sufficient data on dissolved oxygen in AU OR_LK_1708000605_04_100323.

Comments from: Clean Water Services

CWS#1: Suggested Change ID #11

Description: Category determination- Tualatin River for Aldrin

Comment: The lower Tualatin River (OR_SR_1709001005_02_104018) was newly listed in the draft 2024 WQ Assessment for Aldrin as Category 5 (WQ Limited; TMDL needed). The listing was based on six data points from Oregon DEQ at two monitoring stations at Tualatin River at Boones Ferry Road and Tualatin River at Bridge upstream of mouth (aka Weiss Bridge). Four of the six data points were detected on reanalysis; the other two data points were below the Minimum Reporting Level (MRL) or the Method Detection Level (MDL). The WQ Assessment database does not provide information about if the MRL or MDL is used to censor data, and the column heading is "Result Operator". The WQ Assessment uses either the MRL or MDL as available and calls it the Quantitation Limit (QL) (page 28). For results less than the "QL", half of the criteria (0.000005 ug/l) or half the QL will be used, whichever is less. This gives us the annotated dataset shown in Table 1.

Using this dataset, the geomean of the results in "value for calculation" is 0.000033 ug/L, which is above the human health water quality standard (WQS) criteria of 0.000005 ug/L. However, DEQ's WQ Assessment geomean result was 0.000120648540742012 ug/L. This geomean occurs when the censored results are excluded from the dataset, leaving only the quantified concentrations. Excluding results so low that they are not quantifiable or detectable is not consistent with the WQ Assessment Methodology. On page 29, the WQ Assessment Methodology says, "Assessment conclusions will be based on the geometric mean of samples (based on a minimum of three samples) representative of the water body." Samples with no detectable concentration of a pollutant are representative of the water body and should be

included in the basis of the assessment, which is the geometric mean. CWS understands that zero values cannot be used as a value in the dataset for a geometric mean calculation, but the WQ Assessment Methodology has already addressed this issue with the use of half of the QL or half of the WQS criterion, whichever is less. CWS requests that water bodies are evaluated using whole data sets by including censored data in the geomean calculations, as described in the WQ Assessment Methodology.

Response: DEQ agrees with this comment that samples with no detectable concentration of a pollutant are representative of the water body and should be included in the geometric mean. These assessments have been corrected and updated. For the assessment on the lower Tualatin River (OR_SR_1709001005_02_104018), the new geometric mean is 0.00003313813, which is still above the criteria of 0.000005, so this update resulted in no change in assessment category.

Changes were made based on this comment.

CWS#2: Suggested Change ID #12

Description: Category determination– Tualatin River for Chlordane

Comment: The lower Tualatin River (OR_SR_1709001005_02_104018) was newly listed in 2024 for chlordane as Category 5 (WQ Limited; TMDL needed). The chlordane listing was based on the same six dates and locations as the aldrin listing. None of the six data points as presented in the available documentation showed detectable levels of chlordane (see Table 2). Therefore, CWS questions how a determination of Category 5 (WQ Limited; TMDL needed) can be made when no chlordane was detected in any sample.

According to the WQ Assessment Methodology, the value substituted for nondetects should be half the WQS criterion of 0.000081ug/L or half the QL, whichever is less, therefore, the geomean of the dataset should be half or less than 0.000081 ug/L. Chlordane and PCBs are unique in that they are aggregated sums of several chlordane species (e.g., cis-chlordane, transchlordane, and oxychlordane). In EPA's WQX database, DEQ's data are shown by chlordane species. There was one detection of trans-chlordane that was less than the WQS criterion. Seeing the species data is helpful for transparency of the basis of the calculations. CWS suggests printing a note in the

chlordane and PCB data points that these are aggregated data and direct to a website where the raw data may be found.

In the listing explanation, the geomean was stated as 1 ug/L, far above any QL. In the IR database, the censored dataset column AV ("Result_cen") and column BC ("evaluation_result") showed the values that were used in the geomean calculation were all zero. In this program, the geomean of zero was calculated to be 1. Instead, CWS suggests that the sum of the chlordane species is represented by half of the lowest QL or half of the WQS criterion, whichever is less. When there is a mix of the quantified and censored data in the chlordane species, CWS prefers the method of summing only the quantified values.

In the listing explanation, the geomean was stated as 1 ug/L, far above any QL. In the IR database, the censored dataset column AV ("Result_cen") and column BC ("evaluation_result") showed the values that were used in the geomean calculation were all zero. In this program, the geomean of zero was calculated to be 1. Instead, CWS suggests that the sum of the chlordane species is represented by half of the lowest QL or half of the WQS criterion, whichever is less. When there is a mix of the quantified and censored data in the chlordane species, CWS prefers the method of summing only the quantified values. CWS does not agree with Category 5 designations based on results with concentrations below the QL, either the MRL or the MDL. Since there were no excursions, CWS requests the chlordane listing be moved into Category 2 (Attaining).

In addition, CWS requests clarification of how a listing may be recategorized from Category 5 (WQ Limited; TMDL Needed) to Category 2 (Attaining) when the WQS criteria are less than the Quantification Limits.

Response: Thanks for your comments. Based on this comment, DEQ has identified an issue with the way the human health toxics assessment process handled parameters that are assessed as the sum of multiple constituents at the same time all constituents are below detection limits. This has been corrected and OR_SR_1709001005_02_104018 was returned to category 3D.

A listing may be categorized from Category 5 to Category 2 when the Water Quality Standard criteria are less than the Quantification Limits on a case by case basis that will likely require an additional line of evidence. There is no current assessment methodology to address this issue. Future methods involving the use of fish tissue may be developed in future Integrated Report cycles.

Changes were made based on this comment.

CWS#3: Suggested Change ID #13

Description: Category determination- Tualatin River for Chromium

Comment: CWS agrees with the attainment of Gales Creek of the WQS for chromium VI and sensible reclassification from Category 5 to Category 2 using the recent data. On a quarterly sampling schedule, CWS was only able to obtain the minimum dataset for delisting in the five-year assessment cycle. Since CWS cannot continue to collect data indefinitely, it is important to assess the full dataset in the correct cycle. Using an accurate dataset makes the 303d list more accurate, and reclassifying water bodies using new data allows resources to be focused on truly impaired water bodies.

Response: DEQ appreciates Clean Water Services' thorough review of the draft 2024 Integrated Report.

CWS#4: Suggested Change ID #14

Description: Category determination- Tualatin River for Copper- Beaverton Creek

Comment: For the 303d listed segments at Beaverton Creek at Orenco Station (Cornelius), the datasets are incomplete. In particular, on July 18, 2018, and April 11, 2018, the hardness, pH, temperature, and total organic carbon data are missing from the WQ Assessment. However, a complete data set was made available to USGS for these sampling events. CWS transferred the TOC data to USGS in 2019. In addition, alkalinity data from Beaverton Creek at Orenco Station in 2021 were missing from the assessment. The alkalinity data were transferred to USGS in spring 2023 and a link to the data was provided to DEQ on May 15, 2024. When using the measured dataset instead of georegional defaults, the copper concentrations are well below the WQS. Listing Beaverton Creek as WQ Limited for copper based on incomplete datasets, especially when data are available to show that the water body is attaining the water quality standard,

makes the list inaccurate and diverts resources from water bodies that are truly WQ limited. In addition, there is a high data burden to delist a segment, even in error. For these reasons, CWS is submitting the data by attaching it to this letter, and CWS requests that DEQ use the complete dataset and correctly classify the listing from Category 5 to Category 2.

Response: In early May, DEQ learned that data was missing from the initial USGS National Water Information System (NWIS) data pull. DEQ then conducted a second data pull from NWIS in an effort to reconcile all missing data. The results mentioned in this comment were not identified in NWIS. Following the second data pull, DEQ followed the approved assessment methodology to reassess all the AUs impacted by the missing data on June 10, 2024. A supplemental report is available on the [Draft Integrated Report webpage](#) to make it easy to identify the AUs impacted by the reassessment.

The data attached to this letter cannot be accepted because it is not in the data submission template and is outside the open call for data window. Please resubmit the data for the 2026 Integrated Report.

CWS#5: Suggested Change ID #15

Description: Category determination- Tualatin Copper-watersheds

Comment: City of Portland and City of Lake Oswego both sampled for copper in the upper portions of these tributaries to the Tualatin Basin. The City of Portland and City of Lake Oswego boundaries overlap with the Tualatin watershed only in limited upper areas of the Tualatin watershed. Therefore, we can reasonably presume that the Cities only sampled in upper parts of the watershed, so their data sets are not complete with up to 9 missing input parameters. There were IWQC calculated on only pH as an input parameter to the CuBLM, which requires 9 measured input parameters, relying on georegional defaults for the remainder of the CuBLM inputs. For Fanno and Beaverton Creeks, CWS provided much more complete data sets showing the reaches and locations sampled in Fanno and Beaverton Creeks that they should be Category 2 (see “Beaverton Creek – copper” above). CWS agrees with DEQ that complete data sets should be given precedent over incomplete data sets. This approach by DEQ recognizes and incentivizes collecting complete data sets in support of accurate conclusions. Given the burden of delisting a segment once it has been listed as Category 5, CWS requests that Beaverton

watershed (OR_WS_170900100401_02_104506) and Fanno (OR_WS_170900100502_02_104513) watershed are not listed as Category 5. Rather, DEQ should consider instead Category 3 (Insufficient Data) or identifying reaches for listing based on the available information for using the CuBLM. For similar reasons, CWS requests that DEQ evaluate the Saum watershed (OR_WS_170900100504_02_104515) consistent with other watersheds with limited data and potentially recategorize the 2018 listing from Category 5 to Category 3.

Response: Page 122 of the [Assessment Methodology for Oregon's 2024 Integrated Report](#) states "DEQ prefers to use criteria derived from site-specific measured input parameter values for the model. If measured data for one or more of the model input parameters are not available, DEQ will follow the copper criteria implementation procedures" outlined in the 2016 [Implementation of the Freshwater Aquatic Life Water Quality Standards for Copper](#). DEQ has stressed the importance of collecting the required Copper-BLM input parameters if entities are monitoring for copper (See Use and Implementation of the [Copper Biotic Ligand Model FAQ](#).

In addition, 40 CFR 130.7(b)(5) provides that "each state shall assemble and evaluate all existing and readily available water quality-related data and information". DEQ has an established process for assessing copper data with limited ancillary data. If an entity submits copper data to DEQ for use in the Integrated Report, DEQ is obligated to assess all high quality copper data received, regardless of the availability of concurrent parameter data for the Copper-BLM.

CWS#6: Suggested Change ID #16

Description: Category determination- Upper Tualatin River for Copper

Comment: Although the upper Tualatin River segment (OR_SR_1709001002_02_104104) was listed as Category 2, the WQ Assessment database shows seven excursions of the CuBLM IWQC out of 99 samples. The WQ Assessment Methodology Table 6 states that for 99 samples, nine or more excursions will list a segment as Category 2 (Attaining). CWS affirms this listing as its recent data with full datasets shows attainment of the water quality standard in this segment. CWS notes that the Oct. 5, 2022, samples at Tualatin River at Golf Course were missing a majority of the CuBLM input parameters, including pH. DEQ did not specify a way to substitute missing pH values for CuBLM. Therefore, the IWQC cannot be calculated for this date and

location. CWS requests that the Tualatin River at Golf Course data point is removed from the copper evaluation.

Response: The 10/05/2022 copper sample at 3701528-CWS, Tualatin River at Golf Course Rd, was missing several on the Copper-BLM input parameters. Page 122 of the [Assessment Methodology for Oregon's 2024 Integrated Report](#) states "DEQ prefers to use criteria derived from site-specific measured input parameter values for the model. The copper standard OAR-340-041-8033 Endnote N (1)(c) specifies that if concurrent pH data is missing from the sample dataset, DEQ will use a representative pH value from available data relevant to the site. DEQ follows the copper criteria implementation procedures outlined in the 2016 DEQ [Implementation of the Freshwater Aquatic Life Water Quality Standards for Copper document](#), which outlines the process for substituting an estimate input parameter or the use of default values.

In addition, 40 CFR 130.7(b)(5) provides that "each state shall assemble and evaluate all existing and readily available water quality-related data and information". As DEQ has a process for assessing copper data with limited ancillary data, if an entity submits copper data to the integrated report DEQ is obligated to assess all high quality data received following the publicly reviewed Assessment Methodology, regardless of the inclusion of concurrent parameter data for the Copper-BLM.

CWS#7: Suggested Change ID #17

Description: Trash- General

Comment: CWS supports the Oregon Association of Clean Water Agencies (ACWA) comments on the Willamette River trash listings. CWS, as do many others, recognizes that trash can be an aesthetic issue, along with causing other water quality issues. As noted by ACWA, there are broader social, legal, and policy issues related to the sources of trash. We agree with DEQ and ACWA that a TMDL may not be the best approach for responding to trash. CWS encourages DEQ to create an effective holistic, multi-jurisdictional, equitable, just, and data-based strategy for responding to trash which includes, but is not limited to, actions by MS4 permit holders. CWS is willing to engage as a stakeholder.

Response: By incorporating this pollutant in the Clean Water Act 303(d) listing of impaired waters, DEQ is acknowledging the impact of aquatic trash on beneficial use support, while also

recognizing the solution will take a larger coordinated effort than that can be achieved by water pollution prevention efforts alone. DEQ recognizes and will continue to support local efforts that have been focusing and continue to focus on reducing sources of trash pollution on riverbanks and riparian areas. At this time, these 303(d) listings for aquatic trash will be given a low priority for TMDL development. This is due to consideration of critical program factors, such as court-ordered timelines, resource constraints and acknowledgment that other solutions are a more effective tool for restoring waters impaired by aquatic trash. As resources are available, DEQ may consider developing an [advanced restoration plan](#) to build the partnerships needed to address the sources of aquatic trash.

DEQ's existing MS4 permit contains sections on Illicit Discharge Detection & Elimination and Pollution Prevention & Good Housekeeping which require cities to include preventative actions like street sweeping and maintaining catch basins in their stormwater management plans. This permit will continue to contain provisions aimed at preventing trash from running off streets and reaching Oregon's waters through the storm sewer system.

Comments from: Deschutes Redbands Chapter of Trout Unlimited

DRCTU#1: Suggested Change ID #7

Description: TMDL- Deschutes TMDL prioritization

Comment: We recognize the importance of TMDL priority-setting as a vital component of the Integrated Report process. The 2022 Integrated Report assigned a "medium" TMDL priority for the Upper Deschutes and Little Deschutes Subbasins, with a corresponding schedule to have a TMDL submitted to EPA by April 2030. The 2024 Draft Integrated Report maintains this timeline. Our Chapter supports re-assigning the Upper Deschutes and Little Deschutes Subbasins to a "high" TMDL priority in the 2024 Integrated Report Submittal—with a corresponding tentative schedule to have a TMDL submitted earlier than 2030.

The reasoning have been summarized as: Severity of Pollution: In our Chapter's view, the Upper Deschutes and Little Deschutes have some of the most significant impairments of any

waterbody slated for a TMDL in the 2024 TMDL Submission Schedule, but will wait the longest for implementation based on the DEQ's current schedule to complete the work.

Uses of the water: The impaired, designated beneficial uses in the Upper Deschutes and Little Deschutes Subbasins include private domestic water supply, public domestic water supply, and fish and aquatic life. These are among the most vulnerable and susceptible designated beneficial uses for a waterbody. Recreational use of the Upper Deschutes River basin is also an economic driver for the region. The river's users, including our Chapter members, rely on DEQ to help maintain the long-term integrity of the basin's ecosystem by establishing a TMDL—and then getting to work in implementing pollution control measures intended to address the impairments (which will itself take years after the TMDL is completed).

Availability of TMDL resources: We recommend a DEQ review of the status of TMDL development in the basin. As we have offered in the past, our Chapter is interested in supporting the study efforts and may be able to lend Chapter member volunteer time or other resources to data collection efforts needed and approved by DEQ (e.g., collecting pH, dissolved O₂ and temperature data pursuant to methodologies approved by DEQ). We have met with DEQ staff to discuss opportunities to engage in these efforts, and understand that DEQ would be receptive to Chapter efforts to collect and submit data pursuant to study methodologies approved by DEQ; our Chapter is interested in pursuing that and invites further conversation with DEQ staff about those opportunities.

Specific judicial requirements: Our Chapter is not involved in the referenced litigation, but we note that much of the data collection and collaborative processes described on the DEQ website concluded over twelve years ago. If the referenced temperature litigation is not over and has no reasonably foreseeable end, then it may be time for DEQ to re-evaluate when and how it will complete a TMDL for the Upper Deschutes and Little Deschutes Subbasins. Right now, we're slated to wait another six years until DEQ completes a TMDL, and related on-ground water quality improvement measures won't occur until after that.

Other relevant information: The Upper Deschutes and Little Deschutes also provide valuable habitat for threatened species (Oregon spotted frog), native trout, and beloved recreational opportunity. Of course, water quality in the Upper and Little Deschutes Subbasins affects water quality in the middle and lower Deschutes, portions of which provide habitat for anadromous salmon and steelhead (including threatened Middle Columbia summer steelhead). Improving water quality upstream of Bend can improve conditions in those areas downriver.

Response: Oregon's TMDL priorities and schedule have been developed considering Oregon's final 2022 and draft 2024 Section 303(d) list of Category 5 Water Quality Limited Waters needing a TMDL. Each Category 5 listing has been given a TMDL priority (High, Medium, and Low) corresponding to the sequence that TMDLs will be developed. The priority and schedule for these TMDLs is based on multiple factors including number of listed waters in a watershed, listing parameter, the impaired beneficial uses, if a watershed has other TMDLs, severity of the water quality problem, input from the public, DEQ resources, and TMDLs with deadlines that have been established in litigation through a court order. Currently, several DEQ TMDL staff are required to work on a court ordered project for temperature TMDLs at an accelerated pace through May 2028. The few remaining TMDL staff are committed to completing other TMDLs in progress.

Comments from: National Association of Clean Water Agencies and California Association of Sanitation Agencies

NACWA-CASA#1: Suggested Change ID #41

Description: Ocean Acidification and Hypoxia - management implication

Comment: *OAH is a global phenomenon due to CO₂ emissions and climate change – not point source discharges.* The Clean Water Act (CWA) is not an appropriate tool for addressing ocean acidification and hypoxia (OAH). OAH is an unfortunate global phenomenon due principally to excess atmospheric CO₂ levels. The only pollutant sources that can be regulated under the CWA are point source discharges. CO₂ in the atmosphere can come from sources all over the globe, and the CO₂ in ocean waters that result in acidification may have been absorbed years or even decades earlier. This complex spatial and temporal variability in the sources of CO₂ make it impossible to link CO₂ levels in the atmosphere or from any particular air emissions to ocean

water quality in any particular area, much less a point sources of pollution subject to the Clean Water Act.

Management capabilities for addressing impacts of OAH are very limited under the Clean Water Act. Under the CWA, the 303(d) impaired waters list triggers the development of a total maximum daily load (TMDL) for point source dischargers and the establishment of Load and Wasteload allocations. This TMDL, or pollutant budget, dictates how much a waterbody can handle before it is impaired, and the permitting agency must somehow allocate that budget among the pollutant sources. The time, energy, and expense that would be necessary to develop TMDLs to address ocean acidification would not achieve the goals of the CWA. The TMDL program relies on the ability to assign responsibility for making pollutant reductions. However, Oregon DEQ will be powerless to set limits on either national or international air emissions of CO₂, and even if CO₂ sources were identified within the state that were contributing to the acidification of the ocean waters of the state, the CWA does not provide regulatory tools for enforcing controls on those sources. When pollutants are coming from sources beyond the control of the state regulatory agency, the TMDL program is extremely limited in its ability to impose controls to address the underlying issue and concern. The likely cause of ocean acidification, excess atmospheric CO₂ levels, is an issue of global origin. Developing TMDL pollutant budgets for local coastal waters that are being impacted by global sources will not provide the sought-after benefit to water quality.

Response: While section 402 of the Clean Water Act is focused on controlling point sources, other sections of the CWA such as section 303 are focused on controlling sources of pollution more broadly to improve water quality, including reducing nonpoint sources of pollution through the development of TMDLs. Global sources contributing to climate change related water quality stress or impairments do not exempt those impairments from the Clean Water Act. [EPA's 2022 - 2032 Vision for the Clean Water Act Section 303\(d\) Program](#) recognizes the strategic approach needed to account for climate change related impacts to water quality, and suggests that "Examining the potential impact of changing climate conditions on 303(d) program activities will often involve unique considerations depending on regional, local, or project-specific conditions." In the case of ocean acidification and hypoxia, more information and tools are needed to understand the most effective actions by the state of Oregon, pursuant to the Clean Water Act, to reduce and/or mitigate the effects of changing ocean conditions on fish and aquatic life.

NACWA-CASA#2: Suggested Change ID #42

Description: Ocean Acidification and Hypoxia - defer assessment

Comment: *Defer until the 2026 Integrated Report – like California – inclusion of the OAH methodology since there are only two low priority sites, rather than create a new category – 5C – for a new type of impairment based on climate change, which the 2024 Integrated Report acknowledges the traditional TMDL approach is not efficacious.*

The 2024 Integrated Report only lists two sites as impaired, and both were designated low priority for developing a TMDL: (1) Washington Border to Cape Lookout, i.e. the stretch of ocean west of Portland), and (2) Cape Foulweather to Siltcoos River, i.e. the stretch of ocean west of Eugene. We appreciate that the 2024 Integrated Report acknowledges our overarching concern with pursuing a TMDL for OAH in the section about creating a new assessment category for climate change, “5C”: “The challenge of addressing climate change related impairments demands a strategic approach and will require additional tools and resources to accompany the suite of Clean Water Act management and implementation tools traditionally used to restore impaired waters. For this reason, DEQ will use Sub-Category 5C to identify climate change related waterbody impairments on the 303(d) list, while also recognizing a broader approach than the traditional TMDL and restrictions on permitted discharges may be needed to find effective solutions.” (p. 72) In the light of this recognition about not solving 5C impairments through the Clean Water Act, we respectfully recommend instead that Oregon defer inclusion of the OAH methodology from the 2024 Integrated Report for the reasons described above and below, instead of proceeding with a framework with a tenuous premise that incidentally creates exposure to third-party liability if a TMDL is not pursued by DEQ.

California’s 2024 Integrated Report declined to list sites for OAH due to the need for more work on key issues – Oregon could utilize Category 3 or defer inclusion of OAH to their 2026 Integrated Report when it’s complete. California’s 2024 Integrated Report considered aragonite saturation for OAH like Oregon but did not proceed with listing bodies as impaired for it “because it is not clear the number of days marine life would need to be exposed to the aragonite saturation state threshold for severe shell dissolution to occur” (p.76). Beyond determining the number of days exposure for various aragonite saturation states, California also intends “in future listing cycles [to define] thresholds for likely impairment versus potential impairment with the varying aragonite saturation states” (p. 76). This is important work distinguishing likely from potential impairments and should be completed before creating a new

Category for OAH impacts. In addition to those issues, California also is working with the National Oceanographic and Atmospheric Administration (NOAA), and an interstate workgroup on OAH with DEQ and Washington to address the following issues that will inform future OAH assessments: (1) Depth in relation to aragonite saturation state: Should there be differing aragonite saturation thresholds depending on the depth in the water column? Within the 0-200 m, do specific depth ranges (i.e., 0-50m) illustrate higher dissolution rates than others? (2) Timing in relation to data collection: Determining the number of days at a certain threshold for pteropod life stages. (3) Understanding natural aragonite saturation state levels in an upwelling state. (4) Seasonal variation and shift in dissolution rates. (See p. 77-78). Each of those four issues are a critical matter that need more understanding before pursuing and establishing a new methodology for evaluating impacts from OAH and assessing climate change derived impairments on waterbodies for resulting in the listing of waterbodies for which a TMDL likely could not effectuate restoration.

Response: DEQ would like to clarify the use of Category 5C in reporting climate change related impairments in marine waters. Category 5C was used to recognize that in addressing these unique climate change related impairments, other tools will be required in addition to the suite of management and implementation tools available through the CWA. The intent behind the use of Category 5C was not to say that CWA has no role in addressing OAH impairments or impacts.

DEQ agrees that the issues raised by CA Integrated Report team in the 2024 IR Staff Report are important considerations in OAH assessment. The issues raised in the staff report (initial draft released February 2023) were incorporated into DEQ's assessment methodology development process, which was still underway at that time (initial draft released May 2023, finalized August 2023). It also should be noted that water quality standards differ between Oregon and California, along with considerations required to interpret those standards. More information about the listing factors considered in California's 2024 Integrated Report can be found in their [2024 IR Staff Report](#).

DEQ agrees with the suggestion in this comment about the importance of distinguishing likely impairments from potential impairments in making categorical determinations about OA impacts, in this case identifying impaired waters. This distinction was incorporated into DEQ's assessment methodology through the development of the hybrid OA assessment framework. By defining those benchmarks that are independently applicable and those that require combined lines of evidence to determine impairment DEQ has distinguished from benchmarks that signify

potential impact vs. impairment. For more information about the categorical determinations of potential and likely impairment please refer to the [OAH technical support document](#) pg. 35.

The four issues raised are important considerations, and in fact the inter-state working group referenced in this comment was [DEQ's OAH workgroup](#), which was convened to provide technical support throughout DEQ's assessment methodology development process. Depth, data collection timing, natural saturation states in upwelling areas, and seasonal variation were all incorporated into the [Assessment Methodology for Oregon's Integrated Report](#) (beginning on page 64) and accompanying [OAH technical support document](#).

NACWA-CASA#3: Suggested Change ID #43

Description: Ocean Acidification and Hypoxia - assessment methodology

Comment: Apart from the previously mentioned work still needed to be performed, we also have underlying concerns with the certainty in the 1.4 aragonite saturation threshold which is based on a limited number of publications that provide various ranges of estimates for impairments and the singular selection of pteropods for OAH assessment.

While the science is uniformly settled that aragonite saturation state levels < 1.0 can lead to severe shell dissolution, there is less information about where to set the upper-bound for impacts. 1.2, 1.3, 1.4, and 1.5 all have been mentioned. The 2024 California Integrated Report observes, "In Bednaršek 2019, thresholds between 0.9 and 1.5 were found to indicate severe to mild shell dissolution of pteropods, with potential impairment indicated at approximately 1.2 ± 0.1 (for an overall threshold of 1.3)." However, California ultimately relied on older science from a 2015 study which concluded that the maximum uncertainty of ± 0.2 in the calculation of mean omega aragonite saturation state is required to adequately link changes in ocean chemistry to changes in ecosystem function, so the mean omega aragonite saturation state of 1.4 (1.2 ± 0.2) was concluded to be a more accurate reflection of potential OA impairment.

Beyond the issue of where to set the threshold for one species, there also is the broader issue of a TMDL framework centered around seawater chemistry changes and ecological effects for only one organism, i.e. pteropods. Focusing on one indicator taxa is an understandable simplification in the initial stages of developing a framework for identifying impairments, and pteropods are widespread and particularly sensitive to ocean acidification. However, many fundamental

ecological questions remain: are pteropods replaceable in the diet of their predators by other zooplankton that are less sensitive to ocean acidification, or do they play a unique and irreplaceable role? To what extent can species adapt in a particular ocean region, and are some regions more crucial as habitat than others? These questions were proffered by an independent group of international oceanographic experts to a California group comprised of regulators, wastewater dischargers, a statewide environmental organization, and the scientific team building a model to predict OAH in southern California. While that work is ongoing, much more work remains to increase that community's confidence in that OAH model, including adapting approximately thirty-five recommendations from the independent experts to the modeling team. ("National Water Research Institute: Independent Peer Review Panel Draft Report for the ROMS-BEC Model"; you can read more about the overall project on its webpage: <https://www.nwri-usa.org/socal-coastal-model-review>, where the final report will be posted later this summer.)

Likewise, before DEQ adopts the 2024 Integrated Report with the inclusion of the OAH methodology and listings, CASA recommends more investment and time to address these ecosystem-level questions, alongside investment in more transparency and outreach in formalizing a methodology to assess and determine OAH impacts.

Response: DEQ's primary objective in the development of new methodologies for assessing ocean acidification and hypoxia in Oregon's marine waters was to identify what constitutes sufficient evidence to determine impairment based on the best available science. An underlying theme throughout DEQ's consultation with the OAH workgroup in the development of these methodologies was on how to deal with different sources of uncertainty. Some level of uncertainty (scientific, technical, model based) often exists in understanding biological impacts on marine systems and making decisions around water quality impairment. DEQ accounted for the uncertainty in the OA methodology related to the assessment benchmarks by developing a hybrid assessment framework allowing multiple lines of evidence to be used when available. Two benchmarks are used in the framework, an independently applicable benchmark (IA benchmark) and a combined lines of evidence benchmark (CLOE benchmark). In the case of aragonite saturation state, when conducting an assessment on using chemical data alone, DEQ set the IA benchmark at 1.0, a level at which there is great scientific certainty about severe shell dissolution, as articulated above. When multiple lines of evidence are available in the assessment (pteropod shell dissolution data to confirm impacts) a higher CLOE benchmark ($\Omega=1.4$) is applied. As new scientific information becomes available, the Assessment

Methodology on OAH may be updated in future Integrated Report cycles to reflect the evolving science.

NACWA-CASA#4: Suggested Change ID #44

Description: Ocean Acidification and Hypoxia - technical workgroup process

Comment: The Oregon DEQ OAH Technical Workgroup for establishing developing the methodology was not inclusive of dischargers or environmental organizations even though other non-experts from outside of Oregon were invited to attend and participate in meetings where regulatory thresholds were determined for this rulemaking. Oregon is the first west coast state to propose a comprehensive methodology for assessing OAH impairments as a result of anthropogenic stressors under the CWA framework. To undertake this work, Oregon established an OAH Technical Workgroup in 2022 for which the group's charter and meeting minutes were all made available online after the group finished. While CASA understands that group is scientific and technical by its nature, in reviewing the assessment methodology for OAH, CASA noted that numerous external parties who were not experts were invited to attend the meetings to set the 1.4 aragonite saturation threshold and develop the associated methodology. CASA is concerned that key stakeholders from the regulated community and environmental community who also are affected by this work were not invited to participate in these critical foundational meetings and discussions which could affect the entire west coast, even if not ultimately Oregon. Accordingly, we think the process for determining OAH thresholds and establishing an OAH methodology should be better explained and more transparent since it is not immediately clear how the CWA framework offers solutions to point sources for addressing OAH impacts. Only one commentor provided any feedback during the 2024 rulemaking about the OAH methodology, which suggests additional input should be solicited through a more formal process specific to OAH stakeholders from the same states whose regulatory agencies were involved in the OAH Technical Workgroup, and not just generically to Oregon stakeholders through the Integrated Report process, in which only five comment letters in total were received. As two organizations from outside of the state of Oregon, we sense this OAH methodology could result in listing determinations of a higher priority to pursue a TMDL in other jurisdictions which would result in hundreds of millions in local costs without those local entities weighing in on the underlying standards. We respectfully request broader outreach by

DEQ to stakeholders and environmental organizations before adopting the OAH methodology portion of the Integrated Report while Oregon pursues resolution of the same matters California is weighing. Moreover, the reply in the 2024 Response to Comments to the one commentor about OAH states, “DEQ’s primary objective in the development of new methodologies for assessing ocean acidification and hypoxia in Oregon’s marine waters was to identify what constitutes sufficient evidence to determine impairment based on the best available science. This objective was mainly based on compelling comments DEQ received during the 2022 IR comment period, which urges the agency to act in identifying biological impacts related to OAH stress in Oregon’s waters.” However, when examining the 2022 comments DEQ received, only remarks from the Oregon Coordinating Council pertained to OAH, and they did not urge identification of what constitutes sufficient evidence to determine impairment, rather they noted they would be able to send a representative to the OAH Technical Workgroup which had been established, and the other comments were data processing related about filtering information and updating submission platforms. As such, the imperative and mandate is not clear for why the OAH methodology must be adopted in the 2024 listing cycle, and absent an immediate need to include the OAH methodology in the 2024 Integrated Report, we recommend DEQ continue working with other states in noticed, public, open meetings so all potentially impacted parties can timely participate in the efforts of the coalition of interstate regulatory agencies to develop an OAH methodology.

Response: DEQ would like to clarify that this workgroup and methodology development process were not a rulemaking process to establish a water quality standard. The benchmarks established in the OAH methodology through the workgroup process are applied for water quality assessment purposes.

The need to solicit independent scientific and technical input when developing assessment methodologies based on the interpretation of narrative water quality criteria, was established by the Oregon legislature through ORS 468.B.039 in 2015. DEQ complied with this state specific statute for the 2024 OAH assessment methodologies by convening a [scientific technical workgroup](#). The technical workgroup is comprised of over 40 individuals representing a diversity of scientific, technical, and policy expertise in the field of ocean acidification and hypoxia. The full workgroup membership brought a range of specialized regulatory, research, and academic perspectives. The workgroup provided technical expertise to help inform the process but was not a decision-making body. Ocean acidification and hypoxia assessment benchmarks were ultimately set by DEQ and reviewed by the full workgroup.

Additionally, DEQ conducted a public comment period on the draft assessment methodologies from May 31, 2023 to July 7, 2023 and provided an informational overview and additional opportunity for comments on the draft methodologies to its policy and rulemaking board, the Environmental Quality Commission, on September 15, 2023. DEQ also held a detailed public webinar during the public comment period on June 8, 2023.

To increase transparency about the OAH workgroup process, the [OAH workgroup charter](#) and workgroup meeting agendas were posted in advance on DEQ's website. A [technical workgroup process overview document](#), [OAH assessment fact sheet](#), and [technical support document](#) were developed upon the completion of the workgroup process and were made available when the OAH methodology was released for public comment in May 2023.

DEQ would like to address the date error in the 2024 Response to Comments. The public comment period in which DEQ received compelling comments urging the agency to act in identifying biological impacts related to OAH stressor in Oregon's waters was erroneously referred to as the 2022 IR comment period, when in fact it was the 2018/2020 IR comment period. During the 2018/2020 IR comment period DEQ received [several comments letters](#) (beginning on pages 142, 154 and 157) urging the agency to take action on this issue. DEQ's response to these comments was to classify marine waters as 3B (Insufficient data, potential concern) for Ocean Biological Integrity, citing a lack of methodology to assess marine water impairment. During this time DEQ committed to forming an OAH technical workgroup to assist the agency in developing assessment methodology to determine impairment in Oregon's marine waters.

NACWA-CASA#5: Suggested Change ID #48

Description: Ocean Acidification and Hypoxia - quantitative data

Comment: DEQ developed this "first in the nation" listing for impaired ocean acidification using methodologies to assess ocean conditions based upon narrative water quality criteria. Applying narrative criteria for ocean acidification and hypoxia (OAH), DEQ listed one ocean area for OAH and another area for hypoxia. Four other ocean units were not listed due to insufficient data. The assessment methodology used should be supported by significantly more quantitative data (biological, chemical, and physical measures) and less reliant on qualitative narrative evaluation.

Response: While developed to evaluate narrative criteria, DEQ’s assessment methodologies for OAH rely exclusively on high quality quantitative data for assessment determinations. This is consistent with other narrative criteria interpretation methodology in Oregon, such as freshwater narrative biocriteria, which relies on macroinvertebrate assemblage data for assessment determinations.

Comments from: Northwest Environmental Advocates

NWEA#1: Suggested Change ID #5

Description: TMDL- schedule and priorities

Comment: DEQ’s proposed schedule and priorities for TMDL development is pointless and misleading. One of the very few changes from the 2022 schedule and priorities to that for 2024 concerns the Coquille, which has been pushed forward two years, from April 2024 to April 2026. These Coquille TMDLs were first planned for an issuance date of June 2012 and there is a very long history of repeated delays since the 2010-2012 Performance Partnership Agreement, in which the 2012 date was first announced, to DEQ’s current proposal of April 2026. That history is comprised of DEQ’s repeated changes in its expected issuance dates for the Coquille TMDLs—2012, 2013, 2014, 2015, 2016, 2017, 2018, 2021, and 2024. That DEQ cannot manage to complete these purportedly “high” priority TMDLs after 14 years of work—plus two additional years—is certainly pathetic. More to the point, it demonstrates that there is nothing real at all about any of the proposed dates in DEQ’s schedule for TMDL development in Oregon. This issue applies to most of the non-court-ordered TMDLs in the schedule and priorities, for which DEQ has chosen to retain the April 2030 completion date (Deschutes River basin, Powder nutrient-related, Rogue nutrient-related, Schooner Creek and Siletz turbidity) that were set out in the 2022 schedule for these waters. Why does DEQ think that it can meet an April 2030 completion date for these waters when it has slipped the Coquille date once again after 14 years of delay? Why does DEQ think it can meet an April 2030 completion date when it has not been able to complete any other new TMDLs since 2010 with the exception of the nine TMDLs for the Upper Yaquina River and the seven TMDLs for Powder River Basin?

Why has DEQ not added any other new TMDLs to its 2024 schedule and priorities to those that were on its 2022 schedule and priorities? With the passage of two years, and the long-awaited completion of the Upper Yaquina and Powder TMDLs, the agency should be able to add new waters to its “medium” priority and its schedule.

Among those TMDLs that should be added to the priorities and schedule are 303(d) listings for persistent pollutants, such as bioaccumulative toxics and nutrients. With the exception of the court-ordered mercury TMDLs for the Snake River, DEQ has no plans to complete new TMDLs for toxic impairments between now and 2030. As its last new TMDLs for toxics were from 2008—16 years ago—and its schedule goes to 2030, that would be a total of 22 years before DEQ completed any new TMDLs for toxics, with the exception of mercury in the Snake River.

Moreover, DEQ should establish its priorities for toxics and nutrients TMDLs by likelihood that there are NPDES sources that are causing or contributing to these impairments. As DEQ has demonstrated itself incapable of using TMDLs to control significant nonpoint sources, such as logging and farming, and it does have both the legal authority and the legal obligation to control pollutants from NPDES sources, this further consideration should drive its TMDL priorities.

Finally, an additional overlay should be for those pollutants that are having an adverse impact on threatened, endangered and candidate species; species that are on the verge of extirpation in Oregon, such as amphibians; and species at the top of the food chain, such as piscivorous birds and mammals.

DEQ’s method of choosing priorities is not transparent and objectively does not make any sense. For example, bacteria pollution in the Powder River is simply not putting as many people or species at risk as any number of other pollutants. The Upper Yaquina TMDL addresses only an average of 266 cow-calf pairs in a state that has 1,250,000 cows and calves (2020 end-of-year inventory), according to the Oregon Department of Agriculture. It is well past time for DEQ to establish a rational basis for its work.

Response: Thank you for your comment. DEQ TMDL priorities are structured according to the Integrated Report outcomes and staff resource availability and legal requirements including court orders.

Description: Delisting- explanation

Comment: Some of the proposed de-listings for toxics are based on the change in the ratio between excursions and total samples. Of greatest concern is how DEQ prevents polluters from collecting additional samples solely for the purpose of “diluting” the ratio and obtaining a delisting. For others, DEQ simply does not provide enough information on which to judge its proposal or we are not reading the spreadsheets correctly. For example, the following proposed de-listings are confusing:

OR_SR_1709001005_02_104141 Fanno Creek Copper gives as its rationale, that 1 excursion is less than the 3 needed to list from a total of 20 samples. But the information in column “R” of the spreadsheet indicates 0 of 8 samples in 2022 exceeded criteria and 15 of 55 in 2018 did. This is confusing because a total number of samples would be $8+55=63$, not 20, and $0+15=15$.

OR_SR_1709001201_02_104170 Johnson Creek Endosulfan similarly does not make any sense, comparing the information in columns “J” and “R.”

Please provide more complete explanations for the proposed de-listings of the two above along with: OR_SR_1707010211_16_101465 Middle Mud Creek Chlorpyrifos,

OR_SR_1707010211_16_101466 West Branch West Crockett Branch Chlorpyrifos,

OR_SR_1708000107_02_103616 Sandy River Copper, OR_SR_1709000306_05_103854 Willamette River Iron.

Please also explain how DEQ prevents the use of additional data gathered—especially from times and locations expected to yield non-exceedances—by those who have a vested interest in obtaining a de-listing result.

Response: Thank you for this feedback regarding DEQ’s reporting on delistings. In the future, DEQ will present the information more clearly. In the delisting spreadsheet made available on the [Draft Integrated Report website](#), column J provides the rationale for the evaluation of the current dataset, whereas column R provides the rationale for the previous two assessment cycles. DEQ analyzes data for the Integrated Report on a rolling 5-year basis, so sample counts in these two columns will have different values as older data is not in the current window and new data comes into the assessment.

The Clean Water Act 40 CFR 130.7(b)(5) provides that “each state shall assemble and evaluate all existing and readily available water quality-related data and information” when assessing waterbodies for the Integrated Report. DEQ makes every effort to ensure high quality data is used. DEQ’s [Data Submission Guidance](#) describes the elements required to ensure the use of

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high-quality data for the water quality assessment and specifies that DEQ requests ambient data to be representative of the waterbody being sampled.

Here is a more detailed rationale for the delistings mentioned in the comment:

AU: OR_SR_1709001005_02_104141 - Fanno Creek - Copper is being delisted because the number of sample excursions is less than the maximum number of sample excursions allowable to delist as impaired for toxic substances as shown in the [Assessment Methodology for Oregon's 2024 Integrated Report](#) Table 10 (page 41). In the 2024 IR assessment comment period, DEQ discovered missing data provided by the USGS. Once this reassessment was completed, 123 samples were evaluated against the aquatic life criteria. Three excursions of this criteria met the delisting process as described in the methodology document.

AU: OR_SR_1707010211_16_101465 - Middle Mud Creek - Chlorpyrifos data contained 57 total samples. There were 3 sample excursions of the criteria meets which is less than the maximum number of sample excursions allowable to delist as impaired for toxic substances shown in [Assessment Methodology for Oregon's 2024 Integrated Report](#) Table 10 (page 41).

AU: OR_SR_1707010211_16_101466 - West Branch West Crockett Branch- Chlorpyrifos data contained 115 total samples in the data window. There were 6 sample excursions of the criteria meets which is less than the maximum number of sample excursions allowable to delist as impaired for toxic substances as shown in the [Assessment Methodology for Oregon's 2024 Integrated Report](#) Table 10 (page 41).

AU: OR_SR_1708000107_02_103616- Sandy River - Copper data contained 19 samples in the data window. There was 1 sample excursion of the criteria meets which is less than the maximum number of sample excursions allowable to delist as impaired for toxic substances as shown in the [Assessment Methodology for Oregon's 2024 Integrated Report](#) Table 10 (page 41).

AU: OR_SR_1709000306_05_103854- Willamette River- Iron contained 36 samples in the data window. There were 3 sample excursion of the criteria meets which is less than the maximum number of sample excursions allowable to delist as impaired for toxic substances as shown in the [Assessment Methodology for Oregon's 2024 Integrated Report](#) Table 10 (page 41).

Comments from: Oregon Association of Clean Water Agencies

OACWA#1: Suggested Change ID #31

Description: Listing and TMDL need: PFOS source identification

Comment: ACWA members and DEQ are in agreement that any successful approach intended to reduce PFAS in the environment will be source identification and reduction or elimination. Chemicals containing PFAS are ubiquitous and difficult if not impossible to break down once they enter the environment. ACWA is engaging with member agencies, DEQ, Oregon State University and others to study the extent and magnitude of the presence of PFAS in the environment and, more specifically, wastewater and its many beneficial products including biosolids and reuse water.

Listing the Columbia Slough for PFOS based on Oregon Health Authority (OHA) fish consumption advisories and recognizing specific sources that include fire-fighting foam and industrial processes is consistent with ACWA's approach to PFAS reduction. However, given the relative lack of a deep understanding of appropriate PFAS limits and the degree of human health impact, OHA's recommendations are likely intentionally very conservative. The decades-long bioaccumulation of legacy pollutants such as PCBs and pesticides in the Slough further complicates the picture. Having said that, reducing PFAS in the Columbia Slough is an important effort. Ideally, a targeted approach will be utilized to identify significant sources and reduce or eliminate the pollutant at its source. The focus on private parties that release pollution in the Slough and the needed remediation of sediment contamination will be critical. The first step to making the strides that need to be made to reduce PFAS in the environment is to track the most significant release of pollutants to the source and eliminate their release. Taking direct action to reduce release of known sources of pollution will be a far more effective approach than adding PFAS-related chemical pollutants to the 303(d) list and a future TMDL.

Response: DEQ agrees the use of PFAS and similar compounds (PFOS) has been widespread in many industrial and consumer products making it abundant in the environment, and source identification and reduction can be an effective approach to reduce PFAS. The science on setting

water quality criteria to protect beneficial uses is new, with EPA recommended criteria just released in October 2024. While adding the Columbia Slough for PFOS to the 303(d) DEQ recognizes fish consumption advisory as an impact to the public being able to consume resident fish or shellfish harvested from waterbodies and beneficial use of fishing (consumption) is not fully supported. DEQ also acknowledges the next steps to restore this waterbody will require a thoughtful and balanced approach. Prior to initiating TMDL development;

- 1) DEQ's Cleanup Program will continue to work with local governments and other parties to identify and mitigate known sources of PFAS and related compounds in the Columbia Slough.
- 2) DEQ will continue effort to develop an agency wide PFAS strategy.
- 3) DEQ does not anticipate any new monitoring requirements for MS4 permittees in the Slough area.

OACWA#2: Suggested Change ID #32

Description: Trash- Need for methodology

Comment: DEQ listed aquatic trash only for stream segments where it was presented with what it refers to as "overwhelming evidence". Using this methodology should truly be a method of last result as both the evidence presented, and the conclusion reached of "overwhelming evidence", are far too subjective. The standard for credible evidence and the criteria to reach "overwhelming" should be elaborated on by DEQ in the future. In the meantime, ACWA does not quibble with the fact that DEQ was presented with a lot of pictures of trash that suggest an environmental concern to take seriously. DEQ correctly limited the reach of the listing to only those stream segments where evidence was presented.

Response: DEQ appreciates the suggestions in this comment. As stated in the [Assessment Methodology for Oregon's 2024 Integrated Report](#) (page 36) the concept of Overwhelming Evidence states that credible and compelling information indicating waters are not attaining applicable water quality standards can be used to determine impairment with multiple lines of evidence based on a specific rationale. The use of this section of the assessment methodology is rare and should only be applied when the data or information being evaluated overwhelmingly links the pollutant to an affected beneficial use. DEQ reviewed the project plan, numeric data and information on aquatic trash clean up events submitted by Willamette Riverkeeper (WRK) and concluded it met all elements outlined in the IR [Data Submission Guidelines](#) and is of sufficient quality for use in the 2024 Integrated Report. The [Assessment Methodology for](#)

[Oregon's 2024 Integrated Report](#) does not have a specific methodology for evaluating the impacts of aquatic trash on designated beneficial uses. Due to the submission of high-quality aquatic trash data, the fact that [EPA's 2024 IR guidance memo](#) contains a section on trash related impairments, and the federal Clean Water Act 40 CFR 130.7(b)(5) requirement to use all readily available data; DEQ applied the concept to evaluation of aquatic trash data. DEQ only found overwhelming evidence to list for aquatic trash in 3 of the 11 AUs for which data was submitted. Additionally, DEQ narrowed the affected beneficial uses to 2 from the 13 proposed by WRK because there was not sufficient evidence in the data submitted to link the impact of aquatic trash to all uses. It should be noted that this is the only submittal related to assessing aquatic trash that DEQ has received to date. As such, DEQ's evaluation of numeric data is specific to overwhelming evidence in this submittal and should not be considered an update to DEQ's assessment methodology document.

While DEQ cannot foresee all potential future applications of the concept of overwhelming evidence, effort will be made to add further clarification to this section of the assessment methodology for future IR cycles. Additionally, DEQ will continue to provide a detailed rationale when applying overwhelming evidence as was done in 2024 with Appendix E of the [Assessment Methodology for Oregon's 2024 Integrated Report](#).

OACWA#3: Suggested Change ID #33

Description: Trash- TMDL need

Comment: Regarding trash: So what should be done and who should do it? What would a plan look like? How would it be funded and implemented? What logical role would a wastewater treatment or stormwater management agency play in such a plan? Of all the state agencies, is there any reason that DEQ would be expected to lead the way? ACWA cannot answer these questions, and DEQ probably can't yet either. What ACWA can do, and is willing to do, is to provide DEQ with information. We will not look the other way when water quality is being impacted. Without question, a portion of the trash seen along waterways is associated with the homelessness crisis. Most of ACWA's members are municipalities that have information or even programs on current efforts to address help alleviate the crisis. ACWA can work with DEQ to see if data is available that can be shared. Multiple partners will be involved in this effort and ACWA members will need to know how to interact with them within its lane as NPDES permits holders. In the meantime, the Portland Metro area is collecting significant tax revenue to fund programs along with the State of Oregon to address homeless issues, and one of the issues could include

trash reduction and collection plans. As a related matter, there are laws regarding 72-hour notice to enter campsites and personal property protections that must be respected, making the issue even more complex to address.

DEQ should follow its instincts that a TMDL for aquatic trash and eventual inclusion in, most likely, MS4 stormwater permits is not the path to follow. ACWA is aware of the trash TMDL in Los Angeles, a very different situation to that faced in Oregon. Trash collection baskets at the end of storm pipes to the LA “River” no doubt collect trash that otherwise would enter the intermittent flow of water during the rare and irregular heavy storm events that occur. Oregon utilities face more regular wet weather patterns, and stormwater pipes are not a major source of trash. Oregon utilities follow Best Management Practices including regular street sweeping and catch basins and water quality facilities designed to protect water quality but that also serve the ancillary purpose of keeping trash out of storm pipes. Many if not most Oregon utilities mark storm drains with the legend “Drains Directly to Stream” to remind people to not rinse off their lawn mower, dump oil, or drop trash that could end up in the stream. The streamside trash accumulation in riparian areas shown in the evidentiary photos that DEQ is responding were likely not much contributed to by discharge from storm drains. Of course, the houseless contribution mentioned above is added to by the housed community, illegally dumping household refuse, litter, old tires, mattresses, etc. into streams. Riparian areas are not part of the MS4 and our utilities have limited jurisdiction to directly address some of these broader societal concerns related to the accumulation of aquatic trash. Solutions more oriented toward refuse receptacles and trash collection will likely yield more gains than a new MS4 permit requirement.

Response: By including aquatic trash in the Integrated Report, DEQ is acknowledging that aquatic trash getting into waterways is an environmental concern. However, DEQ also recognizes the complexity of this issue and connection to social issues beyond the scope of the Clean Water Act or state water quality regulations. DEQ is interested in seeking creative solutions to determine the most effective tool for addressing aquatic trash by working collaboratively with partner agencies, organizations and communities, which all have important roles in addressing this issue.

Following the Clean Water Act framework, listing waters as impaired is the first step toward developing a pollution prevention plan (such as a TMDL). At this time, DEQ is assigning a low priority for TMDL development for the Assessment Units listed as impaired for aquatic trash due to consideration of critical program factors, such as court-ordered timelines, resource constraints and the understanding that other solutions are a more effective tool for restoring

waters. DEQ would like to focus efforts on working with partners, including ACWA, to better understand sources contributing to aquatic trash pollution and identify the tools within Clean Water Act framework that will be the most effective in addressing these new impairments. DEQ appreciates the efforts ACWA members are already contributing towards reducing trash from entering waterbodies. Such as adherence to DEQ's existing MS4 permit which contains sections on Illicit Discharge Detection & Elimination and Pollution Prevention & Good Housekeeping that require cities to include preventative actions like street sweeping and maintaining catch basins in their stormwater management plans. This permit will continue to contain provisions aimed at preventing trash from running off of streets and reaching Oregon's waters through the storm sewer system.

OACWA#4: Suggested Change ID #34

Description: Ocean Acidification and Hypoxia: Permitting impacts

Comment: DEQ makes the practical and welcome observation that "regulating small point source discharges into marine waters may not be the most effective use of resources given the global influence of changing ocean levels." ACWA supports DEQ's reasoning that a TMDL is not the correct mechanism to use to advance positive solutions. The suggestion to work within "existing state programs on climate solutions that will increase coastal resilience and with the scientific community to better understand effective solutions at the state level" is the place to start. The science should be further developed to better understand what is within the control of regulatory mechanisms and what is more related to global challenges requiring complex multi-national cooperation.

At this time, until further science and state programs to target climate change are developed, DEQ should resist any efforts to target the small communities along the Oregon Coast that have oceanic discharges, especially given the likely extremely low level of relative impact on the larger issue. These communities already must meet stringent NPDES discharge requirements. They do not have the financial, technical, scientific or workforce resources to contribute. To expect these communities to foot any of the bill for the massive investments that may be needed would be unrealistic and place an unfair burden on these generally extremely low-income areas of the Oregon Coast. Additionally, effective solutions will need to include a consideration of non-point sources contribution, further highlighting that a TMDL approach is not the answer.

Response: DEQ agrees with the commentor that “[t]he science should be further developed to better understand what is within the control of regulatory mechanisms and what is more related to global challenges requiring complex multi-national cooperation”, and it is not DEQ’s intention to place any unfair burdens on small oceanic dischargers as a result of the OAH impairments identified in this report.

By including these assessments in the Integrated Report, DEQ recognizes the impact of changing ocean conditions on aquatic life, while also understanding more information is needed to determine how Oregon’s water quality management actions under the Clean Water Act can influence these largely global water quality stressors in marine waters. DEQ will be using a sub-category, Category 5C, for changing ocean condition impairments related to ocean acidification and hypoxia (OAH) identified in the 2024 Integrated Report.

Typically, when DEQ identifies a waterbody as impaired, that action is the first step, followed by the development management plans, such as Total Maximum Daily Load. [EPA’s 2022 - 2032 Vision for the Clean Water Act Section 303\(d\) Program](#) recognizes the strategic approach needed to account for climate change related impacts to water quality, suggesting: “Examining the potential impact of changing climate conditions on 303(d) program activities will often involve unique considerations depending on regional, local, or project-specific conditions.” In the case of ocean acidification and hypoxia, DEQ believes that more information and tools are needed to understand the most effective actions by the state of Oregon, pursuant to the Clean Water Act, to reduce and/or mitigate the effects of changing ocean conditions on fish and aquatic life. DEQ’s WQ program will focus on collaboration with DEQ’s climate mitigation programs and other climate-related efforts with external partners to best address impairments in waterbodies categorized in 5C, during which time they will be assigned a low priority ranking for TMDL development. Until a TMDL is in place, assimilative capacity of ocean waters for permitting purposes will be determined through best professional judgement.

OACWA#5: Suggested Change ID #35

Description: TMDL: Prioritization and interim

Comment: A final point not specifically related to the newly listed pollutants. For each of the three pollutants discussed, there is a common theme. What are the implications of a listing? Is a TMDL more or less likely to be effective? If not, what then? If there is a TMDL, what is the metric

for success? Before DEQ takes any next steps, especially before TMDLs are seriously considered, it is important for DEQ to develop a plan. The plan needs to focus on practical solutions, appropriate funding sources, and identifying the right participants at the right level for meaningful progress.

In the 2024 draft Integrated Report, DEQ has included its TMDL priorities and schedule. The schedule identifies high, medium and low priority TMDL projects. Nearly all the high priority TMDL projects are related to addressing temperature listings. While we understand that DEQ's continued focus on temperature is being driven by legal action, the work on updating the temperature TMDLs will end in the next couple of years. DEQ should look at prioritizing the development of TMDLs for other pollutants that have languished on the 303(d) list. There are long-time listings for dissolved oxygen, aquatic weeds, algal blooms and other constituents in many streams that continue to be identified as low priority items in its TMDL schedule. The recent permit action for the City of Medford was particularly instructive in highlighting the need for watershed assessments and the development of timely TMDLs. Since it will take time for DEQ to develop TMDLs, we encourage DEQ to define compliance pathways during the interim period for de minimis activities that enable facility planning and construction of new facilities to address aging infrastructure and growth and incorporate technological improvements.

Response: The Integrated Report categorizes all assessed waterbodies and lists the waterbodies according to the [Assessment Methodology for Oregon's 2024 Integrated Report](#) (page 18). The waterbodies shown as Category 5 are impaired because at least one beneficial use is not supported and a TMDL is needed. Each Category 5 listing has been given a TMDL priority (High, Medium, and Low) corresponding to the sequence that TMDLs will be developed. The priority and schedule for these TMDLs is based on multiple factors including number of listed waters in a watershed, listing parameter, the impaired beneficial uses, whether a watershed has other TMDLs, severity of the water quality problem, input from the public, DEQ resources, and TMDLs with deadlines that have been established in litigation through a court order. The metric for success is that the TMDL requirements are satisfied, and the water body is in attainment with water quality standards. Before TMDL development, DEQ will continue to work with communities to move forward with facility planning and construction of new facilities.

Comments from: Oregon Department of Fish and Wildlife

ODFW#1: Suggested Change ID #8

Description: Trash- Impaired uses

Comment: DEQ should list the trash impaired sections of the Willamette River as impaired for more beneficial uses than aesthetics and recreation.

Response: DEQ appreciates the feedback related to the aquatic trash assessment and recognizes that this pollutant affects users of the Willamette River. For this assessment, DEQ used the concept of Overwhelming Evidence, defined in the [Assessment Methodology for Oregon's 2024 Integrated Report](#) page 36, which states that credible and compelling information indicating waters are not attaining applicable water quality standards can be used to determine impairment with multiple lines of evidence based on a specific rationale. The use of this section of the assessment methodology is rare and should only be applied when the data or information being evaluated overwhelmingly links the pollutant to an affected beneficial use. For this assessment of aquatic trash data submitted by Willamette Riverkeeper, DEQ used Geo-referenced photographs to assign impacts to beneficial uses and concluded there was not overwhelming evidence in the submittal to show impacts to uses other than aesthetic quality and water contact recreation.

ODFW#2: Suggested Change ID #20

Description: Category determination- alkalinity

Comment: Alkalinity Category 5 designations should be Category 3B designations as per the methodology

Response: Thank you for pointing out this inconsistency with the draft conclusions and the [Assessment Methodology for Oregon's 2024 Integrated Report](#). DEQ agrees with the comment and will update these parameter assessments for Alkalinity from Category 5 to Category 3B.

Description: Delisting method- Temperature

Comment: DEQ revised its temperature delisting methodology for the 2024 Integrated Report 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 made the need for multiple years of data essential to confirm that temperatures did indeed meet criteria to be removed from the 303(d) list of impaired waters. ODFW asks that DEQ consider adding an additional requirement that the monitoring locations that were used to list an assessment unit are also required to delist the assessment unit (or stations similarly located).

For example, Grant Creek, a stream in the Watershed Assessment Unit OR_WS_171002070101_02_106385 HUC12 Name: Maple Creek is proposed to be delisted for meeting its temperature criteria based on monitoring location 40046-ORDEQ Upper Grant Creek, 0.4 miles upstream of the Maple Creek Road crossing (upstream location). The original listing in 2022 was based on two monitoring locations (upstream and downstream), 40046-ORDEQ Upper Grant Creek, 0.4 miles upstream of the Maple Creek Road crossing (upstream) and 40044-ORDEQ Lower Grant Creek at Maple Creek Rd crossing (downstream). The twenty-five exceedances of temperature criteria in the original listing occurred at the downstream site while no exceedances occurred at the upstream location. The current delisting proposal is based solely on data collected at the upstream location. Were data to be collected and submitted from the downstream location, we presume that the stream may remain listed. Therefore, ODFW encourages DEQ to consider refining its temperature delisting methodology to reflect this requirement to maintain protection of aquatic resources and be certain that the delisting is appropriate before waterbody protections are removed.

Response: It is often challenging to determine which monitoring location's data were used for an Assessment Unit's initial listings due to the length of time has passed. In the 2022 Integrated Report, DEQ changed the method for accounting for waterbodies within watershed type units. This approach identifies the specific monitoring station and streams within a watershed unit where the impairment occurs. For watershed units, DEQ tracks AUs status as a sum of the assessed streams within a watershed unit. To delist a watershed assessment unit, all impaired streams within that assessment unit must go through a delisting process.

Description: Ocean Acidification and Hypoxia- Continue data collection

Comment: The impacts of climate and ocean change on our aquatic and marine systems have become more severe and frequent over the past two decades. Oregon is also among the first places in the world to observe direct impacts of ocean acidification and hypoxia (OAH), due to its unique geographic and oceanographic context. Addressing intensifying OAH conditions here in Oregon is critical to our understanding of larger regional climate change impacts. ODFW commends DEQ for its collaborative work to develop a science-based assessment methodology for both marine dissolved oxygen and ocean acidification and the first ocean impairment listing for ocean acidification in the United States. The 2024 draft Integrated Report plays an important role in serving to codify science-based water quality assessments and identify several of Oregon's marine assessment units as impaired for both ocean acidification (WA border - Cape Lookout OR_OC_9999999999_01_107283, Cape Foulweather – Siltcoos River OR_OC_9999999999_01_107285) and hypoxia (Cape Foulweather – Siltcoos River OR_OC_9999999999_01_107285). ODFW encourages DEQ to collect sufficient data to assess both lines of evidence in subsequent Integrated Report cycles. This draft report represents an enormous effort and commitment by DEQ to protect Oregon's natural resources, and ODFW supports continued improvements to assess Oregon's waterbodies.

Response: DEQ appreciates the commendation and support of ongoing OAH assessment efforts in the Integrated Report process and beyond. The outcome of this effort would not have been possible without support from federal, state, and academic partners. Strengthening partnerships that facilitate access to high-quality datasets has been, and will continue to be, an ongoing priority for DEQ.

Comments from: Special Districts Association of Oregon, the League of Oregon Cities and the Oregon Association of Water Utilities

SDAOLOC-OAWU#1: Suggested Change ID #36

Description: Trash- TMDL implications

Comment: As stated in our public comment period extension request, responsible stewardship and protection of Oregon's waterways is a top priority for our members. We wholeheartedly support reduction of trash getting into our waterways. In addition, we appreciate DEQ's efforts to address this issue in light of the observed increases in trash along our waterways, which can largely be attributed to unhoused residents. As we are all aware, this is a deeply complex and challenging issue facing Oregon.

Our members are encouraged about the attention this issue is receiving while simultaneously concerned about the implications of a Total Maximum Daily Load (TMDL) designation for trash in the Willamette River Basin, which is a key focus of the draft 2024 Integrated Report. As such, we hope you find the following concerns, comments, and suggestions helpful as you work towards completion of the 2024 Integrated Report.

1. Jurisdiction. Per the underlying photographic evidence submitted for the draft 2024 Integrated Report, aquatic trash in the Willamette River Basin is often the result of temporary encampments along a river, most often in areas where our members do not have jurisdiction (it's understood that additional sources of trash include recreational river activities not associated with a single point of origin). Given that temporary encampments associated with our unhoused residents are likely the main drivers for aquatic trash, we are concerned that a TMDL listing will disproportionately fall on the shoulders of water service providers who have little to no jurisdiction in and along Oregon's waterways. The Willamette River is a navigable stream and is thus considered to be owned by the state up to the high water mark. We recognize the intent behind DEQ's potential listing as a starting point for collaboration, but the lack of jurisdictional

control could result in an untenable situation should the TMDL result in MS-4 permit requirements for a water service provider. It is also unclear how DEQ would identify and justify a list of Designated Management Agencies (DMAs) responsible for implementing a TMDL, when, as stated above, many DMAs have no jurisdiction over river shoreline areas and the river themselves.

2. Clean-up Efforts. Related to item No. 1 above is the reality that clean-up efforts for trash – which, in the context of this situation, is being driven largely by the homelessness crisis – will require special training and legal requirements for encampment clean-up (e.g., 72-hour advance notice requirements). As noted in our public comment extension request, this issue is best addressed through a multi-jurisdictional, partnership-based approach, as DEQ has plainly stated in their own communications. It's our belief that a TMDL is less likely to promote this type of multijurisdictional collaboration. Rather, it has the potential to create a situation where the entities ultimately responsible for the TMDL implementation – water service providers – will bear the burden of these efforts simply by default, and notably from a financial perspective as others default to the DMAs responsible under a TMDL framework.
3. EPA Clean Water Act Section 303(d). We agree with DEQ's acknowledgment that a "TMDL may not be the most effective tool for reducing aquatic trash." On that specific point, we feel that one of most compelling comments we'd like to share is there are more appropriate and pragmatic pathways under the Clean Water Act, specifically an Advanced Restoration Plan or a similar alternative plan as opposed to a TMDL. As of February 2023, EPA has accepted 87 advance restoration plans from 24 states (EPA, 2024a). Illinois EPA allows communities to develop Nutrient Reduction Plans (NARPs) as alternatives to TMDLs (IEPA, 2024). North Carolina Environmental Quality allows TMDL Alternative Plans and Kentucky also has a program for TMDL alternative approaches. EPA is supportive of alternative plans to TMDLs, as expressed through their 2013 Vision for Implementing the CWA Section 303(d) Impaired Waters Program Responsibilities (EPA 2022, 2024b). In addition, there are already examples in Oregon where agencies, nonprofits, and volunteers have been removing trash along rivers with extensive public access. For example, for the last 20 years, the Clackamas River Water Providers has been working with partner agencies and non-profits to remove several tons of trash from the Clackamas River – all without a TMDL designation.

Response: DEQ appreciates these considerations regarding the new aquatic trash related impairments in the Willamette basin. Under the Clean Water Act framework, placing waterbodies on the 303(d) list of impaired waters for a particular pollutant is the first step towards

restoration. The next steps are typically to identify sources of pollution and develop plans to reduce pollutant loading, such as a TMDL and water quality management plan. At this time, DEQ is assigning a low priority for TMDL development for the AUs listed as impaired for aquatic trash due to consideration of critical program factors, such as court-ordered timelines, resource constraints and the understanding that other solutions can be a more effective tool for restoring waters. These are the first 303(d) listing for aquatic trash in Oregon, as such DEQ is still in the early stages of determining the next steps, but is committed to seeking creative solutions through collaborative efforts.

SDAOLC-OAWU#2: Suggested Change ID #37

Description: Trash assessment methodology

Comment: Data and Evidence. While the evidence submitted to DEQ for this proposed TMDL listing is indeed a cause for action, it should also be noted the usage of the term “overwhelming evidence” is overly subjective in relation to the entirety of the evidence submitted. DEQ is correct in applying the impaired designation to only the assessment units where enough evidence was submitted, and we agree that trash in these reaches is a serious issue. We would still encourage DEQ to take a more rigorous approach to the application of data and information moving forward, specifically with this aquatic trash impairment designation given the potential precedent this may set for other waterways and waterbodies in Oregon. Requesting additional information via our academic research institutions is one example where collaboration would benefit the outcome. The seasonal and transient component of trash up to the wetted bank, combined with storm events, is one component that would further bolster and support where an impaired designation is most appropriately applied.

Response: DEQ appreciates the suggestions in this comment. As stated in the [Assessment Methodology for Oregon’s 2024 Integrated Report](#) (page 36) the concept of Overwhelming Evidence states that credible and compelling information indicating waters are not attaining applicable water quality standards can be used to determine impairment with multiple lines of evidence based on a specific rationale. The use of this section of the assessment methodology is rare and should only be applied when the data or information being evaluated overwhelmingly links the pollutant to an affected beneficial use. DEQ reviewed the project plan, numeric data and information on aquatic trash clean up events submitted by Willamette Riverkeeper and concluded it met all elements outlined in IR [Data Submission Guidelines](#) and is of sufficient quality for use in the 2024 Integrated Report. The [Assessment Methodology for Oregon’s 2024](#)

[Integrated Report](#) does not have a specific methodology for evaluating the impacts of aquatic trash on designated beneficial uses. Due to the submission of high-quality aquatic trash data, the fact that [EPA's 2024 IR guidance memo](#) contains a section on trash related impairments, and the federal Clean Water Act 40 CFR 130.7(b)(5) requirement to use all readily available data; DEQ applied the concept to evaluation of aquatic trash data. DEQ only found overwhelming evidence to list for aquatic trash in 3 of the 11 AUs for which data was submitted. Additionally, DEQ narrowed the affected beneficial uses to 2 from the 13 proposed by WRK because there was not sufficient evidence in the data submitted to link the impact of aquatic trash to all uses. It should be noted that this is the only submittal related to assessing aquatic trash that DEQ has received to date. As such, DEQ's evaluation of numeric data is specific to overwhelming evidence in this submittal and should not be considered an update to DEQ's assessment methodology document. Any future data submittals will go through an independent evaluation which may include additional considerations such as those suggested by the commenter.

SDAOLC-OAWU#3: Suggested Change ID #38

Description: Trash – Communications

Comment: Multiple drinking water providers rely on the Willamette River to meet their communities' needs. Our members rely on high-quality water from the Willamette River, its tributaries, and its impoundments, and work diligently to protect this vital resource in multiple ways (e.g., legislative advocacy, riparian investments, source water protection). DEQ should endeavor in any further communications to make clear what "aquatic trash" accurately represents to the general public. Trash along and in our waterways is a risk and impairment to water quality; however, it is not the same as water quality degradation and contamination under the chemical and biological mechanisms associated with other risks, such as systemic industrial pollution, harmful algal blooms, or transient spills from transportation activities. Multiple federal, state, and local agencies have worked diligently to improve the health of the Willamette River over the last several decades, to great effect. The general public may not understand these nuances as well as DEQ or our members, which is understandable. Furthermore, the actual impact from aquatic trash needs further research (e.g., weathered plastic in the environment and its contribution to micro- and nanoplastics), resulting in a gap for this proposed TMDL listing. We understand the balancing act inherent to this issue and would encourage DEQ to seek our members' feedback on appropriate and technically accurate public facing information, when appropriate. Water service providers are often the intermediary between regulatory issues and

the general public, as well as the media, and have expertise in effective and appropriate communications best practices to promote transparency while not causing undue concern.

Response: DEQ appreciates the comment regarding communication and public perception around the new aquatic trash impairments in the Willamette basin. In the past three Integrated Report cycles, DEQ has greatly improved the tools used to display the results and consistency in communication around the implications of identifying waters as impaired. For example, DEQ uses a [Story Map](#) to help make the assessment approach and conclusions more interactive and accessible to the general public by displaying waterbody status by beneficial use support. DEQ also uses Fact Sheets as a communication tool and works directly with drinking water service providers through the [Drinking Water Source Water Protection](#) program. DEQ will continue to work with drinking water service providers and others to effectively and accurately communicate the Integrated Report conclusions and will use the Story Map to display the affected beneficial uses as aesthetics and recreational.

Comments from: U.S. Environmental Protection Agency

USEPA#1: Suggested Change ID #9

Description: Category determination- Umatilla Fecal Coliform

Comment: In the draft 2024 IR, OR_SR_1707010307_02_102616, Umatilla River, is described in the rationale as being delisted due to a criteria change. It states, "Delist: Criteria Change - 2024 E. Coli assessment = Attaining - No Shell Fish Harvest Sub-Use in AU." However, it does not appear that the AU was moved to an attaining category and remains in Category 4a. Other AUs with the same rationale were moved to Category 2, so it appears that this is in error. Please verify the appropriate category placement for AU OR_SR_1707010307_02_102616.

Response: DEQ appreciates USEPA's thorough review of the draft 2024 Integrated Report. Upon review, DEQ concluded that AU OR_SR_1707010307_02_102616 should be delisted and placed in Category 2 for fecal coliform. This delisting is based on the current attainment of E. coli in this AU. The assessment and reporting tools will be updated.

Changes were made based on this comment.

USEPA#2: Suggested Change ID #10

Description: Category Determination- Klamath pH

Comment: In the draft 2024 IR Supplement, OR_WS_180102041403_05_107134, Klamath Strait Drain, was moved from Category 2-attaining water quality standards to Category 4a-impaired with an approved TMDL. While Klamath Strait Drain does have approved TMDLs for ammonia toxicity, chlorophyll-a and dissolved oxygen under the January 2019 Upper Klamath and Lost River Subbasins Nutrient TMDL and Water Quality Management Plan, that AU does not have an approved TMDL for pH. Please provide the EPA with the technical rationale documenting how the Upper Klamath and Lost River Subbasins Nutrient TMDL will address the pH impairment in OR_WS_180102041403_05_107134 so that the EPA can review and take action on the proposed inclusion of this AU in the TMDL prior to placement of the AU in Category 4a. Until the EPA approves the pH TMDL for this AU, it will need to be placed in Category 5.

Response: The 2019 Upper Klamath and Lost River Subbasins Nutrient TMDL addresses pH impairment in the Klamath Straits Drain (OR_WS_180102041403_05_107134). While this assessment unit was not listed as category 5 impaired for pH at the time of TMDL development, the impairment was known, and it was addressed by the TMDL.

pH standard excursions

The TMDL documents pH water quality standard excursions July - Sept on TMDL page 99 and page 100 Figure 3-8. TMDL Appendix A page 69 Table 3-35 and Table 3-36 summarize the pH data and pH standard excursions at each of the Klamath Straits Drain monitoring stations. The maximum pH excursions occurred at the monitoring station located at Klamath Straits Drain at Stateline Road (KSDSR). 54 out of 195 samples (27.7%) exceeded the upper pH standard of 9.0. Other Klamath Straits Drain monitoring stations had pH excursions rates between 7.9% and 15.8%.

TMDL Scope

Klamath Straits Drain was included in the TMDL scope based on DEQ's understanding those waters do not attain water quality standards for multiple nutrient related parameters, including pH. The TMDL scope is summarized in the TMDL on page 93 in the waterbodies element of Table 3-1. The section says the waterbodies addressed by the TMDL include "The

impoundments and riverine sections of the Lost River from its mouth to Malone Dam (river mile 64.5), Tule Lake, Lower Klamath Lake, Klamath Straits Drain, and any other primary flow pathways connecting these features within the Lost River Subbasin”.

TMDL Allocations

The TMDL loading capacity is located on TMDL page 120 Table 3-9. The loading values presented in Table 3-9 includes allowable loads for Klamath Straits Drain. The Loading Capacity is for the entire Lost River system which is defined in the TMDL scope summarized above. Load Allocations for DIN, CBOD, and DO apply to Klamath Straits Drain and tributaries to Klamath Straits Drain, as shown on TMDL page 120 through page 122 in Table 3-11 through Table 3-13.

Attainment of pH standard

TMDL page 112 states “The calibrated hydrodynamic and water quality model CE-QUAL-W2 presented in Section 3.6 was used to evaluate attainment of water quality standards for the Lost River, Tule Lake, Lower Klamath Lake and Klamath Straits Drain (Table 3-5). Modeling results (Appendix E) indicate that the DO criteria were the most stringent criteria. Consequently, if the dissolved oxygen criteria are met in the system, then the water quality criteria for pH, ammonia toxicity, and chlorophyll-a will also be attained.”

The specific pollutant load reductions required to attain water quality standards are summarized on TMDL page 119, Table 3-7. The pollutant loads to Klamath Straits Drain require a 49% reduction in addition to a necessary DO augmentation, as summarized in Table 3-8. The plots showing pH attainment in Klamath Straits Drain based on the TMDL allocations are shown in TMDL Appendix F. See appendix G (within appendix F) page G-51 through page G-66.

Comments from: UCLA’s Institute of Environment and Sustainability 2024 Ocean Acidification and Hypoxia Practicum Team

UCLA#1: Suggested Change ID #46

Description: Ocean Acidification and Hypoxia - more protective benchmarks

Comment: In particular, the benchmarks for severe shell dissolution and aragonite saturation state under the proposed ocean acidification assessment methodology and the dissolved oxygen threshold under the proposed hypoxia assessment methodology must be strengthened to more protective benchmarks consistent with extensive research, as detailed in the following sections and in the attached appendix, to better protect marine life from the accelerating impacts of OAH under climate change.

Response: DEQ appreciates the thorough and well researched information provided in this comment to articulate the evidence for increasing the protectiveness of DEQ's assessment benchmarks from the [Assessment Methodology for Oregon's 2024 Integrated Report](#), page 65. Oregon's Integrated Report is developed in a two-step process (ORS 468B.039). The first step is to develop the Assessment Methodology, which requires a public comment period. The second step is to draft the Integrated Report based on the published Assessment Methodology. The draft Integrated Report or assessment results also require a public comment process. The opportunity to comment on DEQ's OAH assessment benchmarks was provided during the public comment period for the draft 2024 Ocean Acidification and Hypoxia Assessment Methodologies for marine water, which was held from May 31, 2023 - July 7, 2023. Comments received during that period and DEQ's response to those comments can be found in the Aug 14, 2023 document [Response to Comments on the Draft Assessment Methodology for Oregon's 2024 Integrated Report](#). Following DEQ's public process, those methodologies were adopted for use in the 2024 Integrated Report during the summer of 2023, and used to generate the results of the 2024 Integrated Report. The recent public comment period, during which this comment was submitted, was provided for the public to comment on the results of the draft 2024 Integrated Report, not the methodology used in the assessment. The next opportunity for the public to comment on DEQ's Integrated Report Assessment Methodology (and benchmark values therein) will likely be held in early 2025, when the draft 2026 Integrated Report Assessment Methodology is put out for public comment. We encourage you to submit the comments related to the Assessment Methodology during that period for DEQ's consideration. Announcements are via the [Water Quality Assessment Reporting and 303\(d\) GovDelivery topic](#).

Regarding the suggestions in this comment calling for more protective OAH benchmarks, DEQ would like to clarify that the primary objective in the development of new methodologies for

assessing ocean acidification and hypoxia in Oregon's marine waters was to identify what constitutes sufficient evidence to determine impairment (Category 5) based on the best available science. DEQ worked with a technical workgroup for two years to establish the benchmarks for impairment. From an assessment standpoint, benchmarks established to determine impairment do not automatically provide sufficient evidence or certainty to determine aquatic life use attainment. DEQ didn't have enough information to derive benchmark for attainment, thus did not include in its methodology an avenue to determine attainment for Category 2 assessment.

UCLA#2: Suggested Change ID #47

Description: Ocean Acidification and Hypoxia - regulatory action

Comment: there needs to be regulatory action beyond that of 303(d) and 305(b) listing, such as TMDL formulation and NPDES permitting with numeric effluent limits, in order to ensure the timely attainment of beneficial uses sought in Oregon's assessment methodology for the 2024 Integrated Report.

Response: DEQ appreciates the information given and examples presented on this issue. By including these assessments in the Integrated Report, DEQ recognizes the impact of changing ocean conditions on plants and animals in the ocean, while also understanding more information is needed to determine how Oregon's water quality management actions under the Clean Water Act can influence these largely global water quality stressors in marine waters. DEQ is proposing to use a sub-category, Category 5C, for changing ocean condition impairments related to ocean acidification and hypoxia (OAH) identified in the draft 2024 Integrated Report. As stated in [Assessment Methodology for Oregon's 2024 Integrated Report](#) (page 64 and 92), a significant body of research on these two water quality concerns suggests the main causes of impairment are excess CO₂ absorbed by the ocean, changing weather patterns, and shifting ocean currents, all of which are linked to climate change. DEQ and other jurisdictions are undertaking efforts to address and reduce sources of CO₂, the main underlying cause of ocean acidification and hypoxia. The 5C subcategory acknowledges the complexity in developing TMDLs for waters impaired mainly due to conditions linked to global climate change. It is also intended to promote early action in developing and implementing efforts to address waters impaired in this way.

Typically, when DEQ identifies a waterbody as impaired, that action is the first step, followed by the development of water quality management plans, such as TMDLs. [EPA's 2022 - 2032 Vision for the Clean Water Act Section 303\(d\) Program](#) recognizes the strategic approach needed to account for climate change related impacts to water quality, suggesting: "Examining the potential impact of changing climate conditions on 303(d) program activities will often involve unique considerations depending on regional, local, or project-specific conditions." In the case of ocean acidification and hypoxia, DEQ believes that more information and tools are needed to understand the most effective actions by the state of Oregon, pursuant to the Clean Water Act, to reduce and/or mitigate the effects of changing ocean conditions on fish and aquatic life. While a TMDL can be an effective approach to identifying and controlling sources of pollutants within a watershed, regulating small point source discharges into marine waters may not be the most effective use of resources given the global influence of changing ocean conditions. DEQ's WQ program will focus on collaboration with DEQ's climate mitigation programs and other climate-related efforts with external partners to best address impairments in waterbodies categorized in 5C, during which time they will be assigned a low priority ranking for TMDL development. Until a water quality management plan is in place, assimilative capacity of ocean waters for permitting purposes will be determined through best professional judgement.

Multiple Commenters

DEQ received multiple comment letters with the same suggested changes. These responses are grouped below.

| Commenter |
|----------------------|
| Inga Fisher Williams |
| Jamie Knight |
| Chris Shults |
| Jeff Malmquist |
| Nikki Dennis |

MC: Suggested Change ID #39

Description: Trash- Acknowledgement of problem

Comment: Commenter recognizes trash as a water quality problem.

Response: Thank for this comment and supporting DEQ's assessment of the aquatic trash impairments in the Willamette River.

| Commenters |
|---|
| Willamette Riverkeeper |
| Bill Obrien |
| Celeste Wolf |
| Chris Shults |
| Cory Starr |
| David Kenney |
| Dennis Pennell |
| Emily Platt |
| Ignacio Gonzalez |
| John Cluskey |
| Judith Lienhard |
| Jim Stuller |
| Jeff Malmquist |
| John Maroney |
| Kenneth Bierly/ Glenn Gibson Creek Watershed Council |
| Kristy Overton |
| Linda Leyva |
| Lydia Stivers |
| Mariam Higgins |
| Melody Long |
| Marilyn McWilliams |
| Michael Kipley |
| Michael Schilmoeller |
| Mark Scantlebury |
| Nora Stern |

| Commenters |
|------------------|
| joziedonaghey |
| Roger Kofler |
| Roberta Schwarz |
| Ray Thomas |
| Susan Huston |
| Sarah Wetjen |
| Tammie Bardowell |
| Theo Cantalupo |
| Tom Fawell |
| Teresa Frye |

MC: Suggested Change ID #4

Description: Trash- TMDL priority elevation

Comment: A TMDL for trash in the Willamette River should be a high priority for Oregon DEQ.

Response: Following the Clean Water Act framework, listing waters as impaired is the first step toward developing a pollution prevention plan (such as a TMDL). At this time, DEQ is assigning a low priority for TMDL development for the AUs listed as impaired for aquatic trash due to consideration of critical program factors, such as court-ordered timelines, resource constraints and the understanding that other solutions can be a more effective tool for restoring waters. DEQ would like to focus efforts on working with partners to better understand sources contributing to aquatic trash pollution and identify the tools within Clean Water Act framework that will be the most effective in addressing these new impairments.

| Commenter |
|------------------------|
| Willamette Riverkeeper |
| Celeste Wolf |
| Dennis Pennell |
| Emily Platt |
| Ignacio Gonzalez |
| Judith Lienhard |

| |
|----------------------|
| Jim Stuller |
| John Maroney |
| Linda Leyva |
| Lydia Stivers |
| Melody Long |
| Michael Kipley |
| Michael Schilmoeller |
| Nora Stern |
| Theo Cantalupo |
| Tom Fawell |
| Teresa Frye |

MC: Suggested Change ID #8

Description: Trash- Impaired uses

Comment: DEQ should list the trash impaired sections of the Willamette River as impaired for more beneficial uses than aesthetics and recreation.

Response: DEQ appreciates the feedback related to the aquatic trash assessment and recognizes that this pollutant affects users of the Willamette River. For this assessment, DEQ used the concept of Overwhelming Evidence, defined in the [Assessment Methodology for Oregon's 2024 Integrated Report](#) page 36, which states that credible and compelling information indicating waters are not attaining applicable water quality standards can be used to determine impairment with multiple lines of evidence based on a specific rationale. The use of this section of the assessment methodology is rare and should only be applied when the data or information being evaluated overwhelmingly links the pollutant to an affected beneficial use. For this assessment of aquatic trash data submitted by Willamette Riverkeeper, DEQ used Geo-referenced photographs to assign impacts to beneficial uses and concluded there was not overwhelming evidence in the submittal to show impacts to uses other than aesthetic quality and water contact recreation.

Comments from: Charles Loos

CL#1: Suggested Change ID #2

Draft 2024 Integrated Report – Response to Comments

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Description: Trash- Beneficial Use Impacts

Comment: I'm excited about the prospect of including Willamette Trash in a Clean Water Act 303(d) listing. By way of background, I've rowed on the Willamette River in the Portland area, totaling several thousand miles. I also fish for Spring Chinook on the river. I offer two comments. First, I no longer row or fish as much due to the despoiling of the Willamette. This despoiling comprises four parts; 1) unsightly squatter boats, 2) homeless camps along the river, 3) trash, needles and sewage in and along the river, and 4) feeling intimidated by boat squatters and bank-based homeless, since they are often mentally ill, acting erratically or in a threatening manner. I'm quite vulnerable alone in my 14 foot rowboat.

In other words, I now avoid using the river due to the trash, boat squatters and intimidation factors. For me, the river is no longer the urban treasure it once was. As much as the Big Pipe recovered the river for recreational use, the trash has once again dirtied and defiled the river.

Response: DEQ appreciates the anecdotal examples on the impacts of aquatic trash to recreational beneficial use support in the Willamette River. By incorporating this pollutant in the Clean Water Act 303(d) listing of impaired waters, DEQ is acknowledging this impact, while also recognizing the solution will take a larger coordinated effort than can be achieved by water pollution prevention efforts alone.

CL#2: Suggested Change ID #3

Description: Trash- Multijurisdictional approach

Comment: Second, I am frustrated by the inability of the competing jurisdictions to solve the problem. The City, Sheriff, Coast Guard, Landowners (e.g. Ross Island) and Marine Board all claim they lack jurisdiction to do anything. They throw up their hands and nothing gets done. I hope that a 303(d) listing can break the regulatory and enforcement logjam.

Response: By incorporating this pollutant in the Clean Water Act 303(d) listing of impaired waters, DEQ is acknowledging the issues related to trash in communities on roadsides, parks, and in waters are a significant issue of concern with regards to public health/safety, livability, and protecting waters for recreational opportunities, supporting aquatic life, and other beneficial uses. DEQ also recognizes that communities are investing significant resources and efforts in

addressing these challenges and that local, regional and state solutions will take time. DEQ is interested in seeking creative solutions to determine the most effective tool for addressing aquatic trash by working collaboratively with partner agencies, organizations and communities, which all have important roles in addressing this issue.

Comments from: Lucinda Pierpont

LP#1: Suggested Change ID #40

Description: Trash- Legislation

Comment: Please make this issue a priority in all your upcoming legislations as we all know the Willamette River has been polluted for decades.

Response: Thank you for your comment. DEQ and partners have been working for decades to restore the Willamette River, and although the river continues to have water quality impairments, it has also seen significant improvements in recent decades. Pollution reduction efforts and the resulting improvements have resulted in the removal of some pollutants from the 303(d) list of impaired waters. The water quality assessment and listings associated with development of the Integrated Report are required under the Clean Water Act, and per available resources, will continue to occur. The agency has not proposed legislation on this topic for the 2025 session, but seeks to maintain and enhance resources available for agency efforts related to TMDL development, TMDL implementation, and Integrated Report efforts, generally. The agency will evaluate and provide input on legislative and/or funding proposed by others on a case by case basis.

Comments from: perpetuatetruth@proton.me

Np#1: Suggested Change ID #1

Description: Trash- Obviousness

Comment: I don't think anyone is surprised by the information in this report. If anything the state has contributed to the aquatic trash pollution in our waterways by not acting more urgently to address this issue. Sadly citizens are seeing public waterways and precious habitats and environments being destroyed by unhoused populations existing in our public spaces.

Response: By incorporating this pollutant in the Clean Water Act 303(d) listing of impaired waters, DEQ is acknowledging issues related to trash in communities on roadsides, parks, and in waters are a significant issue of concern with regards to public health/safety, livability, and protecting waters for recreational opportunities, supporting aquatic life, and other beneficial uses. DEQ also recognizes that communities are investing significant resources and efforts in addressing these challenges and that local, regional and state solutions will take time. DEQ is interested in seeking creative solutions to determine the most effective tool for addressing aquatic trash by working collaboratively with partner agencies, organizations and communities, which all have important roles in addressing this complex issue.

Comments from: Ray Thomas

RT#1: Suggested Change ID #2

Description: Trash- Beneficial use impacts

Comment: I'm excited about the prospect of including Willamette Trash in a Clean Water Act 303(d) listing. By way of background, I've rowed on the Willamette River in the Portland area, totaling several thousand miles. I also fish for Spring Chinook on the river. I offer two comments. First, I no longer row or fish as much due to the despoiling of the Willamette. This despoiling comprises four parts; 1) unsightly squatter boats, 2) homeless camps along the river, 3) trash, needles and sewage in and along the river, and 4) feeling intimidated by boat squatters and bank-based homeless, since they are often mentally ill, acting erratically or in a threatening manner. I'm quite vulnerable alone in my 14 foot rowboat.

In other words, I now avoid using the river due to the trash, boat squatters and intimidation factors. For me, the river is no longer the urban treasure it once was. As much as the Big Pipe recovered the river for recreational use, the trash has once again dirtied and defiled the river.

Response: DEQ appreciates the anecdotal examples on the impacts of aquatic trash to recreational beneficial use support in the Willamette River. By incorporating this pollutant in the Clean Water Act 303(d) listing of impaired waters, DEQ is acknowledging this impact, while also recognizing the solution will take a larger coordinated effort than can be achieved by water pollution prevention efforts alone.