

2022 Water Quality Assessment Response to Comments

Water Quality Program

Washington State Department of Ecology Olympia, Washington

April 2025, Publication 25-10-026



Publication Information

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Related Information

- <u>Supporting Information for the 2022 Water Quality Assessment¹</u>
- Water Quality Policy 1-11, Chapter 1: Washington's Water Quality Assessment Listing Methodology to Meet Clean Water Act Requirements²
- Water Quality Policy 1-11, Chapter 2: Ensuring Credible Data for Water Quality Management³

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¹ https://apps.ecology.wa.gov/publications/SummaryPages/2510025.html

² https://apps.ecology.wa.gov/publications/SummaryPages/1810035.html

³ https://apps.ecology.wa.gov/publications/SummaryPages/2110032.html

⁴ https://ecology.wa.gov/about-us/contact-us

Department of Ecology's Regional Offices



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Southwest Region
360-407-6300Northwest Region
206-594-0000Central Region
509-575-2490Eastern Region
509-329-3400

Region	Counties served	Mailing Address	Phone
Southwest	Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, Wahkiakum	PO Box 47775 Olympia, WA 98504	360-407-6300
Northwest	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom	PO Box 330316 Shoreline, WA 98133	206-594-0000
Central	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 W Alder St Union Gap, WA 98903	509-575-2490
Eastern	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	4601 N Monroe Spokane, WA 99205	509-329-3400
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Abbreviations and Acronyms

°C	Celsius (degrees)
ARP	Advance Restoration Plan
AU	Assessment unit
B-IBI	Benthic invertebrate biotic index
CEC	Contaminant of emerging concern
CMER	Cooperative Monitoring, Evaluation, and Research Committee
CWA	Clean Water Act
DOH	Washington State Department of Health
Ecology	Washington State Department of Ecology
EIM	Environmental Information Management database
EPA	United States Environmental Protection Agency
GAO	United States Government Accountability Office
HABs	Harmful algae blooms
HHC	Human health criteria
NHD	National Hydrography Dataset
NPDES	National Pollutant Discharge Elimination System
NWRO	Washington State Department of Ecology - Northwest Regional Office
QA	Quality assurance
QAPP	Quality assurance project plan
QC	Quality control
RCW	Revised Code of Washington
SMS	Sediment Management Standards
SOP	Standard operating procedure
TIE	Toxicity identification evaluation
TMDL	Total maximum daily load
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WQA	Water Quality Assessment
WSDA	Washington State Department of Agriculture

Background

This response to comments document addresses all comments received on the 2022 draft Water Quality Assessment (Assessment), which satisfies Washington's requirements under Clean Water Act Sections 303(d) and 305(b). The Department of Ecology held a public comment period for the draft 2022 Assessment from November 4, 2024 – January 10, 2025. In total 249 comments were received from 41 commenters. All comments and commenters are provided in <u>Appendix A</u>. All comments were evaluated under the guidelines outlined in <u>Policy 1-11, Chapter</u> <u>1: Washington's Water Quality Assessment Listing Methodology</u>⁵, and <u>Policy 1-11, Chapter 2:</u> <u>Ensuring Credible Data for Water Quality Management</u>⁶ with the additional information provided in the <u>Supporting Information for the Draft 2022 Water Quality Assessment</u>⁷.

List of Commenters and Response to Comments

Organization of Comment Topics

The following sections of this document provide all of Ecology's responses to the comments received. The comment sections are organized in one of two ways. We received multiple similar comments on Big Lake and the Spokane River. These comments are grouped together in sections under the waterbody name. All other comments are listed in sections based on the individual commenter or commenting organization. All commenters and the section in which their comment is addressed are noted in Table 1.

We received multiple comments from different commenters on similar topics. Where appropriate, we have summarized multiple comments together and noted the specific comment addressed by the summary. If a comment was received on a specific Listing ID, that is also noted in the comment. All comments, including the commenter and associated Listing IDs, are provided in <u>Appendix A</u>.

List of Commenters

Table 1. Summary of all organizations, tribes, and individuals that provided comment on the draft 2022 Assessment, and the section where their comment is addressed.

Commenter	Person of Contact	Comment Section
Andrea Xaver	Self	1. Big Lake
Beth Rosenstiel	Self	1. Big Lake
Bonnie Blessing	Self	5. Bonnie Blessing

⁵ https://apps.ecology.wa.gov/publications/SummaryPages/1810035.html

⁶ https://apps.ecology.wa.gov/publications/SummaryPages/2110032.html

⁷ https://apps.ecology.wa.gov/publications/SummaryPages/2510025.html

Commenter	Person of Contact	Comment Section
Brandon Taylor	Self	1. Big Lake
City of Seattle	Jess Huybregts	4. City of Seattle
Dean Seckel	Self	1. Big Lake
Ellen Bynum	Self	1. Big Lake
Gary Catlin	Self	1. Big Lake
Gordon Marks	Self	1. Big Lake
Howard Louis Raff	Self	1. Big Lake
Jacob Koopmans	Self	1. Big Lake
Jan Edelstein	Self	1. Big Lake
Jeane Ebeling	Self	1. Big Lake
Jeff Nelson	Self	1. Big Lake
Jim Young	Self	6. Spokane River
John P Verdoes	Self	1. Big Lake
Katrina Martich	Self	6. Spokane River
Kennewick Irrigation District	Seth Defoe	12. Kennewick Irrigation District
Kim Sanford	Self	1. Big Lake
King County	Richard Jack	3. King County
Kris Vandersanden	Self	1. Big Lake
Lisa Beeman	Self	1. Big Lake
Lummi Natural Resources	Kristin Lowell	14. Lummi Natural Resources
Malcolm Gander	Self	17. Malcolm Gander
Mark Johnson	Self	1. Big Lake
Marten Law LLP	James Tupper	8. Marten Law LLP
Michael & Katherine Tarbox	Self	1. Big Lake
Nancy Hansen	Self	18. Nancy Hansen
Paul Pickett	Self	16. Paul Pickett
Richard & Nanette Bergdahl	Self	1. Big Lake
Robert Eleveld	Self	1. Big Lake
Skagit County	Emma Santana	9. Skagit County

Commenter	Person of Contact	Comment Section
Snohomish County	Marisa Burghdoff	2. Snohomish County
Snohomish County	Steve Britsch	2. Snohomish County
Susie Horan	Self	1. Big Lake
South Columbia Basin Irrigation District	Eric Dixon	10. South Columbia Basin Irrigation District
Swinomish Indian Tribal Community	Galen Priest	13. Swinomish Indian Tribal Community
Victoria Hattersley	Self	1. Big Lake
Washington Department of Fish and Wildlife (WDFW)	Rae Eaton	7. Washington Department of Fish and Wildlife (WDFW)
Washington Forest Protection Association	Doug Hooks	15. Washington Forest Protection Association
Washington State Water Resources Association	John Stuhlmiller	11. Washington State Water Resources Association

Comments and Ecology Responses

1. Big Lake

Comment 1.A

Skagit County Data – Comment Summary

Commenters refer to Skagit County total phosphorus monitoring data collected in the vicinity of Big Lake. Some commenters state that Skagit County data shows total phosphorus concentrations in Big Lake have exceeded the lake's action value of 20 ug/L lake. Additionally, some commenters asked that we use Skagit County's total phosphorus data in the 2022 Assessment to update the Big Lake total phosphorus Listing ID 6163. Commenters specifically referenced Skagit County data from the lake outlet and lake inlet. We received seven comments related to Skagit County total phosphorus data.

 Commenters: Ellen Bynum – 1, Jan Edelstein – 2, Jacob Koopmans, Jeane Ebeling, Kimberly Hamburg Sanford, Kim Sanford, Susie Horan

Response to 1.A

In response to these comments, we reviewed three sources of monitoring data collected by Skagit County including:

- Data previously submitted by Skagit County to EIM (Study IDs <u>G0400133 and</u> <u>SCMP WQ⁸</u>).
- Data provided by Skagit County to commenter (Kim Sanford), who submitted the data during the public comment period.
- Data downloaded from <u>Skagit County's webpage</u>⁹.

All three data sources included total phosphorus data from stream monitoring locations flowing into and out of Big Lake. Specifically, the sources contained data collected from location Lake Creek at Highway 9 (Skagit County <u>– Site</u> 18), which is located approximately 0.9 miles upstream of the lake's inlet and location Nookchamps Creek at Big Lake Outlet (Skagit County Site – 17), which is located approximately 0.2 miles downstream from the lake's outlet. The three data sources did not include results from monitoring locations directly in Big Lake.

In all three cases, we were unable to use the Skagit County data for our total phosphorus Assessment evaluation because it does not meet the requirements of the total phosphorus methodology in Policy 1-11, Chapter 1. The methodology specifies that total phosphorus data must be collected from the lake's epilimnion. Skagit County's data was collected from streams that are either upstream or downstream of the lake and there is no information provided that indicates these concentrations are representative of total phosphorus concentrations in the lake's epilimnion. Therefore, we cannot use these data to determine if the lake is exceeding the total phosphorus action value of 20 ug/L. Skagit County's total phosphorus data in EIM was also excluded from previous Assessments because the location metadata provided by Skagit County indicates these are stream locations and not lake locations.

Additionally, the data provided by the commenter is considered third party data. To use third party data, the Assessment requires documentation that the data meets our credible data requirements and includes documentation from the data collector that the QA objectives of the study were met (see Pg. 38 of Policy 1-11, Chapter 1).

Comment 1.B

Ecology Monitoring – Comment summary

Commenters requested that Ecology conduct water quality studies or monitoring on Big Lake. Some commenters specifically asked for Ecology to test total phosphorus levels in the lake. Other commenters asked Ecology to resample for toxics parameters and total phosphorus after

⁸https://apps.ecology.wa.gov/eim/search/Eim/EIMSearchResults.aspx?ResultType=EIMTabs&St udySystemIds=49671846&StudySystemIds=84804537&StudyUserIds=G0400133&StudyUserIds =SCMP_WQ&StudyUserIdSearchType=Equals

 ⁹ https://www.skagitcounty.net/Departments/PublicWorksCleanWater/reportarchive.htm.
Appendix A of 2021-2022 Skagit County Water Quality Monitoring Annual Report. Accessed Jan.
9, 2025.

a new stormwater project for a housing development is complete. We received 25 comments on this topic.

- Commenters: Beth Rosenstiel, Ellen Bynum 1, Ellen Bynum (3-9), Jacob Koopmans, Jeane Ebeling, Jeff Nelson – (1-8), John P Verdoes, Kimberly Hamburg Sanford, Kim Sanford, Lisa Beeman, Robert Eleveld, Susie Horan
- Listing IDs: 6163, 72207, 75632, 78514, 78583, 78804, and 88584

Response 1.B

Planning and implementing water quality sampling projects is outside the scope of the Assessment. The Assessment uses readily available data that meets our credible data requirements (see Policy 1-11, Chapter 1 - Section 1E). Ecology does conduct various environmental monitoring studies across the state. However, we are unable to routinely monitor all waterbodies and for all parameters. For this reason, we utilize data from both internal and external monitoring projects submitted to credible databases in the Assessment.

Comment 1.C

Age of Data – Comment summary

Commenters questioned the age of data used for category determinations on Big Lake and asked Ecology to use newer data. Some commenters specifically questioned our use of total phosphorus data from 1999, which supports the category determination for Listing ID 6163. Other commenters noted the age of data in several toxics' listings (Listing IDs 72207, 75632, 78514, 78583, 78804, 88584) and asked us to use more recent data to update the category determinations to more "accurate levels". We received 13 comments on the topic of data age.

 Commenters: Ellen Bynum – (3-9), Jacob Koopmans, Jan Edelstein – 1, Jan Edelstein – 2, Jeane Ebeling, Kimberly Hamburg Sanford, Kim Sanford

Response to 1.C

The Assessment uses readily available data that meets our credible data requirements (see Policy 1-11, Chapter 1 - Section 1E). If no new data are available for a waterbody, we will retain the existing category determination for the listing until we have newer data that meets our credibility requirements and justifies a different category. This approach is specified on page 36 of Policy 1-11, Chapter 1.

The Big Lake total phosphorus Listing ID 6163 was placed in Category 2 during the 2004 Assessment based on data from 1999 (O'Neal et al. 2001). We maintained the Category 2 determination because there is no new readily available total phosphorus data for Big Lake meeting our credible data requirements.

Toxics Listing IDs 72207, 75632, 78514, 78583, 78804, 88584 are based off tissue data from sampling years 2006 to 2017 that were evaluated in the 2018 Assessment. Since we have no new readily available data for these listings, we carried forward the existing category determinations for the 2022 Assessment.

Comment 1.D

Water Quality Restoration - Comment summary

Commenters asked Ecology to help resolve water quality issues in Big Lake related to toxics, algae, aquatic invasive plants, or fish kills. We received 20 comments on this topic.

 Commenters: Beth Rosenstiel, Ellen Bynum – 2, Ellen Bynum – (5-6), Ellen Bynum – 9, Gary Catlin, Howard Louis Raff, Jacob Koopmans, Jeane Ebeling, Jeff Nelson – (1-8), John P Verdoes, Michael & Katherine Tarbox, Lisa Beeman

Response to 1.D

Following Policy 1-11, waterbodies that have data and information demonstrating an impairment will be placed in Category 5. Under the CWA, Ecology is required to prioritize 303(d) listed waterbodies (Category 5) for development of a clean-up plan (e.g. TMDL). Consistent with the CWA, we only include Category 5 waters in this prioritized list. Category 5 listings currently exist for 2,3,7,8-TCDD (Dioxin) and methyl mercury in Big Lake (Listing IDs 78514 and 88584).

Ecology provided Priority Rankings for all 303(d) (Category 5) listings during public review (Appendix A and Appendix B of Supporting Information Document) including Listing IDs 78514 and 88584. The process Ecology uses to prioritize development of new TMDLs is discussed in the Supporting Information for the Draft 2022 Water Quality Assessment - TMDL and Advance Restoration Plan (ARP) Projects. Every year in the fall, Ecology holds a webinar to provide information on our priorities, which is followed by a comment period. Prioritization of new TMDLs is led by each regional office for the waters in their region.

We have provided these comments to the TMDL staff in the Northwest Regional Office (NWRO) and we encourage continued discussions with the NWRO TMDL staff regarding pollution concerns in Big Lake. More information on TMDLs can be found on Ecology's <u>Total Maximum</u> <u>Daily Load webpage</u>¹⁰.

Remediation projects to remove non-native plants are outside the scope of the Assessment. However, Ecology does offer grants¹¹ for managing aquatic invasive plants and improving riparian and shoreline habitat.

Comment 1.E

Reed Canary Grass – Comment summary

Commenters state that reed canary grass is negatively impacting Big Lake. Commenters specifically mention that the reed canary grass in and around Big Lake has caused flooding, may impede fish passage, and is impacting water quality for aquatic life. We received two comments on this topic.

 ¹⁰ https://ecology.wa.gov/water-shorelines/water-quality/water-improvement/total-maximum-daily-load-process
¹¹ https://ecology.wa.gov/about-us/payments-contracts-grants/grants-loans

Commenters: Andrea Xaver, Ellen Bynum – 2

Response to 1.E

The Assessment evaluates non-native aquatic plants by reviewing Class A and Class B weed lists of submersed and floating plants in lakes using data from Ecology. While the Ecology documents the presence of reed canary grass in Big Lake, the plant was not included in our evaluation of non-native aquatic plants because it is classified as a Class C shoreline plant. However, Big Lake has a Category 4C listing for non-native aquatic plants due to the presence of Brazilian elodea and Eurasian water-milfoil in the lake (see Listing ID 4654). Please see page 16 of the Supporting Information Document for more information on our methodology for evaluating non-native aquatic plants.

While commenters noted that reed canary grass may impede fish passage, decrease dissolved oxygen levels, and increase water temperatures, no specific data or information was provided to support these claims. To determine if an impairment is occurring due to reed canary grass, we would need credible data or information demonstrating a direct link between the environmental alteration in the waterbody and the degradation of a designated use, Policy 1-11, Chapter 1 – Information submittals based on Narrative Standards.

For concerns about invasive plant growth impacting recreation in the waterbody, please see our response to <u>Comment 1.H</u>.

Comment 1.F

Stormwater Permitting Process and Stormwater Impacts – Comment summary

Commenters expressed concerns related to a new housing development and stormwater project that reportedly has an outfall to Big Lake. Specifically, commenters were concerned over the permitting process, outfall location, and potential pollution and flooding related to the outfall. We received ten comments on this topic.

 Commenters: Dean Seckel, Ellen Bynum – (3-9), Gordon Marks, Richard & Nanette Bergdahl

Response 1.F

The purpose of the Assessment is to evaluate the health of Washington's surface waters using the methodologies described in Policy 1-11, Chapter 1. The Assessment could evaluate pollutants related to flooding but does not directly evaluate flooding as a hazard. The Assessment will continue to evaluate any new data in accordance with Policy 1-11 to determine if new category determinations are appropriate for Big Lake.

Permitting for housing developments and new stormwater projects is outside the scope of the Assessment. While stormwater permitting is outside the scope of the Assessment, we have shared comments relating to stormwater permitting with Ecology's Permit and Technical

Services Section, which is involved with stormwater permits. For more information about stormwater permits, please see Ecology's stormwater permit webpage¹².

Comment 1.G

Harmful Algae Blooms – Comment summary

Commenters discussed adverse impacts of algae presence and potential harmful algae blooms on Big Lake. Commenters indicate that algae presence is unsightly and has deterred them, or pets, from using the waterbody. They also mention that the density, frequency and duration of the blooms has increased in more recent years. Some commenters offered to submit pictures of the algae blooms. We received 26 comments on this topic.

 Commenters: Beth Rosenstiel, Brandon Taylor, Ellen Bynum – 1, Howard Louis Raff, Jacob Koopmans, Jan Edelstein – 2, Jeane Ebeling, Jeff Nelson – (1-8), John P Verdoes, Kimberly Hamburg Sanford, Kim Sanford, Kris Vandersanden, Lisa Beeman, Mark Johnson, MD, Michael & Katherine Tarbox, Richard & Nanette Bergdahl, Robert Eleveld, Susie Horan, Victoria Hattersley

Response to 1.G

We evaluated Big Lake for recreational impacts due to harmful algae blooms (HABs), following the HABs methodology in Policy 1-11, Chapter 1. We reviewed data from the Washington State Toxic Algae database. During the data period for the Assessment (2012-2021), Big Lake had samples collected for cyanotoxin analysis in 2013, 2014, 2015, 2016 and 2019. While some samples had detections of cyanotoxins, there were no samples with measured cyanotoxin concentrations exceeding the DOH recreational guidelines (Hardy, 2021). Additionally, there were no instances in which a DOH public health assessment identified a probable or confirmed human or animal HAB exposure event that resulted in illness or death. Finally, we consulted with Skagit County Health Department and found no evidence of a WARNING or DANGER public health advisory for Big Lake due to HABs. Based off this information, we placed Big Lake in Category 3 (insufficient data to make a determination) for the recreational HABs listing (Listing ID 104902), consistent with our assessment methodology.

While some commenters offered to submit photos of algae blooms, no photos were received during the public comment period. Any submitted photos would need to meet our credible data requirements and have enough information for us to make a determination following the narrative standards pathway as specified in Policy 1-11, Chapter 1 – Information submittals based on Narrative Standards.

¹² https://ecology.wa.gov/water-shorelines/water-quality/water-quality-permits

Comment 1.H

Recreational Uses - Comment summary

Commenters indicate that declining water quality has impacted their ability to recreate in and on Big Lake. Commenters specifically indicated that their recreational activities were impacted by algae blooms, concerns over pollution, and invasive plants. Some commenters indicated that they or their family and friends developed symptoms after exposure to the lake water (swimmer's itch, congestion, red eyes). Commenters said that the following recreational activities had been impacted by water quality concerns: swimming (humans and pets), boating, paddling, playing in the water, water skiing, floating, jet skiing, and fishing. We received 23 comments on this topic.

 Commenters: Brandon Taylor, Howard Louis Raff, Jacob Koopmans, Jan Edelstein – 2, Jeane Ebeling, Jeff Nelson – (1-8), Kris Vandersanden, Kimberly Hamburg Sanford, Kim Sanford, Lisa Beeman, Mark Johnson, MD, Michael & Katherine Tarbox, Richard & Nanette Bergdahl, Robert Eleveld, Susie Horan, Victoria Hattersley

Response to 1.H

Our water quality standards set limits on bacteria and thresholds for total phosphorus to protect primary contact recreational uses. In addition, the Assessment also evaluates harmful algae blooms for protection of recreational uses. The primary contact designation protects against illnesses that may result from recreational activities involving submersion in a waterbody or ingestion of water (EPA, 2012).

The Assessment evaluated all readily available bacteria, total phosphorus, and harmful algae bloom data. Following the methodologies in Policy 1-11, Chapter 1, there is insufficient information to list Big Lake as impaired for recreational uses for bacteria, total phosphorus, or harmful algae blooms. Using the available total phosphorous data, we placed Big Lake in Category 2, indicating it is a water of concern. However, the data do not meet the requirements of a Category 5 or "impaired" waterbody for total phosphorus. There was no readily available bacteria data for Big Lake to evaluate.

Waterborne health issues such as swimmers itch or sinus congestion that impact contact recreation could be evaluated under our narrative criteria (WAC 173-201A-300(2)) as could recreational impairments due to invasive plant growth. For the Assessment to make an impairment determination based on the narrative criteria, we would need credible data or information demonstrating a direct link between the environmental alteration in the waterbody and the degradation of a designated use. See page 34 of Policy 1-11, Chapter 1 for information on evaluations following the narrative standards pathway.

For more information on Skagit County total phosphorus data see our response to $\underline{Comment}$ <u>1.A</u>.

For more information on our HABs evaluation please see our response to Comment 1.G.

Comment 1.I

Fish and Shellfish Harvesting Uses – Comment summary

Commenters indicate that they no longer fish or consume fish from Big Lake due to water quality concerns. We received 12 comments on this topic.

 Commenters: Howard Louis Raff, Jan Edelstein – 2, Jeff Nelson – (1-8), Kimberly Hamburg Sanford, Michael & Katherine Tarbox

Response to 1.I

Our human health criteria (HHC) are designed to protect designated uses associated with human consumption of fish and shellfish. In the 2022 Assessment we evaluated fish harvesting uses for 20 different parameters in Big Lake. From these 20 parameters, data for two parameters, 2,3,7,8-TCDD (Dioxin) and methyl mercury (Listing IDs 78514 and 88584), led to Category 5 listings on Big Lake. While we have determined Big Lake is not meeting water quality standards for these pollutants, the Washington State Department of Health issues the most current information and advice regarding public health safety of consuming fish. Please refer to the Washington State Department of Health Fish Consumption Advisories webpage¹³ for specific information about the safety of consuming fish for waterbodies in Washington state.

Comment 1.J

Aquatic Life Uses – Comment summary

Commenters are concerned that aquatic life in Big Lake is impacted due to water quality issues. Specifically, commenters note fewer fish in the lake and fish and clam die off events. We received 21 comments on this topic.

 Commenters: Andrea Xaver, Beth Rosenstiel, Brandon Taylor, Ellen Bynum – 2, Gary Catlin, Howard Louis Raff, Jacob Koopmans, Jeff Nelson – (1-8), Kris Vandersanden, Lisa Beeman, Mark Johnson, MD, Michael & Katherine Tarbox, Richard & Nanette Bergdahl, Susie Horan

Response to 1.J

Our water quality standards set numeric criteria to protect aquatic life uses (see freshwater criteria in WAC 173-201A-200 and WAC 173-201A-240). The Assessment evaluates readily available data using the methodologies in Policy 1-11, Chapter 1 to identify waterbodies persistently exceeding water quality standards. For the 2022 Assessment, there was readily available data for non-native aquatic plants and total phosphorus on Big Lake. Our evaluation resulted in a Category 4C for non-native plants (Listing ID 4654) and Category 3 for total phosphorus (Listing ID 6163). We will continue to evaluate new data in accordance with Policy 1-11 in future cycles.

¹³ https://doh.wa.gov/community-and-environment/food/fish/advisories

For those pollutants that we do not have numeric water quality standards, Ecology can evaluate impacts to aquatic life under the narrative criteria (WAC 172-201A-260(2)). For the Assessment to make an impairment determination based on the narrative criteria, we would need credible data or information demonstrating a direct link between the environmental alteration in the waterbody and the degradation of a designated use as specified in Policy 1-11, Chapter 1 – Information submittals based on Narrative Standards. The comments noting fish and clam die off events do not contain supporting data and information, and therefore we cannot make determinations based on the comments alone.

Comment 1.K

When was the last time Ecology assessed this AU for compliance with Total Phosphorous criteria, rather than simply carry forward the 2004 assessment?

- Commenter: Jan Edelstein 1
- Listing ID: 6163

Response to 1.K

Ecology assesses all readily available data that falls within the data window for each AU during each Assessment. When there is no new available data within the data window, Ecology carries forward the historical category determination in accordance with Policy 1-11, Chapter 1. This listing was first placed into Category 2 during the 2004 Assessment. Since the 2004 Assessment, we have received no new readily available total phosphorus data for Big Lake. Therefore, we have continued to carry forward the previous category determination consistent with Policy 1-11.

Comment 1.L

Hello, I write to submit the professional opinion of Dr. Richard Horner, professor emeritus from University of Washington and long-time consultant to Washington State and California governments on managing impacts of stormwater runoff on salmonoids. In this opinion letter, Dr. Horner assesses the current state of Big Lake as degraded at pdf pages 5 to 10, citing a number of sources of information. For his qualifications, please see PDF pages 28 – 60. I regret that I was unable to file this comment through the portal as requested, but wanted to try yet again to have Department of Ecology fill the 25 year gap since it last reviewed Total Phosphorous data for Big Lake. At that time, the lake was listed as Level 2 for TP, and that listing has been carried forward for 24 years, as if it were currently accurate. It is not. It has become clear to many witnesses who testified under oath in August, 2024, before the Hearing Examiner in Skagit County that Big Lake has degraded, due to algae caused by excess nutrients, and is no longer used by them, or their friends and neighbors, for 'contact recreation' and that fishing has seriously declined. Photos of algae blooms from June 2024 to November 2024 can be provided. This testimony is supported by the water quality monitoring performed by Skagit County pursuant to a Growth Management Hearings Board order 20 years ago to develop data for TMDL Listings, among other things. I have heretofore submitted this data. Unfortunately, at this time, Skagit County staff have not been provided the resources to submit its data through

EIM. Please, don't make Big Lake wait another 5 years for its "Level 5 – Impaired" listing. The lake needs it now to help concerned citizens make the case to protect it from new pollution sources.

• Commenter: Jan Edelstein – 2

Response to 1.L

The commenter references several pieces of data and information regarding the condition of Big Lake.

The commenter provided Skagit County total phosphorus monitoring data from the Big Lake inlet and outlet, which was received prior to the comment period. We reviewed total phosphorus data collected by Skagit Count and were unable to use the data in our evaluation because it does not meet the requirements of Policy 1-11. For more information on our review of Skagit County's total phosphorus data, please see our response to <u>Comment 1.A</u>. While the commenter mentions photos of algae blooms, no photos were submitted. Any submitted photos would need to meet our data credibility requirements, including time and date stamps.

We reviewed Dr. Richard Horner's opinion on Big Lake, which was submitted by the commenter but are unable to use the information on pages 5 - 10 to support an impairment determination. The opinion indicates that Big Lake frequently exceeds the total phosphorus action value for Big Lake and is eutrophic. Dr. Horner bases his conclusion off data from Skagit County collected near the lake inlet and outlet. We are unable to use Skagit County total phosphorus data in our evaluation because it does not meet the requirements of Policy 1-11. For more information on Skagit County data, please see response to <u>Comment 1.A</u>.

While the opinion states that beneficial uses have been degraded by excessive algae growth, no data was provided to support this claim. We evaluated Big Lake following our narrative harmful algae bloom methodology with data from the Toxic Algae database and found that there was insufficient evidence to indicate that recreational uses were being impaired by harmful algae blooms. For more information on this topic, please see our response to <u>Comment 1.G</u>.

Dr. Horner also states that the lake has dissolved oxygen issues due to plant and algae decay. While Dr. Horner references dissolved oxygen data from the lake outlet on Nookchamps Creek, which currently listed as Category 5 (Listing ID 39634), there is no dissolved oxygen data directly from the lake to support this claim. The opinion also indicates that the lake is impaired for invasive species. Big Lake is currently in Category 4C for non-native aquatic plants (Listing ID 4654).

Comment 1.M

Please update the data for this chemical to use more recent EPA studies. The presence of the chemical in fish, presumably that humans can consume, should warrant a plan to eliminate the toxin from the lake.

If the additional stormwater from the proposed 105 homes above Big Lake is added to the lake, DOE will need to re-sample for all of these levels. The volume of untreated SW is estimated to add 30% volume to the lake, creating flooding hazards especially in regular rain events. Please bring the data up to date and re-assess and impose Category 5 to start a clean-up plan for this toxin.

Thank you.

- Commenter: Ellen Bynum 5
- Listing ID: 78514

Response to 1.M

It is unclear what "more recent EPA studies" this comment is referring to. In accordance with Policy 1-11, the Assessment evaluated all readily available between 2012-2021. If the commenter is aware of additional EPA studies not evaluated by the Assessment, they can reach out to us directly with that information at <u>303d@ecy.wa.gov</u>.

Regarding water clean-up plans, please see our response to Comment 1.D.

Regarding the proposed housing development and stormwater flooding, please see our response to <u>Comment 1.F</u>.

For more information on the age of data used in the Assessment, please see our response to <u>Comment 1.C</u>.

Comment 1.N

Carrying data forward from questionable samples is not acceptable when the historical determination was already a Category 5. If the additional stormwater from the proposed 105 homes above Big Lake is added to the lake, DOE will need to re-sample for all of the toxin levels. The volume of untreated SW is estimated to add 30% volume to the lake, creating flooding hazards especially in regular rain events. Please bring the data up to date to re-assess and create a plan to eliminate the Category 5 toxin in Big Lake and downstream waters. Thanks

- Commenter: Ellen Bynum 9
- Listing ID: 88584

Response to 1.N

It is unclear what questionable samples the commenter is referring to. Data used for Listing ID 88584 are considered credible according to Policy 1-11. These credible data were used to create the historical Category 5 determination that was carried forward from the 2018 Assessment. If the commenter has additional information concerning the quality of these data, they can reach out to us directly with that information at <u>303d@ecy.wa.gov</u>.

Regarding water clean-up plans, please see our response to Comment 1.D.

Regarding the proposed housing development and stormwater flooding, please see our response to <u>Comment 1.F</u>.

For more information on the age of data used in the Assessment, please see our response to <u>Comment 1.C</u>.

Comment 1.0

I have been using Big Lake since I was a child and became a homeowner on the lake in 2017. Over that time the water quality of the lake has declined in a predictable manner with no regard for the cause. When I first started coming to the lake it was a well-known fact by all of the residents that the lake had been used for logging. There was a large amount of woody debris and it was not uncommon to come out of the water itching from bark especially at the north end of the lake. Since then, the woody debris has mostly settled to the bottom of the lake which makes it less obvious that it is there but it is still impacting the water quality. I do not have access to professional equipment but I have been doing a fair amount of testing using off the shelf pond testing equipment. I tested for Phosphorus and desolved oxygen throughout the year. There was only one point this summer where the levels of Phosphorus was under the safe levels for a pond. The DO levels were ok at the surface but at appx 6' down the oxygen levels were below safe minimums. This would explain why we have seen fish die off and a massive mussel die off in august of 2022 which appears to have killed all of the lake clams or mussels. There are things that can be done to mitigate the high levels of phosphorus but the state and county refuse to do anything about it.

I spoke with the department of Ecology and discussed the large amount of woody debris in the lake. They indicated that there was no record of there ever being a lumber company on the lake. After sending them evidence of Day Lumber running on what was then called Day Lake they explained to me the reality that because the lumber company no longer exists they could not be required to clear up the damage to the water. She indicated that the department of ecology could make the state do the work but there is a long list of lakes wanting that money and it would likely take years to get approval.

That brings me to the current situation. As you know phosphorus is naturally occurring from organic materials in the lake such as wood but also from run off of fertilizer and other chemicals that wash into the storm drain system. A body of water can usually manager this because the plant material uses photosynthesis to absorb phosphorus and creates oxygen. The problem is when suspended organic material such as the woody debris as well as algae block the sunlight and do not allow photosynthesis to occur. If you look at the lake bed around my house you will see almost no plant life, no invertebrates and now no fish. There are things that can be done to repair the problem but so far no one has been willing to pay the bill to fix it.

These are the steps that should be done to clean up the lake and save the ecosystem. 1) Use an alum based product to bind with the phosphorus and take it to the bottom of the lake.

2) Introduce beneficial bacteria to the lake in large volumes to help break down the organic

material already at the bottom of the lake.

3) Introduce aeration to the lake. We would need between 3-7 aeration stations around the lake to produce the proper amount of oxygen.

4) Consider dredging the lake. This would have several benefits. It would remove large wood and garbage from the bottom of the lake left there by the mill and other dumping, It would reintroduce deep areas of the lake that used to exist. Without these areas fish have nowhere to go when the water warms up and they either go down stream and die or die in the warm oxygen deprived lake water. Last the deeper center section of the lake would reduce turbulence caused by boats by allowing the wave energy to disperse down into the water column.

5) This is a controversial suggestion but there should be a limit to the number of boats that can be launched onto the lake in a single day. This is not a unique idea and many boat launches have limits for day use. This would reduce the amount of foreign water and organisms that frequently travel in boats especially those with ballast tanks, it would reduce the amount of turbidity on summer days when the lake is packed with boats.

6) To help pay for the lake treatment there should be a charge to launch and park at the launch. The residents of the lake should be exempt from this charge. Ultimately the residents will pay the majority of the cost of the lake treatment. the rest of the users can contribute.

• Commenter: Gary Catlin

Response to 1.0

The commenter indicates that dissolved oxygen and phosphorus levels are unsafe based off data they collected. We are unable to review this data because it was not submitted. Additionally, data collected using a pond testing kit would likely not meet our credible data requirements. Our credible data requirements are outlined in Policy 1-11 and include, but are not limited to, collecting data under a QAPP following established SOPs and implementing and documenting appropriate QA/QC checks.

The Assessment does not directly assess the impact of woody debris in lakes. Potential pollutant contributions to Big Lake as a result of wood decomposition, such as phosphorus, would be evaluated under the methodologies in Policy 1-11, Chapter 1. Any potential pollutant not covered by Washington's water quality standards or Policy 1-11, Chapter 1, would need to be evaluated under the narrative standards methodology. Information on our evaluation of narrative information is covered under Policy 1-11, Chapter 1 – Information based on Narrative Standards.

The commentor lists multiple actions that could be taken to clean-up the lake. Planning and implementing clean-up plans is outside the scope of the Assessment. For more information on clean-up plans, please see our response to <u>Comment 1.D</u>.

For more information on aquatic life uses impairments, please see our response to <u>Comment</u> 1.J.

2. Snohomish County

Comment 2.A

This data was gathered by Ecology under a TMDL Effectiveness Monitoring effort which, as documented in the QAPP, included bracketed monitoring for source identification. Bracketed monitoring efforts for source identification are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.

Listing IDs: 102894, 102897, 102910, 102931, 102937, 103042, 103051, 103067, 103078, 103086, 103093, 103119, 103133, 103186, 103207, 103214, 103275, 103292, 103322, 103341, 103380, 103383, 103401, 103408

Response to 2.A

All of the data associated with these listings are collected under Study ID EFF_LSRT. The study's Quality Assurance Project Plan (QAPP) specifies that two of the main study goals are to determine compliance with water quality standards and assess fecal coliform trends over time (Collyard and O'Rourke, 2021). Twenty-two of the study locations associated with these listings were listed in the QAPP. The QAPP specifies that these locations were included in the study because they were locations in the original TMDL and are associated with an original impairment listing. There is no information in the QAPP, or associated data results, to suggest that the sampling conducted at the study locations was for source identification or that they are not representative of ambient conditions.

The QAPP also specifies that additional locations may be added to investigate the extent of pollution. Six locations were added in accordance with the QAPP (AL02.6, AL03.5, ALLENCR21, MA04.3B, QT0.1N, QTS0.3). We discussed data from these locations with the Ecology study lead and determined that they were not collected during targeted run-off or storm events and that they are representative of ambient conditions. Locations were not selected to bracket known sources of pollution.

Comment 2.B

This data was gathered by Ecology under a South Skagit Bay Water Quality monitoring effort which, as documented in the Study Comment in EIM is linked to study SSB_WQ_SID used to collect stormwater samples not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.

Listing IDs: 103166, 103553, 103621, 103866

Response to 2.B

While the two studies, Study ID SSB_WQ_SID and Study ID SSB_WQ are linked in EIM, all data from Study ID SSB_WQ_SID was specifically excluded from the assessment because sampling

occurred during targeted storm events and is not representative of ambient conditions. These listings are based solely on data collected from Study ID SSB_WQ.

Comment 2.C

Listing remarks indicate for the 2022 cycle that a historical 2018 determination of Category 5 was carried forward, yet the historical 2018 listing was Category 2. Further it appears as though for the 2022 assessment that the data used did not fail the hypergeometric mean test for any year. Please clarify and/or confirm the need for a Category 5 listing in the 2022 assessment.

• Listing ID: 9296

Response to 2.C

We reviewed the information associated with this listing and have placed this listing into Category 2. The Category 2 determination in the 2018 Assessment was appropriate based on the data available at the time. New data from Location ID 07C070 evaluated for the 2022 Assessment meet the criteria for a Category 2 determination, but not Category 5. We have corrected the listing and modified the remarks to accurately represent the data.

Comment 2.D

The data used to support this benthic biological indicator listing does not conform to Water Quality Policy 1-11 or standard operating procedures in place at the time of sample collection. Further the application of benthic invertebrate samples obtained from sediment at a high elevation lake do not conform to use in the Puget Sound Lowlands Benthic Macroinvertebrate model for calculation of a BIBI score or associated stressors. As documented in the Hart Crower (MCMA Aquatic Baseline Monitoring) report dated March 31, 2015, the benthic invertebrate sampling methods and qualitative observations used to support this listing do not conform to Ecology's 2010 Standard Operating Procedure (in effect at time of sampling) or EPA's 1999 Rapid Bioassessment Protocols for Use in Streams and Wadable Rivers. As described on pg. 17 of the report and detailed in the July 8, 2013, field data sheet (pg. 184), Hart Crower obtained sediment core (not water) samples from the lake shoreline using a 4" clam gun. A clam gun and sediment sampling are not identified as applicable equipment or matrices in Ecology (2010). Further, sample results are qualitative from field observations and it's not clear that Hart Crowser staff were certified for identification of Western United States taxa to the genus or species level by the North American Benthological Society. As shown on the field data sheet, the qualitative methods of sample observation did not result in identifying the target number of 500 organisms. Additionally, typical macroinvertebrate laboratory quality control measures were not carried out. We question how results obtained in this high elevation lake location and using these methods apply to the Puget Sound Lowlands BIBI model and subsequent calculation of stressor values. For these reasons, we recommend Ecology carefully evaluate Hart Crower (2015) and consider changing this listing to Category 2 or 3 or remove the listing entirely. Note: The location ID of MC-MCL-A03 referenced under data sources in the draft assessment webpage appears to be incorrect relative to Hart Crowser (2015), where they report on page 2 (daily activity summary) for July 8, 2013, that site HC-MCL-01 (not MC-MCL-A03) was sampled for macroinvertebrates. This is consistent with the Hart Crowser (2015) field data sheets for the

same day (pgs. 177-185). Further Ecology's EIM mapping tool does not return a result when attempting to map site MC-MCL-03.

• Listing ID: 80111

Response to 2.D

We reviewed the QAPP and Aquatic Baseline Monitoring report for Study ID Monte Cristo in relation to Location ID MC-MCL-A03 in EIM and have removed this listing from the 2022 Assessment based on the concerns provided. The sampling method associated with this study does not conform to standard SOPs. In addition, macroinvertebrate SOPs used to calculate B-IBI scores are intended for use in river/stream environments (Larson, 2022). Therefore we agree that the macroinvertebrate data should not be used to calculate B-IBI scores or other diagnostic metrics used for listing purposes. For this reason, we have decided to remove this listing from the 2022 Assessment.

Comment 2.E

This is a new Category 5 listing based on data collected in 2011 and not carried forward from a previous assessment. This assessment cycle covers the period from Jan 1, 2012 - Dec 31, 2021. It appears data used to create this listing fall outside the assessment period. Please clarify and/or confirm the validity of using 13-year-old data gathered outside the assessment cycle time period to support this Category 5 listing in the 2022 assessment.

• Listing ID: 93510

Response to 2.E

This category change is correcting a misapplication of the temperature criteria in the 2018 Assessment. There are two temperature criteria that apply for this assessment unit: Char spawning and rearing (12°C) and a salmon and trout supplemental spawning criterion (13°C) from September 1 - July 1. Our water quality standards state that when multiple criteria apply for the same parameter to protect different uses, the most stringent criteria is to be applied (WAC 173-201A-010(c)). Therefore, the char spawning and rearing criteria (12°C) apply throughout the entire year. When comparing existing data from this listing collected in 2011 against the 12°C throughout the year, the assessment unit meets the requirements for Category 5 as outlined in Policy 1-11, Chapter 1 and should have been placed in Category 5 in the 2018 Assessment.

Comment 2.F

Historic Data - Comment summary

These listings are new Category 5 listings based on data collected from 2006 to 2008 and not carried forward from a previous assessment. This assessment cycle covers the period from Jan 1, 2012 - Dec 31, 2021. It appears data used to create these listings fall outside the assessment period. Please clarify and/or confirm the validity of using 16-year-old to 18-year-old data

gathered outside the assessment cycle time period to support these Category 5 listings in the 2022 assessment.

- **Commenter:** Snohomish County Steve Britsch (8-11)
- Listing IDs: 102687, 102694, 102695, 102700

Response to 2.F

All data associated with these listings are collected from Sauk-Suiattle Indian Tribe studies. Ecology was made aware of the Sauk-Suiattle Indian Tribe data leading to its inclusion in the draft 2022 Assessment. Policy 1-11, Chapter 1 states Ecology will typically only evaluate ten years of data but may use data and information older than ten years (pg. 36). We evaluated all readily available data for these waterbodies against the appropriate parameter-specific methodology in Policy 1-11, Chapter 1 leading to these listings.

Comment 2.G

The listing data are from pH measurements taken in May and June of 2014. Lake Ketchum was treated with 13,484 gallons of aluminum sulfate and 7,415 gallons of sodium aluminate (buffer) on May 21st, 2014 (can be confirmed via the aquatic plant and algae management permit that Ecology manages). The pH readings that were taken during these months likely reflected a pH disruption from the treatment rather than actual ambient conditions that would impair beneficial uses over a longer time period as evidence by the lack of values outside of the criteria during the rest of the assessment period. More information about the Lake Ketchum restoration project can be found: https://www.snohomishcountywa.gov/2451/Lake-Ketchum-Restoration

Do not list Ketchum as impaired for pH in this assessment. Flag the data in EIM for the dates near the alum treatment such that these values do not cause the lake to be listed in the future.

• Listing ID: 102261

Response to 2.G

The listing contains data collected in 11 months in 2014, and contains additional data collected in 2010, 2011, 2013, 2015 and 2016. Even if we removed data collected in May and June of 2014, there are still exceedances of the criteria in April, August and September of 2014 that would result in a Category 5 determination. Additionally, large deviations above the criteria (exceeding a pH of 9.0) were observed on 6/15/2014, 8/5/2014 and 8/19/2014, which would also lead to a Category 5 determination. Exceedances of the criteria were also observed in 2010 and 2011, prior to alum treatments on Lake Ketchum as well as in 2016 when alum treatments were reportedly reduced (Snohomish County - Lake Ketchum Restoration webpage¹⁴). For these

¹⁴ https://www.snohomishcountywa.gov/2451/Lake-Ketchum-Restoration

reasons we have determined that the Category 5 determination is not solely related to pH fluctuations due to alum treatments.

All of the data used for this listing were submitted in EIM. None of the results had comments or qualifiers indicating that data do not represent ambient conditions. If Snohomish County believes that specific records they provided do not represent ambient conditions, please contact our Water Quality EIM Data Coordinator at <u>eimwqp@ecy.wa.gov</u> to correctly identify these results in our database.

Comment 2.H

There was a fragment found of *Sagittaria graminea* in 2018 by Snohomish County. However, a follow-up snorkel survey conducted specifically to look for any growth of this plant in the summer of 2024 and found no evidence of slender arrowhead. Remove listing. Snohomish County will submit snorkel survey results to Ecology. If verification needed, have Wes Glisson conduct survey in summer 2025 to confirm.

• Listing ID: 104406

Response to 2.H

Data from the <u>Lakes Environmental Database</u>¹⁵ indicates *Sagittaria graminea* was identified in 2018. The extent of *Sagittaria graminea* was not reported. The data window for the current Assessment is 2012-2021 and did not consider 2024 data. If Snohomish County has updated data for this listing, we encourage them to share the data with Ecology's Lake Monitoring Program and the Assessment during the upcoming call for data for the 2026 Assessment.

Comment 2.I

This data was gathered by WSDA under a Pollution Identification and Correction Grant. Data collection efforts for these grants often focus on source identification and thus are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.

• Listing ID: 89136

Response to 2.I

While Study ID NEP_2016_WSDA and NEP_2019_WSDA are described as source identification projects, there is no indication that sampling was solely targeting periods of elevated bacteria levels. Bacteria results associated with this listing at Location ID WSDA_WQX-STIL-3 and Location ID WSDA_WQX-STIL-5 are collected across the generally recognized wet and dry seasons in 2017, 2018, 2019 and 2020. There is no additional information to suggest that the sampling conducted in these studies is not representative of ambient conditions.

¹⁵ https://ecology.wa.gov/research-data/monitoring-assessment/lake-water-quality

Comment 2.J

This is a new Category 5 listing based on data collected in 2010 and not carried forward from a previous assessment. This assessment cycle covers the period from Jan 1, 2012 - Dec 31, 2021. It appears data used to create this listing fall outside the assessment period and using a new criteria that wasn't in effect at the time of data collection. Please clarify and/or confirm the validity of using a criteria not in effect at the time of data collection for 14-year-old data gathered outside the assessment cycle time period to support this Category 5 listing in the 2022 assessment.

• Listing ID: 93462

Response to 2.J

This category change is correcting a misapplication of the temperature criteria in the 2018 Assessment. The applicable salmon and trout supplemental spawning criteria of 13°C from September 1 through July 1 was not applied in the 2018 Assessment. Correcting the application of this criteria for the 2010 data in 2022 Assessment resulted in the assessment unit meeting the requirements for Category 5 as outlined in Policy 1-11, Chapter 1 and should have been placed in Category 5 in the 2018 Assessment.

Comment 2.K

This is a new Category 5 listing based on data collected in 2000 and not carried forward from a previous assessment. This assessment cycle covers the period from Jan 1, 2012 - Dec 31, 2021. It appears data used to create this listing fall outside the assessment period. Please clarify and/or confirm the validity of using 24-year-old data gathered outside the assessment cycle time period to support this Category 5 listing in the 2022 assessment.

• Listing ID: 81529

Response to 2.K

This new Category 5 listing is based on the update of the assessment unit layer to more accurately reflect our surface water quality standards (see Updating Waterbody Segments in Supporting Information Document). This listing is based on data from Location ID RILEY(SITEB) which is located at 47.8414, -121.9579 in EIM. In the 2018 Assessment, Location ID RILEY(SITEB) was located on AU 17110009000475_001_001 and following the assessment unit layer update now is located on AU 17110009000476_001_001. Data from Location ID RILEY(SITEB) was assessed in previous Assessments under Listing ID 47434, as stated in the Remarks, and is not being evaluated for the first time. Three dissolved oxygen results from this location fall below 6.5 mg/L, well below the 9.5 mg/L numeric criteria, meeting the requirements for Category 5.

Comment 2.L

This is a new Category 5 listing based on data collected in 2000 and not carried forward from a previous assessment. This assessment cycle covers the period from Jan 1, 2012 - Dec 31, 2021. It appears data used to create this listing fall outside the assessment period. Please clarify

and/or confirm the validity of using 24-year-old data gathered outside the assessment cycle time period to support this Category 5 listing in the 2022 assessment.

• Listing ID: 81536

Response to 2.L

This listing is also based on data from Location ID RILEY(SITEB) and is a result of an update of the assessment unit layer – See response to <u>Comment 2.K</u>.

The pH data for this listing met the requirements of Category 5 when it was first evaluated in the 2008 Assessment under Listing ID 50750. There is additional pH data available for Location ID RILEY(SITEB) in EIM. This data supports the impairment determination with 10 excursions of 12 samples in 2001, 7 excursions of 8 samples in 2002 and 3 excursions of 4 samples in 2003.

3. King County

Comment 3.A

[Incorrect data sources] This waterbody is listed using data from two different lake monitoring sites (Beaver-1 (A757) and Beaver-2 (A709)). We recommend reviewing both sites separately.

Listing ID: 6290

Response to 3.A

Both Location ID KCM-A757 (Beaver Lake 1) and Location ID KCM-A709 (Beaver Lake 2) are located on the same assessment unit. Our assessment units are based off the 2021 National Hydrography Dataset (NHD), which represents Beaver Lakes 1 and 2 as a single waterbody feature. Following Policy 1-11, Chapter 1, all total phosphorus data from the single assessment unit were evaluated together, which includes data from both Location ID KCM-A709 and Location ID KCM-A757. To reduce confusion, we have changed the name of the waterbody associated with Listing ID 6290 and AU 17110012005856_001_001 from "BEAVER NO. 2 LAKE" to "BEAVER LAKE". If King County has additional information that demonstrates Beaver Lake 1 and Beaver Lake 2 are physically, chemically, and/or biologically distinct waterbodies, and therefore should have distinct AUs, please submit this information to <u>303d@ecy.wa.gov</u> for consideration in the next assessment.

Comment 3.B

[Update listing with confirmed information] Add Egeria as confirmed by KC Noxious Weeds.

• Listing ID: 4669

Response to 3.B

Thank you for comment. Ecology's Lake Monitoring Program notes the presence of *Egeria densa* in the waterbody in 2021. We have added this information to Listing ID 4669.

Comment 3.C

[Update listing with confirmed information] Remove hydrilla as confirmed by KC Noxious Weeds and KC Lake Stewardship.

• Listing ID: 4680

Response to 3.C

Thank you for identifying this error. Ecology considers *Hydrilla verticillata* eradicated as of 2011. We have added details to the Basis Statement to note this eradication. This listing will remain in Category 4C due to the presence of *Myriophyllum spicatum*.

Comment 3.D

[Update listing with confirmed information] Remove hydrilla as confirmed by KC Noxious Weeds and KC Lake Stewardship.

• Listing ID: 4684

Response to 3.D

Thank you for identifying this error. Ecology considers *Hydrilla verticillata* eradicated as of 2011. We have added details to the Basis Statement to note this eradication. This listing will remain in Category 4C due to the presence of *Myriophyllum spicatum*.

Comment 3.E

[Incorrect data summary listed in basis table] This waterbody is using data from our Beaver-3 lake monitoring site. This monitoring site is no longer active. We recommend updating the waterbody name.

• Listing ID: 40586

Response to 3.E

We have updated the name of the waterbody to "LONG LAKE" to match the name assigned to the waterbody in NHD. We confirmed that data in the Basis Table is from Location ID KCM-A709D, and this location is correctly assigned to this AU.

Comment 3.F

Use of Screen Tube Manipulated Bioassay Data – Comment summary

King County submitted three comments noting the standard methodology larval *echinoderm* sample results at various locations demonstrate designated use are not met for aquatic life, benthic sediment. It was recommended that Ecology utilize the NPDES approved screen tube manipulation method results in the Assessment as the study showed sediment toxicity was due to physical factors. The commenter suggests that the category determinations for these listings would change if the screen tube manipulated data was utilized.

- Commenters: King County 44, King County (58-59)
- Listing IDs: 511871, 827803, 828817

Response to 3.F

For purposes of the Assessment, sediment bioassay data must meet regulatory compliance when compared to the Sediment Management Standards (SMS). Since the SMS biological criteria do not allow for method modifications unless Ecology has reviewed and approved the alternate technical method per WAC 173-204-130(4), the screen tube manipulation data will not be included in the Assessment.

Comment 3.G

[Full data not used in assessment] Assessment is based off of a single station sampled twice during the same study. The sample, along with all others failed only the echinoderm larvae test. Per NPDES permit requirements this opened up the TIE process. Larval bioassay testing was repeated and run side-by-side using the standard method and a screen tube manipulation method to reduce the interference of physical factors on the samples and the sample from station WP430S, run with the screen tube manipulation method PASSED. This indicates that that the failure using the standard methodology was due to physical factors related to the test using the standard method and not indicative of a toxicity. The results used for this listing reflect the repeated sampling of the same bioassay test at the same location and was refuted by the results of the required side-by-side test. Note: there were no corresponding chemical exceedances with these samples when sediments were collected for chemistry analysis in 2017 at WP430S. As a result, this listing should be changed to a Category 1., See: https://your.kingcounty.gov/dnrp/library/2018/kcr3016/kcr3016.pdf, 47122G4F4_NW

Listing ID: 807908

Response to 3.G

See Response to Comment 3.F.

Comment 3.H

Low Total Organic Carbon – Comment summary

The commenter submitted twelve comments on various listings noting sample results at various locations contained low total organic carbon content (less than 0.5%) and should be compared to dry weight equivalent criteria, rather than the organic carbon normalized criteria. The commenter suggests that the category determinations for these listings would change if compared to the dry weight equivalent criteria.

- Listing IDs: 805764, 807962, 807971, 807992, 807998, 808742, 827400, 827401, 827411, 827420, 827432, 827435
- Commenters: King County 45, King County (47-57)

Response to 3.H

For purposes of the Assessment, sediment data are evaluated against the SMS criteria listed in Parts I-IV (WAC 173-204-100 to WAC 173-204-420) as these sections were promulgated by EPA as Clean Water Act approved water quality standards. The commenter is suggesting that we should be applying the sediment cleanup standards, rather than the SMS. EPA did not take action on Part V of the SMS, therefore sediment cleanup standards are not applicable for evaluation in the Assessment. Furthermore, the dry-weight Apparent Effects Threshold values as listed in the Sediment Cleanup User's Manual are not federally approved water quality standards and are not applicable to evaluation in the Assessment.

Comment 3.I

Over the past several decades since the publication of the 2012 303d list, King County has conducted numerous sediment bioassays as part of our NPDES permit requirements. In cases where sporadic mortality or impaired growth results occurred, King County has conducted follow-up investigations to determine the cause of the exceedances. One type of special investigation we have conducted per permit requirements is a sediment toxicity identification evaluation (TIE). These types of special studies repeat sediment bioassays under slightly different conditions to determine whether the observed toxicity is due to natural factors like sediment grain size or due to a human sourced contaminant. Using the results from special studies which are intentionally trying to reproduce toxicity so that the source can be identified is not representative of the waterbody as a whole. In this case, the NPDES program has already concluded that the bioassay results and TIE studies do not represent a sediment quality standards violation. Specifically, in these cases, the toxicity was found to be from contact to the actual sediment surface. Screening eliminated the toxicity and is allowed under Ecology protocols as a modification for bioassays. Therefore, only those screened results should have been used in the assessment. Past comments addressing this issue remain relevant, and we urge Ecology to prioritize screened bioassay results in line with approved protocols.

Response to 3.I

Sediment bioassay data evaluated in the Water Quality Assessment must meet regulatory compliance when compared to the Sediment Management Standards. Toxicity identification evaluation (TIE) data does not meet the requirements listed in the SMS to be representative of in situ sediment conditions and potential toxicity. Therefore, the TIE data will not be included in the Assessment.

Comment 3.J

[Incorrect data summary listed in basis table] Mean of averages for 2020 does not exceed criteria. Additionally, the number of excursions in 2021 is incorrect, should be 3 instead of 5. In 2021, if one high sample was removed the criterion would not be exceeded. We recommend removing this lake from the category 5 listing.

• Listing ID: 21534

Response to 3.J

In the Basis Table, the excursion count represents the number of samples that exceeded the action value during the critical period (June 1st to September 30th). This is our approach for all total phosphorus Basis Tables.

In 2020, three samples exceeded the action value of 20 ug/L. While there were daily samples above the action value, the Basis Table accurately reflects that the mean daily average for 2020 (16.6 ug/L) does not exceed the action value.

For 2021, the Basis Table indicates that there were three samples above the action value, not five as mentioned in the comment. Additionally, the seasonal average (21.7 ug/L) exceeds the action value (20 ug/L), which is the basis for the Category 5 determination. Per Policy 1-11, Chapter 1, a waterbody is placed in Category 5 for total phosphorus when the seasonal average total phosphorus concentration of the critical period exceeds the action value for that assessment unit. Since the seasonal average exceeds the action value, this listing will stay in Category 5.

Comment 3.K

[Different water quality TP threshold] Why does Walker Lake have a 10 ug/L TP threshold? We recommend changing to category 3 due to no data since 2006.

• Listing ID: 23024

Response to 3.K

Walker Lake is located in the Cascades ecoregion. Table 1 of WAC 173-201A-230 specifies that the Cascades ecoregion total phosphorus action value is >10 ug/L.

EPA requires that 303(d) listings are carried forward until new data demonstrates designated uses are being met. For that reason, this listing will remain in Category 5 until new data meets the requirements of Category 1 in Policy 1-11, Chapter 1.

Comment 3.L

[Inappropriate category] Mean of averages does not exceed criteria in 2020 and 2021. The calculated value should be 17.7 and 18.1, respectively. Each year has 3 excursion counts unlike the 4 listed on ECY site. Recommend changing to category 1.

• Listing ID: 105267

Response to 3.L

Policy 1-11 specifies that if total phosphorus samples are collected from multiple depths in the epilimnion at the same location on the same day, the sample results will be average together. If temperature profile data is unavailable, the epilimnion is defined as the upper three meters of the water column.

For this listing, on several days samples were collected at both 1m and 3m on the same day (6/28/2020, 8/23/2020, and 8/9/2021). On these days, samples from the two depths were averaged together to generate the daily epilimnion average. When samples from both depths are averaged together, this leads to an additional daily value above the action value in both 2020 and 2021. As a result, there are four exceedances instead of three in both years. Additionally, the seasonal average in both years exceeds the action value of 20 ug/L and supports the Category 5 determination.

Comment 3.M

Beach Data - Comment summary

The commenter submitted similar comments on multiple listings stating the data location is a beach site with samples collected close to the shore in approximately 1m deep water. The commenter claims the samples are not representative of water quality conditions in the waterbody and therefore should not be used to make a category determination.

- Listing IDs: 10180, 65137, 65184, 65192, 65195, 65210, 65220, 65234, 65285, 65293, 65331, 65333, 93702, 93743, 93843, 94215, 94335, 94401
- **Commenter:** King County 11, King County (18-28), King County (30-35)

Response to 3.M

There is no information provided with the dataset to suggest that the temperature results collected 1 meter deep along the shoreline are not representative of water quality conditions in that shoreline AU. Washington's surface water quality standards apply to all surface waters including shallow waters along a shoreline. If information exists that indicates these samples are not representative of AU conditions, it should be submitted with the dataset.

Comment 3.N

[Data from incorrect sites used] Listing text incorrectly cites data from KCM-NSAJ02, which is in a different location (Quartermaster Harbor). Listing also includes older data from KCM-LSKQ06, which should only be cited in listing 48985 and is a duplicate.

• Listing ID: 42482

Response to 3.N

Thank you for bringing this to our attention. We verified the location of Location ID KCM-NSAJ02 in EIM and confirmed that it is georeferenced to the wrong AU. We moved the data associated with Location ID KCM-NSAJ02 to Listing ID 66483. We also investigated Location ID LSKQ06. While there is no Location ID LSKQ06 in EIM we reasonably concluded that this location is the same as Location ID KCM-LSKQ06. Based on the location of Location ID KCM-LSKQ06 in EIM we confirmed that the georeferencing is incorrect. We moved the data associated with Location ID KCM-LSKQ06 to Listing ID 48985. Due to this change, data for Listing ID 42482 no longer meets the requirements for Category 2 and has been moved to Category 3 with updated remarks.

Comment 3.O

[Inappropriate data used for assessment] These listings are based on data from the Quartermaster Harbor Pathogens Reduction Project. The results from the study were a biased dataset, in which high-bacteria events were targeted. Wet and dry season sampling events occurred, as well as a third event targeting high bacteria concentrations for source tracking purposes. Per page 33 of the WQS Assessment Guidance (Chapter 1-11): "Sampling that solely targets known periods of elevated bacteria levels is not representative of the general condition of an AU, as it may result in an artificially inflated proportion of samples that exceed the criteria. Therefore, Ecology will remove monitoring data from the evaluation when the intention of the monitoring is to target high bacteria levels."

In the 2022 Draft WQA, Shawnee Creek (listing ID 88227; AU 17110019006661_001_001) was changed from Category 5 to Category 3 for Fecal Coliforms. Appropriately, the remark given was "Bacteria data from Study ID KCPIC_Quartermaster removed. Data collected during storm events targeting elevated concentrations." The same should be done for these listings, and they should be reassessed without the KCPIC_Quartermaster study data included.

Listing ID: 82959 and 83285

Response to 3.0

Upon further review of the information and data associated with Study ID KCPIC_Quartermaster we agree that results collected in this study are targeting periods of elevated bacteria levels. As a result, we have removed the bacteria data from the 2022 Assessment. This bacteria data is the only data associated with Listing ID 82959 and Listing ID 83285. Since there is no data associated with these listings we have removed the listings from the Assessment.

Comment 3.P

[Inappropriate data used for assessment] These listings are based on data from the Quartermaster Harbor Pathogens Reduction Project. The results from the study were a biased dataset, in which high-bacteria events were targeted. Wet and dry season sampling events occurred, as well as a third event targeting high bacteria concentrations for source tracking purposes. Per page 33 of the WQS Assessment Guidance (Chapter 1-11): "Sampling that solely targets known periods of elevated bacteria levels is not representative of the general condition of an AU, as it may result in an artificially inflated proportion of samples that exceed the criteria. Therefore, Ecology will remove monitoring data from the evaluation when the intention of the monitoring is to target high bacteria levels."

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• Listing ID: 88913

Response to 3.P

Upon further review of the information and data associated with Study ID KCPIC_Quartermaster we agree that results collected in this study are targeting periods of elevated bacteria levels. As a result, we have removed the bacteria data from the 2022 Assessment and Listing ID 88913. The remaining data in Listing ID 88913 from Location ID KCM-VA41A meets the criteria for Category 5, so the category was not changed. We have updated the basis table, data sources and remarks for Listing ID 88913 to note the exclusion of Study ID KCPIC_Quartermaster.

Comment 3.Q

There were many new category 5 listings for dissolved oxygen and temperature in locations that were previously determined to have excursions driven by natural conditions. The disapproval of the natural conditions provision in the WAC led to a disagreement between the WAC and WQP 1-11, the latter of which states: "Ecology will place marine AUs with exceedances of criteria that are likely due to natural conditions in Category 1 if information demonstrates that the waterbody historically did not meet standards." King County is in favor of continuing to consider the natural conditions as part of the 303d listing process in order to account for natural seasonal changes and large-scale physical processes that occur in Puget Sound. These listings should be reassessed using the new natural conditions provisions in WAC 173-201A-020 which became effective December 15, 2024.

Response to 3.Q

Policy 1-11, Chapter 1 was updated for the 2022 Assessment in March 2023 with a note stating, "Ecology will not utilize the following Natural Conditions methodology for waterbodies relevant to the disapproved provisions until a new natural condition provision has been adopted into our Surface Water Quality Standards and approved by EPA" (Policy 1-11, Chapter 1 page 48). The sentence referenced by the commenter is directly from the suspended Natural Conditions methodology.

While the new natural conditions provisions were adopted on December 15, 2024, they have not been approved by EPA. As stated in Policy 1-11, Chapter 1 only EPA approved natural conditions provisions can be used for CWA purposes such as the Assessment. Should EPA approve of Washington's natural conditions provision, the Assessment team will update the Natural Conditions methodology in Policy 1-11, Chapter 1 to reflect the updated rule.

Comment 3.R

[Inappropriate data used for assessment] Fecal coliforms and Enterococcus (marine) – while the use of only 3 samples for calculating a seasonal geometric mean is allowed under the current rules, a geometric mean calculated from monthly sampling (3 samples) is not an accurate reflection of beach data at a given location. There is so much inherent variability with indicator bacteria sampling, especially without replicate sampling, that an annual geometric mean would
be more reflective of the overall beach conditions for data sampled monthly. We suggest that there is not enough data to designate a category 5 or 2 listing using this limited data. However, we support the continued use of an annual count of excursions for making these designations. We support the continued use of an annual count of excursions for making these designations.

Response to 3.R

In the Bacteria - Water Contact Recreation methodology in Policy 1-11, Chapter 1, the three consecutive month averaging period used to calculate a geometric mean is derived directly from the 90-day or less averaging period stated in Washington's Surface Water Quality Standards (WAC 173-201A-200(2)(b)(B)). Using a 12-month period to calculate an annual geometric mean would not be protective of recreational uses as it would likely average out periods of greatest bacteria exposure. By using a three-month averaging period, we can ensure that high exposure events are captured, while also accounting for the high variability of bacteria concentrations. There is no information provided to suggest datasets with only three samples are not representative of the 90-day averaging period.

Comment 3.S

King County has consistently provided Ecology with water, sediment, and benthic macroinvertebrate monitoring data since the 2004 303d list. However, these datasets often have objectives distinct from Ecology or Clean Water Act regulatory decisions. For example, one of the most common objectives for King County water quality investigations is source tracing. Another is our swimming beach monitoring for public health objectives. In both types of investigations, and others, we frequently target "worst case" conditions in an effort to either find pollution sources or ensure that public health is protected. We share these data with the public, Ecology, and also upload them to the Environmental Information Management (EIM) database so that they are available for future investigators and analysis. Special studies targeting worst case conditions or sources are not representative of ambient water quality conditions and should not be used by themselves as the basis for impairment decisions. Policy 1-11 recognizes this, but we suspect that our data were not clearly labeled as nonrepresentative. Detailed comments attached to this letter elaborate on these studies and associated listings that require revision.

Response to 3.S

We appreciate King County continually sharing their data with Ecology for use in the Assessment and broader purposes. In Policy 1-11 Ecology does state that we will not use data to assess the status of waters when it is not representative of ambient water quality. This is further detailed for bacteria data under the Bacteria - Shellfish Harvesting and the Bacteria - Water Contact Recreation methodologies. If King County has concerns that data in EIM is not reported accurately, we encourage them to reach out to Ecology EIM coordinators at <u>eimwqp@ecy.wa.gov</u> and make corrections to the dataset(s). Additionally, King County can reach out to the Assessment team directly at <u>303d@ecy.wa.gov</u> if they have additional information or concerns on their data. We have reviewed comments on specific studies and listings, and responded to those in <u>Comment 3.M</u>, <u>Comment 3.O</u> and <u>Comment 3.P</u>.

Comment 3.T

We have identified dissolved oxygen impairment listings that rely on older assessment methods and outdated data through our work with Ecology to understand the effects of nutrients on productivity and water quality in Puget Sound. We recommend revising these impairments to Category 2 to reflect current standards and practices.

Response to 3.T

It is unclear what listings the commenter is referring to but in general Category 5 determinations with no new data in the current data window are rolled over from previous Assessments. EPA requires that states keep waterbodies on the 303(d) list until there is newer data demonstrating designated uses are being met. Additionally, our updated 2022 state adopted freshwater dissolved oxygen criteria have not yet received EPA approval and are thus not approved for CWA purposes.

Comment 3.U

[Inappropriate carry-over of previous category determination] Previous category 5 determination made using methods not approved for this assessment. Only data available is over 10 years old.

• Listing ID: 10178

Response to 3.U

Based on available data, this AU met the qualifications for Category 5 in the 2008 Assessment using the methodology in place at that time. The most recent dissolved oxygen data for this AU in 2010 indicates low dissolved oxygen is still not attaining the numeric criteria. This listing will remain in Category 5 until new data demonstrates the AU qualifies for Category 1, and designated uses are being met. This is consistent with EPA requirements.

Comment 3.V

[Inappropriate carry-over of previous category determination] Previous category 5 determination made using methods not approved for this assessment. Only data available is over 10 years old.

• Listing ID: 10237

Response to 3.V

Based on available data, this AU was placed on the 303(d) list for dissolved oxygen in 1998 (see Basis field). No new dissolved oxygen data has been collected on this waterbody since. This listing will remain in Category 5 until new data demonstrates the AU qualifies for Category 1, and designated uses are being met. This is consistent with EPA requirements.

Comment 3.W

[Inappropriate carry-over of previous category determination] Previous category 5 determination made using methods not approved for this assessment. Only data available is over 10 years old.

• Listing ID: 12702

Response to 3.W

Based on available data, this AU was placed on the 303(d) list for dissolved oxygen in the 2004 Assessment (see Basis field). No new dissolved oxygen data has been collected on this waterbody since. This listing will remain in Category 5 until new data demonstrates the AU qualifies for Category 1, and designated uses are being met. This is consistent with EPA requirements.

Comment 3.X

[Inappropriate carry-over of previous category determination] Previous category 5 determination made using methods not approved for this assessment. Data available only shows 1 exceedance in 2015, which would result in a category 2 listing.

• Listing ID: 48944

Response to 3.X

This listing was placed in Category 5 in part using the Salish Sea Model during the 2018 Assessment (Ecology, 2021). Due to disapproval of Ecology's natural conditions provisions in 2021, Ecology is not applying the Salish Sea Model for use in the 2022 Assessment. This listing was reevaluated without the use of the Salish Sea Model.

Based on available data from Location ID KCM-LTKE03 this listing meets the criteria for Category 2 as specified in Policy 1-11, Chapter 1 due to an exceedance of the criteria in 2015. More recent data collected in 2016-2021 does not meet the minimum samples, or sampling period, required for Category 1. As a result this listing is being moved to Category 2. The remarks for this listing have been updated to highlight the category change and indicate the removal of the Salish Sea Model from the evaluation.

We evaluated all Category 5 listings that were evaluated, in part, using the Salish Sea Model and made updates accordingly.

Comment 3.Y

[Inappropriate carry-over of previous category determination] Previous category 5 determination made using methods not approved for this assessment. Data available only shows 1 exceedance in 2000, which would result in a category 2 listing.

• Listing ID: 66124

Response to 3.Y

See response to Comment 3.X.

Based on available data presented in the Basis, this AU met the qualifications for Category 2 in the 2010 Assessment with 1 excursion out of 1 sample in 2000. Since the 2010 Assessment there has been no additional data evaluated. As a result this listing is being moved to Category 2. The remarks for this listing have been updated to highlight the category change and indicate the removal of the Salish Sea Model from the evaluation.

Comment 3.Z

[Data not reflective of current conditions] Data used from this listing was from 1977, and not available in EIM to review. Because data are from 1977 and not additional data has been collected, listing category should be changed from 2 to 3.

• Listing ID: 15801

Response to 3.Z

Data associated with this listing were collected in 1977 before EIM was created. Data from 1977 indicated an excursion of the criteria leading to this Category 2 listing. There are no additional data to suggest that this listing is not representative of current conditions, therefore this listing will remain in Category 2. When new data are available, they will be evaluated according to the methodologies in Policy 1-11, Chapter 1.

Comment 3.A.2

[Newer data show no excursions] 2014 and 2015 failed the hypergeometric test but more recent years (2016-2021) had no excursions.

• Listing ID: 12703

Response to 3.A.2

While samples collected from 2016-2021 do not exceed the criteria, there are not enough samples to demonstrate designated uses are being met in the waterbody (Category 1). Policy 1-11, Chapter 1 details the requirements for a waterbody to meet Category 1 for dissolved oxygen. A waterbody must have a minimum of 21 days sampled within the focal period during the summer season that meet criteria in two or more years. There are only 10-12 samples collected in each year from 2016-2021. This waterbody will remain in Category 5 until data meets the requirements for Category 1, demonstrating designated uses are being met.

Comment 3.B.2

[Not a quantitative parameter] "Fish and Shellfish Habitat" is not a parameter that is quantitatively measured. This is not covered in the WAC or WQP 1-11. There are other 303d listing parameters (e.g., pH and temperature) that contribute to the conditions described in the remarks. This listing should be removed.

• Listing ID: 36169

Response to 3.B.2

As stated in the remark, this listing is based on an evaluation of data and information against the narrative criteria outlined in WAC 173-201A-260(2), which is discussed in Policy 1-11, Chapter 1 (page 34). Under the CWA, Ecology is required to evaluate all readily available data and information to identify designated use impairment, which is not limited strictly to quantitative data or specific parameters outlined in Policy 1-11, Chapter 1. Fish and Shellfish Habitat is one of many parameters evaluated under the narrative criteria that do not have a specified methodology in Policy 1-11, Chapter 1 (e.g. Invasive Exotic Species, Non-Native Aquatic Plants, Non-Native Fish/Shellfish/Zooplankton). This listing indicates that conditions of the waterbody are potentially impacting Fish and Shellfish Habitat and warrants further monitoring.

4. City of Seattle

Comment 4.A

Several listings for pH (listings 102511, 102490, 102488, and 102485) and bacteria (listings 12187 and 12204) utilized data exceeding ten years of age to establish listings within Lake Washington. Policy 1-11 states, "Generally, Ecology will not assess data older than ten years for a given cycle unless noted in the parameter-specific WQA considerations described in Part 2. However, Ecology may consider data and information older than ten years when necessary to determine historic conditions." As pH and bacteria can fluctuate rapidly within a water body and are not persistent impairments, SPU does not believe it is appropriate to utilize data exceeding ten years of age to establish new water quality listings. If more recent data indicated impairment for these criteria, SPU would concur with the listings. Please re-consider the use of old data to derive this listing. Thank you.

Listing IDs: 102511, 102490, 102488, 102485, 12187, 12204

Response to 4.A

The pH data used to generate Listing IDs 102511, 102490, 102488 and 102485 were evaluated for the first time for the 2022 Assessment due to a misapplication of applicable criteria in previous assessments. All data associated with these listings are from Study ID KClake-1 and were present in previous assessments but were not previously considered due to an error in our assessment system. We have corrected this error, which has generated new listings that should have existed in the 2018 Assessment. There are no more recent pH data in these AUs to suggest that pH levels are different than the data supporting these determinations.

The Category 5 listings for fecal coliform (Listing ID 12187 and Listing ID 12204) are a result of EPA's disapproval of Ecology's natural conditions provisions in our Surface Water Quality Standards. Due to this disapproval Ecology is unable to make natural conditions determinations in the Assessment as outlined in Policy 1-11, Chapter 1, the 2022 WQA Supporting Information Document, and the remarks for both Listing ID 12187 and Listing ID 12204. Additionally, EPA

guidance on natural conditions criteria specifies that natural conditions criteria cannot apply to uses that protect human health.

Both Listing ID 12187 and Listing ID 12204 were placed in Category 3 during the 2012 and 2018 Assessment due to a natural conditions determination. Both listings were Category 5 during the 2010 Assessment based on available data, before a natural conditions determination was made. Therefore, when we removed the natural conditions determination these listings reverted back to Category 5 as the most recent data fails to demonstrate designated uses are being met under the Bacteria - Water Contact methodology in Policy 1-11, Chapter 1.

5. Bonnie Blessing

Comment 5.A

So this area is listed for bacteria? They do have a few cows there occasionally but this is for habitat enhancement. Can you send me Berg et al 1995.. I wonder if they should remove this one from the need for a TMDL as the livestock maintain habitat?

• Listing ID: 7753

Response to 5.A

This assessment unit was listed as impaired for fecal coliform in 1996. A TMDL was written for fecal coliform for the Upper Chehalis River and its tributaries in 2004, moving this assessment unit to Category 4A (impaired but with a TMDL approved). This listing will remain in Category 4A until new data demonstrates that contact recreation uses are met (Category 1). Even if livestock are used for habitat management in the watershed, the Water Pollution Control Act (Chapter 90.48 RCW) prohibits the discharge of any pollution to Waters of the State and the applicable water quality standards and designated uses still must be met. Berg et al. 1995 was provided to the commenter.

Comment 5.B

I notice that recreation is a designated use here at Dempsey. Isn't wildlife a designated use or existing use as well? In this 7753.

Listing ID: 7753

Response to 5.B

Both primary contact recreation and wildlife habitat are designated uses for all surface waters of the state (see WAC 173-201A-600(1) and WAC 173-201A-210(4)). This listing specifically evaluates fecal coliform data to evaluate the primary contact recreation use in Dempsey Creek.

Comment 5.C

Since mudminnow, an indigenous or native small nonsalmonid fish that tolerates or maybe even thrives in low DO occurs in this drainage, does the stream need to be listed for DO? Ah, I see, the designated use is salmon. Hmm. Lots of publications on that I can forward.

• Listing ID: 71058

Response to 5.C

This segment of Salmon Creek is listed as impaired for dissolved oxygen and is currently being addressed under the Upper Chehalis River Basin Dissolved Oxygen TMDL (See Listing ID 77965, Category 4A).

While the designated use for this waterbody is "Aquatic Life – Salmonid Spawning, Rearing, and Migration", Washington's water quality criteria are written to protect the most sensitive species and populations. By ensuring protection of more sensitive species such as salmonids, we also ensure protection of species more tolerable to low dissolved oxygen concentrations.

Comment 5.D

I believe that a surface water is being limited in its capacity to support designated uses due to instream flows and maybe invasive plants. Coho and wildlife occur in Beatty Creek and its wetlands (Figure 1,2). Yesterday 13 November 2024, I noticed invasive plants and turbid water in the coho and chum spawning habitat. We see Beatty Creek dries from near its confluence with McLane (near ~ 47.001028, -123.00817) upstream to about Chelsie Drive (near 46.992574, -123.020966). (T18N, R3W, S36, T17N, R3W, S2 and S39). Low flows were apparently documented by Wildfish Conservancy and a local blogger. (Figure 3 and 5 as mapped somewhat on Figure 4 and 6).

Don't Coho need prolonged hydroperiod because they stay in the stream year round?

Because ~ mile of this stream dries up restricting any fish to tiny pocket pools or even pockets of water under gravel I believe this reach should be included as a 4c or 4d reach with the parameter instream flow. I hope this information could be used to inform whether Ecology authorizes activities that could change the instream flows. Naturally the area has glacial deposits that may somewhat reduce surface water. A residential area with a detention basin is nearby but much of the upland area is forested. Occasional landslides have occurred in watershed in geologuic and possibly historic times.

Its interesting to compare current 'condition' with General Land office surveys from 1855 (Figures 7-10). The lower reaches of Beatty Creek where it enters McLane is in Section 1 of Township 17NR03W in Thurston County. The presence of the stream would have been recorded by GLO surveys. Yt is it possible they were having difficulty with their new compass. GLO surveys from June 1855 had just started using the new solar compass to avoided problems due to iron ore deposits The GLO surveyors who had just signed a contract on June 12, 1855 with James Tilton mapped streams and upland habitat in S1 of T17NR03W. Hart and Lyle (on page 209) report 'a branch' at 66.5chains from the north east end of S1 of T17NR03W. The 'branch' is 20 links wide. (A link is 7.92 inches long. A branch is a stream a chain is 66'). I believe this means that surveyrs only documented the presence of McLane Creek in June of 1855 was 7.92x20 inches wide or ~153 inches wide. (See page 210 of the GLO survey done in1855). The

odd thing is the branch (stream) appears to be about where McLane Creek is and not Beatty Creek (Figure 11).

Beatty Creek, where it occurs today does not appear to be recorded, but the surveyors had just started to use the new and improved solar compass (see page 209) so may have been working out the kinks. Of interest to land use is that one area that is now mostly forested was prairie in 1855. On June 15, 1855, Enoch Hart, William Lyle and William Braun, the GLO surveyors (Page 209) reported prairie along the northern boundary of S1 of T17NR03W from chain 4 to chain 28. Oregon white oaks a prairie species persist under forest in this former prairie between Camelot Drive to Delphi Road.

We all wonder whether Beatty Creek has been relocated due to development or road construction. But, whether or not Beatty Creek has been 'relocated' since 1855, coho and cutthroat and wildlife occupy the stream and nearby wetlands. Due to low instream flows I believe coho habitat is degraded. Can this one mile reach of Beatty Creek be added to a 4d list with the impairment being instream flow and invasive plants?

Data sources include WDFW Source of PHS

https://geodataservices.wdfw.wa.gov/hp/phs/, https://wildfishconservancy.org/, a local blog entitled Watershedevents

https://watershedevents.typepad.com/watershedevents/beatty-creek/

Sources include the Oregon land status and cadastral survey records athttps://www.blm.gov/or/landrecords/survey/ySrvy1.php

Response to 5.D

Ecology reviewed the attached figures referenced in this comment. Based on our review, we are unable to make an impairment determination for low flow or invasive species. There is no information provided that demonstrates the attached references meet Ecology's credible data requirements as specified in Policy 1-11, Chapter 2 and Section 1D of Policy 1-11, Chapter 1. The Assessment can evaluate impacts to low flow to aquatic life under the narrative criteria (WAC 172-201A-260(2)). For the Assessment to make an impairment determination based on the narrative criteria, we would need credible data or information demonstrating a direct link between the environmental alteration in the waterbody and the degradation of a designated use as specified in Policy 1-11, Chapter 1 – Information submittals based on Narrative Standards. The commenter does not provide information or data to indicate a designated use impairment is occurring in the waterbody.

6. Spokane River

Comment 6.A

I'm writing in support of adopting a turbidity TMDL for the Spokane River. The river's designated use makes clear the importance of salmonid species as indicators of the overall

health of the river. We can't avoid the impacts climate change will have on redband trout; however, we can and should work to improve their chances to be resilient by eliminating the additional stress of human-caused, turbidity impairment of the Spokane River. The proposed TMDL will provide an impetus to move us toward that goal. The TMDL also offers an opportunity to move toward reparations of the harm done to the Spokane and Coeur d'Alene tribes when dams stopped the salmon runs. Adopting this TMDL will be a sign of support for the tribes' on-going efforts to restore salmon to the Spokane River. All of us living in the Spokane watershed will benefit from restoration of salmon to the river and the watershed ecosystem benefits that come with the salmon. I give thanks to the Department of Ecology for taking the important step of acknowledging the data collected by the citizen science project and drafting this proposed turbidity TMDL. I now urge its adoption, so all involved may move forward to its implementation.

- Commenter: Katrina Martich
- Listing ID: 106267

Response to 6.A

Thank you for your support on this listing determination. The Category 5 determination is based on persistent violation of our turbidity water quality criteria is this section of the Spokane River. As required under Section 303(d) of the CWA, this listing and all Category 5 listings are prioritized for a TMDL or other clean-up plan development (see Supporting Information for the 2022 WQA, TMDL and Advance Restoration Plan (ARP) Projects). Ecology established a <u>TMDL on</u> <u>Hangman Creek</u>¹⁶ (also known as Latah Creek) in 2009 to address elevated levels of turbidity and total suspended solids, among other parameters. The data and information supporting this Category 5 determination for turbidity on the Spokane River links Hangman Creek's as a significant source of anthropogenic turbidity in this section of the Spokane River.

Comment 6.B

I urge stronger policies and regulations that address land use practices to control sediment and other pollution in the Spokane River in all areas. We need a vibrant waterway to remain healthy ourselves, and focusing on fixing and sustaining a flourishing environment is necessary for our well-being and a responsibility to our posterity.

- Commenter: Jim Young
- Listing ID: 106267

Response to 6.B

Thank you for your comment. Addressing land uses practices is outside of the scope of the Assessment. Ecology is currently working to implement the Hangman Creek Multi-Parameter

¹⁶ https://apps.ecology.wa.gov/publications/SummaryPages/0910030.html

TMDL to address impairments in the watershed. For more information on the TMDL please visit the <u>Hangman Creek Multi-Parameter TMDL webpage</u>¹⁷.

7. Washington Department of Fish and Wildlife (WDFW)

Comment 7.A

First, WDFW recommends that Ecology identify Chinook salmon (Oncorhynchus tshawytscha) harvested in Puget Sound between November and March as resident fish for the purposes of the Water Quality Assessment. Approximately 30% or more of all Chinook salmon originating in the sound do not migrate to the Pacific Ocean (Chamberlin et al. 2011; O'Neill and West 2009), a phenomenon previously described by Pressey (1953) and Haw et al. (1967). Fish harvested outside the typical July – September adult Chinook migration window, as well as sexually immature Chinook salmon harvested between April and June, are likely Puget Sound residents based on available research. Known locally as blackmouth, these sub-adult "resident" Chinook salmon appear to feed primarily within their natal basin rather than moving throughout Puget Sound (Arostegui et al. 2017; Chamberlin and Quinn 2014; Kagley et al. 2017). These fish are predicted to have higher concentrations of PCBs and other contaminants than those feeding along the ocean coast (O'Neill et al. 2009; PSP 2022) because of elevated contaminant levels within the Puget Sound food web (Good et al. 2014; West et al. 2008; West et al. 2011). As such, this species is a useful indicator for upper trophic level contamination in Puget Sound.

Response to 7.A

Thank you for your comment. Chinook salmon (*Oncorhynchus tshawytscha*) are considered a resident species for use in the Assessment and are therefore assessed under the methodologies in Policy 1-11, Chapter 1.

Comment 7.B

As part of this recommendation, we also request Ecology re-evaluate sites that were assessed using data from the WDFW study "Contaminants Reveal Spatial Segregation of Sub-adult Chinook Salmon Residing and Feeding in Puget Sound" (EIM study ID WDFW_TBiOS_Chinook). In this study, at least 11 Chinook salmon were collected in each of eight Marine Areas (MAs) throughout Puget Sound managed by WDFW. These MAs roughly correspond to Puget Sound oceanographic basins. Salmon samples were donated by anglers participating in a winter sport fisheries (MAs 6, 7, 8-1, 8-2, 9, 12 and 13) or collected in a commercial test fishery (MA 10). In the current draft assessment, the automated assessment protocol consolidates all samples collected within a single MA into one composite sample. We believe this approach leads to underreporting of impaired waters, such as those MAs in central and south Puget Sound which are still impacted by PCB contamination. We strongly encourage Ecology to use smaller

¹⁷ https://ecology.wa.gov/water-shorelines/water-quality/water-improvement/total-maximum-daily-load-process/directory-of-improvement-projects/hangman-creek

composite sizes, such as the three fish composite minimum stated in Policy 1-11, when interpreting this study.

Response to 7.B

Policy 1-11 indicates that Ecology will create a single quasi-composite of the same species from the same sampling year and AU when individual sampling events have less than 3 samples (i.e., individual fish in this case). The need for a quasi-composite will be triggered even if one sampling event during a specific year has more than 3 samples, but another sampling event from the same year and AU has less than 3 samples. When this occurs, all samples from that year/species/AU will be compiled into a single quasi-composite. Without a scientific justification, samples will not be split to create multiple quasi-composites for the same AU due to the large number of grouping possibilities. WDFW is welcome to add comments to their EIM data entries to indicate how they recommend samples to be composited with appropriate scientific justification.

Comment 7.C

Finally, when taking action on impaired waters identified using Chinook salmon contamination data, we strongly encourage Ecology to take a broader geographic focus, consistent with the feeding patterns and life histories of sampled populations. We understand why Ecology evaluates marine water quality using grid cells with dimensions of 45 seconds latitude by 45 seconds longitude. But we believe that assigning contamination data derived from fish tissues like blackmouth to a single grid cell misrepresents the scope of the contamination indicated by the data. While we understand Ecology cannot revise how it assigns data geographically at this time, we hope that Ecology staff responsible for responding to impaired waters are able to interpret these data as indicators of potentially basin-wide contamination in Puget Sound.

Response to 7.C

We appreciate this feedback. Identifying the full scope of contamination is outside the scope of the Assessment. Listings in Category 5 are prioritized for TMDL development. Part of the role of a TMDL is to identify pollution sources and the full extent of contamination. Trophic level (i.e., feeding patterns) and life history (i.e., age) are already taken into consideration as per Policy 1-11, Chapter 1. Our Assessment team collaborates regularly with our CWA implementing programs to ensure that the context of impairments is understood and fully addressed in implementation.

Comment 7.D

As mentioned above, we appreciate the complexity Ecology faces trying to impose geographic boundaries on water conditions and contamination for this assessment. While we support using the current grid cell dimensions for aquatic species like mussels or English sole, we are concerned that data from species with much larger foraging ranges, like Chinook salmon, are also assigned to a single grid cell. Assigning these contaminant data to a single grid cell misrepresents the scope of the contamination and may accidentally imply a contaminant source that does not exist. WDFW scientists often report contaminant data results by Marine Area in place of specific geographic coordinates to enable regional comparisons of contaminant levels while still representing the geographic uncertainty of specific contaminant sources. As an example, past WDFW studies of resident Chinook salmon reveal that the Chinook with the highest overall tissue concentrations of PCBs are those feeding in the Whidbey Basin and South Basin marine areas (PSP 2022, Pearsall et al. 2021). We would recommend Ecology explore whether similar reporting would be feasible for future water quality assessments.

Response to 7.D

Thank you for your comment. Such revisions to our assessment methods would require an update of our assessment methodology (Policy 1-11, Chapter 1). We will keep these suggestions in mind during future policy updates.

Comment 7.E

We applaud Ecology for its decision to use harvestable species, including WDFW's mussel watch data, to identify potential human exposure concerns. During each biennial survey, WDFW works to consistently deploy mussels at 42 index sites and a series of rotating sites that may only be surveyed once a decade. Each site hosts one cage containing up to 100 mussels, representing one composite sample. Cages are deployed for three months to allow mussels to uptake contaminants along the shoreline. While we largely agree with Ecology's process for calculating chemical exposure thresholds, we caution that the caged mussel data used in the assessment could potentially underrepresent concentrations of bioaccumulative contaminants in wild mussels (Lanksbury et al. 2014; Schøyen et al 2017). We would be interested in exploring further with Ecology whether there is a conversion or measure of uncertainty that can be applied to measured contaminant levels in caged mussels, to ensure we are not underreporting contaminant levels and underestimating their potential human health impact.

Response to 7.E

Thank you for the comment. Given the three-month exposure duration for caged mussel studies, we determined it is inappropriate to use these data for Category 1 determinations as toxic concentrations in caged mussels may underestimate those in wild mussels. We reviewed all Category 1 listings that were determined, in part, due to caged mussel studies. All Category 1 listings were reevaluated without the caged mussel data and placed in the appropriate category. We are committed to working with WDFW, and any interested external party, to ensure data used in the assessment are representative of ambient conditions and appropriately evaluated.

Comment 7.F

Finally, we would like to encourage Ecology to consider using contaminant data measured in whole fish bodies when there is evidence that people in Washington are consuming whole fish. King County recently funded a survey of refugee and immigrant fishing communities in the county wherein 61% of fishers surveyed reported eating whole fish they had caught (Lanksbury, pers. comm.). We are happy to share this report with Ecology, as well as partners at the Washington Department of Health, when it is published in early 2025. Given the diverse cultural

background and harvesting practices of Washington fishers, we encourage Ecology to update Policy 1-11 so that whole body fish contamination data can be included, where appropriate, in future water quality assessments.

Response to 7.F

Thank you for the comment and information. We will keep these suggestions in mind during future policy updates.

8. Marten Law LLP

Comment 8.A

I appreciate the opportunity to comment on the Washington Department of Ecology (Ecology) draft 2022 Water Quality Assessment (Assessment).

There are important questions related to the proposed Category 5 listings for Perfluorooctane Sulfonate (PFOS) for Lake Meridian, Lake Washington and Lake Sammamish (listings 106563, 106565, and 106568, respectively).

For each of these three listings, Ecology states that the basis for the 303(d) Category 5 designation is a WA Department of Health (DOH) fish consumption advisory for PFOS and fish tissue data collected within each lake. All three listings also note that the listing is for the entire waterbody (lake).

These listings are premature. Currently, the State of Washington does not have a final approved water quality standard for PFOS. Washington has submitted its proposed Aquatic Life Toxicity Standards, which include Freshwater Acute and Chronic PFOS criteria and Marine Acute criteria. In addition, Ecology has not updated its Water Quality Program Policy 1-11 (Water Quality Assessment Listing Methodology to Meet Clean Water Act Requirements) to define the methodology to assess Washington's waters to determine whether a waterbody should be listed for PFOS. While Policy 1-11 does allow the use of DOH fish advisories as 'other lines of evidence' when evaluating the human health water quality assessment, it appears that Ecology has expanded the use of DOH fish advisories in this Assessment in two ways not (to our knowledge) previously applied to any other assessment: (1) basing a Category 5 designation solely on a DOH fish advisory, and (2) assigning the resulting Category 5 designation to an entire waterbody (Lake) and not to distinct assessment units within the waterbody.

The use of this type of data for these determinations is not only unprecedented, but also inconsistent with Ecology's policy and practice and has not been authorized based on a revision to Policy 1-11. If Ecology intends to use this methodology, it must first allow for public review and comment on a proposed revision to Policy 1-11.

The underlying evidence illustrates why revision of Policy 1-11 is necessary before Ecology could use this new methodology. The fish tissue sample data for each of these three listings indicates that, while the fish tissue sample results may exceed DOH's screening level to determine a fish advisory for PFOS, the data do not exceed WA's proposed chronic fish tissue

(whole body) aquatic life toxicity criteria for PFOS (that is currently pending EPA approval). In addition, the water sample data also do not exceed either the freshwater acute or chronic criteria (again, currently pending EPA approval).

Response to 8.A

We have reevaluated the PFOS listings in Lake Sammamish and Lake Washington. We corrected the listings to only include AUs where fish samples with measurable PFOS concentrations were collected that supported the original fish consumption advisory. Following this process is consistent with previous listing decisions based on fish consumption advisories. We removed the remark stating that the basis applies to the entire lake. This resulted in Lake Sammamish Listing ID 106568 moving to AU 47122G0A9_01_01. This also resulted in seven additional Category 5 listings in Lake Washington (Listing IDs 103678, 103754, 104314, 104322, 106123, 106124 and 106125). There were no changes made to Listing ID 106563 in Lake Meridian because the entire lake is a single AU due to its small size.

All of these listings are based on our narrative criteria (WAC 173-201A-260(2)(a)) and not numeric criteria. These listings for PFOS follow the same approach for multiple Category 5 listings issued for Polybrominated Diphenyl Ethers (PBDEs) that were approved by EPA in the 2018 Assessment (see Listing IDs 97872, 97874, 97877, 97880, 97882). Both PDBE and PFOS listings follow Policy 1-11, Chapter 1, specifically page 100 that states "Ecology may also consider impairment determinations based on fish advisories for chemicals that are not priority pollutants adopted in the water quality standards if data collected from specific AUs meet data requirements." Since these narrative listings are based on DOH fish consumption advisories set to protect human health, rather than aquatic life, Ecology's recently adopted aquatic life criteria for PFOS are not relevant to these listings.

Comment 8.B

It is also essential that Ecology specify data quality requirements in Policy 1-11. The data collection for all three listings was via studies by Ecology and/or DOH in (approximately) 2016 and 2018 to characterize PFOS levels in fish for DOH fish advisories. The test methods used for these studies were not EPA's currently approved test method for PFOS, Method 1633, but rather test methods AXYS MLA-043 and AXYS MLA-060. Information on these test methods is not currently available, nor is there a discussion on the accuracy or potential limitations of these two test methods.

Response to 8.B

Thank you for this comment. The Washington State Legislature enacted the Water Quality Data Act (RCW 90.48.570-590) in 2004. This legislation requires Ecology to ensure the credibility of data used in the implementation of Clean Water Act programs through the application of quality assurance (QA) protocols. This includes the development of the State's Water Quality Assessment. Ecology established Policy 1-11, Chapter 2, "Ensuring Credible Data for Water Quality Management" to fulfill the intent of the Water Quality Data Act (RCW 90.48.585(3)(b)). This policy describes how Ecology evaluates the credibility of data and information using QA procedures, water quality regulations, policies, and guidance. It also contains data credibility guidance for stakeholders whose data are potentially usable in the Assessment.

All data used for the narrative PFOS listings in Lake Meridian, Washington and Sammamish meet the data quality requirements detailed above.

EPA's Method 1633A did not exist at the time PFOS was analyzed in 2016, 2018 and early 2019. The first draft of Method 1633 was released in August 2021 and the final version was released in January 2024 and most recently updated in December 2024 (EPA, 2024). Additionally, there were no other standard tissue methods, developed by the EPA or other organizations, at the time PFOS data were collected. Tissue samples were analyzed by an accredited laboratory using method AXYS MLA-043 which met all method quality objectives and requirements of Policy 1-11, Chapter 2. Information about QA/QC and data quality for AXYS MLA-043 can be found in the study's final report (Mathieu and McCall 2016). AXYS MLA-060 is for the analysis of aqueous samples (i.e., water samples) and is unrelated to the analysis of tissue. More information on our evaluation of DOH fish consumption advisories for the PFOS listings can be found in the Supplemental Methodologies section of the Supporting Information for the Draft 2022 Water Quality Assessment which was made available during public review.

Comment 8.C

In 2008, Ecology carried out a statewide survey measuring PFAS to evaluate how widespread the presence of PFAS is in WA surface Waters. In 2016, Ecology repeated the study, The 2016 results indicated that PFAS concentrations were generally lower in surface water samples versus the 2008 (Survey of Per- and Poly-fluoroalkyl substances (PFASs) in Rivers and Lakes, 2016).

While the data used to develop the Category 5 listings for PFOS is technically within the 10-year window specified in Policy 1-11, the use of non-standard and currently unapproved test methods raise reasonable questions about data integrity and the resulting Category 5 listings. Without additional data developed with approved test methods, and considering apparent decreasing trends (2016 vs 2008), Ecology should designate the listed areas as Category 2 or Category 3, not Category 5.

I offer these comments in support of a transparent and science-based approach to Washington's water quality assessment process and subsequent regulatory actions, as well as our common goal to ensure that Washington's waters support designated uses.

Response to 8.C

See Response to <u>Comment 8.B</u> for information on how data and methods for these listings are consistent with our Credible Data Policy and support the Category 5 determinations.

The commenter is correct that Ecology's survey of PFAS in rivers and lakes (Mathieu and McCall 2016) determined PFAS surface water concentrations were lower in 2016 compared to 2008, however, this is not relevant to the fish tissue-based listings in Lake Washington, Meridian, or

Sammamish. The narrative listings in Lake Washington, Meridian, and Sammamish were based on tissue concentrations from 2015-2019 that resulted in a <u>DOH fish consumption advisory</u> <u>since 2022¹⁸</u>. Reported lower surface water concentrations in 2016 compared to 2008 are not an indication that the harvesting use is not impaired. These listings will remain Category 5 as per Policy 1-11.

9. Skagit County

Comment 9.A

This temperature listing is located in the Stillaguamish River Watershed Temperature TMDL and should therefore be Category 4A, not Category 5.

• Listing ID: 93508

Response to 9.A

Ecology reviewed the Stillaguamish River Watershed Temperature TMDL (Ecology, 2004) and EPA's approval letter for the TMDL to determine if this listing is clearly covered by the TMDL. Upon review this listing is not clearly included in the approval. This listing is a new Category 5 impairment identified after the approval of the TMDL by EPA in July 2006. EPA provided guidance to Ecology after disapproving many new Category 4A determinations in <u>Washington's 2014-2018 303(d) list submission¹⁹</u> that new impairments identified within a TMDL boundary, that are not explicitly identified as covered in the TMDL, need to go through an additional process before they can be moved to Category 4A. To move listings EPA requires a separate written justification that requires Ecology to provide additional information and likely requires a TMDL addendum. Additionally, EPA has also communicated the need for a public notification process before new listings are moved to Category 4A.

We have shared these comments with the TMDL lead located in the Northwest Regional Office. In future cycles we may be able to move these listings to Category 4A after following the process required by EPA. We ask that the commenter reach out to their regional TMDL lead for more information.

Comment 9.B

This fecal coliform listing is located in the Lower Skagit River Bacteria TMDL and should therefore be Category 4A, not Category 5.

Listing IDs: 103740, 103774, 103742, 88242, 88393, 88367, 74168, 103621, 88951, 103637, 103649, 89163, 103719, 88998

¹⁸ https://doh.wa.gov/sites/default/files/2022-12/334-477.pdf

¹⁹ https://www.epa.gov/system/files/documents/2022-08/washington-2014-2018-303d-pa-pd-response-to-comments-august2022.pdf

Response to 9.B

Ecology reviewed the Lower Skagit River Fecal Coliform TMDL (Ecology, 2000) and EPA's approval letter for the TMDL to determine if these listings are clearly covered by the TMDL. Upon review none of the listings that received comments are clearly included in the approval. See response to <u>Comment 9.A</u> for more information. These listings will remain in Category 5.

Comment 9.C

This fecal coliform listing is located in the Padilla Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.

Listing IDs: 89192, 89240, 89299, 89090, 88172, 89153, 89063, 88359, 88241, 88933

Response to 9.C

Ecology reviewed the Padilla Bay Tributaries Fecal Coliform TMDL (Ecology, 2020(a)), the Eastern Padilla Bay Tributaries Fecal Coliform TMDL Study (Ecology, 2020(b)) and EPA's approval letter for the TMDL to determine if these listings are clearly covered by the TMDL. Upon review none of the listings that received comments are clearly included in the approval. See response to <u>Comment 9.A</u> for more information. These listings will remain in Category 5.

Comment 9.D

This fecal coliform listing is located in the Padilla Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.

Listing IDs: 88277, 88320, 89056, 89148

Response to 9.D

Ecology reviewed the Padilla Bay Tributaries Fecal Coliform TMDL (Ecology 2020(a)), the Eastern Padilla Bay Tributaries Fecal Coliform TMDL Study (Ecology 2020(b)) and EPA's approval letter for the TMDL to determine if these listings are clearly covered by the TMDL. All of these listings are new Category 5 impairments identified after the approval of the TMDL by EPA in December 2020. See response to <u>Comment 9.A</u> for more information. These listings will remain in Category 5.

Comment 9.E

This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.

Listing IDs: 103594, 45257, 89044, 89187, 88920, 88162, 103661, 74148, 89101, 45015, 45856, 88987, 88941, 88960, 88389, 89031, 88942, 88198, 88329, 103583, 103585, 103573, 89295, 89289, 103578, 103797, 88293, 88965, 103572, 89215, 103603, 103716, 88455, 103560

Response to 9.E

Ecology reviewed the Samish Bay Fecal Coliform Bacteria TMDL (Ecology, 2008(b)) and EPA's approval letter to determine if any of these listings were included in the original approval. Upon review none of the listings that received comments were included in the approval. See response to <u>Comment 9.A</u> for more information. These listings will remain in Category 5.

Comment 9.F

This temperature listing is located in the Lower Skagit River Temperature TMDL and should therefore be Category 4A, not Category 5.

Listing IDs: 72514, 73562, 6416, 7146, 94466, 94561

Response to 9.F

Ecology reviewed the Lower Skagit River Temperature TMDL (Ecology, 2008(a)) and EPA's approval letter for the TMDL to determine if these listings are clearly covered by the TMDL. Upon review, none of the listings that received comments are clearly included in the approval. See response to <u>Comment 9.A</u> for more information. These listings will remain in Category 5.

10. South Columbia Basin Irrigation District

Comment 10.A

Several irrigation facilities within the South Columbia Basin Irrigation District are incorrectly listed on the water quality atlas as rivers and streams with a designated use of Salmonid spawning, rearing, and migration. These facilities are non-natural, constructed facilities carrying irrigation project water. As such, they should not be construed as waters of the state. Furthermore, the designated use descriptions and water quality listings are inappropriate for man-made irrigation facilities. These facilities should never be classified as fish bearing or rearing, recreational areas, wildlife habitat, or any other uses other than irrigation supply. The South Columbia Basin Irrigation District requests that the designated uses, and water quality listings be updated or removed to accurately reflect the true characteristics of a constructed conveyance system.

Response to 10.A

Washington's surface water quality standards specify that "surface waters of the state include lakes, rivers, ponds, streams, inland waters, saltwaters, wetlands, and all other surface waters and water courses within the jurisdiction of the state of Washington" (WAC 173-201A-010(2)). A formal opinion written by Washington Attorney General Slade Gordon in 1969 further clarified that water quality standards for waters of the state include waters found in canals, drains, wasteways and reservoirs of irrigation and drainage systems (AGO 1969 No. 4). Therefore, constructed facilities conveying irrigation water are waters of the state and state water quality standards apply. Designated uses are set to protect uses of a waterbody as well as protect downstream uses. While many irrigation canals are manmade structures, these waterways often flow into a natural waterway. Washington's surface water quality standards specify that all waters of the state are protected for aquatic life, recreation, domestic water supply, stock watering, wildlife habitat, commerce and navigation, and boating and aesthetic values (WAC 173-201A-600 and WAC 173-201A-602). Since constructed facilities conveying irrigation water are considered waters of the state, the above uses would apply to these waters at a minimum.

11. Washington State Water Resources Association

Comment 11.A

Please accept these remarks as comments to the Draft 2022 Water Quality Assessment from the Washington State Water Resources Association on behalf of our members. Our comments are intended to amplify any other irrigation district direct comments, including those of South Columbia Basin Irrigation District.

Our members have noted some errors related to irrigation facilities being listed as rivers and streams within the water quality atlas.

This is a significant concern since irrigation facilities should not be considered waters of the state. They are constructed works carrying irrigation project water, not natural rivers or streams.

Additionally, any designated use descriptions and water quality listings applied to such facilities are inappropriate. These facilities should not be classified as fish bearing or rearing, recreational areas, wildlife habitat, or any use other than irrigation supply.

We ask that any such designated uses and water quality listings being applied to irrigation facilities be removed/corrected to accurately reflect the true characteristics of constructed conveyance systems. Please feel free to contact us if you have any questions.

Response to 11.A

Please see response to Comment 10.A.

12. Kennewick Irrigation District

Comment 12.A

The Water Quality Assessment (WQA) Tool: A search in the WQA tool of Benton County waterbodies with water quality data reveals many irrigation facilities, including numerous drains and wasteways (mostly related to the Roza-Sunnyside system) and even a couple of canals being included in the assessment tool. The Columbia Canal of Columbia Irrigation District (CID) is listed in the database, as is the Chandler Canal, owned and operated by the United State Bureau of Reclamation for the purposes of diverting water for KID irrigation use, as well as hydropower generation and hydraulic pumping uses at the Chandler Pumping Plant. The

listing for the Chandler Canal is Category 2 (Waters of Concern) for Fecal Coliform Bacteria. The listed designated use that the contamination impairs is "Recreation – Primary Contact", which may be true of the Yakima River but is not true of the canal, which should never see any recreational use. Amon Wasteway is also in the database, where it is called "Amon Creek Wasteway." The wasteway is considered Category 3 (Insufficient Data) and is not considered impaired. The designated use in the Amon Wasteway is "Water Supply -Domestic Water," which is accurate in that water from the wasteway does supply urban irrigation water at the Gage Pumps (lawn watering is a part of domestic supply), but there is no drinking water sourced from the wasteway directly. KID questions if it is appropriate for constructed irrigation facilities to be included in the database, including Amon Wasteway, which is partially constructed and has flow that mostly (>99%) derives from irrigation return flows.

Response to 12.A

Please see response to Comment 10.A.

Comment 12.B

The Water Quality Atlas: This GIS based mapping application has a layer named "Water Quality Standards" that shows just about every drainage feature as a water body in the state of Washington. The attributes of this data layer do not bother to name any of the features, it just links to a list of use designations and criteria, along with whether the feature is freshwater or brackish/saltwater. Many dry gulches are shown in our area that have probably not seen naturally occurring flowing water in thousands of years. Also shown is the entire KID (and other irrigation districts) canal and lateral system, including drains and wasteways. The layer seems to imply that the mapped features are all "waters of the state," and are thus subject to the water quality standards in WAC 173-201A. The question here is as it is above; should constructed irrigation facilities be included in the atlas? They could be useful as reference features, but to imply that they are "waters of the state" does not seem acceptable or accurate. In summary, if the state is set on issuing this assessment and related tools and atlas with irrigation facilities included, then the irrigation district that manages the relevant facilities should be the primary source of the data and should be consulted on its inclusion in the assessment, tool, and atlas.

Response to 12.B

The purpose of the Water Quality Standards layer in the Water Quality Atlas is to spatially display the applicable designated uses and criteria for all waters of the state. This layer is created based on the designated uses described in Washington's Water Quality Standards for Surface Waters, specifically WAC 173-201A-600, WAC 173-201A-602, WAC 173-201A-610 and WAC 173-201A-612.

All features covered by the Water Quality Standards layer are considered waters of the state. For more explanation on why constructed irrigation waterways are considered waters of the state see response to <u>Comment 10.A</u>.

13. Swinomish Indian Tribal Community

Comment 13.A

Ecology's continued failure to meet EPA-required deadlines impedes salmon recovery which negatively impacts availability of Treaty-reserved resources.

The Clean Water Act requires that Washington's Department of Ecology ("Ecology") produce a Water Quality Assessment (WQA), including a list of impaired water bodies (303(d) list) every two years. Since 2012, Ecology has only produced three such WQAs, including the current 2022 WQA, which is already two years behind schedule. Lack of up-to-date information impairs the ability to understand whether waterbodies are meeting water quality standards and temperature goals and in which water bodies there is degradation to "beneficial uses." Entities working to improve water quality need up-to-date information included in these assessments to inform decisions on prioritization and project implementation. Furthermore, the WQA is the basis for establishing total maximum daily load plans (TMDLs) that form the basis for enforceable regulation of water quality standards. Water quality impairments such as high temperatures and toxic chemicals are significant factors contributing to the decline of salmonids, including ESA-listed Endangered and Threatened species. Unnecessary and preventable delays in water quality assessments impede the ability of entities to make decisions and prioritize water quality projects, prevents the state from enforcing water quality standards in a timely manner, and are therefore negatively impacting salmon stocks which are a Treaty-reserved resource.

The Swinomish Tribe urges Ecology to follow the recommendations in the November 2023 report form the U.S. Government Accountability Office (GAO-24-105687) to work with the EPA to develop a plan to address this issue. Ecology should continually update all data to ensure use of the most current, accurate, and complete science, and adopt a rolling review process rather than a full (delayed) process for WQA and TMDL prioritization.

Response to 13.A

Thank you for your feedback on the Assessment. The Assessment is a complex project that differs between states. This body of work is very large and complex and federal requirements have grown in scope over the years adding to the complexity. In Washington there are additional state specific requirements that make this work challenging. Washington is the only state with sediment management standards approved for CWA purposes that are required to be evaluated through the Assessment. We are also one of the only states evaluating toxics in fish and shellfish tissue. We have a multitude of streams and rivers and evaluated over 85 million data points within small AUs to more accurately determine where water pollution is occurring. We also go above EPA requirements by presenting all of the data associated with listings for transparency purposes at the request of external parties.

Both the Water Quality Assessment and Policy 1-11 revisions go through an extensive public review period including a designated period for Tribal review in accordance with the agreed upon "Cooperative Management Agreement of Washington's 303(d) List". All of these items,

among others, increase the quality of the Assessment but add to Ecology's challenge to complete the Assessment in the two-year timeframe designated in the CWA.

We are currently working to improve our timeliness and have added resources to work on the Assessment. In response to the GAO report, Ecology engaged with EPA during a week-long, in person, Lean process meeting during the Fall of 2024 to identify actionable improvements that both Ecology and EPA can take to improve the timeliness of the Assessment. Ecology has begun implementing the highest priority actions that will have meaningful impacts on the timeliness for the upcoming 2026 Assessment.

Ecology has committed to ongoing conversations with EPA regarding identified improvement processes and has established report out dates to GAO on the progress. We anticipate implementing additional process changes over the years to continue refining and improving the timeliness of the Assessment.

Comment 13.B

Ecology needs to take immediate action to address Contaminants of Emerging Concern (CECs) such as 6PPD-Q in Water Quality Assessments.

Years-long delays in water quality assessment and listing of impaired water bodies means that enforcement of TMDLs for significant emerging water quality issues such as 6PPD-Q are years behind where they should be. The current 2022 WQA only includes data collected prior to December 31st, 2021, the same year 6PPD-Q was identified as the toxin responsible for prespawn mortality in coho salmon (Tian et al. 2021). Delays in the statewide WQA means that all data on 6PPD-Q collected from Washington's waters since 2021 has been excluded from the current assessment and 303(d) list despite a huge and ever-growing body of knowledge regarding impacts to salmon, recognition by tire manufacturers, and 6PPD-Q EPA regulations. This exclusion of up-to-date data delays 6PPD-Q-related TMDLs and Advance Restoration Plans and contributes unacceptably to further decline of salmon stocks and infringement of treaty rights as a result. We recommend that Ecology meet the "most current, accurate, and complete science" standard by taking action to accelerate lab accreditation to enable broader analysis and data availability for 6PPD-Q, and to rapidly assess and include any available data on 6PPD-Q and other CECs into the current WQA and 303(d) list, regardless of the data window which currently only considers data collected prior to December 31st, 2021. We also expect Ecology to track and follow EPA guidance on new criteria such as fresh water dissolved oxygen, fine sediment, and aquatic life toxics and to include these criteria as soon they are approved by the EPA.

Response to 13.B

Ecology evaluated 6PPD-quinone in response to a narrative submittal received during the Call for Data period for the 2022 Assessment. The 6PPD-quinone submittal was evaluated utilizing our narrative water quality standards (WAC 173-201A-260(2)) and our narrative standards assessment methodology in Policy 1-11, Chapter 1. Our evaluation of the narrative submittal was completed in early 2023 and included coordination with Ecology scientists, EPA, and NOAA

to ensure that we included all readily available data at that time, extending beyond 2021. Our evaluation is detailed in Supporting Information for the Draft 2022 Water Quality Assessment and was made available during Tribal and public review periods.

Ecology updated Washington's aquatic life criteria in 2024 including adoption of a new freshwater acute criterion for 6PPD-quinone. Until the new criterion is approved by EPA for CWA actions such as the Assessment, any 6PPD-quinone submittals will continue to be evaluated under our narrative water quality standards. For any "Contaminants of Emerging Concern" (CEC) for which we do not have approved numeric criteria, we will continue to consider readily available credible data and information in the Assessment. Any submissions of 6PPD-quinone or CECs data and information must meet Ecology's credible data requirements as specified in Policy 1-11, Chapter 2 and Section 1D of Policy 1-11, Chapter 1.

Lab accreditation for 6PPD-quinone analysis is outside the scope of the Assessment. Currently, Ecology has accredited three laboratories for 6PPD-quinone and continues to review lab accreditation applications submitted for 6PPD-quinone.

Ecology continually meets with EPA on Washington State adopted water quality standards and tracks when EPA will provide final decisions on the packages submitted to them. If EPA approves new criteria, such as updated dissolved oxygen standards, new fine sediment narrative criteria, and aquatic life toxics criteria updates then the Assessment team will update Policy 1-11, Chapter 1 to reflect the updated criteria. Following Policy 1-11, Chapter 1 updates, the new criteria will be used for evaluation during the Assessment process.

Comment 13.C

Ecology has no transparent process for evaluating and communicating the efficacy of TMDLs and enforcement measures on impaired waters statewide, and no summaries to evaluate broader patterns in water quality changes over time.

TMDLs are the foundation for enforceable actions to improve water quality in impaired water bodies. To inform their own work, and water cleanup efforts statewide, Ecology should be constantly evaluating the efficacy of TMDLs that guide agency and local jurisdiction enforcement measures, and share this information with Tribes and the public in a timely, transparent, and easily-accessible way. We recommend that Ecology add to the online tools a way to view summaries of changes in water quality classifications for the state as a whole, and for individual watersheds or basins. This would allow for easier tracking of patterns and shifts in water quality at a scale broader than individual reaches and water bodies.

Response to 13.C

Thank you for the recommendation. The purpose of the Assessment is to evaluate data readily available data to assess the status of water quality in the state. Evaluating and communicating the efficacy of TMDLs is outside the scope of the Assessment. We encourage you to work with your regional TMDL contacts on specific TMDL progress. In addition, we hold an annual TMDL webinar to discuss TMDL priorities. That is a way to communicate any TMDL effectiveness work

you might like to see. Also, our annual report material for our nonpoint program is another way to see TMDL and Nonpoint implementation challenges and successes. That annual report can be found here: <u>2023 Washington Nonpoint Annual Report</u>²⁰.

14. Lummi Natural Resources

Comment 14.A

Unassessed Assessment Units - Your current format of the Report does not account for unassessed Assessment Units – specifically, those waters with no water quality data. There is no category in your report for such waterbodies. A recent Public Records Request for a list of unassessed Assessment Units with no data in the WRIA1 watershed revealed some concerns. Obtaining a list of such Assessment Units requires a GIS and sorting exercise of data from the Ecology Assessment Unit database. These waterbodies are falling through the cracks because they do not exist in a Category or Appendix of your Report. The unaccounted-for Assessment Units in WRIA 1 is very concerning. Until these Assessment Units are ranked/prioritized and put on a schedule for data collection and assessment of beneficial support, one cannot assume they are not impaired. We request WA Ecology create a new Category in the Report for the Assessment Units with no data and represent them in your online interactive map of the Report. We also request they be ranked, prioritized, and put on a schedule for data collection and assessment of beneficial use support.

Response to 14.A

We appreciate your desire to understand what waterbodies do not have data. Under the CWA, there is no requirement for Ecology to report on unassessed assessment units (AUs) or AUs without data in the Assessment. Washington has over 800,000 individual AUs. Creating a new category to display waterbodies with no data in the Water Quality Atlas, Assessment Search Tool, or appendix for the Assessment would limit the useability of the applications and the report. It would also add an additional layer of work, adding further challenges to the timeliness issues the Assessment currently faces.

Ecology evaluates all readily available data for the Assessment in accordance with Policy 1-11. When an AU has no readily available data, Ecology is inherently unable to make a determination for the AU. Ecology does not assume that AUs without data are supporting designated uses and not impaired and continually communicates this information to the public. Several states follow a similar process for their Assessments and EPA has been supportive of this approach.

Prioritizing unassessed AUs for collection of water quality data is outside the scope of the Assessment.

²⁰ https://apps.ecology.wa.gov/publications/documents/2410029.pdf

Ecology would also like to clarify that information related to unassessed AUs for WRIA 1 was provided to the commenter on request, and not through an official Public Disclosure Request.

Comment 14.B

Assessment Units with Data, but Not Enough to Assess Beneficial Use Support - There are hundreds of Categories 2 and Category 3 Assessment Units – some Assessment Units have been listed in these categories for concerning toxic pollutants such as ammonia, hydrocarbons, and pesticides (to name a few). Some of these Assessment Units have resided in Category 2 or 3 for decades. We request WA Ecology rank/prioritize these Assessment Units and provide a timeline for collection of data and assessment of beneficial use support. Moving these Assessment Units out of Category 2 and 3 into Category 1 or 5 should be a priority for WA Ecology.

Response to 14.B

Prioritizing Category 2 and Category 3 AUs for additional data collection is outside the scope of the Assessment. As new data becomes available for these AUs, they will be evaluated in accordance with Policy 1-11, Chapter 1 and placed into the correct category. Existing Category 2 listings are often considered during the TMDL prioritization and development process undertaken by Ecology regional staff and may be addressed through specific TMDL development.

Comment 14.C

Impaired Assessment Units - It is concerning how few Assessment Units in WRIA 1 are in Category 4A. There are only 2 EPA-Approved TMDLs in the Nooksack River Watershed. There are over 500 Category 5 Assessment Units in WRIA 1. Some of them have been in this Category for decades. We request WA Ecology rank/prioritize Assessment Units in Category 5 and adequately fund TMDL positions and/or contracting for TMDL development and submittal to EPA. We would like TMDLs submitted to EPA on an annual basis to significantly decrease in the number of Assessment Units in Category 5 within the next 5 years.

Response to 14.C

Ecology provided Priority Rankings for all 303(d) (Category 5) listings during public review (Appendix A and Appendix B of Supporting Information Document). Funding for TMDL positions is outside the scope of the Assessment. The process Ecology uses to prioritize development of new TMDLs is discussed in the Supporting Information for the Draft 2022 Water Quality Assessment - TMDL and Advance Restoration Plan (ARP) Projects. Every year in the fall Ecology holds a webinar to provide information on our priorities which is followed by a comment period. Prioritization of new TMDLs is led by each regional office for the waters in their region. We have provided your comment to the TMDL staff in the NWRO and we encourage continued

discussions with their TMDL staff regarding prioritizing impaired assessment units in WRIA 1. More information on TMDLs can be found on Ecology's Total Maximum Daily Load webpage²¹.

15. Washington Forest Protection Association

Comment 15.A

In the Supporting Information Document, Ecology states that they monitor the effectiveness of the adaptive management program within the Forest Practices Rules by evaluating progress towards achieving a series of water quality related milestones. We request that Ecology describe more specifically what is being monitored, where monitoring is being conducted, and what milestones Ecology is monitoring for. Ecology needs to be more transparent about the monitoring being done and what progress is being made.

Response to 15.A

Monitoring done through the adaptive management program under the Forest Practices Board is outside the scope of the Assessment. For the latest update on Ecology's work to monitor the effectiveness of the Forest Practices Adaptive Management Program, please refer to the Forest Practices Board's August 14th, 2024, Meeting Material. This meeting material includes Ecology's Clean Water Act Milestones update, and can be found at

https://www.dnr.wa.gov/publications/bc fpb cwa asur 20240814.pdf²².

Comment 15.B

In this water quality assessment, we observed that many impaired waterbodies located on private forest land are staying on the 303(d) list due to historical information, despite a lack of recent monitoring data to show whether or not the waterbody is still impaired. Given that Ecology considers these streams low-priority for TMDL development due to the State Forest and Fish Program, we request that Ecology monitor these streams to obtain more recent data to update its water quality assessment for these AUs and to monitor the effectiveness of the Forest and Fish Program. If access to private land is limiting Ecology's ability to collect monitoring data, we request that Ecology provide guidance on monitoring for private landowners, or provide a citation to such a document if it exists.

²¹ https://ecology.wa.gov/water-shorelines/water-quality/water-improvement/total-maximum-daily-load-process

²² https://www.dnr.wa.gov/publications/bc_fpb_cwa_asur_20240814.pdf

Response to 15.B

Impaired waterbodies based on older data are required by EPA to remain on the 303(d) list until new data demonstrates designated uses are being met. Planning for and conducting monitoring is outside the scope of the Assessment.

We appreciate your interest in getting updated data and suggest that you connect with our CMER scientists and our Forest and Fish policy representative if you would like to work on a monitoring strategy.

Comment 15.C

Given that Ecology believes the Forest and Fish Program and the adaptive management program are sufficient to give waterbodies on forest land low priority for TMDL development (Ecology, 2024), it seems reasonable to say that the adaptive management program is functioning as a pollution control program. Therefore, we request that all assessment units covered under the State Forest and Fish Program be assigned to Category 4B. Citation: Washington State Department of Ecology (Ecology). 2024. Supporting Information for Draft 2022 Water Quality Assessment: Supplemental methods, citations, TMDL prioritization, and data sources. Accessed online at https://fortress.wa.gov/ecy/ezshare/wg/WQassessment/2022WQA_SupportingInforma

tion.pdf

Response to 15.C

When Ecology determines that a local, state, or federal program or strategy is implementing a pollution control program expected to result in an impaired waterbody meeting water quality standards, Ecology will place a Category 5 listing into Category 4B for consideration by EPA. The existence of a statewide program, such as State Forest and Fish Program, in and of itself, is not sufficient to qualify a waterbody segment for this category.

To qualify for Category 4B the program must include specific elements. This includes an identification of the AUs covered by the program, a statement of the problem causing impairment, a description of pollution controls and how they will achieve water quality standards (enforceable pollution controls or actions must be stringent enough to meet water quality standards), an estimate or projection of time when water quality standards will be met, a schedule for implementing pollution controls, a monitoring plan to track effectiveness of pollution controls and a commitment to revise pollution controls. The specific requirements to be considered for a 4B program are found in Water Quality Program Policy 1-11, Chapter 1 starting on page 42.

Ecology supports the Forest and Fish program and adaptive management program. We continue to work within that process with the goal that those rules will support the attainment of water quality standards.

There may be a watershed specific program or strategy that includes implementation of the Forest and Fish Program that can meet the required elements. However, a broad statement

pointing to the statewide program is not sufficient to put listings into Category 4B. If the commenter knows of specific waterbodies that meet all of the required elements, then those should be submitted to Ecology for consideration. Additionally, it is important to work with Ecology early in the process to gather all the necessary information and data needed to make the 4B justification to EPA. The determination and gathering of updated information must be done each time Ecology submits an Assessment. If for any reason the program is no longer meeting the Category 4B requirements, then Ecology will move the waterbody AU back into Category 5.

Comment 15.D

While reviewing this water quality assessment, we noticed that the geographical boundaries of many assessment units have changed since 2018, including both splitting and combining listings and changing assessment unit identification numbers. This makes it difficult to track changes over time. We request that Ecology more clearly describe changes made to assessment units and do a better job of linking previous information to assessment units even as their identifiers change.

Response to 15.D

Ecology updated AUs following the 2018 Assessment to more accurately reflect our water quality standards. This update also used the 2021 National Hydrography Dataset (NHD) as the basis for AUs, to more accurately map waterbodies for the 2022 Assessment. The update was discussed during the public webinar for the 2022 Assessment and in the Supporting Information Document for the 2022 Water Quality Assessment, and follows the methodology outlined in Section 1C of Policy 1-11, Chapter 1. We made our best effort to clearly identify changes by adding remarks to individual listings when AUs, locations, category determinations and designated uses have changed as a result of the AU layer update. We welcome the commenter to share additional suggestions for how Ecology can provide more information on AU changes. If the commenter has questions on how specific AUs have been modified, they are welcome to contact the Assessment team at <u>303d@ecy.wa.gov</u>.

16. Paul Pickett

Comment 16.A

I'm a volunteer with Clallam Streamkeepers, and a retired Ecology EAP employee, and I had some comments about stream listings in Clallam County. These comments are my own personal opinion and not those of Streamkeepers or Clallam County. It's unfortunate that Table 3 doesn't show the years represented by each item. It would help to see which items listed represent "new data" versus carry-over from the last list. Looking at the "basis" column when you download the Category 5 listings, as far as I can tell the 2022 list for Clallam County is exactly the same as the 2018 list. In fact, neither list cites a study later than 2009. Granted, these are just category 5 listings, but it strikes me as odd that no data since 2009 has supported a category 5 listing in Clallam County. Are our waters really that clean? Or is there no data since 2009? Did you search for more recent data? I searched EIM for studies of surface waters from 2009 through 2022, and I found 48 studies.

EIM Search Results

15 studies collected dissolved oxygen data, while 24 studies collected temperature data. Were data from these studies used in the assessment? Could you confirm that the assessment captured all the most recent data?

Response to 16.A

The 2022 Assessment evaluated all readily available data from EIM and the federal Water Quality Portal that was collected between 2012 and 2021 and met our credible data requirements. Yearly data from these databases that were used in the Assessment are summarized in the Basis Table of each listing. If the category determination for a listing is being driven by new data, the Remark field specifies the data years that lead to the determination. The Remark also specifies if the category determination is based off a historic determination. Clallam County stream listings do contain data from studies conducted later than 2009 and this information is reflected in the Data Sources section of each listing. We reviewed the list of studies provided by the commenter and confirmed that 33 of the 48 studies were included in the 2022 Assessment. The remaining fifteen studies were excluded from the Assessment due to the following reasons: (1) all study data were outside the timeframe (2021 - 2021) of the 2022 Assessment, (2) the study had a low quality assurance level and did not meet Policy 1-11's credible data requirements, (3) the study exclusively contained parameters not evaluated in the Assessment, (4) The study design was not representative of ambient water quality conditions.

17. Malcolm Gander

Comment 17.A

Hello Mr. Donahue and again, sincere thanks for your time this morning in walking me through your WQ tool. I only became aware of this resource a few days ago, and I cannot spend any more time on this now as the deadline is fast approaching. Below are my brief comments. The file above presents and discusses data and a rating of Schel-Chelb Creek on Bainbridge Island, which we discussed this morning. I am not sure if you have all of the data included in your database from this report for this creek. It is very degraded and neglected, and development continues in this area. Please ensure that you have all of this data in your database, given the increasing degradation of this Creek. See pages 23-24, and the Appendix, especially pages 42-44 to see the available data. Thank you again for your time, and I will be sending more data for Schel-Chelb Creek, as I believe it exists.

Response to 17.A

This commenter provided and references the State of the Island's Waters (Berg, 2019). We reviewed the attached report. This report represents a snapshot of water quality, quantity and biological health of Bainbridge Island's 12 watersheds during water year 2017. The report references water quality data collected for the study including toxic, conventional, and biological parameters and rates the health of each watershed using a water quality index, bethic-index of biological integrity (B-IBI), and compound index score. Page 23-24 provides an overview of the Schel Chelb Creek watershed, and reports of poor water quality and compound

index scores. Pages 42-44 contain Appendix I, II, and III which include methods, summary trend data, and detected analytes within each watershed.

We reviewed the Assessment database to determine if the referenced data was provided and evaluated for the 2022 Assessment. On review, we determined that the data is not present in any database used for the Assessment. While the report references many parameters evaluated through the Assessment, there is no mention of quality assurance procedures and therefore it is unclear whether this data would meet our credible data requirements outlined in Policy 1-11, Chapter 2 and Section 1D of Policy 1-11, Chapter 1. In addition, the report does not provide the data used to derive the indexes; data that Ecology could use to evaluate the health of designated uses with our water quality standards. The commenter is not the collector of this data and Ecology does not evaluate third party data without documentation from the data collector that data quality objectives were met (see Policy 1-11 – Section 1E, page 38).

Ecology encourages the commenter to contact the City of Bainbridge and ask them to submit their data, with quality assurance documentation, for the Assessment. If the City of Bainbridge were to submit data to EIM, with documentation that the data meets credible data requirements, then the Assessment team can evaluate relevant data in future Assessments.

18. Nancy Hansen

Comment 18.A

I can't get a few things to work on this tool - to scroll to a water body name I was unable to use the slider at the right to move to a lower section.

I put in an address of a location that should have been assessed. It would not come up, but a SEPA was begun on this site 2 years ago - no mention of water quality. I also know a wetlands study had been done here by the Watershed Company in 2018, so the address used by the city should have come up.

I went to another nearby site by zooming in. There I found a listing for a Category 4, but I was told it was a Category 5. It does not have a TDML associated. This leaves me with many questions.

When I put an address into the search, to get a Listing ID, the list would keep popping back up to start, so unable to use that - went to the zoom function instead, but there are times when it's necessary to use a physical address.

I guess I would appreciate some basic education on how to use this tool in order to be able to make any assumptions or decisions from the vast amount of material here.

Is there any possibility of an on-line training - for maybe basic levels of expertise, to start? Or directions given on a video, from a real person?

I feel this tool is a step in a better direction, and hope it's accompanied with better ideas of load limits for more water bodies. Plus tools to know how to measure and apply the knowledge.

Will this "Water Quality Atlas" be used in a similar way as the statewide "Wetland Inventory Mapping Project"? I am asking this because I have seen nothing on this survey since it was completed. I went back to ask Connor Racette, the lead on the wetlands survey, 2 years later, after I knew the data was taking a long time to enter. But he was no longer at the Ecology, or at least not at the same position.

We are not able to measure how much more wetlands we can afford to lose, as they disappear rapidly due to development. For Kenmore, one wetland only 15 years ago was at 14 acres. Now, it is down to 7.5 acres. This is one that supports very steep slopes. Without the information, we have no way of encouraging less disruption that can prevent tragedies later.

Thank you for the opportunity to explain how the public feel.

We would appreciate more hands-on help from Ecology for the big questions.

Response to 18.A

There is no information on a specific listing or waterbody so we are unable to respond directly to this comment. We provided an overview of the Assessment Search Tool and Water Quality Atlas during the public review webinar and provided further detail on these tools in our Public Review Guidance document. To our knowledge both tools were functioning correctly throughout the public review period. Assessment staff followed up with the commenter for more information and received no response.

Citations

Ecology's Water Quality Program is required to identify the information sources relied upon in support of certain agency actions defined by RCW 34.05.272.

At the end of each citation is a number in brackets identifying which of the citation categories below the sources of information belongs. (RCW 34.05.272).

Table 2. Citation Categories.

Citation Categories				
1	Peer review is overseen by an independent third party.			
2	Review is by staff internal to Department of Ecology.			
3	Review is by persons that are external to and selected by the Department of Ecology.			
4	Documented open public review process that is not limited to invited organizations or individuals.			
5	Federal and state statutes.			
6	Court and hearings board decisions.			
7	Federal and state administrative rules and regulations.			
8	Policy and regulatory documents adopted by local governments.			
9	Data from primary research, monitoring activities, or other sources, but that has not been incorporated as part of documents reviewed under other processes.			
10	Records of best professional judgment of Department of Ecology employees or other individuals.			
11	Sources of information that do not fit into one of the other categories listed.			

Berg, C. 2019. City of Bainbridge Island: State of the Island's Water, Section Edition. <u>https://bainbridgewa.gov/DocumentCenter/View/11715/State-of-the-Waters-Report 2019</u> [9]

Collyard, S. and N. O'Rourke. 2021. Quality Assurance Project Plan: Lower Snohomish River Tributaries Fecal Coliform Bacteria Effectiveness Monitoring. Publication 21-03-107. Washington State Department of Ecology, Olympia. <u>https://apps.ecology.wa.gov/publications/SummaryPages/2103107.html</u> [2] Hardy, J. 2021. Washington State Recreational Guidance for Microcystins, Anatoxin-a, Cylindrospermopsin and Saxitoxin. Publication 333-279. <u>https://doh.wa.gov/sites/default/files/legacy/Documents/4300/333-279-</u> <u>GuidanceFreshwaterToxins.pdf?uid=648b2f99a3eb6</u> [9]

Larson, C. 2022. Standard Operating Procedure EAP073, Version 2.5: Minimum Requirements for the Collection of Freshwater Benthic Macroinvertebrates in Streams and Rivers. Publication 22-03-212. Washington State Department of Ecology, Olympia. https://fortress.wa.gov/ecy/publications/SummaryPages/1903211.html [2]

Mathieu, C. and M. McCall. 2016. Survey of Per- and Poly-fluoroalkyl Substances (PFASs) in Rivers and Lakes, 2016. Publication 17-03-021. Washington State Department of Ecology, Olympia. <u>https://apps.ecology.wa.gov/publications/documents/1703021.pdf</u> [2]

O'Neil, S., D. Hallock, and K. Smith. 2001. Water Quality Assessments of Selected Lakes within Washington State: 1999. Publication 01-03-009. Washington State Department of Ecology, Olympia. <u>https://apps.ecology.wa.gov/publications/SummaryPages/0103009.html</u> [2]

United States Environmental Protection Agency. 2012. Water Quality Standards Handbook Chapter 2: Designation of Uses. Publication EPA 823-B-12-002. <u>https://www.epa.gov/sites/default/files/2014-10/documents/handbook-chapter2.pdf</u> [7]

United States Environmental Protection Agency. 2024. Method 1633, Revision A. Analysis of Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous, Solid, Biosolids, and Tissue Samples by LC-MS/MS. Publication EPA 820-R-24-007.

https://www.epa.gov/system/files/documents/2024-12/method-1633a-december-5-2024-508compliant.pdf [4]

Washington Department of Ecology. 2000. Lower Skagit River Fecal Coliform Total Maximum Daily Load Submittal Report – Water Cleanup Plan. Publication 00-10-010. <u>https://apps.ecology.wa.gov/publications/documents/0010010.pdf</u> [2, 3, 4]

Washington Department of Ecology. 2008(a). Lower Skagit River Tributaries Temperature Total Maximum Daily Load Water Quality Improvement Report. Publication 08-10-020. <u>https://apps.ecology.wa.gov/publications/documents/0810020.pdf</u> [2, 3, 4]

Washington Department of Ecology. 2008(b). Samish Bay Watershed Fecal Coliform Bacteria Total Maximum Daily Load: Volume 1, Water Quality Study Findings. Publication 08-03-029. https://apps.ecology.wa.gov/publications/documents/0803029.pdf [2, 3, 4]

Washington Department of Ecology. 2004. Stillaguamish River Watershed Temperature Total Maximum Daily Load Study. Publication 04-03-010. https://apps.ecology.wa.gov/publications/documents/0403010.pdf [2, 3, 4]

Washington Department of Ecology. 2019. Hangman (Latah) Creek Watershed Fecal Coliform, Temperature, and Turbidity Total Maximum Daily Load Water Quality Improvement Report. Publication 09-10-030. <u>https://apps.ecology.wa.gov/publications/documents/0910030.pdf</u> [2, 3, 4]

Washington Department of Ecology. 2020(a). Padilla Bay Freshwater Tributaries Fecal Coliform Bacteria Total Maximum Daily Load Report - Water Quality Improvement Report and Implementation Plan. Publication 20-10-036.

https://apps.ecology.wa.gov/publications/documents/2010036.pdf [2, 3, 4]

Washington Department of Ecology. 2020(b). Eastern Padilla Bay Tributaries Fecal Coliform Bacteria Total Maximum Daily Load: Water Quality Study Findings. Publication 20-03-001. https://apps.ecology.wa.gov/publications/documents/2003001.pdf [2, 3, 4]

Washington Department of Ecology. 2021. Supporting Information for 2018 Water Quality Assessment Supplemental Methods, Citations, and Data Sources. Ecology Publication No. 21-10-043. <u>https://apps.ecology.wa.gov/publications/documents/2210018.pdf</u> [2]

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Washington Department of Ecology. 2025. Supporting Information for Draft 2022 Water Quality Assessment: Supplemental Methods, Citations, TMDL Prioritization, and Data Sources. Publication 25-10-025.

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Washington State Office of the Attorney General. 1969. AGO 1969 No. 4 - OFFICES AND OFFICERS - STATE - POLLUTION CONTROL COMMISSION - ADOPTION OF WATER QUALITY STANDARDS FOR WATERS OF THE STATE. <u>https://www.atg.wa.gov/ago-opinions/offices-and-officers-state-pollution-control-commission-adoption-water-quality</u> [6]

Appendix A. List of Comments

List of all comments received during the public review period of the 2022 Assessment including the commenter, the Listing ID (if applicable), and the comment. Some commenters are numbered to directly link the comments in the response document.

COMMENTER	LISTING ID	COMMENT
Andrea Xaver	NA	Big Lake in Skagit County, along with the adjacent north end of Lake Creek, are toxic. Many residents around the shore of Big Lake are concerned about the level of phosphorus. Reed Canary Grass has invaded the north end of Lake Creek that goes into Big Lake. It has also invaded the wetland in the same area. Reed Canary Grass is toxic, warms water, and absorbs oxygen. This invasive grass is killing fish and frogs. Both the lake and the creek need immediate help.
Beth Rosenstiel	6163	I have lived on Big Lake for the last 43 years. The green algae bloom this fall was the brightest, densest and most persistent I have ever seen. It is my understanding that phosphorus is a significant contributor to its growth and that the algae can diminish the oxygen in the lake affecting aquatic life. If I could, I would attach a picture taken of the water that looks like an abstract painting with florescent paint! Please continue to monitor the lake and provide remediation guidance. Thank you
Bonnie Blessing	7753	So this area is listed for bacteria? They do have a few cows there occasionally but this is for habitat enhancement. Can you send me Berg et al 1995 I wonder if they should remove this one from the need for a TMDL as the livestock maintain habitat?
Bonnie Blessing	71058	Since mudminnow, an indigenous or native small nonsalmonid fish that tolerates or maybe even thrives in low dO occurs in this drainage, does the stream need to be listed for dO? Ah, I see, the designated use is salmon. Hmm. Lots of publications on that I can forward
Bonnie Blessing	7753	I notice that recreation is a designated use here at Dempsey. Isn't wildlife a designated use or existing use as well? In this 7753.

Bonnie Blessing	NA	I believe that a surface water is being limited in its capacity to support designated uses due to instream flows and maybe invasive plants. Coho and wildlife occur in Beatty Creek and its wetlands (Figure 1,2). Yesterday 13 November 2024, I noticed invasive plants and turbid water in the coho and chum spawning habitat. We see Beatty Creek dries from near its confluence with McLane (near ~ 47.001028, -123.00817) upstream to about Chelsie Drive (near 46.992574, -123.020966). (T18N, R3W, S36, T17N, R3W, S2 and S39). Low flows were apparently documented by Wildfish Conservancy and a local blogger. (Figure 3 and 5 as mapped somewhat on Figure 4 and 6).
		Don't Coho need prolonged hydroperiod because they stay in the stream year round?
		Because ~ mile of this stream dries up restricting any fish to tiny pocket pools or even pockets of water under gravel I believe this reach should be included as a 4c or 4d reach with the parameter instream flow. I hope this information could be used to inform whether Ecology authorizes activities that could change the instream flows. Naturally the area has glacial deposits that may somewhat reduce surface water. A residential area with a detention basin is nearby but much of the upland area is forested. Occasional landslides have occurred in watershed in geologuic and possibly historic times.
		Its interesting to compare current 'condition' with General Land office surveys from 1855 (Figures 7-10). The lower reaches of Beatty Creek where it enters McLane is in Section 1 of Township 17NR03W in Thurston County. The presence of the stream would have been recorded by GLO surveys. Yt is it possible they were having difficulty with their new compass. GLO surveys from June 1855 had just started using the new solar compass to avoided problems due to iron ore deposits The GLO surveyors who had just signed a contract on June 12, 1855 with James Tilton mapped streams and upland habitat in S1 of T17NR03W. Hart and Lyle (on page 209) report 'a branch' at 66.5chains from the north east end of S1 of T17NR03W. The 'branch' is 20 links wide. (A link is 7.92 inches long. A branch is a stream a chain is 66'). I believe this means that surveyrs only documented the presence of McLane Creek in June of 1855 was 7.92x20 inches wide or ~153 inches wide. (See page 210 of the GLO survey done in1855). The odd thing is the branch (stream) appears to be about where McLane Creek is and not Beatty Creek (Figure 11).
		Beatty Creek, where it occurs today does not appear to be recorded, but the surveyors had just started to use the new and improved solar compass (see page 209) so may have been working out the kinks. Of interest to land use is that one area that is now mostly forested was prairie in 1855. On June 15, 1855, Enoch Hart, William Lyle and William Braun, the GLO surveyors (Page 209) reported prairie along the northern boundary of S1 of T17NR03W from chain 4 to chain 28. Oregon white oaks a prairie species persist under forest in this former prairie between Camelot Drive to Delphi Road.
		We all wonder whether Beatty Creek has been relocated due to development or road construction. But, whether or not Beatty Creek has been 'relocated' since 1855, coho and cutthroat and wildlife occupy the stream and nearby wetlands. Due to low instream flows I believe coho habitat is degraded. Can this one mile reach of Beatty Creek be added to a 4d list with the impairment being instream flow and invasive plants?
COMMENTER	LISTING ID	COMMENT
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		Data sources include WDFW Source of PHS https://geodataservices.wdfw.wa.gov/hp/phs/, https://wildfishconservancy.org/, a local blog entitled Watershedovente
		https://watershedevents.typepad.com/watershedevents/beatty-creek/
		Sources include the Oregon land status and cadastral survey records athttps://www.blm.gov/or/landrecords/survey/ySrvy1.php
Brandon Taylor	6163	I have noticed a big change in Big Lake in the last two or three years. Around two years ago there were thousands of dead clam shells on the beach. There was also a very high number of dead fish. In the past, we would typically have only one algae bloom (blue oily) towards the end of summer, but over the past two or three years there has been green algae bloom starting in early-mid summer. The visibility in the lake has decreased to about six inches. My children have gotten swimmers itch, so we have stopped allowing them to swim in the lake, which has limited recreational use in the lake to around 3 to 4 weeks each year.
City of Seattle - Jess Huybregts	102511	Several listings for pH (listings 102511, 102490, 102488, and 102485) and bacteria (listings 12187 and 12204) utilized data exceeding ten years of age to establish listings within Lake Washington. Policy 1-11 states, "Generally, Ecology will not assess data older than ten years for a given cycle unless noted in the parameter-specific WQA considerations described in Part 2. However, Ecology may consider data and information older than ten years when necessary to determine historic conditions." As pH and bacteria can fluctuate rapidly within a water body and are not persistent impairments, SPU does not believe it is appropriate to utilize data exceeding ten years of age to establish new water quality listings. If more recent data indicated impairment for these criteria, SPU would concur with the listings. Please re-consider the use of old data to derive this listing. Thank you.
City of Seattle - Jess Huybregts	102490	Several listings for pH (listings 102511, 102490, 102488, and 102485) and bacteria (listings 12187 and 12204) utilized data exceeding ten years of age to establish listings within Lake Washington. Policy 1-11 states, "Generally, Ecology will not assess data older than ten years for a given cycle unless noted in the parameter-specific WQA considerations described in Part 2. However, Ecology may consider data and information older than ten years when necessary to determine historic conditions." As pH and bacteria can fluctuate rapidly within a water body and are not persistent impairments, SPU does not believe it is appropriate to utilize data exceeding ten years of age to establish new water quality listings. If more recent data indicated impairment for these criteria, SPU would concur with the listings. Please re-consider the use of old data to derive this listing. Thank you.

COMMENTER	LISTING ID	COMMENT
City of Seattle - Jess Huybregts	102488	Several listings for pH (listings 102511, 102490, 102488, and 102485) and bacteria (listings 12187 and 12204) utilized data exceeding ten years of age to establish listings within Lake Washington. Policy 1-11 states, "Generally, Ecology will not assess data older than ten years for a given cycle unless noted in the parameter-specific WQA considerations described in Part 2. However, Ecology may consider data and information older than ten years when necessary to determine historic conditions." As pH and bacteria can fluctuate rapidly within a water body and are not persistent impairments, SPU does not believe it is appropriate to utilize data exceeding ten years of age to establish new water quality listings. If more recent data indicated impairment for these criteria, SPU would concur with the listings. Please re-consider the use of old data to derive this listing. Thank you.
City of Seattle - Jess Huybregts	102485	Several listings for pH (listings 102511, 102490, 102488, and 102485) and bacteria (listings 12187 and 12204) utilized data exceeding ten years of age to establish listings within Lake Washington. Policy 1-11 states, "Generally, Ecology will not assess data older than ten years for a given cycle unless noted in the parameter-specific WQA considerations described in Part 2. However, Ecology may consider data and information older than ten years when necessary to determine historic conditions." As pH and bacteria can fluctuate rapidly within a water body and are not persistent impairments, SPU does not believe it is appropriate to utilize data exceeding ten years of age to establish new water quality listings. If more recent data indicated impairment for these criteria, SPU would concur with the listings. Please re-consider the use of old data to derive this listing. Thank you.
City of Seattle - Jess Huybregts	12187	Several listings for pH (listings 102511, 102490, 102488, and 102485) and bacteria (listings 12187 and 12204) utilized data exceeding ten years of age to establish listings within Lake Washington. Policy 1-11 states, "Generally, Ecology will not assess data older than ten years for a given cycle unless noted in the parameter-specific WQA considerations described in Part 2. However, Ecology may consider data and information older than ten years when necessary to determine historic conditions." As pH and bacteria can fluctuate rapidly within a water body and are not persistent impairments, SPU does not believe it is appropriate to utilize data exceeding ten years of age to establish new water quality listings. If more recent data indicated impairment for these criteria, SPU would concur with the listings. Please re-consider the use of old data to derive this listing. Thank you.
City of Seattle - Jess Huybregts	12204	Several listings for pH (listings 102511, 102490, 102488, and 102485) and bacteria (listings 12187 and 12204) utilized data exceeding ten years of age to establish listings within Lake Washington. Policy 1-11 states, "Generally, Ecology will not assess data older than ten years for a given cycle unless noted in the parameter-specific WQA considerations described in Part 2. However, Ecology may consider data and information older than ten years when necessary to determine historic conditions." As pH and bacteria can fluctuate rapidly within a water body and are not persistent impairments, SPU does not believe it is appropriate to utilize data exceeding ten years of age to establish new water quality listings. If more recent data indicated impairment for these criteria, SPU would concur with the listings. Please re-consider the use of old data to derive this listing. Thank you.

COMMENTER	LISTING ID	COMMENT
Dean Seckel	6163	Excessive pollution level 5. Plans to drain Overlook Crest development and Golf Course ponds into the lake will add significant pollution into the lake. A 42 pipe is planned to drain millions of gallons of polluted runoff into Big Lake a distressed body of water. This is against current laws and must be shut down!
Ellen Bynum - 1	6163	Please use the current data from Skagit County or verify that data with your own testing. Two summers of algae blooms did not happen because Big Lake was within the tentative total phosphorus criterion, based on 1999 data. Thanks.
Ellen Bynum - 2	4654	Reed canary grass is not being managed and causing adjacent flooding as well as impeding fish passage. Please add to DOE's plan to eliminate this pest. Thanks.
Ellen Bynum - 3	72207	If the additional stormwater from the proposed 105 homes above Big Lake is added to the lake, DOE will need to re-sample for all of these levels. The volume of untreated SW is estimated to add 30% volume to the lake, creating flooding hazards especially in regular rain events. Please bring the date up to re-assess and raise the Category 2 to a more accurate level. Thanks.
Ellen Bynum - 4	75632	Please reassess the data and raise the threat level for this and other toxins in Big Lake. If the additional stormwater from the proposed 105 homes above Big Lake is added to the lake, DOE will need to re-sample for all of these levels. The volume of untreated SW is estimated to add 30% volume to the lake, creating flooding hazards especially in regular rain events. Please bring the data up to a current and more accurate result and re-assess and raise the Category 2 to a more accurate level. Thanks.
Ellen Bynum - 5	78514	Please update the data for this chemical to use more recent EPA studies. The presence of the chemical in fish, presumably that humans can consume, should warrant a plan to eliminate the toxin from the lake. If the additional stormwater from the proposed 105 homes above Big Lake is added to the lake, DOE will need to re-sample for all of these levels. The volume of untreated SW is estimated to add 30% volume to the lake, creating flooding hazards especially in regular rain events. Please bring the data up to date and re-assess and impose Category 5 to start a clean up plan for this toxin. Thank you.

COMMENTER	LISTING ID	COMMENT
Ellen Bynum - 6	78514	If the additional stormwater from the proposed 105 homes above Big Lake is added to the lake, DOE will need to re-sample for all of these levels. The volume of untreated SW is estimated to add 30% volume to the lake, creating flooding hazards especially in regular rain events. Please bring the data up to date and re-assess and create a plan to eliminate dioxin from Big Lake. Thanks.
Ellen Bynum - 7	78583	If the additional stormwater from the proposed 105 homes above Big Lake is added to the lake, DOE will need to re-sample for all of the toxin levels. The volume of untreated SW is estimated to add 30% volume to the lake, creating flooding hazards especially in regular rain events. Please bring the data up to date to re-assess and raise the Category 2 to a more accurate level. Thanks
Ellen Bynum - 8	78804	If the additional stormwater from the proposed 105 homes above Big Lake is added to the lake, DOE will need to re-sample for all of the toxin levels. The volume of untreated SW is estimated to add 30% volume to the lake, creating flooding hazards especially in regular rain events. Please bring the data up to date to re-assess and raise the Category 2 to a more accurate level. Thanks
Ellen Bynum - 9	88584	Carrying data forward from questionable samples is not acceptable when the historical determination was already a Category 5. If the additional stormwater from the proposed 105 homes above Big Lake is added to the lake, DOE will need to re-sample for all of the toxin levels. The volume of untreated SW is estimated to add 30% volume to the lake, creating flooding hazards especially in regular rain events. Please bring the data up to date to re-assess and create a plan to eliminate the Category 5 toxin in Big Lake and downstream waters. Thanks

water quality of the lake has declined in a predictable manner with no regard for the coming to the lake it was a well-known fact by all of the residents that the lake had b was a large amount of woody debris and it was not uncommon to come out of the wa	cause. When I first started been used for logging. There rater itching from bark
especially at the north end of the lake. Since then, the woody debris has mostly settle	led to the bottom of the lake
which makes it less obvious that it is there but it is still impacting the water quality. I	l do not have access to
professional equipment but I have been doing a fair amount of testing using off the s	shelf pond testing equipment. I
tested for Phosphorus and desolved oxygen throughout the year. There was only one	e point this summer where the
levels of Phosphorus was under the safe levels for a pond. The DO levels were ok at	the surface but at appx 6'
down the oxygen levels were below safe minimums. This would explain why we have	e seen fish die off and a
massive mussel die off in august of 2022 which appears to have killed all of the lake	clams or mussels. There are
things that can be done to mitigate the high levels of phosphorus but the state and c about it.	ounty refuse to do anything
I spoke with the department of Ecology and discussed the large amount of woody de	ebris in the lake. They
indicated that there was no record of there ever being a lumber company on the lake	e. After sending them evidence
of Day Lumber running on what was then called Day Lake they explained to me the re	eality that because the lumber
company no longer exists they could not be required to clear up the damage to the w	vater. She indicated that the
department of ecology could make the state do the work but there is a long list of lak	kes wanting that money and it
would likely take years to get approval.	
That brings me to the current situation. As you know phosphorus is naturally occurring the late and but also from any off of fartilizer and other above all the tures.	ing from organic materials in
the lake such as wood but also from run off of fertilizer and other chemicals that was	sn into the storm drain
system. A body of water can usually manager this because the plant material uses p	Distribution of the weeds debrie as
phosphorus and creates oxygen. The problem is when suspended organic materials	such as the woody debris as
well as algae block the sunlight and do not allow photosynthesis to occur. If you look	k at the take bed around my
ropain the problem but so far no one has been willing to now the hill to fix it	inings that can be done to
These are the steps that should be done to clean up the lake and save the ecosystem	m
1) Use an alum based product to bind with the phosphorus and take it to the bottom	n. of the lake
2) Introduce beneficial bacteria to the lake in large volumes to belo break down the c	organic material already at the
bottom of the lake	signific material alloady at the
3) Introduce aeration to the lake. We would need between 3-7 aeration stations arou	und the lake to produce the
proper amount of oxygen.	
4) Consider dredging the lake. This would have several benefits. It would remove large	ge wood and garbage from the
bottom of the lake left there by the mill and other dumping. It would reintroduce dee	ep areas of the lake that used
to exist. Without these areas fish have nowhere to go when the water warms up and	they either go down stream
and die or die in the warm oxygen deprived lake water. Last the deeper center sectio	on of the lake would reduce
turbulence caused by boats by allowing the wave energy to disperse down into the w	vater column.
5) This is a controversial suggestion but there should be a limit to the number of boar	its that can be launched onto

COMMENTER	LISTING ID	COMMENT
		 the lake in a single day. This is not a unique idea and many boat launches have limits for day use. This would reduce the amount of foreign water and organisms that frequently travel in boats especially those with ballast tanks, it would reduce the amount of turbidity on summer days when the lake is packed with boats. 6) To help pay for the lake treatment there should be a charge to launch and park at the launch. The residents of the lake should be exempt from this charge. Ultimately the residents will pay the majority of the cost of the lake treatment. the rest of the users can contribute.
Gordon Marks	NA	I would like to express my concern for the lack of a EIS on the development that was approved above the East side of Big Lake. The water quality will likely be impacted in Big Lake and I feel the developer should be required to mitigate the water quality over the next 5-10 years. Perhaps requiring an aeriator to be installed in the lake would help offset the declining water quality.
Howard Louis Raff	6163	I am a homeowner on BIG Lake in Skagit county and would like to know how soon an action plan will be developed regarding the toxic water quality we have been subject to over the past several years. We have annual algae blooms, dead clam shells , and what has been described as a Category five water quality in our lake. We need help since our kids and visitors cannot use the lake for recreation, boating over even fishing. Please help save this beautiful large body of water that we all enjoy and pay taxes to help maintain for many years to come. Thank You.

COMMENTER	LISTING ID	COMMENT
Jacob Koopmans	6163	I am submitting public comments on the draft Water Quality Assessment. My family has owned and lived on Big Lake, in Mount Vernon WA for the last 40 years. This last summer, Big Lake had the worst algae bloom we have ever seen. The bloom started in early August 2024 and was present well in to November 2024. We stopped swimming and recreating in the water in August due to several of our family members getting swimmers itch and sinus congestion after exposure to the water. Please prioritize water quality testing and help Skagit County and our community identify an Action Plan to ensure our water is safe for recreating and safe for the fragile lake ecosystem. I see Big Lake is a waterbody that is listed on the Washington Department of Ecology 303(d) list as an impaired waterbody, with Category 5 levels of Dioxin (2,3,7,8-TCDD) and Methyl mercury, a Category 4 level of non-native Aquatic plants, and Category 2 levels of 4,4'-DDE, Hexachlorobenzene, 2,3,7,8-TCDD TEQ, Polychlorinated Biphenyls (PCBs), and Total Phosphorus. I have read Phosphorus is a critical nutrient in fueling algae growth which impacts aesthetics and recreation, the total Dissolved Oxygen in the lake (aquatic life), and contributes to toxic blue-green algal blooms that threaten human, pet, and wildlife health. I see Ecology has not tested Big Lake for Phosphorus levels since 1999. I promise our water quality has significantly degraded since then and is in desperate need of retesting. I see in 1999, total phosphorus concentration of Big Lake was 18.7 micrograms/L and recommended a maximum total phosphorus criterion of 20 micrograms/L. Skagit County Public Works has been testing Big Lake annually for many years. Skagit County has data shows Total Phosphorus was out falling water with 65 micrograms/L which is 3 times higher than the recommended maximum phosphorus criterion!!! Please help us by retesting Big Lake to establish an updated Category Assignment. We have pictures of the Algae we can provided if that will aid in assessment. Thank You.
Jan Edelstein - 1	6163	When was the last time Ecology assessed this AU for compliance with Total Phosphorous criteria, rather than simply carry forward the 2004 assessment?

COMMENTER	LISTING ID	COMMENT
Jan Edelstein - 2	NA	I write to submit the professional opinion of Dr. Richard Horner, professor emeritus from University of Washington and long-time consultant to Washington State and California governments on managing impacts of stormwater runoff on salmonoids. In this opinion letter, Dr. Horner assesses the current state of Big Lake as degraded at pdf pages 5 to 10, citing a number of sources of information. For his qualifications, please see PDF pages 28 – 60. I regret that I was unable to file this comment through the portal as requested, but wanted to try yet again to have Department of Ecology fill the 25 year gap since it last reviewed Total Phosphorous data for Big Lake. At that time, the lake was listed as Level 2 for TP, and that listing has been carried forward for 24 years, as if it were currently accurate. It is not. It has become clear to many witnesses who testified under oath in August, 2024, before the Hearing Examiner in Skagit County that Big Lake has degraded, due to algae caused by excess nutrients, and is no longer used by them, or their friends and neighbors, for 'contact recreation' and that fishing has seriously declined. Photos of algae blooms from June 2024 to November 2024 can be provided. This testimony is supported by the water quality monitoring performed by Skagit County pursuant to a Growth Management Hearings Board order 20 years ago to develop data for TMDL Listings, among other things. I have heretofore submitted this data. Unfortunately, at this time, Skagit County staff have not been provided the resources to submit its data through EIM. Please, don't make Big Lake wait another 5 years for its "Level 5 – Impaired" listing. The lake needs it now to help concerned citizens make the case to protect it from new pollution sources.

COMMENTER	LISTING ID	COMMENT
Jeane Ebeling	6163	 Hello, my name is Jeane Ebeling, I moved to Big Lake, WA in October 1998 and lived happily at 23970 N. Westview Rd, until March 2008. Although, I no longer live on the Lake, I am still able to enjoy it through out the year. I still go out throughout the year to enjoy Big Lake, but mostly during the Summer to enjoy the Water, from Floating the lake, to swimming, Jet Skiing, and boating not the Mention enjoying the 3rd of July Fireworks. However, something needs to be done to Save Big Lake, as it is Dying. I love Big Lake, and Miss living on it dearly. However, over the past few years I have watched first hand as the quality of the lake has declined, so much so that I no longer get in the water. I have not been in the water for now three summers. I was in the Lake all Summer long from the moment we moved onto the Lake until just a few years ago. The Lake is now full of algae blooms, and there is a sheen of green along the shoreline. It is so saddening to see, our Beautiful Lake dying. I am requesting that the DOE test the lake regularly, as it has not been tested since 1999. That was 26 years ago. 26 YEARS!!! Why is this lake not tested yearly? How is it that the lake is so out of control with toxins, yet the home owners are still paying to have it treated yearly. How years and there is a second control with toxins, yet the home owners are still paying to have it treated yearly. Mhy is it not working? As I stated before, The DOE last tested the lake for Phosphorus in 1999. think about that for a moment. At that time, 26 years ago the levels were at 18.7 Micrograms/L, and it was recommended to be a maximum of 20 Micro/L. Although, Skagit County Public Works and Natural Resources Department has been monitoring the total Phosphorus in Big Lake Since 2004, we are still way over the limit. We are currently 3x's the limit, which puts Big Lake at level 5 Category that requires immediate action to lower these levels. I am asking that the DOE test the lake, and come up with a
Jeff Nelson - 1	4654	I have been a life-long recreational user of Big Lake in Skagit County and a waterfront property owner since 2007. During this time, the frequency of which we have had to stop contact recreation, swimming, and water sports has increased significantly due to concerns for toxic algae blooms, pollution, and invasive plant growth. Fishing has been a life-long family activity and we will not fish on the lake and would never eat fish caught in the lake due to pollution concerns. It is very concerning that we cannot safely fish from our own property. We frequently see dead fish floating along the shoreline. We strongly encourage the Department of Ecology to immediately resume water quality studies to develop a plan to restore environmental safety to this valuable public natural resource.

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Jeff Nelson - 2	6163	I have been a life-long recreational user of Big Lake in Skagit County and a waterfront property owner since 2007. During this time, the frequency of which we have had to stop contact recreation, swimming, and water sports has increased significantly due to concerns for toxic algae blooms, pollution, and invasive plant growth. Fishing has been a life-long family activity and we will not fish on the lake and would never eat fish caught in the lake due to pollution concerns. It is very concerning that we cannot safely fish from our own property. We frequently see dead fish floating along the shoreline. We strongly encourage the Department of Ecology to immediately resume water quality studies to develop a plan to restore environmental safety to this valuable public natural resource.
Jeff Nelson – 3	72207	I have been a life-long recreational user of Big Lake in Skagit County and a waterfront property owner since 2007. During this time, the frequency of which we have had to stop contact recreation, swimming, and water sports has increased significantly due to concerns for toxic algae blooms, pollution, and invasive plant growth. Fishing has been a life-long family activity and we will not fish on the lake and would never eat fish caught in the lake due to pollution concerns. It is very concerning that we cannot safely fish from our own property. We frequently see dead fish floating along the shoreline. We strongly encourage the Department of Ecology to immediately resume water quality studies to develop a plan to restore environmental safety to this valuable public natural resource.
Jeff Nelson – 4	75632	I have been a life-long recreational user of Big Lake in Skagit County and a waterfront property owner since 2007. During this time, the frequency of which we have had to stop contact recreation, swimming, and water sports has increased significantly due to concerns for toxic algae blooms, pollution, and invasive plant growth. Fishing has been a life-long family activity and we will not fish on the lake and would never eat fish caught in the lake due to pollution concerns. It is very concerning that we cannot safely fish from our own property. We frequently see dead fish floating along the shoreline. We strongly encourage the Department of Ecology to immediately resume water quality studies to develop a plan to restore environmental safety to this valuable public natural resource.
Jeff Nelson – 5	78514	I have been a life-long recreational user of Big Lake in Skagit County and a waterfront property owner since 2007. During this time, the frequency of which we have had to stop contact recreation, swimming, and water sports has increased significantly due to concerns for toxic algae blooms, pollution, and invasive plant growth. Fishing has been a life-long family activity and we will not fish on the lake and would never eat fish caught in the lake due to pollution concerns. It is very concerning that we cannot safely fish from our own property. We frequently see dead fish floating along the shoreline. We strongly encourage the Department of Ecology to immediately resume water quality studies to develop a plan to restore environmental safety to this valuable public natural resource.

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Jeff Nelson – 6	78583	I have been a life-long recreational user of Big Lake in Skagit County and a waterfront property owner since 2007. During this time, the frequency of which we have had to stop contact recreation, swimming, and water sports has increased significantly due to concerns for toxic algae blooms, pollution, and invasive plant growth. Fishing has been a life-long family activity and we will not fish on the lake and would never eat fish caught in the lake due to pollution concerns. It is very concerning that we cannot safely fish from our own property. We frequently see dead fish floating along the shoreline. We strongly encourage the Department of Ecology to immediately resume water quality studies to develop a plan to restore environmental safety to this valuable public natural resource.
Jeff Nelson – 7	78804	I have been a life-long recreational user of Big Lake in Skagit County and a waterfront property owner since 2007. During this time, the frequency of which we have had to stop contact recreation, swimming, and water sports has increased significantly due to concerns for toxic algae blooms, pollution, and invasive plant growth. Fishing has been a life-long family activity and we will not fish on the lake and would never eat fish caught in the lake due to pollution concerns. It is very concerning that we cannot safely fish from our own property. We frequently see dead fish floating along the shoreline. We strongly encourage the Department of Ecology to immediately resume water quality studies to develop a plan to restore environmental safety to this valuable public natural resource.
Jeff Nelson - 8	88584	I have been a life-long recreational user of Big Lake in Skagit County and a waterfront property owner since 2007. During this time, the frequency of which we have had to stop contact recreation, swimming, and water sports has increased significantly due to concerns for toxic algae blooms, pollution, and invasive plant growth. Fishing has been a life-long family activity and we will not fish on the lake and would never eat fish caught in the lake due to pollution concerns. It is very concerning that we cannot safely fish from our own property. We frequently see dead fish floating along the shoreline. We strongly encourage the Department of Ecology to immediately resume water quality studies to develop a plan to restore environmental safety to this valuable public natural resource.
Jim Young	106267	I urge stronger policies and regulations that address land use practices to control sediment and other pollution in the Spokane River in all areas. We need a vibrant waterway to remain healthy ourselves, and focusing on fixing and sustaining a flourishing environment is necessary for our well-being and a responsibility to our posterity.
John P Verdoes	6163	I have lived on Big Lake since 1970. It seems to me that even though the promise of Big Lake having less algae when the sewer was put in place has not materialized. It has been getting worse. In fact this last year it was extremely dense and lasted for longer than usual. It would be helpful if there was a study of this problem and some plans made to mitigate this problem. Thank you.

COMMENTER	LISTING ID	COMMENT
Katrina Martich	106267	I'm writing in support of adopting a turbidity TMDL for the Spokane River. The river's designated use makes clear the importance of salmonid species as indicators of the overall health of the river. We can't avoid the impacts climate change will have on redband trout; however, we can and should work to improve their chances to be resilient by eliminating the additional stress of human-caused, turbidity impairment of the Spokane River. The proposed TMDL will provide an impetus to move us toward that goal. The TMDL also offers an opportunity to move toward reparations of the harm done to the Spokane and Coeur d'Alene tribes when dams stopped the salmon runs. Adopting this TMDL will be a sign of support for the tribes' on-going efforts to restore salmon to the Spokane River. All of us living in the Spokane watershed will benefit from restoration of salmon to the river and the watershed ecosystem benefits that come with the salmon. I give thanks to the Department of Ecology for taking the important step of acknowledging the data collected by the citizen science project and drafting this proposed turbidity TMDL. I now urge its adoption, so all involved may move forward to its implementation.
Kennewick Irrigation District	NA	The Water Quality Assessment (WQA) Tool: A search in the WQA tool of Benton County waterbodies with water quality data reveals many irrigation facilities, including numerous drains and wasteways (mostly related to the Roza-Sunnyside system) and even a couple of canals being included in the assessment tool. The Columbia Canal of Columbia Irrigation District (CID) is listed in the database, as is the Chandler Canal, owned and operated by the United State Bureau of Reclamation for the purposes of diverting water for KID irrigation use, as well as hydropower generation and hydraulic pumping uses at the Chandler Pumping Plant. The listing for the Chandler Canal is Category 2 (Waters of Concern) for Fecal Coliform Bacteria. The listed designated use that the contamination impairs is "Recreation – Primary Contact", which may be true of the Yakima River but is not true of the canal, which should never see any recreational use. Amon Wasteway is also in the database, where it is called "Amon Creek Wasteway." The wasteway is considered Category 3 (Insufficient Data) and is not considered impaired. The designated use in the Amon Wasteway is "Water Supply -Domestic Water," which is accurate in that water from the wasteway does supply urban irrigation water at the Gage Pumps (lawn watering is a part of domestic supply), but there is no drinking water sourced from the wasteway directly. KID questions if it is appropriate for constructed irrigation facilities to be included in the database, including Amon Wasteway, which is partially constructed and has flow that mostly (>99%) derives from irrigation return flows.

COMMENTER	LISTING ID	COMMENT
Kennewick Irrigation District	NA	The Water Quality Atlas: This GIS based mapping application has a layer named "Water Quality Standards" that shows just about every drainage feature as a water body in the state of Washington. The attributes of this data layer do not bother to name any of the features, it just links to a list of use designations and criteria, along with whether the feature is freshwater or brackish/saltwater. Many dry gulches are shown in our area that have probably not seen naturally occurring flowing water in thousands of years. Also shown is the entire KID (and other irrigation districts) canal and lateral system, including drains and wasteways. The layer seems to imply that the mapped features are all "waters of the state," and are thus subject to the water quality standards in WAC 173-201A. The question here is as it is above; should constructed irrigation facilities be included in the atlas? They could be useful as reference features, but to imply that they are "waters of the state" does not seem acceptable or accurate. In summary, if the state is set on issuing this assessment and related tools and atlas with irrigation facilities included, then the irrigation district that manages the relevant facilities should be the primary source of the data and should be consulted on its inclusion in the assessment, tool, and atlas.

COMMENTER	LISTING ID	COMMENT
Kim Sanford	NA	Department of Ecology, Please see emails exchanged below with Skagit County Board of Commissioners, Skagit County Public Works Department/Natural Resources Division and me, to provide your department with documentation of testing. The data provided is for Big Lake, Mount Vernon, Skagit County from 2004-2023, focusing on phosphorus. The excel files noted as 17 (Upper Nookachamps Creek) are tests taken at the Nookachamps Creek outlet for Big Lake. Those noted 18 (Lake Creek) are tests taken at the inlet for Big Lake. The files were provided by Jenn E Johnson, PhD, Natural Resources Division Manager, Skagit County. Big Lake is currently classified as a Category 2, testing done by DOE in 1999. It is now 25 years later, and the quality of the lake has decreased substantially. Skagit County has been testing Big Lake since 2004 for phosphorus, in 2023 Total Phosphorus was 64micrograms/L. In 1999 the test done by the DOE showed 18.7 micrograms/L. Big Lake is now 3X above the 20 micrograms/L threshold, Big Lake should be a Category 5. The quality of the Big Lake water is decreasing quickly. This summer (2024) was the worst yet. The algae blooms started to show in mid-July, by August the lake was covered 100 or more feet from shore and lasted all day. By late August the film was seen over most of the entire Lake. A film of blue-green that lessened visibility into the water was still very active the first week of November 2024. This summer we did not swim in the lake, the last 5 years we have not swum after the first of August. We are asking you please come test Big Lake. Update the testing results and reclassify Big Lake to Category 5, so a plan can be created, and the lake can be cleaned up and saved. In the emails below Skagit County states, they do not have the budget or staffing to complete reports to DOE. We are looking to you for testing. We love the lake, we are 5 generations, 40 years living part-time on the lake , swimming and skiing as early as Memorial Day through September most years. We are watching a great
Kimberly Hamburg Sanford	6163	Please consider prioritize getting updated data of BigLake as soon as possbile.Big Lake was last tested by DOE in 1999. Total Phosphorus was 18.7. Skagit County began testing in 2004. in 2023 total Phosphorus was over 60, this test taken at oulet to Nookachamps Creek. We have lived on BigLake part time for 40 years. We could see the bottom of the lake off our dock until about 10 years ago. Now we have been watching the bluegreen slimmy algea blooms in the lake. In the past 10 years the algea comes earlier each summer and stays later into the fall. We had seen the blue/green yuck come mid to late August and leave by early September. These past 2 years we have not swam in the lake, due to ichy skin and very fearful what other toxins in the water we might encounter.We also noticed the Blue/green was not longer on top of the water as it has been over the past10 years,but through all the water this year and last year. Also this year the Blue/green appreared earlier late June and lasted through November. We see fish dying and out little grandkids no longer fish. The lake has possibly become dangerous and icky. Our lake is dying, please test and prioritize! Thank you,

COMMENTER	LISTING ID	COMMENT
King County – 1	NA	Over the past several decades since the publication of the 2012 303d list, King County has conducted numerous sediment bioassays as part of our NPDES permit requirements. In cases where sporadic mortality or impaired growth results occurred, King County has conducted follow-up investigations to determine the cause of the exceedances. One type of special investigation we have conducted per permit requirements is a sediment toxicity identification evaluation (TIE). These types of special studies repeat sediment bioassays under slightly different conditions to determine whether the observed toxicity is due to natural factors like sediment grain size or due to a human sourced contaminant. Using the results from special studies which are intentionally trying to reproduce toxicity so that the source can be identified is not representative of the waterbody as a whole. In this case, the NPDES program has already concluded that the bioassay results and TIE studies do not represent a sediment quality standards violation. Specifically, in these cases, the toxicity was found to be from contact to the actual sediment surface. Screening eliminated the toxicity and is allowed under Ecology protocols as a modification for bioassays. Therefore, only those screened results should have been used in the assessment. Past comments addressing this issue remain relevant, and we urge Ecology to prioritize screened bioassay results in line with approved protocols.
King County – 2	NA	King County has consistently provided Ecology with water, sediment, and benthic macroinvertebrate monitoring data since the 2004 303d list. However, these datasets often have objectives distinct from Ecology or Clean Water Act regulatory decisions. For example, one of the most common objectives for King County water quality investigations is source tracing. Another is our swimming beach monitoring for public health objectives. In both types of investigations, and others, we frequently target "worst case" conditions in an effort to either find pollution sources or ensure that public health is protected. We share these data with the public, Ecology, and also upload them to the Environmental Information Management (EIM) database so that they are available for future investigators and analysis. Special studies targeting worst case conditions or sources are not representative of ambient water quality conditions and should not be used by themselves as the basis for impairment decisions. Policy 1-11 recognizes this, but we suspect that our data were not clearly labeled as non-representative. Detailed comments attached to this letter elaborate on these studies and associated listings that require revision.
King County – 3	NA	We have identified dissolved oxygen impairment listings that rely on older assessment methods and outdated data through our work with Ecology to understand the effects of nutrients on productivity and water quality in Puget Sound. We recommend revising these impairments to Category 2 to reflect current standards and practices.
King County – 4	4669	[Update listing with confirmed information] Add Egeria as confirmed by KC Noxious Weeds.
King County – 5	4680	[Update listing with confirmed information] Remove hydrilla as confirmed by KC Noxious Weeds and KC Lake Stewardship.

COMMENTER	LISTING ID	COMMENT
King County – 6	4684	[Update listing with confirmed information] Remove hydrilla as confirmed by KC Noxious Weeds and KC Lake Stewardship.
King County – 7	82959	[Inappropriate data used for assessment] These listings are based on data from the Quartermaster Harbor Pathogens Reduction Project. The results from the study were a biased dataset, in which high-bacteria events were targeted. Wet and dry season sampling events occurred, as well as a third event targeting high bacteria concentrations for source tracking purposes. Per page 33 of the WQS Assessment Guidance (Chapter 1-11): "Sampling that solely targets known periods of elevated bacteria levels is not representative of the general condition of an AU, as it may result in an artificially inflated proportion of samples that exceed the criteria. Therefore, Ecology will remove monitoring data from the evaluation when the intention of the monitoring is to target high bacteria levels." In the 2022 Draft WQA, Shawnee Creek (listing ID 88227; AU 17110019006661_001_001) was changed from Category 5 to Category 3 for Fecal Coliforms. Appropriately, the remark given was "Bacteria data from Study ID KCPIC_Quartermaster removed. Data collected during storm events targeting elevated concentrations." The same should be done for these listings, and they should be reassessed without the KCPIC_Quartermaster study data included.
King County – 8	83285	[Inappropriate data used for assessment] These listings are based on data from the Quartermaster Harbor Pathogens Reduction Project. The results from the study were a biased dataset, in which high-bacteria events were targeted. Wet and dry season sampling events occurred, as well as a third event targeting high bacteria concentrations for source tracking purposes. Per page 33 of the WQS Assessment Guidance (Chapter 1-11): "Sampling that solely targets known periods of elevated bacteria levels is not representative of the general condition of an AU, as it may result in an artificially inflated proportion of samples that exceed the criteria. Therefore, Ecology will remove monitoring data from the evaluation when the intention of the monitoring is to target high bacteria levels." In the 2022 Draft WQA, Shawnee Creek (listing ID 88227; AU 17110019006661_001_001) was changed from Category 5 to Category 3 for Fecal Coliforms. Appropriately, the remark given was "Bacteria data from Study ID KCPIC_Quartermaster removed. Data collected during storm events targeting elevated concentrations." The same should be done for these listings, and they should be reassessed without the KCPIC_Quartermaster study data included.

COMMENTER	LISTING ID	COMMENT
King County – 9	88913	[Inappropriate data used for assessment] These listings are based on data from the Quartermaster Harbor Pathogens Reduction Project. The results from the study were a biased dataset, in which high-bacteria events were targeted. Wet and dry season sampling events occurred, as well as a third event targeting high bacteria concentrations for source tracking purposes. Per page 33 of the WQS Assessment Guidance (Chapter 1-11): "Sampling that solely targets known periods of elevated bacteria levels is not representative of the general condition of an AU, as it may result in an artificially inflated proportion of samples that exceed the criteria. Therefore, Ecology will remove monitoring data from the evaluation when the intention of the monitoring is to target high bacteria levels." In the 2022 Draft WQA, Shawnee Creek (listing ID 88227; AU 17110019006661_001_001) was changed from Category 5 to Category 3 for Fecal Coliforms. Appropriately, the remark given was "Bacteria data from Study ID KCPIC_Quartermaster removed. Data collected during storm events targeting elevated concentrations." The same should be done for these listings, and they should be reassessed without the KCPIC_Quartermaster study data included.
King County – 10	10178	[Inappropriate carry-over of previous category determination] Previous category 5 determination made using methods not approved for this assessment. Only data available is over 10 years old.
King County – 11	10180	[Beach data - not representative of water quality conditions] These data are from King County beach site KCM- MSXK01 and were collected in water close to shore that is approximately 1m deep. Per Water Quality Policy 1-11 Chapter 2, samples/measurements must be representative of water quality conditions. These data are not representative of the listed waterbody.
King County – 12	10237	[Inappropriate carry-over of previous category determination] Previous category 5 determination made using methods not approved for this assessment. Only data available is over 10 years old.
King County – 13	12702	[Inappropriate carry-over of previous category determination] Previous category 5 determination made using methods not approved for this assessment. Only data available is over 10 years old.
King County – 14	12703	[Newer data show no excursions] 2014 and 2015 failed the hypergeometric test but more recent years (2016-2021) had no excursions.
King County – 15	36169	[Not a quantitative parameter] "Fish and Shellfish Habitat" is not a parameter that is quantitatively measured. This is not covered in the WAC or WQP 1-11. There are other 303d listing parameters (e.g., pH and temperature) that contribute to the conditions described in the remarks. This listing should be removed.
King County – 16	42482	[Data from incorrect sites used] Listing text incorrectly cites data from KCM-NSAJ02, which is in a different location (Quartermaster Harbor). Listing also includes older data from KCM-LSKQ06, which should only be cited in listing 48985 and is a duplicate.

COMMENTER	LISTING ID	COMMENT
King County – 17	48944	[Inappropriate carry-over of previous category determination] Previous category 5 determination made using methods not approved for this assessment. Data available only shows 1 exceedance in 2015, which would result in a category 2 listing.
King County – 18	65137	[Beach data - not representative of water quality conditions] These data are from King County beach site KCM- MTXA01 and were collected in water close to shore that is approximately 1m deep. Per Water Quality Policy 1-11 Chapter 2, samples/measurements must be representative of water quality conditions. These data are not representative of the listed waterbody.
King County – 19	65184	[Beach data - not representative of water quality conditions] These data are from King County beach site KCM- MTLD03 and were collected in water close to shore that is approximately 1m deep. Per Water Quality Policy 1-11 Chapter 2, samples/measurements must be representative of water quality conditions. These data are not representative of the listed waterbody.
King County – 20	65192	[Beach data - not representative of water quality conditions] These data are from King County beach site KCM- MSSM04 and were collected in water close to shore that is approximately 1m deep. Per Water Quality Policy 1-11 Chapter 2, samples/measurements must be representative of water quality conditions. These data are not representative of the listed waterbody.
King County – 21	65195	[Beach data - not representative of water quality conditions] These data are from King County beach site KCM- MSJL01 and were collected in water close to shore that is approximately 1m deep. Per Water Quality Policy 1-11 Chapter 2, samples/measurements must be representative of water quality conditions. These data are not representative of the listed waterbody.
King County – 22	65210	[Beach data - not representative of water quality conditions] Some of these data are from King County beach site KCM-LSVW01 and were collected in water close to shore that is approximately 1m deep. Per Water Quality Policy 1-11 Chapter 2, samples/measurements must be representative of water quality conditions. These data are not representative of the listed waterbody. Only data from KCM-LSVV01 should be considered.
King County – 23	65220	[Beach data - not representative of water quality conditions] These data are from King County beach site KCM- LSHV01 and were collected in water close to shore that is approximately 1m deep. Per Water Quality Policy 1-11 Chapter 2, samples/measurements must be representative of water quality conditions. These data are not representative of the listed waterbody.
King County – 24	65234	[Beach data - not representative of water quality conditions] These data are from King County beach sites KCM-LSKS04, KCM-LSKS01, and KCM-LSKR01 and were collected in water close to shore that is approximately 1m deep. Per Water Quality Policy 1-11 Chapter 2, samples/measurements must be representative of water quality conditions. These data are not representative of the listed waterbody.

COMMENTER	LISTING ID	COMMENT
King County – 25	65285	[Beach data - not representative of water quality conditions] These data are from King County beach sites KCM- KSSN04 and KCM-KSSN05 and were collected in water close to shore that is approximately 1m deep. Per Water Quality Policy 1-11 Chapter 2, samples/measurements must be representative of water quality conditions. These data are not representative of the listed waterbody.
King County – 26	65293	[Beach data - not representative of water quality conditions] These data are from King County beach site KCM- KSLU03 and were collected in water close to shore that is approximately 1m deep. Per Water Quality Policy 1-11 Chapter 2, samples/measurements must be representative of water quality conditions. These data are not representative of the listed waterbody.
King County – 27	65331	[Beach data - not representative of water quality conditions] These data are from King County beach sites KCM- ITCARKEEKP and KCM-KSHZ03 and were collected in water close to shore that is approximately 1m deep. Per Water Quality Policy 1-11 Chapter 2, samples/measurements must be representative of water quality conditions. These data are not representative of the listed waterbody.
King County – 28	65333	[Beach data - not representative of water quality conditions] These data are from King County beach site KCM- JSVW04 and were collected in water close to shore that is approximately 1m deep. Per Water Quality Policy 1-11 Chapter 2, samples/measurements must be representative of water quality conditions. These data are not representative of the listed waterbody.
King County – 29	66124	[Inappropriate carry-over of previous category determination] Previous category 5 determination made using methods not approved for this assessment. Data available only shows 1 exceedance in 2000, which would result in a category 2 listing.
King County – 30	93702	[Beach data - not representative of water quality conditions] These data are from King County beach site KCM- NSGE01 and were collected in water close to shore that is approximately 1m deep. Per Water Quality Policy 1-11 Chapter 2, samples/measurements must be representative of water quality conditions. These data are not representative of the listed waterbody.
King County – 31	93743	[Beach data - not representative of water quality conditions] These data are from King County beach site KCM- NTFK01 and were collected in water close to shore that is approximately 1m deep. Per Water Quality Policy 1-11 Chapter 2, samples/measurements must be representative of water quality conditions. These data are not representative of the listed waterbody.
King County – 32	93843	[Beach data - not representative of water quality conditions] These data are from King County beach site KCM- NSJY01 and were collected in water close to shore that is approximately 1m deep. Per Water Quality Policy 1-11 Chapter 2, samples/measurements must be representative of water quality conditions. These data are not representative of the listed waterbody.

COMMENTER	LISTING ID	COMMENT
King County – 33	94215	[Beach data - not representative of water quality conditions] These data are from King County beach site KCM- KSYV02 and were collected in water close to shore that is approximately 1m deep. Per Water Quality Policy 1-11 Chapter 2, samples/measurements must be representative of water quality conditions. These data are not representative of the listed waterbody.
King County – 34	94335	[Beach data - not representative of water quality conditions] These data are from King County beach site KCM- MTUJ01 and were collected in water close to shore that is approximately 1m deep. Per Water Quality Policy 1-11 Chapter 2, samples/measurements must be representative of water quality conditions. These data are not representative of the listed waterbody.
King County – 35	94401	[Beach data - not representative of water quality conditions] These data are from King County beach site KCM- LTBD27 and were collected in water close to shore that is approximately 1m deep. Per Water Quality Policy 1-11 Chapter 2, samples/measurements must be representative of water quality conditions. These data are not representative of the listed waterbody.
King County – 36	NA	There were many new category 5 listings for dissolved oxygen and temperature in locations that were previously determined to have excursions driven by natural conditions. The disapproval of the natural conditions provision in the WAC led to a disagreement between the WAC and WQP 1-11, the latter of which states: "Ecology will place marine AUs with exceedances of criteria that are likely due to natural conditions in Category 1 if information demonstrates that the waterbody historically did not meet standards." King County is in favor of continuing to consider the natural conditions as part of the 303d listing process in order to account for natural seasonal changes and large-scale physical processes that occur in Puget Sound., These listings should be reassessed using the new natural conditions provisions in WAC 173-201A-020 which became effective December 15, 2024
King County – 37	6290	[Incorrect data sources] This waterbody is listed using data from two different lake monitoring sites (Beaver-1 (A757) and Beaver-2 (A709)). We recommend reviewing both sites separately.
King County – 38	21534	[Incorrect data summary listed in basis table] Mean of averages for 2020 does not exceed criteria. Additionally, the number of excursions in 2021 is incorrect, should be 3 instead of 5. In 2021, if one high sample was removed the criterion would not be exceeded. We recommend removing this lake from the category 5 listing.
King County – 39	23024	[Different water quality TP threshold] Why does Walker Lake have a 10 ug/L TP threshold? We recommend changing to category 3 due to no data since 2006.
King County – 40	40586	[Incorrect data summary listed in basis table] This waterbody is using data from our Beaver-3 lake monitoring site. This monitoring site is no longer active. We recommend updating the waterbody name.

COMMENTER	LISTING ID	COMMENT
King County – 41	105267	[Inappropriate category] Mean of averages does not exceed criteria in 2020 and 2021. The calculated value should be 17.7 and 18.1, respectively. Each year has 3 excursion counts unlike the 4 listed on ECY site. Recommend changing to category 1.
King County – 42	NA	[Inappropriate data used for assessment] Fecal coliforms and Enterococcus (marine) – while the use of only 3 samples for calculating a seasonal geometric mean is allowed under the current rules, a geometric mean calculated from monthly sampling (3 samples) is not an accurate reflection of beach data at a given location. There is so much inherent variability with indicator bacteria sampling, especially without replicate sampling, that an annual geometric mean would be more reflective of the overall beach conditions for data sampled monthly. We suggest that there is not enough data to designate a category 5 or 2 listing using this limited data. However, we support the continued use of an annual count of excursions for making these designations. We support the continued use of an annual count of excursions for making these designations.
King County – 43	15801	[Data not reflective of current conditions] Data used from this listing was from 1977, and not available in EIM to review., Because data are from 1977 and not additional data has been collected, listing category should be changed from 2 to 3.
King County – 44	511871	[Full data not used in assessment] The samples used in this designation failed the standard echinoderm larvae bioassay test (other two tests passed). Per NPDES permit requirements, this test using standard methods was also run side-by-side using a screen tube manipulation method to reduce the interference of physical factors on the samples. All larval echinoderm tests run with the screen tube manipulation method in this grid PASSED in 2018, indicating that the failure using the standard methodology was due to physical factors related to the test using the standard method and not indicitive of a toxicity. As a result, this listing should be changed to a Category 1., See: https://your.kingcounty.gov/dnrp/library/2018/kcr3016/kcr3016.pdf
King County – 45	805764	[Inappropriate criteria applied to samples with low total organic carbon content] The sediment sampled at LSVW01 in 2020 had very low total organic carbon (0.0498%). Being below 0.5% organic carbon, this sample should be compared to dry weight equivalent criteria (not organic carbon normalized). Mean dry weight (dw) normalized concentrations of the samples used for this designation would be 35.2 ug/Kg dry weight, well under the dry weight SQS of 71 ug/kg dry weight. Therefore, with no samples exceeding SQS, this designation should be changed to a Category 1 from a Category 2.

COMMENTER	LISTING ID	COMMENT
King County – 46	807908	[Full data not used in assessment] Assessment is based off of a single station sampled twice during the same study. The sample, along with all others failed only the echinoderm larvae test. Per NPDES permit requirements this opened up the TIE process. Larval bioassay testing was repeated and run side-by-side using the standard method and a screen tube manipulation method to reduce the interference of physical factors on the samples and the sample from station WP430S, run with the screen tube manipulation method PASSED. This indicates that that the failure using the standard methodology was due to physical factors related to the test using the standard method and not indicitive of a toxicity. The results used for this listing reflect the repeated sampling of the same bioassay test at the same location and was refutued by the results of the required side-by-side test. Note: there were no corresponding chemical exceedances with these samples when sediments were collected for chemistry analysis in 2017 at WP430S. As a result, this listing should be changed to a Category 1., See: https://your.kingcounty.gov/dnrp/library/2018/kcr3016/kcr3016.pdf
King County – 47	807962	[Inappropriate criteria applied to samples with low total organic carbon content] All three samples used in this designation had total organic carbon values <0.5% and should be compared to dry weight equivalent criteria (not organic carbon normalized). When compared to dry weight equivalent criteria, only WPS120 exceeded SIZmax critiera and the other two sites were below the dry weight equivalent sediment quality standard of 500 ug/Kg dry weight (84.5 ug/Kg dry weight for WPS114 and 332 ug/Kg dry weight for WPS117). With only the WPS120 exceedance of the SIZMax, the numerical designation should be a Category 2 instead of 5., See: https://green2.kingcounty.gov/ScienceLibrary/Document.aspx?ArticleID=677
King County – 48	807971	[Inappropriate criteria applied to samples with low total organic carbon content] All three samples used in this designation had total organic carbon values <0.5% and should be compared to dry weight equivalent criteria (not organic carbon normalized). When compared to dry weight equivalent criteria, none of the samples exceeded dry weight equivalent SQS or SIZmax critiera (26 ug/Kg dw for WPS114, not detected for WPS118, and 749 ug/Kg dw for WPS120 - all below the dw SQS of 1,300 ug/Kg Therefore, with no samples exceeding SQS, this designation should be changed to a Category 1 from a Category 2., See: https://green2.kingcounty.gov/ScienceLibrary/Document.aspx?ArticleID=677
King County – 49	807992	[Inappropriate criteria applied to samples with low total organic carbon content] All three samples used in this designation had total organic carbon values <0.5% and should be compared to dry weight equivalent criteria (not organic carbon normalized). As such, sample WPS-117 with a naphthalene concentration of 319 ug/kg dry weight did not exceed dry weight SQS (2100 ug/Kg dw). Therefore, with no samples exceeding SQS, this designation should be changed to a Category 1 from a Category 2., See: https://green2.kingcounty.gov/ScienceLibrary/Document.aspx?ArticleID=677

COMMENTER	LISTING ID	COMMENT
King County – 50	807998	[Inappropriate criteria applied to samples with low total organic carbon content] All three samples used in this designation had total organic carbon values <0.5% and should be compared to dry weight equivalent criteria (not organic carbon normalized). As such, sample WPS-117 with a total aroclor value of 113 ug/kg dry weight and WPS120 with a total aroclor value of 114 ug/Kg dry weight did not exceed dw SQS (130 ug/Kg dry weight). Therefore, with no samples exceeding SQS, this designation should be changed to a Category 1 from a Category 2., See: https://green2.kingcounty.gov/ScienceLibrary/Document.aspx?ArticleID=677
King County – 51	808742	[Inappropriate criteria applied to samples with low total organic carbon content] The sediment samples used in this designation (NB_CSO_MLLW_L, NB_CSO_OHW_L, and NB_CSO_OHW_R) had total organic carbon values of <0.5% and should be compared to dry weight equivalent criteria (not organic carbon normalized). This listing was based on TOC normalized concentrations of BEHP, which is not appropriate due to the low organic carbon content. Mean dry weight (dw) normalized concentrations of the samples used for this designation ranged from 44.1 to 106 ug/Kg dry weight, well under the dry weight SWS criteria or 1,300 ug/kg dry weight. Therefore, with no samples exceeding SQS, this designation should be changed to a Category 1., See: https://your.kingcounty.gov/dnrp/library/2019/kcr3051/kcr3051.pdf
King County – 52	827400	[Inappropriate criteria applied to samples with low total organic carbon content] Samples WPS121 and WPS122 used in this designation had total organic carbon values <0.5% and should be compared to dry weight equivalent criteria (not organic carbon normalized). Only WPS121 exceeded the SIZmax, while WPS122 had a concentration of 80 ug/Kg dry weight compared to a dry weight SQS/SIZmax of 110 ug/Kg dry weight. The designation should stay the same, however, due to the combination of the exceedances., See: https://green2.kingcounty.gov/ScienceLibrary/Document.aspx?ArticleID=677
King County – 53	827401	[Inappropriate criteria applied to samples with low total organic carbon content] Samples WPS121 and WPS122 used in this designation had total organic carbon values <0.5% and should be compared to dry weight equivalent criteria (not organic carbon normalized). Only WPS121 exceeded the dry weight equivalent SIZmax, while WPS122 had a concentration of 217 ug/Kg dry weight compared to a dry weight SQS of 670 ug/Kg dw. The designation should stay the same, however, due to the combination of the exceedances., See: https://green2.kingcounty.gov/ScienceLibrary/Document.aspx?ArticleID=677
King County – 54	827411	[Inappropriate criteria applied to samples with low total organic carbon content] Samples WPS121 and WPS122 used in this designation had total organic carbon values <0.5% and should be compared to dry weight equivalent criteria (not organic carbon normalized). Neither exceeded the dry weight SQS of 1300 ug/Kg dry weight with values of 290 and 190 ug/Kg dry weight, respectively. With only the WPS124 exceedance of the SIZMax, the numerical designation should be a Category 2 instead of 5., See: https://green2.kingcounty.gov/ScienceLibrary/Document.aspx?ArticleID=677

COMMENTER	LISTING ID	COMMENT
King County – 55	827420	[Inappropriate criteria applied to samples with low total organic carbon content] Samples WPS121 and WPS122 used in this designation had total organic carbon values <0.5% and should be compared to dry weight equivalent criteria (not organic carbon normalized). Only WPS121 exceeded the dry weight SQS/SIZmax of 540 ug/Kg dry weight with a value of 759 ug/Kg dry weight, while WPS122 had a concentration of 188 ug/Kg dry weight. The designation should stay the same, however, due to the combination of the exceedances., See: https://green2.kingcounty.gov/ScienceLibrary/Document.aspx?ArticleID=677
King County – 56	827432	[Inappropriate criteria applied to samples with low total organic carbon content] Samples WPS121 and WPS122 used in this designation had total organic carbon values <0.5% and should be compared to dry weight equivalent criteria (not organic carbon normalized). Only WPS121 exceeded the dry weight SQS/SIZmax of 2100 ug/Kg dry weight with a value of 6,710 ug/Kg dry weight, WPS122 had a concentration of 520 ug/Kg dry weight, well below the dry weight-equivalent SQS critera.The designation should stay the same, however, due to the combination of the exceedances., See: https://green2.kingcounty.gov/ScienceLibrary/Document.aspx?ArticleID=677
King County – 57	827435	[Inappropriate criteria applied to samples with low total organic carbon content] Samples WPS121 and WPS122 used in this designation had total organic carbon values of <0.5% and should be compared to dry weight equivalent criteria (not organic carbon normalized). Both exceeded the dry weight SQS of 130 ug/Kg dry weight with values of 794 and 229 ug/Kg dry weight, respectively, but neither exceeded the SIZmax dw equivalent of 1000 ug/Kg dry weight . The designation should stay the same, however, due to the combination of the three exceedances., See: https://green2.kingcounty.gov/ScienceLibrary/Document.aspx?ArticleID=677
King County – 58	827803	[Full data not used in assessment] The samples used in this designation failed the standard echinoderm larvae bioassay test (other two tests passed). Per NPDES permit requirements, this test using standard methods was also run side-by-side using a screen tube manipulation method to reduce the interference of physical factors on the samples. All larval echinoderm tests run with the screen tube manipulation method in this grid PASSED in 2018, indicating that the failure using the standard methodology was due to physical factors related to the test using the standard method and not indicitive of a toxicity. As a result, this listing should be changed to a Category 1., See: https://your.kingcounty.gov/dnrp/library/2018/kcr3017/kcr3017.pdf
King County – 59	828817	[Full data not used in assessment] The samples used in this designation failed the standard echinoderm larvae bioassay test (other two tests passed). Per NPDES permit requirements, this test using standard methods was also run side-by-side using a screen tube manipulation method to reduce the interference of physical factors on the samples. All larval echinoderm tests run with the screen tube manipulation method in this grid PASSED in 2018, indicating that the failure using the standard methodology was due to physical factors related to the test using the standard method and not indicitive of a toxicity. As a result, this listing should be changed to a Category 1., See: https://your.kingcounty.gov/dnrp/library/2018/kcr3017/kcr3017.pdf

COMMENTER	LISTING ID	COMMENT
Kris Vandersanden	NA	Our family has had property on Big Lake since 1950 so we have some historic knowledge of how the lake has changed. We used to have catfish and crayfish in abundance which are now seldom if ever seen. Several years ago we had a freshwater clam kill. The shore was covered with clam shells and white clam bodies were floating all over the shoreline. Aquatic growth has always been an issue and I remember raking out seaweed as a kid. However even with yearly spraying the weed variety and quantity seem to be increasing. The last several years we've seen the introduction of jelly like blobs that grow on submerged ladders and ropes. Most of us now have boat lifts to prevent the dirty growth that happens very quickly for those boats left in the water. The algae blooms are so bad now that at times it seems like you could walk on them. During the summer I swim across the lake and back every day, but now make sure I take a shower afterwards. My daughter takes an antihistamine before swimming and still ends up with red eyes and congestion. The lake quality issue is only going to get worse with the new housing developments going in around the lake. Skagit County, who owns Big Lake, has been irresponsible in ignoring these issues for years. We pay exorbitantly high property taxes to live on a lake that is slowly dying. We are actively involved in talks with the county and we are asking that the state become a part of the conversation.
Lisa Beeman	6163	We live in Big Lake and are sad to see these levels increase and ruin such a fun recreational lake. So much less boating and swimming seen this past year. There are dead fish seen floating quite often. During the summer months when we want to swim and play in the lake we are left with a slimy and neon green lake that doesn't look appealing and is probably not healthy at all. These levels aren't tested enough and just keep increasing. When will something be done. Let's fix this recreational area of Skagit County and repair this beautiful lake.
Lummi Natural Resources	NA	Unassessed Assessment Units - Your current format of the Report does not account for unassessed Assessment Units – specifically, those waters with no water quality data. There is no category in your report for such waterbodies. A recent Public Records Request for a list of unassessed Assessment Units with no data in the WRIA1 watershed revealed some concerns. Obtaining a list of such Assessment Units requires a GIS and sorting exercise of data from the Ecology Assessment Unit database. These waterbodies are falling through the cracks because they do not exist in a Category or Appendix of your Report. The unaccounted-for Assessment Units in WRIA 1 is very concerning. Until these Assessment Units are ranked/prioritized and put on a schedule for data collection and assessment of beneficial support, one cannot assume they are not impaired. We request WA Ecology create a new Category in the Report for the Assessment Units with no data and represent them in your online interactive map of the Report. We also request they be ranked, prioritized, and put on a schedule for data collection and assessment of beneficial use support.

COMMENTER	LISTING ID	COMMENT
Lummi Natural Resources	NA	Assessment Units with Data, but Not Enough to Assess Beneficial Use Support - There are hundreds of Categories 2 and Category 3 Assessment Units – some Assessment Units have been listed in these categories for concerning toxic pollutants such as ammonia, hydrocarbons, and pesticides (to name a few). Some of these Assessment Units have resided in Category 2 or 3 for decades. We request WA Ecology rank/prioritize these Assessment Units and provide a timeline for collection of data and assessment of beneficial use support. Moving these Assessment Units out of Category 2 and 3 into Category 1 or 5 should be a priority for WA Ecology.
Lummi Natural Resources	NA	Impaired Assessment Units - It is concerning how few Assessment Units in WRIA 1 are in Category 4A. There are only 2 EPA-Approved TMDLs in the Nooksack River Watershed. There are over 500 Category 5 Assessment Units in WRIA 1. Some of them have been in this Category for decades. We request WA Ecology rank/prioritize Assessment Units in Category 5 and adequately fund TMDL positions and/or contracting for TMDL development and submittal to EPA. We would like TMDLs submitted to EPA on an annual basis to significantly decrease in the number of Assessment Units in Category 5 within the next 5 years.
Malcolm Gander	NA	Hello Mr. Donahue and again, sincere thanks for your time this morning in walking me through your WQ tool. I only became aware of this resource a few days ago, and I cannot spend any more time on this now as the deadline is fast approaching. Below are my brief comments. The file above presents and discusses data and a rating of Schel-Chelb Creek on Bainbridge Island, which we discussed this morning. I am not sure if you have all of the data included in your database from this report for this creek. It is very degraded and neglected, and development continues in this area. Please ensure that you have all of this data in your database, given the increasing degradation of this Creek. See pages 23-24, and the Appendix, especially pages 42-44 to see the available data. Thank you again for your time, and I will be sending more data for Schel-Chelb Creek, as I believe it exists.
Mark Johnson, MD	6163	We have owned property on Big Lake from the early 1990's. there has been a significant deterioration of the quality of the lake water with algae occurring earlier in August and extending into November. At time it is bright Blue Green as if some one poured pain into the lake. Detrimental for swimming as well as increased fish kill and fresh water clams dying.

COMMENTER	LISTING ID	COMMENT
Marten Law LLP	NA	I appreciate the opportunity to comment on the Washington Department of Ecology (Ecology) draft 2022 Water Quality Assessment (Assessment). There are important questions related to the proposed Category 5 listings for Perfluorooctane Sulfonate (PFOS) for Lake Meridian, Lake Washington and Lake Sammamish (listings 106563, 106565, and 106568, respectively). For each of these three listings, Ecology states that the basis for the 303(d) Category 5 designation is a WA Department of Health (DOH) fish consumption advisory for PFOS and fish tissue data collected within each lake. All three listings also note that the listing is for the entire waterbody (lake). These listings are premature. Currently, the State of Washington does not have a final approved water quality standard for PFOS. Washington has submitted its proposed Aquatic Life Toxicity Standards, which include Freshwater Acute and Chronic PFOS criteria and Marine Acute criteria. In addition, Ecology has not updated its Water Quality Program Policy 1-11 (Water Quality Assessment Listing Methodology to Meet Clean Water Act Requirements) to define the methodology to assess Washington's waters to determine whether a waterbody should be listed for PFOS. While Policy 1-11 does allow the use of DOH fish advisories as 'other lines of evidence' when evaluating the human health water quality assessment, it appears that Ecology has expanded the use of DOH fish advisories in this Assessment in two ways not (to our knowledge) previously applied to any other assessment: (1) basing a Category 5 designation solely on a DOH fish advisory, and (2) assigning the resulting Category 5 designation to an entire waterbody (Lake) and not to distinct assessment units within the waterbody. The use of this type of data for these determinations is not only unprecedented, but also inconsistent with Ecology's policy and practice and has not been authorized based on a revision to Policy 1-11. If Ecology intends to use this methodology, it must first allow for public review and comment on a
Marten Law LLP	NA	It is also essential that Ecology specify data quality requirements in Policy 1-11. The data collection for all three listings was via studies by Ecology and/or DOH in (approximately) 2016 and 2018 to characterize PFOS levels in fish for DOH fish advisories. The test methods used for these studies were not EPA's currently approved test method for PFOS, Method 1633, but rather test methods AXYS MLA-043 and AXYS MLA-060. Information on these test methods is not currently available, nor is there a discussion on the accuracy or potential limitations of these two test methods.

COMMENTER	LISTING ID	COMMENT
Marten Law LLP	NA	In 2008, Ecology carried out a statewide survey measuring PFAS to evaluate how widespread the presence of PFAS is in WA surface Waters. In 2016, Ecology repeated the study, The 2016 results indicated that PFAS concentrations were generally lower in surface water samples versus the 2008 (Survey of Per- and Poly-fluoroalkyl substances (PFASs) in Rivers and Lakes, 2016). While the data used to develop the Category 5 listings for PFOS is technically within the 10-year window specified in Policy 1-11, the use of non-standard and currently unapproved test methods raise reasonable questions about data integrity and the resulting Category 5 listings. Without additional data developed with approved test methods, and considering apparent decreasing trends (2016 vs 2008), Ecology should designate the listed areas as Category 2 or Category 3, not Category 5. I offer these comments in support of a transparent and science-based approach to Washington's water quality assessment process and subsequent regulatory actions, as well as our common goal to ensure that Washington's waters support designated uses.
Michael & Katherine Tarbox	6163	We have owned lakefront property on Big Lake for thirty seven years. Our children were young when we purchased our then vacation home and we all spent most of our time in the lake, swimming, waterskiing and lots of fishing. It is hard to believe that we actually ate some of the trout that we caught - something we would NEVER think of doing now. Big Lake is now our permanent residence and our children and grandchildren spend a lot of time with us. This past summer was the first year that a number of our family members did not swim in the lake at all. For those who did swim, we insisted on showers immediately after they came out of the lake. The algae blooms have become increasingly worse every year. Our beaches are covered with dead fish and clam kills. As we experience Big Lake slowly dying before our eyes, we continue to watch our property assessments skyrocket and our property taxes reach the point that many residents of our lake community are being forced to sell property that has been in their families for generations. We ask that the Dept of Ecology work with Skagit County as soon as possible to help restore the health of Big Lake. Thank you very much!

COMMENTER LISTING ID	COMMENT
Nancy Hansen NA	I can't get a few things to work on this tool - to scroll to a water body name I was unable to use the slider at the right to move to a lower section. I put in an address of a location that should have been assessed. It would not come up, but a SEPA was begun on this site 2 years ago - no mention of water quality. I also know a wetlands study had been done here by the Watershed Company in 2018, so the address used by the city should have come up. went to another nearby site by zooming in. There I found a listing for a Category 4, but I was told it was a Category 5. It does not have a TDML associated. This leaves me with many questions. When I put an address into the search, to get a Listing ID, the list would keep popping back up to start, so unable to use that - went to the zoom function instead, but there are times when it's necessary to use a physical address. I guess I would appreciate some basic education on how to use this tool in order to be able to make any assumptions or decisions from the vast amount of material here. Is there any possibility of an on-line training - for maybe basic levels of expertise, to start? Or directions given on a video, from a real person? I feel this tool is a step in a better direction, and hope it's accompanied with better ideas of load limits for more water bodies. Plus tools to know how to measure and apply the knowledge. Will this "Water Quality Atlas" be used in a similar way as the statewide "Wetland Inventory Mapping Project"? I am asking this because I have seen nothing on this survey since it was completed. I went back to ask Connor Racette, the lead on the wetlands survey, 2 years later, after I knew the data was taking a long time to enter. But he was no longer at the Ecology, or at least not at the same position. We are not able to measure how much more wetlands we can afford to lose, as they disappear rapidly due to development. For Kenmore, one wetland only 15 years ago was at 14 acres. Now, it is down to 7.5 acres. This is one that supports very steep slopes.

COMMENTER	LISTING ID	COMMENT
Paul Pickett	NA	I'm a volunteer with Clallam Streamkeepers, and a retired Ecology EAP employee, and I had some comments about stream listings in Clallam County. These comments are my own personal opinion and not those of Streamkeepers or Clallam County.It's unfortunate that Table 3 doesn't show the years represented by each item. It would help to see which items listed represent "new data" versus carry-over from the last list.Looking at the "basis" column when you download the Category 5 listings, as far as I can tell the 2022 list for Clallam County is exactly the same as the 2018 list. In fact, neither list cites a study later than 2009. Granted, these are just category 5 listings, but it strikes me as odd that no data since 2009 has supported a category 5 listing in Clallam County. Are our waters really that clean? Or is there no data since 2009? Did you search for more recent data? I searched EIM for studies of surface waters from 2009 through 2022, and I found 48 studies. (https://apps.ecology.wa.gov/eim/search/Eim/EIMSearchResults.aspx?ResultType=EIMStudyTab&StudyType=B mpMonitor&StudyType=GenEnvironmentalStudy&StudyType=HabitatMonitoring&StudyType=RoutineMonitor&Stu dyType=TmdlDev&StudyType=TmdlMonitor&LocationCounties=Clallam&LocationSettingCode=Canal%2FDitch&LocationSettingCode=Estuary&LocationSettingCode=Lake%2FPond%2FReservoir&LocationSettingCode=Estuary&LocationSettingCode=Stream%2FRiver-NonChannel&LocationSettingCode=Stream%2FRiver-NookLocationSettingCode=Stream%2FRiver-NookLocationSettingCode=Stream%2FRiver-NookLocationSettingCode=Subtida&FieldActivityDateRangeBeginning=1%2F1%2F2010%2012%3A00%3A00%20AM). 15 studies collected dissolved oxygen data, while 24 studies collected temperature data. Were data from these studies used in the assessment? Could you confirm that the assessment captured all the most recent data?

COMMENTER	LISTING ID	COMMENT
Richard & Nanette Bergdahl	6163	 Hello I am Rich Bergdahl. Nanette and I are the owners of 23892 / 23890 N. Westview Road (P29895 & P74765) which together comprise the waterfront parcel adjoining the north side of the county parcel upon which the Overlook Stormwater Outfall is to be located. Our property is equally and as significantly impacted (adversely) by the Overlook Stormwater Outfall Project as the property adjoining said County parcel to the south located at 23904 N. Westview Road (P74762) owned by Kimberly Sanford. It is my understanding that the location of the improvements for the outfall pipe and infrastructure within the County waterfront parcel were determined in the previous Skagit County Hearing Examiner's Decision dated September 4, 2024, which included public and professional project engineer testimony thereon. And as such, it is my understanding this remand for further reconsideration by the Hearing Examiner only has only to do with matters related to do with compliance issues relating to environmental and water quality. If a request for changes in the location of the improvements for the outfall pipe and infrastructure is/are considered in this reconsideration hearing, we respectfully request an equal opportunity to respond to such as: 1) our property is a significantly impacted by such; and 2) we have not been provided with any such request material(s) prior to our comment here. With regard to the water quality of the lake and our activities thereon, our response is as follows: 1) We have been residents of the property for 3 1/2 years, located in the middle of the east side of the 3 1/2 mile long lake. 2) The outfall pipe will be located + / - 40 feet from our southern property line. 3) For 5 months of the year, June to October, there is a lime green swirty slime along our 300' waterfront, with a significant number of small dead fish on the shore and floating upside down along the shoreline. The slime surrounds and extends beyond the dock.

COMMENTER	LISTING ID	COMMENT
Robert Eleveld	6163	My wife and I own a house on Big Lake. The algae blooms have become progressively worse the past few years. Summer of 2024 was definitely the worst, with algae gunk caking the water up to 10-15 feet out from shore. We have two labs who love to swim and chase a ball, and we didn't want them swimming in it, let alone people. I believe total phosphorous needs to be measured consistently in the lake by the county and/or state in order to undertake mitigation efforts. Nothing will improve if it is not measured consistently. Sincerely, Rob Eleveld
Skagit County - Emma Santana	103594	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	45257	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	89044	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	89187	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	88920	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	88162	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	103661	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	74148	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	89101	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	45015	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	45856	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	88987	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
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COMMENTER	LISTING ID	COMMENT
Skagit County - Emma Santana	88941	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	88960	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	88389	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	89031	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	88942	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	88942	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	88198	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	88329	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	103583	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	103585	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	103573	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	89295	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	89289	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	103578	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.

COMMENTER	LISTING ID	COMMENT
Skagit County - Emma Santana	103797	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	88293	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	88965	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	103572	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	89215	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	103603	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	103716	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	88455	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	103560	This fecal coliform listing is located in the Samish Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	89192	This fecal coliform listing is located in the Padilla Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	89240	This fecal coliform listing is located in the Padilla Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	88277	This fecal coliform listing is located in the Padilla Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	88241	This fecal coliform listing is located in the Padilla Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	88933	This fecal coliform listing is located in the Padilla Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.

COMMENTER	LISTING ID	COMMENT
Skagit County - Emma Santana	88320	This fecal coliform listing is located in the Padilla Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	89056	This fecal coliform listing is located in the Padilla Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	89299	This fecal coliform listing is located in the Padilla Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	89090	This fecal coliform listing is located in the Padilla Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	89148	This fecal coliform listing is located in the Padilla Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	88172	This fecal coliform listing is located in the Padilla Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	89153	This fecal coliform listing is located in the Padilla Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	89063	This fecal coliform listing is located in the Padilla Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	88359	This fecal coliform listing is located in the Padilla Bay Watershed Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	103740	This fecal coliform listing is located in the Lower Skagit River Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	103774	This fecal coliform listing is located in the Lower Skagit River Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	103742	This fecal coliform listing is located in the Lower Skagit River Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	88242	This fecal coliform listing is located in the Lower Skagit River Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	88393	This fecal coliform listing is located in the Lower Skagit River Bacteria TMDL and should therefore be Category 4A, not Category 5.

COMMENTER	LISTING ID	COMMENT
Skagit County - Emma Santana	88367	This fecal coliform listing is located in the Lower Skagit River Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	74168	This fecal coliform listing is located in the Lower Skagit River Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	103621	This fecal coliform listing is located in the Lower Skagit River Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	88951	This fecal coliform listing is located in the Lower Skagit River Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	103637	This fecal coliform listing is located in the Lower Skagit River Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	103649	This fecal coliform listing is located in the Lower Skagit River Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	89163	This fecal coliform listing is located in the Lower Skagit River Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	103719	This fecal coliform listing is located in the Lower Skagit River Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	88998	This fecal coliform listing is located in the Lower Skagit River Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	72514	This fecal coliform listing is located in the Lower Skagit River Bacteria TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	72514	This fecal coliform listing is located in the Lower Skagit River Temperature TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	73562	This temperature listing is located in the Lower Skagit River Temperature TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	72514	Apologies for the multiple comments on this one. Just wanting to correct my mistakes for clarity - This temperature listing is located in the Lower Skagit River Temperature TMDL and should therefore be Category 4A, not Category 5.
COMMENTER	LISTING ID	COMMENT
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Skagit County - Emma Santana	6416	This temperature listing is located in the Lower Skagit River Temperature TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	7146	This temperature listing is located in the Lower Skagit River Temperature TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	94466	This temperature listing is located in the Lower Skagit River Temperature TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	94561	This temperature listing is located in the Lower Skagit River Temperature TMDL and should therefore be Category 4A, not Category 5.
Skagit County - Emma Santana	93508	This temperature listing is located in the Stillaguamish River Watershed Temperature TMDL and should therefore be Category 4A, not Category 5.
Snohomish County - Marisa Burghdoff – 1	104406	There was a fragment found of Sagittaria graminea in 2018 by Snohomish County. However, a follow-up snorkel survey conducted specifically to look for any growthof this plant in the summer of 2024 and found no evidence of slender arrowhead. Remove listing. Snohomsih County will submit snorkel survey results to Ecology. If verification needed, have Wes Glisson conduct survey in summer 2025 to confirm.
Snohomish County - Marisa Burghdoff – 2	102261	The listing data are from pH measurements taken in May and June of 2014. Lake Ketchum was treated with 13,484 gallons of aluminum sulfate and 7,415 gallons of sodium aluminate (buffer) on May 21st, 2014 (can be confirmed via the aquatic plant and algae management permit that Ecology manages). The pH readings that were taken during these months likely reflected a pH disruption from the treatment rather than actual ambient conditions that would impair beneficial uses over a longer time period as evidence by the lack of values outside of the criteria during the rest of the assessment period. More information about the Lake Ketchum restoration project can be found: https://www.snohomishcountywa.gov/2451/Lake-Ketchum-Restoration Do not list Ketchum as impaired for pH in this assessment. Flag the data in EIM for the dates near the alum treatment such that these values do not cause the lake to be listed in the future.
Snohomish County - Steve Britsch – 1	9296	Listing remarks indicate for the 2022 cycle that a historical 2018 determination of Category 5 was carried forward, yet the historical 2018 listing was Category 2. Further it appears as though for the 2022 assessment that the data used did not fail the hypergeometric mean test for any year. Please clarify and/or confirm the need for a Category 5 listing in the 2022 assessment.

COMMENTER	LISTING ID	COMMENT
Snohomish County - Steve Britsch – 3	81529	This is a new Category 5 listing based on data collected in 2000 and not carried forward from a previous assessment. This assessment cycle covers the period from Jan 1, 2012 - Dec 31, 2021. It appears data used to create this listing fall outside the assessment period. Please clarify and/or confirm the validity of using 24-year-old data gathered outside the assessment cycle time period to support this Category 5 listing in the 2022 assessment.
Snohomish County - Steve Britsch – 4	81536	This is a new Category 5 listing based on data collected in 2000 and not carried forward from a previous assessment. This assessment cycle covers the period from Jan 1, 2012 - Dec 31, 2021. It appears data used to create this listing fall outside the assessment period. Please clarify and/or confirm the validity of using 24-year-old data gathered outside the assessment cycle time period to support this Category 5 listing in the 2022 assessment.
Snohomish County - Steve Britsch – 5	89136	This data was gathered by WSDA under a Pollution Identification and Correction Grant. Data collection efforts for these grants often focus on source identification and thus are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.
Snohomish County - Steve Britsch – 6	93462	This is a new Category 5 listing based on data collected in 2010 and not carried forward from a previous assessment. This assessment cycle covers the period from Jan 1, 2012 - Dec 31, 2021. It appears data used to create this listing fall outside the assessment period and using a new criteria that wasn't in effect at the time of data collection. Please clarify and/or confirm the validity of using a criteria not in effect at the time of data collection for 14-year-old data gathered outside the assessment cycle time period to support this Category 5 listing in the 2022 assessment.
Snohomish County - Steve Britsch – 7	93510	This is a new Category 5 listing based on data collected in 2011 and not carried forward from a previous assessment. This assessment cycle covers the period from Jan 1, 2012 - Dec 31, 2021. It appears data used to create this listing fall outside the assessment period. Please clarify and/or confirm the validity of using 13-year-old data gathered outside the assessment cycle time period to support this Category 5 listing in the 2022 assessment.
Snohomish County - Steve Britsch – 8	102687	This is a new Category 5 listing based on data collected in 2006 and not carried forward from a previous assessment. This assessment cycle covers the period from Jan 1, 2012 - Dec 31, 2021. It appears data used to create this listing fall outside the assessment period. Please clarify and/or confirm the validity of using 18-year-old data gathered outside the assessment cycle time period to support this Category 5 listing in the 2022 assessment.
Snohomish County - Steve Britsch – 9	102694	This is a new Category 5 listing based on data collected in 2006 and 2007 and not carried forward from a previous assessment. This assessment cycle covers the period from Jan 1, 2012 - Dec 31, 2021. It appears data used to create this listing fall outside the assessment period. Further, more recent data collected in 2017 show no excursions. Please clarify and/or confirm the validity of using 18- and 17-year-old data gathered outside the assessment cycle time period to support this Category 5 listing in the 2022 assessment.

COMMENTER	LISTING ID	COMMENT
Snohomish County - Steve Britsch – 10	102695	This is a new Category 5 listing based on data collected in 2006 and 2008 and not carried forward from a previous assessment. This assessment cycle covers the period from Jan 1, 2012 - Dec 31, 2021. It appears data used to create this listing fall outside the assessment period. Further, more recent data collected in 2017 show no excursions. Please clarify and/or confirm the validity of using 18- and 16-year-old data gathered outside the assessment cycle time period to support this Category 5 listing in the 2022 assessment.
Snohomish County - Steve Britsch – 11	102700	This is a new Category 5 listing based on data collected in 2007 and 2008 and not carried forward from a previous assessment. This assessment cycle covers the period from Jan 1, 2012 - Dec 31, 2021. It appears data used to create this listing fall outside the assessment period. Further, more recent data collected in 2017 show no excursions. Please clarify and/or confirm the validity of using 17- and 16-year-old data gathered outside the assessment cycle time period to support this Category 5 listing in the 2022 assessment.
Snohomish County - Steve Britsch – 12	102894	This data was gathered by Ecology under a TMDL Effectiveness Monitoring effort which, as documented in the QAPP, included bracketed monitoring for source identification. Bracketed monitoring efforts for source identification are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.
Snohomish County - Steve Britsch – 13	102897	This data was gathered by Ecology under a TMDL Effectiveness Monitoring effort which, as documented in the QAPP, included bracketed monitoring for source identification. Bracketed monitoring efforts for source identification are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.
Snohomish County - Steve Britsch – 14	102910	This data was gathered by Ecology under a TMDL Effectiveness Monitoring effort which, as documented in the QAPP, included bracketed monitoring for source identification. Bracketed monitoring efforts for source identification are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.
Snohomish County - Steve Britsch – 15	102931	This data was gathered by Ecology under a TMDL Effectiveness Monitoring effort which, as documented in the QAPP, included bracketed monitoring for source identification. Bracketed monitoring efforts for source identification are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.

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Snohomish County - Steve Britsch – 16	102937	This data was gathered by Ecology under a TMDL Effectiveness Monitoring effort which, as documented in the QAPP, included bracketed monitoring for source identification. Bracketed monitoring efforts for source identification are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.
Snohomish County - Steve Britsch – 17	103042	This data was gathered by Ecology under a TMDL Effectiveness Monitoring effort which, as documented in the QAPP, included bracketed monitoring for source identification. Bracketed monitoring efforts for source identification are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.
Snohomish County - Steve Britsch – 18	103051	This data was gathered by Ecology under a TMDL Effectiveness Monitoring effort which, as documented in the QAPP, included bracketed monitoring for source identification. Bracketed monitoring efforts for source identification are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.
Snohomish County - Steve Britsch – 19	103067	This data was gathered by Ecology under a TMDL Effectiveness Monitoring effort which, as documented in the QAPP, included bracketed monitoring for source identification. Bracketed monitoring efforts for source identification are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.
Snohomish County - Steve Britsch – 20	103078	This data was gathered by Ecology under a TMDL Effectiveness Monitoring effort which, as documented in the QAPP, included bracketed monitoring for source identification. Bracketed monitoring efforts for source identification are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.
Snohomish County - Steve Britsch – 21	103086	This data was gathered by Ecology under a TMDL Effectiveness Monitoring effort which, as documented in the QAPP, included bracketed monitoring for source identification. Bracketed monitoring efforts for source identification are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.

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Snohomish County - Steve Britsch – 22	103093	This data was gathered by Ecology under a TMDL Effectiveness Monitoring effort which, as documented in the QAPP, included bracketed monitoring for source identification. Bracketed monitoring efforts for source identification are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.
Snohomish County - Steve Britsch – 23	103119	This data was gathered by Ecology under a TMDL Effectiveness Monitoring effort which, as documented in the QAPP, included bracketed monitoring for source identification. Bracketed monitoring efforts for source identification are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.
Snohomish County - Steve Britsch – 24	103133	This data was gathered by Ecology under a TMDL Effectiveness Monitoring effort which, as documented in the QAPP, included bracketed monitoring for source identification. Bracketed monitoring efforts for source identification are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.
Snohomish County - Steve Britsch – 25	103166	This data was gathered by Ecology under a South Skagit Bay Water Quality monitoring effort which, as documented in the Study Comment in EIM is linked to study SSB_WQ_SID used to collect stormwater samples not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water ambient conditions for use in the Water Assessment.
Snohomish County - Steve Britsch – 26	103186	This data was gathered by Ecology under a TMDL Effectiveness Monitoring effort which, as documented in the QAPP, included bracketed monitoring for source identification. Bracketed monitoring efforts for source identification are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.
Snohomish County - Steve Britsch – 27	103207	This data was gathered by Ecology under a TMDL Effectiveness Monitoring effort which, as documented in the QAPP, included bracketed monitoring for source identification. Bracketed monitoring efforts for source identification are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.

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Snohomish County - Steve Britsch – 28	103214	This data was gathered by Ecology under a TMDL Effectiveness Monitoring effort which, as documented in the QAPP, included bracketed monitoring for source identification. Bracketed monitoring efforts for source identification are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.
Snohomish County - Steve Britsch – 29	103275	This data was gathered by Ecology under a TMDL Effectiveness Monitoring effort which, as documented in the QAPP, included bracketed monitoring for source identification. Bracketed monitoring efforts for source identification are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.
Snohomish County - Steve Britsch – 30	103292	This data was gathered by Ecology under a TMDL Effectiveness Monitoring effort which, as documented in the QAPP, included bracketed monitoring for source identification. Bracketed monitoring efforts for source identification are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.
Snohomish County - Steve Britsch – 31	103322	This data was gathered by Ecology under a TMDL Effectiveness Monitoring effort which, as documented in the QAPP, included bracketed monitoring for source identification. Bracketed monitoring efforts for source identification are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.
Snohomish County - Steve Britsch – 32	103341	This data was gathered by Ecology under a TMDL Effectiveness Monitoring effort which, as documented in the QAPP, included bracketed monitoring for source identification. Bracketed monitoring efforts for source identification are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.
Snohomish County - Steve Britsch – 33	103380	This data was gathered by Ecology under a TMDL Effectiveness Monitoring effort which, as documented in the QAPP, included bracketed monitoring for source identification. Bracketed monitoring efforts for source identification are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.

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Snohomish County - Steve Britsch – 34	103383	This data was gathered by Ecology under a TMDL Effectiveness Monitoring effort which, as documented in the QAPP, included bracketed monitoring for source identification. Bracketed monitoring efforts for source identification are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.
Snohomish County - Steve Britsch – 35	103401	This data was gathered by Ecology under a TMDL Effectiveness Monitoring effort which, as documented in the QAPP, included bracketed monitoring for source identification. Bracketed monitoring efforts for source identification are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.
Snohomish County - Steve Britsch – 36	103408	This data was gathered by Ecology under a TMDL Effectiveness Monitoring effort which, as documented in the QAPP, included bracketed monitoring for source identification. Bracketed monitoring efforts for source identification are not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use in the Water Quality Assessment.
Snohomish County - Steve Britsch – 37	103553	This data was gathered by Ecology under a South Skagit Bay Water Quality monitoring effort which, as documented in the Study Comment in EIM is linked to study SSB_WQ_SID used to collect stormwater samples not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use for general ambient conditions for use a same ambient conditions for use in the Water Quality Assessment.
Snohomish County - Steve Britsch – 38	103621	This data was gathered by Ecology under a South Skagit Bay Water Quality monitoring effort which, as documented in the Study Comment in EIM is linked to study SSB_WQ_SID used to collect stormwater samples not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use for general ambient conditions for use a sessment.
Snohomish County - Steve Britsch – 39	103866	This data was gathered by Ecology under a South Skagit Bay Water Quality monitoring effort which, as documented in the Study Comment in EIM is linked to study SSB_WQ_SID used to collect stormwater samples not representative of general ambient conditions for use in the Water Quality Assessment. Please confirm data collection efforts and thus results are representative of general ambient conditions for use for general ambient conditions for use a same of general ambient conditions for use a same of general ambient conditions for use in the Water Quality Assessment.

COMMENTER	LISTING ID	COMMENT
Snohomish County - Steve Britsch – 40	80111	The data used to support this benthic biological indicator listing does not conform to Water Quality Policy 1-11 or standard operating procedures in place at the time of sample collection. Further the application of benthic invertebrate samples obtained from sediment at a high elevation lake do not conform to use in the Puget Sound Lowlands Benthic Macroinvertebrate model for calculation of a BIBI score or associated stressors. As documented in the Hart Crower (MCMA Aquatic Baseline Monitoring) report dated March 31, 2015, the benthic invertebrate sampling methods and qualitative observations used to support this listing do not conform to Ecology's 2010 Standard Operating Procedure (in effect at time of sampling) or EPA's 1999 Rapid Bioassessment Protocols for Use in Streams and Wadable Rivers. As described on pg. 17 of the report and detailed in the July 8, 2013, field data sheet (pg. 184), Hart Crower obtained sediment core (not water) samples from the lake shoreline using a 4" clam gun. A clam gun and sediment sampling are not identified as applicable equipment or matrices in Ecology (2010). Further, sample results are qualitative from field observations and it's not clear that Hart Crowser staff were certified for identification of Western United States taxa to the genus or species level by the North American Benthological Society. As shown on the field data sheet, the qualitative methods of sample observation did not result in identifying the target number of 500 organisms. Additionally, typical macroinvertebrate laboratory quality control measures were not carried out. We question how results obtained in this high elevation lake location and using these methods apply to the Puget Sound Lowlands BIBI model and subsequent calculation of stressor values. For these reasons, we recommend Ecology carefully evaluate Hart Crower (2015) and consider changing this listing to Category 2 or 3 or remove the listing entirely. Note: The location ID of MC-MCL-A03 referenced under data sources in the draft assessment webp

COMMENTER	LISTING ID	COMMENT
Susie Horan	6163	I am reaching out to you to request that you take action now to update the Big Lake water quailtiy assessment. Total Phosphorous is a specific concern as there has been a huge spike in phosphorus over the last several years. In 1999 the Department of Ecology determined that the total phosphorus concentration was 18.7 with a reccomendation that the maximum criteria not exceed 20 micrograms. The Skagit County Public Works Department has been monitoring the total phosphorus in Big Lake since 2004. The Skagit County data shows that total phosphorus is now 3x above 20 micrograms. The lake is a category 5 total phosphorus impaired water body and needs immediate attention and action. Please test it so that remediation can become a top priority and so that we can stop further contamination. I have owned a home on the lake for 20 years. When I first moved in the water was clear and you could walk into the lake from the shore. My children and granddaughter could enjoy swimming and water sports. My grand dogs could swim in the lake and even drink the water. In the past 3 years it has become obvious that chemical degragation has moved in. There are alrage growths of toxic blue green algae as well as an irridesent scum on top of the lake. We can not access the water from the shore because of fear of contamination and we can not even see the bottom of the lake. There are also some large pinkish blooms growing under the water and on top of the water all across the front of my property and my neighbor's property as well. I am concerned about the health and safety of my children and granddaugher. Swimmer's itch has also been reported by my friends on the lake. I also feel that the algae and other toxic chemicals will cause harm to my dogs. They are used to accessing the lake from the shore and it is impossible to keep them from swimming in the lake like they used to be able to do. I shutter when I think of them drinking the water. This contamination also affects the fish which I believe are dying off because the fisherman are c
South Columbia Basin Irrigation District - Eric Dixon	NA	Several irrigation facilities within the South Columbia Basin Irrigation District are incorrectly listed on the water quality atlas as rivers and streams with a designated use of Salmonid spawning, rearing, and migration. These facilities are non-natural, constructed facilities carrying irrigation project water. As such, they should not be construed as waters of the state. Furthermore, the designated use descriptions and water quality listings are inappropriate for man-made irrigation facilities. These facilities should never be classified as fish bearing or rearing, recreational areas, wildlife habitat, or any other uses other than irrigation supply. The South Columbia Basin Irrigation District requests that the designated uses, and water quality listings be updated or removed to accurately reflect the true characteristics of a constructed conveyance system.

COMMENTER	LISTING ID	COMMENT
Swinomish Indian Tribal Community	NA	Ecology's continued failure to meet EPA-required deadlines impedes salmon recovery which negatively impacts availability of Treaty-reserved resources. The Clean Water Act requires that Washington's Department of Ecology ("Ecology") produce a Water Quality Assessment (WQA), including a list of impaired water bodies (303(d) list) every two years. Since 2012, Ecology has only produced three such WQAs, including the current 2022 WQA, which is already two years behind schedule. Lack of up-to-date information impairs the ability to understand whether waterbodies are meeting water quality standards and temperature goals and in which water bodies there is degradation to "beneficial uses." Entities working to improve water quality need up-to-date information included in these assessments to inform decisions on prioritization and project implementation. Furthermore, the WQA is the basis for establishing total maximum daily load plans (TMDLs) that form the basis for enforceable regulation of water quality standards. Water quality impairments such as high temperatures and toxic chemicals are significant factors contributing to the decline of salmonids, including ESA-listed Endangered and Threatened species. Unnecessary and preventable delays in water quality assessments impede the ability of entities to make decisions and prioritize water quality projects, prevents the state from enforcing water quality standards in a timely manner, and are therefore negatively impacting salmon stocks which are a Treaty-reserved resource. The Swinomish Tribe urges Ecology to follow the recommendations in the November 2023 report form the U.S. Government Accountability Office (GAO-24-105687) to work with the EPA to develop a plan to address this issue. Ecology should continually update all data to ensure use of the most current, accurate, and complete science, and adopt a rolling review process rather than a full (delayed) process for WQA and TMDL prioritization.

COMMENTER	LISTING ID	COMMENT
Swinomish Indian Tribal Community	NA	Ecology needs to take immediate action to address Contaminants of Emerging Concern (CECs) such as 6PPD-Q in Water Quality Assessments.
		Years-long delays in water quality assessment and listing of impaired water bodies means that enforcement of TMDLs for significant emerging water quality issues such as 6PPD-Q are years behind where they should be. The current 2022 WQA only includes data collected prior to December 31st, 2021, the same year 6PPD-Q was identified as the toxin responsible for pre-spawn mortality in coho salmon ¹ . Delays in the statewide WQA means that all data on 6PPD-Q collected from Washington's waters since 2021 has been excluded from the current assessment and 303(d) list despite a huge and ever-growing body of knowledge regarding impacts to salmon, recognition by tire manufacturers, and 6PPD-Q EPA regulations. This exclusion of up-to-date data delays 6PPD-Q-related TMDLs and Advance Restoration Plans and contributes unacceptably to further decline of salmon stocks and infringement of treaty rights as a result. We recommend that Ecology meet the "most current, accurate, and complete science" standard by taking action to accelerate lab accreditation to enable broader analysis and data availability for 6PPD-Q, and to rapidly assess and include any available data on 6PPD-Q and other CECs into the current WQA and 303(d) list, regardless of the data window which currently only considers data collected prior to December 31st, 2021. We also expect Ecology to track and follow EPA guidance on new criteria such as fresh water dissolved oxygen, fine sediment, and aquatic life toxics and to include these criteria as soon they are approved by the EPA.
Swinomish Indian Tribal Community	NA	Ecology has no transparent process for evaluating and communicating the efficacy of TMDLs and enforcement measures on impaired waters statewide, and no summaries to evaluate broader patterns in water quality changes over time. TMDLs are the foundation for enforceable actions to improve water quality in impaired water bodies. To inform their own work, and water cleanup efforts statewide, Ecology should be constantly evaluating the efficacy of TMDLs that guide agency and local jurisdiction enforcement measures, and share this information with Tribes and the public in a timely, transparent, and easily-accessible way. We recommend that Ecology add to the online tools a way to view summaries of changes in water quality classifications for the state as a whole, and for individual watersheds or basins. This would allow for easier tracking of patterns and shifts in water quality at a scale broader than individual reaches and water bodies.
Victoria Hattersley	6163	I am horrified at the bright green algae that interrupted our family vacations this year. People come from near and far for it and we couldn't let the kids in the water. We were even nervous about paddling or pet swimming. This is unbelievable for such a popular and populated lake. Please please do something! But DON"T USE ROUND UP. THAT IS ONLY MAKING THE PROBLEM WORSE. Sorry for yelling but we have to move beyond the old damage-perpetuating ways :-) I do not fertilize or use herbicides because of that. Thank you!

COMMENTER	LISTING ID	COMMENT
Washington Department of Fish and Wildlife (WDFW)	NA	First, WDFW recommends that Ecology identify Chinook salmon (Oncorhynchus tshawytscha) harvested in Puget Sound between November and March as resident fish for the purposes of the Water Quality Assessment. Approximately 30% or more of all Chinook salmon originating in the sound do not migrate to the Pacific Ocean (Chamberlin et al. 2011; O'Neill and West 2009), a phenomenon previously described by Pressey (1953) and Haw et al. (1967). Fish harvested outside the typical July – September adult Chinook migration window, as well as sexually immature Chinook salmon harvested between April and June, are likely Puget Sound residents based on available research. Known locally as blackmouth, these sub-adult "resident" Chinook salmon appear to feed primarily within their natal basin rather than moving throughout Puget Sound (Arostegui et al. 2017; Chamberlin and Quinn 2014; Kagley et al. 2017). These fish are predicted to have higher concentrations of PCBs and other contaminants than those feeding along the ocean coast (O'Neill et al. 2009; PSP 2022) because of elevated contaminant levels within the Puget Sound food web (Good et al. 2014; West et al. 2008; West et al. 2011). As such, this species is a useful indicator for upper trophic level contamination in Puget Sound.
Washington Department of Fish and Wildlife (WDFW)	NA	As part of this recommendation, we also request Ecology re-evaluate sites that were assessed using data from the WDFW study "Contaminants Reveal Spatial Segregation of Sub-adult Chinook Salmon Residing and Feeding in Puget Sound" (EIM study ID WDFW_TBiOS_Chinook). In this study, at least 11 Chinook salmon were collected in each of eight Marine Areas (MAs) throughout Puget Sound managed by WDFW. These MAs roughly correspond to Puget Sound oceanographic basins. Salmon samples were donated by anglers participating in a winter sport fisheries (MAs 6, 7, 8-1, 8-2, 9, 12 and 13) or collected in a commercial test fishery (MA 10). In the current draft assessment, the automated assessment protocol consolidates all samples collected within a single MA into one composite sample. We believe this approach leads to underreporting of impaired waters, such as those MAs in central and south Puget Sound which are still impacted by PCB contamination. We strongly encourage Ecology to use smaller composite sizes, such as the three fish composite minimum stated in Policy 1-11, when interpreting this study.
Washington Department of Fish and Wildlife (WDFW)	NA	Finally, when taking action on impaired waters identified using Chinook salmon contamination data, we strongly encourage Ecology to take a broader geographic focus, consistent with the feeding patterns and life histories of sampled populations. We understand why Ecology evaluates marine water quality using grid cells with dimensions of 45 seconds latitude by 45 seconds longitude. But we believe that assigning contamination data derived from fish tissues like blackmouth to a single grid cell misrepresents the scope of the contamination indicated by the data. While we understand Ecology cannot revise how it assigns data geographically at this time, we hope that Ecology staff responsible for responding to impaired waters are able to interpret these data as indicators of potentially basin-wide contamination in Puget Sound.

COMMENTER	LISTING ID	COMMENT
Washington Department of Fish and Wildlife (WDFW)	NA	As mentioned above, we appreciate the complexity Ecology faces trying to impose geographic boundaries on water conditions and contamination for this assessment. While we support using the current grid cell dimensions for aquatic species like mussels or English sole, we are concerned that data from species with much larger foraging ranges, like Chinook salmon, are also assigned to a single grid cell. Assigning these contaminant data to a single grid cell misrepresents the scope of the contaminant and may accidentally imply a contaminant source that does not exist. WDFW scientists often report contaminant data results by Marine Area in place of specific geographic coordinates to enable regional comparisons of contaminant levels while still representing the geographic uncertainty of specific contaminant sources. As an example, past WDFW studies of resident Chinook salmon reveal that the Chinook with the highest overall tissue concentrations of PCBs are those feeding in the Whidbey Basin and South Basin marine areas (PSP 2022, Pearsall et al. 2021). We would recommend Ecology explore whether similar reporting would be feasible for future water quality assessments.
Washington Department of Fish and Wildlife (WDFW)	NA	We applaud Ecology for its decision to use harvestable species, including WDFW's mussel watch data, to identify potential human exposure concerns. During each biennial survey, WDFW works to consistently deploy mussels at 42 index sites and a series of rotating sites that may only be surveyed once a decade. Each site hosts one cage containing up to 100 mussels, representing one composite sample. Cages are deployed for three months to allow mussels to uptake contaminants along the shoreline. While we largely agree with Ecology's process for calculating chemical exposure thresholds, we caution that the caged mussel data used in the assessment could potentially underrepresent concentrations of bioaccumulative contaminants in wild mussels (Lanksbury et al. 2014; Schøyen et al 2017). We would be interested in exploring further with Ecology whether there is a conversion or measure of uncertainty that can be applied to measured contaminant levels in caged mussels, to ensure we are not underreporting contaminant levels and underestimating their potential human health impact.
Washington Department of Fish and Wildlife (WDFW)	NA	Finally, we would like to encourage Ecology to consider using contaminant data measured in whole fish bodies when there is evidence that people in Washington are consuming whole fish. King County recently funded a survey of refugee and immigrant fishing communities in the county wherein 61% of fishers surveyed reported eating whole fish they had caught (Lanksbury, pers. comm.). We are happy to share this report with Ecology, as well as partners at the Washington Department of Health, when it is published in early 2025. Given the diverse cultural background and harvesting practices of Washington fishers, we encourage Ecology to update Policy 1-11 so that whole body fish contamination data can be included, where appropriate, in future water quality assessments.

COMMENTER	LISTING ID	COMMENT
Washington Forest Protection Association	NA	In the Supporting Information Document, Ecology states that they monitor the effectiveness of the adaptive management program within the Forest Practices Rules by evaluating progress towards achieving a series of water quality related milestones. We request that Ecology describe more specifically what is being monitored, where monitoring is being conducted, and what milestones Ecology is monitoring for. Ecology needs to be more transparent about the monitoring being done and what progress is being made.
Washington Forest Protection Association	NA	In this water quality assessment, we observed that many impaired waterbodies located on private forest land are staying on the 303(d) list due to historical information, despite a lack of recent monitoring data to show whether or not the waterbody is still impaired. Given that Ecology considers these streams low-priority for TMDL development due to the State Forest and Fish Program, we request that Ecology monitor these streams to obtain more recent data to update its water quality assessment for these AUs and to monitor the effectiveness of the Forest and Fish Program. If access to private land is limiting Ecology's ability to collect monitoring data, we request that Ecology provide guidance on monitoring for private landowners, or provide a citation to such a document if it exists.
Washington Forest Protection Association	NA	Given that Ecology believes the Forest and Fish Program and the adaptive management program are sufficient to give waterbodies on forest land low priority for TMDL development (Ecology, 2024), it seems reasonable to say that the adaptive management program is functioning as a pollution control program. Therefore, we request that all assessment units covered under the State Forest and Fish Program be assigned to Category 4B. Citation: Washington State Department of Ecology (Ecology). 2024. Supporting Information for Draft 2022 Water Quality Assessment: Supplemental methods, citations, TMDL prioritization, and data sources. Accessed online at https://fortress.wa.gov/ecy/ezshare/wq/WQassessment/2022WQA_SupportingInforma tion.pdf
Washington Forest Protection Association	NA	While reviewing this water quality assessment, we noticed that the geographical boundaries of many assessment units have changed since 2018, including both splitting and combining listings and changing assessment unit identification numbers. This makes it difficult to track changes over time. We request that Ecology more clearly describe changes made to assessment units and do a better job of linking previous information to assessment units even as their identifiers change.

COMMENTER	LISTING ID	COMMENT
Washington State Water Resources Association	NA	Please accept these remarks as comments to the Draft 2022 Water Quality Assessment from the Washington State Water Resources Association on behalf of our members. Our comments are intended to amplify any other irrigation district direct comments, including those of South Columbia Basin Irrigation District. Our members have noted some errors related to irrigation facilities being listed as rivers and streams within the water quality atlas. This is a significant concern since irrigation facilities should not be considered waters of the state. They are constructed works carrying irrigation project water, not natural rivers or streams. Additionally, any designated use descriptions and water quality listings applied to such facilities are inappropriate. These facilities should not be classified as fish bearing or rearing, recreational areas, wildlife habitat, or any use other than irrigation supply. We ask that any such designated uses and water quality listings being applied to irrigation facilities be removed/corrected to accurately reflect the true characteristics of constructed conveyance systems. Please feel free to contact us if you have any questions.