2018/2020 Water Quality Report and List of Water Quality Limited Waters

Response to Public Comments on Draft Report

April 2020

Water Quality Assessments
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DEQ is a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.

State of Oregon
Department of Environmental Quality

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Abbreviations

Assessment Unit (AU)
Ambient Water Quality Monitoring System (AWQMS)
Biotic Ligand Model (BLM)
Clean Water Act (CWA)
Hydrologic Unit Code (HUC)
National Hydrography Dataset (NHD)
National Pollution Elimination Discharge Units (NPDES)
Oregon Revised Statute (OAR)
Total Maximum Daily Load (TMDL)
Water Quality Standard (WQS)

1. Introduction

This Response to Public Comments document addresses comments and questions received regarding the Draft 2018/2020 Water Quality Report and List of Water Quality Limited Waters (2018/2020 Integrated Report). The individuals and organizations shown in Table 1 provided comments on the 2018/2020 Integrated Report during the Public Comment Period, which was held from September 30, 2019 through January 6, 2020. All comments received during the public comment period have been reviewed by DEQ and addressed in this document. In total there were 287 unique comments from 83 entities. DEQ made modifications to the report based on 71 of the comments.

Table 1: Commenters on the 2018/2020 Water Quality Report and List of Water Quality Limited Waters

Commenter #	Commenter	Acronym
1	Multiple Commenters Form Letter	MCFL
2	Linda Bentz	LB
3	Center for Biological Diversity	CfBD
4	BLM, Burns District	BBD
5	Willamette Valley Mining Association	WVMA
6	David Cooper	DC
7	Kevin Schurter	KvS
8	Marie Gadotti	MG
9	Timothy Winn	TW
10	Lyndon Kerns	LK
11	Adam Stinnett	AS
12	Craig Herman	CH
13	Srinivas Puram	SP
14	Crook Soil and Water Conservation District	CS-WCD
15	Robert Simerly	RS
16	City of Corvallis	CtC
17	Association of Oregon Counties	AOC
18	Northwest Environmental Advocates	NEA
19	City of Bend	CB
20	Portland Water Bureau	PWB
21	Clean Water Services	CWS
22	Forest Service, Pacific Northwest Region	FSPNR
23	Dan Keeley	DK
24	Kristin Schoorl	KrS
25	Harney County Court	HCC
26	Hood River Soil and Water Conservation District	HRS-WCD
27	City of Portland Bureau of Environmental Services	CPBES

28	City of Hood River	CHR
29	Central Oregon Irrigation District	COID
30	Grant County	GC
31	City of Gresham	CG
32	Columbia County Public Works	CCPW
33	Coos County	CsC
34	Raymond Kaser	RK
35	Eagle Point Irrigation District	EPID
36	Ochoco Irrigation District	OcID
37	Farmers, Middle Fork and East Fork Irrigation Districts	FMF-EFID
38	Polk County Board of Commissioners	PCBC
39	Marion County	MC
40	Union County Board of Commissioners	UCBC
41	Owyhee Irrigation District	OwID
42	Oregon Association of County Engineers and Surveyors	OACE-S
43	City of Troutdale	CT
44	Oregon Association of Clean Water Agencies (ACWA)	OACWA
45	Elaine Steenson	ES
46	Gordon Dromgoole	GD
47	Ken Holliday	KH
48	Roger/Meredith Ediger	RE
49	Oregon Cattlemen's Association	OCA
50	R Blackman	RB
51	Water Environment Services (WES)	WES
52	Multnomah County Drainage District	MCDD
53	Jackson County	JC
54	Mike/Joanne Keerins	MK
55	Oregon Farm Bureau and other agencies	OFB-oa
56	Oregon Homebuilders Association	OHA
57	Klamath Water Users Association	KWUA
58	EPA	EP
59	Oregon State University	OSU
60	Klamath Drainage District	KDD
61	City of Albany	CA
62	Port of Portland	PP
63	Oregon Water Resources Congress	OWRC
64	Clatsop County District 5	CCD5

65	Oregon Coordinating Council on Ocean Acidification and Hypoxia	OCCoOA-H
66	Clatsop County District 4	CCD4
67	Oregon Dept of Fish and Wildlife and Dept of Land Conservation and Development	ODF-W-DLC-D
68	Lake County Waterway	LCW
69	Malheur County SWCD	MCS
70	City of Klamath Falls	CKF
71	Dennis Hebard	DH
72	Wallowa County	WC
73	Northwest Pulp and Paper Association	NP-PA
74	Oregon Forest & Industries Council	OF&IC
75	Blue Mountains Biodiversity Project	BMBP
76	Santiam Water Control District	SWCD
77	Weyerhaeuser	Wy
78	Baker County Commission	BCC
79	Oregon Business & Industry	OB&I
80	Horesefly Irrigation District	HID
81	City of Eugene	CE
82	Wasco County Board of Commissioners Member	WCBCM
83	Dan Andersen	DA

2. Comments from: Multiple Commenters Form Letter

MCFL#1: Suggested Change ID #1

Description: Watershed Units- Extrapolation- Watershed unit assessment conclusions

Comment: I strongly oppose DEQ's decision to list water bodies on farm and forestland as water quality impaired without data to support those listings, as it has done in its 2018-2020 Integrated Report … I strongly oppose DEQ's decision to extrapolate listings of waterways and ditches based upon data collected from neighboring properties. Water quality naturally differs from water body to water body, particularly when those waterways are under different ownership and may have experienced differing current and historic riparian management. DEQ has presented no evidence that this extrapolation is scientifically valid or sound. Instead, it appears to be an attempt to list and regulate waterways without first going through the necessary step of determining that data actually shows an impairment.

Response: Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

When moving to the National Hydrography Dataset (NHD), DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

MCFL#2: Suggested Change ID #2

Description: Watershed Units- Unfair Characterization- Report appears to indicate farms and forests are experiencing declining water quality

Comment: Report … makes it look like farms and forests are experiencing declining water quality, particularly when it appears that DEQ lacks actual data for a significant portions of the waterways listed.

Response: The Integrated Report makes no conclusions about the trends in water quality across the state. It is just a snapshot of the status of state waters and whether beneficial uses are being supported. Identification of increased areas of impaired water quality condition is likely more attributable to the amount of data DEQ assessed in 2018, enhanced resolution of Oregon's hydrography and a construct of how DEQ is required to report to EPA than it can be attributed to any specific known trends in broad scale water quality changes.

MCFL#3: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine any regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation.

Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

MCFL#4: Suggested Change ID #4

Description: Watershed Units - Permission at monitoring locations

Comment: I am particularly concerned with DEQ's decision to list waterways that I have not given DEQ permission to sample and where sampling has not occurred. I urge DEQ to revisit these listings.

Response: Sampling performed by Oregon DEQ followed proper procedures for access to waters on private properties that include obtaining written consent to sample. Oregon DEQ did not evaluate private property permission structures for third-party submitted data. Data were assessed using the procedures outlined in the Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters.

MCFL#5: Suggested Change ID #11

Description: Watershed Units- Unfair characterization of agriculture and forest land- Assessment targets agricultural lands as sources of impairments

Comment: This new method of designation appears to directly target agricultural lands as the source of water quality impairments

Response: The Integrated Report is an objective assessment of the status of state waters based on data that were submitted to DEQ. The methods used to make assessment conclusions were finalized in the 2018 methodology document prior to any data evaluation. The assessment results and conclusions in the

Integrated Report neither attributed the sources of water quality impairments nor targeted any entities such as agricultural lands.

MCFL#6: Suggested Change ID #48

Description: Regulatory Impact - Not a rule

Comment: I farm, and own property that would be impacted by this new ruling of "impaired" waterways. I find it insulting that these new rules are based on no factual findings in the actual waterways or ditches. It is unreasonable to make up rules that have such broad sweeping effects without actually doing the necessary work to support those rules.

Response: The Integrated Report is not a rule. It is a required reporting to EPA of the status of state waters and whether beneficial uses are supported. Assessment Units were created for reporting purposes When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine regulatory actions or consequences.

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3. Comments from: Linda Bentz

LB#1: Suggested Change ID #5

Description: Waters of the State- Listing every ditch

Comment: I am opposed to every ditch in the state being placed on a water quality threat when there is no data to support such findings. This continues to burden those farm and ranch families that work hard to provide healthy clean agricultural commodities for the citizens of Oregon, neighboring states and foreign Countries. These are the very people and products that generate the most revenue for the state of Oregon. To date we already have improvements plans in place to help with water quality. We as a state needs less regulations and more cooperation among the land owners to solve prevalent issues for the waters in Oregon.

Response: DEQ performed a statewide data call and analyzed over 6.5 million rows of data to produce assessment conclusions, and data were used to support any identification of impairment. Minimum data requirements for assessment are outlined in DEQ's Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters.

In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process. In response to comments received, DEQ will be updating its visual display to reflect watershed units as polygons, rather than a collection of stream networks.

LB#2: Suggested Change ID #14

Description: Regulatory Impact - Adding regulations to agriculture land

Comment: I am writing this letter in response to the Draft 2018-20 new regulation that will impose more restrictions to a already over regulated system.

Response: The 2018/2020, Integrated Report is not a regulation or a rule change and it does not impose any additional restrictions. The Integrated Report is a reporting on the status of water quality across the state and whether beneficial uses are supported. The Integrated Report is a Clean Water Act requirement for states to identify waters that do not or are not expected to meet applicable water quality standards. It is a combination of reports required by the Clean Water Act sections 303(d) and 305(b).

The report/list does not, unto itself, specify or determine regulatory actions or consequences. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. Follow-up investigations would initially focus on the sampling stations in the assessment unit that indicated impairment, the exact locations of which are known, as well as additional sampling efforts, to better delineate and characterize extent of impairment.

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4. Comments from: Center for Biological Diversity

CfBD#1: Suggested Change ID #6

Description: Methodology- Microplastics- Oregon must evaluate the attainment status of each of its standards with respect to microplastics pollution

Comment: The Clean Water Act mandates that states include in their Integrated Report all water bodies that fail to meet "any water quality standard," including numeric criteria, narrative criteria, water body uses, and antidegradation requirements. 40 C.F.R. § 130.7 (b)(1),(3), & (d)(2). DEQ must evaluate all sources of water quality data. 33 U.S.C. § 1313(d).

While recognizing that microplastics pose a growing concern to the aquatic environment, DEQ's assessment methodology states that "DEQ does not have criteria or an accepted methodology; therefore, DEQ will be leaving these assessment units as unassessed for microplastics and continue to study and investigate the issue for future assessments." This response is inadequate under the Clean Water Act, and we remind DEQ that it has a responsibility to consider all available data in compiling its Integrated Report. 40 C.F.R. § 130.7(b)(5) ("Each State shall assemble and evaluate all existing and readily available water quality related data and information to develop the list."). DEQ may not wait before the state adopts a criteria specific to microplastics before it acts. DEQ must consider all readily available data on the impacts of microplastics on the State of Oregon's waters in its water quality assessment and consider the attainment status of all of Oregon's relevant water quality standards.

As detailed in the Center's comments submitted to DEQ during the public call for data, DEQ must evaluate microplastic data even without water quality criteria specific to microplastics. There are several existing narrative water quality standards that can be used to gauge if waters with microplastic pollution are impaired. For example, standards require that toxic substances may not be introduced above natural background levels in waters of the state in amounts, concentrations, or combinations that may be harmful, may chemically change to harmful forms in the environment, or may accumulate in sediments or bioaccumulate in aquatic life or wildlife to levels that adversely affect public health safety, or welfare or aquatic life, wildlife or other designated beneficial uses. OAR, § 340-041-0033 (1). In addition, waters of the state must also be of sufficient quality to support aquatic species without detrimental changes in the resident biological communities. OAR, § 340-041-0011. Beneficial uses are designated for each water of the state and include fishing, aesthetic quality, fish and aquatic life, and wildlife and hunting for all coastal basins. E.g., OAR, § 340-041-0220. Available data show that microplastics in Oregon waters are violating the toxic substances standard, disrupting biological communities, and preventing the achievement of all beneficial uses.

Oregon must evaluate the attainment status of each of its standards with respect to microplastics pollution. In its comments, the Center highlighted the need for Oregon to list several marine waterbodies, including ocean waters off Crescent Beach, Cape Blanco, and Fort Stevens State Park as impaired due to microplastic pollution because pollution controls are insufficient for those waters to meet existing criteria.

Response: Microplastics have become widespread and ubiquitous in aquatic environments; however, the information on aquatic life impacts, levels of accumulation, mode of toxicity, and the level at which microplastics negatively impact aquatic life has not been determined. In addition, DEQ does not have

criteria or an accepted assessment methodology. As a result, DEQ will be leaving these assessment units as unassessed for microplastics and continue to study and investigate the issue for future assessments.

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5. Comments from: BLM, Burns District

BBD#1: Suggested Change ID #7

Description: Crosswalk- Map erroneously identifies Bridge Creek in Donner und Blitzen Subbasin

Comment: The interactive map shows an ephemeral/intermittent tributary to Dry Krumbo Creek - which flows into Kern Reservoir, is listed as impaired for iron. (Record 14147). It is labeled in the information as “Bridge Creek”. Bridge Creek is actually to the South of this drainage. I believe this listing was accidentally applied to this ephemeral/intermittent trib, and not to the actual Bridge Creek itself.

Response: The location of the iron listing for Bridge Creek on the 2012 list was incorrect. The monitoring location the listing was based on, 23040-ORDEQ, was incorrectly placed at 42.863917, -118.722389. When upgrading data infrastructure at DEQ, station 23040-ORDEQ was moved to the correct location 42.863748, -118.884533. This puts the iron listing in the OR_WS_171200030203_05_106595 (HUC12 Name: Fivemile Lake-Donner und Blitzen River) watershed assessment unit.

BBD#2: Suggested Change ID #8

Description: Assessment Conclusions- Missing Data- Mud Creek not included in Assessment

Comment: Mud Creek (stream just south of Bridge Creek) is not included in the Assessment Area. I am not sure if this is an oversight, but it is a perennial fish bearing stream that I believe was previously listed on the 303(d) list.

Response: Mud Creek is included in the 2018/2020 Integrated Report. The Category 5 listing for temperature for Mud Creek was moved forward into Assessment Unit ID: OR_WS_171200030106_05_106590 from the previous listing.

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6. Comments from: Willamette Valley Mining Association

WVMA#1: Suggested Change ID #9

Description: Process- Communication and Outreach- Oregon suction dredge miners were invited to the Willamette Basin Mercury TMDL process late

Comment: Because Oregon suction dredge miners were left out of the Willamette Basin Mercury TMDL until the July 3rd 2019 DEQ finally let miners know about the mercury TMDL for the Bohemia area. That is when DEQ notified miners meetings would be scheduled in various locations. I submitted some of the attachments and my email outlining how DEQ left miners out of the loop. I believe EPA folks need to consider this information before approving 303d stream listings for the Bohemia mining district

Response: The Integrated Report process is completely separate process from the Willamette Basin Mercury TMDL process. This comment is related to the Willamette Basin Mercury TMDL process. Any mercury listings proposed in the Integrated Report were based on the fact that currently applicable water quality criteria are not being met and beneficial uses are not supported.

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7. Comments from: David Cooper

DC#1: Suggested Change ID #1

Description: Watershed Units- Extrapolation- Watershed unit assessment conclusions

Comment: I strongly oppose DEQ's decision to list water bodies on farm and forestland as water quality impaired without data to support those listings, as it has done in its 2018-2020 Integrated Report … I strongly oppose DEQ's decision to extrapolate listings of waterways and ditches based upon data collected from neighboring properties. Water quality naturally differs from water body to water body, particularly when those waterways are under different ownership and may have experienced differing current and historic riparian management. DEQ has presented no evidence that this extrapolation is scientifically valid or sound. Instead, it appears to be an attempt to list and regulate waterways without first going through the necessary step of determining that data actually shows an impairment.

Response: Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

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DC#2: Suggested Change ID #2

Description: Watershed Units- Unfair Characterization- Report appears to indicate farms and forests are experiencing declining water quality

Comment: Report … makes it look like farms and forests are experiencing declining water quality, particularly when it appears that DEQ lacks actual data for a significant portions of the waterways listed.

Response: The Integrated Report does not make conclusions about the trends in water quality across the state. The report is a snapshot of the status of state waters and whether beneficial uses are being supported. Identification of increased areas of impaired water quality condition is likely more attributable to the amount of data we assessed in 2018, enhanced resolution of Oregon's hydrography and a construct of how DEQ is required to report to EPA than it can be attributed to any specific known trends in broad scale water quality changes.

DC#3: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

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DC#4: Suggested Change ID #4

Description: Watershed Units - Permission at monitoring locations

Comment: I am particularly concerned with DEQ's decision to list waterways that I have not given DEQ permission to sample and where sampling has not occurred. I urge DEQ to revisit these listings.

Response: Any sampling performed by Oregon DEQ followed proper procedures for access to waters on private properties, which include obtaining written consent to sample. Oregon DEQ did not evaluate private property permission structures for third party submitted data. Data were assessed using the procedures outlined in the Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters.

DC#5: Suggested Change ID #11

Description: Watershed Units- Unfair characterization of agriculture and forest land- Assessment targets agricultural lands as sources of impairments

Comment: This new method of designation appears to directly target agricultural lands as the source of water quality impairments

Response: The Integrated Report is an objective assessment of the status of state waters based on data that were submitted to DEQ. The methods used to make assessment conclusions were finalized in the 2018 methodology document prior to any data evaluation. The assessment results and conclusions in the Integrated Report neither attributed the sources of water quality impairments nor targeted any entities such as agricultural lands.

DC#6: Suggested Change ID #12

Description: Watershed Units- NHD Errors- Threemile Creek drainage includes non-existent waterway

Comment: You have included a "phantom" waterway and designated it as impaired. The waterway that you have identified that does not exist would be a part of the Threemile Creek drainage in Northern Wasco County running SSE just to the East end of Remington Rd. In my nearly 74 years of having lived here I have never know water to flow is this drainage

Response: DEQ used the High Resolution National Hydrography Dataset (NHD), specifically the NHDPlus HR, to draw its assessment units and georeference its water quality standards. The NHD is the federal and state standard and represents the water drainage network of the United States with features such as rivers, streams, canals, lakes, ponds, coastline, dams, and stream gages. The NHD is developed and maintained by a partnership between the USGS and EPA. The dataset intended to "develop nationally-consistent geospatial datasets for the Nation" and provide agencies and organizations a common baseline for mapping aquatic resources. Unfortunately, the NHD does contain errors. A user can report suspected errors to the NHD Markup App at https://edits.nationalmap.gov/markup-app. This tool allows users to suggest edits, or "markups," to the NHD, Watershed Boundary Dataset (WBD), and NHDPlus HR. Anyone can suggest corrections and improvements to the data. Suggested edits are reviewed by the USGS and the NHD state stewards before they are approved for incorporation into the NHD or WBD datasets. In addition, in response to comments received, DEQ will be updating its visual display to reflect watershed units as polygons, rather than a collection of stream networks,

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8. Comments from: Kevin Schurter

KvS#1: Suggested Change ID #1

Description: Watershed Units- Extrapolation- Watershed unit assessment conclusions

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KvS#3: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ divided the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

surface or underground waters) that are located wholly or partially within or bordering the state or within its jurisdiction.

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

KvS#4: Suggested Change ID #4

Description: Watershed Units - Permission at monitoring locations

Comment: I am particularly concerned with DEQ's decision to list waterways that I have not given DEQ permission to sample and where sampling has not occurred. I urge DEQ to revisit these listings.

Response: Any sampling performed by Oregon DEQ followed proper procedures for access to waters on private properties, which include obtaining written consent to sample. Oregon DEQ did not evaluate private property permission structures for third party submitted data. Data were assessed using the procedures outlined in the Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters.

KvS#5: Suggested Change ID #11

Description: Watershed Units- Unfair characterization of agriculture and forest land- Assessment targets agricultural lands as sources of impairments

Comment: This new method of designation appears to directly target agricultural lands as the source of water quality impairments

Response: The Integrated Report is an objective assessment of the status of state waters based on data that were submitted to DEQ. The methods used to make assessment conclusions were finalized in the 2018 methodology document prior to any data evaluation. The assessment results and conclusions in the Integrated Report neither attributed the sources of water quality impairments nor targeted any entities such as agricultural lands.

KvS#6: Suggested Change ID #16

Description: Regulatory Impact- Overreach of report

Comment: I farm, and own property that would be impacted by this new ruling of "impaired" waterways. I find it insulting that these new rules are based on no factual findings in the actual waterways or ditches. It is unreasonable to make up rules that have such broad sweeping effect without actually doing the necessary work to support those rules. Please stop trying to overreach and control every aspect of our lives with baseless administrative rulings.

Response: The Integrated Report is not a rule. The Integrated Report is a federal Clean Water Act requirement that Oregon report on the quality of its surface waters every two years. The Integrated report combines the requirements of Clean Water Act section 305(b) to develop a status report and the section 303(d) requirement to develop a list of impaired waters. DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline, marine territorial waters) into manageable units primarily for assessment and reporting purposes and to enable tracking of water quality status over time. The Integrated Report identifies areas that require additional investigation and follow-up action; it does not, unto itself, specify or determine any regulatory actions or consequences. Follow-up monitoring of impaired assessment units will be necessary to better delineate and characterize the extent of impairment before any prescriptive regulatory actions are taken.

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9. Comments from: Marie Gadotti

MG#1: Suggested Change ID #1

Description: Watershed Units- Extrapolation- Watershed unit assessment conclusions

Comment: I strongly oppose DEQ's decision to list water bodies on farm and forestland as water quality impaired without data to support those listings, as it has done in its 2018-2020 Integrated Report … I strongly oppose DEQ's decision to extrapolate listings of waterways and ditches based upon data collected from neighboring properties. Water quality naturally differs from water body to water body, particularly when those waterways are under different ownership and may have experienced differing current and historic riparian management. DEQ has presented no evidence that this extrapolation is scientifically valid or sound. Instead, it appears to be an attempt to list and regulate waterways without first going through the necessary step of determining that data actually shows an impairment.

Response: Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

MG#2: Suggested Change ID #2

Description: Watershed Units- Unfair Characterization- Report appears to indicate farms and forests are experiencing declining water quality

Comment: Report … makes it look like farms and forests are experiencing declining water quality, particularly when it appears that DEQ lacks actual data for a significant portions of the waterways listed.

Response: The Integrated Report makes no conclusions about the trends in water quality across the state. It is just a snapshot of the status of state waters and whether beneficial uses are being supported. Identification of increased areas of impaired water quality condition is likely more attributable to the amount of data we assessed in 2018, enhanced resolution of Oregon's hydrography and a construct of how DEQ is required to report to EPA than it can be attributed to any specific known trends in broad scale water quality changes.

MG#3: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

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

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MG#4: Suggested Change ID #4

Description: Watershed Units - Permission at monitoring locations

Comment: I am particularly concerned with DEQ's decision to list waterways that I have not given DEQ permission to sample and where sampling has not occurred. I urge DEQ to revisit these listings.

Response: Any sampling performed by Oregon DEQ followed proper procedures for access to waters on private properties, which include obtaining written consent to sample. Oregon DEQ did not evaluate private property permission structures for third party submitted data. Data were assessed using the procedures outlined in the Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters.

MG#5: Suggested Change ID #11

Description: Watershed Units- Unfair characterization of agriculture and forest land- Assessment targets agricultural lands as sources of impairments

Comment: This new method of designation appears to directly target agricultural lands as the source of water quality impairments

Response: The Integrated Report is an objective assessment of the status of state waters based on data that were submitted to DEQ. The methods used to make assessment conclusions were finalized in the 2018 methodology document prior to any data evaluation. The assessment results and conclusions in the Integrated Report neither attributed the sources of water quality impairments nor targeted any entities such as agricultural lands.

MG#6: Suggested Change ID #13

Description: Process- Restoration efforts- Comment about effort to protect water quality

Comment: We as farmers have worked tirelessly with the Department of Agriculture and the Department of Forestry using the SB1010 program. We continually work with NRCS as well to do our part in keeping water quality as a integral part of our operation

Response: DEQ appreciates efforts to improve Oregon's water quality, and looks forward to delisting waterbodies when data indicate attainment of water quality standards.

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10. Comments from: Timothy Winn

TW#1: Suggested Change ID #1

Description: Watershed Units- Extrapolation- Watershed unit assessment conclusions

Comment: I strongly oppose DEQ's decision to list water bodies on farm and forestland as water quality impaired without data to support those listings, as it has done in its 2018-2020 Integrated Report … I strongly oppose DEQ's decision to extrapolate listings of waterways and ditches based upon data collected from neighboring properties. Water quality naturally differs from water body to water body, particularly when those waterways are under different ownership and may have experienced differing current and historic riparian management. DEQ has presented no evidence that this extrapolation is scientifically valid or sound. Instead, it appears to be an attempt to list and regulate waterways without first going through the necessary step of determining that data actually shows an impairment.

Response: Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

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TW#2: Suggested Change ID #2

Description: Watershed Units- Unfair Characterization- Report appears to indicate farms and forests are experiencing declining water quality

Comment: Report … makes it look like farms and forests are experiencing declining water quality, particularly when it appears that DEQ lacks actual data for a significant portions of the waterways listed.

Response: The Integrated Report makes no conclusions about the trends in water quality across the state. It is just a snapshot of the status of state waters and whether beneficial uses are being supported. Identification of increased areas of impaired water quality condition is likely more attributable to the amount of data we assessed in 2018, enhanced resolution of Oregon's hydrography and a construct of how DEQ is required to report to EPA than it can be attributed to any specific known trends in broad scale water quality changes.

TW#3: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

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

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In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

TW#4: Suggested Change ID #4

Description: Watershed Units - Permission at monitoring locations

Comment: I am particularly concerned with DEQ's decision to list waterways that I have not given DEQ permission to sample and where sampling has not occurred. I urge DEQ to revisit these listings.

Response: Any sampling performed by Oregon DEQ followed proper procedures for access to waters on private properties, which include obtaining written consent to sample. Oregon DEQ did not evaluate private property permission structures for third party submitted data. Data were assessed using the procedures outlined in the Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters.

TW#5: Suggested Change ID #11

Description: Watershed Units- Unfair characterization of agriculture and forest land- Assessment targets agricultural lands as sources of impairments

Comment: This new method of designation appears to directly target agricultural lands as the source of water quality impairments

Response: The Integrated Report is an objective assessment of the status of state waters based on data that were submitted to DEQ. The methods used to make assessment conclusions were finalized in the 2018 methodology document prior to any data evaluation. The assessment results and conclusions in the Integrated Report neither attributed the sources of water quality impairments nor targeted any entities such as agricultural lands.

TW#6: Suggested Change ID #99

Description: Regulatory Impact- Regulation Concern- General

Comment: Concern over regulations arising from listings

Response: The Integrated Report is not a rule. It is a required reporting to EPA of the status of state waters and whether beneficial uses are supported. Assessment Units were created for reporting purposes. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

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11. Comments from: Lyndon Kerns

LK#1: Suggested Change ID #1

Description: Watershed Units- Extrapolation- Watershed unit assessment conclusions

Comment: I strongly oppose DEQ's decision to list water bodies on farm and forestland as water quality impaired without data to support those listings, as it has done in its 2018-2020 Integrated Report … I strongly oppose DEQ's decision to extrapolate listings of waterways and ditches based upon data collected from neighboring properties. Water quality naturally differs from water body to water body, particularly when those waterways are under different ownership and may have experienced differing current and historic riparian management. DEQ has presented no evidence that this extrapolation is scientifically valid or sound. Instead, it appears to be an attempt to list and regulate waterways without first going through the necessary step of determining that data actually shows an impairment.

Response: Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

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LK#2: Suggested Change ID #2

Description: Watershed Units- Unfair Characterization- Report appears to indicate farms and forests are experiencing declining water quality

Comment: Report … makes it look like farms and forests are experiencing declining water quality, particularly when it appears that DEQ lacks actual data for a significant portions of the waterways listed.

Response: The Integrated Report makes no conclusions about the trends in water quality across the state. It is just a snapshot of the status of state waters and whether beneficial uses are being supported. Identification of increased areas of impaired water quality condition is likely more attributable to the amount of data we assessed in 2018, enhanced resolution of Oregon's hydrography and a construct of how DEQ is required to report to EPA than it can be attributed to any specific known trends in broad scale water quality changes.

LK#3: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

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LK#4: Suggested Change ID #4

Description: Watershed Units - Permission at monitoring locations

Comment: I am particularly concerned with DEQ's decision to list waterways that I have not given DEQ permission to sample and where sampling has not occurred. I urge DEQ to revisit these listings.

Response: Any sampling performed by Oregon DEQ followed proper procedures for access to waters on private properties, which include obtaining written consent to sample. Oregon DEQ did not evaluate private property permission structures for third party submitted data. Data were assessed using the procedures outlined in the Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters.

LK#5: Suggested Change ID #11

Description: Watershed Units- Unfair characterization of agriculture and forest land- Assessment targets agricultural lands as sources of impairments

Comment: This new method of designation appears to directly target agricultural lands as the source of water quality impairments

Response: The Integrated Report is an objective assessment of the status of state waters based on data that were submitted to DEQ. The methods used to make assessment conclusions were finalized in the 2018 methodology document prior to any data evaluation. The assessment results and conclusions in the Integrated Report neither attributed the sources of water quality impairments nor targeted any entities such as agricultural lands.

12.Comments from: Adam Stinnett

AS#1: Suggested Change ID #1

Description: Watershed Units- Extrapolation- Watershed unit assessment conclusions

Comment: I strongly oppose DEQ's decision to list water bodies on farm and forestland as water quality impaired without data to support those listings, as it has done in its 2018-2020 Integrated Report … I strongly oppose DEQ's decision to extrapolate listings of waterways and ditches based upon data collected from neighboring properties. Water quality naturally differs from water body to water body, particularly when those waterways are under different ownership and may have experienced differing current and historic riparian management. DEQ has presented no evidence that this extrapolation is scientifically valid or sound. Instead, it appears to be an attempt to list and regulate waterways without first going through the necessary step of determining that data actually shows an impairment.

Response: Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

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smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

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AS#2: Suggested Change ID #2

Description: Watershed Units- Unfair Characterization- Report appears to indicate farms and forests are experiencing declining water quality

Comment: Report … makes it look like farms and forests are experiencing declining water quality, particularly when it appears that DEQ lacks actual data for a significant portions of the waterways listed.

Response: The Integrated Report makes no conclusions about the trends in water quality across the state. It is just a snapshot of the status of state waters and whether beneficial uses are being supported. Identification of increased areas of impaired water quality condition is likely more attributable to the amount of data we assessed in 2018, enhanced resolution of Oregon's hydrography and a construct of how DEQ is required to report to EPA than it can be attributed to any specific known trends in broad scale water quality changes.

AS#3: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

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AS#4: Suggested Change ID #11

Description: Watershed Units- Unfair characterization of agriculture and forest land- Assessment targets agricultural lands as sources of impairments

Comment: This new method of designation appears to directly target agricultural lands as the source of water quality impairments

Response: The Integrated Report is an objective assessment of the status of state waters based on data that were submitted to DEQ. The methods used to make assessment conclusions were finalized in the 2018 methodology document prior to any data evaluation. The assessment results and conclusions in the Integrated Report neither attributed the sources of water quality impairments nor targeted any entities such as agricultural lands.

AS#5: Suggested Change ID #17

Description: Methodology- Monitoring Locations- Unaware of any Monitoring Locations

Comment: I am unaware of any monitoring in the locations I work in with the company I'm employed with. It's completely unreasonable to lump these streams in with others without actually doing the work. Please don't make the mistake of letting the DEQ get away with such nonsense.

Response: Any sampling performed by Oregon DEQ followed proper procedures for access to waters on private property, which included obtaining written consent to sample. Oregon DEQ did not evaluate private property permission structures for third party submitted data. When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical

relative to the state's monitoring and assessment resources. In the case of the Integrated Report, a watershed unit listed as Impaired indicates that an impairment exists within the watershed, not that the entire watershed is considered impaired.

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13. Comments from: Craig Herman

CH#1: Suggested Change ID #1

Description: Watershed Units- Extrapolation- Watershed unit assessment conclusions

Comment: I strongly oppose DEQ's decision to list water bodies on farm and forestland as water quality impaired without data to support those listings, as it has done in its 2018-2020 Integrated Report … I strongly oppose DEQ's decision to extrapolate listings of waterways and ditches based upon data collected from neighboring properties. Water quality naturally differs from water body to water body, particularly when those waterways are under different ownership and may have experienced differing current and historic riparian management. DEQ has presented no evidence that this extrapolation is scientifically valid or sound. Instead, it appears to be an attempt to list and regulate waterways without first going through the necessary step of determining that data actually shows an impairment.

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CH#2: Suggested Change ID #2

Description: Watershed Units- Unfair Characterization- Report appears to indicate farms and forests are experiencing declining water quality

Comment: Report … makes it look like farms and forests are experiencing declining water quality, particularly when it appears that DEQ lacks actual data for a significant portions of the waterways listed.

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Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

CH#4: Suggested Change ID #4

Description: Watershed Units - Permission at monitoring locations

Comment: I am particularly concerned with DEQ's decision to list waterways that I have not given DEQ permission to sample and where sampling has not occurred. I urge DEQ to revisit these listings.

Response: Any sampling performed by Oregon DEQ followed proper procedures for access to waters on private properties, which include obtaining written consent to sample. Oregon DEQ did not evaluate private property permission structures for third party submitted data. Data were assessed using the procedures outlined in the Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters.

CH#5: Suggested Change ID #11

Description: Watershed Units- Unfair characterization of agriculture and forest land- Assessment targets agricultural lands as sources of impairments

Comment: This new method of designation appears to directly target agricultural lands as the source of water quality impairments

Response: The Integrated Report is an objective assessment of the status of state waters based on data that were submitted to DEQ. The methods used to make assessment conclusions were finalized in the 2018 methodology document prior to any data evaluation. The assessment results and conclusions in the Integrated Report neither attributed the sources of water quality impairments nor targeted any entities such as agricultural lands.

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14. Comments from: Srinivas Puram

SP#1: Suggested Change ID #123

Description: General Comment

Comment: General support.

Response: Thank you for your comments.

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15. Comments from: Crook Soil and Water Conservation District

CS-WCD#1: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

CS-WCD#2: Suggested Change ID #4

Description: Watershed Units - Permission at monitoring locations

Comment: I am particularly concerned with DEQ's decision to list waterways that I have not given DEQ permission to sample and where sampling has not occurred. I urge DEQ to revisit these listings.

Response: Any sampling performed by Oregon DEQ followed proper procedures for access to waters on private properties, which include obtaining written consent to sample. Oregon DEQ did not evaluate private property permission structures for third party submitted data. Data were assessed using the procedures outlined in the Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters.

CS-WCD#3: Suggested Change ID #10

Description: Watershed Units- Listing all waterbodies in watershed units is not appropriate

Comment: Applying assessment conclusions from monitoring stations within a watershed unit to all waterbodies in that unit is not appropriate.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report process, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5 ("Impaired"), it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine regulatory actions or consequences.

CS-WCD#4: Suggested Change ID #11

Description: Watershed Units- Unfair characterization of agriculture and forest land- Assessment targets agricultural lands as sources of impairments

Comment: This new method of designation appears to directly target agricultural lands as the source of water quality impairments

Response: The Integrated Report is an objective assessment of the status of state waters based on data that were submitted to DEQ. The methods used to make assessment conclusions were finalized in the 2018 methodology document prior to any data evaluation. The assessment results and conclusions in the Integrated Report neither attributed the sources of water quality impairments nor targeted any entities such as agricultural lands.

CS-WCD#5: Suggested Change ID #62

Description: Watershed Units- Extrapolation- Data

Comment: DEQ's methodology, especially as it relates to watershed assessment units, is an inappropriate use of the data available and risks invalidating this update to listings of impaired waterways. DEQ should not assume or declare impairment in most of the waterways in the state based on a lack of data.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5 ("Impaired"), it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

It is important to note that the Oregon Legislature passed state law (ORS 468B.039) in 2015 which directed DEQ to publish the methodology prior to analyzing water quality data and drafting the Integrated Report (two-step process). This process ensures that methodology is robust and not developed or altered

in an ad-hoc manner in response to assessment results. DEQ held public stakeholder and work group processes for updates to the Assessment Methodology prior to the Integrated Report being drafted. This process was inclusive and included representatives from industry, environmental interests, tribes, agriculture and forestry on the work group.

Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

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16. Comments from: Robert Simerly

RS#1: Suggested Change ID #1

Description: Watershed Units- Extrapolation- Watershed unit assessment conclusions

Comment: I strongly oppose DEQ's decision to list water bodies on farm and forestland as water quality impaired without data to support those listings, as it has done in its 2018-2020 Integrated Report … I strongly oppose DEQ's decision to extrapolate listings of waterways and ditches based upon data collected from neighboring properties. Water quality naturally differs from water body to water body, particularly when those waterways are under different ownership and may have experienced differing current and historic riparian management. DEQ has presented no evidence that this extrapolation is scientifically valid or sound. Instead, it appears to be an attempt to list and regulate waterways without first going through the necessary step of determining that data actually shows an impairment.

Response: Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

RS#2: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

RS#3: Suggested Change ID #11

Description: Watershed Units- Unfair characterization of agriculture and forest land- Assessment targets agricultural lands as sources of impairments

Comment: This new method of designation appears to directly target agricultural lands as the source of water quality impairments

Response: The Integrated Report is an objective assessment of the status of state waters based on data that were submitted to DEQ. The methods used to make assessment conclusions were finalized in the 2018 methodology document prior to any data evaluation. The assessment results and conclusions in the

Integrated Report neither attributed the sources of water quality impairments nor targeted any entities such as agricultural lands.

RS#4: Suggested Change ID #18

Description: Assessment Conclusions- Fletcher Gulch assessments

Comment: 1. Temperature. Naturally the temperature of a water course varies on the time of year, time of day and air temperature. The water in the lateral is relatively deep and fast moving. The temperature of the water flowing in it is not adversely high. Clearly the temperature has not been measured appropriately. The water in the drains is relatively shallow and slow moving. The channels (ditch walls) are approximately 10 to 15 feet deep and the waters are well shaded by vegetation. It is likely that these waters are warmer than the lateral but still likely not excessively high even on a hot day.

2. Dissolved Oxygen is a function of temperature and I doubt these waters are low in dissolved oxygen at any time of year.

3. pH: The waters and soils in the region where Fletcher Gulch is located are naturally slightly alkaline resulting in a relatively high pH value.

4. The bio-criteria has not been properly assessed. There is a great deal of wildlife that routinely use the waterways at this location including: frogs and other amphibians; bull snakes and other reptiles; birds including songbirds, birds of prey, upland game and waterfowl; and mammals including coyotes, badgers, skunks and other small animals. Over the years I have observed mule deer, antelope, foxes, weasels, muskrat and other species using the water on this property. These animals are supported by an abundance of naturally occurring vegetation and insects at the bottom of the food chain.

5. Total dissolved gases (see # 2 above).

6. The presence of "toxic pollutants" (mercury, lead, copper, arsenic, pH) in the water are the result of the native minerals (pesticide residues notwithstanding). These elements would have been present in the environment prior to European settlement.

Response: The assessments for Fletcher Gulch were contained in HUC12 Name: Fletcher Gulch-Owyhee River, OR_WS_170501100706_05_102965 and HUC12 Name: Rock Spring Canyon-Owyhee River, OR_170501100704_05_102963 (Fletcher Drain). DEQ did not assess temperature in either assessment unit in the 2018/2020 Integrated Report. DEQ encourages continuous data collection in Fletcher Gulch to confirm that temperatures remain cool and attain temperature standards. DEQ's assessment confirms that both assessment units attain cool water year-round dissolved oxygen criteria; 0 of 24 samples and 0 of 25 samples, respectively exceed criteria. The Fletcher Gulch assessment unit (OR_WS_170501100706_05_102965) attained dissolved oxygen spawning criteria (1 of 11 samples fell below spawning criteria), however eight of eleven dissolved oxygen samples in AU OR_170501100704_05_102963 fall below the spawning criteria of 11 mg/L and 95% saturation during the spawning period of January 1st through May 15th. Fletcher Gulch attained water quality pH criteria with 0 of 224 samples falling outside the pH range of values, while Fletcher Drain was not assessed for pH, biocriteria or total dissolved gases. Although toxic pollutants (i.e. mercury, lead, copper, arsenic) may have been present pre-European settlement, they currently persist above water quality criteria set to protect aquatic life and as a result, are classified as impaired.

RS#5: Suggested Change ID #19

Description: TMDL Applicability - Fletcher Gulch suspended solids

Comment: TMDLs in the form of suspended solids are also native to our region. The vast majority of the soils in the Fletcher Gulch drainage are silt loams which are prone to movement by air and water. The waters in this area likely would not have met current TMDL standards even in pre-European settlement times.

Response: Thank you for your comment. Appropriate TMDL sediment targets may be addressed through a separate TMDL process.

RS#6: Suggested Change ID #20

Description: Beneficial Uses and WQ Standards- Fletcher Gulch Designated Uses

Comment: The assessment lists these waters as a fishery which it is not. There is no salmonid spawning; historically, prior to the advent of irrigated agriculture, these waters did not flow year round. They were washouts during times of heavy rain. … One thing the assessment got right is that Fletcher Gulch does not have a recreational or aesthetic value. With the possible exception of bird hunting, it never has and should not be expected to.

Response: The dissolved oxygen criteria for spawning areas apply during specific time periods. These criteria protect the oxygen requirements for eggs and fry of salmon, steelhead, and resident trout. The spawning time period matches the onset of spawning through the emergence of fry from the gravels. The Dissolved Oxygen spawning criteria are applicable from January 1 to May 15 in Fletcher Gulch because of its "redband or Lahontan cutthroat trout," use classification. In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is done through a separate Water Quality Standards triennial review process, which is outside of the Integrated Report process. DEQ encourages the commenter's participation and input for the next water quality standard triennial review later this year.

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17. Comments from: City of Corvallis

CtC#1: Suggested Change ID #21

Description: Watershed Units- Break watershed units into smaller areas

Comment: We recommend breaking up HUC/AU ID into smaller areas. In that way, the data would be more representative of the areas samples would need to be collected. We don't recommend this additional sampling, as it is cost-prohibitive.

Response: The HUC-12 sub-watershed is the smallest watershed boundary unit identified in the NHD. In subsequent reporting cycles, we will revisit the scale of assessment units when more information, such as the development of HUC-14 subwatershed units, is available. DEQ will continue to improve and refine its methodologies as it prepares for the next cycle of the Integrated Report. The agency will begin planning for the next cycle, including soliciting input for suggested methodology improvements for the 2022 Integrated Report, in early 2020.

CtC#2: Suggested Change ID #22

Description: Mapping tools/ Visualizations- Change interactive map colors

Comment: We recommend coloring streams for all 5 categories on the interactive map, and using colors that are not similar to each other, in order to improve comprehension.

Response: Thank you for your suggestion. We will be revising the interactive map and how the results are displayed for final submittal to EPA.

CtC#3: Suggested Change ID #23

Description: Data- Include site description

Comment: Please provide the site description for MLocID 35080-ORDEQ

Response: Monitoring location 35080-ORDEQ is Dixon Creek at NW 9th St, Corvallis (Willamette). The coordinates for that monitoring location are 44.5734 N, 123.2637 W.

CtC#4: Suggested Change ID #24

Description: Assessment Conclusions- OR_WS_170900030609_02_104297 DO

Comment: Please provide the site description for MLocID 35080-ORDEQ. … We believe OR_WS_170900030609_02_104297 is incorrectly listed for Dissolved Oxygen based upon the data provided.

Response: The site description for Monitoring Location ID 35080-ORDEQ is Dixon Creek at NW 9th St, Corvallis (Willamette). DEQ will clarify that the Category 5 listing proposed for OR_WS_170900030609_02_104297 is during the spawning period. Three of seven samples fell below the spawning criteria of 11 mg/L and 95% saturation during the spawning period of January 1st through June 15th.

CtC#5: Suggested Change ID #25

Description: Assessment Conclusions- Lower Mary's River OR_WS_170900030211_02_104263 Biocriteria

Comment: 1. There was no data provided to justify Category 5 Biocriteria listing at OR_WS_170900030211_02_104263. We request that DEQ provide the data they used, so we can review it as well. If PREDATOR was not used to ascertain the taxa loss, we request that DEQ supply the study that led to the determination.

We do not understand the meaning of the listing "cause unknown - impaired biota". We request that DEQ explain that comment and provide the data for how that determination was derived.

Response: The Category 5 biocriteria listing for Lower Mary's River OR_WS_170900030211_02_104263 was based on a previous listing. No new assessment was done in 2018/2020. The original listing was based on data collected on Dunawi Creek on 7/31/2006 and was added to the 303(d) list in 2010. The PREDATOR (O/E) score for this site was 0.3. The biocriteria thresholds for Category 5 are any one sample less than a PREDATOR score of 0.8.

CtC#6: Suggested Change ID #26

Description: Assessment Conclusions- Greasy Creek OR_WS_170900030204_02_104256 Temperature

Comment: OR_WS_170900030204_02_104256 is indicated as impaired for temperature.

1. Our concern is that the criteria is based upon a three-year period. However the data were only collected over four years total. The first two years had no exceedance; all exceedances were in 2012 and 2013. We believe more data should have been collected to ascertain whether the two final years were anomalies. We request that DEQ provide an explanation for why more data were not collected.

2. We believe it is important to know whether air temperature exclusion and low flow condition evaluations were performed on that data. If they have not been done, we request these evaluations be performed and the results added to the data file spreadsheet.

Response: DEQ's methodology for a Category 5 listing for temperature is two or more exceedances of the seven day average daily maximum (7-DADM) value within a three year period. During the years 2011 and 2012, 199 of 7544 7-DADM values exceeded the temperature criterion of either 16 degrees Celsius or 18 degrees Celsius, respectively. The assessment conclusion is consistent with DEQ's methodology. In addition, since 2014, and 2015, were some of the hottest years on record in Oregon, DEQ anticipates that this pattern of exceedance would have continued on into another three year period. the temperature data were submitted to DEQ by the United States Forest Service and we are unaware of why data collection ceased in this watershed.

An air temperature exclusion analysis was performed for OR_WS_170900030204_02_104256. Water temperature exclusions for the period of Aug.5, 2012, through Aug.11, 2012 met the requirements for an air temperature exclusion. After excluding those values, there were still greater than two exceedances of the 7-DADM in a three year period. Thus, the Category 5 listing would remain.

CtC#7: Suggested Change ID #27

Description: Data- Include site description for SNF-040

Comment: Please provide site description for SNF-040.

Response: This station was submitted to DEQ from the US Forest Service, and in reviewing the site, it appears a more descriptive name is, South Fork Rock Creek near mouth.

CtC#8: Suggested Change ID #73

Description: General comment - compliment

Comment: We would like to express our gratitude to the DEQ for all of the hard work they have done in gathering and disseminating the integrated report. We recognize the enormity of the task performed and the work still to be done.

Response: Thank you for your support.

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18. Comments from: Association of Oregon Counties

AOC#1: Suggested Change ID #1

Description: Watershed Units- Extrapolation- Watershed unit assessment conclusions

Comment: I strongly oppose DEQ's decision to list water bodies on farm and forestland as water quality impaired without data to support those listings, as it has done in its 2018-2020 Integrated Report … I strongly oppose DEQ's decision to extrapolate listings of waterways and ditches based upon data collected from neighboring properties. Water quality naturally differs from water body to water body, particularly when those waterways are under different ownership and may have experienced differing current and historic riparian management. DEQ has presented no evidence that this extrapolation is scientifically valid or sound. Instead, it appears to be an attempt to list and regulate waterways without first going through the necessary step of determining that data actually shows an impairment.

Response: Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with

smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

AOC#2: Suggested Change ID #2

Description: Watershed Units- Unfair Characterization- Report appears to indicate farms and forests are experiencing declining water quality

Comment: Report … makes it look like farms and forests are experiencing declining water quality, particularly when it appears that DEQ lacks actual data for a significant portions of the waterways listed.

Response: The Integrated Report makes no conclusions about the trends in water quality across the state. It is just a snapshot of the status of state waters and whether beneficial uses are being supported. Identification of increased areas of impaired water quality condition is likely more attributable to the amount of data we assessed in 2018, enhanced resolution of Oregon's hydrography and a construct of how DEQ is required to report to EPA than it can be attributed to any specific known trends in broad scale water quality changes.

AOC#3: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

DEQ is not asserting "jurisdiction" over any new waters. DEQ water quality programs are implemented for waters of the state, which has a broad statutory definition in Oregon Statutes (ORS 468B.005): "Waters of the state" means lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of

Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters) that are located wholly or partially within or bordering the state or within its jurisdiction.

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

AOC#4: Suggested Change ID #11

Description: Watershed Units- Unfair characterization of agriculture and forest land- Assessment targets agricultural lands as sources of impairments

Comment: This new method of designation appears to directly target agricultural lands as the source of water quality impairments

Response: The Integrated Report is an objective assessment of the status of state waters based on data that were submitted to DEQ. The methods used to make assessment conclusions were finalized in the 2018 methodology document prior to any data evaluation. The assessment results and conclusions in the Integrated Report neither attributed the sources of water quality impairments nor targeted any entities such as agricultural lands.

AOC#5: Suggested Change ID #28

Description: Process- Communication/Outreach- County Official Outreach

Comment: We are disappointed that the agency did not reach out to county officials about the Integrated Report prior to listing the vast majority of our waterbodies as water quality impaired. We believe we were entitled. as local government, to forewarning and a more in depth discussion of the methodologies used and the assumptions that the Integrated Report makes about waterways in our counties, particularly when the agency has made some very significant policy calls that will have a direct impact on counties and county land.

Response: DEQ performed extensive outreach on its draft 2018/2020 Integrated Report and provided multiple opportunities to comment on its methodology and draft report.

The draft Integrated Report was open for public comment from Sept. 30, 2019, through Jan. 6, 2020, for a total of 99 days, which included a 34 day extension in response to stakeholder requests. Notifications were sent to over 3,000 individuals signed up on the GovDelivery listserv. DEQ staff subsequently held

six informational sessions across the state to review the results of the report and assisted participants with its new interactive tools. The six informational sessions included: Portland on Oct. 15, 2019; Bend on Oct. 22, 2019; Central Point/Medford on Oct. 29, 2019; Newport on Nov. 5, 2019; Corvallis on Nov. 12, 2019; and Salem on Nov. 14, 2019. DEQ staff also held a webinar on Nov. 4, 2019, and the webinar was recorded and available on the Integrated Report website on-line Webinar.

DEQ will continue to adapt its approach to outreach and communications in the next Integrated Report and encourages your input and participation. The agency anticipates convening a stakeholder group in 2020, to evaluate and make recommended changes to the methodology, with the methodology going out for public comment in approximately Dec. 2020.

AOC#6: Suggested Change ID #62

Description: Watershed Units- Extrapolation- Data

Comment: DEQ's methodology, especially as it relates to watershed assessment units, is an inappropriate use of the data available and risks invalidating this update to listings of impaired waterways. DEQ should not assume or declare impairment in most of the waterways in the state based on a lack of data.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5 ("Impaired"), it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

It is important to note that the Oregon Legislature passed state law (ORS 468B.039) in 2015 which directed DEQ to publish the methodology prior to analyzing water quality data and drafting the Integrated Report (two-step process). This process ensures that methodology is robust and not developed or altered in an ad-hoc manner in response to assessment results. DEQ held public stakeholder and work group processes for updates to the Assessment Methodology prior to the Integrated Report being drafted. This process was inclusive and included representatives from industry, environmental interests, tribes, agriculture and forestry on the work group.

Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

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19. Comments from: Northwest Environmental Advocates

NEA#1: Suggested Change ID #124

Description: Process - Combining 2018/2020

Comment: DEQ is incorrectly calling this a "2018/2020 Integrated Report." The call for data upon which DEQ is relying was issued on May 2, 2018 for data collected between January 1, 2008 and December 31, 2017. See DEQ Online Subscriptions, Integrated Report - 2018 Call for Data (May 2, 2018). DEQ cannot just tack on "2020" because it is hoping or planning to submit the list to EPA for approval in 2020. EPA has not allowed this in the past with Washington State. For example, when the Washington Department of Ecology submitted a list that was purportedly its 2014 list, EPA informed the state that it was approving the list as a 2012 list "because the assessment includes data collected only through May 1, 2011." Letter from Daniel Opalski, EPA, to Heather Bartlett, Ecology, Re: Approval of Washington State 2012 303(d) List (July 22, 2016).

Response: In 2016, DEQ undertook a major improvement effort to streamline the Integrated Report and address longstanding issues, including establishing new assessment units, migration to the High Resolution National Hydrologic Dataset, and the transfer of data from an outdated data management system to its new system. Due to the limited resources available to DEQ and the vast quantities of data received in its statewide data call (> 6.5 million rows of data), EPA agreed that DEQ could submit its 2018 Integrated Report as a combined 2018/2020 Integrated Report.

Due to the vast improvements efforts that were implemented, combination of the 2018 cycle with the 2020 cycle, in consultation with EPA, was necessary to put Oregon back on schedule for completing an Integrated Report every two years. DEQ intends to assess all waters of the State in its 2022 Integrated Report with the understanding that it will assess all data within the time period of January 1, 2015 through December 31, 2020.

NEA#2: Suggested Change ID #164

Description: Data - Weighing More Recent Data

Comment: DEQ notes that it will "place more weight on recent data to determine the final assessment conclusion." Id. at 3. We do not object to DEQ's looking to see if more recent data demonstrates that an impairment has been resolved; however, DEQ should also be looking to see if the reason for the apparent disappearance of the problem is unrelated to the underlying reason for the original listing. For example, if it were a pollutant that manifests itself in low water and there are a series of high water years, or a discharger temporarily suspends its operations. A little bit of common sense should be inserted into

DEQ's point that it will always place more weight on more recent data, just as DEQ might not consider data that come from a one-time spill, the effects of which are not expected to linger in the environment. See, e.g., id. at 3, response 2.

Response: The Integrated Report is a report which combines the requirements of both Section 305(b) and 303(d) of the federal Clean Water Act. The Integrated Report is a reporting of the status of water quality in Oregon and a list of waters considered to be impaired. Beneficial uses that are not being supported are identified along with the pollutant causing the impairment. In certain cases, sources and causes of pollutants causing use impairment may not be known. DEQ placed more weight on more recent data when it could be justified.

The Integrated Report is a snapshot of the status water quality in Oregon in a given two-year cycle. The report. identifies areas that may require additional investigation and follow-up action as well as areas that may currently be supporting their beneficial uses. It does not, unto itself, analyze the specific circumstances around water quality attainment or non-attainment.

NEA#3: Suggested Change ID #165

Description: Methodology - Downstream Protection

Comment: In its Response no. 3, DEQ states that it "is still exploring the option to list 'sandwich' Assessment Units as Category 3B for conservative pollutants for follow up monitoring." Id. at 3. The use of the word "sandwich" is not particularly clear here but could mean that an assessment unit upstream is listed and one downstream is listed as violating water quality standards, leading to the inference that the one in the middle is at least a likely candidate for follow-up monitoring. While Oregon has not, to the best of our knowledge, adopted a rule into its water quality standards that implements the federal requirement that "[i]n designating uses of a water body and the appropriate criteria for those uses, the State shall take into consideration the water quality standards of downstream waters and shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters," 40 C.F.R. § 131.10(b), it is required to interpret its water quality standards in a fashion that meets this requirement. If DEQ is aware that the source of the pollutant in the most downstream end of this metaphorical sandwich stems from, in whole or in part, the assessment unit in the middle, DEQ is obligated to list that unit as violating the requirement of a water quality standard that it protect downstream standards. As such, this assessment unit would not be listed under Category 3B but, rather, under Category 5. Thus, DEQ is incorrect in stating that in all cases it "does not intend to list water bodies where there is [sic] no data to support a listing."

Response: DEQ assessed water quality data against water quality criteria for current designated uses. The 303(d) list of impaired waters identifies assessment units that require additional investigation and follow-up action. Whether or not an adjacent/downstream assessment unit is also impaired (or attaining) is a site-specific and pollutant-specific evaluation of factors such as flow, hydrology, and pollutant characteristics. Conclusions from one assessment unit can not be universally extrapolated to the adjacent unit. TMDLs will continue to be developed and implemented at the basin/sub-basin scale and allocations are determined such that water quality standards will be attained in downstream uses.

NEA#4: Suggested Change ID #166

Description: Beneficial Uses and WQ Standards - Listings on the Basis of Designated Use Impairment

Comment: In Response no. 8, DEQ emphasizes its decision to assess water quality based on "when data are available by applying criteria for pollutants or parameters and determining which beneficial uses are impacted." Response to Comments at 4. DEQ directs readers to a table in its draft Methodology that links specific parameters with the uses that those criteria are intended to protect. This is not a response to the comment that was made, a comment that pertains to, as DEQ quotes but ignores, "how the state assesses the status of designated use support, particularly how DEQ uses data and information that are not water column data." Specifically, the question is not how DEQ tied uses to numeric criteria in the listing process but whether DEQ uses designated use impacts alone as the basis for listing. DEQ's Call for Data cannot possibly ensure that sources of information on designated use impairment have submitted data and information because DEQ makes clear that it only accepts data for which "surface water quality will be assessed by comparing measured chemical, physical, and biological parameters to water quality criteria and standards" and that which is related to the "accuracy of the sample location." DEQ, Oregon's 2018 Integrated Report Call for Data Submission Guidelines (undated). While DEQ does not state categorically that it will not accept data and information regarding designated use impairment, it implies that it will not. In addition, it states that it will "prioritize data with established methodologies," none of which listed address designated uses. In addition, all uses of the word "wildlife" in DEQ's listing methodology pertain to the goals of the Clean Water Act, a quotation from the Oregon narrative criterion that is otherwise ignored, and the Oregon Department of Fish and Wildlife. See ODEQ, Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters (Sept. 2019) (hereinafter "2018 Methodology").

Response: DEQ assessed designated use support, through methodologies outlined in its Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters. DEQ does not assess designated use impacts, alone, as the basis for a 303(d) impairment listing. EPA's 2002, Consolidated Assessment and Listing Methodology documents addresses this point through their explanation of numeric and narrative criteria. "States, territories, and authorized tribes adopt numeric and narrative water quality criteria to protect designated uses. … Narrative criteria are descriptions of the conditions necessary for a waterbody to attain its designated use, whereas numeric criteria are values expressed as chemical concentrations, toxicity units, aquatic community index levels, or other numbers deemed necessary to protect designated uses." DEQ assessment of beneficial use support in the Integrated Report was performed through the assessment of their numeric and narrative criteria (OAR 340-041).

When sample sizes were minimal but there was additional information that impairment was likely and beneficial uses were not supported, DEQ implemented the concept of "overwhelming evidence". Overwhelming evidence used multiple lines of evidence based on a specific rationale to conclude that a waterbody was impaired. DEQ reviewed all of the qualitative data (i.e. scientific reports, journal articles, peer-reviewed studies etc.) that were submitted during the data call as part of its assessment process and the final report will contain rationales for its decision to include or waterbodies on its list of impaired waters.

NEA#5: Suggested Change ID #167

Description: Assessment Unit - Columbia River

Comment: Likewise, DEQ fails to recognize how the change in its Columbia River assessment units will provide the protection required by the above-cited standards regulation as well as common sense. In our comments on the Draft Methodology, we noted that the use of small assessment units could reduce protection on the Columbia. DEQ's response was that: Smaller assessment units on the Columbia (8.6 miles on average) and Snake Rivers (19 miles on average) provide a more refined look at where impairments may occur along a larger river system. It does not result in a lessening of water quality protections. Rather than a blanket listing of the entire river which may result in an inefficient use of resources to address an impairment that does not exist in all reaches, the impairment may be more confined to a particular reach. Resources may then be targeted to specific areas of impairment.

Response to Comments at 5. DEQ is mistaken in stating that smaller assessment units do not result in a lessening of water quality protections. Since the only water quality protections that Oregon implements, albeit in the slowest possible manner, are those in NPDES permits, and DEQ conducts its analysis of reasonable potential to cause or contribute to violations of water quality standards based on the location of the discharge pipe, making assessment units smaller can indeed result in a disconnect between outfalls/mixing zones and impairments in assessment units. This would not be as significant an issue if DEQ properly applied the requirements of 40 C.F.R. § 131.10(b) requiring the protection of downstream waters. The failure to do so, and the DEQ's focus on attempting to discount 303(d) listings in the issuance of NPDES permits in the first place, does point to lessened protections. On the other side of the ledger, when DEQ argues that more geographically limited 303(d) listings will result in more efficient and targeted use of resources, it is unclear to what DEQ is referring. If it is that a TMDL will be more targeted, that is unlikely because such an investigation would necessitate a broader examination of the area in any event. If DEQ is referring to some other resource targeting, short of looking at a hazardous waste site, this is disingenuous. DEQ does not target resources to nonpoint source controls and this listing approach reduces the likelihood that NPDES sources will be given discharge restrictions rather than increases them.

Response: In Oregon, water quality protections are implemented through the designation of beneficial uses and implementation of their associated criteria (numeric and narrative). Beneficial uses were designated prior to the 2018/2020 Integrated Report assessment, and conclusions from the assessment do not lessen any of those protections. Implementation of 303(d) listings in NPDES permits is a separate process and falls outside the scope of the Integrated Report.

DEQ reached out to partner states when defining assessment units for the Columbia and Snake Rivers, which define Oregon's borders. In the case of the Columbia River, DEQ chose to adopt Washington's methodology for delineation of assessment units on the Columbia River. As a result, DEQ and Washington Department of Ecology will now assess the same segments of water on the Columbia River using their respective water quality standards and assessment methodologies.

NEA#6: Suggested Change ID #168

Description: Methodology - Antidegradation Policy

Comment: DEQ is remarkably ill-informed as to the meaning of the antidegradation policy. In response to comments that DEQ is required to use the policy in making assessments of water quality, DEQ

responds that "[with regard to the commenters concern regarding antidegradation Tier I concerns, DEQ will assess the data received against all designated uses." Response to Comments at 6. First, "data" are not necessarily what one assessed "against" designated uses. Data implies water quality data whereas other "information" may be the best evidence of use impairment. For example, reproductive failure in wildlife caused by toxic contaminants in water is evidence of a designated use impairment but is not water quality data. But DEQ misses the bigger point here, namely that existing uses may not be designated or not clearly designated. For example, whereas wildlife is a designated use, the absence of any information at all as to specific wildlife in specific waters renders this a purely academic sort of protection. DEQ does not seek to protect amphibians, for example, in location or by criteria, in any of its regulatory programs. Therefore, in response to a comment that DEQ must evaluate data and information against "existing uses," which include those that have not been designated or so unspecifically designated as to not be apparent, DEQ says that it will evaluate against designated uses, thereby missing the entire point. That DEQ goes on to say that it will evaluate new locations of uses is also entirely beside the point. The antidegradation policy protects existing uses regardless of whether they have been designated. As NWEA has fully explained repeatedly, protecting existing uses does not mean merely what DEQ suggests, whether uses have popped up where DEQ did not believe they were present, as in DEQ's spawning example, but rather where they have been locally extirpated since 1975.

Given that DEQ has only designated wildlife uses broadly without the kind of "when and where" designation given to salmonid life cycle stages, DEQ has actually provided these uses with zero protection other than indirectly through salmonids, which provides no protection where wildlife occupy non-salmonid streams. A full discussion of two wildlife species—the Southern torrent salamander, Rhyacotriton variegatus, and the Coastal tailed frog, Ascaphus truei—for which DEQ provides no protection throughout the majority of stream networks is set out in a letter from Nina Bell, NWEA, to Dan Opalski, EPA, Re: Oregon Coastal Nonpoint Pollution Control Program; Protection of the Designated Use of Amphibians in Non-Fish-Bearing ("Type N") Streams Through the MidCoast Implementation Ready TMDL (Oct. 5, 2012). Protection must be established through the DEQ process of evaluating data and information against applicable water quality standards, namely the 303(d) listing process. Without this evaluation, DEQ will take no regulatory action, including inclusion in future TMDLs, to protect these species.

Response: DEQ did not make any listing decisions based solely on antidegradation as the basis for listing. DEQ applies the antidegradation policy primarily when issuing wastewater discharge permits or water quality certifications, not as part of water quality assessment. Oregon's antidegradation policy is established in OAR 340-041-004 and approved by EPA as part of Oregon's water quality standards. "The purpose of the Antidegradation Policy is to guide decisions that affect water quality to prevent unnecessary further degradation from new or increased point and nonpoint sources of pollution, and to protect, maintain, and enhance existing surface water quality to ensure the full protection of all existing beneficial uses. The standards and policies set forth in OAR 340-041-0007 through 340-041-0350 supplement the Antidegradation Policy." Assessment of designated uses protects existing uses, therefore if water quality criteria are being met, than the antidegradation policy is being met.

Data is defined as "factual information (such as measurements or statistics) used as a basis for reasoning, discussion, or calculation" (Merriam-Webster). Section 3.3.2 of DEQ's Methodology for Oregon's 2018, Water Quality Report and List of Water Quality Limited Waters states that "To characterize conditions in Oregon waters, DEQ assembles water quality data and information available from monitoring sites or sampling points on a water body". Call for data guidelines (3.2.2) specify "Non-numeric data that cannot be tabulated in a spreadsheet must be related to specific locations within Oregon's waters. DEQ makes its water quality assessment conclusions on a waterbody-specific basis, and therefore, cannot base its assessment on generalized water quality information or information that is at a regional scale."

DEQ has a designated wildlife beneficial use. A finer classification of wildlife beneficial use may be undertaken through a separate Water Quality Standards process. DEQ's Fish and Aquatic Life Use and associated criteria are designed to protect the entire aquatic community, not just salmonids. Protection of these uses is provided to all waterbodies, regardless of salmonid use, through associated aquatic life criteria.

NEA#7: Suggested Change ID #169

Description: Methodology - Failure to Use All Readily Available Data and Information

Comment: In response to comments that, inter alia, DEQ has not used data and information from tribes, the U.S. Fish and Wildlife Service, the National Marine Fisheries Services, the Oregon Department of Fish and Wildlife, the Oregon Department of State Lands, Soil and Water Conservation Districts, academic institutions, the Lower Columbia River Estuary Partnership, the Columbia River Estuary Study Taskforce, and other organizations and institutions that routinely monitor or publish studies on water quality and designated uses in Oregon, DEQ asserts that sending out an email to over 4,000 entities and individuals is all the effort EPA's regulations require. This is incorrect. First, DEQ concludes that its obligation stops with its effort to solicit data, stating that "DEQ is required under the CWA to solicit all readily available data (40 CFR §130.7 (b)(5)(iii))[.]" Response to Comments at 7. That misreads the EPA regulations that start with the following: Each State shall assemble and evaluate all existing and readily available water quality-related data and information to develop the list required by §§ 130.7(b)(1) and 130.7(b)(2). At a minimum "all existing and readily available water quality-related data and information" includes but is not limited to all of the existing and readily available data and information about the following categories of waters: (i) Waters identified by the State in its most recent section 305(b) report as "partially meeting" or "not meeting" designated uses or as "threatened"; (ii) Waters for which dilution calculations or predictive models indicate nonattainment of applicable water quality standards; (iii) Waters for which water quality problems have been reported by local, state, or federal agencies; members of the public; or academic institutions. These organizations and groups should be actively solicited for research they may be conducting or reporting. For example, university researchers, the United States Department of Agriculture, the National Oceanic and Atmospheric Administration, the United States Geological Survey, and the United States Fish and Wildlife Service are good sources of field data; and (iv) Waters identified by the State as impaired or threatened in a nonpoint assessment submitted to EPA under section 319 of the CWA or in any updates of the assessment. 40 C.F.R. § 130.7 (b)(5) (emphasis added). These regulations squarely place the burden on DEQ to assemble and evaluate all existing and readily available water quality-related data and information to develop the list without exception including the exception that DEQ might have solicited but not received data so long as it is "readily available." Readily available means that if there are data and information published on agency websites and in scientific journals or referenced in agency news letters that could be obtained through an internet search, personal email, or phone call to the source. That is because the regulations also go on to specify that at a minimum the phrase "readily available" includes "[w]aters for which water quality problems have been reported by local, state, or federal agencies; members of the public; or academic institutions." If the problems have been reported, the data and information are deemed to be readily available, and DEQ is required to assemble and evaluate them even if the agencies in question do not respond to DEQ's mass email inviting them to submit water quality data. That various entities "should be solicited" for research they are conducting is not intended to modify the obligation that the "State shall assemble and evaluate." Second, as it describes, DEQ solicits "relevant water quality data." Data are not "information," the kind of information that some of the listed agencies and institutions collect and analyze, e.g., pollution impacts to designated uses. These entities are not aware that DEQ's limited view of "data and information" that excludes information about such water quality standards issues as designated use impairment in the

absence of ambient water quality data, are in fact, matters that DEQ should be asking for and they should be providing. The vast majority of the public believes that the phrase "water quality standard" refers only to numeric criteria. Only a very tiny fraction of people, even among those who understand the legal definition of a water quality standard is more than the numeric criteria, grasp that in regulatory programs regulatory agencies are required to use that full legal definition. Therefore, when DEQ issues a "call for data" that does not specify all of the kinds of data and information that it will compare to EPA-approved water quality standards including designated and existing uses, it has not, in fact, complied with EPA regulations and guidance to actively solicit organizations and individuals. If this were not clear from EPA regulations on standards, EPA makes it even more clear by setting the requirement out in the 303(d) listing regulations. 40 C.F.R. § 130.7(b)(3) ("For the purposes of listing waters under § 130.7(b), the term 'water quality standard applicable to such waters' and 'applicable water quality standards' refer to those water quality standards established under section 303 of the Act, including numeric criteria, narrative criteria, waterbody uses, and antidegradation requirements."). A solicitation that is narrow can only be expected to generate an equally narrow response.

Response: The term "data" encompasses both facts and information used to make an assessment and is both quantitative and qualitative. For the 2018/2020 Integrated Report, DEQ conducted a robust statewide call for data through the GovDelivery listserv notice, which was sent to more than 3,000 individuals. DEQ also downloaded data from various publicly accessible databases such as DEQ's Ambient Water Quality Monitoring System (AWQMS), USGS National Water Information System (NWIS), the Water Quality Portal, and the National Marine Estuary Research Reserve. A total of 6,528,807 rows of data were assessed from 74 organizations as a result of third-party submittals and extracting data from publicly available databases. DEQ also assembled data and information for the assessment from the: Oregon Invasive Species Hotline, Oregon Health Authority Harmful Algal Bloom Advisories and Public Water Systems turbidity data (Appendix B, Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters). In addition, data and information provided during the public comment period were reviewed for the assessment.

This was a robust effort that resulted in an extensive body of relevant data and information. DEQ will continue to communicate broadly for the call for data, and reach out to large public agencies for relevant data; however submittal by outside groups is voluntary.

NEA#8: Suggested Change ID #170

Description: Methodology - Evaluations and Listings DEQ Admits it Continues to Fail to Do

Comment: In its Response to Comments, DEQ admits that it continues to fail to list waters on at least the following bases: - Identification of waters as "threatened." Id. at 4. - Flow modification. Id. at 9. (DEQ offers that "anyone who believes that a water body may be impacted due to flow modification may submit data and evidence identifying the pollutants and beneficial uses affected" however its limited Call for Data does not include flow modification and only references "water quality data." DEQ Online Subscriptions, Integrated Report - 2018 Call for Data (May 2, 2018). Moreover, DEQ implies that flow modifications must affect pollutants as well as beneficial uses, which is incorrect as an effect on the uses is sufficient to constitute an impairment. Fish tissue. Response to Comments at 15 ("DEQ was unable to include a method for assessing fish tissue and/or sediment contamination by toxic substances."). - Sediment values of toxics. Id. - Narrative criteria. Id. ("DEQ will be setting priorities for evaluating narrative standards in future Integrated Reports. Developing a method would require a significant amount of resources, since it is not a direct interpretation of water quality standards, and may be undertaken for future Integrated Reports."). See also id. at 16 ("DEQ must develop protocols to implement the narrative

criteria and to date has done so for a limited number of narrative criteria. DEQ has developed several assessment protocols that apply narrative criteria in conjunction with available numeric criteria for related pollutants that are protective of beneficial uses or that TMDLs will target. See 2018 Methodology protocols for biocriteria, harmful algae blooms, use of beach advisories due to bacteria levels, turbidity impacts to drinking water, and use of fish consumption advisories due to toxic substance levels in fish."). - Wildlife impairment. Id. at 15 ("DEQ will review all studies, reports and/or data that are submitted during the data call period and will use its best professional judgement to determine whether enough evidence exists to conclude that a specific water body's use is not supported, and it is in fact impaired."). DEQ is ignoring all studies and reports that have been previously submitted and that DEQ has access to without their being submitted during the data call period. - All bases of impairments. Id. ("the Columbia River (in the example presented) was previously listed as impaired for DDE, PCBs and PAHs based on fish consumption recommendations from both Oregon and Washington. As a result, the toxics present in fish tissue as referenced in DEQ's report will be addressed through the TMDL process."). Listing on all bases is important because when DEQ develops TMDLs it limits them to only the impairment bases upon which they were initially listed. - Nutrients. Response to Comments at 21 ("an assessment methodology for nutrients was not undertaken at this time."). - Sedimentation. Id. at 22 ("an assessment methodology for sedimentation was not undertaken at this time."). - Designated uses. Id. at 24 ("Given the absence of [turbidity] data, it is difficult for DEQ to conclude that a designated use is not supported and a water body is impaired for a specific parameter."). - Antidegradation. Id. at 25 ("DEQ is open to considering additional ways to implement antidegradation in the 303(d) listing process if EPA develops guidance on how to align the antidegradation policy with the listing process where the focus is to identify waters that are degraded and impaired."). - Microplastics. See 2018 Methodology at 75–76. - Ocean acidification. See id. at 76 – 77.

In response to a comment that DEQ's call for data should not have been limited to 2008 through 2017, DEQ stated that: "The focus of the Integrated Report is to make a determination about the current status of the water bodies in Oregon. As such, DEQ's focus on a ten year data window provides the most current and relevant information about a waterbody." Response to Comments at 6. While DEQ is certainly correct that most recent data is most current, it is equally true that: (1) expensive studies from long ago have not been replicated in recent years and are likely not to be in the near future; (2) where DEQ has in years prior to ten years ago refused to review data and information due to overly narrow interpretations of its obligation to issue a 303(d) list, it is manifestly incorrect to not consider those data and information now, particularly if the cost of obtaining these data is prohibitive; and (3) noting the extensive areas in which DEQ has still not established assessment methods, applying date restrictions on data and information that pre-date methodologies once they are established clearly will result in a failure to identify waters that do not meet water quality standards based on readily available data and information. DEQ also states that it will "consider all of the data it receives in its call for data and make a determination about whether this represents the current condition of the water bodies in question," id., but that leaves open whether DEQ is expecting the public to re-submit data and information that have already been submitted in prior years and if DEQ has this expectation on what basis. If data and information have been submitted prior to the time that DEQ has established a method of evaluating the data and information, it is clearly readily available because DEQ already has it in hand.

Response: Oregon does not have any waterbody segments listed specifically as threatened, as opposed to impaired, on its 303(d) list. DEQ used data and information identifying waters that do not meet water quality standards to develop Oregon's 303(d) list of impaired waters. According to EPA 2006 guidance "States may define "threatened waters" in their assessment and listing methodologies. EPA recommends that states consider as threatened those waters that are currently attaining WQSs, but which are expected to not meet WQSs by the next listing cycle (every two years). DEQ received no data submittals that distinctly showed a declining trend for a specific water quality criterion where the projected trend would

result in a failure to meet a criterion by the date of the next list. Therefore, there are no listings specifically attributed to being "threatened" in accordance with suggested EPA guidance.

Oregon Water Quality Standards are designed to set criteria levels for the protection of the associated beneficial uses. Monitoring data provides a direct indicator that can be used to make assumptions that uses are, or may be, impaired if the associated criteria are showing continual exceedances. Determining impairment of a beneficial use of a waterbody, absent any monitoring data, is more time and resource intensive. There needs to be a clear and direct link between the environmental effect and the impairment of a beneficial use in order to make a more definitive determination that the water is impaired based on narrative standards. Since the interpretation of narrative standards as the basis for impairment is both time and resource intensive, DEQ primarily used defined, accepted methodologies as outlined in its Assessment Methodology, to make listing decisions. DEQ would like to point out that it used its protocols for biocriteria, harmful algal blooms, turbidity and fish consumption advisories to directly assess designated use support to identify impaired waters in the 2018/2020, Integrated Report.

Oregon's Integrated Report includes many listings that were assessed based on data collected and analyzed prior to the period of record identified in its call for data. DEQ followed the Integrated Guidance developed by EPA, to identify a period of record for its 2018/2020 Integrated Report. This guidance suggests that "If the state has specifications for data and information, these specifications should be included in any requests for information. To facilitate the timely completion of a draft list that can be distributed for public review and comment, states may set a reasonable "cut-off" date after which no additional data or information will be considered in the preparation of the draft section 303(d) list and other aspects of a preliminary Integrated Report." DEQ determined that a ten-year period of record was a reasonable time-frame that would encompass all data collected since its last statewide data call. Data older than ten years was included in Oregon's assessment if it was submitted during DEQ's data call.

In the case of (1) past studies that were submitted to DEQ as part of its call for data were reviewed in the assessment. DEQ did not exclude a study solely on the basis of data being outside the specified period of record. In the case of (2) where DEQ did not previously review data and information in development of its 303(d) list, if the data were submitted to DEQ during its call for data and the data met quality assurance and quality control requirements, then it was used in the assessment. If it was not submitted during the data call, it was not used in the assessment. In the case of (3) noting the areas in which DEQ does not have assessment methods, DEQ employed a "weight of evidence" approach and continues to develop new methodologies for interpretation of its narrative criteria. DEQ will continue to assess any data and information that is submitted during its data call. However, if more recent data is submitted that demonstrates beneficial uses are not impaired, DEQ will weigh the data and information accordingly.

NEA#9: Suggested Change ID #171

Description: Assessment Conclusions - Category 4B Listings

Comment: DEQ has failed to provide an opportunity to comment on the entire list. According to its database, DEQ has listed four waterbody segments—North Umpqua River (total dissolved gas), North Myrtle Creek (ammonia), Willamette River (pentachlorophenol)—under Category 4B but it has not made these 4B determinations available to the public. In contrast, DEQ states that the use of Category 4B is "subject to public comment." Response to Comments at 9. In addition, DEQ failed to respond to the comments that requested that DEQ clarify what a "reasonable period of time" is for purposes of not listing waters as needing TMDLs. Id. In response, DEQ simply copied the information for Category 4B from EPA's 2006 guidance and did not even include the specific language of the EPA guidance pertaining

to the issue of the period of time. See EPA, Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act (July 29, 2005) at 55–56 ("What constitutes a reasonable period of time for purposes of 4b?"). DEQ certainly gave no information about how it uses the factors suggested by EPA to determine whether a period of time is reasonable. Without access to the proposed 4B findings, the public cannot provide comments on them.

Response: There are currently eight waterbody segments identified as Category 4B— the North Umpqua River (total dissolved gas), North Myrtle Creek (ammonia), Ecola Creek (chlorine), Potter Creek (biocriteria), Cow Creek (chlorine), South Umpqua River (chlorine), Laurelhurst Pond (aquatic weeds) and the Willamette River (pentachlorophenol). All of these Category 4B determinations were made and finalized in the previous Integrated Reports of 2002, 2004, 2010, and 2012, which were prior to the 2018/2020 draft Integrated Report. DEQ did not include data used to support previous category determinations as part of the 2018/2020 draft. For any future Category 4B assessment determinations, DEQ will make the documentation and rationale for Category 4B determinations available for public comment.

NEA#10: Suggested Change ID #264

Description: Assessment Conclusions - DEQ's Methodology in Light of the Available Database

Comment: Pollutants and pollution that are not available to search for in the database include but are not limited to: localized extirpation of existing or designated uses, nitrogen, reproductive failure (and other adverse population effects) of aquatic and aquatic-dependent designated wildlife uses, threatened waters, fish tissue toxics, sediment toxics, synergistic effects of multiple pollutants, nutrients, so-called emerging pollutants such as pharmaceuticals and personal care products (PPCP), and sedimentation (for new data).

Response: DEQ's current online database is searchable by pollutant, however DEQ will add the option of searching by beneficial use to the database in the final Integrated Report. Water quality assessments under CWA Section 303(d) requires states to identify waters that are not attaining beneficial uses according to state water quality standards.

NEA#11: Suggested Change ID #265

Description: Beneficial Uses and WQ Standards - Listings Must Identify All Applicable Criteria Violated

Comment: It is not possible to know which criteria in water quality standards that DEQ considers to have been violated for individual segments because DEQ does not provide that level of information. In addition to keeping the public in the dark, it is important that DEQ identify all criteria—numeric and narrative—that are violated and all uses that are not supported because of the ramifications for future regulatory actions, including under section 303(d) of the Clean Water Act. DEQ has taken the position that in the event it prepares a total maximum daily load (TMDL), it will address only the basis upon which the waterbodies were listed. So, for example, if there is no listing for impacts to human health, aquatic life, or wildlife, the TMDL will similarly not evaluate whether those aspects of the applicable water quality standards will be protected, leaving the possibility that the TMDL will not meet all water quality standards. Moreover, as DEQ begins to adopt variances for water quality standards, those may have the practical effect of rendering other criteria more applicable. For example, if a mercury variance essentially

nullifies the human health criteria for mercury, it may leave the criteria for aquatic life protection being the more applicable criterion. In that event it would be important for people taking regulatory actions, as well as the public, to know if the originally-less protective criterion is now the controlling criterion. And in that context, it would be important to know if the current water quality is violating the controlling criterion. One example of this problem concerns seasonality. DEQ has listed the Lower Columbia River as impaired for temperature. However, this is just a part of the picture. One could conclude that the violation is of the 20º C numeric criterion applicable at the hottest time of the year (and accompanied by additional narrative criteria that we know DEQ ignores). DEQ has likely not evaluated in this assessment the question of whether the narrative criteria of cold water refugia and temperature timing have been met but it is impossible to determine from the scant information made available to the public. For example, EPA has concluded that: "increasing July river temperatures at Bonneville Dam (Panel B) over the past 60 years has resulted in earlier migration of Columbia River sockeye salmon." EPA, Columbia River Cold Water Refuges Plan DRAFT (Oct. 2019) at 57. If DEQ has not identified this as a violation of standards in its 303(d) list, it has erred. We are also fairly certain that DEQ has not identified a violation of the water quality standard that requires protection of the designated uses in addition to the numeric criterion and its associated narratives, namely the 2015 massive death of sockeye salmon migrating through the Columbia River. As EPA described it recently: Figure 4-8 shows how survival of sockeye from Bonneville Dam to McNary Dam dropped significantly as temperature rose during the sockeye run in 2015. In early June when river temperatures were below 19°C, survival between the two dams was high (90-100%). During week 4 in Figure 4-8 (June 22–28), when river temperature climbed above 20°C, survival dropped to 70% for Columbia River sockeye and 50% for Snake River sockeye (10% for Snake River sockeye transported as juveniles). In weeks 5-8, when river temperatures exceeded 21°C, survival was very low (0-20%). Because most of the Snake River sockeye migrated in late June and July, the overall survival for Snake River sockeye between Bonneville Dam and McNary Dam was only 15% in 2015 (FPC 2015). Id. at 55. This massive mortality is a violation of the water quality standards' requirement to support designated uses. And, EPA pointed out that the problem has not been limited to 2015: Although 2015's unusually warm June-July river temperatures had a dramatic effect on sockeye salmon survival in the Lower Columbia River, warm Lower Columbia River temperatures result in decreased sockeye survival in other years as well. Figure 4-9 shows the sockeye survival rate between Bonneville and McNary dams as a function of river temperature across the sockeye run for six different years (2010-2015). In 2010-2012 when the sockeye migrated through the Lower Columbia River before river temperatures reached 64°F (18°C) survival rates were relatively high (approximately 75%). In 2013 and 2014, for those sockeye migrating through Lower Columbia River when temperatures exceeded 64°F (18°C) survival decreased, most dramatically for Snake River sockeye. Id. at 55–56. As EPA demonstrates, designated use support is key to providing protection to sockeye because the 20º C criterion and associated narratives applicable at the hottest times of the year do not protect sockeye.

These additional listings are relevant for the reason explained above with regard to any subsequent TMDLs. They are also relevant to NPDES permitting and the eventuality of any nonpoint source controls the state might require to meet water quality standards. DEQ does not have a crystal ball through which it can see into the future; instead it must carefully determine where and when and in what way water quality standards have been violated in order that future regulatory actions may respond fully and appropriately.

Along those lines, DEQ must consider how to use its antidegradation policy and/or the requirement to evaluate threatened waters to evaluate the waters that EPA is in the process of designating "cold water refuges," pursuant to a Reasonable and Prudent Alternative established by the National Marine Fisheries Service in response to finding that without such refuges, Oregon's numeric criterion for migration in the Columbia River jeopardizes the continued existence of salmonids. See id. These cold-water refuge waters, some of which are already listed by DEQ as violating numeric criteria, must be identified in the 303(d) list in the context of the narrative criterion that gave rise to EPA's finding that they require protection and restoration.

Response: For the first time, DEQ is making the data and associated criteria assessed in the Integrated Report publicly available through its online assessment database. Beneficial uses that are and are not supported are also identified through the online database.

Related to the given example of the Columbia River, the entirety of the Columbia River in Oregon is listed as impaired for Fish and Aquatic Life use because of temperature exceedances. It is also important to note that a water quality standard variance does not have an effect on the Integrated Report since the water quality assessment is based on the underlying designated uses and criteria. TMDL development and the development of the Integrated Report are separate processes.

NEA#12: Suggested Change ID #266

Description: Process - DEQ Must Expand the Timeframe of Data and Information Evaluated

Comment: The fact that DEQ has "not conducted a statewide data call for water quality data from outside sources since 2009," Response to Comments at 3, is reason enough for DEQ to have accepted data and information for a period longer than call for data period that was open May 1, 2018 to July 25, 2018, id. at 7. More than just accepting such data, it is crucial that DEQ seek such data and use the data and information that it has but has declined to use to date. Remarkably, DEQ admits that its years-long failure to assemble and evaluate data and information, combined with a short window in which agencies were asked to submit data (and not information), resulted in its failure to have assembled all of the readily available data and information. See id. at 7 ("The [U.S. Forest Service] USFS has made its best attempt, given the short notice, to submit all readily available data [pertaining to temperature and other parameters] that has been validated to DEQ for the 2018 IR."); id. ("Due to the magnitude of data that is being submitted, and the short timeline, DEQ made the recommendation to the USFS that they prioritize their data submittal. Since DEQ lacks specific methodologies for sedimentation and turbidity, DEQ made the recommendation that the USFS prioritize temperature data submittal."). It is precisely this sort of failure that is rooted in a particular assessment that gives rise to problems when DEQ sets arbitrary timeframes for use of data down the road. For example, with regard to these data that DEQ admits that it did not use, should it fail again for a long period of time to do another list, it would likely make the same policy decision to restrict the age of data it was using. In doing so, it would then leave behind data that it never got around to using earlier. This is not just a matter for projecting into the future about the use of Forest Service data. It pertains very much to data and information from many years ago. For example, in NWEA's 2010 comment letter on the 303(d) list, we noted the following: As a result of the Department's limited interpretation of its own water quality standards, it has failed to evaluate data on use impairment related to levels of toxic contaminants, i.e. for pollutants that are at levels posing a risk to piscivorus wildlife such as eagles, mink and otter. For example, despite a report citing a technical report on the Columbia River that concludes "that river otter in the vicinity of RM 119.5 are in a critical or almost critical category based on reference level comparisons, abnormalities noted during necropsy, and histopathological observations of individuals," DEQ has not used this data as the basis of listing. The Health of the River 1990-1996, Integrated Technical Report, Tetra Tech, May 20, 1996, Figure 14, at 53. This information is tied to toxic contaminants: "Concentrations of organochlorine insecticides, PCBs, and to a lesser extent PCDDs and PCDFs in the liver of river otters were highly correlated with each other and many were significantly related to baculum [penis bone] and testes size or weight." Id. at 52. This same study noted that "[h]istorically, some individual mink contained PCB concentrations known to make adult female mink in laboratory studies incapable of producing young." Id. at 5 2. If this is not sufficient evidence of beneficial use impairment, clearly nothing short of extremely expensive studies and extreme impairment of species will satisfy DEQ that its narrative criteria for the protection of wildlife from toxic contaminants have been violated. Yet DEQ ignores this data and information. Similarly, DEQ ignores the

results of the Lower Columbia Water Quality Study where it found sediment contamination exceeds values believed to be protective of benthic organisms and wildlife. Id. at 37, Figure 14.

Letter from Nina Bell, NWEA, to Oregon DEQ, Re: Comments on Phase I – Oregon 2010 Integrated Report; CWA 303(d) List (Dec. 15, 2010) at 23. The comments also pointed out that: The Department has many studies that include data reported as tissue residue, sediment contamination, reproductive failure and other adverse effects on fish and wildlife. These include studies from the Bi-State Lower Columbia River Water Quality Program, U.S. Fish & Wildlife Service, the National Marine Fisheries Service, the US Geological Survey, and academic institutions, among others. The public cannot evaluate whether the Department has all of the studies that it should have because it has not chosen to make that information available. (In addition, it is not clear whether the Department has entered all of the data and information it has into its database and that the only aspect of the "phased" approach to listing and assessment is the assessment or if the Department has not yet entered all the data and information into the database. Again, the public cannot comment on what is not clear.) However, DEQ may not ignore these data and the results of these studies in interpreting and applying its narrative criteria, Tier I protections of its antidegradation policy, and the requirement to fully support designated uses. Instead, it is required to obtain these data and information and use them in assessing Oregon's waters' compliance with water quality standards.

Id. at 24. To this day, we have no evidence of what DEQ did with these data and information from this very expensive one-time study of toxics and other pollutants in the Lower Columbia River and other associated data and information, such as on reproductive impairment of mammals. What we can say with certainty is that DEQ did not use them as the basis for 303(d) listings and did not apparently use them as the basis for non-impairment category identification. And we can surely say that when DEQ precludes the use of these data and information because they are older than ten years from its most recent call for data, it will automatically refuse to consider them once again. It is not acceptable for DEQ to bring forward all of its past failures into its new list any more than it is acceptable for DEQ to set itself up to do the same thing moving forward

Response: DEQ followed EPA's Integrated Report Guidance (2006), to establish its listing methodologies and data submission guidelines. This guidance states that "If the state has specifications for data and information, these specifications should be included in any requests for information. To facilitate the timely completion of a draft list that can be distributed for public review and comment, states may set a reasonable "cut-off" date after which no additional data or information will be considered in the preparation of the draft section 303(d) list and other aspects of a preliminary Integrated Report." DEQ determined a 10-year period of record was a reasonable time-frame to assess available data since it had been ten years since its last statewide call for data. Data older than ten years could be submitted; however, if there was more recent data to assess, it was weighted accordingly.

DEQ accepted data during its data call, which was open for 86 days. DEQ included a cut-off date for data to be submitted in order to be able to submit its Integrated Report in a timely manner, given the extensive body of work this effort represented. This date is a necessary step in the assessment in order to consolidate and assess a complete dataset for each waterbody and meet submittal deadlines. DEQ assessed over 6 million data records in this assessment. A continuous iterative process to accept data beyond a published date would have made the assessment process infeasible.

DEQ is unable to use the list of studies that cited in NWEA's comment letter. First, the information was not received within the 86-day call-for-data period such that DEQ could have reviewed the appropriateness of the information to make listing decisions in the draft Assessment. Secondly, DEQ requires data submitters to provide corresponding metadata, such as a project plan (QAPP/SAP) and location information to ensure that the information meets the requirements outlined in the Assessment Methodology "Missing or incomplete metadata may make data unusable for the Integrated Report." In

addition, DEQ states that "Non-numeric data that cannot be tabulated in a spreadsheet must be related to specific locations within Oregon's waters. DEQ makes its water quality assessment conclusions on a waterbody-specific basis, and therefore, cannot base its assessment on generalized water quality information or information that is at a regional scale…Anecdotal information, in the absence of chemical, physical, or biological data, will not in and of itself be adequate to support a listing decision." Information used to make narrative listings need to show documentation of environmental effect in the waterbody segment, as well as documentation that impairment of the existing or designated use is directly linked to the effect on that same waterbody.

Regarding the Lower Columbia River, the Columbia River retains a Category 5 listing for PCBs for 490 of its 644 river miles. DEQ continues to participate in the Columbia River Toxics Reduction Working Group, which was established to share information, coordinate activities, and develop strategies to identify and reduce toxics in the Columbia River Basin.

NEA#13: Suggested Change ID #267

Description: Regulatory Impact - DEQ Should Not Agree to Disregard 303(d) Listings for Future Regulatory Actions

Comment: In response to a comment that DEQ commit to not engaging in delisting actions between listing submissions to EPA, DEQ agreed: "DEQ does not delist waterbody segments between assessment cycles." Response to Comments at 12. Unfortunately, however, DEQ has disingenuously agreed to do all but remove waters from the list between EPA approvals: "If during the evaluation of ambient data during permit development or through 401 certification, DEQ determines that available data indicate that a waterbody is not impaired (e.g., either through an error in previous data analysis, revised criteria, would demonstrate attainment, etc.) and has assimilative capacity for a given parameter, then they may proceed with determining the appropriate effluent limits that ensures the permit requirements comply with all applicable state and federal requirements." Id.

Response: DEQ does not delist waterbodies between assessment cycles. However, if new data or information are available that demonstrate attainment of water quality criteria, or if a listing was determined in error, DEQ uses the new information to accurately assess the potential for the discharge to exceed water quality standards. Conversely, in the event a waterbody is not listed, DEQ will also use any available site specific data to determine the potential for the discharge to exceed water quality standards. In the event updated information shows the water body exceeds water quality standards and there is no assimilative capacity, the assessment is performed at end of pipe.

NEA#14: Suggested Change ID #268

Description: Process - Readily Available Data and Information that DEQ Continues to Ignore and Past Submissions of Data and Information

Comment: DEQ has not obtained and/or evaluated an extensive and readily available database relevant to assessing impairment of aquatic uses. "Researchers compiled a comprehensive database of mussel records from research and museum collections, historical publications, and public agency and personal records dating as far back as 1834, allowing scientists for the first time to understand the true picture of mussel distribution in western North America." Columbia Basin Bulletin, Study: Range of Western Freshwater

Mussels Declines by One-Fifth, Could Impact Stream Health (Nov. 3, 2017); see also Emilie Blevins, et al., Extinction Risk of Western North American Freshwater Mussels: Anodonda Nuttalliiana, the Anodonta Oregonensis/Kennerlyi Clade, Gonidea Angulata, and Margaritifera Falcata, 20 Freshwater Mollusk Biology and Conservation 71 (2017); Columbia Basin Fish & Wildlife Program, Proposal No. NPCC19- 2002-037-00. If, as a representative of the Confederated Tribes of the Umatilla Indian Reservation said that freshwater mussels are "a canary in the coal mine," DEQ's failure to evaluate their extirpation since November 1975 and their population decline is DEQ's failure to identify the water quality problems that are leading to their demise. Columbia Basin Bulletin, Freshwater Mussels – Canary in the Coal Mine for Streams – In Sharp Decline; Umatilla Tribes Working to Bring Back (Nov. 14, 2019). DEQ has not evaluated readily available data and information pertaining to threatened waters. See Lisa G. Crozier, et al., Climate vulnerability assessment for Pacific salmon and steelhead in the California Current Large Marine Ecosystem, PloS ONE 14(7):e0217711 (2019) (salmonid species evaluated for vulnerability to climate change in light of water quality). DEQ has failed to implement the narrative toxic criterion as written. See, e.g., Memorandum from Leslie Bach, to Northwest Power and Conservation Council, Re: Presentation on effects of Toxic contaminants on fish (Aug. 8, 2017); Cathy A. Laetz, et al., The Synergistic Toxicity of Pesticide Mixtures: Implications for Risk Assessment and the Conservation of Endangered Pacific Salmon, 117 Environmental Health Perspectives 3 (March 2009); Cathy A. Laetz, Interaction Neurobehavioral Toxicity of Diazinon, Malathion, and Ethoprop to Juvenile Coho Salmon, Environmental Science and Technology (2013); Robert J. Naiman, et al., Developing a Broader Scientific Foundation for River Restoration: Columbia River Food Webs, 109 PNAS 52 (Dec. 26, 2012); Nathaniel L. Scholz, et al., A Perspective on Modern Pesticides, Pelagic Fish Declines, and Unknown Ecological Resilience in Highly Managed Ecosystems, 62 BioScience 4 (April 2012); Kate H. Macneale, et al., Pesticides, Aquatic Food Webs, and the Conservation of Pacific Salmon, 8(9) Front Ecol Environ 475 (2010); Cathy A. Laetz, et al., Elevated Temperatures Increase the Toxicity of Pesticide Mixtures to Juvenile Coho Salmon, 146 Aquatic Toxicology 38 (2014); David H. Baldwin, et al., A Fish of Many Scales: Extrapolating Sublethal Pesticide Exposures to the Productivity of Wild Salmon Populations, 19(8) Ecological Applications 2004 (2009); John P. Incadona, et al., Very Lower Embryonic Crude Oil Exposures Cause Lasting Cardiac Defects in Salmon and Herring, Scientific Reports (Sept. 2015); Nathaniel L. Scholz, et al., Recurrent Die-Offs of Adult Coho Salmon Returning to Spawn in Puget Sound Lowland Urban Streams, PloS ONE 6(12): e28013.(2011) All of these reports and studies were obtained from the internet with little effort. These are precisely the types of reports on water impairment that DEQ is required to obtain and assess against its water quality standards.

Past Submissions of Data and Information NWEA has submitted data and information in the past, for example by letters dated February 24, 2014, and December 15, 2010. Yet nowhere does DEQ respond to inform us or the general public on whether DEQ is using that data and information. Has it? If so, how did DEQ use it? If not, will it ever use these data and information? If it hasn't because it has lacked a listing methodology, why will it continue to exclude the data and information on the basis of age?

More Sources of Data and Information that DEQ May Not Have Used EPA regularly sends out emails with information links to the Columbia River Basin Toxics Reduction Working Group. Here are some of the sources of data and information readily available through that general source that DEQ may or may not have used in proposing its list of impaired waters: • EPA, Columbia River Basin: State of the River Report for Toxics (Jan. 2009) • Northwest Power and Conservation Council, Polycyclic Aromatic Hydrocarbons: Locations in the Columbia River Basin Where the Toxics Could be Affecting Fish and Wildlife, available at http://nwcouncil.maps.arcgis.com/apps/MapJournal/index.html?appid=99e5965fe1ac4dd38001e784d7c6aac6 (last accessed Dec. 16, 2019) (note findings such as "In 2012, Yanagida et al. (2012) measured PAH concentrations in juvenile Chinook from the lower Willamette River and found concentrations near levels associated with immune dysfunction.") • Hart Crowser, Final Field and Data Report Upriver Reach Sediment Characterization Lower Willamette River Portland, Oregon (May 8, 2018) • Environmental Working Group and Social Science

Environmental Health Research Institute, PFAS Contamination in the U.S., available at https://www.ewg.org/ interactive-maps/2019_pfas_contamination/map/ (last accessed Dec. 16, 2019)

Response: DEQ reviewed all of the articles provided and determined there was insufficient data and information provided to determine that aquatic life uses are impaired for specific waterbody/pollutant listings or were already identified as not supporting aquatic life use designations. Rationales for these assessment conclusions can be found as an appendix in the Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters

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NEA#15: Suggested Change ID #269

Description: Beneficial Uses and WQ Standards - Proper Application of the Numeric Temperature Criteria

Comment: Water quality standards must be applied to data and information in the way that it was assumed they would be when submitted to and approved by EPA. In the case of temperature, EPA assumed that Oregon's numeric criteria would be met at the lowest extent of the waterbody designated for the related use. See, e.g., EPA, Biological Evaluation of the Revised Oregon Water Quality Standards for Temperature, Intergravel Dissolved Oxygen, and Antidegradation (Feb. 4, 2004). It reasoned that the criterion would be protective because: the 7DADM temperatures will be cooler than 16 C most of the time where this use occurs. This is true because: 1) if the criterion is met during the summer maximum period, then temperatures will be colder than that value during the rest of the year, 2) because the criterion must be attained at the furthest point downstream where this use is designated, temperatures will generally be colder where the use occurs upstream due the effect of elevation on temperature, and 3) the criterion must be met in the warmest years (except for unusual warm conditions as per 340-041-0028(12(c)), so that in most years, the waters will be colder. Id. at 5-19 (pertaining to 16º C criterion) (emphasis added); see also id. at 5-20 (pertaining to 18º C criterion). The National Marine Fisheries Service (NMFS), in turn, relied on EPA's interpretation of how the numeric criteria would be applied. See NMFS, Biological Opinion on EPA's Proposed Approval of Revised Oregon Water Quality Standards for Temperature, Intergravel Dissolved Oxygen, and Antidegradation Implementation Methods (Feb. 23, 2004) at 41, 42, 44, 46. And, on this same basis, EPA approved the numeric criteria. See EPA, Support Document for EPA's Action Reviewing New Or Revised Water Quality Standards for the State of Oregon (March 2, 2004) at 51, 52. The only way in which this rationale can work on the ground is if temperature data collected upstream of the most downstream extent of a use designation are evaluated at temperatures lower than the applicable criterion itself. If, instead, these upstream waters are evaluated against the numeric criterion that applies at the most downstream extent, the waters at the most downstream extent will never be able to meet the applicable criterion because the warming will have been allowed further upstream where the federal agencies assumed it would not be allowed. DEQ's failure to incorporate this basic assumption underlying its numeric temperature criteria in its listing methodology and in its proposed 303(d) list render the list as having failed to identify all impaired waters.

Response: DEQ's methodology for evaluating temperature data against the biologically based numeric criteria is an appropriate methodology because a finding of impairment triggers a 303(d) listing and subsequent TMDL. The TMDL is developed at a subbasin or watershed scale in order to address this issue. During TMDL development, more thorough waterbody specific information is collected and analyzed, leading to further analysis of thermal conditions that need to be achieved in order to meet the relevant temperature standards that apply throughout the basin., including identifying any reaches that must be colder than the numeric criteria in order to attain the criteria downstream. Until the analysis is done during TMDL development, DEQ could only speculate what the appropriate temperature for

upstream reaches would be. Defining appropriate temperature requirements at a basin or subbasin scale requires a longitudinal model or modeling multiple compliance points up and down the stream. That information is not available for purposes of the statewide 303(d) assessment until the TMDL is already completed and therefore, is not possible, nor feasible to do in conjunction with the assessment.

NEA#16: Suggested Change ID #273

Description: Roll Out - DEQ Has Not Provided Adequate Opportunity for Public Comment

Comment: DEQ purports to have issued an integrated list for public comment but it has done nothing of the kind. It is unclear how much money DEQ has invested in its new data bases and presentation options but the fact that they are disconnected from one another, individually opaque, and missing the most key information renders them almost useless from the standpoint of a member of the public attempting to comment on almost any aspect of the 303(d) list and the overall assessment. It is equally unclear how the public will be able to use the information provided for such regulatory matters as commenting on proposed NPDES permits, TMDLs, and 401 certifications.

First, DEQ has an "interactive web map application." See https://hdcgcx2.deq.state.or.us/ HVR291/?viewer=wqsa. This has the benefit of showing the "segment" visually, although in addition to showing the segment, it also combines waterbodies in ways that changes their names and apparently is not intended to show their actual 303(d) status. The "description" provided for a given segment on this application includes the general uses that are impaired and the pollutants or parameters that are causing the impairments along with the year listed.1 There is no information on the source of the data and information upon which the listing was originally made and no information at all about any data and information subsequent to the year in which the water was listed, including any new analysis since that original date. For example, the description for AU ID: OR_LK_1708000605_04_100320 (AU Name: Columbia River) states that the segment was listed in 1998. It is not clear if that year applies to all of the data for all of the pollutants/parameters, which are identified as: Temperature-Year Round; Methylmercury; DDE 4,4'; Dioxin (2,3,7,8-TCDD); Fecal Coliform; Arsenic, Inorganic. One cannot see if there are any data or information that DEQ has obtained since 1998 that either support or potentially contradict the listing that is made. One cannot comment on whether DEQ has all the relevant data and information because there are no references. One cannot comment on how DEQ has applied its listing methodology because there is no reference to the source of the data and information upon which DEQ relied.

In contrast, the past 303(d) lists provided the river miles of the segment, what action if any was taken during that particular assessment (e.g., 2012), and most importantly, the data and the basis for the conclusion, year by year (if applicable), and parameter by parameter. As a result, the listing date for an individual parameter was available as was a summary of the data DEQ reviewed, for example stating a river mile(s) and how many days the water quality exceeded the criterion. In addition, rather than exclusively a database, DEQ provided a summary of the 303(d) listing results, with listings, delistings, and other information. See DEQ, Oregon's 2012 Integrated Report - Summary of New 303(d) Listings, Delistings, and Other Significant Changes (Nov. 2012).

The second option is DEQ's new "on-line searchable database" that covers some but not all of the same information, ostensibly searchable by assessment unit. See https://travispritchard. shinyapps.io/2018-2020_IR_Database/. This, however, is only a pulldown menu with a very long list of very long and difficult-to-read identification numbers in an unknown listing order. It is not possible to paste an ID number in that menu. According to DEQ's website, this database includes some information not on the

map, namely the monitoring locations. Like the map, it does not provide any insight into the data and information upon which DEQ based its conclusions, the source of those data, or its analysis. It does not include the applicable TMDLs.

The last source of information is DEQ's Ambient Water Quality Monitoring System, which does not allow one to retrieve data and information by use of the identification number. There is an eco-region menu without a map by which one could identify what eco-region one might be looking in. This is cluttered with eco-regions from other states. It is possible to find monitoring sites on a map using this system but that does not correspond to the ID numbers of the segments. It is possible to find information about data sets submitted by a limited list of sources. It is possible to identify monitoring locations. It is not possible to use this system, as far as we can see, to answer the kinds of questions that are not answered by the database and map described above. In any case, this system produces information about data at monitoring locations but not by waterbody segments and provides no insight into DEQ's listing rationale.

In sum, this entire system and therefore the entire list, including the proposed delistings, is not really open for public comment because DEQ has made the information opaque. Contrast this with Washington's system. You can enter via a map or a searchable database, both of which are fully integrated. The database allows a member of the public to determine the status of the waterbody by status on previous lists (if desired), the parameter or parameters, the medium of the data, and many other options all of which are easily understood (in contrast with the Ambient Water Quality Monitoring System). After performing the search, the results come up with a total of the listings that are present in the search. All of the information that one could want is presented, including hyperlinks to applicable TMDLs. There are two key columns for obtaining additional information. The first is a segment/parameter-specific link that allows a person to view the agency's thought process, analysis, data and information, and data sources over time that are keyed to the assessment unit. The second is a link to the information as presented on the map (uncluttered with extra creeks that are not actually included in the listed segment). Likewise, the map links to the details of the assessment. Each unit shows the dates of listings and delisting by specific parameters, the basis of the decisions, specific remarks pertaining to the data and the findings, and a link to the actual data source. It is not only very simple and easy to use, it provides the primary information members of the public want to review the 303(d) listings proposed or to use them for regulatory purposes: on what basis did the agency come to its conclusions that the water complies or does not comply with water quality standards?

We request a list that allows the public to comment on the data and information used, DEQ's rationale and analysis, sufficient information to understand what the listings are, and what the proposed delistings are.

Response: DEQ has provided extensive opportunity for public comment throughout the development of the Integrated Report and the supporting documentation, as well as numerous opportunities for interested members of the public to obtain information, in-person tutorials, and webinars to guide people through DEQ's new interface. In 2016, DEQ undertook a major improvement effort to address longstanding process and technical issues associated with the development and production of the Integrated Report, in addition to changes that were required in order to conform to EPA's new data system and reporting requirements. The same types of information that had been previously available with regard to waterbody location, pollutants evaluated, data used, etc. is contained DEQ's reconfigured system. Upon final submittal to EPA, raw assessment data will be available for download through the online database rather than separately through AWQMS. Information will also be available through EPA's "How's My Waterway" that will incorporate listing decision information. Over subsequent reporting cycles, DEQ will continue to improve the usability of its visualization and reporting tools.

20. Comments from: City of Bend

CB#1: Suggested Change ID #29

Description: Data- Data submission- City of Bend

Comment: City of Bend submitted data were utilized during the 2018 assessment for this report. A large amount of the City's data for pH, temperature, dissolved oxygen and specific conductance was not submitted due to insufficient time to correctly format the data. We anticipate being able to submit this data during a future DEQ call for water quality data.

Response: DEQ thanks the City of Bend for submitting data used in the 2018/2020 Integrated Report. We look forward to receiving the data the City has collected and encourage the City to work with DEQ staff to improve the data submission process for future integrated reports.

CB#2: Suggested Change ID #30

Description: Watershed Units- NHD Issues- Unnamed streams in City of Bend area are not necessarily streams

Comment: Several 'unnamed streams' [see assessment units OR_WS_170703010406_05_102290 (HUC12 Name: Overturf Butte-Deschutes River), OR_WS_170703010801_05_102305 (HUC12 Name: Deschutes Junction, OR_WS_170703010802_05_102306 (HUC12 Name: Laidlaw Butte-Deschutes River), others] are included in the report in the City of Bend area, many of which are not actually streams. These unnamed streams are a diverse collection of natural and man-made features which range from open irrigation canals to city streets to dry creek beds and land depressions.

Response: The Integrated Report is a federally required status assessment of water quality across the state and determines whether waterbodies are supporting their designated beneficial uses. DEQ is not asserting "jurisdiction" over any new waters. DEQ water quality programs are implemented for waters of the state, which has a broad statutory definition in Oregon Statutes (ORS 468B.005): "Waters of the state" means lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters) that are located wholly or partially within or bordering the state or within its jurisdiction.

DEQ used the High Resolution National Hydrography Dataset, specifically the NHDPlus HR, to draw its assessment units and georeference its water quality standards. The NHD is the federal and state standard and represents the water drainage network of the United States with features such as rivers, streams, canals, lakes, ponds, coastline, dams, and stream gages. The National Hydrography Dataset (NHD) is developed and maintained by a partnership between the USGS and EPA. The dataset intended to "develop nationally-consistent geospatial datasets for the Nation" and provide agencies and organizations a common baseline for mapping aquatic resources. Unfortunately, the NHD does contain errors. A user can report suspected errors to the NHD Markup App at https://edits.nationalmap.gov/markup-app. This tool

allows users to suggest edits, or "markups", to the NHD, Watershed Boundary Dataset (WBD), and NHDPlus HR. Anyone can suggest corrections and improvements to the data. Suggested edits are reviewed by the USGS and the NHD state stewards before they are approved for incorporation into the NHD or WBD datasets. In addition, in response to comments received, DEQ will be updating its visual display to reflect watershed units as polygons, rather than a collection of stream networks,

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CB#3: Suggested Change ID #31

Description: Beneficial Uses and WQ Standards- Tumalo Creek Fish Use

Comment: With regard to the listing of Tumalo Creek (AU ID: OR_WS_170703010501_05_102291, AU Name: HUC12 Name: Upper Tumalo Creek, standard Temperature - Numeric OAR: 340-041-0028) as impaired for the criteria 'Temperature - Year Round' based on the 12°C Bull Trout Standard: Tumalo Creek and Bridge creek are streams with no Bull Trout presence, no management planned for Bull Trout and are not listed as potential critical habitat in current related work. It makes no sense to list a waterway impaired for a standard that does not apply.

Response: DEQ assessed the Upper Tumalo Creek watershed unit, AU ID: OR_WS_170703010501_05_102291 using the current beneficial Fish Use designation -Bull Trout Spawning and Juvenile Rearing, with the corresponding 12°C Bull Trout temperature criteria. In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is done through a separate water quality standards update, which is outside of the Integrated Report process. DEQ encourages the commenter to participate and submit comments during the next Water Quality Standards Triennial Review later this year.

CB#4: Suggested Change ID #32

Description: Mapping Tools- New interactive formats are useful

Comment: The City of Bend would like to recognize and thank DEQ staff for the large amount of time and effort it must've taken to assess and organize the 2018 Integrated Report into these interactive formats. They will be very useful tools for further understanding and research of water quality in the state of Oregon.

Response: Thank you for your support.

CB#5: Suggested Change ID #73

Description: General comment - compliment

Comment: We would like to express our gratitude to the DEQ for all of the hard work they have done in gathering and disseminating the integrated report. We recognize the enormity of the task performed and the work still to be done.

Response: Thank you for your support.

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21. Comments from: Portland Water Bureau

PWB#1: Suggested Change ID #33

Description: Assessment Conclusions- Additional Data- Bull Run Reservoir 2

Comment: The draft document indicates insufficient data to support attainment for water supply for Bull Run Reservoir 2. Attached to this email is a summary of water quality monitoring results for 34 contaminants relevant to DEQ's assessment. The sample location for this data is entry point of the Portland Drinking Water Service area (the outlet of the Lusted Hill treatment facility) and the summary indicates no detection of these contaminants with the exception of chloroform. Portland's drinking water is unfiltered at this time so these water quality results are indicative of the water quality in Bull Run Reservoir 2. The presence of chloroform in this summary is a result of the Water Bureau's disinfection process which consists of chloramination at the Lusted Hill facility downstream of Reservoir 2.

Response: Thank you for your data submittal and clarification. On page 6 of DEQ's Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters states that "Data submitted after the deadline stated in the data call will not be considered for the current assessment/listing but will be put into consideration for the next assessment/listing cycle. Anecdotal information, in the absence of chemical, physical, or biological data, will not in and of itself be adequate to support a listing decision." Thus, the submitted data will be considered in the next assessment/listing cycle.

Prior communication with Portland Water Bureau during DEQ's call for data clarified that DEQ would like any water quality data the Portland Water Bureau had collected in Bull Run Lake and Reservoirs. However, since the letter was received on the final day of data submittal, DEQ replied that …"given the timeline, we understand you may not be able to provide the data in the format DEQ is requiring. …. DEQ will be generating an Integrated Report on a two-year cycle and anticipates initiating the call for data for the 2020 Integrated Report in early winter 2019. Since the 2020, Integrated Report was combined with the 2018 Report we encourage the Portland Water Bureau to work with DEQ staff to submit data for the 2022 Integrated Report. The data call will likely be initiated in late 2020 to early 2021.

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22. Comments from: Clean Water Services

CWS#1: Suggested Change ID #34

Description: Assessment Conclusions- Tualatin River Copper

Comment: DEQ is proposing a Category 5 (water quality limited, TMDL required) listing for copper for the lower mainstem Tualatin River (Assessment Unit ID: OR_SR_l 709000704_02_104018). We have reviewed the water quality data that were used for the proposed listing for copper. The biotic ligand model was used to determine the applicable criteria and assess whether the measured copper concentration met the criteria. The biotic ligand model requires the input of several parameters to calculate the applicable water quality criteria; of these parameters, dissolved organic carbon and pH have the most important influence on the calculated criterion. In all, there were 474 samples that were evaluated in the lower Tualatin River assessment unit. Most of the samples (461 of the 474 samples) were labeled as "Tier 5" where the dissolved organic carbon concentration was assigned the regional default value. All of the exceedances of the copper criteria are triggered by the use of Willamette Basin default values for biotic ligand model parameters. There were 13 instances where dissolved organic carbon (DOC) concentrations and other BLM parameters were measured concurrently; there were no exceedances of the water quality criteria for copper in this data set.

As part of its watershed-based NPDES permit, the District collected water quality data for biotic ligand model parameters from June 2016 to May 2018. A total of 24 samples were collected at two locations in the lower Tualatin River: Tualatin River@ Jurgens Park (RM 10.6) and Tualatin River@ Boones Ferry (RM 8.7). Below are charts showing the range of biotic ligand model parameters at these locations; the Tualatin River data are presented as box plots with the interquartile range shown in the solid box and the Willamette Basin default value is shown with the dashed redline.

For every parameter, the interquartile range of the biotic ligand model parameters in the Tualatin River are above the Willamette Basin defaults. For most parameters including DOC, the full range of the observed values were above the Willamette Basin default values. Thus, the Willamette Basin default values are not representative of water quality conditions in the lower Tualatin River basin and should not be used for assessing compliance with the water quality criteria for copper.

When adopting the biotic ligand model based criteria for copper, DEQ had specified that concurrent data would take precedent over default values. Oregon Administrative Rules 340- 041-8033, Table 30 (Endnote N) states that biotic ligand model results based on sufficient measured input parameter data are more accurate and supersede results based on estimates or default values.

The biotic ligand model data collected at the two lower Tualatin River locations noted above are presented in Tables 1 and 2.

These data were used to calculate the acute and chronic water quality criteria for copper; the measured copper concentrations were then compared with the calculated acute and chronic criteria to determine if the criteria was met (Table 3 and 4).

The results are expressed in terms of acute and chronic toxicity units; exceedances of the acute or chronic criteria would be expressed as a toxic unit that is greater than 1.0. The maximum acute toxic unit was 0.36 and the maximum chronic toxic unit was 0.58 at Tualatin River@ Boones Ferry Road; the maximum acute toxic unit was 0.34 and the maximum chronic toxic unit was 0.55 at Tualatin River@ Jurgens Parle The acute and chronic toxic unit calculations at both lower Tualatin River locations are well below 1.0. These results are consistent with the DEQ results where concurrent data were available. These data demonstrate that the lower Tualatin River consistently meets the water quality criteria for copper. Thus, the proposed category 5 listing for copper should be removed; copper should be categorized as meeting water quality standards (i.e. category 2).

Response: DEQ reassessed the Tualatin River (AU ID: OR_SR_l 709000704_02_104018) for copper using the site-specific input parameters submitted by Clean Water Services through DEQ's data call.

There were no exceedances of the chronic copper criterion in 160 dissolved copper samples with measured input parameter values. According to DEQ's 2018 Assessment Methodology, when assessing hardness-dependent criteria or use of the Biotic Ligand Model with default input parameters, where both measured and default input criteria are used and some samples exceed criteria generated from default data and measured input criteria sample data meet minimum sample sizes, then the assessment unit should be categorized as Category 2. Measured input parameters meet minimum sample size requirements, therefore the assessment unit should be categorized as Category 2.

CWS#2: Suggested Change ID #35

Description: Assessment Conclusions- Fanno Creek and Beaverton Creek: Copper

Comment: DEQ is proposing a category 5 listing for copper for Fanno Creek and Beaverton Creek (Assessment ID: OR_SR_l 709001005_02_104141 and OR_SR_l 709001004_02_104134). It appears that the listings for copper in Fanno Creek and Beaverton Creek were also triggered by the use of Willamette Basin default values for the biotic ligand model parameters. DEQ should use the default values to conduct a screening level evaluation to determine if additional data are necessary. If the screening level evaluation suggests that there is potential to exceed water quality criteria, the pollutant can be listed as category 3A or 3B (insufficient data) and additional site-specific data should be gathered. Because of the significant implications of a category 5 listing on Oregon's water quality programs, a category 5 listing should not be based on regional default values.

The District conducts routine water quality monitoring in both Fanno Creek and Beaverton Creek. Monitoring was conducted once every two weeks for field parameters, nutrients, solids, and common ions; monitoring for metals was conducted on a quarterly basis. For this evaluation, water quality data from 2012 to 2019 were reviewed. Biotic ligand model data were available for several parameters; where biotic ligand model data were not available, they were calculated based on the DEQ regression equations. The water quality data and calculated biotic ligand model inputs are attached (Attachments 1, 2 and 3).

These data were used to calculate the acute and chronic water quality criteria for copper; the measured copper concentrations were then compared with the calculated acute and chronic criteria to determine if the water quality criteria for copper was met. The results are expressed in terms of acute and chronic toxic units; exceedances of the acute and chronic criteria would be expressed as a toxicity unit that is greater than 1.0. The biotic ligand model calculations for Fanno Creek@ Durham are presented in Table 5.

The maximum acute toxic unit was 0.33 and the maximum chronic toxic unit was 0.54 (Table 5). The acute and chronic toxic units at Fam10 Creek are well below 1.0.

Two sites were monitored on Beaverton Creek as part of the District's ambient monitoring program: Beaverton Creek@ 170th (RM 5.0) and Beaverton Creek near Cornelius Pass Road (RM 1.2). The biotic ligand model calculations for Beaverton Creek @ 170th are presented in Table 6 and the calculations for Beaverton Creek @ Cornelius Pass Road are presented in Table 7.

The maximum acute toxic units was 0.29 and the maximum chronic toxic units was 0.47 at Beave1ion Creek@ 170th (Table 6); the maximum acute toxic units was 0.32 and the maximum chronic toxic units was 0.52 at Beaverton Creek@ Cornelius Pass Road (Table 7). The acute and chronic toxic units at both locations on Beaverton Creek are well below 1.0. These data show that both Fanno Creek and Beaverton Creek consistently meet the water quality criteria for copper. Thus, the proposed category 5 listing for

copper for Fanno Creek and Beave1ion Creek should be removed; copper should be categorized as meeting water quality standards (i.e. category 2).

Response: For calculator-based toxics criteria such as the aquatic life Biotic Ligand Model (BLM) based () freshwater copper criteria, DEQ based listing decisions for the Integrated Report on the most accurate water-chemistry based criteria. These criteria are calculated from measured input parameter data to determine copper bioavailability and toxicity.

In cases where there is a sufficient number of measured input parameter data to calculate criteria to assess a waterbody, DEQ can base the assessment on those criteria. However, cases where measured input parameter data is not available or there are not a sufficient number of measured samples, the Department is required to apply default values to calculate protective criteria (see OAR 340-041-0033 Table 30 Endnote N).

DEQ initially proposed a Category 5 listing for copper for Fanno Creek (AU ID: OR_SR_l 709001005_02_ 104141). The Fanno Creek listing was based on 15 of 55 dissolved copper samples exceeding the chronic criterion. Data submitted for Fanno Creek contained no samples that reported DOC. DEQ's assessment methodology procedure directs the Department to apply a conservative default DOC to these samples in order to calculate criteria and make an impairment decision.

Therefore, DEQ will retain the Category 5 determination for Fanno Creek in the current assessment. DEQ is not accepting new data at this time, but encourages Clean Water Services to submit site-specific input parameter data for consideration in the 2022 Integrated Report assessment.

DEQ initially proposed a Category 5 listing for copper for Beaverton Creek (AU ID: OR_SR_l 709001004_02_ 104134) based on 13 of 116 dissolved copper samples exceeding chronic criteria based on conservative default input parameter values. Data for Beaverton Creek also contained 12 samples with fully measured sets of input parameters; however, these samples considered alone do not meet the minimum data requirement for assessment. None of the fully measured samples showed copper excursions above the calculated criteria, however 13 exceedances occurred using default input parameters. Therefore, according to our 2018 Assessment Methodology, DEQ will revise the category determination for Beaverton Creek from Category 5 to Category 3B.

CWS#3: Suggested Change ID #36

Description: Assessment Conclusions- Gales Creek: Hexavalent chromium

Comment: Gales Creek includes a category 5 listing for hexavalent chromium (Assessment ID: OR_SR_ l 709001001_02_104096). The Integrated Report did not assess the hexavalent chromium listing; the previous listing was carried forward. The District conducts water quality monitoring at two locations on Gales Creek: Gales Creek@ Stringtown Road (RM 7.0) and Gales Creek @ New Hwy 47 (RM 1.5). Monitoring was conducted once every two weeks for field parameters, nutrients, solids, and common ions; monitoring for metals was conducted on a quarterly basis. Data from 2009 - 19 were evaluated. During this period, there were 66 discrete monitoring events at the New Hwy 47 monitoring location and 65 discrete monitoring events at the Stringtown Road monitoring location that included chromium data. The water quality data are attached (Attachment 5). There were no exceedances of the hexavalent chromium criteria at either location even if all the dissolved chromium is assumed to be in the hexavalent form (again, a highly conservative assumption). Thus, DEQ should remove the category 5 listing for hexavalent chromium in Gales Creek.

Response: Based on guidance from EPA, all Category 4 and 5 listings must be carried forward unless it is demonstrated that water quality standards are being attained. DEQ received no hexavalent chromium data on Gales Creek during its data call for the 2018/2020 Integrated Report, therefore the Category 5 listing was moved forward. According to DEQ's Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters (Section 3.2.2, page 6), "Data submitted after the deadline stated in the data call will not be considered for the current assessment/listing but will be put into consideration for the next assessment/listing cycle." DEQ encourages Clean Water Services to submit its hexavalent chromium data on Gales Creek to the DEQ during its next call for data for the 2022 Integrated Report.

CWS#4: Suggested Change ID #37

Description: Assessment Conclusions- Fanno Creek: Hexavalent Chromium & Copper

Comment: Fanno Creek (HUC 12) includes category 5 listings for hexavalent chromium and copper (Assessment ID: OR_ WS_l 70900100502_02_104513). The Integrated Report notes that copper was assessed in 2018 whereas hexavalent chromium was not assessed in 2018; the 2012 listing for hexavalent chromium was carried forward. The Fanno Creek (HUC 12) listing for copper and hexavalent chromium are likely based on data collected in the early 1990s at the Koll Wetlands. The District had previously commented on the listing for the Koll Wetlands. Data were collected at the Koll Wetlands for three months in 1992. The data is of poor quality, and the information regarding the purpose of the monitoring and sampling procedures are lacking. Additionally, the monitoring appears to be related to a remedial investigation, complaint or spill and is not part of a representative, ambient monitoring program to assess water quality.

As noted above, the District conducts water quality monitoring in Fanno Creek @ Durham (RM 1.2). As documented above, there are no exceedances of the water quality criteria for copper in Fanno Creek.

The District also conducted monitoring for chromium in Fanno Creek @ Durham. Monitoring was conducted once every two weeks for field parameters, nutrients, solids, and common ions; monitoring for metals was conducted on a quarterly basis. Data from 2009 - 19 were evaluated; there were 66 discrete monitoring events that included chromium data. The water quality data are attached (Attachment 4). There were no exceedances of the hexavalent chromium criteria when compared to the dissolved chromium data. The assumption that all the dissolved chromium is in the hexavalent form is a highly conservative assumption.

DEQ should recognize the poor data quality that triggered the initial listing, the substantial representative data collected by the District and correct this mistake by removing the HUC 12 - Fanno Creek listing for hexavalent chromium and copper in the Integrated Report.

Response: Based on guidance from EPA, all Category 4 and 5 listings must be carried forward unless it is demonstrated that water quality standards are being attained. Fanno Creek (HUC 12) should be delisted for copper based on data assessed in 2018. Twelve of 231 dissolved copper samples exceeded the chronic criterion using default BLM parameters, which meets DEQ's delisting methodology. DEQ will modify the proposed copper listing for AU ID: OR_WS_170900100502_02_104513 to Category 2. The 2012 Category 5 listing for hexavalent chromium was carried forward on Fanno Creek (AU ID: OR_WS_170900100502_02_104513). The listing was based on data collected in the early 1990s at the Koll Wetlands. Unfortunately, DEQ received no hexavalent chromium data on this assessment unit during its data call for the 2018/2020 Integrated Report. DEQ encourages Clean Water Services to submit its hexavalent chromium data to the DEQ during its next call for data for the 2022 Integrated Report.

CWS#5: Suggested Change ID #38

Description: Assessment Conclusions- Fanno Creek (tetrachloroethylene)

Comment: DEQ is proposing to list Fanno Creek for tetrachloroethylene (PCE) (Assessment Unit ID: OR_ SR_ 1709001005 02 104141). USGS data collected in 2001 and 2002 is the supporting data for the proposed listing. PCE is typically associated with an industrial spill or contaminated groundwater plume from a commercial/industrial activity entering surface waters. The appropriate mechanism to address this issue would be through DEQ's cleanup program. Considering that the data is nearly 20 years old, it may be that DEQ's cleanup program has already addressed this source. Considering the significant implications of a category 5 listing on Oregon's water quality program, DEQ should seek confirmation that PCE is still an issue in Fanno Creek before proposing a category 5 listing for this parameter.

Response: The Category 5 listing for tetrachloroethylene (PCE) (Assessment Unit ID: OR_ SR_ 1709001005 02 104141) for Fanno Creek was carried forward from a 2012 listing. The 2012 listing was based on data collected by the USGS where 9 of 18 samples exceeded the chronic criterion. DEQ would encourage additional data collection using DEQ's delisting methodology as a guide so that the data can be used for the next listing.

CWS#6: Suggested Change ID #39

Description: Assessment Conclusions- Tualatin Basin Biocriteria

Comment: DEQ is proposing category 5 listings for a number of streams in the Tualatin Basin for biocriteria. It is not clear how DEQ plans to address the biocriteria listings. Additionally, the implications of the biocriteria listings on the NPDES permit program are not clear. Since a TMDL cannot be developed for biocriteria, DEQ should focus its efforts to identify the underlying pollutants causing the impairment. Since 2000, the District has conducted macro invertebrate monitoring in the Tualatin River watershed. The macro invertebrate studies have included an assessment of the stressors in the Tualatin River watershed (2018 Tualatin River Basin macroinvertebrate Assessment, Cole Ecological, ~May 2019). Temperature and dissolved oxygen were identified as the primary stressors for macro invertebrate communities in the Tualatin River watershed. Thus, biocriteria impairment should be addressed and resolved through listings for these pollutants. This is consistent with the approach noted in the PREDATOR model report, which states that "knowing a site is in poor biological condition is useful, but unless we are able to identify the cause(s) of impairment, we are at a loss for how to most effectively go about improving the stream."

The 2001 and 2012 Tualatin TMDLs include allocations to address impairments from temperature, dissolved oxygen, and nutrients. DEQ should re-categorize the biocriteria listings in the Tualatin Basin as "water quality limited - TMDL approved" (category 4A) or "water quality limited not needing a TMDL" (category 4B).

Response: DEQ appreciates the efforts Clean Water Services has taken to utilize various approaches to identifying causes of biological impairment. DEQ agrees that the general approach is scientifically sound; however, it did not incorporate all possible stressors. The 2018 macroinvertebrate assessment (Cole 2019) claims that other stressors (e.g., nutrients, metals) were not examined due to a lack of available data; furthermore it states these other potential stressors are likely to be addressed by "proximal surrogates"

(riparian condition and instream habitat heterogeneity) addressed through management actions intended to address temperature and fine sediment impairments. This may be true, in part, but in large urban and agricultural areas, there are multiple point-sources that may provide direct impacts to biological integrity which would not be addressed through the proposed non-point source management plans; as well as non-point source runoff of these stressors. In addition, the report identifies two sites in the higher-gradient reaches with signals of excess fine sediments as a cause of biological impairment. While macroinvertebrate Fine Sediment models were not applied to lower gradient reaches, the habitat surveys showed 5-6 sites with measurements of embeddedness, fines, and sand at high levels (> 40%). DEQ would encourage CWS to identify fine sediments as a cause of macroinvertebrate community impairment.

CWS#7: Suggested Change ID #40

Description: Assessment Conclusions- Elemental Phosphorus in the Tualatin River

Comment: There are several assessment units in the Tualatin River that include a category 4A listing (water quality limited; TMDL approved) for elemental phosphorus. There is no freshwater water quality criteria for phosphorus; there is only a marine water quality criteria for elemental phosphorus (see excerpt from Oregon Administrative Rules (OAR 340-041-8033, Table 30).

The phosphorus TMDL for the Tualatin River was based on the meeting the pH criteria in the lower Tualatin River. The TMDL has been successful at achieving the water quality criteria. The category 4A listing for elemental phosphorus should be corrected to reflect that the pH criteria was the basis of establishing the phosphorus TMDL in the lower Tualatin River.

Additionally, a number of the tributaries include a category 4A listing for elemental phosphorus; these include Fanno Creek, Beaverton Creek, Rock Creek, Chicken Creek, Gales Creek, and Dairy Creek. While the phosphorus TMDL for the Tualatin River establishes target concentrations for phosphorus on a sub-watershed (i.e. tributary) scale, the location of the primary effect of the total phosphorus loading is on the lower portion of the Tualatin River. Section 4.4.9.2 of the 2001 Tualatin Sub-basin TMDL states the following:

The loading capacities - and therefore the allocations - contained in this portion of the T.MDL were developed to address water quality issues specific to the lower mainstem Tualatin River. As such, the aggregate loading from all sources to the lower mainstem is the critical factor.

Thus, the category 4A listing for elemental phosphorus for the Tualatin River tributaries should be removed.

Response: The 2012 303(d) Integrated Report included 30 Category 4A listings for Phosphorus. These listings were reconciled to 33 new assessment units and the pollutant name was erroneously assigned as elemental phosphorus instead of phosphorus. These listings will be updated to phosphorus in the final report.

CWS#8: Suggested Change ID #41

Description: TMDL Applicability- Fanno Creek Dieldrin

Comment: The Integrated Report includes a category 4A (water quality limited; TMDL approved) listing for dieldrin for Fanno Creek. A TMDL has not been developed for dieldrin in Fanno Creek. DEQ should reassess the data using the updated assessment methodology developed in 2018.

Response: DEQ agrees with this comment and will incorporate the changes into the final report.

CWS#9: Suggested Change ID #42

Description: TMDL Applicability- Dairy Creek, McKay Creek and Gales Creek: Ammonia

Comment: The Integrated Report includes a category 4A (water quality limited; TMDL approved) listing for ammonia for Dairy Creek, McKay Creek and Gales Creek. There is no established TMDL for ammonia in these streams. The category 4A listing for ammonia for these streams should be removed before finalizing the Integrated Report.

Response: DEQ agrees with this comment. Category 4A listings for ammonia for Dairy Creek, McKay Creek, and Gales Creek will be returned to Category 5: Impaired.

CWS#10: Suggested Change ID #43

Description: Data- Chicken Creek mislabeled

Comment: Chicken Creek (Assessment ID: OR_SR_ l 709001005_02_104140) is labeled as Cedar Creek in the Integrated Report. This should be corrected before finalizing the Integrated Report.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report process, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrologic Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

The high resolution NHD is managed by the USGS and it is the federal and state standard. NHD represents the water drainage network of the United States with features such as rivers, streams, canals, lakes, ponds, coastline, dams, stream gages, and watershed boundary dataset. The dataset intended to "develop nationally-consistent geospatial datasets for the Nation" and provide agencies and organizations a common baseline for mapping aquatic resources. The NHD may contain errors. A user can report suspected errors to the NHD Markup App at https://edits.nationalmap.gov/markup-app. This tool allows users to suggest edits, or "markups," to the NHD. Anyone can suggest corrections and improvements to the data. Suggested edits are reviewed by the USGS and the NHD state stewards before they are approved for incorporation into the NHD datasets. The NHD is constantly maintained and updated through a consortium of state and federal partners. DEQ is asking these errors be sent directly to the Oregon NHD data steward.

CWS#11: Suggested Change ID #44

Description: Databases- Assessment Database- Duplicate Listings

Comment: DEQ should eliminate the duplicate listings included in the assessment database or provide information to explain the difference between the entries. There are several instances where the assessment database includes two identical entries for dissolved oxygen and temperature. It is unclear why there are multiple assessments of the same parameter for a single assessment unit.

Response: Duplicate listings have been corrected. The duplicate listings were the result of an error when combining assessment conclusions from the 2018/2020 Integrated Report with assessments from previous cycles.

CWS#12: Suggested Change ID #73

Description: General comment - compliment

Comment: We would like to express our gratitude to the DEQ for all of the hard work they have done in gathering and disseminating the integrated report. We recognize the enormity of the task performed and the work still to be done.

Response: Thank you for your support.

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23. Comments from: Forest Service, Pacific Northwest Region

FSPNR#1: Suggested Change ID #49

Description: Methodology- NHD support

Comment: We support the change from the outdated Longitude Latitude Identification (LLID) system to National Hydrography Dataset (NHD) for water body designation which is the national and state hydrologic framework standard.

Response: Thank you for your comment and support.

FSPNR#2: Suggested Change ID #50

Description: TMDL Applicability- Outreach to USFS

Comment: The smallest assessment unit proposed is at the subwatershed (HUC12) level where all streams are evaluated as a cohesive unit. Entire subwatersheds this are depicted as having impaired water quality yet in reality there is only one impaired stream segment, as adjacent and downstream segments within the subwatershed are achieving standards. In some cases, areas of shared land ownership with upstream segments on National Forest System lands are designated as impaired due to private land management downstream. There are also portions of Wilderness area which have never been actively managed now considered water quality Limited.

I am requesting further dialogue between my staff and DEQ on how TMDL implementation standards in these subwatersheds will differ between water-quality impaired segments versus those in compliance; yet mapped as impaired due to ODEQ mapping protocols. This methodology does not accurately reflect the issues on the ground. It will add to confusion on where to target treatments and potentially restrict appropriate land management activities where water quality is meeting standards.

Response: Using watershed units will not change how TMDLs are developed or implemented. TMDLs are usually developed at a much larger scale (i.e. basin scale) and consider all relevant data and sources that may be contributing to location-specific exceedances of water quality standards. DEQ will continue to work with USFS staff and continue to further dialogue on TMDL implementation issues.

FSPNR#3: Suggested Change ID #51

Description: Assessment Unit Updates (Specific) - Sandy River channel at mouth

Comment: On the Columbia River Gorge National Scenic Area, the Sandy River channel at the mouth that was reconnected through the Sandy River Delta to the east is mapped as the Columbia River but carries Sandy River flow at lower flows and the Columbia River flows at other times of the year.

Response: The Sandy River Delta is comprised of four Assessment Units; OR_SR_1708000107_02_103616 (Sandy River: Bull Run River to confluence with Columbia River), OR_SR_1708000108_88_100671 (Columbia River: Bridal Veil Creek to Sandy River), OR_SR_1708000302_88_100670 (Columbia River: Sandy River to Willamette River) and OR_WS_170800010804_02_103704 (HUC12 Name: Latourell Creek-Columbia River). The AU, OR_WS_170800010804_02_103704, is the restored east channel. The way OR_SR_1708000108_88_100671 is displayed on the web map is not consistent with this delineation. DEQ will update the web map display.

FSPNR#4: Suggested Change ID #52

Description: TMDL Applicability- Eagle Creek

Comment: Eagle Creek is listed as Category 4A (WQ limited/TMDL Approved) as it is within the assessment area of the Western Hood Subbasin Temperature TMDL, however, the MDL [sic] focus was

completely on the Hood River basin. We are unsure of whether this TMDL adequately addresses water quality issues within Eagle Creek.

Response: Eagle Creek was part of the 2018 revision of the Western Hood Subbasin Temperature TMDL (see section 1.2, page 2); therefore, a Category 4A determination is appropriate. The TMDL allocated 0.045 degrees Celsius of the human use allowance to nonpoint sources in Eagle Creek with effective shade surrogate measures that implement that allocation. The effective shade surrogate measures apply throughout the TMDL study area including Eagle Creek. Adequacy of TMDL targets is a separate process that should be deliberated with TMDL staff.

FSPNR#5: Suggested Change ID #53

Description: Assessment Conclusions- White River: Biocriteria

Comment: On the Mt Hood National Forest, there is a new listing for biocriteria on the White River (Iron Creek to Clear Creek). This reach is dominated by silty, sandy and rocky substrate that originates from the White River Glacier high up the SE flanks of Mt Hood. The river valley is a long debris fan indicative of drainages originating from glaciated volcanoes. Average annual turbidity, fine sediment, and coarse sediment are naturally high with fine sediment dominating the substrate. Availability of interstitial spaces and breeding matrix for macroinvertebrates is limiting but it is a historic natural condition.

Response: DEQ agrees with the Mount Hood National Forest description of natural conditions in the White River system: high turbidity, high levels of fine sediment filling the interstitial spaces, etc. Direct observations of these two reaches corroborate this description. It should be noted that the reaches were dominated by large substrates, not fines, but interstitial spaces were filled by glacial flour. Despite these observations, the macroinvertebrate community is not dominated by taxa tolerant to fine sediment. Results from the assessment of the macroinvertebrate community failed to meet PREDATOR Observed/Expected thresholds. However, a Best Professional Judgement exercise performed by DEQ's macroinvertebrate assessment expert found limited signs of impairment in the macroinvertebrate community. The overarching concern with this sample is that over 80% of individuals assessed by the PREDATOR model were represented by a single taxon (Diptera: Simuliidae: Simulium). While normally such high dominance by one or a few taxa would provide cause for concern, in this case there is evidence that the macroinvertebrate community is only minimally impaired. The best example of this comes from the O/E model outputs. For each of the two samples on the White River, the general tolerances of the taxa missing in the O/E analyses (and thus resulting in lower O/E scores) were higher (more tolerant) than the replacement taxa. The replacement taxa were mostly made up of moderately sensitive taxa (plus one highly sensitive taxon), compared to a mix of moderately-sensitive to moderately-tolerant taxa in the missing taxa. Also, the very high abundance of Simulium (a black fly) provides potentially misleading assessments. This taxon is highly adapted to fast-flowing water, which these reaches exhibited, and can grow in "blooms" (so to speak) with very high localized abundances. That, combined with their specialized body structures, specialized hook-like hairs which enable them to hold fast in heavy flow, often results in very dense groupings in the laboratory sorting trays. This can work to dramatically reduce representation by other taxa in the sample. Due to the uncertainty as to whether the samples represent true biological impairment, DEQ has revised the listing to Category 3B: Insufficient Data; Exceedances. This assessment unit has been identified for follow-up sampling to confirm biocriteria support status.

FSPNR#6: Suggested Change ID #54

Description: Data- Misplaced Monitoring location on South Umpqua

Comment: On the Umpqua National Forest, the South Umpqua (SU @ Tiller) monitoring site is listed as South Umpqua above the falls. There is no monitoring site at SU above the falls; therefore, the monitoring site location should be mapped within Assessment Unit OR_SR_1710030201_02_105374, not OR_1710030203_02_205389.

Response: DEQ agrees that the South Umpqua at Tiller (UmpNF-077) monitoring site is incorrectly identified in Assessment Unit OR_SR_1710030203_02_105389. DEQ will correct the Assessment Unit to OR_SR_1710030201_02_105374 and reassess for the final report.

FSPNR#7: Suggested Change ID #55

Description: General- Water Quality Efforts

Comment: Water quality protection on USDA Forest Service (USDAFS) land has significantly improved in the last twenty years with the implementation of aquatic conservation strategies commonly known as the Northwest Forest Plan, PACFISH (PACFISH addresses anadromous fish-producing watersheds in the Northwest and northern California) and INFISH (INFISH addresses native inland fish in Oregon, Washington, Idaho, and Montana), which amended the national forest land and resource management plans in the state. Other regional and national strategies that focus on water quality protection include USDAFS regional aquatic restoration strategy and USDAFS National Watershed Condition framework which assess watershed condition and prioritize and focus active restoration to improve watershed condition. A national BMP program now in place has renewed emphasis on BMPs and requires use of standardized monitoring protocols. One of the key components of BMP monitoring is identifying corrective actions and adaptive management needed to improve performance on water quality protection.

Response: DEQ acknowledges and is grateful for your continued efforts on improving water quality.

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24. Comments from: Dan Keeley

DK#1: Suggested Change ID #46

Description: Assessment Conclusions- Mission Creek: Dissolved Oxygen and Dieldrin

Comment: In exploring your Draft Integrated report for 2020 it appears that there is no actual data for Mission Creek (tributary of Champoeg Creek), either above or below our dam. The application map, however, clearly shows this segment to be water quality impaired for both dissolved oxygen and dieldrin. Given dieldrin has been illegal for several decades, the reservoir supports a thriving bass fishery and Mission creek below the reservoir is largely dry or stagnant pools during the summer, it seems unreasonable to label it as impaired without specific data.

Response: Data for the assessment of AU ID: OR_WS_170900070305_02_104416, HUC12 Name: Champoeg Creek was collected at the Mission Creek at Champoeg Park Visitor's Center monitoring location (36877-ORDEQ) and Champoeg Creek near mouth at Champoeg State Park (Willamette) (33638-ORDEQ). The Category 5 listing for Dissolved Oxygen is based on twenty-nine of thirty-seven samples falling below the dissolved oxygen spawning criteria of 11 mg/L and 95% saturation during the spawning period of January 1st through June 15th. In 2002, Champoeg Creek was added to the 303(d) list for dieldrin. According to EPA guidance, all impairments must be carried forward to successive 303(d) lists unless it can be demonstrated that water quality criteria are attained. If the commenter believes the dieldrin listing is no longer valid, DEQ encourages data collection according to DEQ's delisting methodology to demonstrate attainment of water quality criteria for future integrated reports.

DK#2: Suggested Change ID #47

Description: Mapping Tools- Geocortex App- Watershed Unit display

Comment: If you don't have the data, show the stream segment as unknown/suspected impaired based on regional data or some such words.

Response: Thank you for the suggestion. DEQ is currently exploring its options for changing how the Integrated Report is displayed and discussed. In response to comments received, DEQ will be updating its visual display to reflect watershed units as polygons, rather than a collection of stream networks, as well as adding a beneficial use search functionality. We will continue to refine our display and our assessment interpretations during each assessment cycle.

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25. Comments from: Kristin Schoorl

KrS#1: Suggested Change ID #45

Description: General- Support- Nyssa

Comment: As a farm owner in Nyssa, Oregon, I am very concerned about water quality in this area (specifically, irrigation canals in Nyssa and Adrian that ultimately feed into the Malheur, Owyhee, and Snake rivers) and support Oregon's DEQ 2018/2020 Draft Integrated Report on the status of water quality.

With the abundance of herbicides used to control grass, moss, and weeds in our canals; the use of herbicides and pesticides by the majority of farmers in Malheur county; in addition to water treatment (and fogging) for mosquitoes in our area; the amount of toxins in our waterways and farm ground is greatly concerning to me, so much so that I rarely irrigate, even though I participate in Owyhee Irrigation's Lock and Close program during aquatic chemical applications. With Roundup-resistant GMO creeping bentgrass in our ditches and irrigation canals, a chemical other than Roundup is now used to control this grass, and one can only speculate as to how long this chemical will remain effective. (Per

Owyhee Irrigation's web site, Magnacide H Acroline and Xylene range aromatic solvent are used on an as-needed basis to resolve flow restriction and water quality issues.)

I've owned my farm for 22 years, and since 1997/98, there has been a significant decline in pheasant, quail, and meadowlark populations; I rarely see cottontails, which were once fairly prevalent on our property; and in general, there seems to be a general decline in biodiversity. I cannot help but think that the herbicides and toxins (naturally occurring or otherwise) in our waterways have contributed to this decline, but regardless, the fact these toxins pollute waterways, farms, fisheries and ultimately aquifers and wells, requires the most stringent monitoring and regulation of all waterways by Oregon DEQ.

Thank you for the opportunity to comment,

Response: Thank you for your comment and support.

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26. Comments from: Harney County Court

HCC#1: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

HCC#2: Suggested Change ID #11

Description: Watershed Units- Unfair characterization of agriculture and forest land- Assessment targets agricultural lands as sources of impairments

Comment: This new method of designation appears to directly target agricultural lands as the source of water quality impairments

Response: The Integrated Report is an objective assessment of the status of state waters based on data that were submitted to DEQ. The methods used to make assessment conclusions were finalized in the 2018 methodology document prior to any data evaluation. The assessment results and conclusions in the Integrated Report neither attributed the sources of water quality impairments nor targeted any entities such as agricultural lands.

HCC#3: Suggested Change ID #14

Description: Regulatory Impact - Adding regulations to agriculture land

Comment: I am writing this letter in response to the Draft 2018-20 new regulation that will impose more restrictions to a already over regulated system.

Response: The 2018/2020 Integrated Report is not a regulation or a rule change and it does not impose any additional restrictions. The Integrated Report is a reporting on the status of water quality across the state and whether beneficial uses are supported. The Integrated Report is a Clean Water Act requirement for states to identify waters that do not or are not expected to meet applicable water quality standards. It is a combination of reports required by the Clean Water Act sections 303(d) and 305(b).

The report/list does not, unto itself, specify or determine any regulatory actions or consequences. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. Follow-up investigations would initially focus on the sampling stations in the AU that indicated impairment, the exact locations of which are known, as well as additional sampling efforts, to better delineate and characterize the extent of impairment.

HCC#4: Suggested Change ID #56

Description: Process- Communication/Outreach- county official outreach 2

Comment: We believe we were entitled, as local government, to forewarning and a more in depth discussion of the methodologies used and the assumptions that the Integrated Report makes about waterways in our county, particularly when the agency has made some very significant policy calls that will have a direct impact on county programs and county lands. We are additionally surprised that this very impactful policy work has left us with such a narrow window of opportunity to comment now that we have been alerted.

Response: DEQ performed extensive outreach on its draft 2018/2020 Integrated Report and provided multiple opportunities to comment on its methodology and draft report.

In 2015, the Oregon Legislature directed DEQ to publish the listing methodology prior to the start of drafting the Integrated Report (ORS 468B.039). This process ensured that the methodology was unbiased and transparent and not developed or altered in an ad-hoc manner in response to assessment results. Updates to its Assessment Methodology were vetted through a stakeholder work group process and a subsequent 60 day public comment period. In addition, there was an opportunity for public comment on the draft assessment methodologies during the July 2018, Environmental Quality Commission meeting.

The draft Integrated Report was open for public comment from Sept. 30, 2019, through Jan. 6, 2020, for a total of 99 days, which included a 34 day extension in response to stakeholder requests. Notifications were sent to over 3,000 individuals signed up on the GovDelivery listserv. DEQ staff subsequently held six informational sessions across the state to review the results of the report and assisted participants with its new interactive tools. The six informational sessions included: Portland on Oct. 15, 2019; Bend on Oct. 22, 2019; Central Point/Medford on Oct. 29, 2019; Newport on Nov. 5, 2019; Corvallis on Nov. 12, 2019; and Salem on Nov. 14, 2019. DEQ staff also held a webinar on Nov. 4, 2019, and the webinar was recorded and available on the Integrated Report website on-line Webinar.

DEQ will continue to adapt its approach to outreach and communications in the next Integrated Report and encourages your input and participation. The agency anticipates convening a stakeholder group in 2020, to evaluate and make recommended changes to the methodology, with the methodology going out for public comment in approximately Dec. 2020.

HCC#5: Suggested Change ID #57

Description: Watershed Units- Data within units

Comment: We object to DEQ's decision to list water bodies throughout the state as water quality impaired without data to support those listings.

Response: Data and information was used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions. Assessments were conducted following the 2018 Assessment Methodology.

HCC#6: Suggested Change ID #62

Description: Watershed Units- Extrapolation- Data

Comment: DEQ's methodology, especially as it relates to watershed assessment units, is an inappropriate use of the data available and risks invalidating this update to listings of impaired waterways. DEQ should not assume or declare impairment in most of the waterways in the state based on a lack of data.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5 ("Impaired"), it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

It is important to note that the Oregon Legislature passed state law (ORS 468B.039) in 2015 which directed DEQ to publish the methodology prior to analyzing water quality data and drafting the Integrated Report (two-step process). This process ensures that methodology is robust and not developed or altered in an ad-hoc manner in response to assessment results. DEQ held public stakeholder and work group processes for updates to the Assessment Methodology prior to the Integrated Report being drafted. This process was inclusive and included representatives from industry, environmental interests, tribes, agriculture, and forestry on the work group.

Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

HCC#7: Suggested Change ID #80

Description: Process - Opportunity to Comment

Comment: ….this very impactful policy work has left us with a narrow window of opportunity to comment…

Response: DEQ performed extensive outreach on its draft 2018/2020 Integrated Report and provided multiple opportunities to comment on its methodology and draft report.

The draft Integrated Report was open for public comment from Sept. 30, 2019, through Jan. 6, 2020, for a total of 99 days, which included a 34 day extension in response to stakeholder requests. Notifications were sent to over 3,000 individuals signed up on the GovDelivery listserv. DEQ staff subsequently held six informational sessions across the state to review the results of the report and assisted participants with its new interactive tools. The six informational sessions included: Portland on Oct. 15, 2019; Bend on Oct. 22, 2019; Central Point/Medford on Oct. 29, 2019; Newport on Nov. 5, 2019; Corvallis on Nov. 12, 2019; and Salem on Nov. 14, 2019. DEQ staff also held a webinar on Nov. 4, 2019, and the webinar was recorded and available on the Integrated Report website on-line Webinar.

DEQ will continue to adapt its approach to outreach and communications in the next Integrated Report and encourages your input and participation. The agency anticipates convening a stakeholder group in 2020, to evaluate and make recommended changes to the methodology, with the methodology going out for public comment in approximately Dec. 2020.

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27. Comments from: Hood River Soil and Water Conservation District

HRS-WCD#1: Suggested Change ID #58

Description: Process- Communication/Outreach- Notification of report iterations

Comment: We were not aware there was an update to the Integrated Report occurring or of the review/comment period until late November 2019. Therefore, our timeline for analyzing the report and providing comments was significantly shortened. In the future, we suggest a better system of notifying stakeholders and constituents of report iterations and a longer review/comment period.

Response: DEQ performed extensive outreach on its draft 2018/2020 Integrated Report and provided multiple opportunities to comment on its methodology and draft report.

The draft Integrated Report was open for public comment from Sept. 30, 2019, through Jan. 6, 2020, for a total of 99 days, which included a 34 day extension in response to stakeholder requests. Notifications were sent to over 3,000 individuals signed up on the GovDelivery listserv. DEQ staff subsequently held six informational sessions across the state to review the results of the report and assisted participants with its new interactive tools. The six informational sessions included: Portland on Oct. 15, 2019; Bend on

Oct. 22, 2019; Central Point/Medford on Oct. 29, 2019; Newport on Nov. 5, 2019; Corvallis on Nov. 12, 2019; and Salem on Nov. 14, 2019. DEQ staff also held a webinar on Nov. 4, 2019, and the webinar was recorded and available on the Integrated Report website on-line Webinar.

DEQ will continue to adapt its approach to outreach and communications in the next Integrated Report and encourages your input and participation. The agency anticipates convening a stakeholder group in 2020, to evaluate and make recommended changes to the methodology, with the methodology going out for public comment in approximately Dec. 2020.

HRS-WCD#2: Suggested Change ID #59

Description: Watershed Units- Extrapolation- Watershed unit connectivity

Comment: We have concerns with the use of sub-watersheds (HUC-12) as the assessment unit. DEQ's methodology stated that "through the assessment process, DEQ will review the watershed units more closely", but that does not seem to have occurred in the Hood River Basin. The sub-watersheds often include multiple waterways that come from separate source waters, flow through different land-uses, and are not hydrologically connected. DEQ is required to assess waterbody units based on data and it appears that the scale of these assessment units does not allow that to happen with the data DEQ has. It does not make sense to assume that an impairment measured in one waterway means that the same impairment is present in any other waterway, or even that the impairment is suggested in the unmeasured waterway. At a minimum, the assessment unit should include just the waterways that are hydrologically connected instead of lumping them all together in one HUC-12 boundary. Best practices would suggest that DEQ actually "review the watershed units more closely" for other differences in watershed homogeneity, in addition to hydrologic connectivity.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

DEQ will continue to improve and refine its methodologies as it prepares for the next cycle of the Integrated Report. The agency will begin planning for the next cycle, including soliciting input for suggested methodology improvements for the 2022 Integrated Report, in early 2020.

HRS-WCD#3: Suggested Change ID #60

Description: Watershed Units- Mixing headwater streams with larger streams

Comment: Watershed assessment units: Classifying headwater, often intermittent streams that may not even have a defined channel, with larger stream or watershed assessment units seems questionable at best. Impairments measured in the mainstems or main branches of a waterway are unlikely to be found in most/all of the headwaters, especially as many of these headwater streams are located in protected areas.

Response: Watershed assessment units only include waterbodies with a Strahler Stream Order 4 or less within a HUC-12. Larger river and streams (Strahler Stream Order 5 and higher) are classified separately as river and stream units.

HRS-WCD#4: Suggested Change ID #61

Description: methodology- Assessment Units- Prioritization difficulties

Comment: Using the assigned assessment units for the Hood River Basin doesn't seem to help in prioritizing areas of concern or areas to focus efforts. For example, the map of the Hood River Basin shows literally every mapped waterway as impaired

Response: The Integrated Report assessment is a snapshot of the current status of water quality in Oregon and is a reflection of the data and information provided. A priority ranking for TMDL development is included with final submittal of the report. When a watershed unit has been identified as Category 5 (Impaired), it indicates that an impairment exists within the watershed unit, not that the entire watershed is impaired. The Integrated Report identifies areas that require additional monitoring and follow-up action; it does not, unto itself, specify or determine any regulatory actions or consequences. Follow-up, focused attention on impaired assessment units will be necessary to better delineate/characterize extent of impairment before any prescriptive actions are taken (permit issuance, TMDL development, etc.).

HRS-WCD#5: Suggested Change ID #62

Description: Watershed Units- Extrapolation- Data

Comment: DEQ's methodology, especially as it relates to watershed assessment units, is an inappropriate use of the data available and risks invalidating this update to listings of impaired waterways. DEQ should not assume or declare impairment in most of the waterways in the state based on a lack of data.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's

waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

It is important to note that the Oregon Legislature passed state law (ORS 468B.039) in 2015 which directed DEQ to publish the methodology prior to analyzing water quality data and drafting the Integrated Report (two-step process). This process ensures that methodology is robust and not developed or altered in an ad-hoc manner in response to assessment results. DEQ held public stakeholder and work group processes for updates to the Assessment Methodology prior to the Integrated Report being drafted. This process was inclusive and included representatives from industry, environmental interests, tribes, agriculture and forestry on the work group.

Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

HRS-WCD#6: Suggested Change ID #63

Description: Process- Communication and Outreach- local feedback

Comment: If DEQ needs local feedback on local watershed hydrology and/or relevant breaks to create homogeneous waterway segments, they have significant resources with local SWCDs, watershed councils, irrigation districts, agencies, and citizens. DEQ needs to rework their process and methodology to create an assessment that is both supportable and scientifically defensible.

Response: DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline, and marine territorial waters) into manageable units for assessment and reporting purposes. Water quality assessment based on a watershed approach is a well-established methodology and is employed by many other states (e.g. Ohio, Michigan etc.) for meeting EPA reporting requirements. It is rooted in scientific principles that support application of data from one or more locations for extrapolation across a broader geographical area. DEQ made a number of improvements to its Assessment Methodology through a stakeholder work group process, and its listing methodology was

validated by an independent scientific peer review panel. DEQ will continue to adapt its methodologies in the next Integrated Report and encourages your input and participation. The agency anticipates convening a stakeholder group in 2020, to evaluate and make recommended changes to the methodology, with the methodology going out for public comment in approximately December 2020.

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28. Comments from: City of Portland Bureau of Environmental Services

CPBES#1: Suggested Change ID #74

Description: General- Support- BES

Comment: BES would like to express our appreciation of DEQ's recent efforts to improve the Integrated Report, including the updated assessment methodology and tools that DEQ has made available to the public. The interactive web map, assessment geodatabase, and the online searchable assessment database allowed BES to thoroughly review the draft Integrated Report assessments, as well as the new assessment units

Response: Thank you for your support of our efforts.

CPBES#2: Suggested Change ID #75

Description: Watershed units- NHD Issues- Surface Waters

Comment: DEQ should remove line segments from the assessment units that do not represent surface waters. There are multiple line features included in DEQ's new assessment units that do not represent surface waterbodies. Many of these lines represent stormwater pipes or areas that may have been surface waters in the past, but today there is no body of water present. A map highlighting the non-surface water line segments in the Portland area that should be removed is included with this comment letter and a GIS layer with categorized line types that specify open channels vs. pipes is available online: http://gis-pdx.opendata.arcgis.com/datasets/stream-centerlines

Response: DEQ used the High Resolution National Hydrography Dataset, specifically the NHDPlus HR, to draw its assessment units and georeference its water quality standards. The NHD is the federal and state standard and represents the water drainage network of the United States with features such as rivers, streams, canals, lakes, ponds, coastline, dams, and stream gages. The National Hydrography Dataset (NHD) is developed and maintained by a partnership between the USGS and EPA. The dataset intended to "develop nationally-consistent geospatial datasets for the Nation" and provide agencies and organizations a common baseline for mapping aquatic resources. Unfortunately, the NHD does contain errors. A user can report suspected errors to the NHD Markup App at https://edits.nationalmap.gov/markup-app. This tool allows users to suggest edits, or "markups," to the

NHD, Watershed Boundary Dataset (WBD), and NHDPlus HR. Anyone can suggest corrections and improvements to the data. Suggested edits are reviewed by the USGS and the NHD state stewards before they are approved for incorporation into the NHD or WBD datasets. In addition, in response to comments received, DEQ will be updating its visual display to reflect watershed units as polygons, rather than a collection of stream networks,

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CPBES#3: Suggested Change ID #76

Description: Assessment Unit Updates (Specific) - Columbia Slough

Comment: DEQ should divide the Columbia Slough watershed assessment unit (OR_WS_170900120201 02_104554) so that the lower 8.5 miles of the mainstem channel (from the confluence with the Willamette River to the levee at Elrod Drive) is delineated as a separate stream assessment unit. The lower 8.5 miles of the Columbia Slough represent a unique waterbody with many features that differentiate it from the rest of the watershed. The lower Slough is tidally influenced, free-flowing, and directly connected to the Willamette River, providing important habitat for migrating salmonids. This segment of the Columbia Slough has been designated as critical habitat for Lower Columbia River Chinook, coho, and steelhead. In contrast, the upstream reaches of the watershed are managed by a system of drainage districts that pump water through the system. Given that the levee divides the Slough into two very different water bodies—both hydrologically and biologically—the use of Strahler stream order to distinguish between homogeneous watershed areas and stream reaches is not appropriate and fails to capture the variability. As such, a division of the current watershed assessment unit at the levee near Elrod Drive is warranted.

Response: DEQ agrees with this comment and split this assessment unit at the levee near Elrod Drive.

CPBES#4: Suggested Change ID #77

Description: Assessment Conclusions- Willamette: DO Spawning

Comment: The Category 5 impairment listing for dissolved oxygen spawning for the Willamette River (OR_SR_1709001202_88_104175) should be removed 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: DEQ agrees that the Category 5 impairment listing for the Willamette River (OR_SR_1709001202_88_104175) should be removed as there is "no spawning use" for this assessment unit. DEQ will incorporate this change in its final report.

CPBES#5: Suggested Change ID #78

Description: Assessment Conclusions- Additional Data- Johnson Creek: Temperature

Comment: The Category 3 determination for year-round temperature for Johnson Creek (OR_SR_1709001201 02_104170) is not correct and should be updated based on the available continuous

temperature data. The three USGS stations listed as having been evaluated have recorded continuous water temperature since 2007. Consequently, there is a sufficient number of samples to assess whether the designated use is supported.

Response: DEQ incorporated the continuous temperature data from USGS and updated its assessment determination for year-round temperature for Johnson Creek (OR_SR_1709001201 02_104170). This assessment unit is assessed as Category 5 for year-round temperature. Evaluation of the data demonstrated that 3382 out of 12105 7-Day Average Daily Max (7-DADM) values exceeded the 18 degree Celsius criteria.

CPBES#6: Suggested Change ID #79

Description: Assessment Conclusions- Additional Data- Lower Johnson Creek: Temperature

Comment: The Category 3 determination for year-round temperature for the Lower Johnson Creek HUC (OR_WS_170900120103_02_104552) is not correct and should be updated based on the available continuous temperature data. The two USGS stations listed as having been evaluated have extensive water temperature records. Consequently, there is a sufficient number of samples to assess whether the designated use is supported.

Response: DEQ incorporated the continuous temperature data from USGS and updated its assessment determination for year-round temperature for the Lower Johnson Creek HUC (OR_WS_170900120103_02_104552). This assessment unit should be Category 5 for year-round temperature. Evaluation of the data demonstrated that 1163 out of 4523 7 - Day Average Daily Maximum (7-DADM) values exceeded the 18 degree Celsius criteria.

CPBES#7: Suggested Change ID #81

Description: TMDL Applicability- Johnson Creek

Comment: The Category 5 impairment determination for DDT for Johnson Creek (OR_SR_1709001201_02_104170) should be changed to Category 4A given the existing TMDL. The 2006 Johnson Creek Toxics TMDL includes both DDT and dieldrin.

Response: DEQ agrees with this comment and will incorporate the changes into the final report.

CPBES#8: Suggested Change ID #82

Description: TMDL Applicability- elemental phosphorus

Comment: DEQ should remove the Category 4A determinations for elemental phosphorus for freshwater assessment units as the water quality criterion does not apply to freshwater aquatic life. The following assessment units in the Portland area include Category 4A determinations for elemental phosphorus. TMDLS are in place for these assessment units, however, the TMDLs are for total phosphorus, not elemental phosphorus.

Response: Thank you for your comment. DEQ will replace the Category 4A determinations for elemental phosphorus with phosphorus in the final report for the assessment units identified.

CPBES#9: Suggested Change ID #83

Description: Assessment Conclusions- conflicting information

Comment: Where there are conflicting determinations in the assessment database, DEQ should review the assessments and clarify the determinations. A list of assessments units with conflicting determinations for the same parameter in the Portland area are included below.

Response: The conflicting assessment determinations for AU ID: OR_WS_170900120201_02_104554 reflected different assessment conclusion for the Year-round versus spawning time periods. AU ID OR_WS_170900120201_02_104554 should be Category 4A for Dissolved Oxygen-Spawning and Category 2 for Dissolved Oxygen Year-Round. The assessment conclusion for AU ID OR_WS_170900120104_02_104553 should be Category 4A for Dissolved Oxygen-Spawning and Category 2 for Dissolved Oxygen Year-Round. We have updated the database to make clear the purpose of multiple listings (year round vs spawning, cool water vs cold water, etc.).

CPBES#10: Suggested Change ID #84

Description: Assessment Conclusions- Duplications

Comment: Where there are conflicting determinations in the assessment database, DEQ should review the assessments and clarify the determinations. A list of assessments units with conflicting determinations for the same parameter in the Portland area are included below.

Response: Multiple assessment determinations for AU ID: OR_SR_1709001201_02_104170 and OR_WS_170900120305_02_104561 for Dissolved Oxygen-Year Round reflect assessment conclusions for both Cold Water and Cool Water criteria. That assessment unit contains both cold and cool water use classifications in portions of the waterbody. The assessment database has been updated to make that more clear.

Duplicate temperature listings identified have been corrected. OR_SR_1709001202_88_104175 has been corrected to a single assessment of Category 5. OR_WS_170900100502_02_104513 has been corrected to reflect Category 5 determinations for both Temperature Year-Round and Temperature-Spawning. OR_WS_170900120101_02_104550 and OR_WS_170900120103_02_104552 have also been corrected to reflect Category 5 determinations for both Temperature Year-Round and Temperature-Spawning.

CPBES#11: Suggested Change ID #85

Description: Assessment Conclusions- Missing Data- Portland Area chlorophyll-a

Comment: DEQ should re-assess the waterbody using the full set of records to evaluate attainment of water quality standards. The following assessment units and parameters should be re-assessed by DEQ using all the readily available and accepted data.

a. DEQ should re-assess the Willamette River (OR_SR_10709001202_88_104175) assessment unit for chlorophyll-a using all readily available and accepted data. BES provided DEQ with chlorophyll-a data during the call for data for three monitoring stations on the Willamette River (PDX_BES-BM, PDX_BES-CM, PDX_BES-FM). The chlorophyll-a records for these mainstem Willamette sites were accepted by DEQ and are available in DEQ's AWQMS database. If DEQ had used the more comprehensive chlorophyll-a dataset when assessing the Willamette River, there would be sufficient data to classify the assessment unit as Category 2 for chlorophyll-a (157 samples with 18 excursions).

b. DEQ should assess … assessment units for chlorophyll-a as data are readily available and accepted by DEQ As noted above, BES provided DEQ with chlorophyll-a data which were accepted by DEQ and are available in AWQMS but were not used.

Response: DEQ would like to thank Bureau of Environmental Services of City of Portland for noting the discrepancy in the number of chlorophyll-a samples on the Willamette River and in neighboring watersheds. DEQ reassessed the Willamette River assessment unit (OR_SR_10709001202_88_104175) for chlorophyll-a using all of the data provided. DEQ agrees that the assessment conclusion for the mainstem Willamette River for chlorophyll-a should be Category 2, where 18 of 156 samples exceeded the chlorophyll-a criteria of 0.15 mg/L. One of 44 calculated 3-month average chlorophyll-a concentrations exceeded the criteria which also indicates a Category 2 listing is appropriate.

DEQ reassessed the additional assessment units for chlorophyll-a and the assessment conclusions are illustrated in the table below.

Assessment Units Reassessed for Chlorophyll-a					
Assessment Unit ID	**AU Name**	**Parameter**	**No. of Chl-a samples**	**No. of samples that exceed criteria**	**IR Category**
OR_WS_170900120202_02_104555	HUC12 Name: Balch Creek-Willamette River	Chlorophyll-*a*	209	4	Cat 2
OR_WS_170900120104_02_104553	HUC12 Name: Oswego Creek-Willamette River	Chlorophyll-*a*	79	0	Cat 2
OR_WS_170900120101_02_104550	HUC12 Name: Upper Johnson Creek	Chlorophyll-*a*	26	0	Cat 2
OR_WS_170900120103_02_104552	HUC12 Name: Lower Johnson Creek	Chlorophyll-*a*	75	1	Cat 2

Assessment Units Reassessed for Chlorophyll-a					
Assessment Unit ID	**AU Name**	**Parameter**	**No. of Chl-a samples**	**No. of samples that exceed criteria**	**IR Category**
OR_WS_170900120305_02_104561	HUC12 Name: Multnomah Channel	Chlorophyll-*a*	13	0	Cat 2
OR_LK_1709001202_02_100858	Fairview Lake	Chlorophyll-*a*	15	8	Cat 5

CPBES#12: Suggested Change ID #86

Description: Assessment Conclusions- Missing Data- Johnson Creek: Temperature

Comment: The USGS has collected continuous temperature data in all three of the Johnson Creek assessment units (OR_SR_ 1709001201_02_104170, OR_WS_170900120101_ 02_104550, OR_WS_170900120103_02_104552), however, these three assessment units were not assessed for temperature to determine whether the designated spawning use was met for the 2018/2020 Integrated Report. Given the readily available and extensive datasets, DEQ should evaluate these three assessment units to determine whether the designated spawning use is met for temperature.

Response: The draft report inadvertently missed the temperature monitoring data. This data has been identified and reassessed in the final report.

Continuous temperature data collected by the USGS indicate that all three of the Johnson Creek assessment units (OR_SR_ 1709001201_02_104170, OR_WS_170900120101_ 02_104550, OR_WS_170900120103_02_104552), should be Category 5 for Temperature-Spawning in the 2018/2020 Integrated Report. For AU ID: OR_SR_ 1709001201_02_104170, 742 out of 4286 spawning period 7-DADM values exceeded the spawning criteria. 183 out of 2044 spawning period 7-DADM values exceeded the spawning criteria in AU ID: OR_WS_170900120101_ 02_104550 and 636 out of 2049 spawning period 7-DADM values exceeded spawning criteria in AU ID: OR_WS_170900120103_02_104552.

CPBES#13: Suggested Change ID #87

Description: Databases- Assessment database- rationale- Aquatic Weeds

Comment: DEQ should include information on the source data used to assess aquatic weeds in the assessment database. Multiple assessment units are listed as impaired (Category 5) or having insufficient data (Category 3B) for aquatic weeds. Given the lack of included in the assessment database, it is not possible for the public to review and confirm the water quality status for aquatic weeds. A list of the assessment units in the Portland area with no specified data sources are included…

Response: According to DEQ's 2018 Assessment Methodology, a Category 5 impairment listing for Aquatic Weeds requires documented reports of excessive growths of invasive, non-native aquatic plants

that dominate the assemblage in a water body and have a harmful effect on fish or aquatic life or are injurious to health, recreation, or industry. Plants include aquatic species on the Oregon Department of Agriculture Noxious Weed Policy and Classification System designated as "A", "B", or "T" weeds or those covered by a quarantine in OAR 603-052-1200. Aquatic weeds listings were based on reports of excessive growth of invasive aquatic plants through the state's Invasive Species Hotline. The table below provides information on the propose aquatic weeds listings.

Aquatic Weeds listings				
Non-native, invasive plant	**County**	**AU_ID**	**AU_Name**	**IR Category**
Parrot Feather Watermilfoil (*Myriophyllum aquaticum*)	Crook	OR_WS_170900100502_02_104513	Fanno Creek	5
Purple Loosestrife (*Lythrum salicaria*)	Multnomah	OR_WS_170800010801_15_103707	Tanner Creek-Columbia River	3B
Parrot Feather Watermilfoil (*Myriophyllum aquaticum*)	Washington	OR_WS_170900100401_02_104506	Beaverton Creek	3B
Yellow-Flag Iris (*Iris pseudacorus*)	Clackamas	OR_WS_170900100504_02_104515	Saum Creek-Tualatin River	3B
Water Hyacinth (*Eichhornia crassipes*)	Douglas	OR_SR_1710030211_02_105320	South Umpqua River	5

CPBES#14: Suggested Change ID #88

Description: Crosswalk- methodology

Comment: DEQ should publish the geospatial methodology utilized to crosswalk the 2012 and 2018/2020 Integrated Reports. The 2018 Assessment Methodology states that where conclusions from the 2012 and 2018/2020 Integrated Reports differ for an assessment unit, DEQ will make cross-walking determinations on a case-by-case basis. These determinations should be made available to the public.

Response: DEQ will make the geospatial methodology used to crosswalk the 2012 and 2018/2020 Integrated Report and the crosswalk itself available on its website following its submittal to EPA. Before that information is available online, DEQ staff are available to answer any specific crosswalk questions.

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29. Comments from: City of Hood River

CHR#1: Suggested Change ID #64

Description: Watershed Units- Extrapolation- Watershed Connectivity #2

Comment: The watershed assessment units used in the 2018/2020 assessment create difficulties based both on their size and hydrologic disconnection. The assessment units within the city or around city operations include between 52-111 miles of waterways, which is a significant scale to list based on, at worst, only one monitoring site within that assessment unit (e.g. Lake Branch). In addition, two of the watershed assessment units include waterways that are outside of (and not hydrologically connected to) the waterways within the city/UGB (Grays Creek and Harphan Creek). As such, the waterways in the city are listed based on data collected on waterways completely unrelated to (and disconnected from) our urban waterways. This does not seem like a valid way to determine impairment of these waterways.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5 ("Impaired"), it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

Unfortunately, the NHD and WBD contain errors in the watershed boundaries. Land use and administration boundaries were not taken into account when delineating assessment units. For some watershed assessment units, hydrologic connectivity is based on the WBD 12 digit hydrologic unit code (HUC12). A user can report suspected errors to the NHD Markup App at https://edits.nationalmap.gov/markup-app. This tool allows users to suggest edits, or "markups", to the NHD, Watershed Boundary Dataset (WBD), and NHDPlus HR. Anyone can suggest corrections and improvements to the data. Suggested edits are reviewed by the USGS and the NHD state stewards before they are approved for incorporation into the NHD or WBD datasets.

CHR#2: Suggested Change ID #65

Description: Crosswalk- Indian Creek-Hood River sub-watershed

Comment: We noticed some issues with the translation of the 2012 assessment to the 2018/2020 report, specifically within the Indian Creek-Hood River sub-watershed. There are multiple parameters listed in the 2018/2020 report based on past data, that do not seem to be in the past data and/or reports.

Response: DEQ reviewed the 2012 impairments in the Indian Creek - Hood River sub-watershed and how they were translated into the 2018/2020 assessments. Category 4 and 5 listings from 2012 that were carried forward are contained in the table below.

CHR#3: Suggested Change ID #66

Description: Mapping tools/ Visualizations- Clarification of criteria

Comment: The Lake Branch sub-watershed contains multiple standards for the spawning temperature criteria (in this case, there are sections with spawning, no spawning, and bull trout criteria). It is unclear from the assessment/database which standard is being exceeded. It also seems unclear why the assessment unit would contain multiple different standards for the same parameter.

Response: The Integrated Report assessment conclusions in the Lake Branch Assessment Unit were based on exceedances of the bull trout temperature criterion. The Lake Branch sub-watershed contains multiple standards for the spawning temperature criteria (in this case, there are sections with spawning, no spawning, and bull trout criteria). Assessment units were originally delineated to represent relatively homogeneous hydrological units, such as main stems between major tributaries, or headwater catchments, where water quality is expected to be uniform due to natural processes. Assessment units were subsequently delineated by changes in designated beneficial uses according to OAR-340-041 Tables 101A - 330A, including specific water bodies. Assessment Units were not delineated on all changes in sub-use categories that may affect the applicable criteria that apply at specific points within an assessment unit. The Fish and Aquatic Life use applies throughout the Hood River Basin, however some waterbodies are further designated into sub-uses of fish and aquatic life such as the spawning fish use. Waterbodies may have multiple water quality standards that apply to them, including some site-specific standards that may only apply to a specific section of an assessment unit. Because criteria could change over a small area, as in the spawning fish use designations, it is not feasible to divide and manage assessment units on every change in water quality criteria. Impairments are based on the data from specific monitoring stations and the criteria that apply to those specific locations or waterbodies. TMDLs to address impairments are completed at the basin or sub-basin level and not the scale of individual water bodies unless those waterbodies are major rivers, tributaries, or waterbodies. For purposes of assessment, it is sufficient that an assessment unit that has impairments within it is identified, even if the specific impairment is not uniformly distributed throughout the assessment unit. As of the 2018/2020 Integrated Report, EPA no longer permits DEQ to assign “seasonal” impairments or listings. Therefore, DEQ considers an assessment unit that does not meet the spawning criteria as assessed at one or more monitoring locations within the unit to be impaired for spawning without qualifiers. The monitoring data and monitoring locations that triggered the finding of impairment are available to view in the Integrated Report online database to explain the timing and location where the specific impairment was observed. The specific season or timing of impairments is considered in NPDES permits and when setting TMDL allocations but is not the basis for 303(d) impairment status.

CHR#4: Suggested Change ID #67

Description: Assessment Unit Updates (Specific) - Phelps Creek

Comment: There seems to be a section of Phelps Creek that has been mapped to the Indian Creek-Hood River subwatershed.

Response: DEQ used the High Resolution National Hydrography Dataset, specifically the NHDPlus HR, to draw its assessment units and georeference its water quality standards. The NHD is the federal and state standard and represents the water drainage network of the United States with features such as rivers, streams, canals, lakes, ponds, coastline, dams, and stream gages. The National Hydrography Dataset (NHD) is developed and maintained by a partnership between the USGS and EPA. The dataset intended to "develop nationally-consistent geospatial datasets for the Nation" and provide agencies and organizations a common baseline for mapping aquatic resources. Unfortunately, the NHD does contain errors in the watershed boundaries. A user can report suspected errors to the NHD Markup App at https://edits.nationalmap.gov/markup-app. This tool allows users to suggest edits, or "markups", to the NHD, Watershed Boundary Dataset (WBD), and NHDPlus HR. Anyone can suggest corrections and improvements to the data. Suggested edits are reviewed by the USGS and the NHD state stewards before they are approved for incorporation into the NHD or WBD datasets.

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30. Comments from: Central Oregon Irrigation District

COID#1: Suggested Change ID #68

Description: Waters of the State- Beneficial Uses- Powell Butte-Dry River

Comment: This area [OR_WS_170703050808_05_102490] consists of district facilities (canals, culverts, pipes, etc.) and private irrigation ditches and canals as shown on the Draft Integrated Report map. Please note that the sole function of these facilities is the delivery of water for irrigated agriculture. These facilities are utilized for approximately 190 days a year, and otherwise remain dry and unable to support fish or aquatic lifeforms. Water supplied to district users is screened at the original diversion point to prevent fish from entering the system. The identified infrastructure is entirely man-made, dry for almost six months a year, and were never intended to or capable of providing sustained habitat for fish or aquatic life.

Central Oregon Irrigation District believes that inclusion of our facilities on DEQ's report must be in error. We respectfully request that the above listed area be removed from the current status listing.

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

DEQ is not asserting "jurisdiction" over any new waters. DEQ water quality programs are implemented for waters of the state, which has a broad statutory definition in Oregon Statutes (ORS 468B.005):

"Waters of the state" means lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters) that are located wholly or partially within or bordering the state or within its jurisdiction.

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses . The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

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31. Comments from: Grant County

GC#1: Suggested Change ID #2

Description: Watershed Units- Unfair Characterization- Report appears to indicate farms and forests are experiencing declining water quality

Comment: Report … makes it look like farms and forests are experiencing declining water quality, particularly when it appears that DEQ lacks actual data for a significant portions of the waterways listed.

Response: The Integrated Report makes no conclusions about the trends in water quality across the state. It is just a snapshot of the status of state waters and whether beneficial uses are being supported. Identification of increased areas of impaired water quality condition is likely more attributable to the amount of data we assessed in 2018, enhanced resolution of Oregon's hydrography and a construct of how DEQ is required to report to EPA than it can be attributed to any specific known trends in broad scale water quality changes.

GC#2: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired"

indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine any regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

GC#3: Suggested Change ID #11

Description: Watershed Units- Unfair characterization of agriculture and forest land- Assessment targets agricultural lands as sources of impairments

Comment: This new method of designation appears to directly target agricultural lands as the source of water quality impairments

Response: The Integrated Report is an objective assessment of the status of state waters based on data that were submitted to DEQ. The methods used to make assessment conclusions were finalized in the 2018 methodology document prior to any data evaluation. The assessment results and conclusions in the Integrated Report neither attributed the sources of water quality impairments nor targeted any entities such as agricultural lands.

GC#4: Suggested Change ID #28

Description: Process- Communication/Outreach- County Official Outreach

Comment: We are disappointed that the agency did not reach out to county officials about the Integrated Report prior to listing the vast majority of our waterbodies as water quality impaired. We believe we were entitled. as local government, to forewarning and a more in depth discussion of the methodologies used and the assumptions that the Integrated Report makes about waterways in our counties, particularly when the agency has made some very significant policy calls that will have a direct impact on counties and county land.

Response: DEQ performed extensive outreach on its draft 2018/2020 Integrated Report and provided multiple opportunities to comment on its methodology and draft report.

The draft Integrated Report was open for public comment from Sept. 30, 2019, through Jan. 6, 2020, for a total of 99 days, which included a 34 day extension in response to stakeholder requests. Notifications were sent to over 3,000 individuals signed up on the GovDelivery listserv. DEQ staff subsequently held six informational sessions across the state to review the results of the report and assisted participants with its new interactive tools. The six informational sessions included: Portland on Oct. 15, 2019; Bend on Oct. 22, 2019; Central Point/Medford on Oct. 29, 2019; Newport on Nov. 5, 2019; Corvallis on Nov. 12, 2019; and Salem on Nov. 14, 2019. DEQ staff also held a webinar on Nov. 4, 2019, and the webinar was recorded and available on the Integrated Report website on-line Webinar.

DEQ will continue to adapt its approach to outreach and communications in the next Integrated Report and encourages your input and participation. The agency anticipates convening a stakeholder group in 2020, to evaluate and make recommended changes to the methodology, with the methodology going out for public comment in approximately Dec. 2020.

GC#5: Suggested Change ID #59

Description: Watershed Units- Extrapolation- Watershed unit connectivity

Comment: We have concerns with the use of sub-watersheds (HUC-12) as the assessment unit. DEQ's methodology stated that "through the assessment process, DEQ will review the watershed units more closely", but that does not seem to have occurred in the Hood River Basin. The sub-watersheds often include multiple waterways that come from separate source waters, flow through different land-uses, and are not hydrologically connected. DEQ is required to assess waterbody units based on data and it appears that the scale of these assessment units does not allow that to happen with the data DEQ has. It does not make sense to assume that an impairment measured in one waterway means that the same impairment is present in any other waterway, or even that the impairment is suggested in the unmeasured waterway. At a minimum, the assessment unit should include just the waterways that are hydrologically connected instead of lumping them all together in one HUC-12 boundary. Best practices would suggest that DEQ actually "review the watershed units more closely" for other differences in watershed homogeneity, in addition to hydrologic connectivity.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

DEQ will continue to improve and refine its methodologies as it prepares for the next cycle of the Integrated Report. The agency will begin planning for the next cycle, including soliciting input for suggested methodology improvements for the 2022 Integrated Report, in early 2020.

GC#6: Suggested Change ID #62

Description: Watershed Units- Extrapolation- Data

Comment: DEQ's methodology, especially as it relates to watershed assessment units, is an inappropriate use of the data available and risks invalidating this update to listings of impaired waterways. DEQ should not assume or declare impairment in most of the waterways in the state based on a lack of data.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5 ("Impaired"), it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

It is important to note that the Oregon Legislature passed state law (ORS 468B.039) in 2015 which directed DEQ to publish the methodology prior to analyzing water quality data and drafting the Integrated Report (two-step process). This process ensures that methodology is robust and not developed or altered in an ad-hoc manner in response to assessment results. DEQ held public stakeholder and work group processes for updates to the Assessment Methodology prior to the Integrated Report being drafted. This process was inclusive and included representatives from industry, environmental interests, tribes, agriculture and forestry on the work group.

Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

GC#7: Suggested Change ID #80

Description: Process - Opportunity to Comment

Comment: ….this very impactful policy work has left us with a narrow window of opportunity to comment…

Response: DEQ performed extensive outreach on its draft 2018/2020 Integrated Report and provided multiple opportunities to comment on its methodology and draft report.

The draft Integrated Report was open for public comment from Sept. 30, 2019, through Jan. 6, 2020, for a total of 99 days, which included a 34 day extension in response to stakeholder requests. Notifications were sent to over 3,000 individuals signed up on the GovDelivery listserv. DEQ staff subsequently held six informational sessions across the state to review the results of the report and assisted participants with its new interactive tools. The six informational sessions included: Portland on Oct. 15, 2019; Bend on Oct. 22, 2019; Central Point/Medford on Oct. 29, 2019; Newport on Nov. 5, 2019; Corvallis on Nov. 12, 2019; and Salem on Nov. 14, 2019. DEQ staff also held a webinar on Nov. 4, 2019, and the webinar was recorded and available on the Integrated Report website on-line Webinar.

DEQ will continue to adapt its approach to outreach and communications in the next Integrated Report and encourages your input and participation. The agency anticipates convening a stakeholder group in 2020, to evaluate and make recommended changes to the methodology, with the methodology going out for public comment in approximately Dec. 2020.

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32. Comments from: City of Gresham

CG#1: Suggested Change ID #89

Description: Assessment Unit Updates- Tributaries matched with parent stream

Comment: Ensure that tributaries are mapped within the same watershed as their parent stream/river. One specific example noted within Gresham:

The headwaters of Fairview Creek are mapped with the Johnson Creek tributaries (AU ID: OR_WS_170900120101_02_104550). This area, located between Powell Blvd. and Division St. and between SE 182nd and NW Birdsdale Ave, has no hydraulic connectivity with Johnson Creek. It is connected to Fairview Creek, which is part of the Columbia Slough watershed. While Johnson Creek and the Columbia Slough are both within the Willamette Basin TMDL, there are specific pollutants and allocations within the Lower Willamette Subbasin TMDL for Johnson Creek, Fairview Creek and the Columbia Slough.

Response: DEQ used the High Resolution National Hydrography Dataset, specifically the NHDPlus HR, to draw its assessment units and georeference its water quality standards. The NHD is the federal and state standard and represents the water drainage network of the United States with features such as rivers, streams, canals, lakes, ponds, coastline, dams, and stream gages. The National Hydrography Dataset (NHD) is developed and maintained by a partnership between the USGS and EPA. The dataset intended to "develop nationally-consistent geospatial datasets for the Nation" and provide agencies and organizations a common baseline for mapping aquatic resources. Unfortunately, the NHD does contain errors in the watershed boundaries. A user can report suspected errors to the NHD Markup App at https://edits.nationalmap.gov/markup-app. This tool allows users to suggest edits, or "markups", to the NHD, Watershed Boundary Dataset (WBD), and NHDPlus HR. Anyone can suggest corrections and improvements to the data. Suggested edits are reviewed by the USGS and the NHD state stewards before they are approved for incorporation into the NHD or WBD datasets.

CG#2: Suggested Change ID #90

Description: TMDL Applicability- Beaver Creek tributaries

Comment: The Beaver Creek tributaries (AU ID: OR_WS_170800010703_02_103703) are currently listed as having Active TMDLs for not just the Sandy River Basin (which is where it belongs), but also for Columbia Slough and Willamette Basin. The active TMDLs list needs to be updated to reflect that only the Sandy River Basin TMDL applies to these tributaries.

Response: DEQ agrees with this comment and will make these changes.

CG#3: Suggested Change ID #91

Description: TMDL Applicability- Upper Johnson Creek Tributaries

Comment: The Upper Johnson Creek tributaries (AU ID: OR_WS_170900120101_02_104550)are currently listed as having Active TMDLs for Columbia Slough and Willamette Basin. The active TMDLs list needs to be updated to reflect that only the Willamette Basin TMDL applies to these tributaries. There is actually a specific Johnson Creek TMDL that is part of the Lower Willamette Subbasin TMDL. The Johnson Creek TMDL is at a similar scale to the Columbia Slough TMDL, which DEQ currently calls out, so it would be good to be consistent in the TMDL listing scale –either stick with just Willamette Basin for all, or add Johnson Creek in the same way Columbia Slough is used

Response: DEQ agrees with this comment and will incorporate the changes into the final report.

CG#4: Suggested Change ID #92

Description: TMDL Applicability- Fairview Creek

Comment: Fairview Creek, which is lumped in with the Columbia Slough (AU ID: OR_WS_170900120201_02_104554)currently lists Active TMDLs for Columbia Slough, Willamette Basin, and Sandy River Basin. Fairview Creek has no connection to the Sandy River Basin, so that TMDL should be removed from the list. It appears as though all of those TMDLs may be included in the list since some of the tributaries in Troutdale/Wood Village are in this same assessment unit(e.g. Arata and Salmon Creeks). Those tributaries are unique in that they aren't connected to the Columbia Slough/Willamette, but also don't connect to the Sandy River–they are primarily controlled by a drainage district that pumps them directly to the Columbia River. The City of Troutdale has provided more detailed comments related to these tributaries.

Response: DEQ agrees the Sandy River Basin TMDL should be removed from AU ID: OR_WS_170900120201_02_104554 and will incorporate the change into the report. DEQ will also be making updates to the Columbia Slough assessment unit based on comments received.

CG#5: Suggested Change ID #93

Description: Watershed Units- Extrapolation- Watershed Connectivity #4

Comment: Manually alter segments in watershed units: Temperature. Some tributaries have high temperatures due to inline ponds while others are cool year-round due to groundwater flows. The City has data demonstrating several tributaries are meeting the temperature standard, with data on other tributaries showing exceedances, yet the entire group of tributaries (as a segment) are shown as impaired. When data demonstrates a tributary is not impaired, it doesn't seem logical to display it as impaired. The current way of representing segments allows a few tributaries exceeding a standard to supersede data on other tributaries demonstrating that an impairment does not exist

Response: When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. Impairments are based on data from specific monitoring stations and the criteria that apply to those specific locations or waterbodies. Once an assessment unit is listed as impaired, follow up work will be conducted which would focus on the sampling locations which provided data to the listing process. Using watershed units will not change how TMDLs are developed or implemented. TMDLs are usually developed at a much larger scale (i.e. basin scale) and consider all relevant data and sources that may be contributing to location-specific exceedances of water quality standards. For point source discharges, DEQ will continue to evaluate permit requirements based on the water quality within the stream segment to which the facility discharges and the discharge's relationship to that stream segment.

In response to comments received, DEQ will be updating its visual display to reflect watershed units as polygons, rather than a collection of stream networks. Monitoring locations used in the assessment, which were formerly an additional map layer that needed to be clicked on, will be turned on by default and will be visible when the map is zoomed in. In addition, data used in the assessment will be available to download through DEQ's online database.

CG#6: Suggested Change ID #94

Description: Watershed Units- Extrapolation- Watershed Connectivity #5

Comment: Manually alter segments in watershed units:

Similar to temperature, the City has collected other data (i.e. water quality, biocriteria) on small first-order streams that demonstrate differences between streams which are currently lumped into the same "segment," which gets listed based on the least common denominator.

Response: When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire watershed is impaired. The 303(d) list of impaired waters identifies assessment units that require additional investigation and follow-up action. Follow-up monitoring and investigations are necessary to delineate and characterize the extent of impairment.

33. Comments from: Columbia County Public Works

CCPW#1: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

surface or underground waters) that are located wholly or partially within or bordering the state or within its jurisdiction.

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

CCPW#2: Suggested Change ID #69

Description: Regulatory Impact- Stormwater Impacts

Comment: I am writing to express concern regarding the draft 2018-2020 Integrated Report. The primary concern is around the inclusion of roadside drainage ditches or "intermittent drainage ditches" as regulated water bodies. It is unclear what this means and there may be unintended consequences in expanding Federal Clean Water Act regulations to regulate waterways that are typically exempt.

In Columbia County's case, the Public Works Department maintains approximately 550 miles of roadways. A vast majority of these roads use roadside ditches to drain rainwater. That is over 1,000 miles of ditch lines that we are responsible to maintain. We are a small department with very limited resources and have to prioritize everything we do to effectively serve our citizens. What this typically means is that we are responding to the worst spots first. These are drainage issues that are usually impacting the safety of the roadway or have the potential to cause damage to private property if we do not respond in a timely manner. My concern is that adding the regulatory weight of the Federal Clean Water Act to roadside ditches will hamper our ability to quickly and efficiently address drainage issues so that damage is minimized and our resources can be focused on other priorities.

My concern with the potential of expanding Clean Water Act requirements to these activities is based on experience. For individual projects that we do apply Clean Water Act requirements, we instinctively add a significant amount of time and resources to them because we know that the permitting timelines can range from 6 months to a couple of years depending on the complexity of the project. I have seen permitting processes take much longer even. The thought of having to do the same for the various routine road maintenance activities we do is distressing. Without further definition or discussion to define exactly what the impact of this decision will have, it is hard to see it being applied without further hampering our ability to efficiently serve our citizens. As a member of the Association of Oregon Counties (AOC) and OACES, an affiliate of the AOC, I support their request for clarification on what DEQ categorizes as an intermittent drainage ditch, specifically if drainage ditches in the county right-of-way are included in the assessment even if they do not feed into an adjacent stream.

Response: DEQ is not asserting jurisdiction over any new waters. Waters of the state has a broad statutory definition in Oregon Statutes (ORS 468B.005): "Waters of the state" means lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or

underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters) that are located wholly or partially within or bordering the state or within its jurisdiction."

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is done through a separate Water Quality Standards update, which is outside of the Integrated Report process

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CCPW#3: Suggested Change ID #98

Description: Process- Communications/Outreach- Local government involvement #3 (general)

Comment: Disappointment local government representatives were not included in the work group that evaluated updated methodology.

Response: DEQ performed extensive outreach on its draft 2018/2020 Integrated Report and provided multiple opportunities to comment on its methodology and draft report.

In 2015, the Oregon Legislature directed DEQ to publish the listing methodology prior to the start of drafting the Integrated Report (ORS 468B.039). This process ensured that the methodology was unbiased and transparent and not developed or altered in an ad-hoc manner in response to assessment results. Updates to its Assessment Methodology were vetted through a stakeholder work group process and a subsequent 60 day public comment period. In addition, there was an opportunity for public comment on the draft assessment methodologies during the July 2018, Environmental Quality Commission meeting.

DEQ will continue to adapt its approach to outreach and communications in the next Integrated Report and encourages your input and participation. The agency anticipates convening a stakeholder group in 2020 to evaluate and make recommended changes to the methodology, with the methodology going out for public comment in approximately December 2020.

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34. Comments from: Coos County

CsC#1: Suggested Change ID #2

Description: Watershed Units- Unfair Characterization- Report appears to indicate farms and forests are experiencing declining water quality

Comment: Report … makes it look like farms and forests are experiencing declining water quality, particularly when it appears that DEQ lacks actual data for a significant portions of the waterways listed.

Response: The Integrated Report makes no conclusions about the trends in water quality across the state. It is just a snapshot of the status of state waters and whether beneficial uses are being supported. Identification of increased areas of impaired water quality condition is likely more attributable to the

amount of data we assessed in 2018, enhanced resolution of Oregon's hydrography and a construct of how DEQ is required to report to EPA than it can be attributed to any specific known trends in broad scale water quality changes.

CsC#2: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

CsC#3: Suggested Change ID #11

Description: Watershed Units- Unfair characterization of agriculture and forest land- Assessment targets agricultural lands as sources of impairments

Comment: This new method of designation appears to directly target agricultural lands as the source of water quality impairments

Response: The Integrated Report is an objective assessment of the status of state waters based on data that were submitted to DEQ. The methods used to make assessment conclusions were finalized in the 2018 methodology document prior to any data evaluation. The assessment results and conclusions in the Integrated Report neither attributed the sources of water quality impairments nor targeted any entities such as agricultural lands.

CsC#4: Suggested Change ID #28

Description: Process- Communication/Outreach- County Official Outreach

Comment: We are disappointed that the agency did not reach out to county officials about the Integrated Report prior to listing the vast majority of our waterbodies as water quality impaired. We believe we were entitled. as local government, to forewarning and a more in depth discussion of the methodologies used and the assumptions that the Integrated Report makes about waterways in our counties, particularly when the agency has made some very significant policy calls that will have a direct impact on counties and county land.

Response: DEQ performed extensive outreach on its draft 2018/2020 Integrated Report and provided multiple opportunities to comment on its methodology and draft report.

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DEQ will continue to adapt its approach to outreach and communications in the next Integrated Report and encourages your input and participation. The agency anticipates convening a stakeholder group in 2020, to evaluate and make recommended changes to the methodology, with the methodology going out for public comment in approximately Dec. 2020.

CsC#5: Suggested Change ID #59

Description: Watershed Units- Extrapolation- Watershed unit connectivity

Comment: We have concerns with the use of sub-watersheds (HUC-12) as the assessment unit. DEQ's methodology stated that "through the assessment process, DEQ will review the watershed units more closely", but that does not seem to have occurred in the Hood River Basin. The sub-watersheds often include multiple waterways that come from separate source waters, flow through different land-uses, and are not hydrologically connected. DEQ is required to assess waterbody units based on data and it appears that the scale of these assessment units does not allow that to happen with the data DEQ has. It does not

make sense to assume that an impairment measured in one waterway means that the same impairment is present in any other waterway, or even that the impairment is suggested in the unmeasured waterway. At a minimum, the assessment unit should include just the waterways that are hydrologically connected instead of lumping them all together in one HUC-12 boundary. Best practices would suggest that DEQ actually "review the watershed units more closely" for other differences in watershed homogeneity, in addition to hydrologic connectivity.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5 ("Impaired"), it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

DEQ will continue to improve and refine its methodologies as it prepares for the next cycle of the Integrated Report. The agency will begin planning for the next cycle, including soliciting input for suggested methodology improvements for the 2022 Integrated Report, in early 2020.

CsC#6: Suggested Change ID #62

Description: Watershed Units- Extrapolation- Data

Comment: DEQ's methodology, especially as it relates to watershed assessment units, is an inappropriate use of the data available and risks invalidating this update to listings of impaired waterways. DEQ should not assume or declare impairment in most of the waterways in the state based on a lack of data.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for

tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5 ("Impaired"), it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

It is important to note that the Oregon Legislature passed state law (ORS 468B.039) in 2015 which directed DEQ to publish the methodology prior to analyzing water quality data and drafting the Integrated Report (two-step process). This process ensures that methodology is robust and not developed or altered in an ad-hoc manner in response to assessment results. DEQ held public stakeholder and work group processes for updates to the Assessment Methodology prior to the Integrated Report being drafted. This process was inclusive and included representatives from industry, environmental interests, tribes, agriculture and forestry on the work group.

Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

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35. Comments from: Raymond Kaser

RK#1: Suggested Change ID #70

Description: Assessment Unit Updates (Specific) - Butte Creek near Scotts Mills

Comment: Butte Creek is listed as being impaired because of water temperature. I own a farm that borders Butte Creek near Scotts Mills. The stream is shaded, and the water temperature is cool in the summer. I strongly oppose the listing without data that support warm stream conditions. Trout survive just fine in the summer by remaining in deep pools.

Response: Butte Creek is currently proposed as Category 4A which indicates a TMDL has been approved for this waterbody. The 2018 assessment for Butte Creek, Assessment Unit ID OR_SR_1709000902_02_104072 was based on one year of continuous temperature data from May 2008 through May 2009. Data from the monitoring location, 40122-ORDEQ: Butte Creek at Woodburn-

Monitor Rd, exceeded the 7-day average daily maximum (7-DADM) criteria value of 18 degrees Celsius on 83 out of 378 calculated 7-DADM values. According to DEQ's assessment methodology, two exceedances of the 7-DADM constitutes an impairment of the temperature criteria. Butte Creek is, however, categorized as Category 2: Attaining criteria for the spawning period October 15th through May 15th.

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36. Comments from: Eagle Point Irrigation District

EPID#1: Suggested Change ID #71

Description: Process- Communication and Outreach-Include in Future Discussions

Comment: The District understands the importance and potential regulatory consequences of DEQ listing the District Facilities and requests that DEQ include the District in any future discussion of the Draft Report.

Response: The classification of Oregon waterbodies into Assessment Units were primarily designed for reporting purposes. When a watershed unit was identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. The Integrated Report identifies areas that require additional investigation and follow-up action; it does not, unto itself, specify or determine any regulatory actions or consequences. Follow-up monitoring of impaired assessment units will be necessary to better delineate and characterize the extent of impairment before any prescriptive regulatory actions may be taken. DEQ will continue to adapt its approach to outreach and communications in the next Integrated Report and encourages your input and participation.

EPID#2: Suggested Change ID #72

Description: Watershed Units- Extrapolation- Watershed Connectivity #3

Comment: The District is concerned that listing of waterbodies within the District Facilities without evidence of impairment may harm the District. DEQ is required to designate a waterbody as "water quality limited" in an integrated report only if that waterbody is unable to meet its designated beneficial uses. However, under the new methodology, DEQ is using data from other waterbodies within the Assessment Unit to designate a waterbody as impaired. DEQ's actions could the harm the District, and other agricultural water districts, because water conveyance facilities may be added to the 303(d) list without actual impairment. This would potentially subject the District to new TMDLs and permitting requirements without cause.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report process, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units

that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

Using watershed units will not change how TMDLs are developed or implemented. TMDLs are usually developed at a much larger scale (i.e. basin scale) and consider all relevant data and sources that may be contributing to location-specific exceedances of water quality standards. For point source discharges, DEQ will continue to evaluate permit requirements based on the water quality within the stream segment to which the facility discharges and the discharge's relationship to that stream segment.

EPID#3: Suggested Change ID #99

Description: Regulatory Impact- Regulation Concern- General

Comment: Concern over regulations arising from listings

Response: The Integrated Report is not a rule. It is a required reporting to EPA of the status of state waters and whether beneficial uses are supported. Assessment Units were created for reporting purposes. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

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37. Comments from: Ochoco Irrigation District

OcID#1: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify has areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

OcID#2: Suggested Change ID #62

Description: Watershed Units- Extrapolation- Data

Comment: DEQ's methodology, especially as it relates to watershed assessment units, is an inappropriate use of the data available and risks invalidating this update to listings of impaired waterways. DEQ should not assume or declare impairment in most of the waterways in the state based on a lack of data.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National

Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5 ("Impaired"), it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

It is important to note that the Oregon Legislature passed state law (ORS 468B.039) in 2015 which directed DEQ to publish the methodology prior to analyzing water quality data and drafting the Integrated Report (two-step process). This process ensures that methodology is robust and not developed or altered in an ad-hoc manner in response to assessment results. DEQ held public stakeholder and work group processes for updates to the Assessment Methodology prior to the Integrated Report being drafted. This process was inclusive and included representatives from industry, environmental interests, tribes, agriculture and forestry on the work group.

Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

OcID#3: Suggested Change ID #119

Description: Beneficial Uses and WQ Standards- Lower McKay Creek

Comment: DEQ has incorrectly attributed several District canals as being attached to natural waterways. For example, a section of the Crooked River Distribution Canal was included with Lower McKay Creek as "impaired" for fish and aquatic life. This particular stretch of canal does not contain water from McKay Creek (It is from the Crooked River) and does not divert water from the creek. Other examples include sections of the OID Ryegrass Canal, Ochoco Main Canal and Grimes Flat East and West Canals.

Response: The sections of the Crooked River Distribution Canal that were included in the Lower McKay Creek watershed unit are part of the HUC-12 boundary layer in the NHD. DEQ used the High Resolution National Hydrography Dataset, specifically the NHDPlus HR, to draw its assessment units and georeference its water quality standards. The NHD is the federal and state standard and represents the water drainage network of the United States with features such as rivers, streams, canals, lakes, ponds, coastline, dams, and stream gages. The National Hydrography Dataset (NHD) is developed and maintained by a partnership between the USGS and EPA. The dataset intended to "develop nationally-consistent geospatial datasets for the Nation" and provide agencies and organizations a common baseline for mapping aquatic resources. Unfortunately, the NHD does contain errors. A user can report suspected errors to the NHD Markup App at https://edits.nationalmap.gov/markup-app. This tool allows users to

suggest edits, or “markups”, to the NHD, Watershed Boundary Dataset (WBD), and NHDPlus HR. Anyone can suggest corrections and improvements to the data. Suggested edits are reviewed by the USGS and the NHD state stewards before they are approved for incorporation into the NHD or WBD datasets.

In this particular case, there was no data assessed from this distribution canal, therefore the canal is not technically considered impaired, it is located within a watershed unit that is impaired. When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that all of the waterbodies within the HUC-12 are impaired.

OcID#4: Suggested Change ID #120

Description: Process- Communications/Outreach- General

Comment: Concern about lack of outreach and communication from DEQ

Response: DEQ performed extensive outreach on its draft 2018/2020 Integrated Report and provided multiple opportunities to comment on its methodology and draft report.

The draft Integrated Report was open for public comment from Sept. 30, 2019, through Jan. 6, 2020, for a total of 99 days, which included a 34 day extension in response to stakeholder requests. Notifications were sent to over 3,000 individuals signed up on the GovDelivery listserv. DEQ staff subsequently held six informational sessions across the state to review the results of the report and assisted participants with its new interactive tools. The six informational sessions included: Portland on Oct. 15, 2019; Bend on Oct. 22, 2019; Central Point/Medford on Oct. 29, 2019; Newport on Nov. 5, 2019; Corvallis on Nov. 12, 2019; and Salem on Nov. 14, 2019. DEQ staff also held a webinar on Nov. 4, 2019, and the webinar was recorded and available on the Integrated Report website on-line Webinar.

DEQ will continue to adapt its approach to outreach and communications in the next Integrated Report and encourages your input and participation. The agency anticipates convening a stakeholder group in 2020, to evaluate and make recommended changes to the methodology, with the methodology going out for public comment in approximately Dec. 2020.

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38. Comments from: Farmers, Middle Fork and East Fork Irrigation Districts

FMF-EFID#1: Suggested Change ID #130

Description: Process- Communications/Outreach- Not aware of updates

Comment: In almost every case, organizations who may be interested and affected by this report were not aware of the review period or that there was an update happening. Farmers Irrigation District, Middle

Fork Irrigation District, and East Fork Irrigation District would not have known if it weren't for notification from Oregon Water Resources Congress. The lack of notification and the very short window to review and comment is ridiculous, as this report will have major ramifications moving forward. Farmers Irrigation District is fortunate to have a staff member with significant experience in reviewing technical documents, a robust understanding of the Hood River Basin, and significant experience in collecting and analyzing monitoring data. Most organizations do not have this specialized expertise and would struggle to review and comment in depth. Through our review, we found significant concerns with the assessment methodology and results, report/data presentation, public accessibility of the report, translation of past data to the new report, and waterway mapping. With this problematic process, DEQ risks loss of trust with communities, as well as loss of credibility generally. Updates like this should be well vetted and reviewed, and should rely heavily on local input, as it is the local communities made up of watershed councils, soil &water conservation districts, businesses, agriculture, timber managers, irrigation districts, and average citizens who will have to deal with the long-term ramifications of poorly thought out and scientifically indefensible methodologies.

Response: DEQ performed extensive outreach on its draft 2018/2020 Integrated Report and provided multiple opportunities to comment on its methodology and draft report.

The draft Integrated Report was open for public comment from Sept. 30, 2019, through Jan. 6, 2020, for a total of 99 days, which included a 34 day extension in response to stakeholder requests. Notifications were sent to over 3,000 individuals signed up on the GovDelivery listserv. DEQ staff subsequently held six informational sessions across the state to review the results of the report and assisted participants with its new interactive tools. The six informational sessions included: Portland on Oct. 15, 2019; Bend on Oct. 22, 2019; Central Point/Medford on Oct. 29, 2019; Newport on Nov. 5, 2019; Corvallis on Nov. 12, 2019; and Salem on Nov. 14, 2019. DEQ staff also held a webinar on Nov. 4, 2019, and the webinar was recorded and available on the Integrated Report website on-line Webinar.

DEQ will continue to adapt its approach to outreach and communications in the next Integrated Report and encourages your input and participation. The agency anticipates convening a stakeholder group in 2020, to evaluate and make recommended changes to the methodology, with the methodology going out for public comment in approximately Dec. 2020.

The updates made to the Integrated Report were well vetted through a stakeholder work group process. DEQ made updates to its methodologies according to ORS 468B.039, which directed DEQ to publish the methodology "prior to publishing draft assessments of water bodies based on the methodologies developed" 468B.039 (1)(b). This process ensured that the assessment methodology was unbiased and not developed or altered in an ad-hoc manner in response to assessment results. Revised methodologies went through a rigorous scientific peer review process before finalization in the methodology document.

FMF-EFID#2: Suggested Change ID #131

Description: Watershed Units- Break units

Comment: DEQ's Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters states that assessment units were defined to "incorporate environmentally and hydrologically relevant breaks" and that assessment units should "represent homogeneous segments of surface waters". The watershed assessment units used in the 2018/2020 Integrated Report do neither (see bullets below). The methodology states that "through the assessment process, DEQ will review the watershed units more closely". This is desperately needed based on what these HUC-12 watersheds

include on-the-ground and their management implications. Subdivision or complete reworking of the watershed assessment units needs to be based on significantly more than "where other relevant data layers indicate differences in watershed homogeneity". The stream layer itself should be enough for DEQ to determine differences in watershed homogeneity (e.g. there are multiple waterways in the same HUC-12 sub-watershed that are not hydrologically connected). Watershed assessment unit divisions should be based on stream order changes and the other breaks used for the river/stream assessment units. The draft assessments based on the currently used watershed assessment units is a gross misuse of available hydrologic and water quality data.

Our main concern is with the use of sub-watersheds (HUC-12) as the assessment unit. The sub-watersheds often include multiple waterways that come from separate source waters, flow through different land-uses, and are in no way hydrologically connected. E.g. the Odell Creek-Hood River sub-watershed includes both Odell Creek (flowing from the east, predominately through agricultural and residential uses, before its confluence with the mainstem Hood River) and Ditch Creek (flowing from the west, predominately through forestry and agricultural uses, before its confluence with the mainstem Hood River), as well as multiple other smaller tributaries to the mainstem Hood River. Given the lack of hydrologic connection between the waterways, and the variety of land uses along them, it is non-sensical to assume that an impairment measured in one waterway means that same impairment is present in the other waterways, or even that said impairment is suggested. If that were the case, an impairment in any waterway in the state would or could suggest/mean that every other waterway in the state is equally impaired. These same issues with sub-watersheds and disconnected waterways are present in 8 of the 11 mapped sub-watersheds in the Hood River Basin, as well as the Grays Creek-Columbia sub-watershed (and, we assume, many other sub-watersheds around that state outside of our service areas).See attached spreadsheet for which hydrologically separate waterways are within each HUC-12 sub-watershed.

- At a minimum, the assessment unit should include just the waterways/sub-watersheds that are actually hydrologically connected (e.g. Odell Creek and its tributaries are one assessment unit, Ditch Creek and its tributaries are another, Pine Creek and its tributaries are another, etc.), instead of lumping them all together based on the HUC-12 boundaries.

- More logically, the assessment units for watersheds should follow similar assessment unit divisions as the river/stream assessment units –e.g. unit breaks occur when there is a change in designated use, a change in stream order, and/or at the HUC-12 boundary. This would provide significantly more confidence that the data collected is correctly informing the assessment of "homogeneous segments of surface waters"

- We would question why there is a "need to classify headwater streams and small feeder drainages, many of which are intermittent" if these waterways have not been included in past assessments or past Integrated Reports. Many of the intermittent waterways identified as impaired on the maps in the Hood River Basin rarely have surface water present and, in many cases, have no defined channel. Collecting data to show impairment would be difficult to nearly impossible due to the extremely intermittent nature of presence of flow. Also, the vast majority of these intermittent/feeder systems are located in areas without development and protected by land use classification. Inclusion of these intermittent and feeder systems appears to be a substantial overreach.

DEQ is required to assess waterbody segments based on data. The scale of these assessment units is a significant reach based on the evaluation data DEQ has available. And does not seems to be based on any geographic or hydrologic logic.

- Many of the waterways within the various HUC-12 sub-watersheds are listed due to data collected in other waterways from which they are hydrologically disconnected. In addition, many of these

waterways have never had any water quality data collected on that waterway. All of this results in a significant number of listings based on no information. See attached spreadsheet for which hydrologically separate waterways have (or don't have) monitoring sites within the 2018/2020 web map and which parameters have (or don't have) locations and/or monitoring sites attached to their listings.

- As an example, the 2018/2020 listing of the entire Grays Creek-Columbia sub-watershed for biocriteria is based on data collected in Harphan Creek (which led to the listing of Harphan Creek in 2010). Harphan Creek is 5-10 miles from Phelps Creek (and across watershed divides) and there is no data suggesting biocriteria issues in Phelps Creek, but Phelps Creek is now listed for biocriteria because it is lumped into the same HUC-12 as Harphan Creek.

- Pine Creek and Ditch Creek are both listed as impaired in the 2018/2020 assessment because they are lumped into the Odell Creek-Hood River sub-watershed. Odell Creek has been (and continues to be) listed as impaired based on data collected in that waterway. However, no data has ever been collected on Pine or Ditch creeks, so both basins are listed as impaired based on zero actual data. Data collected in the Odell Creek drainage does not equate to any usable information on Pine or Ditch creeks (see first bullet above).

- The HUC-12sub-watersheds cover significant waterway mileage (e.g. 88.8 miles for the Odell Creek-Hood River sub-watershed, 52.8 miles for the Indian Creek-Hood River sub-watershed, and 111.1 miles for the Grays Creek-Columbia sub-watershed), with an average of 83 miles per HUC-12 sub-watershed in the Hood River Basin. It is a significant stretch to state that an impairment found at 1 or 2 monitoring sites within these 50-100-milewaterways implies impairment throughout the entire system and again, we'll reiterate, especially if those systems are not hydrologically connected.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report process, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

DEQ will continue to improve and refine its methodologies as it prepares for the next cycle of the Integrated Report. The agency will begin planning for the next cycle, including soliciting input for suggested methodology improvements for the 2022 Integrated Report, in early 2020.

FMF-EFID#3: Suggested Change ID #132

Description: Assessment Units- River and stream unit appropriateness

Comment: The assessment units for rivers/streams generally seem to make better sense, but still make significant assumptions. E.g. the mainstem Hood River (from the mouth to confluence of the East and West forks) is a reasonable stream/river stretch to manage and to reasonably assume impairment in one section suggests impairment on other sections. But it is important to note that given the length of river, limited data available, multiple inputs into a river system, etc. that an impairment at one monitoring site does not mean there is an impairment along that whole river/stream section, it just suggests that there may be an impairment throughout that river/stream section

Response: DEQ agrees that an impairment at one monitoring location does not mean there is an impairment along that whole river/stream section, it just suggests that there may be an impairment in the river/stream segment. The impaired waters list identifies Assessment Units that require additional investigation and follow-up action. Follow-up investigations would initially focus on the sampling stations in the Assessment Unit that indicated impairment, the exact locations of which are known. These investigations would better delineate and characterize the extent of the impairment.

FMF-EFID#4: Suggested Change ID #133

Description: Assessment Units- Lakes and reservoirs

Comment: Assessment units for lakes and reservoirs should be based on more than simple surface area and, instead, should incorporate volume as well. Surface area to volume ratios could be quite important in understanding water quality.

Response: Assessment Units are segments or areas of waterbodies that are predetermined based on similar environmental/hydrographic characteristics and are used for tracking and reporting water quality over time. Lake and reservoir assessment units were developed to portion water bodies into manageable sizes for assessment purposes and for differentiating areas of standing water versus flowing water. The commenter is correct that surface area to volume ratios may be an important factor in understanding water quality and may be considered during development of TMDLs and water quality management plans.

FMF-EFID#5: Suggested Change ID #134

Description: Assessment Units- Criteria Applicability

Comment: A number of assessment units in the Hood River Basin (and, we assume, around the state outside of our service areas) contain multiple standards and/or time frames for water quality parameters. E.g. the Neal Creek-Hood River sub-watershed includes sections that have a ‘temperature (spawning)’

standard, as well as sections that do not have a 'temperature (spawning)' standard. In addition, where this sub-watershed does have a 'temperature (spawning)' standard, that standard varies between October 15-May 15 and January 1-May 15 depending on the section of waterway. This is not logical and makes it very difficult to know which standard(s) are being violated and when. Assessment units should be divided where water quality standards change.

Response: For the purposes of the Integrated Report, DEQ subdivides waterbodies into assessment units, which partition the state's waters into manageable units for assessment and reporting purposes. These assessment units are static and fixed over time, which make it possible to track water quality status and trends for future reports. Assessment units were delineated to represent river reaches or waterbodies that have similar environmental or hydrological characteristics. For instances, many assessment units are delineated on changes in designated beneficial uses or where major tributaries meet. The assessment units were not further divided based on mores specific subcategories of beneficial use such as the spawning fish use subcategory of fish and aquatic life. Waterbodies may have multiple water quality standards that apply to them. Because criteria may change over a small area, as in the spawning fish use designations, it is not feasible to divide and manage assessment units on every change in water quality criteria. However, impairments are based on the data from specific monitoring stations, and the specific criteria that apply to beneficial uses or use subcategories at the location where data are collected. The location of different fish uses within assessment units, including season or timing of use impairments, are considered during the TMDL process and in NPDES permit development.

FMF-EFID#6: Suggested Change ID #135

Description: Assessment Units- Prioritization

Comment: The proposed assessment units also don't seem to help in prioritizing areas of concern or areas to focus efforts. For example, the map of the Hood River Basin shows literally every mapped waterway as impaired. Inherently, that both: 1) seems incorrect (especially for upper tributaries in protected forest lands and/or other relatively undisturbed waterways), and 2) doesn't help with resource management or prioritization.

Response: The Integrated Report is a report on the quality of Oregon's surface waters every two years required by the federal Clean Water Act (CWA). Oregon surface waters are assessed to determine if they contain pollutants at levels that exceed protective water quality standards. The result of these analyses and conclusions is called the "Integrated Report" because it combines the requirements of Clean Water Act section 305(b) to develop a status report and the section 303(d) requirement to develop a list of impaired waters. The Integrated Report categorizes all assessed waterbodies. DEQ used water quality data to evaluate the most common beneficial uses, such as aquatic life, drinking water or recreation. Waterbodies that exceed protective water quality standards are identified as impaired, (which is also referred to as the "303(d) List"). Identifying a waterbody as impaired initiates the prioritization and development of a Total Maximum Daily Load (TMDL) for specified pollutants.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences. Follow-up monitoring and focused attention on impaired assessment units by local resource managers will be necessary to better delineate and characterize the extent of impairment and to

prioritize future actions. In response to comments received, DEQ will be updating its visual display to reflect watershed units as polygons, rather than a collection of stream networks

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FMF-EFID#7: Suggested Change ID #136

Description: Mapping tools/ Visualizations- Story Map/database consistency

Comment: Many of the listings in the 2018/2020 database do not match up with the 2018/2020 story map resulting in confusion and/or a high likelihood that some segment of the public has been misinformed about what is actually being proposed for listing

Response: The Story Map and interactive web map tool display the same 2018/2020 Draft Integrated Report conclusions rolled up to the overall status of an assessment unit. If an assessment unit was determined to be impaired for any parameter or beneficial use, the status is shown as impaired. The assessment database provides the assessment category reached for each assessed parameter, and DEQ will try to make this designation more clear to end users. DEQ will continue to improve its visual representation of the Integrated Report and correct any errors that have been identified.

FMF-EFID#8: Suggested Change ID #137

Description: Watershed Units- NHD Issues- Surface Waters #3

Comment: Waterways mapped in the database/map do not match up with realities on-the-ground: - A number of irrigation canals and other irrigation infrastructure are mapped as waterways and listed as impaired. We strongly dispute the suggestion that irrigation canals/infrastructure are waterways under the Clean Water Act or are subject to 303(d) listings. -If irrigation canals were going to be mapped as waterways, and, again, we strongly oppose this, the waterways need to be mapped in a hydrologically sensible manner, instead of being lumped into the watershed assessment unit they are geographically closest to. E.g. the East Fork Irrigation District Main Canal diverts water from the East Fork Hood River and "releases" water to the Eastside Canal, Central Lateral Pipeline, etc., but sections of it are lumped into the East Fork Hood River, Lower East Fork Hood River, and Odell Creek-Hood River assessment units and mapped as if itis another tributary within each assessment unit. This is not a logical or defensible use of the geographic, hydrologic, or operational realities of this infrastructure. -A number of waterways are mapped that do not exist and/or do not have defined channels on-the-ground. E.g. The map shows a waterway entering the Upper Green Point Reservoir from the west. While there would be drainage into the reservoir from the west during storm events, there is no defined or identifiable waterway in this location. -There are a number of sections of mapped waterway that are disconnected from any other waterway/system. They are likely not real waterways, or there is something else wrong with the mapping. -There are a number of sections of mapped waterway that seem to be attached to the wrong sub-watershed, or there is something else wrong with the mapping. -See attached spreadsheet for all of the mapping issues for each assessment unit.

Response: DEQ is not asserting "jurisdiction" over any new waters. DEQ water quality programs are implemented for waters of the state, which has a broad statutory definition in Oregon Statutes (ORS 468B.005): "Waters of the state" means lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or

coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters) that are located wholly or partially within or bordering the state or within its jurisdiction.

DEQ used the High Resolution National Hydrography Dataset (NHD), specifically the NHDPlus HR, to draw its assessment units and georeference its water quality standards. The NHD is the federal and state standard and represents the water drainage network of the United States with features such as rivers, streams, canals, lakes, ponds, coastline, dams, and stream gages. The National Hydrography Dataset (NHD) is developed and maintained by a partnership between the USGS and EPA. The dataset intended to "develop nationally-consistent geospatial datasets for the Nation" and provide agencies and organizations a common baseline for mapping aquatic resources. Unfortunately, the NHD does contain naming errors. A user can report suspected errors to the NHD Markup App at https://edits.nationalmap.gov/markup-app. This tool allows users to suggest edits, or "markups", to the NHD, Watershed Boundary Dataset (WBD), and NHDPlus HR. Users can suggest corrections and improvements to the data. Suggested edits are reviewed by the USGS and the NHD state stewards before they are approved for incorporation into the NHD or WBD datasets. In addition, in response to comments received, DEQ will be updating its visual display to reflect watershed units as polygons, rather than a collection of stream networks,

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FMF-EFID#9: Suggested Change ID #138

Description: NHD Issues- Prefer LLID

Comment: We'd also suggest using the DEQ hydrography, instead of the NHD for mapping/waterway definition, since the NHD includes a number of waterways that are questionable at best (e.g. waterway flowing into the Upper Green Point Reservoir). This could solve the issue with needing "to classify headwater streams and small feeder drainages, many of which are intermittent"

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report process, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

The NHD is the federal and state standard and represents the water drainage network of the United States with features such as rivers, streams, canals, lakes, ponds, coastline, dams, and stream gages. The National Hydrography Dataset (NHD) is developed and maintained by a partnership between the USGS and EPA. The dataset intended to "develop nationally-consistent geospatial datasets for the Nation" and provide agencies and organizations a common baseline for mapping aquatic resources. Unfortunately, the NHD does contain naming errors. A user can report suspected errors to the NHD Markup App at https://edits.nationalmap.gov/markup-app. This tool allows users to suggest edits, or "markups", to the NHD, Watershed Boundary Dataset (WBD), and NHDPlus HR. Anyone can suggest corrections and improvements to the data. Suggested edits are reviewed by the USGS and the NHD state stewards before they are approved for incorporation into the NHD or WBD datasets.

FMF-EFID#10: Suggested Change ID #139

Description: Assessment Conclusions (Specific) - Hood River watersheds

Comment: - There is no assessment at all for the Green Point Creek, Dead Point Creek, or Shingle Creek watersheds. - There is no assessment at all for the East Fork Hood River between the confluence of the Middle Fork Hood River and West Fork Hood River.

Response: No data were submitted in either the Green Point Creek, Dead Point Creek or Shingle Creek watersheds, therefore they remain unassessed. Similarly, no data were submitted on the segment of the East Fork Hood River between the confluence of the Middle Fork Hood River and West Fork Hood River. The previous listing on the East Fork Hood River was from data collected in different Assessment Units, and the East Fork Hood River between the confluence of the Middle Fork Hood River and West Fork Hood River was reassigned an unassessed status. DEQ encourages data collection in these unassessed assessment units for inclusion in future integrated reports.

FMF-EFID#11: Suggested Change ID #140

Description: Databases- Assessment Database

Comment: The 2018/2020 database does not list monitoring locations for most parameters, including sites newly listed in the 2018 assessment. This makes it very difficult to assess whether a listing makes sense for the entire assessment unit or not

Response: The 2018/2020 assessment database identifies monitoring locations for sites that were assessed for the 2018/2020 Integrated Report. DEQ identified an issue with some monitoring locations not displaying properly, but this issue has been corrected. Additionally, upon finalization of the Integrated Report, DEQ will be making the monitoring data used for the listing publicly available through the online assessment database, in addition to the AWQMS data portal.

FMF-EFID#12: Suggested Change ID #141

Description: Databases- AWQMS- Difficult to use- Login

Comment: An AWQMS login is required to view any of the data used during these assessments, so we (and, we assume, others in the public) were not able to review the underlying data that was used to form the assessment results. This undermines our ability to be confident in DEQ's methods and/or results.

Response: DEQ will be making the monitoring data used for the listing publicly available through the assessment database, in addition to the AWQMS data portal. Thus, the public can access the data through either the online assessment database or the AWQMS data portal.

AWQMS is a publically accessible database. Information on how to access AWQMS can be found at https://www.oregon.gov/deq/wq/Pages/WQdata.aspx as well as on the AWQMS login page at https://orwater.deq.state.or.us/Login.aspx. This data portal provides public read-only access to water

quality monitoring data through the State of Oregon. For reference, the public login information is: Username: ORPUBLIC and Password: ORPUBLIC

FMF-EFID#13: Suggested Change ID #142

Description: Databases- Assessment Database- Delistings

Comment: Information on which parameters or waterways were delisted in the draft report is not publicly provided. We were able to receive a list of said delistings for the Hood River Basin from our regional representative, but, as with many bullets above, this makes it difficult for members of the public to have full access to(and therefore confidence in)the assessment and its results

Response: The interactive map currently contains a delisting layer that could be activated. In addition, DEQ will be making the data used in the assessment available for download through its online assessment database when the report is finalized.

FMF-EFID#14: Suggested Change ID #143

Description: General Comment- Data - methodology

Comment: In summary, DEQ did not use scientifically or technically sound methodologies in developing this update to listings of impaired waterways, did not use accurate maps to develop this update or its presentation, did not develop defensible conclusions based on the data available, did not correctly translate past assessments into this update, and did not provide accurate/consistent data or its presentation for the public to adequately review this assessment and its results. In order to properly assess the waterways of Oregon, DEQ would need to establish a much more robust system of monitoring. Lacking actual data for the vast majority of the stream systems in Oregon is not an excuse and does not give DEQ the authority to make broad brushed assumptions to list most of the stream systems in the state. This methodology ignores all of the hard work that watershed groups, SWCD's, conservation groups, state agencies, federal agencies, irrigation districts, local governments, and citizens of the state have been doing, and continue to do, to address water quality and habitat concerns in our communities. We had hoped that the top down regulation concept had largely died and that we were in an era where collaboration and input from local communities matters. DEQ needs to start over and create a process and methodology that will foster support from communities, take input from those who actually work in these watersheds, and that is actually based in science and data.

Response: DEQ conclusions were based on scientifically and technically sound methodologies. Water quality assessment based on a watershed unit approach is a well-established methodology and is employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. It is rooted in scientific principles that support application of data from one or more locations for extrapolation across a broader geographical area. DEQ made a number of improvements to its Assessment Methodology through a stakeholder work group process, and its listing methodology was validated by an independent scientific peer review panel. DEQ utilized the National Hydrography Dataset (1:24,000 scale) as the basis for its assessment units. The National Hydrography Dataset (NHD) is developed and maintained by a partnership between the USGS and EPA. The dataset intended to "develop nationally-consistent geospatial datasets for the Nation" and provide agencies and organizations a common baseline for mapping aquatic resources. A user can report suspected errors to the NHD Markup App at

https://edits.nationalmap.gov/markup-app. This tool allows users to suggest edits, or "markups", to the NHD, Watershed Boundary Dataset (WBD), and NHDPlus HR. Anyone can suggest corrections and improvements to the data. Suggested edits are reviewed by the USGS and the NHD state stewards before they are approved for incorporation into the NHD or WBD datasets.

The Integrated Report is not a regulation. Its conclusions identify areas that require additional monitoring and follow-up action; it does not, unto itself, specify or determine any regulatory actions or consequences other than identifying that an area has impairment and is in need of follow-up monitoring for the development of management plans/action. DEQ clarified its translation of past assessments in a separate comment.

DEQ will make the supporting data available for download through DEQ's online database following final submittal. Data used in the assessment is also available through DEQ's Ambient Water Quality Monitoring System (AWQMS) data portal or upon request.

DEQ agrees that in order to improve its assessment, DEQ would need additional resources to establish a more robust system of monitoring for assessment purposes. Lacking these additional resources, DEQ must use all of the data that is collected and submitted to us through the data call. The Integrated Report assessment was designed to meet EPA reporting requirements. The improved methodology sought to capture all of the hard work that watershed groups, SWCD's, conservation groups, state agencies, federal agencies, irrigation districts, local governments, and citizens of the state have been doing, and continue to do, to address water quality and habitat concerns in our communities. Our new fixed assessment unit framework enables entities to identify status and trend changes over time. Additionally, DEQ created a transparent and consistent method for delisting waterbodies from its 303(d) list of impaired waters. It is our intent to utilize this delisting methodology and highlight all of the good work that is being performed across the state. DEQ will continue to collaborate with interested stakeholders for continued improvements to the Integrated Report and its Assessment Methodology.

FMF-EFID#15: Suggested Change ID #275

Description: Assessment Units - classification of headwaters and intermittent streams

Comment: We would question why there is a "need to classify headwater streams and small feeder drainages, many of which are intermittent" if these waterways have not been included in past assessments or past Integrated Reports. Many of the intermittent waterways identified as impaired on the maps in the Hood River Basin rarely have surface water present and, in many cases, have no defined channel. Collecting data to show impairment would be difficult to nearly impossible due to the extremely intermittent nature of presence of flow. Also, the vast majority of these intermittent/feeder systems are located in areas without development and protected by land use classification. Inclusion of these intermittent and feeder systems appears to be a substantial overreach.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National

Hydrologic Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

DEQ is not asserting jurisdiction over any new waters. Waters of the state has a broad statutory definition in Oregon Statutes (ORS 468B.005): "Waters of the state" means lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters) that are located wholly or partially within or bordering the state or within its jurisdiction. It is DEQ's interpretation that intermittent/ headwater streams fall squarely in this definition. At a higher policy level, it is important to understand water quality within these systems may have water quality impacts on downstream waterbodies and the aquatic life therein.

FMF-EFID#16: Suggested Change ID #276

Description: Crosswalk - General

Comment: Many of the listings in the 2018/2020 database do not match up with the 2012 Integrated Report assessment database and 303(d) list (https://www.deq.state.or.us/wq/assessment/rpt2012/search.asp):

See attached spreadsheet for all of the crosswalk issues between the 2012, and 2018/2020, assessments within each assessment unit. Issues include: <U+25AA> For a number of waterways/parameters, there are no records of parameter listings for the assessment unit (or any component waterway) in the 2012 database, although the 2018/2020 database claims said parameters were listed in or prior to 2012. <U+25AA> For a number of waterways/parameters, the 2018/2020 database states a parameter was listed as Category 5 for the assessment unit (or any component waterway) in 2012, but the 2012 database shows that same parameter as Category 2 or 3 (depending on parameter and waterway).

Response: DEQ reviewed the spreadsheet provided by the commenter. The majority of the impairments provided were EPA additions to the 2012 303(d) list that were finalized in December 2018. See the table below for specific information on the identified waterbody listings.

HUC-12 - Watershed Unit	AU ID	Waterway Miles	2012 database	Clarification
Indian Creek - Hood River	OR_WS_170701050703_02_102007	0 to 7.8	Comments noted no listing	Indian Creek was an EPA addition to the 2012 303(d) list for: Dieldrin, heptachlor epoxide, DDT, DDE and DDD
Neal Creek	OR_WS_170701050701_02_102005	0-11.1	Comments noted no listing	EPA addition to 2012 list: 4,4´-DDD
		0-11.1	Comments noted no listing	EPA addition to 2012 list: 4,4´-DDE
		0-11.1	Comments noted no listing	EPA addition to 2012 list: 4,4´-DDT
		0-5.6	Comments noted no listing	EPA addition to 2012 list: Dieldrin
Lenz Creek	OR_WS_170701050701_02_102005	0-1.8	Comments noted no listing	EPA addition to 2012 list: 4,4´-DDD
		0-1.8	Comments noted no listing	EPA addition to 2012 list: 4,4´-DDE
		0-1.8	Comments noted no listing	EPA addition to 2012 list: 4,4´-DDT
		0-1.5	Comments noted no listing	EPA addition to 2012 list: Heptachlor epoxide
		0-1.5	Comments noted no listing	EPA addition to 2012 list: Dieldrin
Odell Creek - Hood River	OR_WS_170701050702_02_102006	0-6.6	Comments noted no listing	EPA addition to 303(d) list: 4,4´-DDD
		0-6.6	Comments noted no listing	EPA addition to 303(d) list: 4,4´-DDE
		0-9	Comments noted no listing	EPA addition to 303(d) list: 4,4´-DDT
		0-6.6	Comments noted no listing	EPA addition to 303(d) list: Chlorpyrifos
		0-6.6	Comments noted no listing	EPA addition to 303(d) list: Dieldrin
Upper East Fork Hood River	OR_WS_170701050501_02_101996	0-1.7	Comments noted no listing	Unnamed stream - tributary to East Fork Hood River (Record ID 1218)
Hood River	OR_SR_1707010507_02_101512	0-14.6	Comments noted no listing	EPA addition to 303(d) list: 4,4´-DDE
		0-14.6	Comments noted no listing	EPA addition to 303(d) list: Dissolved Oxygen - Spawning

HUC-12 - Watershed Unit	AU ID	Waterway Miles	2012 database	Clarification
Laurance Lake	OR_LK_1707010505_02_100017	0-3.8	Comments noted no listing	Clear Branch Temperature listing mapped to Laurance Lake - Record ID 1201

FMF-EFID#17: Suggested Change ID #277

Description: Methodology - Not scientifically and technically defensible

Comment: ….DEQ did not use scientifically or technically sound methodologies in developing this update to listings of impaired waterways,

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report process, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrologic Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

In 2015, the Oregon Legislature directed DEQ to publish its listing methodology prior to the start of drafting the Integrated Report (ORS 468B.039). This process ensured that the methodology was unbiased and transparent and not developed or altered in an ad-hoc manner in response to assessment results. Updates to its Assessment Methodology were vetted through a stakeholder work group process and a subsequent 60 day public comment period. In addition, there was an opportunity for public comment on the draft assessment methodologies during the July 2018, Environmental Quality Commission meeting.

FMF-EFID#18: Suggested Change ID #278

Description: Assessment Conclusions - General

Comment: DEQ did not……. develop defensible conclusions based on the data available,

Response: DEQ assessment conclusions were made based on application of the 2018 Integrated Report Assessment Methodology to the data received through its statewide data call. Methods used to identify waterbodies as impaired underwent scientific peer review. Absent a specific conclusion in question, DEQ is unable to review impairment determinations.

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39. Comments from: Polk County Board of Commissioners

PCBC#1: Suggested Change ID #1

Description: Watershed Units- Extrapolation- Watershed unit assessment conclusions

Comment: I strongly oppose DEQ's decision to list water bodies on farm and forestland as water quality impaired without data to support those listings, as it has done in its 2018-2020 Integrated Report … I strongly oppose DEQ's decision to extrapolate listings of waterways and ditches based upon data collected from neighboring properties. Water quality naturally differs from water body to water body, particularly when those waterways are under different ownership and may have experienced differing current and historic riparian management. DEQ has presented no evidence that this extrapolation is scientifically valid or sound. Instead, it appears to be an attempt to list and regulate waterways without first going through the necessary step of determining that data actually shows an impairment.

Response: Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

PCBC#2: Suggested Change ID #2

Description: Watershed Units- Unfair Characterization- Report appears to indicate farms and forests are experiencing declining water quality

Comment: Report … makes it look like farms and forests are experiencing declining water quality, particularly when it appears that DEQ lacks actual data for a significant portions of the waterways listed.

Response: The Integrated Report makes no conclusions about the trends in water quality across the state. It is just a snapshot of the status of state waters and whether beneficial uses are being supported. Identification of increased areas of impaired water quality condition is likely more attributable to the amount of data we assessed in 2018, enhanced resolution of Oregon's hydrography and a construct of how DEQ is required to report to EPA than it can be attributed to any specific known trends in broad scale water quality changes.

PCBC#3: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

PCBC#4: Suggested Change ID #11

Description: Watershed Units- Unfair characterization of agriculture and forest land- Assessment targets agricultural lands as sources of impairments

Comment: This new method of designation appears to directly target agricultural lands as the source of water quality impairments

Response: The Integrated Report is an objective assessment of the status of state waters based on data that were submitted to DEQ. The methods used to make assessment conclusions were finalized in the 2018 methodology document prior to any data evaluation. The assessment results and conclusions in the Integrated Report neither attributed the sources of water quality impairments nor targeted any entities such as agricultural lands.

PCBC#5: Suggested Change ID #28

Description: Process- Communication/Outreach- County Official Outreach

Comment: We are disappointed that the agency did not reach out to county officials about the Integrated Report prior to listing the vast majority of our waterbodies as water quality impaired. We believe we were entitled. as local government, to forewarning and a more in depth discussion of the methodologies used and the assumptions that the Integrated Report makes about waterways in our counties, particularly when the agency has made some very significant policy calls that will have a direct impact on counties and county land.

Response: DEQ performed extensive outreach on its draft 2018/2020 Integrated Report and provided multiple opportunities to comment on its methodology and draft report.

The draft Integrated Report was open for public comment from Sept. 30, 2019, through Jan. 6, 2020, for a total of 99 days, which included a 34 day extension in response to stakeholder requests. Notifications were sent to over 3,000 individuals signed up on the GovDelivery listserv. DEQ staff subsequently held six informational sessions across the state to review the results of the report and assisted participants with its new interactive tools. The six informational sessions included: Portland on Oct. 15, 2019; Bend on Oct. 22, 2019; Central Point/Medford on Oct. 29, 2019; Newport on Nov. 5, 2019; Corvallis on Nov. 12, 2019; and Salem on Nov. 14, 2019. DEQ staff also held a webinar on Nov. 4, 2019, and the webinar was recorded and available on the Integrated Report website on-line Webinar.

DEQ will continue to adapt its approach to outreach and communications in the next Integrated Report and encourages your input and participation. The agency anticipates convening a stakeholder group in 2020, to evaluate and make recommended changes to the methodology, with the methodology going out for public comment in approximately Dec. 2020.

PCBC#6: Suggested Change ID #57

Description: Watershed Units- Data within units

Comment: We object to DEQ's decision to list water bodies throughout the state as water quality impaired without data to support those listings.

Response: Data and information was used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions. Assessments were conducted following the 2018 Assessment Methodology.

PCBC#7: Suggested Change ID #62

Description: Watershed Units- Extrapolation- Data

Comment: DEQ's methodology, especially as it relates to watershed assessment units, is an inappropriate use of the data available and risks invalidating this update to listings of impaired waterways. DEQ should not assume or declare impairment in most of the waterways in the state based on a lack of data.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5 ("Impaired"), it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

It is important to note that the Oregon Legislature passed state law (ORS 468B.039) in 2015 which directed DEQ to publish the methodology prior to analyzing water quality data and drafting the Integrated Report (two-step process). This process ensures that methodology is robust and not developed or altered in an ad-hoc manner in response to assessment results. DEQ held public stakeholder and work group processes for updates to the Assessment Methodology prior to the Integrated Report being drafted. This

process was inclusive and included representatives from industry, environmental interests, tribes, agriculture and forestry on the work group.

Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

PCBC#8: Suggested Change ID #80

Description: Process - Opportunity to Comment

Comment: ….this very impactful policy work has left us with a narrow window of opportunity to comment…

Response: DEQ performed extensive outreach on its draft 2018/2020 Integrated Report and provided multiple opportunities to comment on its methodology and draft report.

The draft Integrated Report was open for public comment from Sept. 30, 2019, through Jan. 6, 2020, for a total of 99 days, which included a 34 day extension in response to stakeholder requests. Notifications were sent to over 3,000 individuals signed up on the GovDelivery listserv. DEQ staff subsequently held six informational sessions across the state to review the results of the report and assisted participants with its new interactive tools. The six informational sessions included: Portland on Oct. 15, 2019; Bend on Oct. 22, 2019; Central Point/Medford on Oct. 29, 2019; Newport on Nov. 5, 2019; Corvallis on Nov. 12, 2019; and Salem on Nov. 14, 2019. DEQ staff also held a webinar on Nov. 4, 2019, and the webinar was recorded and available on the Integrated Report website on-line Webinar.

DEQ will continue to adapt its approach to outreach and communications in the next Integrated Report and encourages your input and participation. The agency anticipates convening a stakeholder group in 2020, to evaluate and make recommended changes to the methodology, with the methodology going out for public comment in approximately Dec. 2020.

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40. Comments from: Marion County

MC#1: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as “impaired” indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired.

Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

MC#2: Suggested Change ID #11

Description: Watershed Units- Unfair characterization of agriculture and forest land- Assessment targets agricultural lands as sources of impairments

Comment: This new method of designation appears to directly target agricultural lands as the source of water quality impairments

Response: The Integrated Report is an objective assessment of the status of state waters based on data that were submitted to DEQ. The methods used to make assessment conclusions were finalized in the 2018 methodology document prior to any data evaluation. The assessment results and conclusions in the Integrated Report neither attributed the sources of water quality impairments nor targeted any entities such as agricultural lands.

MC#3: Suggested Change ID #59

Description: Watershed Units- Extrapolation- Watershed unit connectivity

Comment: We have concerns with the use of sub-watersheds (HUC-12) as the assessment unit. DEQ's methodology stated that "through the assessment process, DEQ will review the watershed units more closely", but that does not seem to have occurred in the Hood River Basin. The sub-watersheds often include multiple waterways that come from separate source waters, flow through different land-uses, and are not hydrologically connected. DEQ is required to assess waterbody units based on data and it appears that the scale of these assessment units does not allow that to happen with the data DEQ has. It does not make sense to assume that an impairment measured in one waterway means that the same impairment is present in any other waterway, or even that the impairment is suggested in the unmeasured waterway. At a minimum, the assessment unit should include just the waterways that are hydrologically connected instead of lumping them all together in one HUC-12 boundary. Best practices would suggest that DEQ actually "review the watershed units more closely" for other differences in watershed homogeneity, in addition to hydrologic connectivity.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

DEQ will continue to improve and refine its methodologies as it prepares for the next cycle of the Integrated Report. The agency will begin planning for the next cycle, including soliciting input for suggested methodology improvements for the 2022 Integrated Report, in early 2020.

MC#4: Suggested Change ID #62

Description: Watershed Units- Extrapolation- Data

Comment: DEQ's methodology, especially as it relates to watershed assessment units, is an inappropriate use of the data available and risks invalidating this update to listings of impaired waterways. DEQ should not assume or declare impairment in most of the waterways in the state based on a lack of data.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5 ("Impaired"), it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

It is important to note that the Oregon Legislature passed state law (ORS 468B.039) in 2015 which directed DEQ to publish the methodology prior to analyzing water quality data and drafting the Integrated Report (two-step process). This process ensures that methodology is robust and not developed or altered in an ad-hoc manner in response to assessment results. DEQ held public stakeholder and work group processes for updates to the Assessment Methodology prior to the Integrated Report being drafted. This process was inclusive and included representatives from industry, environmental interests, tribes, agriculture and forestry on the work group.

Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

MC#5: Suggested Change ID #95

Description: Regulatory Impact- Concern of long-term ramifications to county programs

Comment: Concern about the long-term ramifications, whether intentional or unintentional, to county programs as a result of this change.

Response: In 2016, DEQ undertook a major improvement effort to streamline the Integrated Report and address longstanding issues. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline, marine territorial waters) into manageable units primarily for assessment and reporting purposes and to enable tracking of water quality status over time. A watershed unit listed as Impaired indicates that an impairment exists within the watershed, not that the entire watershed is considered impaired. The

Integrated report identifies areas that require additional investigation and follow-up action; it does not, unto itself, specify or determine any regulatory actions or consequences. Follow-up monitoring of impaired assessment units will be necessary to better delineate and characterize the extent of impairment before any prescriptive regulatory actions are taken.

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41. Comments from: Union County Board of Commissioners

UCBC#1: Suggested Change ID #2

Description: Watershed Units- Unfair Characterization- Report appears to indicate farms and forests are experiencing declining water quality

Comment: Report … makes it look like farms and forests are experiencing declining water quality, particularly when it appears that DEQ lacks actual data for a significant portions of the waterways listed.

Response: The Integrated Report makes no conclusions about the trends in water quality across the state. It is just a snapshot of the status of state waters and whether beneficial uses are being supported. Identification of increased areas of impaired water quality condition is likely more attributable to the amount of data we assessed in 2018, enhanced resolution of Oregon's hydrography and a construct of how DEQ is required to report to EPA than it can be attributed to any specific known trends in broad scale water quality changes.

UCBC#2: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

DEQ is not asserting "jurisdiction" over any new waters. DEQ water quality programs are implemented for waters of the state, which has a broad statutory definition in Oregon Statutes (ORS 468B.005):

"Waters of the state" means lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters) that are located wholly or partially within or bordering the state or within its jurisdiction.

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

UCBC#3: Suggested Change ID #11

Description: Watershed Units- Unfair characterization of agriculture and forest land- Assessment targets agricultural lands as sources of impairments

Comment: This new method of designation appears to directly target agricultural lands as the source of water quality impairments

Response: The Integrated Report is an objective assessment of the status of state waters based on data that were submitted to DEQ. The methods used to make assessment conclusions were finalized in the 2018 methodology document prior to any data evaluation. The assessment results and conclusions in the Integrated Report neither attributed the sources of water quality impairments nor targeted any entities such as agricultural lands.

UCBC#4: Suggested Change ID #28

Description: Process- Communication/Outreach- County Official Outreach

Comment: We are disappointed that the agency did not reach out to county officials about the Integrated Report prior to listing the vast majority of our waterbodies as water quality impaired. We believe we were entitled. as local government, to forewarning and a more in depth discussion of the methodologies used and the assumptions that the Integrated Report makes about waterways in our counties, particularly when the agency has made some very significant policy calls that will have a direct impact on counties and county land.

Response: DEQ performed extensive outreach on its draft 2018/2020 Integrated Report and provided multiple opportunities to comment on its methodology and draft report.

The draft Integrated Report was open for public comment from Sept. 30, 2019, through Jan. 6, 2020, for a total of 99 days, which included a 34 day extension in response to stakeholder requests. Notifications were sent to over 3,000 individuals signed up on the GovDelivery listserv. DEQ staff subsequently held six informational sessions across the state to review the results of the report and assisted participants with its new interactive tools. The six informational sessions included: Portland on Oct. 15, 2019; Bend on Oct. 22, 2019; Central Point/Medford on Oct. 29, 2019; Newport on Nov. 5, 2019; Corvallis on Nov. 12, 2019; and Salem on Nov. 14, 2019. DEQ staff also held a webinar on Nov. 4, 2019, and the webinar was recorded and available on the Integrated Report website on-line Webinar.

DEQ will continue to adapt its approach to outreach and communications in the next Integrated Report and encourages your input and participation. The agency anticipates convening a stakeholder group in 2020, to evaluate and make recommended changes to the methodology, with the methodology going out for public comment in approximately Dec. 2020.

UCBC#5: Suggested Change ID #59

Description: Watershed Units- Extrapolation- Watershed unit connectivity

Comment: We have concerns with the use of sub-watersheds (HUC-12) as the assessment unit. DEQ's methodology stated that "through the assessment process, DEQ will review the watershed units more closely", but that does not seem to have occurred in the Hood River Basin. The sub-watersheds often include multiple waterways that come from separate source waters, flow through different land-uses, and are not hydrologically connected. DEQ is required to assess waterbody units based on data and it appears that the scale of these assessment units does not allow that to happen with the data DEQ has. It does not make sense to assume that an impairment measured in one waterway means that the same impairment is present in any other waterway, or even that the impairment is suggested in the unmeasured waterway. At a minimum, the assessment unit should include just the waterways that are hydrologically connected instead of lumping them all together in one HUC-12 boundary. Best practices would suggest that DEQ actually "review the watershed units more closely" for other differences in watershed homogeneity, in addition to hydrologic connectivity.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5 ("Impaired"), it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

DEQ will continue to improve and refine its methodologies as it prepares for the next cycle of the Integrated Report. The agency will begin planning for the next cycle, including soliciting input for suggested methodology improvements for the 2022 Integrated Report, in early 2020.

UCBC#6: Suggested Change ID #62

Description: Watershed Units- Extrapolation- Data

Comment: DEQ's methodology, especially as it relates to watershed assessment units, is an inappropriate use of the data available and risks invalidating this update to listings of impaired waterways. DEQ should not assume or declare impairment in most of the waterways in the state based on a lack of data.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5 ("Impaired"), it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

It is important to note that the Oregon Legislature passed state law (ORS 468B.039) in 2015 which directed DEQ to publish the methodology prior to analyzing water quality data and drafting the Integrated Report (two-step process). This process ensures that methodology is robust and not developed or altered in an ad-hoc manner in response to assessment results. DEQ held public stakeholder and work group processes for updates to the Assessment Methodology prior to the Integrated Report being drafted. This process was inclusive and included representatives from industry, environmental interests, tribes, agriculture and forestry on the work group.

Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

UCBC#7: Suggested Change ID #95

Description: Regulatory Impact- Concern of long-term ramifications to county programs

Comment: Concern about the long-term ramifications, whether intentional or unintentional, to county programs as a result of this change.

Response: In 2016, DEQ undertook a major improvement effort to streamline the Integrated Report and address longstanding issues. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline, marine territorial waters) into manageable units primarily for assessment and reporting purposes and to enable tracking of water quality status over time. A watershed unit listed as Impaired indicates that an impairment exists within the watershed, not that the entire watershed is considered impaired. The Integrated report identifies areas that require additional investigation and follow-up action; it does not, unto itself, specify or determine any regulatory actions or consequences. Follow-up monitoring of impaired assessment units will be necessary to better delineate and characterize the extent of impairment before any prescriptive regulatory actions are taken.

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42. Comments from: Owyhee Irrigation District

OwID#1: Suggested Change ID #16

Description: Regulatory Impact- Overreach of report

Comment: I farm, and own property that would be impacted by this new ruling of "impaired" waterways. I find it insulting that these new rules are based on no factual findings in the actual waterways or ditches. It is unreasonable to make up rules that have such broad sweeping effect without actually doing the necessary work to support those rules. Please stop trying to overreach and control every aspect of our lives with baseless administrative rulings.

Response: The Integrated Report is not a rule. It is a federal Clean Water Act requirement that Oregon report on the quality of its surface waters every two years. The Integrated report combines the requirements of Clean Water Act section 305(b) to develop a status report and the section 303(d) requirement to develop a list of impaired waters. DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline, marine territorial waters) into manageable units primarily for assessment and reporting purposes and to enable tracking of water quality status over time. The Integrated Report identifies areas that require additional investigation and follow-up action; it does not, unto itself, specify or determine any regulatory actions or consequences. Follow-up monitoring

of impaired assessment units will be necessary to better delineate and characterize the extent of impairment before any prescriptive regulatory actions are taken.

OwID#2: Suggested Change ID #100

Description: Waters of the State-Designated Uses- Owyhee Irrigation District

Comment: Serious concerns with regard to the report, specifically the listing of OID's canals, pipelines, laterals, and drains as 303(d) Impaired Waters.

Owyhee Irrigation District operates under Oregon State law as an irrigation district with the directive to supply irrigation water to farmland for the production of crops. The specific beneficial use of the water is for crop production and is not for wildlife, recreation, fishing, nor drinking water. The report fails to take into consideration the fact that OID's conveyance systems do not use natural streams as part of their conveyance system. In reviewing the maps in the report, it appears that a shotgun approach was used in listing impaired waters in that OID closed systems and pipelines are listed as impaired waters which require a Total Maximum Daily Load (TMDL). This overreach by Oregon DEQ is not supported by proper sampling, testing, nor on the ground research.

Given the lack of data supporting the findings, OID is unable to specifically address all of the errors in the report and all of the incorrectly identified water conveyance systems of the district.

OID requests and strongly encourages DEQ to remove OID's canals, pipelines, laterals, and drains as impaired waters from this report.

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted. DEQ is not asserting "jurisdiction" over any new waters. DEQ water quality programs are implemented for waters of the state, which has a broad statutory definition in Oregon Statutes (ORS 468B.005): "Waters of the state" means lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters) that are located wholly or partially within or bordering the state or within its jurisdiction.

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses . The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

The NHD is the federal and state standard and represents the water drainage network of the United States with features such as rivers, streams, canals, lakes, ponds, coastline, dams, and stream gages. The National Hydrography Dataset (NHD) is developed and maintained by a partnership between the USGS and EPA. The dataset intended to "develop nationally-consistent geospatial datasets for the Nation" and provide agencies and organizations a common baseline for mapping aquatic resources. Unfortunately, the NHD does contain errors. A user can report suspected errors to the NHD Markup App at https://edits.nationalmap.gov/markup-app. This tool allows users to suggest edits, or "markups", to the NHD, Watershed Boundary Dataset (WBD), and NHDPlus HR. Anyone can suggest corrections and improvements to the data. Suggested edits are reviewed by the USGS and the NHD state stewards before they are approved for incorporation into the NHD or WBD datasets.

DEQ will continue to improve and refine its methodologies as it prepares for the next cycle of the Integrated Report. The agency will begin planning for the next cycle, including soliciting input for suggested methodology improvements for the 2022 Integrated Report, in early 2020.

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43. Comments from: Oregon Association of County Engineers and Surveyors

OACE-S#1: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

OACE-S#2: Suggested Change ID #97

Description: Watershed Units- NHD- drainage ditch clarification

Comment: OACES is writing to express concern with the draft 2018-2020 Integrated Report, which includes intermittent drainage ditches as regulated water bodies without clear intent. On the surface, the report appears to be an attempt to regulate waterways that are typically exempt under the Federal Clean Water Act, such as roadside and agricultural ditches. The assessment methodology does not specify what type of drainage ditches are included, which implies that all drainage ditches within the assessment area are subject to the same regulations as the adjacent streams and rivers, even if they do not serve the same function. Many roadside ditches are not connected to adjacent water bodies and do not have an impact on the water quality of the watershed overall.

County road departments play a key role in managing Oregon's water quality, as they maintain a large number of bridges and culverts that are critical for water quality and fish passage. However, including drainage ditches as impaired waterways will expand the regulatory requirements to most road maintenance, which would make it more difficult for counties to maintain their system.

OACES is requesting clarification on what DEQ categorizes as an intermittent drainage ditch, specifically if drainage ditches in the county right-of-way are included in the assessment even if they do not feed into an adjacent stream.

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted

DEQ is not asserting "jurisdiction" over any new waters. DEQ water quality programs are implemented for waters of the state, which has a broad statutory definition in Oregon Statutes (ORS 468B.005): "Waters of the state" means lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters) that are located wholly or partially within or bordering the state or within its jurisdiction. The National Hydrography Dataset (NHD) is developed and maintained by a partnership between the USGS and EPA. However, it does not consistently identify "intermittent" and "ephemeral" streams accurately.

A watershed unit identified as impaired that contains canals and/or ditches indicates an impairment exists within the sub-watershed or HUC-12 level, not that every waterbody within the sub-watershed is impaired. Assessment Units identified as Category 5 in the Integrated Report are areas that require additional investigation and follow-up action; it does not, unto itself, specify or determine any regulatory actions or consequences. Focused attention on impaired assessment units will be necessary to better delineate and characterize the extent of impairment before any regulatory actions may be taken.

OACE-S#3: Suggested Change ID #98

Description: Process- Communications/Outreach- Local government involvement #3 (general)

Comment: Disappointment local government representatives were not included in the work group that evaluated updated methodology.

Response: DEQ performed extensive outreach on its draft 2018/2020 Integrated Report and provided multiple opportunities to comment on its methodology and draft report.

In 2015, the Oregon Legislature directed DEQ to publish the listing methodology prior to the start of drafting the Integrated Report (ORS 468B.039). This process ensured that the methodology was unbiased and transparent and not developed or altered in an ad-hoc manner in response to assessment results. Updates to its Assessment Methodology were vetted through a stakeholder work group process and a subsequent 60 day public comment period. In addition, there was an opportunity for public comment on the draft assessment methodologies during the July 2018, Environmental Quality Commission meeting.

DEQ will continue to adapt its approach to outreach and communications in the next Integrated Report and encourages your input and participation. The agency anticipates convening a stakeholder group in 2020 to evaluate and make recommended changes to the methodology, with the methodology going out for public comment in approximately December 2020.

OACE-S#4: Suggested Change ID #99

Description: Regulatory Impact- Regulation Concern- General

Comment: Concern over regulations arising from listings

Response: The Integrated Report is not a rule. It is a required reporting to EPA of the status of state waters and whether beneficial uses are supported. Assessment Units were created for reporting purposes. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

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44. Comments from: City of Troutdale

CT#1: Suggested Change ID #115

Description: Watershed Units- Realign Columbia Slough and Beaver Creek

Comment: The City agrees with DEQ's desire to create fixed AUs that satisfy the desired outcomes outlined in the report. According to the interactive web map application, the City has four separate assessment units (AU) within its jurisdictional limits. Two of the City's AUs, HUC 12 Name: Beaver Creek-Sandy River (OR_WS_170800010703_02_103703) and HUC 12 Name: Columbia Slough (OR_WS_170900120201_02_104554), fall under the AU classification of streams that are grouped into a watershed unit at the HUC12 or sub-watershed scale. These represent streams of Strahler Stream Order of 4 or less. DEQ's Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters says, "Using environmentally and/or hydrologically relevant breaks means the assessments units should represent homogeneous segments of surface waters." The report goes on to mention under the watershed AU classification that, "Where other relevant data layers indicate differences in watershed homogeneity, further divisions may be warranted in the assessment unit."

To this point, watershed homogeneity does not appear to match the AU for HUC 12 Name: Columbia Slough (OR_WS_170900120201_02_104554) in Figure 1 or HUC 12 Name: Beaver Creek-Sandy River (OR_WS_170800010703_02_103703) in Figure 2. The City requests DEQ to review the delineation of these two watershed AUs. From the City's understanding, the natural waterways of Arata and Salmon Creek in Figure 1 do not drain into Fairview Lake. Instead, the Sandy Drainage Improvement Company of the Multnomah County Drainage District oversees drainage from these two creeks into the Columbia River through a pump station via the West Sundial Wetlands. In Figure 2, the tributaries that comprise their AU (OR_WS_170800010703_02_103703) within the City's jurisdiction would be better served with their parent stream/river AU of Beaver Creek (OR_SR_1708000107_02_103612).

Response: DEQ agrees with this comment and will incorporate the changes into the final report.

CT#2: Suggested Change ID #116

Description: TMDL Applicability- Columbia Slough-Willamette Basin TMDL

Comment: Currently, the Integrated Report draft has the active total maximum daily loads (TMDL) listed for HUC12 Name: Columbia Slough and HUC 12 Name: Beaver Creek-Sandy River as the Columbia Slough-Willamette Basin TMDL and Sandy River Basin TMDL. The Columbia Slough-Willamette Basin TMDL, however, should be removed as an active TMDL for both AUs because the streams are not hydrologically connected to those watersheds. The inclusion of the Columbia Slough-Willamette Basin TMDL appears to be a mistake. For reference, the 2012 Integrated Report did not have the Columbia Slough-Willamette Basin TMDL listed for the streams under the new AUs, nor does the recently approved Willamette Basin Mercury TMDL include these streams. There are no monitoring locations within the City's jurisdiction for either the HUC 12 Name: Columbia Slough AU or HUC 12 Name: Beaver Creek-Sandy River AU.

Response: DEQ agrees with this comment and will make these changes.

CT#3: Suggested Change ID #117

Description: Waters of the State- Columbia Slough/Beaver Creek

Comment: "Unnamed streams" of both natural and man-made conveyance are found within the HUC 12 Name: Columbia Slough AU and HUC 12 Name: Beaver Creek-Sandy River AU. The National Hydrography Dataset (NHD) includes man-made features in both Figures 1 and 2 as "waters of the state", but the City believes some of these features should not be classified in this manner. A closer review of these features is needed for these AUs, and clarification of what qualifies as "waters of the state" in terms of "…bodies of surface or underground waters, natural or artificial…" as it applies to underground pipes etc. would be helpful.

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

The NHD is the federal and state standard and represents the water drainage network of the United States with features such as rivers, streams, canals, lakes, ponds, coastline, dams, and stream gages. The National Hydrography Dataset (NHD) is developed and maintained by a partnership between the USGS

and EPA. The dataset intended to "develop nationally-consistent geospatial datasets for the Nation" and provide agencies and organizations a common baseline for mapping aquatic resources. Unfortunately, the NHD does contain errors. A user can report suspected errors to the NHD Markup App at https://edits.nationalmap.gov/markup-app. This tool allows users to suggest edits, or "markups", to the NHD, Watershed Boundary Dataset (WBD), and NHDPlus HR. Anyone can suggest corrections and improvements to the data. Suggested edits are reviewed by the USGS and the NHD state stewards before they are approved for incorporation into the NHD or WBD datasets.

CT#4: Suggested Change ID #118

Description: Assessment Conclusions- Duplicate listings

Comment: Another item that was noticed when reviewing the data in the assessment database was the repeat listing of chlordane in the Beaver Creek AU (OR_SR_1708000107_02_103612) and HUC 12 Name: Beaver Creek-Sandy River AU (OR_WS_170800010703_02_103703) for the human health criteria. The HUC12 Name: Beaver Creek-Sandy River AU also had a repeat listing of DDT 4/4' for human health criteria.

Response: Thank you for your comment. DEQ recognized a summation error in the chlordane assessment. The error has been corrected and replaced for all chlordane assessments. DEQ also found an error in the display of DDT metabolites for the human health assessment. The display has been corrected.

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45. Comments from: Oregon Association of Clean Water Agencies (ACWA)

OACWA#1: Suggested Change ID #55

Description: General- Water Quality Efforts

Comment: Water quality protection on USDA Forest Service (USDAFS) land has significantly improved in the last twenty years with the implementation of aquatic conservation strategies commonly known as the Northwest Forest Plan, PACFISH (PACFISH addresses anadromous fish-producing watersheds in the Northwest and northern California) and INFISH (INFISH addresses native inland fish in Oregon, Washington, Idaho, and Montana), which amended the national forest land and resource management plans in the state. Other regional and national strategies that focus on water quality protection include USDAFS regional aquatic restoration strategy and USDAFS National Watershed Condition framework which assess watershed condition and prioritize and focus active restoration to improve watershed condition. A national BMP program now in place has renewed emphasis on BMPs and requires use of standardized monitoring protocols. One of the key components of BMP monitoring is identifying corrective actions and adaptive management needed to improve performance on water quality protection.

Response: DEQ acknowledges and is grateful for your continued efforts on improving water quality.

OACWA#2: Suggested Change ID #73

Description: General comment - compliment

Comment: We would like to express our gratitude to the DEQ for all of the hard work they have done in gathering and disseminating the integrated report. We recognize the enormity of the task performed and the work still to be done.

Response: Thank you for your support.

OACWA#3: Suggested Change ID #201

Description: Mapping Tools / Data Visualization- Geocortex App - Reliability

Comment: Some local agencies have had challenges accessing the site, downloading pages, accessing the online database, and working with the interactive online map. DEQ should improve the site's performance and accessibility, perhaps by creating a means of downloading some or all portions of the system for local access.

Efforts to access data through the map periodically fail—the system crashes or times out with errors. See error screen shot.

Response: Thank you for the feedback on DEQ's new Integrated Report online tools. DEQ will make every effort to improve performance of these systems. DEQ has made the GIS data that feeds the web maps available for download (https://www.oregon.gov/deq/wq/Pages/2018-Integrated-Report.aspx).

OACWA#4: Suggested Change ID #202

Description: Mapping Tools / Data Visualization- Geocortex App - Display Sampling Locations

Comment: The Assessment Geodatabase would be more helpful if it included the sampling locations and water quality data used in the analysis.

Response: Monitoring locations used in the 2018/2020 assessment are currently available as a layer in the interactive web map. In the final version of the report, these monitoring locations will be on by default and will become visible when zoomed in. The analytical data used in the assessment will be available for download through DEQ's online database.

OACWA#5: Suggested Change ID #203

Description: Crosswalk- Methodology- Publish

Comment: Public access to the geospatial methodology used to coordinate the 2012 with the 2018/2020 reports should be provided to enable understanding of how conclusions were reached in cases of potential discrepancies between the reports.

Response: DEQ will make the geospatial methodology used to crosswalk the 2012 and 2018/2020 Integrated Report and the crosswalk itself available on its website following its submittal to EPA. Before that information is available online, DEQ staff are available to answer any specific crosswalk questions.

OACWA#6: Suggested Change ID #204

Description: Waters of the State- Man-made features

Comment: AUS for 'unnamed streams' include a wide range of natural and man-made features, such as irrigation canals, city streets, buried pipelines, dry creek beds, and land depressions. The database should be revised to remove those AUS that are not applicable.

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses . The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new

information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

The NHD is the federal and state standard and represents the water drainage network of the United States with features such as rivers, streams, canals, lakes, ponds, coastline, dams, and stream gages. The National Hydrography Dataset (NHD) is developed and maintained by a partnership between the USGS and EPA. The dataset intended to "develop nationally-consistent geospatial datasets for the Nation" and provide agencies and organizations a common baseline for mapping aquatic resources. Unfortunately, the NHD does contain errors. A user can report suspected errors to the NHD Markup App at https://edits.nationalmap.gov/markup-app. This tool allows users to suggest edits, or "markups", to the NHD, Watershed Boundary Dataset (WBD), and NHDPlus HR. Anyone can suggest corrections and improvements to the data. Suggested edits are reviewed by the USGS and the NHD state stewards before they are approved for incorporation into the NHD or WBD datasets.

OACWA#7: Suggested Change ID #205

Description: Watershed Units- General

Comment: Combining all upstream 1st through 4th order streams into a single AU classification, as described in the 2018 assessment methodology document, is creating a few different challenges, which are described below:

- The combined stream AU has created a loss of detail that was available in previous reports for tributaries.

- It is less clear what water bodies are covered in a given AU, because naming conventions may not be completely accurate or may not include sufficient naming to better recognize tributaries included in the AU.

- Limited data are being applied across all of the tributaries within the new combined AUS. There does not appear to be a means of recognizing portions of these AUS that are meeting water quality when all of the streams are now listed within a combined ALT.

- It is unclear what the ramifications of combined tributary AUS will have on TMDL implementation in watersheds and whether blanket inclusion of tributaries that lack data will result in management of portions of the system that are not necessary.

- We offer the following suggestions to help clarify the difference between impaired and unimpaired tributaries within the watershed boundaries: 1) provide clear distinctions between tributaries that have data showing impairments and those that don't in the report data and graphics/mapping; and 2) re-evaluate this aspect of the methodology document in the next iteration (2021/2023?) of the Integrated Report to improve clarity and accuracy.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for

tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

DEQ will modify its mapping tools to include monitoring stations by default, at certain zoom levels. DEQ will continue to improve and refine its methodologies as it prepares for the next cycle of the Integrated Report. The agency will begin planning for the next cycle, including soliciting input for suggested methodology improvements for the 2022 Integrated Report, in early 2020.

OACWA#8: Suggested Change ID #206

Description: Data- Quality Assurance/Quality Control

Comment: We recommend that a final round of quality assurance/quality control review be conducted to ensure the accuracy of the data included in the Report and a clear process with support from impacted agencies for validating or determining the use of data that may result in an impairment listing.

Response: DEQ will conduct a final round of QA/QC prior to submitting the report to EPA.

OACWA#9: Suggested Change ID #207

Description: Data- Missing Data- General

Comment: Some local agencies have identified missing data, that should have been included in the Report. It appears there are a variety of reasons for missing data, including how data is submitted, issues with unit conversions, issues with electronic submissions, and time necessary to submit data.

Response: DEQ has corrected data omissions with groups who have identified specific missing data. DEQ staff have reassessed the data and final assessment results have been communicated to these parties. This was the first Integrated Report that utilized a data template for third party data submittal, and there were some "bugs" to be worked out. DEQ will be using the same data submittal process for its 2022 Integrated Report, and DEQ encourages parties who intend to submit data to begin working with the data

template as early as possible. DEQ staff will continue to improve data infrastructure and its submission process to prevent errors in the future.

OACWA#10: Suggested Change ID #208

Description: Data- USGS data

Comment: Challenges with performing analysis of USGS data results in incorrect categories applied to some AUS.

Response: Some USGS data were mistakenly left out of the initial analysis. This data has been identified and affected assessment units have been reassessed.

OACWA#11: Suggested Change ID #209

Description: Data- Monitoring Locations

Comment: Some data are missing location identification, making it challenging to verify accuracy of data for the associated AU that has been evaluated.

Response: Unfortunately, without more specific information, we are unable to ascertain the missing location information.

OACWA#12: Suggested Change ID #210

Description: Data- data matches assessment

Comment: Tables generated within the Report do not match data submitted by local agencies, particularly as they relate to whether values exceed water quality criteria.

Response: Unfortunately, without more specific information, we are unable to ascertain the locations of impairments in question.

OACWA#13: Suggested Change ID #211

Description: Data- Old data

Comment: Some listings have been associated with very old and suspect data. There should be a clear process with support from impacted agencies for validating or determining the use of data that may result in an impairment listing

Response: Based on guidance from EPA, all Category 4 and 5 listings must be carried forward unless it is demonstrated that water quality standards are being attained. The 2018 methodology document outlines a clear delisting process for removing listings that are no longer warranted.

OACWA#14: Suggested Change ID #212

Description: Assessment Conclusions- Willamette Copper- default BLM data

Comment: Copper — Several listings for copper were triggered by the use of Willamette Basin default values for the biotic ligand model parameters. DEQ should use the default values to conduct a screening level evaluation to determine if additional data are necessary. If the screening level evaluation suggests that there is potential to exceed water quality criteria, the pollutant should be listed as category 3A or 3B (insufficient data) and additional site-specific data should be gathered. Because of the significant implications of a category 5 listing on Oregon's water quality programs, a category 5 listing should not be based on regional default values.

When adopting the biotic ligand model-based criteria for copper, DEQ had specified that concurrent data would take precedent over default values. Oregon Administrative Rules 340041-8033, Table 30 (Endnote N) states that biotic ligand model results based on sufficient measured input parameter data are more accurate and supersede results based on estimates or default values. Thus, DEQ should use site-specific data where available and give more weight to these data in assessing copper.

Response: The aquatic life criteria for copper in freshwater are a function of water chemistry including ions, alkalinity, organic carbon, pH, and temperature in the water column. The criteria are derived using the biotic ligand model referenced in OAR 340-041-8033 - Table 30 Endnote N. As stated in the Assessment Methodology, DEQ prefers to use criteria derived from site-specific measured input parameter values for the model rather than regional default values. In the absence of site-specific input data, impairment listings were based on the use of default input values, which provides a conservative assumption of impairment. DEQ encourages parties to collect concurrent site-specific biotic ligand model input data for the 2022 Integrated Report assessment.

OACWA#15: Suggested Change ID #213

Description: Assessment Conclusions- Hexavalent Chromium

Comment: There are instances where a stream has been listed for hexavalent chromium based on total chromium data. DEQ did not assess the validity of these listings in the Report. DEQ should re-examine these listings and ensure that the listings are appropriate.

Response: Based on EPA guidance, all Category 4 and 5 listings must be carried forward unless it is demonstrated that water quality standards are being attained. DEQ did not reassess historic Category 5 listings since no new data were provided. DEQ received no hexavalent chromium data during its data call for the 2018/2020 Integrated Report, therefore previous Category 5 listings were moved forward. DEQ encourages the collection and submittal of hexavalent chromium data for these Category 5 listings to ensure the listings are still appropriate.

OACWA#16: Suggested Change ID #214

Description: Assessment Conclusions- HABs

Comment: HABs are identified for some water bodies, with a prerequisite for listing being the reporting or a public health warning by the Oregon Health Authority (OHA). No data has been provided in the Report to indicate the OHA warnings associated with listing of AUS for HABs. This information should be added.

Response: DEQ will make the data available that were used as the basis for the proposed Category 5 HABs listings available to the public through its online assessment database.

OACWA#17: Suggested Change ID #215

Description: Assessment Conclusions- Biocriteria

Comment: DEQ is proposing category 5 listings for a number of streams for biocriteria. It is not clear how DEQ plans to address the biocriteria listings. Additionally, the implications of the biocriteria listings on the NPDES permit program are not clear. Since a TMDL cannot be developed for biocriteria, DEQ should focus its efforts to identify the underlying pollutants causing the impairment. Temperature and dissolved oxygen are often identified as the primary stressors for macro invertebrate communities. Thus, biocriteria impairment should be addressed and resolved through listings for these pollutants.

Response: EPA determined that any water identified as being biologically impaired should be listed as Category 5 for 303(d) listing whether or not the pollutant causing the impairment or the pollutant source are known. The pollutants or stressors causing biological impairment will be identified through a stressor identification process in conjunction with Total Maximum Daily Load (TMDL) development.

OACWA#18: Suggested Change ID #216

Description: Assessment Conclusions- Elemental Phosphorus

Comment: DEQ is proposing category 5 listings for dozens of streams for elemental phosphorus. There is no freshwater water quality criterion for phosphorus; there is only a marine water quality criterion for elemental phosphorus (see excerpt from Oregon Administrative Rules (OAR 340-041-8033, Table 30). DEQ should remove these listings from the Report.

Response: The Category 5 listings for elemental phosphorus were incorrectly associated with the pollutant for marine waters when the previous listings were carried forward. DEQ will correct these listings to be identified as “Phosphorus” in the final Integrated Report.

OACWA#19: Suggested Change ID #217

Description: TMDL Applicability- Dieldrin (Deep Creek/Clackamas River, Fanno Creek)

Comment: There are several instances where AUS received dieldrin listings associated with approved TMDLs for dieldrin (Deep Creek/Clackamas River, Fanno Creek). However, we cannot identify any established TMDLs for dieldrin. These listings should be re-evaluated.

Response: DEQ agrees that assessments units: OR_WS_170800010703_02_103703, OR_SR_1709000703_04_104013, OR_SR_1709000703_88_104015, OR_SR_1709000704_88_104019, OR_SR_1709000704_88_104020, OR_SR_1709001005_02_104141, OR_SR_1709001202_88_104175, OR_WS_170900070301_02_104413, OR_WS_170900070305_02_104416, OR_WS_170900110605_02_104547, were mis-classified as Category 4a, and will be revised to Category 5 in the final list.

DEQ used the following Total Maximum Daily Loads (TMDLs) to classify the waters as Category 4A for dieldrin:

TMDL	Impairment	ASSESSMENT_UNIT_ID
Snake River - Hells Caynon TMDL	dieldrin	OR_LK_1705020103_05_100578
Snake River - Hells Caynon TMDL	dieldrin	OR_LK_1705020107_05_100583
Snake River - Hells Caynon TMDL	dieldrin	OR_SR_1705010311_02_103231
Snake River - Hells Caynon TMDL	dieldrin	OR_SR_1705011502_02_103230
Snake River - Hells Caynon TMDL	dieldrin	OR_SR_1705020101_02_103229
Molalla-Pudding Subbasin TMDL	dieldrin	OR_WS_170900090204_02_104467
Molalla-Pudding Subbasin TMDL	dieldrin	OR_LK_1709000902_02_100830
Molalla-Pudding Subbasin TMDL	dieldrin	OR_SR_1709000902_02_104073
Molalla-Pudding Subbasin TMDL	dieldrin	OR_SR_1709000905_02_104088
Molalla-Pudding Subbasin TMDL	dieldrin	OR_SR_1709000901_02_104064
Columbia Slough TMDL	dieldrin	OR_WS_170900120201_02_104554
Willamette Basin TMDL (Lower Willamette Subbasin)	dieldrin	OR_SR_1709001201_02_104170
Willamette Basin TMDL (Lower Willamette Subbasin)	dieldrin	OR_WS_170900120103_02_104552
Willamette Basin TMDL (Lower Willamette Subbasin)	dieldrin	OR_WS_170900120101_02_104550

OACWA#20: Suggested Change ID #218

Description: Assessment Conclusions- Aquatic Weeds

Comment: There are multiple listings of impairments for aquatic weeds, however, the assessment database does not specify the source data used to make the determination. The source data needs to be identified for us to evaluate the validity of the impairment

Response: According to DEQ's 2018 Assessment Methodology, a Category 5 impairment listing for Aquatic Weeds requires documented reports of excessive growths of invasive, non-native aquatic plants that dominate the assemblage in a water body and have a harmful effect on fish or aquatic life or are injurious to health, recreation, or industry. Plants include aquatic species on the Oregon Department of Agriculture Noxious Weed Policy and Classification System designated as "A", "B", or "T" weeds or those covered by a quarantine in OAR 603-052-1200. Aquatic weeds listings were based on reports of excessive growth of invasive aquatic plants through the state's Invasive Species Hotline. The table below provides information on the proposed aquatic weeds listings.

Aquatic Weeds listings				
Non-native, invasive plant	**County**	**AU_ID**	**AU_Name**	**IR Category**
Parrot Feather Watermilfoil (*Myriophyllum aquaticum*)	Crook	OR_WS_170900100502_02_104513	Fanno Creek	5
Purple Loosestrife (*Lythrum salicaria*)	Multnomah	OR_WS_170800010801_15_103707	Tanner Creek-Columbia River	3B
Parrot Feather Watermilfoil (*Myriophyllum aquaticum*)	Washington	OR_WS_170900100401_02_104506	Beaverton Creek	3B
Yellow-Flag Iris (*Iris pseudacorus*)	Clackamas	OR_WS_170900100504_02_104515	Saum Creek-Tualatin River	3B
Water Hyacinth (*Eichhornia crassipes*)	Douglas	OR_SR_1710030211_02_105320	South Umpqua River	5

OACWA#21: Suggested Change ID #219

Description: Beneficial Uses and WQ Standards- Errors

Comment: In some cases, we identified incorrect application of designated beneficial uses and associated criteria to an ALT, such as spawning in areas where spawning does not occur. In other cases, we note a lack of presence of specific fish species and then use of associated fish health criteria that is not appropriate. Again, a final comprehensive QA/QC review should be conducted to ensure accurate application of beneficial uses.

Response: The current beneficial uses were originally designated on a large scale and were established based on the information available at that time. In the process of digitizing beneficial uses, a comprehensive QA/QC was conducted, but there may have been errors. Unfortunately, we are not able to evaluate this comment further without more specific information.

OACWA#22: Suggested Change ID #220

Description: Databases- Assessment Database- Duplicate Listings #2

Comment: There are some assessment units that have two identical entries in DEQ's database. It's not entirely clear why there are identical listings in the assessment database. The database should be cleaned of the duplicates for clarity and accuracy purposes.

Response: Duplicate listings have been corrected. The duplicate listings were the result of an error when combining assessment conclusions from the 2018/2020 Integrated Report with assessments from previous cycles.

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46. Comments from: Elaine Steenson

ES#1: Suggested Change ID #151

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches- Support

Comment: I also FULLY SUPPORT DEQ's decision to include agricultural irrigation and drainage ditches in its list of water quality impaired waterways

Response: Thank you for your comment and support.

ES#2: Suggested Change ID #152

Description: Watershed Units- Extrapolation- Watershed unit connectivity- Support

Comment: I strongly SUPPORT DEQ's decision to extrapolate listings of waterways and ditches based upon data collected from neighboring properties. Water quality is inextricably linked water body to water body, and we are together left with the consequences of poor management of our shared (and only) natural resources. DEQ is tasked with a profoundly important duty, to safeguard our entire system of watersheds, in all its complexity.

Response: Thank you for your comment and support.

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47. Comments from: Gordon Dromgoole

GD#1: Suggested Change ID #2

Description: Watershed Units- Unfair Characterization- Report appears to indicate farms and forests are experiencing declining water quality

Comment: Report … makes it look like farms and forests are experiencing declining water quality, particularly when it appears that DEQ lacks actual data for a significant portions of the waterways listed.

Response: The Integrated Report makes no conclusions about the trends in water quality across the state. It is just a snapshot of the status of state waters and whether beneficial uses are being supported. Identification of increased areas of impaired water quality condition is likely more attributable to the amount of data we assessed in 2018, enhanced resolution of Oregon's hydrography and a construct of

how DEQ is required to report to EPA than it can be attributed to any specific known trends in broad scale water quality changes.

GD#2: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

GD#3: Suggested Change ID #4

Description: Watershed Units - Permission at monitoring locations

Comment: I am particularly concerned with DEQ's decision to list waterways that I have not given DEQ permission to sample and where sampling has not occurred. I urge DEQ to revisit these listings.

Response: Any sampling performed by Oregon DEQ followed proper procedures for access to waters on private properties, which include obtaining written consent to sample. Oregon DEQ did not evaluate private property permission structures for third party submitted data. Data were assessed using the procedures outlined in the Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters.

GD#4: Suggested Change ID #11

Description: Watershed Units- Unfair characterization of agriculture and forest land- Assessment targets agricultural lands as sources of impairments

Comment: This new method of designation appears to directly target agricultural lands as the source of water quality impairments

Response: The Integrated Report is an objective assessment of the status of state waters based on data that were submitted to DEQ. The methods used to make assessment conclusions were finalized in the 2018 methodology document prior to any data evaluation. The assessment results and conclusions in the Integrated Report neither attributed the sources of water quality impairments nor targeted any entities such as agricultural lands.

GD#5: Suggested Change ID #59

Description: Watershed Units- Extrapolation- Watershed unit connectivity

Comment: We have concerns with the use of sub-watersheds (HUC-12) as the assessment unit. DEQ's methodology stated that "through the assessment process, DEQ will review the watershed units more closely", but that does not seem to have occurred in the Hood River Basin. The sub-watersheds often include multiple waterways that come from separate source waters, flow through different land-uses, and are not hydrologically connected. DEQ is required to assess waterbody units based on data and it appears that the scale of these assessment units does not allow that to happen with the data DEQ has. It does not make sense to assume that an impairment measured in one waterway means that the same impairment is present in any other waterway, or even that the impairment is suggested in the unmeasured waterway. At a minimum, the assessment unit should include just the waterways that are hydrologically connected instead of lumping them all together in one HUC-12 boundary. Best practices would suggest that DEQ actually "review the watershed units more closely" for other differences in watershed homogeneity, in addition to hydrologic connectivity.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National

Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5 ("Impaired"), it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

DEQ will continue to improve and refine its methodologies as it prepares for the next cycle of the Integrated Report. The agency will begin planning for the next cycle, including soliciting input for suggested methodology improvements for the 2022 Integrated Report, in early 2020.

GD#6: Suggested Change ID #62

Description: Watershed Units- Extrapolation- Data

Comment: DEQ's methodology, especially as it relates to watershed assessment units, is an inappropriate use of the data available and risks invalidating this update to listings of impaired waterways. DEQ should not assume or declare impairment in most of the waterways in the state based on a lack of data.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5 ("Impaired"), it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is

identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

It is important to note that the Oregon Legislature passed state law (ORS 468B.039) in 2015 which directed DEQ to publish the methodology prior to analyzing water quality data and drafting the Integrated Report (two-step process). This process ensures that methodology is robust and not developed or altered in an ad-hoc manner in response to assessment results. DEQ held public stakeholder and work group processes for updates to the Assessment Methodology prior to the Integrated Report being drafted. This process was inclusive and included representatives from industry, environmental interests, tribes, agriculture and forestry on the work group.

Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

GD#7: Suggested Change ID #102

Description: Assessment Conclusions- Yamhill Creek temperature assessment

Comment: Concerning the Yamhill Creek watershed:

The so called "tributaries" in this watershed if they ever had water in them, are dried up by May/June. The flow in the main channel of this creek at Cove Orchard Rd varies from a few inches deep at most in the summer to over 4 ft in the winter coursing within inches of the top of a large culvert. It's flow volume and how it varies throughout [sic] the year do not appear to be documented. (By the way, your maps fail to show a 10+ acre pond (coordinates 45.361443, -123.159521) in this watershed. It's located approximately 700 ft east of Cove Orchard Rd and less than ½ mile from Yamhill Creek.)

Because this creek is listed as temperature impaired year round and has such a variable flow rate I was curious about when and where measurements were taken. Using the identifiers from your interactive map to search the 2018/2020 data base returned "file not found". Indeed the HUC12 number does not show up in the dropdown list. So I tried DEQ's AWQMS. In the stretch north of Yamhill according to DEQ's AWQMS the two so called monitoring stations consist of a single well monitoring station located approximately 700 ft from this creek and a location at a county road (presumably Lincoln Ave) for which there are no data for the last 15 years!

So when and where were these temperature measurements taken and what was the flow rate at time of measurement?

Where are the data?

Response: Yamhill Creek and its tributaries are represented by two assessment units, AU IDs: OR_SR_1709000806_02_104056 (mainstem) and OR_WS_170900080605_02_104447 (tributaries). Data for the mainstem of Yamhill Creek was collected at monitoring station 28465-ORDEQ, Yamhill Creek downstream of Hwy 47. The Category 5 impairment listing for temperature from RM 0 to RM 6.9 was carried forward from a 2010 impairment listing. It was originally included as Category 5 on the 2010 303(d) list because exceedances of the salmonid rearing criterion of 18 degrees Celsius were observed as

high as 20.8 C in July 2000 at DEQ station 28465, Yamhill Creek downstream of Hwy 47. Flow measurements were not recorded at this time.

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48. Comments from: Ken Holliday

KH#1: Suggested Change ID #57

Description: Watershed Units- Data within units

Comment: We object to DEQ's decision to list water bodies throughout the state as water quality impaired without data to support those listings.

Response: Data and information was used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions. Assessments were conducted following the 2018 Assessment Methodology.

KH#2: Suggested Change ID #62

Description: Watershed Units- Extrapolation- Data

Comment: DEQ's methodology, especially as it relates to watershed assessment units, is an inappropriate use of the data available and risks invalidating this update to listings of impaired waterways. DEQ should not assume or declare impairment in most of the waterways in the state based on a lack of data.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5 ("Impaired"), it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is

identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

It is important to note that the Oregon Legislature passed state law (ORS 468B.039) in 2015 which directed DEQ to publish the methodology prior to analyzing water quality data and drafting the Integrated Report (two-step process). This process ensures that methodology is robust and not developed or altered in an ad-hoc manner in response to assessment results. DEQ held public stakeholder and work group processes for updates to the Assessment Methodology prior to the Integrated Report being drafted. This process was inclusive and included representatives from industry, environmental interests, tribes, agriculture and forestry on the work group.

Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

KH#3: Suggested Change ID #99

Description: Regulatory Impact- Regulation Concern- General

Comment: Concern over regulations arising from listings

Response: The Integrated Report is not a rule. It is a required reporting to EPA of the status of state waters and whether beneficial uses are supported. Assessment Units were created for reporting purposes. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

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49. Comments from: Roger/Meredith Ediger

RE#1: Suggested Change ID #14

Description: Regulatory Impact - Adding regulations to agriculture land

Comment: I am writing this letter in response to the Draft 2018-20 new regulation that will impose more restrictions to a already over regulated system.

Response: The 2018/2020 Integrated Report is not a regulation or a rule change and it does not impose any additional restrictions. The Integrated Report is a reporting on the status of water quality across the state and whether beneficial uses are supported. The Integrated Report is a Clean Water Act requirement for states to identify waters that do not or are not expected to meet applicable water quality standards. It is a combination of reports required by the Clean Water Act sections 303(d) and 305(b).

The report/list does not, unto itself, specify or determine any regulatory actions or consequences. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. Follow-up investigations would initially focus on the sampling stations in the AU that indicated impairment, the exact locations of which are known, as well as additional sampling efforts, to better delineate/characterize extent of impairment.

RE#2: Suggested Change ID #48

Description: Regulatory Impact - Not a rule

Comment: I farm, and own property that would be impacted by this new ruling of "impaired" waterways. I find it insulting that these new rules are based on no factual findings in the actual waterways or ditches. It is unreasonable to make up rules that have such broad sweeping effects without actually doing the necessary work to support those rules.

Response: The Integrated Report is not a rule. It is a required reporting to EPA of the status of state waters and whether beneficial uses are supported. Assessment Units were created for reporting purposes. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

RE#3: Suggested Change ID #99

Description: Regulatory Impact- Regulation Concern- General

Comment: Concern over regulations arising from listings

Response: The Integrated Report is not a rule. It is a required reporting to EPA of the status of state waters and whether beneficial uses are supported. Assessment Units were created for reporting purposes. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

RE#4: Suggested Change ID #279

Description: Assessment conclusion - John Day - Temperature

Comment: Again, the DEQ map of "water impaired" streams in our area, the Upper Main Stem of the John Day River Basin, suggests a temperature issue for nearly the entire basin. But this is backed by minimal current and no identifiable historic data from which to draw, or support, such a broad, and far reaching conclusion.

Response: There are currently two sections of the mainstem John Day River, from the South Fork John Day River to the North Fork John Day River, identified as impaired for temperature in the 2018/2020 Integrated Report. This is a refinement of the original 2010 impairment listing of the entire river (RM 0.4

to RM 182) based on a single sampling location at RM 181. A Total Maximum Daily Load (TMDL) was previously approved for temperature, but the impairments were returned to the 303(d) list by EPA in 2012 due to litigation surrounding DEQ's Natural Conditions Criteria (NCC) as a TMDL endpoint. The Category 5 impairment for temperature in the headwaters of the mainstem John Day River were based on US Forest Service data from three monitoring locations (MNF-012, MNF-039, MNF-040). Data were collected from 2008 through 2017, and there were 361 exceedances of the 7-DADM out of 1,979 7-DADM values.

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50. Comments from: Oregon Cattlemen's Association

OCA#1: Suggested Change ID #1

Description: Watershed Units- Extrapolation- Watershed unit assessment conclusions

Comment: I strongly oppose DEQ's decision to list water bodies on farm and forestland as water quality impaired without data to support those listings, as it has done in its 2018-2020 Integrated Report … I strongly oppose DEQ's decision to extrapolate listings of waterways and ditches based upon data collected from neighboring properties. Water quality naturally differs from water body to water body, particularly when those waterways are under different ownership and may have experienced differing current and historic riparian management. DEQ has presented no evidence that this extrapolation is scientifically valid or sound. Instead, it appears to be an attempt to list and regulate waterways without first going through the necessary step of determining that data actually shows an impairment.

Response: Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

OCA#2: Suggested Change ID #2

Description: Watershed Units- Unfair Characterization- Report appears to indicate farms and forests are experiencing declining water quality

Comment: Report … makes it look like farms and forests are experiencing declining water quality, particularly when it appears that DEQ lacks actual data for a significant portions of the waterways listed.

Response: The Integrated Report makes no conclusions about the trends in water quality across the state. It is just a snapshot of the status of state waters and whether beneficial uses are being supported. Identification of increased areas of impaired water quality condition is likely more attributable to the amount of data we assessed in 2018, enhanced resolution of Oregon's hydrography and a construct of how DEQ is required to report to EPA than it can be attributed to any specific known trends in broad scale water quality changes.

OCA#3: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

OCA#4: Suggested Change ID #11

Description: Watershed Units- Unfair characterization of agriculture and forest land- Assessment targets agricultural lands as sources of impairments

Comment: This new method of designation appears to directly target agricultural lands as the source of water quality impairments

Response: The Integrated Report is an objective assessment of the status of state waters based on data that were submitted to DEQ. The methods used to make assessment conclusions were finalized in the 2018 methodology document prior to any data evaluation. The assessment results and conclusions in the Integrated Report neither attributed the sources of water quality impairments nor targeted any entities such as agricultural lands.

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51. Comments from: R Blackman

RB#1: Suggested Change ID #101

Description: General Comment- Monitoring

Comment: The Inorganic Nitrogen average values for the Mid and Lower Willamette River are in the fair to poor range. Organic Nitrogen may also be playing a role in the Mid and Lower Willamette River. Total Nitrogen Analysis by pyrolysis and chemiluminescence may be useful in determining if organic nitrogen is adding to the nitrogen problem.

The Biochemical Oxygen Demand (BOD) average values for the Willamette River are in the fair to poor range. Total Organic Carbon (TOC) Analysis data are available for these streams. Consideration should be given to adding Chemical Oxygen Demand (COD) analysis as a monitoring parameter for the Willamette River. The combination of BOD, COD and TOC analyses may help to explain these BOD trends. The average Dissolved Organic Carbon values in the report are in many cases equal to or greater than the Total Organic Carbon values. Was this the result of the error associated with the analytical methods? Were both chemical oxidation and high temperature catalytic oxidation methods used to determine Total Organic Carbon and Dissolved Organic Carbon values? Many large naturally occurring organic molecules, consumer products, pesticides and herbicides have poor recoveries using chemical oxidation for Organic Carbon Analysis. Therefore, high temperature catalytic oxidation and infrared detection should be the method of choice.

Addition of Bacterial Bioluminescence Analyses to the Willamette River monitoring program (especially in the Mid and Lower Sections) may provide essential scientific data to assist with determining the health of the Willamette River system.

Response: Thank you for your comments. DEQ will look into these suggestions for future monitoring in the Willamette.

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52. Comments from: Water Environment Services (WES)

WES#1: Suggested Change ID #191

Description: Watershed Units- Extrapolation- Watershed Connectivity #10

Comment: In many instances, DEQ chose to combine two or more smaller streams into sub-watershed-size groupings, which are based on the U.S. Geological Survey's HUC-12 classification, the smallest federally-derived hydrologic classification available in Oregon at this time. So for listings of interest to WES, all of the water quality data from several different creeks were apparently pooled together into a single Assessment Unit (unit) and an assessment conclusion was then drawn for the units as a whole. This is a loss of detail compared to previous 303(d) lists/integrated reports, when creeks weren't combined into a larger units with one or more other creeks for 303(d) listing purposes. An example is Sieben Creek, a tributary in the lower Clackamas River's watershed. In previous integrated reports, Sieben Creek had its own 303(d) listings (dissolved oxygen, for example). But Sieben Creek is now in a larger assessment unit with Rock Creek and maybe other creeks and this unit's name is "HUC12 Name: Rock Creek - Clackamas River". This loss of detail creates challenges from a water quality management perspective, in part because creeks at this scale and particularly in urban environments can have drastically different water quality characteristics.

Response: Water quality assessment based on a watershed approach is a well-established methodology and is employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. It is rooted in scientific principles that support application of data from one or more locations for extrapolation across a broader geographical area. DEQ made a number of improvements to its Assessment Methodology through a stakeholder work group process, and its listing methodology was validated by an independent scientific peer review panel. Assessment conclusions were supported by a robust dataset and a transparent comparison between data and water quality criteria will be available for download through DEQ's online database.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire watershed is impaired. The 303(d) list of impaired waters identifies assessment units that require additional investigation and follow-up action. The report does not, unto itself, specify or determine any regulatory actions or consequences. Follow-up monitoring and investigations may be necessary to delineate and characterize the extent of impairment.

DEQ will continue to improve and refine its methodologies as it prepares for the next cycle of the Integrated Report. The agency will begin planning for the next cycle, including soliciting input for suggested methodology improvements for the 2022 Integrated Report, in early 2020.

WES#2: Suggested Change ID #192

Description: Watershed Units- Extrapolation- Watershed Connectivity #11

Comment: Listing a group of creeks in an assessment unit as impaired for a particular pollutant found in only one creek is inappropriate. As such, we request that DEQ, at least for existing listings, retain the geographic specificity of the listing, and moving forward use data to list assessment units. If DEQ decides to combine creeks and streams into larger units in this report, it should note which areas of the combined unit have specific impairments to allow for appropriate water quality management of that unit

Response: When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire watershed is impaired. The 303(d) list of impaired waters identifies assessment units that require additional investigation and follow-up action. The report does not, unto itself, specify or determine any regulatory actions or consequences.

DEQ will continue to improve and refine its methodologies and explore options for displaying its report conclusions as it prepares for the next cycle of the Integrated Report. The agency will begin planning for the next cycle, including soliciting input for suggested methodology improvements for the 2022 Integrated Report, in early 2020.

WES#3: Suggested Change ID #193

Description: Watershed Units- Naming

Comment: To reduce confusion, we request that the Rock-Sieben Creek unit's name be changed to the following: "HUC12 Name: Rock and Sieben Creeks - Clackamas River". Furthermore, we encourage DEQ to provide updated, more inclusive names for the other units in Oregon which include several different smaller creeks, such as the unit which includes the North Fork of Deep Creek and Noyer Creek in the Clackamas River's watershed.

Response: The name of the watershed units is a concatenation of the name assigned to the HUC12 in the Watershed Boundary Dataset and it is part of the National Hydrography Dataset High Resolution (NHDH) with the prefix identifying the HUC12 Name. DEQ understands the name may not always reflect all of the stream names within the HUC12. In order to retain consistency, DEQ would like to keep the naming convention tied to the NHDH.

WES#4: Suggested Change ID #194

Description: Waters of the State- Irrigation Ditches- Distinguish #2

Comment: An additional concern related to the aggregation of water bodies into larger units and the application of listings to within the units is the potential for DEQ to inappropriately list waters that should not be listed, like roadside ditches and potentially even parts of our municipal storm system. This issue seems to exist in the current draft, although it is difficult to tell. We request that DEQ include a statement in defining the geographic units that such units specifically do not include waters or conveyance

infrastructure that otherwise would not be included so as to avoid any inappropriate listings. We further request DEQ conduct a thorough quality assurance review to ensure if a listing is made that it is allowable, warranted and does not include any inappropriate designations such as those described above.

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses . The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

The NHD is the federal and state standard and represents the water drainage network of the United States with features such as rivers, streams, canals, lakes, ponds, coastline, dams, and stream gages. The National Hydrography Dataset (NHD) is developed and maintained by a partnership between the USGS and EPA. The dataset intended to "develop nationally-consistent geospatial datasets for the Nation" and provide agencies and organizations a common baseline for mapping aquatic resources. Unfortunately, the NHD does contain errors. A user can report suspected errors to the NHD Markup App at https://edits.nationalmap.gov/markup-app. This tool allows users to suggest edits, or "markups", to the NHD, Watershed Boundary Dataset (WBD), and NHDPlus HR. Anyone can suggest corrections and improvements to the data. Suggested edits are reviewed by the USGS and the NHD state stewards before they are approved for incorporation into the NHD or WBD datasets.

In response to comments received, DEQ will be updating its visual display to reflect watershed units as polygons, rather than a collection of stream networks. Monitoring locations used in the assessment, which were formerly an additional map layer that needed to be clicked on, will be turned on by default and will

be visible when the map is zoomed in. In addition, data used in the assessment will be available to download through DEQ's online database.

WES#5: Suggested Change ID #195

Description: Databases- Assessment Database- Add rationale and data

Comment: In recent years, DEQ's 303(d) list/integrated report website provided a summary of the water quality data which was used by DEQ to support listing and de-listing decisions. Having this data on the website was very helpful when my staff conducted our reviews of previous 303(d) lists. Unfortunately, this data isn't on the DEQ's website at this time, which is a step backwards. During our review over the past few months, my staff have been able to eventually obtain much of the information they've sought, but they needed to contact DEQ staff for this information each time they've wanted to access the data and important gaps remain. This additional communication has taken time from WES staff and DEQ staff, time which could have been spent in a more productive manner. We urge DEQ to provide the summaries of water quality data on the website again in the future when the 303(d) list is updated again.

Response: DEQ agrees with the commenter that the basis for the listings may be hard to evaluate without a summary of the rationale for the listing, or the data itself. Thus, in the final report and in future iterations of the Integrated Report, DEQ will make the supporting data and rationales available through the online assessment database, in addition to having raw data available through the AWQMS data portal.

WES#6: Suggested Change ID #196

Description: Assessment Conclusions (Specific) - Lower Willamette DO

Comment: The Lower Willamette River (Johnson Creek to the Columbia River) has two new proposed category 5 listings for dissolved oxygen. One of these proposed listings is for fish spawning. In the data set which was used to support this listing, 6 of 30 samples exceed the spawning criteria, but the monitoring site or sites that showed exceedances are in the Swan Island channel in the industrialized portion of the river in Portland. This is a low-incidence spawning area generally. Further, the species of concern for this listing seems to be salmon and steelhead. If so, this proposed listing should be reviewed and potentially removed since salmon and steelhead are highly unlikely to be spawning in this location.

Response: DEQ agrees that the Category 5 impairment listing for the Lower Willamette River (OR_SR_1709001202_88_104175) should be removed as there is no spawning use for this assessment unit. DEQ will incorporate this change in its final report.

WES#7: Suggested Change ID #197

Description: Assessment Conclusions (Specific)- Rock/Sieben Creek HABs

Comment: The Rock Creek/Sieben Creek unit in the Clackamas River's watershed has a new proposed category 5 listing for harmful algae blooms (HAB). The "Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters" appears to say a public health advisory issued by the

Oregon Health Authority (OHA) is a prerequisite for listing a water body for HABs. Has OHA ever issued a public health advisory for HABs in Rock and/or Sieben Creeks? We are not aware of one. If not, does this water body still qualify for a category 5 listing for HABs? If this water body does qualify for a category 5 listing for HABs, please provide us with the explanation.

Response: DEQ reviewed the Category 5 HABs impairment listing for the Rock Creek/Sieben Creek assessment unit OR_WS_170900110607_02_104549 in the Clackamas River watershed. This listing was proposed in error. The correct assessment unit for the Category 5 impairment listing for HABs is OR_LK_1709001106_02_100259, Clackamas Cove. DEQ will revise the listing in the final Integrated Report.

WES#8: Suggested Change ID #198

Description: Assessment Conclusions (Specific)- North Fork Deep Creek: Dieldrin

Comment: The unit which includes the North Fork of Deep Creek in the Clackamas River's watershed has a category 4A listing for dieldrin. This is a mistake, since this category is for pollutants with a TMDL, and there isn't a dieldrin TMDL for the North Fork of Deep Creek or for any other water body in the Clackamas River's watershed. Please revise this listing.

Response: DEQ agrees that there is no approved Total Maximum Daily Load (TMDL) for dieldrin on the North Fork of Deep Creek or any other AU in the Clackamas Subbasin, therefore this assessment unit will be assigned a Category 5 listing for dieldrin.

WES#9: Suggested Change ID #199

Description: NHD Issues- Kellogg Creek

Comment: The portion of Kellogg Creek from the mouth of the Willamette to the confluence with Mt Scott Creek (OR_SR_1709001201_02_104171) was incorrectly classified in the NHD layer as Mount Scott Creek, Assessment Unit Name: Mount Scott Creek. There were two monitoring locations on this portion of the stream: 10623-ORDEQ, Kellogg Creek at Hwy 99E (Milwaukie) and 452552122373700-USGS, Kellogg Creek at Rowe Middle School, at Milwaukie, OR. We request that DEQ report this suspected error to the NHD Markup App: (https://edits.nationalmap.gov/markup-app) and correctly identify the unit as Kellogg Creek.

Response: DEQ used the High Resolution National Hydrography Dataset, specifically the NHDPlus HR, to draw its assessment units and georeference its water quality standards. The NHD is the federal and state standard and represents the water drainage network of the United States with features such as rivers, streams, canals, lakes, ponds, coastline, dams, and stream gages. The National Hydrography Dataset (NHD) is developed and maintained by a partnership between the USGS and EPA. The dataset intended to "develop nationally-consistent geospatial datasets for the Nation" and provide agencies and organizations a common baseline for mapping aquatic resources. Unfortunately, the NHD does contain naming errors. A user can report suspected errors to the NHD Markup App at https://edits.nationalmap.gov/markup-app. This tool allows users to suggest edits, or "markups", to the NHD, Watershed Boundary Dataset (WBD), and NHDPlus HR. Anyone can suggest corrections and

improvements to the data. Suggested edits are reviewed by the USGS and the NHD state stewards before they are approved for incorporation into the NHD or WBD datasets.

WES#10: Suggested Change ID #200

Description: Assessment Conclusions (Specific) - Saum Creek: Zinc/Copper

Comment: The proposed category 5 listings for zinc and copper in Saum Creek (Tualatin River watershed) should be withdrawn, since this water quality data were collected from a water body in the City of West Linn, and no portion of the City of West Linn is in Saum Creek's watershed.

Response: The zinc and copper listings for the watershed assessment unit OR_WS_170900100504_02_104515 (HUC12 Name: Saum Creek-Tualatin River) are based on data submitted to DEQ from the city of West Linn during the call for data. Eleven out of 52 total samples exceeded the numeric hardness based criteria for zinc and 20 out of 52 total samples exceeded the Biotic Ligand Model calculated numeric criteria for copper. Both of these listings originate from the monitoring location COWL_03_Unnamed Stream (45.3542,-122.6647). DEQ verified the sample location in the Comprehensive Clackamas County NPDES MS4 Stormwater Monitoring Plan. The unnamed stream is not mapped on the NHDH. DEQ confirmed the connectivity to the watershed assessment OR_WS_170900100504_02_104515 using the West Linn Public Works - Stormwater Map App 2017. https://www.arcgis.com/apps/webappviewer/index.html?id=71454ac0e6784f9ab4563d692fd04525

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

WES#11: Suggested Change ID #280

Description: Watershed Unit - Loss of Detail in listing

Comment: In many instances, DEQ chose to combine two or more smaller streams into sub-watershed-size groupings, which are based on the U.S. Geological Survey's HUC-12 classification, the smallest federally-derived hydrologic classification available in Oregon at this time. So for listings of interest to WES, all of the water quality data from several different creeks were apparently pooled together into a single Assessment Unit (unit) and an assessment conclusion was then drawn for the units as a whole. This is a loss of detail compared to previous 303(d) lists/integrated reports, when creeks weren't combined into a larger units with one or more other creeks for 303(d) listing purposes.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000). The watershed units were only identified as impaired if data from within the watershed unit demonstrated that water quality criteria were not being met and one or more beneficial uses were not supported. A watershed unit listed as Impaired indicates that an impairment exists within the watershed, not that the entire watershed is considered to be impaired.

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

It is important to note that the Oregon Legislature passed state law (ORS 468B.039) in 2015 which directed DEQ to publish the methodology prior to analyzing water quality data and drafting the Integrated Report (two-step process). This process ensures that methodology is robust and not developed or altered in an ad-hoc manner in response to assessment results. DEQ held public stakeholder and work group processes for updates to the Assessment Methodology prior to the Integrated Report being drafted. Assessment conclusions were supported by a robust dataset and a transparent comparison between data and water quality criteria, which will be available for download through DEQ's online database. DEQ will continue to refine its methodologies in the 2022 reporting cycle and encourages input and participation in the process.

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53. Comments from: Multnomah County Drainage District

MCDD#1: Suggested Change ID #84

Description: Assessment Conclusions- Duplications

Comment: Where there are conflicting determinations in the assessment database, DEQ should review the assessments and clarify the determinations. A list of assessments units with conflicting determinations for the same parameter in the Portland area are included below.

Response: Multiple assessment determinations for AU ID: OR_SR_1709001201_02_104170 and OR_WS_170900120305_02_104561 for Dissolved Oxygen-Year Round reflect assessment conclusions for both Cold Water and Cool Water criteria. That assessment unit contains both cold and cool water use

classifications in portions of the waterbody. The assessment database has been updated to make that more clear.

Duplicate temperature listings identified have been corrected. OR_SR_1709001202_88_104175 has been corrected to a single assessment of Category 5. OR_WS_170900100502_02_104513 has been corrected to reflect Category 5 determinations for both Temperature Year-Round and Temperature-Spawning. OR_WS_170900120101_02_104550 and OR_WS_170900120103_02_104552 have also been corrected to reflect Category 5 determinations for both Temperature Year-Round and Temperature-Spawning.

MCDD#2: Suggested Change ID #103

Description: Process- Public Comment Process- additional comments

Comment: The Districts reserve the right to submit additional comments. It is extremely challenging for a small staff to meaningfully review and respond to such complex information in the allowed comment period.

Response: DEQ understands the challenge of working with small staff. DEQ provided a public comment period of 99 days, which should provide a sufficient amount of time to conduct a review and submit comments. DEQ looks forward to continued engagement in subsequent Integrated Report cycles.

MCDD#3: Suggested Change ID #104

Description: Methodology- Binomial

Comment: The Districts appreciate the revised methods for assessing water body condition. The statistical approach, described in the methods section 3.3.4, has provided a more accurate representation of water body condition than the previous approach, which effectively penalized waterbodies with more water monitoring data, like the Columbia Slough

Response: Thank you for your comment and support for DEQ's statistical approach to listing and delisting.

MCDD#4: Suggested Change ID #105

Description: Watershed Units- Subdivide

Comment: The report results demonstrate that the methods applied to delineate "watershed assessment units" (described in section3.3.3.) are not sufficiently granular. Assessing (sic) all streams with a Strahler Stream Order of 4 or less as one "watershed unit" does not reflect the diversity of impacts and opportunities within a dense urban watershed like the Columbia Slough. Portions of the Slough drain natural areas, residential developments, heavy industrial use areas and interstate transportation corridors, and yet are lumped together as if they were homogenous.

The Districts suggest that the "watershed units" in the Columbia Slough be further divided to reflect the prevailing land cover, and that any future investigations of water quality in the Slough (e.g., updated

TMDL), include an analysis that can reflect watershed impacts and opportunities on a reach-by-reach scale.

Response: DEQ agrees with the comment to split the Columbia Slough watershed unit and will incorporate the changes into the final report.

MCDD#5: Suggested Change ID #106

Description: Watershed units- NHD Issues- Surface Waters #2

Comment: The Districts request that DEQ remove line segments that do not represent surface waters. The maps show multiple line features that are in fact stormwater pipes or other conveyance infrastructure. We ask that DEQ review the Columbia Slough watershed for these misclassifications, and that any future investigations of water quality in the Slough (e.g., updated TMDL), include an analysis that can reflect the location of open channels in the watershed.

Response: DEQ used the High Resolution National Hydrography Dataset, specifically the NHDPlus HR, to draw its assessment units and georeference its water quality standards. The NHD is the federal and state standard and represents the water drainage network of the United States with features such as rivers, streams, canals, lakes, ponds, coastline, dams, and stream gages. The National Hydrography Dataset (NHD) is developed and maintained by a partnership between the USGS and EPA. The dataset intended to "develop nationally-consistent geospatial datasets for the Nation" and provide agencies and organizations a common baseline for mapping aquatic resources. Unfortunately, the NHD does contain errors. A user can report suspected errors to the NHD Markup App at https://edits.nationalmap.gov/markup-app. This tool allows users to suggest edits, or "markups", to the NHD, Watershed Boundary Dataset (WBD), and NHDPlus HR. Anyone can suggest corrections and improvements to the data. Suggested edits are reviewed by the USGS and the NHD state stewards before they are approved for incorporation into the NHD or WBD datasets. In addition, in response to comments received, DEQ will be updating its visual display to reflect watershed units as polygons, rather than a collection of stream networks,

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MCDD#6: Suggested Change ID #107

Description: Data- Include Aquatic Weeds data

Comment: The Districts suggest that DEQ include information on the source data used to assess aquatic weeds in the assessment database. The Columbia Slough (OR_WS_170900120201_02_1045540) is listed as Category 5 for aquatic weeds with no specified data source. Given the lack of information included in the assessment database, it is not possible for the public to review and confirm the water quality status for aquatic weeds.

Response: DEQ will include information on the source data used to assess aquatic weeds available for download through its online assessment database. The Category 5 impairment listing for Aquatic Weeds on the Columbia Slough was added by EPA in the 2012 Integrated Report based on data on the Portland Bureau of Environmental Services website indicating that water primrose is present in the Columbia Slough (https://www.portlandoregon.gov/BES/article/516891).

MCDD#7: Suggested Change ID #108

Description: Watershed Units- Break watershed (Columba Slough)

Comment: The Districts suggest that DEQ divide the Columbia Slough watershed assessment unit (OR_WS_170900120201_02_104554) so that the lower 8.5 miles of the mainstem channel,from the confluence with the Willamette River to the levee at Elrod Drive is delineated as a separate stream assessment unit.

The lower 8.5 miles of the Columbia Slough represent a unique waterbody with many features that differentiate it from the rest of the watershed. The lower Slough is tidally influenced, free-flowing, and directly connected to the Willamette River, providing important habitat for migrating salmonids. This segment of the Slough has been designated as critical habitat for Lower Columbia River Chinook, coho, and steelhead.

Multnomah County Drainage District #1Flood Protection 1880 NE Elrod Drive Portland, OR 97211 / 503.281.5675 phone /503.281.0392fax/ mcdd.org The lower Slough terminates on the western side of MCDD's Peninsula Canal Levee, built in 1959, and the middle Slough begins on the eastern side. The upper Slough begins at the 142ndAvenue cross-levee. The middle and upper sloughs are connected to each other via a gate in the142ndAvenuecross-levee,which is open except during extreme flood events.

The middle and upper Sloughs are not, however, typically hydrologically connected to the Columbia River or the lower Slough. The only connectivity comes from stormwater exiting the middle and upper Sloughs,in the following two ways:

•Pump Station #1, located at the MCDD Headquarters on NE Elrod Drive, expels stormwater from the middle to lower Slough.

•Gated gravity outfalls in the middle and upper Slough expel stormwater to the Columbia River. They are only opened in the low-water periods in the summer months when there is no flood potential or possibility of fish passage or entrapment.

For these reasons, the current classification is not appropriate and fails to capture known environmental variability. The middle and upper Sloughs should be considered a separate watershed from the lower Slough because they are effectively disconnected.

Response: DEQ agrees with this comment and has incorporated the changes into the final report.

54. Comments from: Jackson County

JC#1: Suggested Change ID #2

Description: Watershed Units- Unfair Characterization- Report appears to indicate farms and forests are experiencing declining water quality

Comment: Report … makes it look like farms and forests are experiencing declining water quality, particularly when it appears that DEQ lacks actual data for a significant portions of the waterways listed.

Response: The Integrated Report makes no conclusions about the trends in water quality across the state. It is just a snapshot of the status of state waters and whether beneficial uses are being supported. Identification of increased areas of impaired water quality condition is likely more attributable to the amount of data we assessed in 2018, enhanced resolution of Oregon's hydrography and a construct of how DEQ is required to report to EPA than it can be attributed to any specific known trends in broad scale water quality changes.

JC#2: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

JC#3: Suggested Change ID #11

Description: Watershed Units- Unfair characterization of agriculture and forest land- Assessment targets agricultural lands as sources of impairments

Comment: This new method of designation appears to directly target agricultural lands as the source of water quality impairments

Response: The Integrated Report is an objective assessment of the status of state waters based on data that were submitted to DEQ. The methods used to make assessment conclusions were finalized in the 2018 methodology document prior to any data evaluation. The assessment results and conclusions in the Integrated Report neither attributed the sources of water quality impairments nor targeted any entities such as agricultural lands.

JC#4: Suggested Change ID #28

Description: Process- Communication/Outreach- County Official Outreach

Comment: We are disappointed that the agency did not reach out to county officials about the Integrated Report prior to listing the vast majority of our waterbodies as water quality impaired. We believe we were entitled. as local government, to forewarning and a more in depth discussion of the methodologies used and the assumptions that the Integrated Report makes about waterways in our counties, particularly when the agency has made some very significant policy calls that will have a direct impact on counties and county land.

Response: DEQ performed extensive outreach on its draft 2018/2020 Integrated Report and provided multiple opportunities to comment on its methodology and draft report.

The draft Integrated Report was open for public comment from Sept. 30, 2019, through Jan. 6, 2020, for a total of 99 days, which included a 34 day extension in response to stakeholder requests. Notifications were sent to over 3,000 individuals signed up on the GovDelivery listserv. DEQ staff subsequently held six informational sessions across the state to review the results of the report and assisted participants with its new interactive tools. The six informational sessions included: Portland on Oct. 15, 2019; Bend on Oct. 22, 2019; Central Point/Medford on Oct. 29, 2019; Newport on Nov. 5, 2019; Corvallis on Nov. 12, 2019; and Salem on Nov. 14, 2019. DEQ staff also held a webinar on Nov. 4, 2019, and the webinar was recorded and available on the Integrated Report website on-line Webinar.

DEQ will continue to adapt its approach to outreach and communications in the next Integrated Report and encourages your input and participation. The agency anticipates convening a stakeholder group in 2020, to evaluate and make recommended changes to the methodology, with the methodology going out for public comment in approximately Dec. 2020.

JC#5: Suggested Change ID #59

Description: Watershed Units- Extrapolation- Watershed unit connectivity

Comment: We have concerns with the use of sub-watersheds (HUC-12) as the assessment unit. DEQ's methodology stated that "through the assessment process, DEQ will review the watershed units more closely", but that does not seem to have occurred in the Hood River Basin. The sub-watersheds often include multiple waterways that come from separate source waters, flow through different land-uses, and are not hydrologically connected. DEQ is required to assess waterbody units based on data and it appears that the scale of these assessment units does not allow that to happen with the data DEQ has. It does not make sense to assume that an impairment measured in one waterway means that the same impairment is present in any other waterway, or even that the impairment is suggested in the unmeasured waterway. At a minimum, the assessment unit should include just the waterways that are hydrologically connected instead of lumping them all together in one HUC-12 boundary. Best practices would suggest that DEQ actually "review the watershed units more closely" for other differences in watershed homogeneity, in addition to hydrologic connectivity.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5 ("Impaired"), it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

DEQ will continue to improve and refine its methodologies as it prepares for the next cycle of the Integrated Report. The agency will begin planning for the next cycle, including soliciting input for suggested methodology improvements for the 2022 Integrated Report, in early 2020.

JC#6: Suggested Change ID #62

Description: Watershed Units- Extrapolation- Data

Comment: DEQ's methodology, especially as it relates to watershed assessment units, is an inappropriate use of the data available and risks invalidating this update to listings of impaired waterways. DEQ should not assume or declare impairment in most of the waterways in the state based on a lack of data.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5 ("Impaired"), it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

It is important to note that the Oregon Legislature passed state law (ORS 468B.039) in 2015 which directed DEQ to publish the methodology prior to analyzing water quality data and drafting the Integrated Report (two-step process). This process ensures that methodology is robust and not developed or altered in an ad-hoc manner in response to assessment results. DEQ held public stakeholder and work group processes for updates to the Assessment Methodology prior to the Integrated Report being drafted. This process was inclusive and included representatives from industry, environmental interests, tribes, agriculture and forestry on the work group.

Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

JC#7: Suggested Change ID #96

Description: Assessment Conclusions- Standard Applicability- Jackson County

Comment: Further, a review of the Integrated Web Map for Jackson County, and the underlying data, shows that the vast majority of the water bodies in this County are being listed as impaired waters solely or mostly due to temperature. Southern Oregon has a distinctly different climate than Northern Oregon or other parts of Oregon. The average high temperature in Medford, Oregon, for example, in June and especially July and August is nearly 90 degrees F. During these months, Southern Oregon also experiences negligible rainfall. With such naturally occurring conditions, the waterways in Jackson County are going to experience high temperatures. As there is no reasonable course of action by which those temperatures can be mitigated, listing such waterways as impaired is creating a problem without a solution.

Response: DEQ reviewed the temperature impairment listings in Jackson County. When DEQ adopted the temperature criteria, it contained two components, the biologically based numeric criteria and the natural conditions criteria. The biologically based numeric criteria identified the temperatures that presented low/no risk to fish and aquatic life and represented the goal to keep waters cold where that is attainable. The natural condition criteria acknowledged that some waters would be naturally warmer than the biologically based numeric criteria (e.g. Southern Oregon) and allowed DEQ to set an alternative target criteria based on those naturally achievable temperatures. The natural condition criteria have been invalidated by the court and disapproved by EPA. Therefore, temperature assessments for the 2018/2020 Integrated Report were based on the biologically based numeric criteria.

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55. Comments from: Mike/Joanne Keerins

MK#1: Suggested Change ID #48

Description: Regulatory Impact - Not a rule

Comment: I farm, and own property that would be impacted by this new ruling of "impaired" waterways. I find it insulting that these new rules are based on no factual findings in the actual waterways or ditches. It is unreasonable to make up rules that have such broad sweeping effects without actually doing the necessary work to support those rules.

Response: The Integrated Report is not a rule. It is a required reporting to EPA of the status of state waters and whether beneficial uses are supported. Assessment Units were created for reporting purposes. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

MK#2: Suggested Change ID #99

Description: Regulatory Impact- Regulation Concern- General

Comment: Concern over regulations arising from listings

Response: The Integrated Report is not a rule. It is a required reporting to EPA of the status of state waters and whether beneficial uses are supported. Assessment Units were created for reporting purposes. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

MK#3: Suggested Change ID #109

Description: General Comment- multiple data points

Comment: It is not acceptable that DEQ should list waterways over a large area with only one data point used for data. They need to have a larger data base with a longer period of time (years) before increasing the list of " impaired water bodies".

Nature changes things and there needs to be numerous data points to get a clear picture of how nature is changing the landscape with drought and floods. The data used for Pine Creek was gathered during a drought. The data collectors told me that they could not get a clear picture of the area because of the drought.

Response: DEQ would like to clarify that it did not list waterways with just a single data point. In some instances, data may have been collected from a single monitoring location, but water bodies were not classified as impaired or attaining based on a single data point. The 2018 Assessment Methodology contains minimum data thresholds for classifying a waterbody as impaired which vary depending upon the pollutant or standard being considered (a total of 140 different pollutants are evaluated as part of the Integrated Report). Depending on the standard, different parameters have different minimum data thresholds to be classified as attaining or impaired. The "Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters" document describes these minimum data thresholds. In the most recent updates to the methodology, DEQ increased the rigor of its assessments through the adoption of a statistically based assessment process.

The Category 5 listings on Pine Creek were added to the 303(d) list in 2010. According to EPA guidance, DEQ must carry the Category 4 and 5 listings forward until it can be demonstrated that water quality criteria are being met. No new water quality data on Pine Creek were submitted for this report. If the commenter believes that the waterbody may be attaining criteria, we encourage the commenter to collect data and submit to DEQ for evaluation in upcoming Integrated Report cycles.

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56. Comments from: Oregon Farm Bureau and other agencies

OFB-oa#1: Suggested Change ID #2

Description: Watershed Units- Unfair Characterization- Report appears to indicate farms and forests are experiencing declining water quality

Comment: Report … makes it look like farms and forests are experiencing declining water quality, particularly when it appears that DEQ lacks actual data for a significant portions of the waterways listed.

Response: The Integrated Report makes no conclusions about the trends in water quality across the state. It is just a snapshot of the status of state waters and whether beneficial uses are being supported. Identification of increased areas of impaired water quality condition is likely more attributable to the amount of data we assessed in 2018, enhanced resolution of Oregon's hydrography and a construct of how DEQ is required to report to EPA than it can be attributed to any specific known trends in broad scale water quality changes.

OFB-oa#2: Suggested Change ID #112

Description: Regulatory Impact- regulatory uncertainties

Comment: A reasonable, fair, and defensible 2018/2020 Integrated Report is critically important to our members. When a stream reach is included in an AU that is subsequently included in the 303(d) list, those who interact with that stream (e.g., by discharging to it, releasing stormwater runoff to it, or harvesting from the land near it) are unwillingly drawn into a multi-year period of regulatory uncertainty while they wait for a TMDL to be created. First, they must manage their operations in light of the increased risk that this uncertainty creates, then they must invest resources in tracking the development of the TMDL, and finally they must understand the implementation of the TMDL and its implications for their operations. Make no mistake, the regulatory burden on our members starts as soon as a waterway is included on the state 303(d) list due to the period of uncertainty between the listing and the creation of the TMDL.

Additionally, a 303(d) listing of a waterway near our members' operations has other important consequences that our members feel long before a TMDL is created. Once the label of "impaired waterway" is placed upon a river or stream, the activities of our members face greater scrutiny by members of the public who do not necessarily comprehend our operations or our many existing efforts to control our impact on Oregon's waterways. Moreover, in some cases, a 303(d) listing triggers additional regulations before a TMDL and its associated implementation are enacted.

When a 303(d) listing is supported by a recent and robust data set and a transparent comparison between data and water quality criteria, our members are willing to do their part to protect the water quality of our state's waterways. However, based on the concerns outlined in this comment letter, we cannot be confident that data exist to support the "impaired" status of all stream reaches included in the 303(d)-listed AUs of the Draft 2018/2020 Integrated Report. Should stream reaches be 303(d)-listed without recent and robust data and a transparent means of understanding that listing, our members will be unreasonably and unfairly impacted. These impacts will begin immediately upon adoption of the new 303(d) list, not in several years when specific TMDL processes begin, and they will unnecessarily add to the regulatory burden on housing development without producing any meaningful benefit to the water quality of Oregon.

A reasonable, fair, and defensible Report is critically important to our members. When a stream reach is included in an watershed AU that is subsequently included in the 303(d) list, those who interact with that stream (e.g., by discharging to it, releasing stormwater runoff to it, or managing land near it) are unwillingly drawn into a multi-year period of regulatory uncertainty while they wait for a TMDL to be created. First, they must manage their operations in light of the increased risk that this uncertainty creates, then they must invest resources in tracking the development of the TMDL, and finally they must understand the implementation of the TMDL and its implications for their operations. Make no mistake,

the regulatory burden on our members starts as soon as a waterway is included on the state 303(d) list due to the period of uncertainty between the listing and the creation of the TMDL.

Additionally, a 303(d) listing of a waterway near our members' operations has other important consequences that our members feel long before a TMDL is created. Once the label of "impaired waterway" is placed upon a river or stream, the activities of our members face greater scrutiny by members of the public who do not necessarily comprehend our operations or our many existing efforts to control our impact on Oregon's waterways, and who likely will not understand that the watershed scale listing was not driven by water body specific data. Moreover, in some cases, a 303(d) listing triggers additional regulations before a TMDL and its associated implementation are pursued.

Response: The Integrated Report is not a regulation. It is a federal Clean Water Act requirement that Oregon report on the quality of its surface waters every two years. The Integrated Report combines the requirements of Clean Water Act section 305(b) to develop a status report and section 303(d) requirement to develop a list of impaired waters. DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline, marine territorial waters) into manageable units primarily for assessment and reporting purposes and to enable tracking of water quality status over time. Assessment units classified as "impaired" identify areas that require additional investigation and follow-up action; it does not, unto itself, specify or determine any regulatory actions or consequences. Follow-up monitoring of impaired assessment units is necessary to better delineate and characterize the extent of impairment before any prescriptive regulatory actions are taken. In the case of impaired watershed units, a watershed unit listed as Impaired indicates that an impairment exists within the watershed, not that the entire watershed is considered impaired.

In 2015, the Oregon Legislature directed DEQ to publish the listing methodology prior to the start of drafting the Integrated Report. This process ensured that the methodology was unbiased and transparent and not developed or altered in an ad-hoc manner in response to assessment results. Updates to its Assessment Methodology were vetted through a stakeholder work group process and a subsequent 60 day public comment period. In addition, there was an opportunity for public comment on the draft assessment methodologies during the July 2018, Environmental Quality Commission meeting. Assessment conclusions were supported by a robust dataset and a transparent comparison between data and water quality criteria, which will be available for download through DEQ's online database.

OFB-oa#3: Suggested Change ID #234

Description: Mapping Tools / Data Visualization- General

Comment: DEQ Must Make Other Important Improvements to the Report

- Match interactive web map colors to Story Map. Colors should correspond to categories, not impairment, such that Category 4 and Category 5 AUs appear differently.

- A map tool that includes the monitoring locations referenced in the Assessment Database should be included in the Integrated Web Map tool. Additionally, please add monitoring locations and existing analytical data to the Geodatabase. Without it, we cannot evaluate the data that led to the water quality categorization.

- The Assessment Database is not currently searchable by beneficial use. Being able to find water bodies that are listed for the same beneficial uses would be helpful in understanding precedents for

establishing water quality standards, developing TMDLs, delisting segments, and implementing point and non-point source pollutant controls. Please add this functionality.

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

- The Ambient Water Quality Monitoring System (AWQMS)is critical to understanding the categorization of an Assessment Unit of interest, but it is remarkably difficult to use. Please undertake a comprehensive review of the user interface of this system and make the database public to facilitate intuitive custom searches.

- Please make it possible to search by Assessment Unit, not merely monitoring location identification numbers, in the AWQMS.

Response: Thank you for your suggestions. DEQ will revise its visual displays (i.e. Interactive Map and Story Map) to use the same color scheme. Monitoring locations used in the 2018/2020 assessment are currently available as a layer in the interactive web map. In the final version of the report, these monitoring locations will become visible when zoomed in. The analytical data used in the assessment will be available for download through DEQ's online database, and the online database will be searchable by beneficial use. Search results returned outside the State of Oregon primarily come from the Watershed Boundary Dataset (USGS), which is a national dataset. There is no way to turn off this search as it would not return any results in Oregon for this dataset, therefore DEQ intends to continue to use this dataset. Unfortunately, DEQ is unable to make any changes to the AWQMS user interface. DEQ will continue to provide tutorials and staff assistance on how to best use AWQMS. DEQ will, however, add the functionality to search by Assessment Unit ID in AWQMS.

OFB-oa#4: Suggested Change ID #235

Description: Databases - Data availability

Comment: Problems with Completeness and Connectivity of Data Must Be Addressed

- Our comparison of the data received from DEQ in spreadsheet form and the data available on the AWQMS web portal indicates that, in at least one case, the web portal does not include all the data that are available for an AU. Importantly, data that were not on the AWQMS web portal were the data that led to a Category 5 determination for a specific AU. All data that lead to categorizations of AUs should be publicly accessible without the personal assistance of DEQ personnel.

- The analytical data represented in the Integrated Report are not accessible via the Interactive Web Map and the Assessment Database

- The Assessment Database should identify the organization that collected the data

Response: DEQ agrees with the commenter. In the final report and in future iterations of the Integrated Report, DEQ will make the supporting data and rationales available through the online assessment database, in addition to having raw data available in the AWQMS data portal.

OFB-oa#5: Suggested Change ID #270

Description: Process- Public Comment Process- additional comments #3

Comment: DEQ Should Accept Comments on the Methodology

As in initial matter, we urge DEQ to reconsider its decision not to accept comments on the Methodology document. While DEQ correctly notes that the Methodology was put out for public comment in 2018, that comment period was well before DEQ completed its call for data, developed its 303(d) list and published its map illustrating DEQ's revised approach to listing. DEQ's significant changes in approach were not immediately apparent in its draft Methodology, especially the meaning of DEQ moving to a "watershed scale" approach for assessing units that are stream order 4 or less. Indeed, members of the work group, including the Oregon Farm Bureau, do not recall talking about the changes to the approach to stream order 4 or less streams and moving to a watershed scale assessment unit; instead, the focus of the assessment unit conversation was almost entirely on the new approach to segmentation of stream order 5 or higher streams. Further, what was meant by an assessment unit was very vague –from reading the methodology, it appears that the watershed scale assessment unit is simply a means of dividing those smaller streams into segments. It is not clear that DEQ would actually list an entire watershed based on data from one stream in that watershed. At any rate, it is appropriate to take comments on the entirety of the Report and Methodology now that DEQ has completed its call for data and developed its proposed 303(d) list of Report and Methodology Comments | 3waterways; only now can the public can fully understand the implications of DEQ's decisions in its Methodology.

Response: DEQ performed extensive outreach on its draft 2018/2020 Integrated Report and provided multiple opportunities to comment on its methodology and draft report.

In 2015, the Oregon Legislature directed DEQ to publish the listing methodology prior to the start of drafting the Integrated Report (ORS 468B.039). This process ensured that the methodology was unbiased and transparent and not developed or altered in an ad-hoc manner in response to assessment results. Updates to its Assessment Methodology were vetted through a stakeholder work group process and a subsequent 60 day public comment period. In addition, there was an opportunity for public comment on the draft assessment methodologies during the July 2018, Environmental Quality Commission meeting.

DEQ will continue to adapt its approach to outreach and communications in the next Integrated Report and encourages your input and participation. The agency anticipates convening a stakeholder group in 2020 to evaluate and make recommended changes to the methodology, with the methodology going out for public comment in approximately December 2020.

OFB-oa#6: Suggested Change ID #271

Description: Watershed Units- General #3

Comment: We Oppose DEQ's Decision to Move to Watershed Scale Assessment Units and Listings in the Methodology … In order to be scientifically defensible, decisions to list waterbodies as impaired must be based on water body specific data and cannot be done on a watershed wide scale or based upon pooling data (i.e. extrapolating data from samples from neighboring waterways or tributaries). Watersheds are composed of hundreds of individual water bodies. Within a watershed, water quality can

easily differ from water body to water body, particularly when those waterways are under different ownership and may have experienced differing current and historic riparian management. Further, it does not appear that DEQ analyzed whether the selected beneficial use for the sampled tributary would actually apply to all waterbodies in the watershed AU or be an appropriate basis for listing all waterbodies in the watershed AU. This is particularly important in the context of irrigation and drainage ditches, many of which are closed diversion systems which are screened to prevent fish from entering the system. Many of the standards for fish life or human drinking water would not apply to these water bodies, as they are separate systems that do not support those beneficial uses. Instead of undertaking a site-specific analysis based on site specific data, DEQ has chosen to aggregate almost all of this man-made infrastructure across the state into its watershed scale analysis, in the process applying inappropriate beneficial uses and listing criteria to these waterbodies. This approach is not scientifically justified or legally appropriate.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

Watershed units were only characterized as Impaired if data from within the watershed unit demonstrated that water quality criteria were not being met and one or more beneficial uses were not supported. A watershed unit listed as Impaired indicates that an impairment exists within the watershed, not that the entire watershed is considered to be impaired. Assessment Units identified as Category 5 in the Integrated Report are areas that require additional investigation and follow-up action; it does not, unto itself, specify or determine any regulatory actions or consequences.

Beneficial uses were designated according to administrative basin in OAR-340-041 Tables 101A - 330A, including specific water bodies and designation for "All other streams and tributaries" which includes all waters of the state not specifically designated. In the transition to the High Resolution NHD layer, more waterbodies are mapped, but as beneficial uses are designated on an administrative basin wide scale, there has been no geographic expansion of these uses. Not all ditches and canals are alike. To the extent that a canal may not have fish in it, it likely has other aquatic life, and the canal may still affect fish and other aquatic life in waterbodies downstream. The applicable uses may warrant further review based on new information, but this is done through a separate Water Quality Standards update, which is outside of the Integrated Report process.

OFB-oa#7: Suggested Change ID #272

Description: Watershed Units- General #4

Comment: DEQ Did Not Properly Delineate Assessment Units

In its application of the Methodology, DEQ has failed to properly look at the homogeneity of the watersheds, and thus has made improper judgements regarding where to sub-divide new watershed AUs. In the areas where we performed a specific analysis of relevant data and listings, we found that the watershed AUs are much too large because they capture regions of widely varying land use, major differences in beneficial uses, or where the original listing data is too stale to be extrapolated to the rest of the basin. This has led to prior 303(d) listings being applied to additional miles of rivers and streams where monitoring data may be scant or nonexistent, and where conditions on the ground are very likely to be different from the locations where the monitoring data were collected.

According to the Methodology, DEQ was supposed to assess the homogeneity of Watershed Units when defining AUs and reassess geographical areas over which a beneficial use extends (i.e., the extent of fish habitat) when mapping previous AUs to new ones("using environmentally and/or hydrologically relevant breaks means the assessment units should represent homogenous segments of surface waters" and "where other relevant data layers indicate differences in watershed homogeneity, further divisions may be warranted in the assessment unit").4This analysis is intended to determine whether the new watershed AU is appropriate for the water body and pollutant previously listed on a single waterbody in the watershed AU, and ensure that DEQ is not pursuing listings where additional data is likely to demonstrate a listing isn't warranted. However, it does not appear that a homogeneity analysis happened for many –if any – watershed AUs listed in the Report.

DEQ failed to complete a waterbody specific evaluation of land use patterns–including changes in riparian condition –prior to extending an AU to include an entire watershed. For most of the new watershed scale AUs, the agricultural land use and regional conditions vary considerably, making it very unlikely that a sample from a waterbody in one part of a watershed would be representative of a waterbody where the land use, land features, or stream condition is different. This is particularly true when all waterbodies in a watershed AU are not the same classification. For example, where a watershed AU is comprised of natural waterways, irrigation ditches, and drainage or other man altered channels, it is very unlikely that a sample from one type of system in the watershed would be representative of all the waterbodies in that watershed.

Similarly, when there are varying land uses or systems that are impacted by different types of legacy conditions, it is not appropriate to use data from one part of the watershed to represent the entire watershed. DEQ failed to review each watershed AU for changes in land use, riparian condition, and other landscape features that could indicate that the waterbody where the data collected may be differently situated than other waterbodies in the same watershed, and further subdivide watershed AUs based on this analysis. For any new watershed AUs where DEQ lacks that data to assess the condition, they should be listed as Category 3.

Extending the geographic reach of a former listing under the watershed units also had the effect of extending the reach of the beneficial use that the original listing was based upon. It appears that across the state, DEQ simply extended the reach of the assessment unit, and thus the geographic reach of the beneficial use, without first evaluating whether that beneficial use should extend to the whole watershed AU. As part of its homogeneity analysis, DEQ should have looked at the beneficial uses for the stream with the original impairment to make sure that the same beneficial use would apply throughout the new

watershed AU. In its final Report, DEQ must ensure that AUs in the Report are homogeneous with respect to their beneficial uses.

In watersheds with ditches or other man-made infrastructure, DEQ should not extend the beneficial use to that infrastructure. Including irrigation ditches in watershed AUs is not consistent with the requirement that watershed AUs be divided at points of heterogeneity. Instead, the stream from the 2012 Integrated Report should be one AU with its beneficial uses and nearby irrigation ditches identified in the NHDH data set should be a separate AU with beneficial uses identified separately from the stream. This is particularly relevant for irrigation ditches because they are usually screened to prevent fish from entering, and thus extending the beneficial use of Fish Habitat from a free-flowing stream to irrigation ditches is not reasonable. To that end, we recommend that DEQ should develop a filter for the High Resolution National Hydrography data set that separates unnatural channels and areas with modified flow patterns (e.g., irrigation ditches) from natural channels. If DEQ lacks data on the water quality status of these ditches, they should be listed as Category 3 and treated separately from nearby natural waterways.

Finally, where the only data supporting a previous listing for a stream that will carry over to a new watershed AU in the Report is stale (more than a decade old),DEQ should not extrapolate that data out to an entire watershed AU, and thus expand the stale listing to a broader watershed. Instead, DEQ should list the remaining waters of the watershed as Category 3 if there is not sufficient new data to determine their status.

Response: In 2016, DEQ undertook a major improvement effort to streamline the Integrated Report and address longstanding issues. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes The focus of the method update was to create static assessment units that remain fixed over time. Fixed assessment units allow DEQ to track water quality changes over time. DEQ simultaneously migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. at a much higher resolution than in the past (LLID; 1:100,000). The high resolution NHD is the federal and state standard and represents the water drainage network of the United States with features such as rivers, streams, canals, lakes, ponds, coastline, dams, stream gages, and watershed boundary dataset. The dataset intended to "develop nationally-consistent geospatial datasets for the Nation" and provide agencies and organizations a common baseline for mapping aquatic resources.

When moving to the NHD, DEQ chose to define assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages, were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. It is rooted in scientific principles that support the application of data from one or more locations for extrapolation across a broader geographical area. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

Beneficial uses were designated according to administrative basin in OAR-340-041 Tables 101A - 330A, including specific water bodies and designation for "All other streams and tributaries" which includes all waters of the state not specifically designated. In the transition to the High Resolution NHD layer, more waterbodies are mapped, but as beneficial uses are designated on an administrative basin wide scale, there has been no geographic expansion of these uses.

It is not practicable to split assessment units on land use designations, due to complexity in landscape scale and land use changes over time. Many assessment units were delineated on changes in designated beneficial uses or where major tributaries meet. The assessment units were not further divided based on mores specific subcategories of beneficial use such as the spawning fish use subcategory of fish and aquatic life. Waterbodies may have multiple water quality standards that apply to them. Because criteria may change over a small area, as in the spawning fish use designations, it is not feasible to divide and manage assessment units on every change in water quality criteria. However, impairments are based on the data from specific monitoring stations, and the specific criteria that apply to beneficial uses or use subcategories at the location where data is collected. The location of different fish uses within assessment units, including season or timing of use impairments, are considered during the Total Maximum Daily Load (TMDL) process and in NPDES permit development.

Not all ditches and canals are alike. To the extent that a canal may not have fish in it, it likely has other aquatic life, and the canal may still affect fish and other aquatic life in waterbodies downstream. The applicable uses may warrant further review based on new information, but this is done through a separate Water Quality Standards update, which is outside of the Integrated Report process.

Following EPA guidance, previous Category 5 listings must be carried forward, until it can be demonstrated that water quality criteria are being met. Similar to 2018/2020 assessments, for previous Category 5 listings that were carried forward, if a watershed unit was identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire watershed is impaired. The 303(d) list of impaired waters identifies assessment units that require additional investigation and follow-up action. The report does not, unto itself, specify or determine any regulatory actions or consequences.

DEQ will continue to improve and refine its methodologies as it prepares for the next cycle of the Integrated Report. The agency will begin planning for the next cycle, including soliciting input for suggested methodology improvements for the 2022 Integrated Report, in early 2020.

OFB-oa#8: Suggested Change ID #274

Description: Mapping tools/ Visualizations- Improvements

Comment: DEQ Must Improve its Display of Assessment Units

DEQ's current display paints a very inaccurate picture of water quality in the state, particularly on agriculture and forest lands. While DEQ does not have significant new data driving new listings, DEQ's decision to map the status of every waterbody in a watershed AU makes it appear as if DEQ has sampled nearly every water body in the state and has found widespread impairments, and makes it impossible for the user to tell which waterbodies DEQ actually has data for. It also makes it appear as though water quality on agriculture and forest lands has declined drastically since 2012, when we know the opposite to be true. If DEQ chooses to continue to pursue watershed scale AUs, DEQ must modify how it displays the data it has such that1) the user can easily see where in a watershed the data points driving a listing are coming from and 2) DEQ doesn't highlight as "impaired" any waterbodies it lacks data for

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for

assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrologic Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000). A watershed unit listed as Impaired indicates that an impairment exists within the watershed, not that the entire watershed is considered impaired. In response to comments received, DEQ will be updating its visual display to reflect watershed units as polygons, rather than a collection of stream networks. Monitoring locations used in the assessment, which were formerly an additional map layer that needed to be clicked on, will be on by default and will be visible at certain zoom levels. In addition, data used in the assessment will be available to download through DEQ's online database.

The Oregon Legislature adopted ORS 468B.039 in 2015 which directed DEQ to publish its Assessment Methodology "prior to publishing draft assessments of water bodies based on the methodologies developed" 468B.039 (1)(b). This process ensured that the methodology was unbiased and not developed or altered in an ad-hoc manner in response to assessment results. All of the methods used in the Integrated Report were vetted through an Assessment Methodology work group prior to DEQ's assessment of the data. Water quality assessment based on this watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. Including all of the waterbodies in a HUC-12 is a way of grouping and portioning all of the waterbodies across the state.

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57. Comments from: Oregon Homebuilders Association

OHA#1: Suggested Change ID #99

Description: Regulatory Impact- Regulation Concern- General

Comment: Concern over regulations arising from listings

Response: The Integrated Report is not a rule. It is a required reporting to EPA of the status of state waters and whether beneficial uses are supported. Assessment Units were created for reporting purposes. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

OHA#2: Suggested Change ID #110

Description: Watershed Units- Break Units on land use

Comment: The 2018/2020 Integrated Report AUs capture regions of widely varying land use or major differences in beneficial uses. This has led to prior 303(d) listings being applied to additional miles of rivers and streams where monitoring data may be scant or nonexistent. Measurements in Portland Harbor

could lead to reported water quality impairments in the upstream segments of the Lower Willamette River, measurements near developed land of McMinnville could lead to reported impairments in agricultural areas southeast of that city, or that measurements in those agricultural areas could impact development in the urbanized portions of McMinnville. Please ensure that AUs in the Draft 2018/2020 Integrated Report are homogeneous with respect to their land and beneficial uses.

Example1: Assessment Unit OR_WS_170900080701_02_104451, the South Yamhill River HUC12 Watershed Assessment Unit, should be divided into multiple AUs because its southern and northern portions are neither homogenous nor hydrologically connected. Notably, the part of this AU that lies south of the South Yamhill River drains agricultural land, whereas the part of this AU on the north side of the South Yamhill River drains developed urban land.

Response: Assessment units were delineated on changes in designated beneficial uses according to OAR-340-041 Tables 101A - 330A, including specific water bodies. However, assessment units were not delineated on all changes in sub-use categories that may affect the applicable criteria that apply at specific points within an assessment unit. It is not practicable to split assessment units on land use designations, due to complexity in landscape scale and land use changes over time.

DEQ created watershed assessment units based on the HUC12 sub-watershed units, which represent the smallest watershed boundary unit identified in the NHD. Including all of the waterbodies in a HUC-12 is a way of grouping and portioning all of the waterbodies across the state. A Category 5 listing identifies that impairments exist within the watershed based on the data collected, not that the entire watershed is impaired. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements, and is rooted in scientific principles that support application of data from one or more locations for extrapolation across a broader geographical area.

OHA#3: Suggested Change ID #111

Description: Beneficial Uses and WQ Standards- Crosswalk

Comment: We are concerned that, when DEQ created the Draft 2018/2020 Integrated Report, the beneficial uses from the 2012 Integrated Report were transferred to 2018/2020 AUs through an automated algorithm whose results need additional review for reasonableness. Please confirm that the beneficial uses in the AUs of the Draft 2018/2020 Integrated Report extend throughout each AUs.

The Draft 2018/2020 Integrated Report used the High-Resolution National Hydrography (NHDH) data set to define the geographical extent of new AUs. These were compared with AUs from the 2012 Integrated Report, and, when they overlapped, the beneficial uses of 2012 AUs were inherited by the 2018/2020 AUs. In many cases involving HUC12 Watershed AUs in the Draft 2018/2020 Integrated Report, the 2018/2020 AU includes a much longer distance of streams than did the 2012 AU. Consequently, in many cases, the creation of HUC12 Watershed AUs represents a geographical expansion of beneficial uses relative to the 2012 Integrated Report.

The geographic expansion of beneficial uses described above can violate the principle of homogeneity that should separate neighboring AUs from each other. The 2018 Assessment Methodology states that "using environmentally and/or hydrologically relevant breaks means the AUs should represent homogenous segments of surface waters" and "where other relevant data layers indicate differences in watershed homogeneity, further divisions may be warranted in the assessment unit." There are several

examples where it appears that heterogeneous water bodies have been incorporated into the same AU. This led to the application of beneficial uses and water quality criteria that do not represent the entirety of several newly expanded AUs. Most notably, this occurs when irrigation ditches are included in a new AU that also includes a previously categorized free-flowing stream. DEQ must not assume that the beneficial uses of the stream can be extended to the irrigation ditches. Instead, the stream from the 2012 Integrated Report should be one AU with its beneficial uses and nearby irrigation ditches identified in the NHDH data set should be a separate AU with beneficial uses identified separately from the stream. This is particularly relevant for irrigation ditches because they are usually screened to prevent fish from entering, and thus extending the beneficial use of Fish Habitat from a free-flowing stream to irrigation ditches is not reasonable.

Response: Water quality standards are established to protect beneficial uses of the State's waters. All of the waters classified in DEQ's assessment units are considered "waters of the state". Beneficial uses are designated for all waters of the state, according to administrative basin and some specific water bodies according to the Oregon Administrative Rules for water quality standards (OAR-340-041…). The creation of HUC12 watershed assessment units geographically expanded some of the impaired waters previously identified in the 2012 Integrated Report, but the beneficial uses applied to those waters existed prior to this assessment. Assessment units based on the NHD hydrography include some water bodies that did not appear at the resolution of the hydrography used to map impaired waters previously identified in the 2012 Integrated Report. The beneficial uses applied to all waters are established in the OARs and existed prior to being mapped for this assessment. If the commenter believes that some of the water bodies are not waters of the state or the designated beneficial uses are not applicable to particular water bodies in the 2018/2020 Integrated Report, there is a separate Water Quality Standards process to petition to modify or remove the designated uses through a Use Attainability Analysis.

OHA#4: Suggested Change ID #112

Description: Regulatory Impact- regulatory uncertainties

Comment: A reasonable, fair, and defensible 2018/2020 Integrated Report is critically important to our members. When a stream reach is included in an AU that is subsequently included in the 303(d) list, those who interact with that stream (e.g., by discharging to it, releasing stormwater runoff to it, or harvesting from the land near it) are unwillingly drawn into a multi-year period of regulatory uncertainty while they wait for a TMDL to be created. First, they must manage their operations in light of the increased risk that this uncertainty creates, then they must invest resources in tracking the development of the TMDL, and finally they must understand the implementation of the TMDL and its implications for their operations. Make no mistake, the regulatory burden on our members starts as soon as a waterway is included on the state 303(d) list due to the period of uncertainty between the listing and the creation of the TMDL.

Additionally, a 303(d) listing of a waterway near our members' operations has other important consequences that our members feel long before a TMDL is created. Once the label of "impaired waterway" is placed upon a river or stream, the activities of our members face greater scrutiny by members of the public who do not necessarily comprehend our operations or our many existing efforts to control our impact on Oregon's waterways. Moreover, in some cases, a 303(d) listing triggers additional regulations before a TMDL and its associated implementation are enacted.

When a 303(d) listing is supported by a recent and robust data set and a transparent comparison between data and water quality criteria, our members are willing to do their part to protect the water quality of our state's waterways. However, based on the concerns outlined in this comment letter, we cannot be

confident that data exist to support the "impaired" status of all stream reaches included in the 303(d)-listed AUs of the Draft 2018/2020 Integrated Report. Should stream reaches be 303(d)-listed without recent and robust data and a transparent means of understanding that listing, our members will be unreasonably and unfairly impacted. These impacts will begin immediately upon adoption of the new 303(d) list, not in several years when specific TMDL processes begin, and they will unnecessarily add to the regulatory burden on housing development without producing any meaningful benefit to the water quality of Oregon.

A reasonable, fair, and defensible Report is critically important to our members. When a stream reach is included in an watershed AU that is subsequently included in the 303(d) list, those who interact with that stream (e.g., by discharging to it, releasing stormwater runoff to it, or managing land near it) are unwillingly drawn into a multi-year period of regulatory uncertainty while they wait for a TMDL to be created. First, they must manage their operations in light of the increased risk that this uncertainty creates, then they must invest resources in tracking the development of the TMDL, and finally they must understand the implementation of the TMDL and its implications for their operations. Make no mistake, the regulatory burden on our members starts as soon as a waterway is included on the state 303(d) list due to the period of uncertainty between the listing and the creation of the TMDL.

Additionally, a 303(d) listing of a waterway near our members' operations has other important consequences that our members feel long before a TMDL is created. Once the label of "impaired waterway" is placed upon a river or stream, the activities of our members face greater scrutiny by members of the public who do not necessarily comprehend our operations or our many existing efforts to control our impact on Oregon's waterways, and who likely will not understand that the watershed scale listing was not driven by water body specific data. Moreover, in some cases, a 303(d) listing triggers additional regulations before a TMDL and its associated implementation are pursued.

Response: The Integrated Report is not a regulation. It is a federal Clean Water Act requirement that Oregon report on the quality of its surface waters every two years. The Integrated Report combines the requirements of Clean Water Act section 305(b) to develop a status report and section 303(d) requirement to develop a list of impaired waters. DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline, marine territorial waters) into manageable units; primarily for assessment and reporting purposes and to enable tracking of water quality status over time. Assessment units classified as "impaired" identify areas that require additional investigation and follow-up action; it does not, unto itself, specify or determine any regulatory actions or consequences. Follow-up monitoring of impaired assessment units is necessary to better delineate and characterize the extent of impairment before any prescriptive regulatory actions are taken. In the case of impaired watershed units, a watershed unit listed as Impaired indicates that an impairment exists within the watershed, not that the entire watershed is considered impaired.

In 2015, the Oregon Legislature directed DEQ to publish the listing methodology prior to the start of drafting the Integrated Report. This process ensured that the methodology was unbiased and transparent and not developed or altered in an ad-hoc manner in response to assessment results. Updates to its Assessment Methodology were vetted through a stakeholder work group process and a subsequent 60 day public comment period. In addition, there was an opportunity for public comment on the draft assessment methodologies during the July 2018, Environmental Quality Commission meeting. Assessment conclusions were supported by a robust dataset and a transparent comparison between data and water quality criteria, which will be available for download through DEQ's online database.

58. Comments from: Klamath Water Users Association

KWUA#1: Suggested Change ID #113

Description: General Comment- Clarity of tools

Comment: KWUA supports practical and science-based approaches to protect and improve Oregon's water resources. Based on the presently available information, KWUA cannot independently validate the display, datasets, and underlying methodology in support of the draft Integrated Report. For example, the combined display of impaired waterways is confusing, difficult to use, and has yielded anxiety amongst Klamath Project stakeholders. Furthermore, KWUA believes that the display of impaired waterways in the draft Integrated Report may be inconsistent with the approach taken by the Department of Environmental Quality in the recent Klamath Basin total maximum daily loads (nutrients and temperature).

KWUA is familiar with three separate comment letters that have been filed by the Klamath Drainage District, Oregon Water Resources Congress, and Oregon Farm Bureau, and supports and joins in those comments.

Response: Based on comments received through the Integrated Report public comment period, DEQ has revised its interactive web map to address concerns raised by commenters. DEQ will be updating its Interactive Map and visual representation of its watershed units. Watershed units which are currently identified as the stream networks within a HUC-12 boundary will be modified to polygons. DEQ used its Methodology for Oregon's 2018/2020 Water Quality Report and List of Water Quality Limited Waters to perform its assessments and data used in the assessment, along with the criteria it was assessed against will be available for download from its online database. DEQ's draft Integrated Report is consistent with the approach taken in the recent Klamath Basin total maximum daily load and Assessment staff continue to work with Total Maximum Daily Load (TMDL) staff to coordinate accurate categorical reporting conclusions.

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59. Comments from: EPA

EP#1: Suggested Change ID #121

Description: Data- Additional Information- EPA

Comment: The EPA requests that additional information be provided by ODEQ. For example, for the waters that ODEQ is reporting as Category 3, i.e. there is insufficient available data and/or information to make a use support determination, please provide a rationale that demonstrates good cause for not including these waters on the list of impaired waters under the Clean Water Act section 303(d). Additionally, if ODEQ has chosen not to rely on certain existing and readily available data and/or information for making impairment determinations, please provide a rationale detailing this decision.

Response: DEQ will provide rationales for all waters proposed as Category 5 and Category 3 under the Clean Water Act section 303(d). Rationales for waterbodies classified as Category 3 indicate that there was insufficient data to make an assessment conclusion. Rationales for specific impairment determinations lacking a methodology were also included in Appendix C of its Assessment Methodology. Any data that DEQ did not use in its assessment for making impairment determinations is contained in Appendix B of its Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters.

EP#2: Suggested Change ID #122

Description: General Comment- Updates

Comment: Thank you for the opportunity to comment on the Oregon Department of Environmental Quality's draft 2018-2020 Integrated Report. The EPA understands that this report encompasses an assessment of data covering the 2014 through 2020 Integrated Report periods. EPA recognizes that there were a number of significant updates since the 2012 Integrated Report submittal, including listing methodology revisions and re-segmentation of waterbody assessment units, in addition to the transition to the new EPA Assessment, Total Maximum Daily Load (TMDL) Tracking and Implementation System (ATTAINS) online database system. The EPA believes these efforts will lead to accurate, transparent and timely assessment submittals.

Response: Thank you for your support of our continued Integrated Report improvement efforts.

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60. Comments from: Oregon State University

OSU#1: Suggested Change ID #114

Description: General Comment- Data source offer

Comment: We write in response to the call for public comments for the Oregon DEQ draft 2018/2020 Integrated Report. My colleague, Jack Barth and I are members of the faculty at Oregon State University. We are actively involved in the study of ocean acidification and hypoxia and have research programs that directly monitor dissolved oxygen, carbonate chemistry and associated ocean properties in Oregon's nearshore waters. Understanding the status and trends of ocean acidification and hypoxia is an important endeavor and we are supportive of DEQ's efforts to address these stressors in the Integrated Report. Ideally, we would be providing an in-depth response to the data sources, quality and interpretation of the Report. Unfortunately, we found that the interactive story map and the on-line searchable database to be rather difficult to navigate for pulling out detailed information. Instead, we emphasize that we are a source of data on dissolved oxygen and carbonate chemistry in Oregon's nearshore ocean. Some of these data sets are publicly available in federally-funded data portals, others are freely available upon request. These data sets highlight the particular vulnerability of Oregon coastal ecosystems to further declines in water quality from ocean acidification and intensification of hypoxia. We were not directly contacted by DEQ for the preparation of this draft Integrated Report, but we would be more than happy to point to data

access portals or share data sets to support management. This is an important effort for Oregon and we stand ready to assist.

Response: DEQ became aware of additional marine data sources during its public comment period and informational sessions. Data sources identified in additional comment letters that are publicly available have subsequently been analyzed for the final report. DEQ will prioritize outreach to entities actively involved in ocean research and seeks further collaboration on the assessment of marine waters for the 2022 Integrated Report. DEQ will also explore ways to broaden outreach efforts in the 2022 call for data. DEQ staff continue to work on its interactive map display and will be making the data used in the assessment available for download through its online database.

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61. Comments from: Klamath Drainage District

KDD#1: Suggested Change ID #144

Description: waters of the State- KDD canals

Comment: ODEQ Has Exceeded Its Authority. Specifically, KDD believes ODEQ has exceeded its authority in including and mapping KDD's irrigation canals as impaired water bodies subject to the Report and Visualization Tools. Irrigation canals do not fall squarely under the Oregon "waters of the state" definition. 2017 Oregon Revised Statutes section 460B.005 (10) omits "ditches" and includes canals except "those private waters which do not combine or effect a junction with natural surface or underground waters." As a policy matter and under federal law, agricultural conduits have been historically exempt, and the state should mirror this important public policy. 40 CFR § 232.3(d) (exempting normal farming operations from 404 permitting requirements).

Response: Oregon's definition of waters of the state is very broad (Section 468B.005(10)) "'Water' or 'Waters of the State' include lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters which do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the state or within its jurisdiction)." DEQ's interpretation is that irrigation canals fall squarely in this definition, and water quality within irrigation canals could have water quality impacts on downstream waterbodies and the aquatic life therein. DEQ understands that not all ditches and canals are alike. To the extent that a canal may not have fish in it, it likely has other aquatic life, and the canal may still affect fish and other aquatic life in waterbodies downstream. In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on their currently designated uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time.

KDD#2: Suggested Change ID #145

Description: mapping Tools / Visualization- inclusion of agriculture infrastructure

Comment: The Report and Visualization Tool Lack Support. Without explanation or a clearly stated rationale, the Report improperly blends man-made infrastructure and District facilities with natural waterways as listed water bodies. Not only is listing agricultural infrastructure inconsistent with public policy, but also the regulatory impacts are far-reaching and onerous. These man-made systems should be removed from the Visualization Tool and inclusion in general.

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

DEQ used the high-resolution National Hydrography Dataset (NHD) stream network, which is the federal standard, to classify all of Oregon state waters that are identified in its GIS map layer as Assessment Units. DEQ is required to assess Oregon state waters against the applicable criteria based on their current designated uses. The current beneficial uses were originally designated on a basin scale and were established based on the information available at that time. The current applicability of designated uses may warrant further review based on new information, but this is done through a separate Standards process, outside of the Integrated Report process. Therefore, in this iteration of the Integrated Report, assessment was done based on the currently designated uses.

Assessment Units were designed primarily for reporting purposes and allows DEQ to track changes in water quality over time. A Category 5 conclusion for a watershed assessment unit identifies that there are stream(s) within the unit that are impaired, not that the entire watershed unit is impaired. The Integrated Report identifies areas that require additional investigation and follow-up action; it does not, unto itself, specify or determine any regulatory actions or consequences. Focused attention on impaired Assessment Units will be necessary to better delineate and characterize the extent of impairment before any prescriptive regulatory actions may be taken.

KDD#3: Suggested Change ID #146

Description: Assessment Conclusions- Unsupported designations

Comment: Designations are Arbitrary and Unsupported. KDD recognizes water quality challenges within the Klamath River Basin, however, for ODEQ to hold KDD solely responsible for the water quality of water coming from upstream sources into KDD's canals is unjust, inequitable and in exceedance of ODEQ's authority. Nothing in the Report explains or justifies why KDD's canals have been designated as impaired, and no other irrigation canals within the Project using the same water have been so designated. Due to other regulatory burdens and operation of the Project as a whole, KDD has limited control over the quality of water entering its system. Analysis of water quality within the Project and the Basin should be

the subject of a more involved and comprehensive inquiry before portions of the existing infrastructure are labeled as impaired

Response: The federal Clean Water Act (CWA) requires Oregon to report on the quality of its surface waters every two years. Oregon surface waters are assessed to determine if they contain pollutants at levels that exceed protective water quality standards. The result of these analyses and conclusions is called the "Integrated Report" because it combines the requirements of Clean Water Act section 305(b) to develop a status report and the section 303(d) requirement to develop a list of impaired waters. The Integrated Report categorizes all assessed waterbodies. DEQ used water quality data to evaluate the most common beneficial uses, such as aquatic life, drinking water or recreation. Waterbodies that exceed protective water quality standards are identified as impaired, (which is also referred to as the "303(d) List"). The 303(d) list identifies where Oregon surface waters are not meeting water quality standards and the cause of those impairments. It does not identify the source of the impairments nor does it attribute sources responsibility for those impairments to any affected part or parties. Identifying a waterbody as impaired initiates the prioritization and development of a Total Maximum Daily Load (TMDL) for specified pollutants. The Integrated Report identifies areas that require additional investigation and follow-up action; it does not, unto itself, specify or determine any regulatory actions or consequences (other than identifying that an area has impairment and is in need of follow-up investigation.

In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify has areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream. In response to comments received, DEQ will be updating its visual display to reflect watershed units as polygons, rather than a collection of stream networks. Monitoring locations used in the assessment, which were formerly an additional map layer that needed to be turned on, will be turned on by default and will be visible when the map is zoomed in. DEQ will continue to enhance and improve communication tools for the 2018/2020 Integrated Report and future reports.

Assessment units identified as impaired were based on monitoring data. Unfortunately, without more information, we are unable to ascertain the locations of the specific impairments in question.

KDD#4: Suggested Change ID #147

Description: Regulatory Impact- Unfunded Mandate

Comment: The Report and Visualization Tool Constitute an Unfunded Mandate. KDD understands the purpose of the Integrated Report is to identify areas of the state that may have water quality issues, however, being identified on the Visualization Tool map could have serious detrimental impacts. Even though a listing as impaired may not impose immediate regulatory requirements, the inference and the risk is real. Operational costs to conform to future regulatory action would be devastating to a small district like KDD. Requiring compliance with the program without state funding would constitute an unfunded mandate under Article XI, section 15(3) of the Oregon Constitution.

Response: The Integrated Report is a required reporting to EPA of the status of state waters and whether beneficial uses are supported. The Integrated Report identifies areas that require additional investigation and follow-up action; it does not, unto itself, specify or determine any regulatory actions or consequences. When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. In response to comments received, DEQ will be updating its visual display to reflect watershed units as polygons, rather than a collection of stream networks.

KDD#5: Suggested Change ID #148

Description: Methodology- Complex regulatory process

Comment: ODEQ Must Consider Regulatory Complexities Associated with the Klamath Project and the 2019 Biological Opinion. Klamath Project operations and Endangered Species Act requirements (some of which are presently under consideration in the 9th Circuit and in state court) are very complicated and will impact the quantity, and potentially quality, of water flowing through KDD's canals and ditches. In low water years especially, KDD may have very little control over the amount of water flowing into and out of its infrastructure. ODEQ's methodology and the outcome (the Report and Visualization Tool) fail to take these realities into account.

Response: The federal Clean Water Act (CWA) requires Oregon to report on the quality of its surface waters every two years. Oregon surface waters are assessed to determine if they contain pollutants at levels that exceed protective water quality standards. The result of these analyses and conclusions is called the "Integrated Report" because it combines the requirements of Clean Water Act section 305(b) to develop a status report and the section 303(d) requirement to develop a list of impaired waters. The Integrated Report categorizes all assessed waterbodies.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

DEQ used water quality data to evaluate the most common beneficial uses, such as aquatic life, drinking water or recreation. This assessment process is described in detail in the "Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Impaired Waters". As this report represents an assessment of whether water bodies are meeting currently meeting water quality criteria and are supporting their designated beneficial uses based on data and information, regulatory complexity is not a factor that was considered.

KDD#6: Suggested Change ID #149

Description: Process- Outreach- Inform

Comment: ODEQ Failed to Engage Affected and/or Interested Parties in the Process. KDD was taken by surprise to learn that ODEQ had generated a draft Report and Visualization Tool that identified the District's manmade ditches as impaired water bodies. Given the draft Report has a 2018/2020 timeframe, the Draft Integrated Report and Visualization Tool clearly has been worked on for some time. Why was the District never informed? Why were there no public meetings to educate the public?

Response: DEQ commenced its outreach with a public presentation and webinar on Integrated Report improvements and a draft schedule for the 2018 Integrated Report in August 2017. Subsequent to the webinar, DEQ held a series of stakeholder work group meetings to discuss changes that were going to be made to the report methodologies which wrapped up in April 2018. During that time-period, DEQ presented at the Oregon Conservation Education and Assistance Network (OCEAN) CONNECT conference in April 2018 on revisions to its methodologies. In addition to a 59 day public comment period in 2018 for the assessment methodology, DEQ held a 99 day public comment period for the draft report. All of these periods were noticed through our GovDelivery listserv with a recipient list of over 3000 individuals. Following the release of the draft 2018/2020 Integrated Report, DEQ staff held six informational sessions across the state to review the results of the report and assist people with its new interactive tools. The six informational sessions included: Portland on October 15, 2019, Bend on October 22, 2019, Central Point/Medford on October 29, 2019, Newport on November 5, 2019, Corvallis on November 12, 2019, and Salem on November 14, 2019. DEQ staff also recorded a webinar on November 4, 2019, which was available on its website. Due to the substantial changes made to the report this cycle, DEQ staff made themselves available by phone or email to assist anyone with questions. DEQ will continue to improve its outreach and communication in the next Integrated Report cycle. DEQ encourages your input and participation for the 2022 Assessment Methodology update.

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62. Comments from: City of Albany

CA#1: Suggested Change ID #55

Description: General- Water Quality Efforts

Comment: Water quality protection on USDA Forest Service (USDAFS) land has significantly improved in the last twenty years with the implementation of aquatic conservation strategies commonly known as the Northwest Forest Plan, PACFISH (PACFISH addresses anadromous fish-producing watersheds in the Northwest and northern California) and INFISH (INFISH addresses native inland fish in Oregon, Washington, Idaho, and Montana), which amended the national forest land and resource management plans in the state. Other regional and national strategies that focus on water quality protection include USDAFS regional aquatic restoration strategy and USDAFS National Watershed Condition framework which assess watershed condition and prioritize and focus active restoration to improve watershed condition. A national BMP program now in place has renewed emphasis on BMPs and requires use of standardized monitoring protocols. One of the key components of BMP monitoring is identifying corrective actions and adaptive management needed to improve performance on water quality protection.

Response: DEQ acknowledges and is grateful for your continued efforts on improving water quality.

CA#2: Suggested Change ID #125

Description: mapping Tools / Visualization- Data availability

Comment: The City greatly appreciates and encourages the continued use of geographic information-centric technology to communicate water quality impairments throughout Oregon. Although the updated technology was welcomed, the AQWMS, Report Database, and Interactive Web map are not intuitive and do not always yield results, or consistent results, for interested stakeholders. We also suggest the Department of Environmental Quality (DEQ)derive a way to link the data used for the Integrated Report directly to the report database so that the listing or impairment can be matched with its location and compendium of data.

The most consistent, but somewhat incomplete, way to review listings within the City's jurisdiction became downloading the Assessment Geodatabase. Although using the Assessment Geodatabase helped identify categories and listings in the City's jurisdiction, accessing the actual data for the listings was not straightforward and often led to not being able to identify the supporting information. The Report Database was helpful in finding listings located within the City's jurisdiction but locating the listing data through AQWMS or the Interactive Web Map was not consistent or reproduceable. The City is also concerned with the age of data used to evaluate some of the listings and how representative they are of current impairments within the City's jurisdiction. The City could provide specific examples and suggestions upon request.

Response: Thank you for your suggestion. DEQ has improved the online assessment database by allowing the user to download the data assessed in the Integrated Report. The data download function and information used to generate the report will be publicly available when the Integrated Report is finalized. The listings proposed in the 2018/2020 Integrated Report were based on data collected between January 1, 2008 and December 31, 2017. Based on EPA guidance, all Category 4 and 5 listings identified in previous cycles must be carried forward unless it is demonstrated that water quality standards are being

attained based on new data collected. DEQ would encourage city staff to collect data for those historical impairment listings where they believe are no longer representative of current water quality.

CA#3: Suggested Change ID #126

Description: Watershed Units- Extrapolation- Watershed Connectivity #6

Comment: The City noted that the classification of the new assessment units has dissolved stream names, which can be problematic. The City believes this may be a result of the new assessment unit delineation methodology. As an example, in Figure 1, waterbodies like Burkhart Creek, Periwinkle Creek, Cox Creek, and the Santiam/Albany Canal have been grouped together in the same assessment unit (Truax Creek-Willamette River). In this example, the Santiam/Albany Canal is a man-made canal that is used primarily as a drinking water and hydropower source, while Periwinkle Creek is an urban stream through Albany, and neither are connected to Truax Creek. Although the City understands the reasoning for this delineation of these 1-4 order streams, there is concern that this methodology will lead to broad listings across diverse land uses that require different approaches for water quality improvement. Furthermore, when the City attempted to recover the data used for the listings, it is unclear what data were collected, how many data points were used, by what organization, for which tributary, and when the original listing was made. It appears that limited data is being applied across the different tributaries without recognizing their differences or that some portions may be meeting water quality standards.

Response: DEQ's method for listing watershed assessment units identifies that impairments exist within the watershed based on the data collected. Water quality assessment based on a watershed approach is a well-established methodology and is employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. It is rooted in scientific principles that support application of data from one or more locations for extrapolation across a broader geographical area. DEQ made a number of improvements to its Assessment Methodology through a stakeholder work group process, and its listing methodology was validated by an independent scientific peer review panel. Assessment conclusions were supported by a robust dataset and a transparent comparison between data and water quality criteria, which will be available for download through DEQ's online database.

DEQ will continue to improve and refine its methodologies as it prepares for the next cycle of the Integrated Report. The agency will begin planning for the next cycle, including soliciting input for suggested methodology improvements for the 2022 Integrated Report, in early 2020.

CA#4: Suggested Change ID #127

Description: Assessment Conclusions-Truax Creek-Willamette: Biocriteria

Comment: Based on the report database, there is a Biocriteria listing for the Truax Creek-Willamette unit. It is not clear what a Biocriteria impairment may mean as far as what physical or chemical stressor is causing the impairment (e.g., temperature, sediment). Specific pollutants should be relied upon for impairment listings since there is no way to create TMDLs for Biocriteria. Searching the AQWMS database did not return any results for this listing and in a discussion with regional DEQ staff in Eugene, the City was told it may need to submit a public records request for this data.

Response: There is a Category 5 Biocriteria impairment listing on Periwinkle Creek, which is contained in the HUC12 watershed unit Truax Creek-Willamette River (AU ID: OR_WS_170900030610_02_104298). Periwinkle Creek was originally listed as Category 5 for Biocriteria in 2010 based on data collected in July of 2006 at monitoring location 33506-ORDEQ. EPA determined that any water identified as being biologically impaired should be listed as impaired whether or not the pollutant causing the impairment or the pollutant source is known. EPA also determined that using benchmarks based on reference conditions to assess macroinvertebrate data is a valid approach to identify impaired waters. Prior to Total Maximum Daily Load (TMDL) development, the pollutants or stressors causing biological impairment will be identified. Macroinvertebrate metrics (i.e. PREDATOR scores) will be available for download through the Integrated Report online database.

CA#5: Suggested Change ID #128

Description: Assessment Conclusions-Truax Creek-Willamette: Phosphorus

Comment: There is also a Phosphorus-Elemental-Aquatic Life Criteria listing for the Truax Creek-Willamette unit along with Dissolved Oxygen and pH listings from 2012 (OR_WS_170900030610_02_104298). Again, it is unclear what waterbody these listings represent and what data were used to determine the listings.

Response: The Category 5 listing for elemental phosphorus for the Truax Creek-Willamette River assessment unit (AU ID: OR_WS_170900030610_02_104298) was added to the 2012 303(d) list as a Total Phosphorus Category 5 listing for Burkhart Creek. When the previous listings were carried forward, the pollutant name was erroneously assigned as elemental phosphorus instead of phosphorus. These listings will be updated to phosphorus in the final report. Burkhart Creek is also identified as Category 5 for pH and Dissolved Oxygen-Spawning. There are also Dissolved Oxygen-Spawning Category 5 listings on Cox Creek and Periwinkle Creek. These listings were added to the 2012 303(d) list by EPA. The data for these listings can be in found in AWQMS by searching the following stations and the data will be available for download through DEQ's online database.

Phosphorus Data: 37234-ORDEQ - Burkhart Cr at Scravel Hill Rd 37233-ORDEQ - Burkhart Cr near Mouth

Dissolved Oxygen Data: 37233 - Burkhart Cr near Mouth 37234 - Burkhart Cr at Scravel Hill Rd 37236 - Burkhart Cr at Hwy 34 37247 - Cox Creek at Goldfish Farm Rd Albany 37241 - Periwinkle Cr near Mouth 37242 - Periwinkle Cr at Grand Prairie Park Albany

pH Data: 37233 - Burkhart Cr near Mouth 37234 - Burkhart Cr at Scravel Hill Rd

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63. Comments from: Port of Portland

PP#1: Suggested Change ID #73

Description: General comment - compliment

Comment: We would like to express our gratitude to the DEQ for all of the hard work they have done in gathering and disseminating the integrated report. We recognize the enormity of the task performed and the work still to be done.

Response: Thank you for your support.

PP#2: Suggested Change ID #76

Description: Assessment Unit Updates (Specific) - Columbia Slough

Comment: DEQ should divide the Columbia Slough watershed assessment unit (OR_WS_170900120201 02_104554) so that the lower 8.5 miles of the mainstem channel (from the confluence with the Willamette River to the levee at Elrod Drive) is delineated as a separate stream assessment unit. The lower 8.5 miles of the Columbia Slough represent a unique waterbody with many features that differentiate it from the rest of the watershed. The lower Slough is tidally influenced, free-flowing, and directly connected to the Willamette River, providing important habitat for migrating salmonids. This segment of the Columbia Slough has been designated as critical habitat for Lower Columbia River Chinook, coho, and steelhead. In contrast, the upstream reaches of the watershed are managed by a system of drainage districts that pump water through the system. Given that the levee divides the Slough into two very different water bodies—both hydrologically and biologically—the use of Strahler stream order to distinguish between homogeneous watershed areas and stream reaches is not appropriate and fails to capture the variability. As such, a division of the current watershed assessment unit at the levee near Elrod Drive is warranted.

Response: DEQ agrees with this comment and split this assessment unit at the levee near Elrod Drive.

PP#3: Suggested Change ID #155

Description: Mapping tools / Visualization - General Improvements

Comment: The fact sheet and supporting documents are very useful and provided a good overview of the water quality assessment process. The interactive map and database provide an efficient method to navigate and access the results of the water quality assessment. However, there remain some aspects that need improvement such as addressing loading errors and correcting database access problems.

Response: Thank you for your feedback. DEQ continues to make improvements to its online Integrated Report tools and to provide publicly accessible data that were analyzed in the assessment. DEQ would like to encourage the commenter to make DEQ staff aware of any access issues or error they may

encounter, so DEQ can better serve the individuals and organizations that are using the Integrated Report conclusions.

PP#4: Suggested Change ID #156

Description: Databases- Assessment Database- Supporting data

Comment: Although it's relatively easy to identify what specific listings DEQ proposes, it's not easy to evaluate the basis for the listings. DEQ, in future iterations of the Integrated Report, should include links to the supporting data and rationale for individual proposed listing decisions in a format that allows the public to evaluate and meaningfully comment on a proposed listing decision.

Response: DEQ agrees with the commenter. In the final report and in future iterations of the Integrated Report, DEQ will make the supporting data and rationales available through the online assessment database, in addition to having raw data available in the AWQMS data portal.

PP#5: Suggested Change ID #157

Description: Watershed Units- NHD issues- Stormwater structures

Comment: The new assessment unit maps show water features that should not be included because they do not exist or are not waters of the state to which water quality standards apply. These include, for example, the ditches and other stormwater features on Port International Airport property discharging to the Columbia Slough. Many of the depicted features that should be removed represent stormwater pipes or other conveyances or surface waters that may have existed in the past but today no longer exist.

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

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

NHD or WBD datasets. In addition, in response to comments received, DEQ will be updating its visual display to reflect watershed units as polygons, rather than a collection of stream networks,

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PP#6: Suggested Change ID #158

Description: Watershed Units- Extrapolation- Watershed Connectivity #9

Comment: The draft Integrated Report appears to list as impaired, all waterbodies within an assessment unit, regardless whether there is any data for that waterbody that demonstrates impairment. This is particularly true of tributaries in HUC12 watershed assessment units. Broadly applying water quality data to upstream tributaries where assessment data has not been obtained is not appropriate. Upstream tributaries may meet water quality standards and therefore should not be listed as impaired solely based on the expansion of the assessment unit. DEQ should carefully review and remove listed tributaries where no or insufficient data to demonstrate impairment exists, or, where that is not feasible, clearly state in the final Integrated Report that only the waterbodies in an assessment unit that are designated as impaired, are those for which there is data demonstrating impairment, not all waterbodies within the assessment unit.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences. In response to comments received, DEQ will be updating its visual display to reflect watershed units as polygons, rather than a collection of stream networks

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PP#7: Suggested Change ID #159

Description: Regulatory Impact- Regulation Concern- General #2

Comment: Impaired stream listings may have significant regulatory consequences, including effects on NPDES discharge permits and National Environmental Policy Act documents. DEQ should continue to refine its methodology and provide for an ongoing process to review and correct inaccurate or arbitrary applications of data.

Response: The Integrated Report is a federal Clean Water Act requirement that Oregon report on the quality of its surface waters every two years. The Integrated Report combines the requirements of Clean Water Act section 305(b) to develop a status report and section 303(d) requirement to develop a list of impaired waters. Its conclusions identify areas that require additional monitoring and follow-up action; it does not, unto itself, specify or determine any regulatory actions or consequences other than identifying that an area has impairment and is in need of follow-up monitoring. DEQ will continue to improve and refine its methodologies as it prepares for the next cycle of the Integrated Report.

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64. Comments from: Oregon Water Resources Congress

OWRC#1: Suggested Change ID #185

Description: Mapping tools / Visualization - Summary Document

Comment: As a general comment, the Report would benefit greatly from the addition of a summary document that better explains the approach used to evaluate the status of water quality in Oregon and provides a comprehensive list of waters considered to be impaired as a result of the Report. As DEQ notes on the website portal for the Report, an actual comprehensive document does not exist and instead can be accessed through a combination of information housed in an interactive story map, interactive web map application, 2018/2020 Integrated Report Assessment Database, and ArcGIS Assessment Geodatabase. The lack of any sort of comprehensive document or even a rudimentary summary poses a significant barrier to understanding the Report and its potential ramifications to our members.

Response: The approach that DEQ used to evaluate the status of water quality is outlined in its Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters available on DEQ's 2018 Integrated Report website. DEQ will include a "303(d)" list of waters considered to be impaired and corresponding rationales for listing when the Integrated Report is finalized and submitted to the EPA.

OWRC#2: Suggested Change ID #186

Description: Waters of the State- Irrigation Ditches- Distinguish

Comment: Our major concerns are primarily focused on how the Report's assessment and visualization tools have blended district facilities and other man-made infrastructure with natural waterways without adequate or verified data to justify such listings. Being listed as an impaired waterway has serious ramifications to irrigated agriculture, including regulatory impacts of being included on a 303(d) list, increased legal costs, and negative public perception.

The Report needs to be revised to either remove water conveyance systems altogether or, at a minimum, properly distinguish between natural and man-made infrastructure where there is adequate data to justify inclusion. The burden should not be on conveyance system operators to justify exclusion; rather, the burden should be on DEQ in the first instance to justify the basis for inclusion. DEQ's presumption of inclusion has no basis in law.

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

In response to comments received, DEQ will be updating its visual display to reflect watershed units as polygons, rather than a collection of stream networks. Monitoring locations used in the assessment, which were formerly an additional map layer that needed to be turned on, will be turned on by default and will be visible when the map is zoomed in. In addition, data used in the assessment will be available to download through DEQ's online database.

OWRC#3: Suggested Change ID #187

Description: Crosswalk- Beneficial Uses

Comment: The Report uses the High-Resolution National Hydrography (NHDH) dataset to define the geographical extent of new Assessment Units (AU) to characterize Oregon waterways. These were compared with AUs from the 2012 Integrated Report, and, when they overlapped, the beneficial uses of 2012 AUs were inherited by the 2018/2020 AUs. In many cases involving HUC12 Watershed Assessment Units in the Draft 2018/2020 Integrated Report, the 2018/2020 Assessment Unit includes a much longer stream distance than did the 2012 Assessment Unit. Consequently, in many cases, the creation of HUC12 Watershed Assessment Units represents a geographical expansion of beneficial uses relative to the 2012 Integrated Report without any rational or reasonable basis.

While DEQ may assert that a more complete dataset is being used to give a detailed assessment of the state's waterways, the geographic expansion of beneficial uses as described often results in the violation of the principle of homogeneity, which should result in the separation of neighboring Watershed Assessment Units from one another. The 2018 Assessment Methodology states that "using environmentally and/or hydrologically relevant breaks means the assessment units should represent homogenous segments of surface waters" and "where other relevant data layers indicate differences in watershed homogeneity, further divisions may be warranted in the assessment unit."

While DEQ may assert that a more complete dataset is being used to give a detailed assessment of the state's waterways, the geographic expansion of beneficial uses as described often results in the violation of the principle of homogeneity, which should result in the separation of neighboring Watershed Assessment Units from one another. The 2018 Assessment Methodology states that "using environmentally and/or hydrologically relevant breaks means the assessment units should represent homogenous segments of surface waters" and "where other relevant data layers indicate differences in watershed homogeneity, further divisions may be warranted in the assessment unit."

DEQ must not simply assume that the beneficial uses of a particular stream can be extended to district infrastructure that may in some way be connected to such a stream, whether as a result of diversion of water from the stream into the conveyance system or otherwise. Instead, each stream as identified in the 2012 Integrated Report should be one AU with its own beneficial uses, while nearby irrigation ditches identified in the NHDH dataset should be a separate AU with beneficial uses identified separately from the stream. This is particularly relevant for district infrastructure because there are almost always fish screens at the major points of diversion from natural waterways to prevent fish from entering, and thus haphazardly extending the beneficial use of Fish Habitat from a free flowing stream to irrigation canals and ditches is not legally rational or reasonable.

We are concerned the Report incorporates beneficial uses from the 2012 Integrated Report that were automatically and indiscriminately transferred to 2018/2020 AUs without any additional review for reasonableness or quality control. Please ensure that the beneficial uses in the AUs of the Draft 2018/2020 Integrated Report extend throughout each AU and are homogeneous with respect to their beneficial uses. Where there is not homogeneity, please ensure that the necessary additional analyses and appropriate divisions of heterogeneous AUs occurs

Response: There are two distinct parts to this comment. The first point that DEQ would like to clarify is the expansion of beneficial uses. Beneficial uses were designated according to administrative basin in OAR-340-041 Tables 101A - 330A, including specific water bodies and designation for "All other streams and tributaries" which includes all waters of the state not specifically designated. In previous assessments, DEQ used its LLID layer to identify waterbodies that were assessed. The LLID layer was

created using a resolution of 1:100,000. In the transition to the High Resolution NHD layer (1:24,000), all waterbodies in Oregon were mapped. However, since beneficial uses were designated on an administrative basin wide scale decades ago, there has been no geographic expansion of these uses, just an enhanced visualization of Oregon's waterbodies and their associated beneficial uses. OAR 340-041-0028 (5) identifies the methodology that DEQ used to digitize its beneficial use maps " Unidentified Tributaries. For waters that are not identified on the "Fish Use Designations" maps referenced in section (4) of this rule, the applicable criteria for these waters are the same criteria as is applicable to the nearest downstream water body depicted on the applicable map. This section (5) does not apply to the "Salmon and Steelhead Spawning Use Designations" maps." If the commenter believes that beneficial uses have been assigned in error, DEQ will be soliciting input for its Aquatic Life use updates, which is part of the Water Quality Standards Triennial Review process and is a separate process from the Integrated Report.

The second point identified concerns with the concept of homogeneity within watershed units. After completion of the 2012 Integrated Report, DEQ commenced a series of improvements to its Integrated Report process. One of its major improvements was the creation of "Assessment Units". DEQ created Assessment Units to partition the state's waterbodies (streams, river, lakes, estuaries, etc.) into manageable units for assessment and reporting purposes which allowed for the ability to track changes in water quality over time. DEQ identified over two million different river/stream units which was not practical relative to the state's monitoring and assessment resources. As a result, DEQ grouped smaller order streams (Strahler Stream Order 4 or less) into "watershed units" based on the current HUC-12 designation. This was the first step in creating assessment units that could be tracked over time. DEQ anticipates that any refinement of the assessment units will be an iterative process that could occur over consecutive integrated report cycles.

OWRC#4: Suggested Change ID #188

Description: Mapping tools / Visualization - NHD

Comment: Maps can be powerful educational tools. However, navigating the Report's story map and interactive map requires a high level of technical expertise to understand the display, datasets, and underlying methodology. Overall, the Report's combined display of impaired waterways is exceedingly confusing and difficult to use, and has yielded nothing but fear and angst amongst many stakeholders. The overlapping and inconsistent datasets behind the maps only add to the confusion. If anything, this Report is little more than a roadmap for litigation on virtually every waterbody in Oregon.

The Report's story map and interactive map appear to be populated with data using a computer algorithm and lack evidence that a human ever double checked the validity of the resulting display of impaired waterways. It is unclear how many district facilities are erroneously included or mischaracterized as our association does not have direct knowledge or GIS data regarding where these facilities are located statewide. Districts have limited staff and very few have GIS-specific staff that can dive into the datasets, identify their infrastructure, and where there are inaccuracies or misrepresentations. That being said, we have heard from numerous members that there are obvious errors and misrepresentations of how and where district infrastructure is included.

Some district systems are completely piped or are made up of canals and ditches with no direct discharges or return flows to natural waterways. There is no rational basis for any of these types of infrastructure systems to be listed as waterways let alone as impaired waterbodies. The Report needs to be revised to differentiate between man-made conveyances and natural streams. Not only does the inability to visually

distinguish between these systems pose significant and unwarranted liability to our members, it also discredits the validity of the Report itself.

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

In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Assessment unit results were designed primarily for reporting purposes. When creating its assessment units and georeferencing its water quality standards, DEQ used the high resolution NHD, which is the federal and state standard and represents the water drainage network of the United States with features such as rivers, streams, canals, lakes, ponds, coastline, dams, and stream gages. The NHD is developed and maintained by a partnership between the USGS and EPA. The NHD may contain errors. The dataset intended to "develop nationally-consistent geospatial datasets for the Nation" and provide agencies and organizations a common baseline for mapping aquatic resources. A user can report suspected errors to the NHD Markup App at https://edits.nationalmap.gov/markup-app. This tool allows users to suggest edits, or "markups", to the NHD, Watershed Boundary Dataset (WBD), and NHDPlus HR. Anyone can suggest corrections and improvements to the data. Suggested edits are reviewed by the USGS and the NHD state stewards before they are approved for incorporation into the NHD or WBD datasets.

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources. The thorough water quality assessment that was conducted for the 2018/2020 Integrated Report is challenging to summarize into one map. DEQ regrets that this oversimplification may have led to confusion and fear for Oregonians. Staff conducted a series of in-person information sessions and held a webinar to inform the public about these new Integrated Report products and answer questions. In response to comments, and for a better representation of the assessment, DEQ will be updating its interactive map to display the watershed assessment as an area, or polygon, where an overall status was assigned to one or more streams. When a watershed unit has been identified as Category 5 (Impaired), it indicates that an impairment exists within the watershed unit, not that the entire watershed is impaired.

DEQ encourages collaboration in future assessments to better understand water conveyance infrastructure in the state.

OWRC#5: Suggested Change ID #189

Description: Regulatory Impact- Regulation Concern- General #3

Comment: Our members are local government entities dependent on annual assessments from their patrons—often a small group of farmers—for the operation and maintenance of water delivery infrastructure. Districts have limited ability to pay for additional legal and technical assistance that may be required to respond to the regulatory burden created by new 303(d) listings, the related legal uncertainties, and likely lawsuits. Furthermore, the process and underlying methodology used to develop the Report appear inconsistent with previous efforts and represent a significant policy shift that was not adequately communicated to affected stakeholders during development.

When a 303(d) listing is supported by a robust dataset and a transparent comparison between data and water quality criteria, our members are willing to do their part to protect the water quality of our state's waterways. However, based on the concerns outlined in this comment letter, we cannot be confident that data exist to support the "impaired" status of all stream reaches included in the 303(d) listed AUs as set forth in the Report. Should stream reaches be 303(d) listed without recent and robust data and a transparent means of understanding the listing, our members will be unreasonably and unfairly impacted. These impacts will begin immediately upon adoption of the new 303(d) list—not in several years when specific TMDL processes begin—and they will unnecessarily add to the regulatory burden of our members' operations without producing any meaningful benefits to the water quality of Oregon.

Response: The Integrated Report is not a DEQ regulatory action. It is a federal Clean Water Act requirement that Oregon report on the quality of its surface waters every two years. The Integrated Report combines the requirements of Clean Water Act section 305(b) to develop a status report and the section 303(d) requirement to develop a list of impaired waters.

In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000). Areas classified as Impaired in the Integrated Report identify areas that require additional monitoring and investigation; it does not, unto itself, specify or determine any regulatory actions or consequences. Follow-up monitoring of impaired assessment units is necessary to better delineate and characterize the extent of impairment before any prescriptive regulatory actions are taken.

It is important to note that the Oregon Legislature passed state law (ORS 468B.039) in 2015 which directed DEQ to publish the methodology prior to analyzing water quality data and drafting the Integrated Report (two-step process). This process ensures that the methodology is robust and not developed or altered in an ad-hoc manner in response to assessment results. DEQ held public stakeholder and work group processes for updates to the Assessment Methodology prior to the drafting of the Integrated Report. Assessment conclusions were supported by a robust dataset and a transparent comparison between data and water quality criteria, which will be available for download through DEQ's online database.

Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70

organizations to come up with its assessment conclusions. DEQ performed extensive outreach on its draft 2018/2020 Integrated Report and provided multiple opportunities to comment on its methodology and draft report.

OWRC#6: Suggested Change ID #190

Description: Regulatory Impact- Regulation Concern- Impact to Piping and conservation projects

Comment: OWRC members are actively involved in water conservation, water supply, and modernization of aging infrastructure projects that lead to improved water efficiency and reliability to farmers, increased instream flows for fish and wildlife, and other community wide benefits. Being listed as an impaired waterway could cause unintended negative consequences to these beneficial projects by causing delays or loss of funding due to conflicts with funding parameters or lack of knowledge about the listing. Furthermore, the visual display tools could cause loss of trust with collaborative partners and other stakeholders due to misperceptions about water quality near and around agricultural operations.

Response: DEQ supports efforts to conserve water, modernize aging infrastructure, increase instream flows for fish and wildlife, and other efforts that provide community wide benefits. Priority is often given to waterbodies identified as impaired for watershed grant funding (e.g. Nonpoint Source 319 funding, etc.). In response to comments received, DEQ will be updating its visual display to reflect watershed units as polygons, rather than a collection of stream networks. Monitoring locations used in the assessment, which were formerly an additional map layer that needed to be turned on, will be turned on by default and will be visible when the map is zoomed in. DEQ will continue to enhance and improve communication tools for the 2018/2020 Integrated Report and future reports. DEQ will continue to improve and refine its methodologies as it prepares for the next cycle of the Integrated Report. The agency will begin planning for the next cycle, including soliciting input for suggested methodology improvements for the 2022 Integrated Report, in early 2020.

OWRC#7: Suggested Change ID #281

Description: Beneficial Uses - Geographical expansion

Comment: While DEQ may assert that a more complete dataset is being used to give a detailed assessment of the state's waterways, the geographic expansion of beneficial uses as described often results in the violation of the principle of homogeneity, which should result in the separation of neighboring Watershed Assessment Units from one another. The 2018 Assessment Methodology states that "using environmentally and/or hydrologically relevant breaks means the assessment units should represent homogenous segments of surface waters" and "where other relevant data layers indicate differences in watershed homogeneity, further divisions may be warranted in the assessment unit."

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

junction with natural surface or underground waters) that are located wholly or partially within or bordering the state or within its jurisdiction.

Beneficial uses were designated according to administrative basin in OAR-340-041 Tables 101A - 330A, including specific water bodies and designation for "All other streams and tributaries" which includes all waters of the state not specifically designated. Beneficial use designations were done well prior to any assessment results and were visualized on PDF maps. In the transition to the High Resolution NHD layer, all waterbodies in Oregon were mapped, which represented a visual increase of waters designated. However, since beneficial uses were designated on an administrative basin wide scale, there was no physical geographic expansion of these uses, just an expansion of the visuals used to identify them.

In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences. In response to comments received, DEQ will be updating its visual display to reflect watershed units as polygons, rather than a collection of stream networks

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65. Comments from: Clatsop County District 5

CCD5#1: Suggested Change ID #2

Description: Watershed Units- Unfair Characterization- Report appears to indicate farms and forests are experiencing declining water quality

Comment: Report … makes it look like farms and forests are experiencing declining water quality, particularly when it appears that DEQ lacks actual data for a significant portions of the waterways listed.

Response: The Integrated Report makes no conclusions about the trends in water quality across the state. It is just a snapshot of the status of state waters and whether beneficial uses are being supported. Identification of increased areas of impaired water quality condition is likely more attributable to the amount of data we assessed in 2018, enhanced resolution of Oregon's hydrography and a construct of how DEQ is required to report to EPA than it can be attributed to any specific known trends in broad scale water quality changes.

CCD5#2: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

CCD5#3: Suggested Change ID #11

Description: Watershed Units- Unfair characterization of agriculture and forest land- Assessment targets agricultural lands as sources of impairments

Comment: This new method of designation appears to directly target agricultural lands as the source of water quality impairments

Response: The Integrated Report is an objective assessment of the status of state waters based on data that were submitted to DEQ. The methods used to make assessment conclusions were finalized in the 2018 methodology document prior to any data evaluation. The assessment results and conclusions in the Integrated Report neither attributed the sources of water quality impairments nor targeted any entities such as agricultural lands.

CCD5#4: Suggested Change ID #28

Description: Process- Communication/Outreach- County Official Outreach

Comment: We are disappointed that the agency did not reach out to county officials about the Integrated Report prior to listing the vast majority of our waterbodies as water quality impaired. We believe we were entitled. as local government, to forewarning and a more in depth discussion of the methodologies used and the assumptions that the Integrated Report makes about waterways in our counties, particularly when the agency has made some very significant policy calls that will have a direct impact on counties and county land.

Response: DEQ performed extensive outreach on its draft 2018/2020 Integrated Report and provided multiple opportunities to comment on its methodology and draft report.

The draft Integrated Report was open for public comment from Sept. 30, 2019, through Jan. 6, 2020, for a total of 99 days, which included a 34 day extension in response to stakeholder requests. Notifications were sent to over 3,000 individuals signed up on the GovDelivery listserv. DEQ staff subsequently held six informational sessions across the state to review the results of the report and assisted participants with its new interactive tools. The six informational sessions included: Portland on Oct. 15, 2019; Bend on Oct. 22, 2019; Central Point/Medford on Oct. 29, 2019; Newport on Nov. 5, 2019; Corvallis on Nov. 12, 2019; and Salem on Nov. 14, 2019. DEQ staff also held a webinar on Nov. 4, 2019, and the webinar was recorded and available on the Integrated Report website on-line Webinar.

DEQ will continue to adapt its approach to outreach and communications in the next Integrated Report and encourages your input and participation. The agency anticipates convening a stakeholder group in 2020, to evaluate and make recommended changes to the methodology, with the methodology going out for public comment in approximately Dec. 2020.

CCD5#5: Suggested Change ID #59

Description: Watershed Units- Extrapolation- Watershed unit connectivity

Comment: We have concerns with the use of sub-watersheds (HUC-12) as the assessment unit. DEQ's methodology stated that "through the assessment process, DEQ will review the watershed units more closely", but that does not seem to have occurred in the Hood River Basin. The sub-watersheds often include multiple waterways that come from separate source waters, flow through different land-uses, and

are not hydrologically connected. DEQ is required to assess waterbody units based on data and it appears that the scale of these assessment units does not allow that to happen with the data DEQ has. It does not make sense to assume that an impairment measured in one waterway means that the same impairment is present in any other waterway, or even that the impairment is suggested in the unmeasured waterway. At a minimum, the assessment unit should include just the waterways that are hydrologically connected instead of lumping them all together in one HUC-12 boundary. Best practices would suggest that DEQ actually "review the watershed units more closely" for other differences in watershed homogeneity, in addition to hydrologic connectivity.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

DEQ will continue to improve and refine its methodologies as it prepares for the next cycle of the Integrated Report. The agency will begin planning for the next cycle, including soliciting input for suggested methodology improvements for the 2022 Integrated Report, in early 2020.

CCD5#6: Suggested Change ID #62

Description: Watershed Units- Extrapolation- Data

Comment: DEQ's methodology, especially as it relates to watershed assessment units, is an inappropriate use of the data available and risks invalidating this update to listings of impaired waterways. DEQ should not assume or declare impairment in most of the waterways in the state based on a lack of data.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units

for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

It is important to note that the Oregon Legislature passed state law (ORS 468B.039) in 2015 which directed DEQ to publish the methodology prior to analyzing water quality data and drafting the Integrated Report (two-step process). This process ensures that methodology is robust and not developed or altered in an ad-hoc manner in response to assessment results. DEQ held public stakeholder and work group processes for updates to the Assessment Methodology prior to the Integrated Report being drafted. This process was inclusive and included representatives from industry, environmental interests, tribes, agriculture and forestry on the work group.

Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

CCD5#7: Suggested Change ID #80

Description: Process - Opportunity to Comment

Comment: ….this very impactful policy work has left us with a narrow window of opportunity to comment…

Response: DEQ performed extensive outreach on its draft 2018/2020 Integrated Report and provided multiple opportunities to comment on its methodology and draft report.

The draft Integrated Report was open for public comment from Sept. 30, 2019, through Jan. 6, 2020, for a total of 99 days, which included a 34 day extension in response to stakeholder requests. Notifications were sent to over 3,000 individuals signed up on the GovDelivery listserv. DEQ staff subsequently held six informational sessions across the state to review the results of the report and assisted participants with its new interactive tools. The six informational sessions included: Portland on Oct. 15, 2019; Bend on Oct. 22, 2019; Central Point/Medford on Oct. 29, 2019; Newport on Nov. 5, 2019; Corvallis on Nov. 12,

2019; and Salem on Nov. 14, 2019. DEQ staff also held a webinar on Nov. 4, 2019, and the webinar was recorded and available on the Integrated Report website on-line Webinar.

DEQ will continue to adapt its approach to outreach and communications in the next Integrated Report and encourages your input and participation. The agency anticipates convening a stakeholder group in 2020, to evaluate and make recommended changes to the methodology, with the methodology going out for public comment in approximately Dec. 2020.

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

OCCoOA-H#1: Suggested Change ID #55

Description: General- Water Quality Efforts

Comment: Water quality protection on USDA Forest Service (USDAFS) land has significantly improved in the last twenty years with the implementation of aquatic conservation strategies commonly known as the Northwest Forest Plan, PACFISH (PACFISH addresses anadromous fish-producing watersheds in the Northwest and northern California) and INFISH (INFISH addresses native inland fish in Oregon, Washington, Idaho, and Montana), which amended the national forest land and resource management plans in the state. Other regional and national strategies that focus on water quality protection include USDAFS regional aquatic restoration strategy and USDAFS National Watershed Condition framework which assess watershed condition and prioritize and focus active restoration to improve watershed condition. A national BMP program now in place has renewed emphasis on BMPs and requires use of standardized monitoring protocols. One of the key components of BMP monitoring is identifying corrective actions and adaptive management needed to improve performance on water quality protection.

Response: DEQ acknowledges and is grateful for your continued efforts on improving water quality.

OCCoOA-H#2: Suggested Change ID #172

Description: Methodology- Ocean pH

Comment: We commend ODEQ for listing Oregon coastal waters as being impaired for ocean acidification (3B categorization–likely impaired but lacking data) through the use of a biocriteria for pteropods. However, we encourage ODEQ to also review methodology for pH narrative criteria to consider including a “0.2 unit excursions from natural conditions” clause similar to as was done in California and Washington. Also we encourage ODEQ to work with regional academics and resource managers to reconsider developing other criteria for ocean acidification such as aragonite saturation state.

Response: DEQ appreciates your support. The Integrated Report team will forward the comment about refinement of existing pH water quality standards for marine waters to the Water Quality Standards team. Commenters are encouraged to resubmit relevant comments during the Water Quality Standards Triennial Review process.

OCCoOA-H#3: Suggested Change ID #173

Description: Assessment Conclusions- Coast shellfish toxins

Comment: Oregon Coordinating Council on Ocean Acidification and Hypoxia would also like to commend ODEQ for listing of marine waters as being impaired (category 5 listing) for Harmful Algal Blooms (HABs) through the application of shellfish harvest use impairment. HABs affect not only Oregonians' ability to harvest marine resources (e.g., clams and crab), but can also have detrimental cascading effects throughout the whole marine ecosystem. As ocean conditions continue to change with changing climate, it will be important for the State to continue to consider the compounding effects of water quality criteria of HABs, ocean acidification, and hypoxia. Several research studies suggest that as ocean OAH conditions increase in intensity and duration, this could have a direct effect on the concentration and toxicity of HABs within our coastal waters.

Response: Thank you for your support of the marine biotoxin listing. DEQ hopes to continue working with the council, ODFW and other agencies to monitor and manage marine biotoxins.

OCCoOA-H#4: Suggested Change ID #174

Description: Assessment Conclusions- Marine DO

Comment: We strongly encourage ODEQ to list Oregon coastal waters as impaired for dissolved oxygen. The Oregon coast has been experiencing ocean hypoxia since the early 2000s, which has impacted our coastal fisheries and marine ecosystems. There are data currently available to support listing our State's coastal waters as a Category 5 impairment, and we would like to offer Our ongoing assistance to ODEQ in accessing these publically available data sets so that dissolved oxygen could be include in the 2018/2020 Integrated Report, as well as in future Integrated Reports.

Oregon's coastal economies rely on our vibrant marine ecosystem. Our nearshore waters are home to sport and commercial fisheries, all of the State's mariculture operations, and contain critical nursery grounds for economically important species including rockfish, oysters, salmon, pink shrimp, Dungeness crab, and others. Oregon is also among the first places in the world to observe direct impacts of OAH, due to our unique geographic and oceanographic context, putting our fragile marine ecosystem at risk. Addressing intensifying OAH conditions here in Oregon is critical to our understanding of larger regional climate change impacts through management strategies. The OAH Council's September 2018 report as well as the Oregon OAH Action Plan (2019 -2025) identifies water quality as an important consideration in reducing the causes of OAH (Theme 2). In these documents, the OAH Council encourages the State to make improvements to water quality by not only identifying pollutants that amplify or exacerbate OAH impacts, but also ensure that existing regulations are achieving their expected outcomes.

Response: DEQ appreciates the comments on ocean hypoxia and recognizes that climate change and coastal upwelling make Oregon waters increasingly vulnerable to hypoxia, as well as ocean acidification.

Oregon's marine dissolved oxygen standard states that "For ocean waters, no measurable reduction in dissolved oxygen concentration may be allowed." DEQ is proposing to list Oregon territorial waters as Category 3B for ocean hypoxia. This 3B categorization signifies insufficient data to determine aquatic life use support but recognizes that some data indicate non-attainment of a criterion. Both ocean acidification and hypoxia are complex and challenging issues, and they require a strategic approach to addressing the broad-scale underlying mechanisms, as well as potential local contributing factors. DEQ looks forward to strengthening coordination efforts with other state agencies and interested partners to chart a path forward to best address these issues in a comprehensive and collaborative way.

OCCoOA-H#5: Suggested Change ID #175

Description: Mapping Tools / Data Visualization- marine water clarity

Comment: We would once again like to acknowledge ODEQ on the great strides forward in the data collecting and consideration of some marine water quality standards in the 2018/2020 Integrated Report. While we support ODEQ for the modernization of their reporting system with new story maps and data portals, we encourage ODEQ to provide some supplemental summary tables to make it clear which marine water bodies have been listed and for what. This information is difficult to access through the current online interfaces. We offer our assistance to ODEQ in future calls for data to help facilitate better access to the wider marine community and increase regional participation in this important process of setting and amending State water quality standards.

Response: Thank you for your support. DEQ will add supplementary information on marine water listings to its appendices in its Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters.

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67. Comments from: Clatsop County District 4

CCD4#1: Suggested Change ID #1

Description: Watershed Units- Extrapolation- Watershed unit assessment conclusions

Comment: I strongly oppose DEQ's decision to list water bodies on farm and forestland as water quality impaired without data to support those listings, as it has done in its 2018-2020 Integrated Report … I strongly oppose DEQ's decision to extrapolate listings of waterways and ditches based upon data collected from neighboring properties. Water quality naturally differs from water body to water body, particularly when those waterways are under different ownership and may have experienced differing current and historic riparian management. DEQ has presented no evidence that this extrapolation is scientifically valid or sound. Instead, it appears to be an attempt to list and regulate waterways without first going through the necessary step of determining that data actually shows an impairment.

Response: Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

CCD4#2: Suggested Change ID #2

Description: Watershed Units- Unfair Characterization- Report appears to indicate farms and forests are experiencing declining water quality

Comment: Report … makes it look like farms and forests are experiencing declining water quality, particularly when it appears that DEQ lacks actual data for a significant portions of the waterways listed.

Response: The Integrated Report makes no conclusions about the trends in water quality across the state. It is just a snapshot of the status of state waters and whether beneficial uses are being supported. Identification of increased areas of impaired water quality condition is likely more attributable to the amount of data we assessed in 2018, enhanced resolution of Oregon's hydrography and a construct of how DEQ is required to report to EPA than it can be attributed to any specific known trends in broad scale water quality changes.

CCD4#3: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

CCD4#4: Suggested Change ID #4

Description: Watershed Units - Permission at monitoring locations

Comment: I am particularly concerned with DEQ's decision to list waterways that I have not given DEQ permission to sample and where sampling has not occurred. I urge DEQ to revisit these listings.

Response: Any sampling performed by Oregon DEQ followed proper procedures for access to waters on private properties, which include obtaining written consent to sample. Oregon DEQ did not evaluate private property permission structures for third party submitted data. Data were assessed using the procedures outlined in the Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters.

CCD4#5: Suggested Change ID #11

Description: Watershed Units- Unfair characterization of agriculture and forest land- Assessment targets agricultural lands as sources of impairments

Comment: This new method of designation appears to directly target agricultural lands as the source of water quality impairments

Response: The Integrated Report is an objective assessment of the status of state waters based on data that were submitted to DEQ. The methods used to make assessment conclusions were finalized in the 2018 methodology document prior to any data evaluation. The assessment results and conclusions in the Integrated Report neither attributed the sources of water quality impairments nor targeted any entities such as agricultural lands.

CCD4#6: Suggested Change ID #28

Description: Process- Communication/Outreach- County Official Outreach

Comment: We are disappointed that the agency did not reach out to county officials about the Integrated Report prior to listing the vast majority of our waterbodies as water quality impaired. We believe we were entitled. as local government, to forewarning and a more in depth discussion of the methodologies used and the assumptions that the Integrated Report makes about waterways in our counties, particularly when the agency has made some very significant policy calls that will have a direct impact on counties and county land.

Response: DEQ performed extensive outreach on its draft 2018/2020 Integrated Report and provided multiple opportunities to comment on its methodology and draft report.

The draft Integrated Report was open for public comment from Sept. 30, 2019, through Jan. 6, 2020, for a total of 99 days, which included a 34 day extension in response to stakeholder requests. Notifications were sent to over 3,000 individuals signed up on the GovDelivery listserv. DEQ staff subsequently held six informational sessions across the state to review the results of the report and assisted participants with its new interactive tools. The six informational sessions included: Portland on Oct. 15, 2019; Bend on Oct. 22, 2019; Central Point/Medford on Oct. 29, 2019; Newport on Nov. 5, 2019; Corvallis on Nov. 12, 2019; and Salem on Nov. 14, 2019. DEQ staff also held a webinar on Nov. 4, 2019, and the webinar was recorded and available on the Integrated Report website on-line Webinar.

DEQ will continue to adapt its approach to outreach and communications in the next Integrated Report and encourages your input and participation. The agency anticipates convening a stakeholder group in 2020, to evaluate and make recommended changes to the methodology, with the methodology going out for public comment in approximately Dec. 2020.

CCD4#7: Suggested Change ID #99

Description: Regulatory Impact- Regulation Concern- General

Comment: Concern over regulations arising from listings

Response: The Integrated Report is not a rule. It is a required reporting to EPA of the status of state waters and whether beneficial uses are supported. Assessment Units were created for reporting purposes. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

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68. Comments from: Oregon Dept of Fish and Wildlife and Dept of Land Conservation and Development

ODF-W-DLC-D#1: Suggested Change ID #176

Description: Data- Data acquisition

Comment: Recommend additional data acquisition and agency coordination to ensure that all available data are collected, analyzed, and used for consideration in water quality management during the 2020/2022 Integrated Report process. [Further rationale and information included in comment appendix]

Response: During this assessment, DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations. We hope to continue to make improvements on our process for soliciting data and welcome the assistance in reaching out to data holders that are not traditionally reached through regular channels.

ODF-W-DLC-D#2: Suggested Change ID #177

Description: Assessment Conclusions- Marine DO #2

Comment: ODFW and DLCD recommend the listing of coastal waters for dissolved oxygen as Category 5 for the 2018/2020 Integrated Report, based on the abundance of available data showing decreased oxygen concentrations and adverse effects on Oregon's marine ecosystems. [Further rationale and information included in comment appendix]

Response: DEQ appreciates the comments on ocean hypoxia and recognizes that climate change and coastal upwelling make Oregon waters increasingly vulnerable to hypoxia, as well as ocean acidification. Oregon's marine dissolved oxygen standard states that "For ocean waters, no measurable reduction in dissolved oxygen concentration may be allowed." DEQ is proposing to list Oregon territorial waters as Category 3B for ocean hypoxia. This 3B categorization signifies insufficient data to determine aquatic life use support but recognizes that some data indicate non-attainment of a criterion. Both ocean acidification and hypoxia are complex and challenging issues, and they require a strategic approach to addressing the broad-scale underlying mechanisms, as well as potential local contributing factors. DEQ looks forward to strengthening coordination efforts with other state agencies and interested partners to chart a path forward to best address these issues in a comprehensive and collaborative way.

ODF-W-DLC-D#3: Suggested Change ID #178

Description: Assessment Conclusions- Ocean pH

Comment: ODFW and DLCD Support the designation of coastal waters as a Category 3B for ocean acidification under a biocriteria for the 2018/2020 Integrated Report; but suggest further refinement of existing pH water quality standards, thresholds, and observation methods as part of the 2020/2022 Integrated Report. [Further rational and information included in comment appendix]

Response: DEQ appreciates your support. The recommendation on the refinement of the existing pH water quality standard for marine waters will be forwarded to the Water Quality Standards team. DEQ encourages resubmittal of relevant comments regarding ocean pH during the water quality standard triennial review process.

ODF-W-DLC-D#4: Suggested Change ID #179

Description: Assessment conclusions- coastal shellfish toxins

Comment: ODFW and DLCD Support the listing of coastal waters as Category 5 for shellfish use impairment due to HABs and related biotoxins for the 2018/2020 Integrated Report, and offer assistance in the continued monitoring and management of biotoxins. [Further rational and information included in comment appendix]

Response: DEQ appreciates ODFW and DLCD's support. DEQ hopes to continue working with ODFW to monitor and manage marine biotoxins.

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69. Comments from: Lake County Waterway

LCW#1: Suggested Change ID #1

Description: Watershed Units- Extrapolation- Watershed unit assessment conclusions

Comment: I strongly oppose DEQ's decision to list water bodies on farm and forestland as water quality impaired without data to support those listings, as it has done in its 2018-2020 Integrated Report … I strongly oppose DEQ's decision to extrapolate listings of waterways and ditches based upon data collected from neighboring properties. Water quality naturally differs from water body to water body, particularly when those waterways are under different ownership and may have experienced differing current and historic riparian management. DEQ has presented no evidence that this extrapolation is scientifically valid or sound. Instead, it appears to be an attempt to list and regulate waterways without first going through the necessary step of determining that data actually shows an impairment.

Response: Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were

grouped into “watershed units” at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state’s monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

LCW#2: Suggested Change ID #2

Description: Watershed Units- Unfair Characterization- Report appears to indicate farms and forests are experiencing declining water quality

Comment: Report … makes it look like farms and forests are experiencing declining water quality, particularly when it appears that DEQ lacks actual data for a significant portions of the waterways listed.

Response: The Integrated Report makes no conclusions about the trends in water quality across the state. It is just a snapshot of the status of state waters and whether beneficial uses are being supported. Identification of increased areas of impaired water quality condition is likely more attributable to the amount of data we assessed in 2018, enhanced resolution of Oregon’s hydrography and a construct of how DEQ is required to report to EPA than it can be attributed to any specific known trends in broad scale water quality changes.

LCW#3: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as “impaired” indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

LCW#4: Suggested Change ID #4

Description: Watershed Units - Permission at monitoring locations

Comment: I am particularly concerned with DEQ's decision to list waterways that I have not given DEQ permission to sample and where sampling has not occurred. I urge DEQ to revisit these listings.

Response: Any sampling performed by Oregon DEQ followed proper procedures for access to waters on private properties, which include obtaining written consent to sample. Oregon DEQ did not evaluate private property permission structures for third party submitted data. Data were assessed using the procedures outlined in the Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters.

LCW#5: Suggested Change ID #11

Description: Watershed Units- Unfair characterization of agriculture and forest land- Assessment targets agricultural lands as sources of impairments

Comment: This new method of designation appears to directly target agricultural lands as the source of water quality impairments

Response: The Integrated Report is an objective assessment of the status of state waters based on data that were submitted to DEQ. The methods used to make assessment conclusions were finalized in the 2018 methodology document prior to any data evaluation. The assessment results and conclusions in the Integrated Report neither attributed the sources of water quality impairments nor targeted any entities such as agricultural lands.

LCW#6: Suggested Change ID #28

Description: Process- Communication/Outreach- County Official Outreach

Comment: We are disappointed that the agency did not reach out to county officials about the Integrated Report prior to listing the vast majority of our waterbodies as water quality impaired. We believe we were entitled. as local government, to forewarning and a more in depth discussion of the methodologies used and the assumptions that the Integrated Report makes about waterways in our counties, particularly when the agency has made some very significant policy calls that will have a direct impact on counties and county land.

Response: DEQ performed extensive outreach on its draft 2018/2020 Integrated Report and provided multiple opportunities to comment on its methodology and draft report.

The draft Integrated Report was open for public comment from Sept. 30, 2019, through Jan. 6, 2020, for a total of 99 days, which included a 34 day extension in response to stakeholder requests. Notifications were sent to over 3,000 individuals signed up on the GovDelivery listserv. DEQ staff subsequently held six informational sessions across the state to review the results of the report and assisted participants with its new interactive tools. The six informational sessions included: Portland on Oct. 15, 2019; Bend on Oct. 22, 2019; Central Point/Medford on Oct. 29, 2019; Newport on Nov. 5, 2019; Corvallis on Nov. 12, 2019; and Salem on Nov. 14, 2019. DEQ staff also held a webinar on Nov. 4, 2019, and the webinar was recorded and available on the Integrated Report website on-line Webinar.

DEQ will continue to adapt its approach to outreach and communications in the next Integrated Report and encourages your input and participation. The agency anticipates convening a stakeholder group in 2020, to evaluate and make recommended changes to the methodology, with the methodology going out for public comment in approximately Dec. 2020.

LCW#7: Suggested Change ID #99

Description: Regulatory Impact- Regulation Concern- General

Comment: Concern over regulations arising from listings

Response: The Integrated Report is not a rule. It is a required reporting to EPA of the status of state waters and whether beneficial uses are supported. Assessment Units were created for reporting purposes. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

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70. Comments from: Malheur County SWCD

MCS#1: Suggested Change ID #129

Description: Watershed Units- Extrapolation- Watershed Connectivity #7

Comment: The Malheur SWCD has issue with the water quality assessment showing drains as impaired within the Malheur County Region. It appears that one sample is taken in the watershed, and then all totality of the entire watershed is impaired, even though the pollution maybe a few feet upstream and not in the whole watershed.

The low number of samples taken is questionable to make an assumption as to fact that the watershed is impaired. Old data and sampling technique is questionable as well.

Adoption of water quality standards based on limited data has potential for dire consequence economically as well as culturally. We believe such assessment should be done with most current and accurate data available to differentiate between man-made and natural occurring effects within the entire watersheds.

Response: When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. Water quality assessment based on a watershed approach is a well-established methodology and is employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. It is rooted in scientific principles that support application of data from one or more locations for extrapolation across a broader geographical area. DEQ made a number of improvements to its Assessment Methodology through a stakeholder work group process, and its listing methodology was validated by an independent scientific peer review panel. Assessment conclusions were supported by a robust dataset and a transparent comparison between data and water quality criteria, which will be available for download through DEQ's online database. DEQ will continue to improve and refine its methodologies as it prepares for the next cycle of the Integrated Report. The agency will begin planning for the next cycle, including soliciting input for suggested methodology improvements for the 2022 Integrated Report, in late 2020. In response to comments received, DEQ will be updating its visual display to reflect watershed units as polygons, rather than a collection of stream networks.

MCS#2: Suggested Change ID #282

Description: Regulatory Impact - Not a Water Quality standard

Comment: Adoption of water quality standards based on limited data has potential for dire consequence economically as well as culturally.

Response: The Integrated Report assessment process is not an adoption of water quality standards, nor is it a regulation. The Integrated Report is a reporting on the status of water quality across the state and whether beneficial uses are supported. The Integrated Report is a Clean Water Act requirement for states to identify waters that do not or are not expected to meet applicable water quality standards. It is a combination of reports required by the Clean Water Act sections 303(d) and 305(b). Data were used to

support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

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71. Comments from: City of Klamath Falls

CKF#1: Suggested Change ID #15

Description: TMDL Applicability - Upper Klamath and Lost River TMDL

Comment: Category 5 temperature listings in river sections located within the Upper Klamath and Lost River Subbasins should be reassigned to Category 4A due to the 2019 Temperature TMDL

Response: DEQ agrees with this comment and will incorporate the changes into the final report.

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72. Comments from: Dennis Hebard

DH#1: Suggested Change ID #150

Description: Assessment units- Dorena Reservoir

Comment: You've taken a single listing for Dorena Reservoir from the 2012 report for mercury and made two listings from the Dam and Row river floodplain, some fish went up stream a few hundred feet, because of the new hydrologic units you have extended the listing another 5 miles. The sampling that showed elevated mercury or methylmercury was several hundred feet below the Row river gauging station this should still be considered slack water or flood area from the dam.

Please consider making the unit start at King creek at the top of the floodplain to Sharps Creek instead of from Vaughn creek to sharps creek, all of the tributaries in this watershed have the designation HUC12 Name King Creek-Row River so should the upper Row River AU ID, OR_SR_1709000202_02_103766.

Response: When the 2012 Category 5 impairment listing for mercury was carried forward into DEQ's new assessment unit framework, it was based on the spatial extent (RM 7.3 to RM 7.9) of the original listing. The proposed listing in the 2018/2020 report encapsulates this listing in two assessment units (OR_LK_1709000202_02_100705 and OR_SR_1709000202_02_103766). Fish movement is not restricted solely to Dorena Reservoir.

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73. Comments from: Wallowa County

WC#1: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

WC#2: Suggested Change ID #62

Description: Watershed Units- Extrapolation- Data

Comment: DEQ's methodology, especially as it relates to watershed assessment units, is an inappropriate use of the data available and risks invalidating this update to listings of impaired waterways. DEQ should not assume or declare impairment in most of the waterways in the state based on a lack of data.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

It is important to note that the Oregon Legislature passed state law (ORS 468B.039) in 2015 which directed DEQ to publish the methodology prior to analyzing water quality data and drafting the Integrated Report (two-step process). This process ensures that methodology is robust and not developed or altered in an ad-hoc manner in response to assessment results. DEQ held public stakeholder and work group processes for updates to the Assessment Methodology prior to the Integrated Report being drafted. This process was inclusive and included representatives from industry, environmental interests, tribes, agriculture and forestry on the work group.

Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

WC#3: Suggested Change ID #99

Description: Regulatory Impact- Regulation Concern- General

Comment: Concern over regulations arising from listings

Response: The Integrated Report is not a rule. It is a required reporting to EPA of the status of state waters and whether beneficial uses are supported. Assessment Units were created for reporting purposes. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

WC#4: Suggested Change ID #180

Description: Data- call for data

Comment: The county would also like to express concern about how agency gathered the data for its recent recommendations. On review, the determinations were not based on site specific data before being determined "impaired"

Response: Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to come up with its assessment conclusions. DEQ interprets the concern to be not how the data were gathered, but how the data were used to assess the water quality.

In order to provide an accurate reporting to EPA on the condition of state waters, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, etc.) into manageable units for assessment and reporting purposes. DEQ chose the high resolution National Hydrography Dataset (NHD) framework, which is both the federal and state standard, to define these Assessment Units statewide. In addition to large rivers and streams units (Strahler Stream Order 5 and higher), headwater streams and small feeder drainages (Strahler Stream Order 4 or less), were grouped into "watershed units" at the HUC-12 (Hydrologic Unit Code) level which is currently the smallest HUC classification in Oregon. The watershed units were only identified as "impaired" if data from within the watershed unit demonstrated that water quality criteria were not being met and one or more beneficial uses were not supported. A watershed unit listed as Impaired indicates that an impairment exists within the watershed, not that the entire watershed is considered to be impaired. Follow-up investigations would initially focus on the sampling stations in the Assessment Units that indicated impairment, the exact locations of which are known, as well as additional sampling efforts where appropriate, to better delineate and characterize the extent of impairment.

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74. Comments from: Northwest Pulp and Paper Association

NP-PA#1: Suggested Change ID #73

Description: General comment - compliment

Comment: We would like to express our gratitude to the DEQ for all of the hard work they have done in gathering and disseminating the integrated report. We recognize the enormity of the task performed and the work still to be done.

Response: Thank you for your support.

NP-PA#2: Suggested Change ID #99

Description: Regulatory Impact- Regulation Concern- General

Comment: Concern over regulations arising from listings

Response: The Integrated Report is not a rule. It is a required reporting to EPA of the status of state waters and whether beneficial uses are supported. Assessment Units were created for reporting purposes. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

NP-PA#3: Suggested Change ID #252

Description: Databases - Data availability #2

Comment: For future Integrated Reports, NWPPA urges DEQ to provide user-friendly access to all the information pertinent to a specific classification decision, including supporting water quality data, through a single, readily accessible location. For example, if the Integrated Report proposes to list a specific river segment as impaired for temperature, DEQ's website should provide a single location through which one can ascertain: (1) the geographic location and extent of the segment; (2) the temperature criteria that DEQ has applied to the segment; (3)DEQ's rationale for identifying the segment as impaired for temperature (e.g., there were more than two instances of the 7-day-average daily maximum temperature exceeding the applicable spawning temperature criterion within a 3-year period); and (4) the temperature data and any other information used in the assessment for that segment, including monitoring locations, dates, and QA/QC information. Making this information readily accessible from a single location would not only assist the public in providing meaningful comments on draft Integrated Reports, it would allow both DEQ staff and the public to correctly interpret and apply Integrated Report classifications of waterbodies to other regulatory decisions, including the issuance of discharge permits and water quality certifications.

Response: DEQ agrees with the commenter. In the final report and in future iterations of the Integrated Report, DEQ will make the supporting data and rationales available through the online assessment database, in addition to having raw data available in the AWQMS data portal.

NP-PA#4: Suggested Change ID #253

Description: Watershed Units- Extrapolation- Watershed Connectivity #16

Comment: Although the assessment methodology states that DEQ may create further divisions of the HUC12 assessment units based on "differences in watershed homogeneity," the draft Integrated Report does not appear to have undertaken such finer-scale divisions.

NWPPA is concerned that the draft Integrated Report lists all the streams and drainages within entire HUC12 subwatersheds as impaired based on data from only a single, or at most only a few, streams or drainages within the subwatershed. Moreover, many of the "streams" that the draft Integrated Report shows as impaired within the subwatershed are pipes, stormwater ditches, and other conveyances that do not support and are not intended to support, aquatic life. NWPPA understands based on statements by DEQ personnel that DEQ does not intend to list as impaired all streams and drainages within a HUC12 subwatershed that are shown as impaired in the draft Integrated Report, but only those streams for which there is water quality data demonstrating impairment. This distinction, however, is not apparent from assessment methodology or the draft Integrated Report.

Only the stream or drainage for which there is sufficient data demonstrating impairment should be identified as impaired.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

DEQ will continue to improve and refine its methodologies as it prepares for the next cycle of the Integrated Report. The agency will begin planning for the next cycle, including soliciting input for suggested methodology improvements for the 2022 Integrated Report, in early 2020.

NP-PA#5: Suggested Change ID #254

Description: Assessment Conclusions- Continuation of Unsupported PCB Impairment Listings

Comment: Several assessment units, including Columbia River assessment units, are listed as impaired by polychlorinated biphenyls (PCBs). The sole basis for these listings is that waterbodies were listed as impaired for PCBs in 1998, and those listings have been carried forward. Moreover, the draft Integrated Report does not identify any specific data on which the 1998 listing was based. … NWPPA asks DEQ to review the data and factual basis for the 1998 listing. Absent any information other than that the Columbia River was listed as impaired for PCBs more than 20 years ago, the final Integrated Report should delist the river for PCBs.

Response: The Columbia River Assessment Units are listed as impaired for PCBs in the 2018/2020 Integrated Report. The impairment listings were originally based on Oregon Health Authority/Washington Department of Health fish consumption advisories for the Columbia River in addition to studies documenting reduced bald eagle reproduction (USFWS, 96). DEQ has reviewed the original listing and concluded that there is not sufficient information to remove the Columbia River from the 303(d) list for PCBs. The Columbia River basin: State of The River Report for Toxics released by EPA in 2009 (http://nptwaterresources.org/wp-content/uploads/2014/01/Columbia_R_Basin_State_of_the_River_Report.pdf) concluded that "There are currently no data to indicate whether PCB levels in the mainstem of the Columbia River are increasing or decreasing." The report cites studies indicating that juvenile fall Chinook salmon throughout the Basin are

accumulating toxic contaminants, including PCBs, in their tissues above the effect threshold for juvenile salmon. DEQ would encourage NWPPA to collect the necessary PCB data, which can be used to evaluate the Columbia River for PCBs in future integrated reports.

NP-PA#6: Suggested Change ID #255

Description: Assessment Conclusions- Arsenic support

Comment: NWPPA supports the following Category 2 and 3 listings for either Aquatic Life or Human Health Arsenic (including Inorganic Arsenic) and believes the listing actions are statistically justified. [table included]

Response: DEQ appreciates your support.

NP-PA#7: Suggested Change ID #256

Description: Assessment Conclusions- DO support

Comment: NWPPA supports the following Category 2 and 3 listings for either spawning or year round Dissolved Oxygen and believes the listing actions are statistically justified. [table provided]

Response: DEQ appreciates your support.

NP-PA#8: Suggested Change ID #257

Description: Assessment Conclusions- E. coli support

Comment: NWPPA supports the following Category 2 listings for E. Coli and believes the listing actions are statistically justified. [table provided]

Response: DEQ appreciates your support.

NP-PA#9: Suggested Change ID #258

Description: Assessment Conclusions (Specific)- Fecal coliform- 104034

Comment: NWPPA questions the Fecal Coliform listing for NWPPA segment number 29, DEQ Segment OR_SR_1709000802_02_104034, and asks DEQ to review the data and factual basis for the listing.

Response: The fecal coliform Category 5 impairment listing on the South Yamhill River, AU OR_SR_1709000802_02_104034, was added in 1998 based on exceedances of the fecal coliform criteria of 400 MPN/100 milliliters. Data were collected from three monitoring locations ORDEQ-402627, ORDEQ-402628, and ORDEQ-402631. The fecal coliform criteria was replaced with an E. coli criteria

for freshwater contact. This listing will be carried forward from the previous listing until a fecal coliform delisting methodology is completed.

NP-PA#10: Suggested Change ID #259

Description: Assessment Conclusions- Copper support

Comment: NWPPA supports the following Category 2 and 3 listings for Aquatic Life and Human Health Copper and believe the listing actions are statistically justified. [Table provided]

Response: DEQ appreciates your support.

NP-PA#11: Suggested Change ID #260

Description: Assessment Conclusions- Iron support

Comment: NWPPA supports the following Category 2 and 3 listings Iron and believe the listing actions are statistically justified. [Table provided]

Response: Thank you for your support of the assessment conclusions.

NP-PA#12: Suggested Change ID #261

Description: Assessment Conclusions (specific) - Iron listing rationale

Comment: NWPPA questions the Category 5 Iron listings NWPPA segment numbers 46, 49 and 50 and asks for a review of the underlying data and conversion factors.

Response: The aquatic life criteria for iron are expressed as total iron. DEQ reviewed the underlying data and listings, and no revisions were made. The following section describes the listing rationale. The Category 5 listing for Iron for OR_SR_1709000306_05_103854 was based on eleven exceedances of the 1000 ug/L total recoverable iron criteria out of 124 samples which is equivalent to greater than the 5% allowable exceedance frequency. The Category 5 listing for Iron for OR_SR_1710030801_05_105552 was based on six exceedances of the 1000 ug/L total recoverable iron criteria out of 17 samples which is equivalent to greater than the 5% allowable exceedance frequency. The Category 5 listing for Iron for OR_SR_1706010411_02_103339 was confirmed by four of twelve samples exceeding the 1000 ug/L total recoverable criterion which is greater than the 5% allowable exceedance frequency.

NP-PA#13: Suggested Change ID #262

Description: Assessment Conclusions- PCB support

Comment: NWPPA supports the Category 3D PCB listings for NWPPA segments numbers 54-59 and believes the listings are statistically justified. [Table Provided]

Response: DEQ appreciates your support.

NP-PA#14: Suggested Change ID #263

Description: Assessment Conclusions- Methylmercury rationale

Comment: NWPPA questions the age and segmentation analysis of the underlying fish tissue data for the Category 5 Human Health Mercury listing for OR_SR_1710030802_04_105816

Response: The Category 5 listing for mercury on the Rogue River using the Human Health criteria was based on fish tissues samples collected at DEQ stations 10418-ORDEQ on 10/21/10 and 10422-ORDEQ on 6/14/10. The geometric mean of five fish from each of these sites exceeded the numeric criteria of 0.04 mg/kg (10418-ORDEQ = 0.43 mg/kg and 10422-ORDEQ = 0.52 mg/kg). DEQ added the Category 5 listing for mercury for the Rogue River (River Mile 0 to 216.8) to its 2012 Integrated Report. When reconciling the 2012 list to the new 2018/2020 assessment unit framework, DEQ used the stations the original listing was based on to transfer the Category 5 designation to OR_SR_1710030802_04_105816 and OR_SR_1710031002_04_104794. DEQ believes that these localized assessment units better characterize the extent of the impairment. New data for assessment unit OR_SR_1710030802_04_105816 from the 2018/2020 assessment confirms this designation (geomean = 0.27 mg/kg).

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75. Comments from: Oregon Forest & Industries Council

OF&IC#1: Suggested Change ID #234

Description: Mapping Tools / Data Visualization- General

Comment: DEQ Must Make Other Important Improvements to the Report

- Match interactive web map colors to Story Map. Colors should correspond to categories, not impairment, such that Category 4 and Category 5 AUs appear differently.
- A map tool that includes the monitoring locations referenced in the Assessment Database should be included in the Integrated Web Map tool. Additionally, please add monitoring locations and existing analytical data to the Geodatabase. Without it, we cannot evaluate the data that led to the water quality categorization.
- The Assessment Database is not currently searchable by beneficial use. Being able to find water bodies that are listed for the same beneficial uses would be helpful in understanding precedents for establishing water quality standards, developing TMDLs, delisting segments, and implementing point and non-point source pollutant controls. Please add this functionality.
- To properly use the Interactive Web Map, the location or name of the waterway must be known. Search options can be improved. For example, typing “Florence” returns a search result that leads to

Lake Florence, in Alaska. Please limit search results to Oregon and enhance the ease of searching by geographical areas that would be commonly used by Oregonians.

- The Ambient Water Quality Monitoring System (AWQMS)is critical to understanding the categorization of an Assessment Unit of interest, but it is remarkably difficult to use. Please undertake a comprehensive review of the user interface of this system and make the database public to facilitate intuitive custom searches.

- Please make it possible to search by Assessment Unit, not merely monitoring location identification numbers, in the AWQMS.

Response: Thank you for your suggestions. DEQ will revise its visual displays (i.e. Interactive Map and Story Map) to use the same color scheme. Monitoring locations used in the 2018/2020 assessment are currently available as a layer in the interactive web map. In the final version of the report, these monitoring locations will become visible when zoomed in. The analytical data used in the assessment will be available for download through DEQ's online database, and the online database will be searchable by beneficial use. Search results returned outside the State of Oregon primarily come from the Watershed Boundary Dataset (USGS), which is a national dataset. There is no way to turn off this search as it would not return any results in Oregon for this dataset, therefore DEQ intends to continue to use this dataset. Unfortunately, DEQ is unable to make any changes to the AWQMS user interface. DEQ will continue to provide tutorials and staff assistance on how to best use AWQMS. DEQ will, however, add the functionality to search by Assessment Unit ID in AWQMS.

OF&IC#2: Suggested Change ID #235

Description: Databases - Data availability

Comment: Problems with Completeness and Connectivity of Data Must Be Addressed

- Our comparison of the data received from DEQ in spreadsheet form and the data available on the AWQMS web portal indicates that, in at least one case, the web portal does not include all the data that are available for an AU. Importantly, data that were not on the AWQMS web portal were the data that led to a Category 5 determination for a specific AU. All data that lead to categorizations of AUs should be publicly accessible without the personal assistance of DEQ personnel.

- The analytical data represented in the Integrated Report are not accessible via the Interactive Web Map and the Assessment Database

- The Assessment Database should identify the organization that collected the data

Response: DEQ agrees with the commenter. In the final report and in future iterations of the Integrated Report, DEQ will make the supporting data and rationales available through the online assessment database, in addition to having raw data available in the AWQMS data portal.

OF&IC#3: Suggested Change ID #242

Description: Watershed Units- Extrapolation- Watershed Connectivity #15

Comment: We oppose this decision to move to watershed scale AU's because it now results in listing waterbodies where DEQ lacks any data from that specific water body.

Decisions to list waterbodies as impaired must be based on water body specific data and should not be done on a watershed scale or based on pooling (often very outdated and disconnected) data from neighboring waterways. DEQ has not presented evidence that its decision to list on such a broad scale is either scientifically valid or sound. It appears to be an attempt to list and regulate waterbodies without first providing data that actually shows an impairment for the specific waterway.

Response: When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

DEQ made a number of improvements to its Assessment Methodology through a stakeholder work group process, and its listing methodology was validated by an independent scientific peer review panel. Assessment conclusions were supported by a robust dataset and a transparent comparison between data and water quality criteria and will be available for download through DEQ's online database. DEQ will continue to improve and refine its methodologies as it prepares for the next cycle of the Integrated Report. The agency will begin planning for the next cycle, including soliciting input for suggested methodology improvements for the 2022 Integrated Report, in early 2020.

OF&IC#4: Suggested Change ID #243

Description: Methodology - Sampling

Comment: No sampling was completed specifically for the Draft 2018/2020 report; instead the report represents a collection of data gathered for other purposes. The location and samples were therefore not implemented with an understanding of the AU's. All data for a given AU are pooled when comparing them to the water quality standards for the beneficial uses of the AU. This results in all locations within an AU being considered equivalent when assessing the AU. Data incorporated into the Draft 2018/2020 report include data from 2008-2017 that met data quality requirements stated by DEQ. This does not allow for local variation or even an assurance that all the water bodies listed in a given AU even exist. In fact, we are confident many of the independent, disconnected upstream locations exist for, at best, only a few days or weeks a year.

Response: CWA section 303(d); 40 CFR 130.7 requires DEQ to submit to EPA as part of the Integrated Report "A description of the data and information used to identify waters, including a description of the existing and readily available data and information used". Data provided to DEQ during its data call that

met its QA/QC requirements was considered to be "readily available". There is not a requirement that data be collected solely for the purpose of assessment, but rather to gather all of the data that is being collected by various entities statewide. Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrologic Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000). A watershed unit was identified as Impaired if data from within the watershed unit demonstrated that water quality criteria were not being met and one or more beneficial uses were not supported. A watershed unit listed as Impaired indicates that an impairment exists within the watershed, not that the entire watershed is considered to be impaired.

In response to comments received, DEQ will be updating its visual display to reflect watershed units as polygons, rather than a collection of stream networks. Monitoring locations used in the assessment, which were formerly an additional map layer that needed to be turned on, will be turned on by default and will be visible when the map is zoomed in.

OF&IC#5: Suggested Change ID #244

Description: Watershed Units- Delineation- Homogeneity

Comment: We also have concerns that AU's are not properly sub-divided based on common characteristics. In the areas that we specifically analyzed, the AU's are too large and capture regions that have widely disparate land uses. There are also AU's where the original sampling data or modeling is much too old to be extrapolated to larger, sometimes disconnected areas within the newly formed AU. Our understanding was DEQ was to undertake an assessment of the homogeneity of Watershed Units when defining AU's on smaller streams and reassess the geographical areas over which a beneficial use extends when mapping previous AU's to new ones. We see no evidence this analysis took place. [Example given in comment letter]

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report process, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were

grouped into “watershed units” at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state’s monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

DEQ will continue to improve and refine its methodologies as it prepares for the next cycle of the Integrated Report. The agency will begin planning for the next cycle, including soliciting input for suggested methodology improvements for the 2022 Integrated Report, in early 2020.

OF&IC#6: Suggested Change ID #245

Description: Watershed Units- Delineation- South Yamhill (Specific)

Comment: Assessment Unit OR_WS_170900080701_02_104451, the South Yamhill River HUC12 Watershed Assessment Unit, should be divided into multiple Assessment Units because its southern and northern portions are neither homogenous nor hydrologically connected. Notably, the part of this Assessment Unit that lies south of the South Yamhill River drains agricultural land, whereas the part of this Assessment Unit on the north side of the South Yamhill River drains developed urban land.

Response: Assessment units were delineated on changes in designated beneficial uses according to OAR-340-041 Tables 101A - 330A, including specific water bodies. It is not practicable to split assessment units on land use designations, due to complexity in landscape scale and land use changes over time.

DEQ created watershed assessment units based on the HUC-12 sub-watershed units, which represent the smallest watershed boundary unit identified in the NHD. Including all of the waterbodies in a HUC-12 is a way of grouping and portioning all of the waterbodies across the state. A Category 5 listing identifies that impairments exist within the watershed based on the data collected, not that the entire watershed is impaired. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states for meeting EPA reporting requirements, and is rooted in scientific principles that support application of data from one or more locations for extrapolation across a broader geographical area.

OF&IC#7: Suggested Change ID #246

Description: Data- Biocriteria data availability

Comment: When an Assessment Unit is listed in Category 5 due to BioCriteria, too little information is provided on the Assessment Database. This implies that an interested party cannot proactively improve stewardship of that Assessment Unit. We acknowledge that the Methodology for the Draft 2018/2020 Integrated Report states that the BioCriteria protocol “does not by itself indicate if changes [in the

integrity of biological communities] are related to pollutants, or identify which pollutant should be addressed by point source or other controls through a Total Maximum Daily Load." However, the available information (accessed preferably in the Assessment Database, but potentially via pasting the sampling location into AWQMS) should be enhanced to provide: A) the number of samples that were collected and B) the locations of the reference sites used in the PREDATOR BioCriteria model. Without these, it is impossible to understand the scientific basis behind a water quality categorization.

Response: DEQ will make PREDATOR scores used in the 2018/2020 Integrated Report available for download through its online assessment database. Information used to support the PREDATOR model is available upon request.

OF&IC#8: Suggested Change ID #247

Description: Assessment Conclusions- Moon Creek: Biocriteria

Comment: We examined Assessment Unit OR_WS_171002030205_05_106104, the Moon Creek HUC12 Watershed. We searched this on the Assessment Database and found that it is impaired for BioCriteria at a monitoring location called "dfw_20240". We searched this location on the AWQMS web portal and downloaded a "Standard Export" report. This shows no "Results" or "Metrics"; it contains only "Indices". Please provide the result on which BioCriteria model output are based and the date of data collection for all data used in any Assessment Unit where BioCriteria are mentioned. The indices reported were calculated in 2008, the first year of the window when data were eligible for inclusion in the Draft 2018/2020 Integrated Report. However, model output is not a data set, and we cannot know that this model output has been rightfully included without knowing the dates of data collection. Additionally, this Assessment Unit is listed as Category 5, but its "% Taxa Loss" index has two values of "-3". The Methodology for the Integrated Report states that an Assessment Unit will receive a Category 5 listing if >20% taxa loss has occurred in the Marine Western Coastal Forest. Please explain whether this Category 5 listing is an error. If it is, please check for other similar errors. If it is not, please explain the justification for this Category 5 listing.

Response: DEQ examined the data used to support the Category 5 impairment listing for biocriteria on Assessment Unit OR_WS_171002030205_05_106104, the Moon Creek HUC12 Watershed. The Category 5 listing was the result of DEQ's crosswalk to the 2012 303(d) list. DEQ station 35786, East Creek at River Mile 7.08 from 8/3/1999 had an O/E score of 0.68. According to DEQ's current assessment methodology, one more current sample collected at monitoring location dfw_20240, Moon Creek on 8/14/2008, which has a PREDATOR O/E score of 1.03, is enough to delist this assessment unit. DEQ will correct the assessment conclusion for Assessment Unit OR_WS_171002030205_05_106104 to reflect a Category 2 determination.

OF&IC#9: Suggested Change ID #283

Description: Data - Sufficiency

Comment: ….if DEQ does not have sufficient data to assess a water body within an Assessment Unit, that water body should not be listed as impaired and should instead be listed as a Category 3.

Response: Minimum data requirements for assessment are outlined in DEQ's Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters. If the commenter feels these requirements are in need of revision, DEQ encourages the commenter to participate in upcoming revisions to its Assessment Methodology.

OF&IC#10: Suggested Change ID #284

Description: IR Improvements - Suggestions

Comment: 1. The Assessment Database is not currently searchable by beneficial use. Being able to find water bodies that are listed for the same beneficial uses would be helpful in understanding precedents for establishing water quality standards, developing TMDLs, delisting segments, and implementing point and non-point source pollutant controls. Please add this functionality.

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

3. The AWQMS is critical to understanding the categorization of an Assessment Unit of interest, but it is remarkably difficult to use. Please undertake a comprehensive 2018/2020 review of the user interface of this system and make the database public to facilitate intuitive custom searches.

4. Please make it possible to search by Assessment Unit, not merely monitoring location identification numbers, in the AWQMS.

Response: Thank you for your suggestion.

1. DEQ will make the Assessment Database searchable by beneficial use.

2. Search results returned outside the State of Oregon primarily come from the Watershed Boundary Dataset (USGS), which is a national dataset. There is no way to turn off this search as it would not return any results in Oregon for this dataset. Thus, DEQ intends to continue to use this dataset.

3. DEQ is unable to make any changes to the AWQMS user interface. DEQ will continue to provide tutorials and staff assistance on how to best use AWQMS.

4. DEQ will add the functionality to search by Assessment Unit ID in AWQMS. In addition, DEQ will be making the data used in the 2018/2020 Integrated Report available to download through its online assessment database.

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76. Comments from: Blue Mountain Biodiversity Project

BMBP#1: Suggested Change ID #73

Description: General comment - compliment

Comment: We would like to express our gratitude to the DEQ for all of the hard work they have done in gathering and disseminating the integrated report. We recognize the enormity of the task performed and the work still to be done.

Response: Thank you for your support.

BMBP#2: Suggested Change ID #248

Description: Data- USFS data questions

Comment: BMBP does have some remaining concerns about the water quality data submitted by the Forest Service. In future calls for data, is it expected that the USFS will submit their data? We were confused to read that the USFS had only "short notice" for submitting their data (Pg. 10, ODEQ's Response to Comments in Sept. 2018). Doesn't the USFS expect to submit data during ODEQ calls for data? Why was this long-overdue sharing of USFS water quality data not planned for by both the USFS and ODEQ? This is an issue that BMBP has repeatedly raised with the USFS over the past several years. We have repeatedly noted it in writing in public comments and objections with FS staff, including Forest Supervisors. We have given this issue clear and pointed focus during multiple recent and large timber sales within the past 3-4 years.

While we understand that it is very unlikely that additional data will be considered for the 2018/2020 Integrated Report, we request confirmation from ODEQ that the USFS is planning to submit additional data during the next ODEQ call for data. In addition, all agencies and organizations that have collected water quality data on National Forest lands in Oregon in recent years should be asked to share these data with ODEQ during the next call for data.

Response: It is our understanding that the USFS will be submitting data to DEQ in future data calls. The USFS and DEQ are operating under a Memorandum of Understanding where both parties agree to work collaboratively on submitting data for listing and delisting purposes.

BMBP#3: Suggested Change ID #249

Description: Data- Missing USFS

Comment: Concern about various USFS temperature data that appears to not be included in the report.

Response: The vast quantities of data collected by the USFS, the 10-year period of record for the 2018/2020 Integrated Report assessment, lack of third party data in previous assessments, lack of

completed QA/QC of data, and the lack of centralized data management system were several of the reasons that all of the stream temperature data collected by the USFS were not submitted to DEQ. Examples provided of stream temperature data within NorWeST that ODEQ does not seem to have within the Middle Fork of the John Day River watershed (i.e. Sunshine Creek, Ruby Creek, and Coyote Creek) were likely due to the fact that data fell outside DEQ's period of record for the draft report. It is our understanding that the USFS will be submitting data to DEQ in future data calls. USFS and DEQ are operating under a Memorandum of Understanding where both parties agree to work collaboratively on submitting data for listing and delisting purposes. DEQ staff continue to work with USFS staff to streamline the data submittal process for the 2022 Integrated Report.

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77. Comments from: Santiam Water Control District

SWCD#1: Suggested Change ID #225

Description: Watershed Units- Extrapolation- Watershed Connectivity #12

Comment: DEQ is not meeting the requirement to designate a waterbody as water quality limited based on whether that waterbody is impaired for its designated beneficial uses. Specifically, a "receiving stream may be designated as water quality limited through the biennial water quality status assessment report prepared to meet the requirements of section 305(b) of the Federal Clean Water Act. Appendix A of the Status Assessment report will identify: what waterbodies are water quality limited, the time of year the water quality standards violations occur, the segment of stream or area of water body limited, the parameter(s) of concern, and whether it is water quality limited under the definition of "Water Quality Limited" in OAR 340-041-0002." OAR 340-041-0046(1).

Instead of meeting this requirement, DEQ pools all available monitoring results from waterbodies within a watershed assessment unit ("Assessment Unit") to evaluate the entire unit for impairment. DEQ then designates the entire Assessment Unit as impaired, rather than just the specific impaired waterbody. Methodology S3.3.2. Pooling of monitoring results leads to clearly erroneous water quality classifications. For example, there is an approved TMDL for an E. coli impacted stream in the southern portion of the Lower Mill Creek Assessment Unit. The TMDL for a single stream has resulted in listing the entire unit as Category 4A:Water Quality Limited TMDL Approved for E. coli. DEQ notes in its Response to Methodology Comments that it does not have the discretion not to list a waterbody as impaired if there is evidence of impairment. However, in the Draft Report, DEQ is not only listing the impaired waterbody, but listing all the waterbodies with no evidence of impairment in the Assessment Unit.

Another issue with the pooling methodology is that monitoring results are based on available data since 2002, not data strategically sampled at monitoring locations to confirm whether Assessment Unit waterbodies share impairment. The Draft Report describes the imprecise application of historical data from monitoring locations within a new Assessment Unit to all the waterbodies in the Assessment Unit as "Crosswalk".

Response: When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder

drainages were grouped into “watershed units” at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state’s monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

CWA section 303(d); 40 CFR 130.7 requires DEQ to submit to EPA as part of the Integrated Report “A description of the data and information used to identify waters, including a description of the existing and readily available data and information used”. Data provided to DEQ during its data call that met its QA/QC requirements was considered to be “readily available”. There is not a requirement that data be collected solely for the purpose of assessment, but rather to gather all of the data that is being collected by various entities statewide. Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions. Assessment results were based on data from a ten-year period of record (January 1, 2008 through December 31, 2017). EPA guidance requires that all previous Category 4 and 5 listings must be accounted for in the 2018 Integrated Report. Therefore, all Category 4 and 5 listings were carried forward unless it was demonstrated that water quality criteria were being met.

SWCD#2: Suggested Change ID #226

Description: Watershed Units- Homogeneity

Comment: The Draft Report changed the method by which it identifies the segments of waterbodies used to conduct assessments to fixed waterbody assessment units (“Assessment Units”).DEQ states that the new waterbody Assessment Units represent homogeneous surface water quality, because they incorporate environmentally and hydrologically relevant breaks(such as flow, adjacent land uses, and other characteristics). Draft Report Fact Sheet. However, many Assessment Units are not homogenous.

Homogeneity within an Assessment Unit is important because, in order to retain the information from previous assessments and apply the information to the new Assessment Units, DEQ “crosswalks” the monitoring results from certain waterbodies to the entire new Assessment Unit. Then DEQ applies the beneficial uses and the impairment of one waterbody within an Assessment Unit to all waterbodies in the same Assessment Unit. Therefore, Assessment Units must contain waterbodies with the same qualities. Otherwise, the methodology applies incorrect beneficial uses and thus, incorrect designations of impairment, to waterbodies within the Assessment Unit. Incorrect designations prevent DEQ from using the Assessment Unit to accurately assess water quality.

In the 2018 Report Methodology, DEQ acknowledged that differences in waterbody characteristics within a HUC12 may require breaking the HUC12 down into smaller units and stated that it could do so in the Draft Report to facilitate accurate water quality assessment. The Report Methodology also stated that DEQ would further evaluate the Assessment Units and subdivide as needed to preserve homogeneity.

Specifically, the Report Methodology notes that during "the assessment process, DEQ will review the watershed units more closely. Where other relevant data layers indicate differences in watershed homogeneity, further divisions may be warranted in the assessment unit." Report Methodology S 3.3.3. Additionally, "[o]ther environmentally relevant data layers, such as land cover and ecoregion may be used to further divide these [HUC12] units if needed." Id. However, DEQ does not appear to have performed these additional steps. Consequently, the Draft Report includes Assessment Units that encompass significantly diverse waterbodies.

DEQ addressed this issue in its Response to Comments to Oregon's 2018 Draft Assessment Methodology by stating that the Assessment Units are considered preliminary, that establishing the boundaries of the Assessment Units remains an iterative process, and any splits or division of watershed AUs will be done on a consistent basis with environmentally relevant GIS layers. Upon review of the draft assessment findings, DEQ states that it will be better able to define a rationale for how and when assessment units may be split.

Therefore, in order to facilitate DEQ's creation of a process to further divide Assessment Units, SWCD provides the following analysis of the material environmental and hydrological breaks between irrigation ditches and natural streams. Because of the significant differences between irrigation ditches and natural waterbodies, DEQ should subdivide Assessment Units that contain both.

Including irrigation ditches in Watershed Assessment Units with natural waterways is not consistent with the requirement that Watershed Assessment Units be divided at points of heterogeneity. Irrigation canals have significantly different attributes from natural waterbodies because they are controlled for flow, seasonal, and operated under the requirements of the applicable water rights and related statues and regulations. In the instance of SWCD, certain facilities are intermittently connected to other waterbodies by the operation of a system of automated headgates and flow control structures (e.g., weir boards and check dams) to manage water conveyance as required under SWCD water rights.

Consequently, these artificial systems are materially different than the other natural waterways included the Assessment Units within SWCD boundaries. Like "Crosswalking," grouping completely different systems into a single Assessment Unit prohibits accurate evaluating of water quality and effective water quality management. Therefore, DEQ should divide unnatural channels and areas with modified flow patterns, such as irrigation ditches, from natural channels in Assessments Units.

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

DEQ is not asserting "jurisdiction" over any new waters. DEQ water quality programs are implemented for waters of the state, which has a broad statutory definition in Oregon Statutes (ORS 468B.005): "Waters of the state" means lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh

or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters) that are located wholly or partially within or bordering the state or within its jurisdiction.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire watershed is impaired. The 303(d) list of impaired waters identifies assessment units that require additional investigation and follow-up action. The report does not, unto itself, specify or determine any regulatory actions or consequences. Follow-up monitoring and investigations are necessary to delineate and characterize the extent of impairment.

DEQ will continue to improve and refine its methodologies as it prepares for the next cycle of the Integrated Report. The agency will begin planning for the next cycle, including soliciting input for suggested methodology improvements for the 2022 Integrated Report, in early 2020.

SWCD#3: Suggested Change ID #227

Description: Beneficial Uses and WQ Standards- General

Comment: DEQ has not confirmed that the beneficial uses which trigger impairment of an entire Assessment Unit are actual beneficial uses of the entire Assessment Unit. The Lower Mill Creek HUC12 Watershed AU demonstrates this point. This Assessment Unit primarily consists of irrigation ditches but includes natural waterways. Fish screens prevent fish from entering the irrigation ditches and consequently, the ditches are not fish habitat. But Fish and Aquatic Life is considered a beneficial use for the entire Assessment Unit

Response: Beneficial uses were designated according to administrative basin in OAR-340-041 Tables 101A - 330A, including specific water bodies and designation for "All other streams and tributaries" which includes all waters of the state not specifically designated. In the transition to the High Resolution NHD layer, more waterbodies are mapped, but as beneficial uses are designated on an administrative basin wide scale, there has been no geographic expansion of these uses. DEQ understands that not all ditches and canals are alike. However, to the extent that fish screens prevent fish from entering these irrigation ditches, it likely the ditches support other aquatic life, and the canal may still affect fish and other aquatic life in waterbodies downstream. Beneficial uses designation is a separate Water Quality Standards process. DEQ will be undertaking updates to its Aquatic Life Uses during this Triennial Review process.

SWCD#4: Suggested Change ID #228

Description: Regulatory Impact- Delisting

Comment: DEQ claims that being listed as impaired does not impose immediate regulatory requirements and that when DEQ undertakes any additional activities affecting the "impaired" water body, such as the development of a permit or a TMDL, the data will be further evaluated for the relevant waterbody and connected water bodies before any action is taken.

SWCD has several concerns with this approach. First, once a waterbody is listed as impaired, it is subject to a higher regulatory standard. For example, identifying a waterbody as impaired initiates the

prioritization and development of a TMDL. Once a water body is found to be water quality limited and is assigned to Category 5: 303(d) status, the water remains on Oregon's 303(d) list until DEQ delists or removes it from Category 5: 303(d),and EPA approves delisting those waters. Even if DEQ determines an error was made in the Category 5 listing, in order to delist, a regulated entity must go through the delisting process described in the 2018 Methodology. Given the amount of process and time required for delisting, DEQ has a responsibility to accurately list only those waterbodies that have monitoring data evidencing impairment.

DEQ should create a streamlined delisting process for waterbodies incorrectly listed as a result of the imprecise Assessment Unit methodology. SWCD understands DEQ's position that delisting a waterbody requires higher level of evidence to overcome the non-attainment finding and show the waterbody is in fact attaining. However, this rationale does not apply to cases where a waterbody has been listed without actual evidence of non-attainment under the Assessment Unit methodology. For example, the 2018/2020 IR Assessment Database indicates that SWCD's Perrin Lateral irrigation canal is a Category4A: Water quality limited, TMDL approved. The canal was listed in 2010. This designation appears to have been made based on water quality monitoring data(bacteria)collected during the non-irrigation "OFF season" in 2003 and was not assessed again in 2018.Unless DEQ either revises its listing or creates a simpler process for delisting, SWCD will be forced to invest financial and staff resources correcting potentially improper listings.

DEQ's approach shifts responsibility of maintaining an accurate 303(d) list to regulated entities. The approach also postpones further evaluation of the Assessment Unit until a TMDL or permit is required and when the resources and data may not be available. Accordingly, DEQ may not have sufficient time to perform this additional review when upcoming TMDLs must be created under mandated timelines.

Response: In 2018, DEQ clarified the guidelines for the delisting of impaired waters when there is new or additional data indicating water quality standards are now attained. Prior to 2018, DEQ's methodology described only vague data requirements for delisting based on new or additional water quality data: "sufficient information from the current assessment to evaluate the pollutant or parameter and the information demonstrated that currently applicable water quality standards were being met…" What constituted "similar data" was not well defined. DEQ's 2018 Assessment Methodology clearly outlined the number of samples required to remove a waterbody from the 303(d) list of impaired waters (pages 15-20).

In the case of the example provided, the SWCD's Perrin Lateral irrigation canal is identified as Category 4A: Water quality limited, Total Maximum Daily Load (TMDL) approved for E. coli in the 2018/2020 draft Integrated Report. Allocations for the canal were included in the Willamette E. coli TMDL. The canal is part of the HUC12 Name: Lower Mill Creek assessment unit (AU ID OR_WS_170900070204_02_104412) and was originally listed in 2004/2006. No data were provided in the 2018/2020 assessment, and the canal was not assessed. The E. coli criteria is assessed as a year-round criteria; it does not explicitly specify seasons in the criteria.

SWCD#5: Suggested Change ID #229

Description: Regulatory Impact- Concern about regulatory impact TMDLs

Comment: DEQ has had multiple discussions with regulated entities about the implications of the Draft Report. DEQ statements vary, and at times contradict a plain reading of the Draft Report. First, DEQ states that there is a regulatory difference between a Watershed Assessment Unit and the water bodies

within the watershed. DEQ states that it regards a 303(d) listing of a Watershed Assessment Unit as a means to draw attention to that watershed for water quality improvement. DEQ states that it does not, however, believe that a 303(d) listing of a Watershed AU implies that all water bodies –that is, all the small streams –of the AU are impaired.

DEQ's communications are indirect contrast to the substance of the Draft Report. The Draft Report does not include the waterbody/ Assessment Unit distinction. In contrast, the Draft Report shows that all streams within an impaired Watershed Assessment Unit are colored red (impaired) on the Integrated Web Map. DEQ admits that the map is an imperfect visualization but claims that it not symptomatic of an underlying problem.

DEQ communications also indicate that the agency is not certain whether a TMDL would encompass an entire impaired Assessment Unit, or whether the TMDL would include only the waterbodies in the Assessment Unit that are actually impaired. This raises the concern that DEQ will choose the reaches it finds convenient for a TMDL instead of maintaining a clear and predetermined connection between the Assessment Unit and a future TMDL. The omission of a mechanism by which non-impaired waterbodies are distinguished from impaired waterbodies within an assessment unit means that the agency must act arbitrarily. Arbitrary agency actions create regulatory uncertainty and risks improperly bringing entities on non-impaired waterbodies within an impaired Assessment Unit into a TMDL.

Response: In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report process, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources. A watershed unit identified as Impaired indicates that an impairment exists within the watershed, not that the entire watershed is considered to be impaired. Using watershed units will not change how Total Maximum Daily Loads (TMDLs) are developed or implemented. TMDLs are usually developed at a much larger scale (i.e. basin scale) and consider all relevant data and sources that may be contributing to location-specific exceedances of water quality standards.

In response to comments received, DEQ will be updating its Interactive Map and visual representation of its Integrated Report. Watershed units currently identified as the stream networks within a HUC-12 boundary will be modified to polygons. Monitoring locations used in the assessment will be available when the map is zoomed into a higher resolution.

SWCD#6: Suggested Change ID #230

Description: NHD Issues- Correct Errors

Comment: When DEQ migrated its hydrologic framework from the prior system to the National Hydrography Dataset (NHD) framework, the agency appeared not to verify the NHD hydrology information. That information contains numerous errors within the SWCD Facilities. The NHD contains incorrect flow information. Some of the ditches within the SWCD Facilities are described as flowing backwards in the lower area of the district. This NHD incorrect flow information is not shown on the DEQ model. Therefore, it is unclear how DEQ is evaluating flow. … SWCD recommends that DEQ incorporate corrected information from regulated entities into their tools and in cases where there are significant corrections required, reevaluate the applicable Assessment Unit.

Response: DEQ used the High Resolution National Hydrography Dataset, specifically the NHDPlus HR, to draw its assessment units. The National Hydrography Dataset (NHD) is developed and maintained by a partnership between the USGS and EPA. The dataset intended to "develop nationally-consistent geospatial datasets for the Nation" and provide agencies and organizations a common baseline for mapping aquatic resources. A user can report suspected errors to the NHD Markup App at https://edits.nationalmap.gov/markup-app. This tool allows users to suggest edits, or "markups", to the NHD, Watershed Boundary Dataset (WBD), and NHDPlus HR. Anyone can suggest corrections and improvements to the data. Suggested edits are reviewed by the USGS and the NHD state stewards before they are approved for incorporation into the NHD or WBD datasets.

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources. The thorough water quality assessment that was conducted for the 2018/2020 Integrated Report is challenging to summarize into one map. DEQ regrets that this oversimplification may have led to confusion and fear for Oregonians. Staff conducted a series of in-person information sessions and held a webinar to inform the public about these new Integrated Report products and answer questions. In response to comments, and for a better representation of the assessment, DEQ will be updating its interactive map to display the watershed assessment as an area, or polygon, where an overall status was assigned to one or more streams. When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire watershed is impaired.

SWCD#7: Suggested Change ID #231

Description: Regulatory Impact- Concern about regulatory impact: existing plans conflict

Comment: Concern about how impaired designations may impact existing plans such as future piping of SWCD's canals.

Response: The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify has areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

SWCD#8: Suggested Change ID #232

Description: Beneficial Uses and WQ Standards- Conduct UAA

Comment: Santiam Water Control District therefore requests that DEQ perform a UAA of the district's conveyance system in order to determine whether the current designated uses and resulting water quality standards may be removed from the District Facilities.

Response: Oregon Revised Statutes 468B.062 for Use attainability analysis of certain waters of the state states that "Consistent with the Federal Water Pollution Control Act, P.L. 92-500, as amended, the Department of Environmental Quality may determine whether selected segments of the waters of the state are capable of attaining designated uses. In conducting its use attainability analysis, the department shall include appropriate documentation and defensible data for determining whether subcategories or seasonal uses should be designated….". DEQ concurs that the applicable uses may warrant further review based on new information, but this is done through a separate Standards update process. The Use Attainability Analysis (UAA) process is separate from the Integrated Report assessment process and is conducted in accordance with the Water Quality Standards Triennial Review process. Comments submitted will be forwarded to the Water Quality Standards program staff. DEQ encourages the commenter to participate and submit comments during the next Water Quality Standards Triennial Review later this year.

SWCD#9: Suggested Change ID #233

Description: Process- Triennial Review

Comment: SWCD recommends that comments submitted to ODEQ via the Biennial 2018/2020 Water Quality Inventory Report scoping process requesting 'splits' to watershed assessment units based on environmentally and/or hydrologically relevant breaks be submitted to the ODEQ Water Quality Standards Review and Planning team for consideration when determining updates to fish and aquatic life use designations and mapping

Response: Updates to Aquatic Life Use designations is a separate Water Quality Standards process. These comments will be passed along to the Water Quality Standards team. DEQ encourages the commenter to resubmit relevant comments during the Water Quality Standards Triennial Review of Fish and Aquatic Life use designations.

SWCD#10: Suggested Change ID #243

Description: Methodology - Sampling

Comment: No sampling was completed specifically for the Draft 2018/2020 report; instead the report represents a collection of data gathered for other purposes. The location and samples were therefore not implemented with an understanding of the AU's. All data for a given AU are pooled when comparing them to the water quality standards for the beneficial uses of the AU. This results in all locations within an AU being considered equivalent when assessing the AU. Data incorporated into the Draft 2018/2020 report include data from 2008-2017 that met data quality requirements stated by DEQ. This does not

allow for local variation or even an assurance that all the water bodies listed in a given AU even exist. In fact, we are confident many of the independent, disconnected upstream locations exist for, at best, only a few days or weeks a year.

Response: CWA section 303(d); 40 CFR 130.7 requires DEQ to submit to EPA as part of the Integrated Report "A description of the data and information used to identify waters, including a description of the existing and readily available data and information used". Data provided to DEQ during its data call that met its QA/QC requirements was considered to be "readily available". There is not a requirement that data be collected solely for the purpose of assessment, but rather to gather all of the data that is being collected by various entities statewide. Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrologic Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000). A watershed unit was identified as Impaired if data from within the watershed unit demonstrated that water quality criteria were not being met and one or more beneficial uses were not supported. A watershed unit listed as Impaired indicates that an impairment exists within the watershed, not that the entire watershed is considered to be impaired.

In response to comments received, DEQ will be updating its visual display to reflect watershed units as polygons, rather than a collection of stream networks. Monitoring locations used in the assessment, which were formerly an additional map layer that needed to be turned on, will be turned on by default and will be visible when the map is zoomed in.

SWCD#11: Suggested Change ID #276

Description: Crosswalk - General

Comment: Many of the listings in the 2018/2020 database do not match up with the 2012 Integrated Report assessment database and 303(d) list (https://www.deq.state.or.us/wq/assessment/rpt2012/search.asp):

See attached spreadsheet for all of the crosswalk issues between the 2012 and 2018/2020 assessments within each assessment unit. Issues include: <U+25AA> For a number of waterways/parameters, there are no records of parameter listings for the assessment unit (or any component waterway) in the 2012 database, although the 2018/2020 database claims said parameters were listed in or prior to 2012. <U+25AA> For a number of waterways/parameters, the 2018/2020 database states a parameter was listed as Category 5 for the assessment unit (or any component waterway) in 2012, but the 2012 database shows that same parameter as Category 2 or 3 (depending on parameter and waterway).

Response: DEQ reviewed the spreadsheet provided by the commenter. The majority of the impairments provided were EPA additions to the 2012 303(d) list that were finalized in December 2018. See the table below for specific information on the identified waterbody listings.

SWCD#12: Suggested Change ID #285

Description: Methodology - Pooling of WQ data

Comment: DEQ is not meeting the requirement to designate a waterbody as water quality limited based on whether that waterbody is impaired for its designated beneficial uses. Specifically, a "receiving stream may be designated as water quality limited through the biennial water quality status assessment report prepared to meet the requirements of section 305(b) of the Federal Clean Water Act. Appendix A of the Status Assessment report will identify: what water bodies are water quality limited, the time of year the water quality standards violations occur, the segment of stream or area of water body limited, the parameter(s) of concern, and whether it is water quality limited under the definition of "Water Quality Limited" in OAR 340-041-0002." OAR 340-041-0046(1), emphasis added.

Instead of meeting this requirement, DEQ pools all available monitoring results from waterbodies within a watershed assessment unit ("Assessment Unit") to evaluate the entire unit for impairment. DEQ then designates the entire Assessment Unit as impaired, rather than just the specific impaired waterbody. Methodology S3.3.2.

Response: Oregon Administrative Rules require that DEQ designates a waterbody as water quality limited based on whether that waterbody is impaired for its designated beneficial uses. Specifically, a "receiving stream may be designated as water quality limited through the biennial water quality status assessment report prepared to meet the requirements of section 305(b) of the Federal Clean Water Act. Appendix A of the Status Assessment report will identify: what water bodies are water quality limited, the time of year the water quality standards violations occur, the segment of stream or area of water body limited, the parameter(s) of concern, and whether it is water quality limited under the definition of "Water Quality Limited" in OAR 340-041-0002." OAR 340-041-0046(1). The above rule allows for the partitioning of waterbodies into manageable units for assessment and reporting purposes. In the case of watershed units, the "area of water body limited" refers to the grouping of smaller order streams at the HUC-12 level into watershed assessment units, as outlined in the 2018 Assessment Methodology. In the absence of this approach for grouping smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements.. DEQ's method for listing waterbodies as impaired was reviewed by a scientific panel. The method for pooling data were vetted through a stakeholder process, technical white paper and public comment period for the methodology itself. DEQ encourages the commenter to participate and provide input for DEQ's 2022 Assessment Methodology update.

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78. Comments from: Weyerhaeuser

Wy#1: Suggested Change ID #153

Description: Watershed Units- Extrapolation- Watershed Connectivity #8

Comment: In developing the new AUS, DEQ failed to assess watersheds appropriately, with multiple assessment units that are neither homogenous nor hydrologically connected. DEQ further exacerbated the heterogeneity within AUS by extrapolating data from samples from neighboring waterways or tributaries and expanding previous 303(d) listings without water body specific data. This fails to account for the variability of streams across watersheds due to historic and use practices, site location and landscape variability like elevation. Without current site-specific data, DEQ should adjust individual waterbodies within the AUS to be listed as category 3.

While it was not possible at the time to foresee all issues related to the application of DEQ's new methodology, commenters on the methodology document predicted that the AUS would be overinclusive, including because the draft did not provide sufficient detail describing how decisions on dividing assessment units might be reached. These concerns proved prescient. DEQ sought to mitigate this impact by promising additional public input on this process— calling finalization of assessment units "an iterative process" and stated that splits or divisions of watershed units would be considered based on environmentally relevant GIS information. It is not apparent how, when, or whether DEQ intends to follow through with this "iterative process." The current methodology is inadequate, since it fails to distinguish segments with different characteristics.

Response: Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. It is rooted in scientific principles that support the application of data from one or more locations for extrapolation across a broader geographical area. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to the commencement of any additional regulatory actions. The report does not, unto itself, specify or determine any regulatory actions or consequences. In response to comments received, DEQ will be updating its visual display to reflect watershed units as polygons, rather than a collection of stream networks.

Wy#2: Suggested Change ID #154

Description: Mapping Tools/ Visualizations –Color coding waterbodies within AUs

Comment: All mapped waterbodies in AUS without impairments must be labeled differently than waterbodies with impairments. The current "report," which is really a series of interactive maps and graphics rather than a true "report," gives the mistaken impression that numerous additional waters are impaired because its mapped overlay shows all streams within the AU in the same color as the impaired

waters. To assist the public in interpreting the listing information, data points need to be added explaining beneficial use and the assessment database should be searchable by beneficial use. It is also particularly confusing that the stream colors in the interactive Web Map do not match the colors of the AUS described in the Interactive Story Map, and they should be updated to match.

Response: The Integrated Report is a reporting on the quality of Oregon surface waters every two years, as required by the Clean Water Act. The current report is a combination of a story map, interactive web map and online database. The "numerous additional waters" referred to by the commenter concerns the use of "watershed units." For purposes of the Integrated Report, and in order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrologic Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000). The commenter is correct that a watershed unit listed as Impaired indicates that an impairment exists within the watershed, not that the entire watershed is considered impaired. In response to comments received, DEQ will be updating its visual display to reflect watershed units as polygons, rather than a collection of stream networks, as well as adding a beneficial use search functionality.

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79. Comments from: Baker County Commission

BCC#1: Suggested Change ID #1

Description: Watershed Units- Extrapolation- Watershed unit assessment conclusions

Comment: I strongly oppose DEQ's decision to list water bodies on farm and forestland as water quality impaired without data to support those listings, as it has done in its 2018-2020 Integrated Report … I strongly oppose DEQ's decision to extrapolate listings of waterways and ditches based upon data collected from neighboring properties. Water quality naturally differs from water body to water body, particularly when those waterways are under different ownership and may have experienced differing current and historic riparian management. DEQ has presented no evidence that this extrapolation is scientifically valid or sound. Instead, it appears to be an attempt to list and regulate waterways without first going through the necessary step of determining that data actually shows an impairment.

Response: Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions.

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with

smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences.

BCC#2: Suggested Change ID #3

Description: Waters of the State- Irrigation Ditches- Report included agricultural irrigation and drainage ditches

Comment: Concern about including agricultural irrigation ditches as water quality impaired

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

The water quality within irrigation canals (which have a connection to natural surface waters) affects water quality in downstream waterbodies and the aquatic life therein. Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream.

In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

BCC#3: Suggested Change ID #11

Description: Watershed Units- Unfair characterization of agriculture and forest land- Assessment targets agricultural lands as sources of impairments

Comment: This new method of designation appears to directly target agricultural lands as the source of water quality impairments

Response: The Integrated Report is an objective assessment of the status of state waters based on data that were submitted to DEQ. The methods used to make assessment conclusions were finalized in the 2018 methodology document prior to any data evaluation. The assessment results and conclusions in the Integrated Report neither attributed the sources of water quality impairments nor targeted any entities such as agricultural lands.

BCC#4: Suggested Change ID #181

Description: Regulatory Impact- Agricultural infrastructure

Comment: The County is concerned that ramifications of water quality impairment in man-made systems will impact the County's land use jurisdiction and tax base as well as impart economic hardships on citizens that rely on ditches to provide economic viable conditions.

Response: In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

A watershed unit identified as impaired that contains irrigation canals indicates an impairment exists within the sub-watershed or HUC-12 level, not that every waterbody within the sub-watershed is impaired. Assessment Units identified as Category 5 in the Integrated Report are areas that require additional investigation and follow-up action. The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify has areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

BCC#5: Suggested Change ID #182

Description: Regulatory Impact- Applicability of 303(d)

Comment: Powder River flows through Baker County and does not have a TMDL, leaving the County and its citizens no way to dispute findings, address the concerns, or allow for removal from the 303(d) list. Therefore, until a TMDL is developed for the Powder River through a coordinated effort between the DEQ, County, and Stakeholders, any proposed inclusion in the 303(d) list of any waterbody within the county should be null and void.

Response: The process to remove waterbodies from the 303(d) list or from an impaired status is outlined on page 15 of the Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters. The creation of fixed assessment units makes this process much more transparent and DEQ looks forward to delisting waterbodies as water quality data indicate attainment of water quality standards and beneficial use support. Inclusion on the 303(d) list is the beginning of the process to prioritize Total Maximum Daily Load (TMDL) development; therefore, 303(d) listing comes before TMDL development.

BCC#6: Suggested Change ID #183

Description: Regulatory Impact- applicability of other statutes

Comment: Baker County believes that the proposed changes in water quality policies is not only a huge agency overreach, but will lead to DEQ running afoul of the Oregon State Agency Coordination laws as they relate to land use and the TMDL process in Baker County:

"Each state agency is required to prepare a State Agency Coordination (SAC) Program to assure that its "rules and programs affecting land use" comply with the statewide planning goals, and are compatible with acknowledged city and county comprehensive plans and land use regulations. (See ORS 197.180, OAR 660 030 and OAR 660-031.) SAC agreements are used to document the results of an agency evaluation and the coordination of technical assistance provided by DLCD to assure compliance and compatibility " (Oregon.gov/lcd/About/Pages/State-AgencyCoordination.aspx)

"ORS 197.180(1) Except as provided in ORS 197.277 (Oregon Forest Practices Act) or subsection (2) of this section or unless expressly exempted by another statute from any of the requirements of this section, state agencies shall carry out their planning duties, powers and responsibilities and take actions that are authorized by law with respect to programs affecting land use: (a) In compliance with the goals, rules implements the goals and rules implement this section; and (b) In a manner compatible with acknowledged comprehensive plans and land use regulations."

In accordance with ORS 197.180 and OAR Chapter 660, Division 30 and 31, and approved by the Environmental Quality Commission on August 10, 1990, page 34-35:

Action: Requirement for Implementation Plan to meet Total Maximum Daily Loads (TMDLs) Restrictions for Water Quality Limited Waterways. Authorities: PL 92-500 sec, 303; ORS 468; OAR Division 41 Analysis: To improve water quality in subbasins that are identified as water quality limited, the Commission adopts special requirement for TMDLS stream allocations and requires, the development of an implementation plan. The load restrictions may necessitate a change in land use activities or practices. The Standards are implemented for point sources through the permitting process.

Land Use Compatibility Mechanism: A Commission designated local government is generally responsible for coordinating the development of an implementation plan with the affected local comprehensive plans. Evidence that the implementation plans compatible with or will be compatible with the affected local comprehensive plans must be provided before the Commission approves the plan.

Response: DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. Assessment Units were primarily designed for reporting purposes and allow DEQ to track changes in water quality over time. DEQ policy has not changed. Waterbodies identified as Category 5 in the Integrated Report identify areas that require additional investigation and follow-up action; it does not, unto itself, specify or determine any regulatory actions or consequences. Follow-up monitoring for impaired assessment units will be necessary to better delineate and characterize the extent of impairment before any prescriptive regulatory actions are taken.

Using watershed units will not change how Total Maximum Daily Loads (TMDLs) are developed or implemented. TMDLs are usually developed at a much larger scale (i.e. basin scale) and consider all relevant data and sources that may be contributing to location-specific exceedances of water quality standards.

BCC#7: Suggested Change ID #184

Description: Process- Outreach- County Outreach #3

Comment: Baker County is frustrated that the agency did not reach out to county officials prior to the Integrated Report listing waterbodies within the county as water quality impaired. We believe we are entitled, as the local government, to having input and in-depth discussions Of the methodologies used and the assumptions that are made in the Integrated Report. Coordination between state agencies and local governments lead to better policies, especially those that will have significant and direct impact county land uses, economy and social stability.

Response: DEQ performed extensive outreach on its draft 2018/2020 Integrated Report and provided multiple opportunities to comment on its methodology and draft report.

The draft Integrated Report was open for public comment from Sept. 30, 2019, through Jan. 6, 2020, for a total of 99 days, which included a 34 day extension in response to stakeholder requests. Notifications were sent to over 3,000 individuals signed up on the GovDelivery listserv. DEQ staff subsequently held six informational sessions across the state to review the results of the report and assisted participants with its new interactive tools. The six informational sessions included: Portland on Oct. 15, 2019; Bend on Oct. 22, 2019; Central Point/Medford on Oct. 29, 2019; Newport on Nov. 5, 2019; Corvallis on Nov. 12, 2019; and Salem on Nov. 14, 2019. DEQ staff also held a webinar on Nov. 4, 2019, and the webinar was recorded and available on the Integrated Report website on-line Webinar.

DEQ will continue to adapt its approach to outreach and communications in the next Integrated Report and encourages your input and participation. The agency anticipates convening a stakeholder group in 2020, to evaluate and make recommended changes to the methodology, with the methodology going out for public comment in approximately Dec. 2020.

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80. Comments from: Oregon Business & Industry

OB&I#1: Suggested Change ID #73

Description: General comment - compliment

Comment: We would like to express our gratitude to the DEQ for all of the hard work they have done in gathering and disseminating the integrated report. We recognize the enormity of the task performed and the work still to be done.

Response: Thank you for your support.

OB&I#2: Suggested Change ID #234

Description: Mapping Tools / Data Visualization- General

Comment: DEQ Must Make Other Important Improvements to the Report

- Match interactive web map colors to Story Map. Colors should correspond to categories, not impairment, such that Category 4 and Category 5 AUs appear differently.

- A map tool that includes the monitoring locations referenced in the Assessment Database should be included in the Integrated Web Map tool. Additionally, please add monitoring locations and existing analytical data to the Geodatabase. Without it, we cannot evaluate the data that led to the water quality categorization.

- The Assessment Database is not currently searchable by beneficial use. Being able to find water bodies that are listed for the same beneficial uses would be helpful in understanding precedents for establishing water quality standards, developing TMDLs, delisting segments, and implementing point and non-point source pollutant controls. Please add this functionality.

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

- The Ambient Water Quality Monitoring System (AWQMS)is critical to understanding the categorization of an Assessment Unit of interest, but it is remarkably difficult to use. Please undertake a comprehensive review of the user interface of this system and make the database public to facilitate intuitive custom searches.

- Please make it possible to search by Assessment Unit, not merely monitoring location identification numbers, in the AWQMS.

Response: Thank you for your suggestions. DEQ will revise its visual displays (i.e. Interactive Map and Story Map) to use the same color scheme. Monitoring locations used in the 2018/2020 assessment are

currently available as a layer in the interactive web map. In the final version of the report, these monitoring locations will become visible when zoomed in. The analytical data used in the assessment will be available for download through DEQ's online database, and the online database will be searchable by beneficial use. Search results returned outside the State of Oregon primarily come from the Watershed Boundary Dataset (USGS), which is a national dataset. There is no way to turn off this search as it would not return any results in Oregon for this dataset, therefore DEQ intends to continue to use this dataset. Unfortunately, DEQ is unable to make any changes to the AWQMS user interface. DEQ will continue to provide tutorials and staff assistance on how to best use AWQMS. DEQ will, however, add the functionality to search by Assessment Unit ID in AWQMS.

OB&I#3: Suggested Change ID #235

Description: Databases - Data availability

Comment: Problems with Completeness and Connectivity of Data Must Be Addressed

- Our comparison of the data received from DEQ in spreadsheet form and the data available on the AWQMS web portal indicates that, in at least one case, the web portal does not include all the data that are available for an AU. Importantly, data that were not on the AWQMS web portal were the data that led to a Category 5 determination for a specific AU. All data that lead to categorizations of AUs should be publicly accessible without the personal assistance of DEQ personnel.

- The analytical data represented in the Integrated Report are not accessible via the Interactive Web Map and the Assessment Database

- The Assessment Database should identify the organization that collected the data

Response: DEQ agrees with the commenter. In the final report and in future iterations of the Integrated Report, DEQ will make the supporting data and rationales available through the online assessment database, in addition to having raw data available in the AWQMS data portal.

OB&I#4: Suggested Change ID #236

Description: Databases- Assessment Database- Be more like Washington

Comment: Oregon Should Make Its Water Quality Database More Like Washington's

Response: DEQ appreciates the input. Oregon DEQ has made significant improvements to the database and the visual display of the 2018/2020 Integrated Report. We will continue to refine the database and the visual display in subsequent cycles to improve access and readability.

OB&I#5: Suggested Change ID #237

Description: Watershed Units- Extrapolation- Watershed Connectivity #13

Comment: Policy Decisions in the Methodology Resulted in the Addition of Many Water Bodies That Lack Data

Response: Data were used to support all of the listings proposed in the 2018/2020 Integrated Report. DEQ held its first statewide data call in over ten years and assessed over 6.5 million rows of data from over 70 organizations to arrive at its assessment conclusions. Comments related to the use of a watershed unit approach are addressed in other responses to comments.

OB&I#6: Suggested Change ID #238

Description: Assessment Units-Adjust (Specific)

Comment: AU Willamette River from Johnson Creek to the Columbia River is Too Large

Response: DEQ agrees with the commenter that extensive sampling has taken place along the Lower Willamette AU, OR_SR_1709001202_88_104175. Data from the recreational areas south of the Ross Island Bridge are pooled with the Portland Harbor area and, as a result, data collected in either location applies to the assessment of both locations. Lacking any specific recommendation or supporting information for where the assessment unit should be divided, DEQ will retain this particular assessment unit in its entirety for the 2018/2020 Integrated Report.

OB&I#7: Suggested Change ID #239

Description: Watershed Units- Extrapolation- Watershed Connectivity #14

Comment: Large AUs Compounded by Aggregated Data Do Not Provide an Accurate Characterization of Water Quality

Extensive samples have been collected along the Lower Willamette AU, however not all the locations are visible through the AWQMS. The data requested from DEQ does contain all related monitoring locations, but the coordinates for sampling points are not given. Data from the recreational areas south of the Ross Island Bridge is pooled with the Portland Harbor area and, as a result, data collected in either location applies to the assessment of both locations. In other words, water quality near Oaks Amusement Park is lumped together with water quality in the Portland Harbor. With the possible exception of temperature, there is no basis to conclude that the water quality in these two very different locations would be the same. Additionally, the inclusion of two very different stream characterizations in one AU coupled with the significant public access and water recreation south of Portland Harbor could cause unnecessary concern among recreationists and the public.

Response: Monitoring locations used in the 2018/2020 assessment are currently available as a layer in the interactive web map that must be turned on. In the final version of the report, these monitoring locations will become visible when zoomed in. Upon final submittal of the Integrated Report, the data and criteria used in the assessment will be available for download through DEQ's online database. The Lower Willamette Assessment Unit, OR_SR_1709001202_88_104175, was generated using the method outlined in the Assessment Methodology. The monitoring stations for the parameters assessed in 2018/2020 were dispersed throughout the entire assessment unit, therefore an assessment unit split was not warranted.

OB&I#8: Suggested Change ID #240

Description: Beneficial Uses and WQ Standards- watershed units

Comment: Creation of the HUC 12 Watershed Assessment Units Represents a Geographic Expansion of Beneficial Uses

Response: Oregon's current beneficial uses were designated on a basin scale decades ago. The 2018/2020 Integrated Report was developed based on these same designated beneficial uses. Thus, there is no physical geographic expansion of the beneficial uses. The only change is the designated use map scale, which was changed to a higher resolution (from 1:100,000 to 1:24,000). As a result, more designated waterbodies are shown on the map. However, no new or expansion of beneficial uses occurred since the last Integrated Report was conducted.

Beneficial uses were designated according to administrative basin decades ago and are found in OAR-340-041 Tables 101A - 330A, including specific water bodies and designation for "All other streams and tributaries" which includes all waters of the state not specifically designated. Beneficial use designations were previously only visualized on PDF maps. In previous assessments, waterbodies were identified using a 1:100,000 resolution, however in the transition to the High Resolution NHD layer (1:24,000), all waterbodies in Oregon were mapped, which represented a visual increase of waters designated. No physical geographic expansion of these uses occurred, just an expansion of the visual tools used to identify them.

OB&I#9: Suggested Change ID #241

Description: Regulatory Impact- Uncertain that sufficient data exists for impairment and regulatory burden

Comment: When a 303(d) listing is supported by a recent and robust data set and a transparent comparison between data and water quality criteria, our members are willing to do their part to protect the water quality of our state's waterways. However, based on the concerns outlined in this comment letter, we cannot be confident that sufficient data exist to support the "impaired" status of all stream reaches included in the 303(d)-listed Assessment Units of the Draft 2018/2020 Integrated Report. Should stream reaches be 303(d)-listed without recent and robust data and a transparent means of understanding that listing, our members will be unreasonably and unfairly impacted. These impacts will begin immediately upon adoption of the new 303(d) list, not in several years when specific TMDL processes begin, and they will unnecessarily add to the regulatory burden of our members' operations without producing any meaningful benefit to the water quality of Oregon.

The regulatory burden on our members starts as soon as a waterway is included on the state 303(d) list. Additionally, a 303(d) listing of a waterway near our members' operations has other important consequences that our members feel long before a TMDL is created. Once the label of "impaired waterway" is placed upon a river or stream, the activities of our members face greater scrutiny by members of the public who do not necessarily comprehend our operations or our many existing efforts to control our impact on Oregon's waterways. Moreover, in some cases, a 303(d) listing triggers additional regulations before a TMDL and its associated implementation are enacted. As an example, the 1200-Z Industrial Stormwater General Permit requires monitoring of all pollutants on the "impaired pollutant list"

that is defined in the permit assignment letter for each site. This list of impaired pollutants is taken directly from the 303(d) listings of the waterbody to which the 1200-Z permittee discharges. Thus, a 303(d) listing increases the expense incurred by routine monitoring activities long before DEQ begins the process of creating a TMDL.

Response: The Integrated Report is not a regulation, and it does not, unto itself, specify or determine any regulatory actions or consequences. The Integrated Report is a federal Clean Water Act requirement that Oregon report on the quality of its surface waters every two years. The Integrated Report combines the requirements of Clean Water Act section 305(b) to develop a status report and the section 303(d) requirement to develop a list of impaired waters. In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report process, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000). Assessment units classified as Impaired in the Integrated Report are areas that require additional monitoring and investigation. Follow-up monitoring of impaired assessment units is necessary to better delineate and characterize the extent of impairment before any prescriptive regulatory actions are taken. Integrated Report assessment conclusions are supported by a robust dataset and a transparent comparison between data and water quality criteria, which will be available for download through DEQ's online database.

Prior to the reissuance of the 1200-Z in Oct. 2018, permitted industrial facilities were only required to sample twice annually for Category 5, 303(d) listed pollutants. Monitoring was increased to four times annually upon the reissuance of the 1200-Z on Oct. 22, 2018. Language was also added to Schedule B.1, monitoring requirements, allowing permit registrants to discontinue monitoring for impairment pollutants when permit registrants are able to: (1) prevent all pollutants for which the waterbody is impaired from being exposed to stormwater, and documents in the stormwater pollution control plan, SWPCP those procedures it has taken to prevent exposure on site; or (2) provide monitoring data demonstrating that the pollutant(s) for which the waterbody is impaired are not present in the discharge. In addition, the 1200-Z has a monitoring waiver provision; when approved by DEQ or Agent, which allows permit registrants to discontinue monitoring when the geometric mean of four consecutive samples are equal or below the impairment reference concentration.

OB&I#10: Suggested Change ID #284

Description: IR Improvements - Suggestions

Comment: 1. The Assessment Database is not currently searchable by beneficial use. Being able to find water bodies that are listed for the same beneficial uses would be helpful in understanding precedents for establishing water quality standards, developing TMDLs, delisting segments, and implementing point and non-point source pollutant controls. Please add this functionality.

2. To properly use the Interactive Web Map, the location or name of the waterway must be known. Search options can be improved. For example, typing "Florence" returns a search result that leads to

Lake Florence, in Alaska. Please limit search results to Oregon and enhance the ease of searching by geographical areas that would be commonly used by Oregonians.

3. The AWQMS is critical to understanding the categorization of an Assessment Unit of interest, but it is remarkably difficult to use. Please undertake a comprehensive 2018/2020 review of the user interface of this system and make the database public to facilitate intuitive custom searches.

4. Please make it possible to search by Assessment Unit, not merely monitoring location identification numbers, in the AWQMS.

Response: Thank you for your suggestion.

1. DEQ will make the Assessment Database searchable by beneficial use.

2. Search results returned outside the State of Oregon primarily come from the Watershed Boundary Dataset (USGS), which is a national dataset. There is no way to turn off this search as it would not return any results in Oregon for this dataset. Thus, DEQ intends to continue to use this dataset.

3. DEQ is unable to make any changes to the AWQMS user interface. DEQ will continue to provide tutorials and staff assistance on how to best use AWQMS.

4. DEQ will add the functionality to search by Assessment Unit ID in AWQMS. In addition, DEQ will be making the data used in the 2018/2020 Integrated Report available to download through its online assessment database.

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81. Comments from: Horsefly Irrigation District

HID#1: Suggested Change ID #221

Description: Watershed Units- General #2

Comment: The Draft Report has identified a significant number of existing open canals, piped canals, drains, and nonexistent waterbodies within HID's boundaries as impaired waters (see map included as Exhibit A). By contrast, in this portion of the Lost River basin, only the Lost River and Buck Creek appear on DEQ's 2012 Impaired Waters 303(d) list set forth in OAR 340-041-0180, Table 180A. No part of the HID delivery system is currently included on the 303(d) list.

This greatly expanded listing of impaired waterbodies appears to correlate with the Draft Report creation of an AU that it labels the Lower Buck Creek-Lost River level 12 HUC (Assessment Unit ID OR_WS_180102040704_05_107120). The Draft Report indicates that within the AU, the impaired uses are "Fish and Aquatic Life" and that the impairment cause is "Temperature-Year Round." See Exhibit B showing this information. However, the existing 303(d) list is more specific, listing the designated beneficial use in Buck Creek (River Miles 0 to 12.8) as limited to "Redband or Lahontan cutthroat trout." OAR 340-041-0180, Table 180A. Despite this difference, it appears that the expanded listings are the result of DEQ's use of the new methodology to impute the Buck Creek impaired status onto the

aggregated system of manmade facilities within HID's boundaries. HID is not aware or, nor has it been able to identify any actual DEQ temperature data that supports the expansion of the AU to include the manmade facilities.

Response: In 2016, DEQ undertook a major improvement effort to streamline the Integrated Report and address longstanding issues. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time., DEQ simultaneously migrated to the High Resolution National Hydrologic Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. at a much higher resolution than in the past (LLID; 1:100,000). DEQ is not asserting jurisdiction over any new waters.

Assessment units were delineated to represent relatively homogeneous hydrological units, such as main stems between major tributaries, or headwater catchments, where water quality is expected to be uniform due to natural processes. These assessment units were also delineated on changes in designated beneficial uses according to OAR-340-041 Tables 101A - 330A, including specific water bodies. However, assessment units were not delineated on all changes in sub-use categories that may affect the applicable criteria that apply at specific points within an assessment unit. The Fish and Aquatic Life use applies throughout the Hood River Basin, however some waterbodies are further designated into sub-uses of fish and aquatic life such as the spawning fish use. Waterbodies may have multiple water quality standards that apply to them, including some site-specific standards that may only apply to a specific section of an assessment unit. Because multiple criteria can be designated as changing over a small area, as in the spawning fish use designations, it is not feasible to divide and manage assessment units on every change in water quality criteria. Impairments are based on the data from specific monitoring stations and the criteria that apply to those specific locations or waterbodies. Total Maximum Daily Loads (TMDLs) to address impairments are completed at the basin or sub-basin level and not the scale of individual water bodies unless those waterbodies are major rivers, tributaries, or waterbodies.

HID#2: Suggested Change ID #222

Description: Watershed Units- Extrapolation- Watershed Connectivity / Beneficial uses

Comment: We endorse the OFB Comments with regard to the flawed methodology and specifically the use of data pooling. In HID's case, the use of that approach has resulted in irrigation delivery canals (and pipelines) being listed as temperature-impaired waterbodies. This reveals several flaws in DEQ's approach. First, those delivery facilities only deliver water to headgates or pumps located at the high point of private landowners' fields. The delivery facilities have no hydrologic connection to Buck Creek, making it impossible for them to influence the temperature in Buck Creek. Second, the diversion and delivery facilities are equipped with fish screens, making it impossible for fish to enter those manmade structures. This means that the delivery facilities themselves could not possibly serve the designated beneficial use for the Lower Buck Creek-Lost River AU of Redband or Lahontan cutthroat trout. Third, the Draft Report has designated the delivery structures without reliance on actual temperature data. This approach fails to account for any actual conditions in the newly designated waters. By way of example, in this particular case, HID's system is supplied with a combination of surface water and low temperature groundwater originating from the basalt aquifer. Moreover, the delivery facilities are piped through a substantial portion of the total length. Therefore, it is highly unlikely that the high temperature conditions

in Buck Creek, which under the Draft Report methodology have now imputed to the surrounding waters, would be present in the HID delivery facilities.

The result of the data pooling and imputation approach is a fundamentally flawed Draft Report with respect to irrigation facilities. It has improperly designated irrigation delivery structures as temperature-impaired waters serving the designated beneficial use. The methodology should be reworked to use actual data, which we anticipate would eliminate the HID delivery facilities from the impaired waters list. At a minimum those manmade waterbodies should be classified as an independent AU for the purpose of designating beneficial uses and potential impairment.

Response: In order to assess the entirety of the state in a manageable manner and to track water quality over time, DEQ broke up the state into assessment units of stream segments and watershed units using the National Hydrography Dataset (NHD). A watershed unit that identifies irrigation canals as "impaired" indicates an impairment within the sub-watershed, not that every waterbody in the unit is impaired. Integrated Report conclusions do not identify the source of the impairment nor does it attribute source responsibility for those impairments to any affected parties.

The Integrated Report does not, unto itself, specify or determine regulatory actions or consequences. Assessment results identify areas of impairment and in need of follow-up investigation and evaluation. Activities by DEQ affecting an irrigation canal will not occur until additional evaluation and assessment of the relevant canal and adjacent waters has been conducted.

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

Not all ditches and canals are alike. Regardless of whether a canal may or may not have fish in it, it likely has other aquatic life, and the conditions within a canal may still affect fish and other aquatic life in waterbodies downstream. In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses. The current beneficial uses were designated on a basin scale and were established based on the information available at that time. The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

Importantly, the Oregon Legislature passed state law (ORS 468B.039) in 2015 that directed DEQ to publish the methodology prior to analyzing water quality data and drafting the Integrated Report (two-step process). This process ensures that a methodology is robust and not developed or altered in an ad-hoc manner in response to assessment results. DEQ held public stakeholder and work group processes for updates to the Assessment Methodology prior to the Integrated Report was drafted. This process was inclusive and included representatives from environmental groups, industry, tribes, agriculture, and forestry on the work group.

HID#3: Suggested Change ID #223

Description: Beneficial Uses and WQ Standards- Lower Buck Creek- Lost River

Comment: The Draft Report methodology extends the blanket of impaired waters within the Lower Buck Creek-Lost River AU to the manmade canals and drains within HID's boundaries. However, even if one were to accept use of the flawed methodology, this result is contrary to law. Buck Creek is listed in the existing 303(d) list for only a single beneficial use—Redband or Lahontan cutthroat trout. As noted above, the delivery system could not possibly support that use because the intakes for the system are fully screened and that system has no hydraulic connection to Buck Creek. In addition, the drains that have been listed are not fish habitat. They are artificial structures that occasionally convey agricultural runoff away from fields when they are being irrigated. Additionally, as noted above, most of the drains shown in the Draft Report are not waters that have a hydraulic connection with Buck Creek, making it impossible for fish to enter those structures.

Based on this factual reality—which the Draft Report fails to acknowledge—it is simply impossible for the manmade waterways within the HID boundaries to serve the current 303(d) list designated beneficial use, or to impact waters that do. The same holds true for the expanded beneficial use of "Fish and Aquatic Life" in the Draft Report for this AU. The physical reality of this artificial conveyance system precludes the presence of fish within those newly designated waters. Likewise, for the majority of the newly-designated artificial waterways in the Draft Report, there is no way that water within those structures could impact water quality within Buck Creek given that they are not tributary to that stream.

This is just one example of how the approach taken in the Draft Report yields nonsensical and legally unsupportable results. Rather than using a proven approach based on actual field observations and water temperature measurement, the Draft Report adopts an artificially broad hypothetical approach by making watershed scale inferences. The result is the improper inclusion of hydraulically disconnected manmade conveyance structures that could not serve the designated beneficial uses.

In addition to removing the nonexistent waterbodies from the Draft Report, DEQ should adopt the recommendations in the OFB Comments to distinguish unnatural channels and areas with modified flow patters from natural channels. (See Section 3 on page 6 of the OFB Comments.) The extension of the AU from Buck Creek onto the manmade waterways in HID is a failure to comply with the homogeneity requirement described in the Integrated Report Methodology as a basis for designating a Watershed Assessment Unit.1 DEQ's failure to even adhere to its own methodology creates an untenable result from both a factual and legal perspective.

Response: Beneficial uses were designated according to administrative basin in OAR-340-041 Tables 101A - 330A, including specific water bodies and designation for "All other streams and tributaries" which includes all waters of the state not specifically designated. In previous assessments, DEQ used its LLID layer to identify waterbodies that were assessed. The LLID layer was created a resolution of 1:100,000. In the transition to the High Resolution NHD layer (1:24,000), all waterbodies in Oregon were mapped. However, since beneficial uses were designated on an administrative basin wide scale decades ago, there has been no geographic expansion of these uses, just an enhanced visualization of Oregon's waterbodies and their associated beneficial uses. OAR 340-041-0028 (5) identifies the methodology that DEQ used to digitize its beneficial use maps. For waters that are not identified on the "Fish Use Designations" maps (Unidentified Tributaries) referenced in section (4) of this rule, the applicable criteria for these waters are the same criteria as is applicable to the nearest downstream water body depicted on the applicable map. This section (5) does not apply to the "Salmon and Steelhead Spawning Use Designations" maps." DEQ understands that not all ditches and canals are alike. However, to the extent that fish screens prevent fish from entering these irrigation ditches, it likely the ditches support other aquatic life and the canal may still affect fish and other aquatic life in waterbodies downstream. In the 2018/2020 Integrated Report, DEQ assessed waterbodies based on the current designated beneficial uses.

The applicable uses may warrant further review based on new information, but this is evaluated through a separate Water Quality Standards update, which is outside the scope of the Integrated Report process.

In 2016, DEQ undertook a major effort to update and improve the robustness of the Integrated Report methodology, address longstanding issues, and improve accessibility. In order to conform to EPA's new reporting requirements, DEQ created Assessment Units, which partitioned the state's waterbodies (streams, river, lakes, estuaries, coastline and marine territorial waters) into manageable units for assessment and reporting purposes. The focus of the method update was to create static assessment units that are fixed over time. Fixed assessment units increase transparency, consistency and allow for tracking water quality changes over time. DEQ also has migrated to the High Resolution National Hydrography Dataset (NHD; 1:24,000) that represents the surface water of the entire U.S. in a standardized manner and at a much higher resolution than in the past (LLID; 1:100,000).

When moving to the NHD, DEQ defined assessment units for surface waters for the entire state. In addition to large rivers and streams assessment units, headwater streams and small feeder drainages were grouped into "watershed units" at the sub-watershed scale. Water quality assessment based on a watershed unit approach is a well-established methodology employed by many other states (e.g. Ohio, Michigan, etc.) for meeting EPA reporting requirements. In the absence of this approach for dealing with smaller streams, Oregon would have more than two million different assessment units in need of assessment, which would be impractical relative to the state's monitoring and assessment resources.

When a watershed unit has been identified as Category 5: Impaired, it indicates that an impairment exists within the watershed unit, not that the entire sub-watershed is impaired. When an assessment unit is identified as impaired, evaluation of the existing data and any data gaps occur prior to any additional regulatory actions occurring. The report does not, unto itself, specify or determine any regulatory actions or consequences. In response to comments received, DEQ will be updating its visual display to reflect watershed units as polygons, rather than a collection of stream networks

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HID#4: Suggested Change ID #224

Description: Process- Public Comment Process- additional comments #2

Comment: DEQ has indicated that it considers the 2018 Methodology to be beyond the scope of the current round of public comments. However, as made clear above, the Draft Report cannot be separated from the underlying methodology. We endorse the OFB Comments on this point and amplify them as follows.

The Draft Report is the sum of both the underlying methodology and data. By separately publishing the methodology for public comment in 2018, DEQ has effectively deprived the public of an opportunity to understand how the methodology would work in the applied setting. The Draft Report is the first opportunity the public has been afforded to fully understand and appreciate how the new methodology impacts the scope and extent of listed waters. Therefore, if DEQ persists in its position that the methodology is outside the scope of the current notice and comment period, it will violate the Oregon Administrative Procedures Act and deprive HID and the public of its right to due process.

Response: DEQ performed extensive outreach on its draft 2018/2020 Integrated Report and provided multiple opportunities to comment on its methodology and draft report.

In 2015, the Oregon Legislature directed DEQ to publish the listing methodology prior to the start of drafting the Integrated Report (ORS 468B.039). This process ensured that the methodology was unbiased and transparent and not developed or altered in an ad-hoc manner in response to assessment results. Updates to its Assessment Methodology were vetted through a stakeholder work group process and a subsequent 60 day public comment period. In addition, there was an opportunity for public comment on the draft assessment methodologies during the July 2018, Environmental Quality Commission meeting. In April of 2019, after completion of its data call, DEQ reconvened the work group to walk through specific examples of how Category 5 listings would be displayed and how prior listings would be carried forward.

DEQ will continue to adapt its approach to outreach and communications in the next Integrated Report and encourages your input and participation. The agency anticipates convening a stakeholder group in 2020, to evaluate and make recommended changes to the methodology, with the methodology going out for public comment in approximately December 2020.

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82. Comments from: City of Eugene

CE#1: Suggested Change ID #161

Description: Assessment Conclusions- Missing Data- Amazon Creek

Comment: Monitoring locations listed in the on-line search results inconsistently identify locations for sample data submitted by the City of Eugene; as an example, lead in Amazon Creek is shown as being assessed in 2018 but does not include City of Eugene sample locations, hence it is difficult to ascertain whether the assessments performed by the Department accurately reflect the entire data set.

Response: Data collected and submitted by the City of Eugene were inadvertently left out of the 2018/2020 Draft Integrated Report assessment. Data submitted by the City of Eugene will be assessed and included as part of the final Integrated Report submittal.

CE#2: Suggested Change ID #162

Description: Databases- AWQMS- Difficult to use- exceedances

Comment: The Oregon Water Quality Monitoring Data Portal Single Parameter Statistics by Location Report search engine is not particularly useful in identifying exceedances of acute and chronic toxicity for hardness-dependent metals because the interactive web page requires an upper threshold entry to generate a table of exceedances; thresholds will vary based on the hardness measured for a specific sampling event.

Response: DEQ agrees that the Oregon Ambient Water Quality Monitoring Data Portal (AWQMS) Single Parameter Statistics by Location Report search engine is not particularly useful in identifying exceedances of acute and chronic toxicity for hardness-dependent metals because the interactive web page requires an upper threshold entry to generate a table of exceedances because DEQ has not, nor

intends to, populate the threshold table in AWQMS. The webpage only allows us to include one benchmark or threshold for each parameter. Since our standards are so complex in some cases, they do not lend themselves easily to this format. At this time, Gold Systems (creator of AWQMS) is reluctant to disable the exceedance report/map/export functions. Similarly, they are reluctant to include additional fields for additional thresholds/benchmarks. For those parties interested in assessing individual exceedances of criteria, DEQ will make the supporting data used in the Integrated Report assessment and the criteria that were assessed against, available for download through its online database.

CE#3: Suggested Change ID #163

Description: Databases- AWQMS- Difficult to use- exceedances #2

Comment: The Oregon Water Quality Monitoring Data Portal Exceedance Report search engine does not identify any exceedances of water quality standards for all parameters and waterbodies in the Eugene area; we found the exceedance report accurately lists data from the collected samples, however, the table column indicating whether the value exceeds the water quality criterion does not appear to be accurate for parameters we examined, including, for example, metals, dissolved oxygen, temperature, bacteria, and nitrates for which the report indicated no exceedances under the Acute, Chronic and Other threshold types as applicable.

Response: DEQ agrees that the Oregon Ambient Water Quality Monitoring Data Portal (AWQMS) Single Parameter Statistics by Location Report search engine is not particularly useful in identifying exceedances of acute and chronic toxicity for hardness-dependent metals because the interactive web page requires an upper threshold entry to generate a table of exceedances because DEQ has not, nor intends to, populate the threshold table in AWQMS. The webpage only allows us to include one benchmark or threshold for each parameter. Since our standards are so complex in some cases, they do not lend themselves easily to this format. At this time, Gold Systems (creator of AWQMS) is reluctant to disable the exceedance report/map/export functions. Similarly, they are reluctant to include additional fields for additional thresholds/benchmarks. For those parties interested in assessing individual exceedances of criteria, DEQ will make the data used in the Integrated Report assessment and the criteria that were assessed against, available for download through its online database.

CE#4: Suggested Change ID #286

Description: Watershed Units - TMDLs

Comment: It is unclear what the ramifications of the watershed unit approach will have on TMDL implementation

Response: Using watershed units will not change how Total Maximum Daily Loads (TMDLs) are developed or implemented. TMDLs are usually developed at a much larger scale (i.e. basin scale) and consider all relevant data and sources that may be contributing to location-specific exceedances of water quality standards.

CE#5: Suggested Change ID #287

Description: Geodatabase - Database and monitoring locations

Comment: It would be helpful if the assessment geodatabase contained monitoring locations and all of the data used in the analysis.

Response: All of the data used in the Integrated Report assessment will be available to download through DEQ's online database, in addition to the AWQMS data portal. Additionally, the Interactive Web Map also will automatically display monitoring locations at certain zoom levels.

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83. Comments from: Wasco County Board of Commissioners Member

WCBCM#1: Suggested Change ID #160

Description: Process- Communications/Outreach- General #2

Comment: As a member of the Wasco County Board of Commissioners, I would ask that the Department of Environmental Quality reach out to county officials and other stakeholders about the Integrated Report prior to listing the vast majority of our waterbodies as water quality impaired. Going forward, it would be appropriate to engage in a discussion of the methodologies used and the assumptions that the Integrated Report makes about waterways in Oregon, particularly when it results in significant policy decisions that have a direct impact on county programs and county lands. This very important policy work deserves input from all stakeholders; however, we have not had time to thoroughly review and understand the report.

I urge you to reopen the comment period and allow for a robust and transparent process for decisions that have such far-reaching impacts for Oregonians.

Response: DEQ performed extensive outreach on its draft 2018/2020 Integrated Report and provided multiple opportunities to comment on its methodology and draft report.

In 2015, the Oregon Legislature directed DEQ to publish the listing methodology prior to the start of drafting the Integrated Report. This process ensured that the methodology was unbiased and transparent and not developed or altered in an ad-hoc manner in response to assessment results. Updates to its Assessment Methodology were vetted through a stakeholder work group process and a subsequent 60 day public comment period. In addition, there was an opportunity for public comment on the draft assessment methodologies during the July 2018, Environmental Quality Commission meeting.

The draft Integrated Report was open for public comment from Sept. 30, 2019, through Jan. 6, 2020, for a total of 99 days, which included a 34 day extension in response to stakeholder requests. Notifications were sent to over 3,000 individuals signed up on the GovDelivery listserv. DEQ staff subsequently held six informational sessions across the state to review the results of the report and assisted participants with its new interactive tools. The six informational sessions included: Portland on Oct. 15, 2019; Bend on

Oct. 22, 2019; Central Point/Medford on Oct. 29, 2019; Newport on Nov. 5, 2019; Corvallis on Nov. 12, 2019; and Salem on Nov. 14, 2019. DEQ staff also held a webinar on Nov. 4, 2019, and the webinar was recorded and available on the Integrated Report website on-line Webinar.

DEQ will continue to adapt its approach to outreach and communications in the next Integrated Report and encourages your input and participation. The agency anticipates convening a stakeholder group in 2020, to evaluate and make recommended changes to the methodology, with the methodology going out for public comment in approximately Dec. 2020.

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84. Comments from: Dan Andersen

DA#1: Suggested Change ID #250

Description: Data- public access

Comment: I have concerns about the ramifications of this report for private land owners in our area. Putting these maps out for public review will open up the ability of non affected entities to access private data.

Response: All assessments made in the 2018/2020 Integrated Report utilize data that is publicly available. In the case of data generated by DEQ, permission was granted for any data or information collected on private land.

DA#2: Suggested Change ID #251

Description: NHD Issues- non-existent waterbodies

Comment: I have reviewed the map down to the smallest line. There are points where a waterbody is indicated that no water exists or never reaches an impaired stream. This leads me to believe that there are numerus [sic] errors in the new system. I am concerned with the over reach of this report and the lac [sic] of respect for the work that has previously been accomplished. The 1010 plans have been working under the guidance of ODA.

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

The Integrated Report is an assessment of whether there is data or information indicating a waterbody attains its applicable criteria and supports its designated uses. ODA's Agricultural Water Quality Management Program and the biennial review process continue to be the primary mechanism by which agriculture will address water quality issues. DEQ will continue to work with ODA to provide water quality data and information, such as assessment information. DEQ supports all of the previously accomplished work in improving water quality, and looks forward to delisting waterbodies when data indicate attainment of water quality standards and highlighting those successes in future reports.