City of Seattle

Refer to attached letter.

Seattle Public Utilities

April 6, 2018

Susan Braley
Washington Department of Ecology
Water Quality Program
PO Box 47600
Olympia, WA 98504-7600

To Ms. Braley,

The City of Seattle appreciates the opportunity to review and provide input on draft revisions to Water Quality Policy 1-11. Seattle's comments are attached. Thank you for your work with Seattle and entities across the state to assess the water quality of Washington's receiving waters and set priorities for protecting and improving these waters. If you have any questions about these comments, please contact Kate Rhoads, kate.rhoads@seattle.gov.

Cordially,

Madeline Fong Goddard, PE
Deputy Director
Drainage and Wastewater Line of Business
Seattle Public Utilities

Attachment

Cc: Ben Marre, SPU
Kevin Burrell, SPU
Kate Rhoads, SPU
Pete Rude, SPU
Ingrid Wertz, SPU
Theresa Wagner, Seattle City Attorney's Office

Attachment 1. City of Seattle Comments on draft revisions to Water Quality Policy 1-11

Below are City of Seattle comments on the draft revisions to Water Quality Policy 1-11.

1. **Definitions, pages vi-ix:** Suggest (1) revising the definitions so that they do not include rules for calculation, which will appear elsewhere in the Policy if needed, and (2) deleting definitions that are not drawn from the law and therefore could cause confusion or later be used out of context – for example: "data validation" (used once in the Policy and explained there – p. 9), "impairment" and "water quality standards."

   BioPoints - The number of points assigned to an individual BioStation based upon the number of bioassay exceedances (maximum 3 bioassays per station) and the severity of the bioassay exceedance (SQS/SIZmax). ~~If greater than three BioStations exist in a quarter grid, the BioStations with the highest exceedances are used.~~

   BioScore - The total number of points assigned to a quarter grid ~~resulting from the summation of the~~ based on BioPoints from BioStations ~~from the three stations with the most recent collection/evaluation date.~~

   Call-for-Data- Invitation of public opportunity, for a specified w~~W~~indow of time, to submit ~~that~~ data ~~is being~~ to be assessed for the listing cycle.

   ChemPoints - The number of points assigned to an individual ChemStation based upon the number of chemical exceedances and the severity of the chemical exceedance (SQS/SIZmax) at that station. ~~If greater than three ChemStations exist in a quarter grid, the three ChemStations with the most recent date and highest exceedances are used. This is performed for all 47 SMS chemicals at each ChemStation.~~

   ChemScore - The total number of points assigned to a quarter grid ~~resulting from the summation of the~~ based on ChemPoints from ChemStations~~the three stations with the most recent collection/evaluation date and the highest chemical values for each of the 47 SMS chemicals~~.

   ~~**Data validation** - An analyte-specific and sample-specific process that extends the evaluation of data beyond data verification to determine the usability of a specific data set. It involves a detailed examination of the data package, using both professional judgment, and objective criteria, to determine whether the method quality objectives for precision, bias, and sensitivity have been met. It may also include an assessment of completeness, representativeness, comparability and integrity, as these criteria relate to the usability of the dataset.~~

   Grid - Defines an assessment unit in marine waters, lakes of more than 1,500 acres, and estuarine areas (the lower end) of some large rivers, using ~~. Assessment units for gridded waterbodies are defined by~~ a rectangular grid sized at 45 seconds latitude by 45 seconds longitude (approximately 2,460 feet by 3,660 feet) which may be divided ~~Contaminated sediment site listing segments are assigned to the appropriate quarter grid section of a full size rectangular grid (dividing the 2,460 feet by 3,660 feet grid~~ into quarter sections~~)~~.

~~**Impairment** – Occurs when a designated use of a waterbody is not supported; this occurs when water quality standards are not persistently met.~~

~~**Listing** – An evaluation of data and information compared to the water quality standards to determine the appropriate category for an individual AU/medium/parameter combination.~~

TMDL Boundary --*[Return to definition in Policy.]* ~~The perimeter that encompasses an~~ The area wherein a TMDL project applies and wherein implementation actions must occur to meet the goals and objectives of that TMDL.

~~**Water Quality Standards** – Water quality standards consist of numeric criteria, narrative criteria, and antidegradation components. The combination of these components express the water quality conditions necessary for supporting the state designated uses of a waterbody.~~

2. **Part 1.C (Waterbody Segments and GIS Layers), page 4, first paragraph.** Like the current Policy, the scope should be identified as "surface waters" within state jurisdiction. Suggest: *"Waterbodies covered by this policy include all surface waters of the state. …"*

3. **Part 1.C (Waterbody Segments and GIS Layers), page 6, last paragraph.** The description of the Water Quality Atlas appears incomplete. The Atlas also includes, for example, surface water, tissue, and sediment testing data and documents category determinations. The atlas is a very broad tool and it would be helpful to make that clear to the reader.

4. **Part 1.F (Category Descriptions), page 18, Category 4.** For accuracy and to match Category 4B description (p. 20 of the policy), identify as "pollution control program" at the following location:
   "A. EPA has approved the respective TMDL for a given pollutant (Category 4A).
   B. A pollution control program ~~clean-up program~~ other than a TMDL is already in place (Category 4B).
   C. The impairment is not known to be caused by a pollutant, and therefore a TMDL is not appropriate to address the impairment (Category 4c)."

5. **Part 1.F (Category Descriptions), page 19, Category 4A.** Revise paragraph to read:
   "When new data are assessed for an AU within an approved TMDL boundary, WQA staff will consult with appropriate TMDL staff to determine if the existing TMDL adequately addresses the AU ~~that a load or wasteload allocation exists for that AU~~. If the existing TMDL adequately addresses the AU ~~has a load or wasteload allocation associated with it~~, the AU will be placed in Category 4A (Has a TMDL). If not, the AU will be placed in the appropriate category based on data results alone."

6. **Part 1.F (Category Descriptions), page 21, Requirements for an Eligible Category 4B Program.** This section focuses on necessary components of a Category 4B placement for water column impairment and does not mention the pathway to Category 4B related specifically to sediment quality. SPU suggests a footnote on page 20 or 21 making clear that the pathway to Category 4B for sediment quality is described in Part 3 (Page 80).

7. **Part 1.F (Category 4B), page 21, end of para. 1.** Add to end of section, to better direct the reader: "Contaminated sediment listings, including Category 4B listings will be made based on the process in Part 3."

8. **Part 1.F (Category 4B), page 21, Point 2, first bullet.** Delete unneeded sentence to read: "*Identify the water quality target: The water quality target is the protection of beneficial uses and the attainment of the numeric criteria that are set to protect that use. ~~This would be the water quality standards that apply to the particular AU.~~*"

9. **Part 1.F (Category 4B), page 21, last sentence.** Delete "self-executing" in the examples, to read: *"(examples may include: ~~self executing~~ state or local regulations, permits, …*" Though the phrase is used in EPA guidance, it does not have clear meaning in this state.

10. **Part 1.F (Category 4B), pages 22-23.** Suggest reviewing the use of terms "determination" and "demonstration," which appear to be used interchangeably.

11. **Part 1.F (Category 4B), page 22. second from last paragraph.** To provide fair notice to the public , please revise:

    "*Progress will be reviewed every listing cycle, and if the pollution control program is not progressing ~~progress is not going according to plan, particularly if things are getting worse due to a source control issue~~, the water ~~will~~ may be placed back into Category 5 until a revised program is developed and implementation has begun."*

12. **Part 2A (Bacteria), page 30, fourth full paragraph.** Suggest specifying the time period for using new bacteria criteria, so listings are not changed piecemeal.

    "Ecology will ~~reserves the right to~~ apply the most current version of the state water contact criteria during the next WQA cycle. Although the general methodology described in this section wouldn't change, the numeric criteria applied would differ."

13. **Overall, page 30, page 41 (DO) and page 46 (pH) - for example Part 2A (Bacteria, Category Determinations).** Delete the following sentence each time it appears in the Policy, because it is inaccurate and unnecessary. (For example, see WDOH-related rule at pp. 32-33.) Part 1.F, Category 5, provides the necessary decision tool.

    ~~"Once a listing is placed in Category 5, 4A, or 4B, it can only move out of the category by qualifying for Category 1."~~

14. **Part 2A (Bacteria), top of page 31.** Edit to match other references to Category 4B in the Policy:

    "*An AU will be placed in Category 4B when the bacteria problem is being addressed by an alternative ~~active~~ pollution control program that is being actively implemented and meets the requirements of the Policy ~~EPA's qualifications for 4B designation~~. For example, an actively implemented Pollution Identification and Control Program or DOH closure response plan may be used to qualify for a 4B designation."*

15. **Part 2B (Benthic Biological), General Comment.** As part of previous WQA review, the City (SPU) provided comments to Ecology by letter dated May 15, 2015. SPU recommended that bioassessments should not be the basis for Category 5 listings until a pollutant is identified. SPU is still concerned about the use of benthic biological indicators, including the proposed Ecology approach, and reiterates its comments. However, SPU appreciates Ecology's acknowledgment that pollutants associated with low bioassessment scores need to be identified through a stressor identification analysis prior to TMDL development and encourages Ecology to continue to work with

stakeholders to further develop the methods and anticpated outcomes of a stressor identification analysis.

16. **Part 2B (Benthic Biological), bottom of page 34.** For accuracy and to match p. 37 of the Policy, identify as "Benthic Biodiversity-cause unknown."
    "Bioassessment data based on the B-IBI model will be used to determine if the bioassessment scores are indicative of water quality and/or habitat degradation, and if so will be placed in Category 5 as "Benthic Biodiversity ~~Degraded Biological Community~~-cause unknown."

17. **Part 2B (Benthic Biological), bottom of page 36.** For clarity, consistency and to match p. 37 of the Policy, identify as "benthic assemblage index."
    "The average of any benthic assemblage index ~~pollutant-related biological index~~ score from the most recent two years with data is below the defined tolerance levels, or if not defined, below the 10th percentile of the index scores for the associated reference sites."

18. **Part 2B (Benthic Biological), Category 5, page 37, para. 1 and 2.** In order to provide fair notice to the public of the technical basis for Category 5 listings:
    (1) Delete sentence; other indices yet to be developed should not be used to list in Category 5 without amending the Policy:

    "~~Other benthic assemblage indices will be used once they are developed (for example, a thermal indicator index is currently under development and will be used when available).~~"

    (2) Delete sentence: "~~Ecology will also consider identifying an AU as impaired when the biological data clearly indicate an ongoing downward trend in B-IBI scores relative to historic conditions.~~"

19. **Part 2B (Benthic Biological), Category 4, page 37, para. 3.** Website link is broken to "Guidance for stressor identification of biologically impaired aquatic resources." In addition, this document should be listed in "Helpful Documents" section on page 39.

20. **Part 2B (Benthic Biological), Category 4, page 37, para. 5.** Because later sections do identify Category 4 listings, for clarity please delete: "… ~~In other words, there will be no Category 4 listings for bioassessment.~~

21. **Part 2B (Benthic Biological), top of page 36.** For clarity, consistency and to match p. 37 of the Policy, identify as "benthic assemblage indices."
    "The average B-IBI score from the most recent two years are above the 10th percentile of reference site scores but one or more benthic assemblage indices ~~pollutant-related metrics~~ are below the 10th percentile of reference sites."

22. **Part 2C (Dissolved Oxygen), page 40, last paragraph.** Provide clarification on the following new language added to Policy: "*An exceedance is indicated in profile data when more than 10% of the water column are below the criterion magnitude."* Does the 10% apply to profile data within the stratified layer or increments or to the entire water column? Is it 10% of the data values within the water column? What is the basis for 10%?

23. **Part 2C (Dissolved Oxygen), page 41, first paragraph.** Category 5 listings should not be based on a one-day exceedance; see similar Comment re: pH. However, if a one-day exceedance is used as a basis for Category 5 listings, instrument accuracy for discrete samples should be accounted for by applying the 0.2 mg/L margin of error since a single discrete sample could result in a Category 5 listing.

24. **Part 2C (Dissolved Oxygen), page 42, last three paragraphs.** Delete the entire second ground for listing, as there is no basis in the WQ criterion and no precedent for listing based on a one-day exceedance:

    "~~OR 2. An AU will be placed Category 5 when the above requirements are not met, but a large deviation from the criterion magnitude is observed … Fair Quality marine DO criterion, which is the least stringent criterion for marine water).~~"

25. **Part 2D (pH), page 45, second paragraph.** Category 5 listings should not be based on a one-day exceedance; see similar Comment re: DO. However, if a one-day exceedance is used as a basis for Category 5 listings, instrument accuracy for discrete samples should be accounted for by applying the 0.2 pH standard units margin of error since a single discrete sample could result in a Category 5 listing.

26. **Part 2D (pH), page 46, Category 5, first bullet.** To correct typo, "DO" should be replaced with "pH" as follows: *"…when using discrete data in order to establish that <u>pH</u> ~~DO~~ exceedances are indicative of a pattern of altered <u>pH</u> ~~DO~~ instead of transient occurrences that…."*

27. **Part 2D (pH), page 47, para. 2.** Delete the entire second ground for listing, as there is no basis in the WQ criterion and no precedent for listing based on a one-day exceedance:

    "*~~OR An AU will be placed in Category 5 when the above requirements are not met, but a large deviation from the criterion magnitude is observed, which would provide high confidence that the pH criteria are not persistently met. An AU will be placed in Category 5 when any single day has a verifiable pH value below 5.5 in freshwater, below 6.5 in marine waters, or above 9.0 in fresh or marine waters.~~"*

28. **Part 2F (Temperature), page 51, last paragraph.** If Category 5 listings can be based on a single exceedance, instrument accuracy for discrete samples should be accounted for by applying the 0.2^{o}C margin of error since a single discrete sample could result in a Category 5 listing.

29. **Part 2.I(2) (Fish and Shellfish Harvest Use Assessment), General Comment**. During the scoping process for Policy 1-11, the City provided comments to Ecology (letter from SPU to Ecology dated March 31, 2016). Regarding the use of tissue data within the assessment process for toxic substances, SPU recommended that Ecology consider discontinuing the use of tissue data because:
    - There are many uncertainties and assumptions embedded in the use of tissue concentrations as an indicator of water quality that make it an unreliable assessment tool including uncertainties inherent in derivation of bioconcentration factors (BCFs).
    - It is not clear whether the source of toxic pollutants in tissue is the water column or sediment or a combination of these sources.
    - Some resident fish might be long-lived, which contributes to the uncertainty of the source and timing of potentially related surface water impacts.

- Our comment on this issue concluded that, if the tissue approach stays in the policy, clear procedures need to be identified for how a water body that is listed related to tissue would be delisted.

Although SPU is still concerned about the use of fish tissue including the new proposed Ecology approach, SPU appreciates Ecology's efforts to better frame the use of fish tissue and consider some of its shortcomings. SPU reiterates its March 31, 2016 comments above and provides these additional comments and recommendations regarding the potential use of fish and shellfish tissue:

- Although not obviously identified in the equations on page 65 of the draft policy, BCFs are still embedded in the calculation and lead to significant uncertainty in the calculated TECs.
- If Ecology decides to include their new tissue proposal in the policy, SPU recommends that Ecology employ tissue data evaluation criteria that help account for the uncertainty in use of tissue data. The current proposal regarding Category 5 evaluations for carcinogens (bottom of page 67) already incorporates such criteria. These criteria include use of median composite values and TEC_c exceedance factors of 10 to 100 times. Such criteria will maintain protectiveness while reducing over-listing. SPU recommends that Ecology reevaluate its proposed criteria for non-carcinogens and consider whether they provide a balanced, protective assessment approach.

30. **Part 2.I(2) (Fish and Shellfish Harvest Use Assessment), page 66, Age of fish**. SPU recommends expanding this discussion of the age of fish that are available for evaluating harvest use impairment. For example, using long-lived fish tissue may not be representative of current conditions.

31. **Part 3 (Sediment Quality Criteria), page 79, 5th bullet**. Recommend a footnote to help reader stating that, currently, the SMS does not include freshwater biological or chemical tests and sediment quality standards for freshwater are reserved/case-by-case.

32. **Part 3 (Sediment Quality Criteria), page 79, section on Assessment Information, first sentence.** Recommend expanding to help reader understand what numeric and biological criteria are currently available for the different salinity conditions.

33. **Part 3 (Sediment Quality Criteria), page 79, section on Assessment Information, first bullet.** Based on earlier drafts of the sediment assessment approach (e.g., see November 14, 2016 Ecology presentation on sediment listing policy), the concentrations of each of the three highest concentrations of a chemical would be averaged and that average would be compared to the SMS chemical criteria. That approach is not clear in the February 2018 draft policy.

34. **Part 3 (Sediment Quality Criteria), Regulatory Authorities, page 78, last para.:** Restate to conform simply to EPA's December 18, 2015, decision regarding Washington's revised Sediment Management Standards, Part V:

"Parts I - IV were promulgated under the authority of Chapter 90.48 RCW, *Water Pollution Control Act*, and Chapter 70.105D RCW, *Model Toxics Control Act* (MTCA), to establish marine, low salinity, and freshwater surface sediment management standards for the state of Washington and are ~~therefore~~ EPA approved water quality standards consistent with CWA Section 303. EPA did not take action on ~~Part V was promulgated exclusively under the authority of MTCA, to establish marine, low salinity, and freshwater surface sediment cleanup standards for the state of Washington.~~ Part V, ~~are~~

~~not EPA-approved water quality standards~~ and ~~therefore~~ Part V is not used ~~as water quality standards~~ in this WQA.

35. **Part 3 (Sediment Quality Criteria), page 79, section on Assessment Information, second bullet.** Is the comparison in this bullet intended to be done for each chemical? That should be clarified.

36. **Part 3 (Sediment Quality Criteria), page 80, third bullet on BioScore**. The phrase "and there can be multiple spatially distinct and chemically similar stations per grid" is not clear. Can more context or an illustrative example of this concept be included here?

37. **Part 3 (Sediment Quality Criteria), page 80, BioScore**. For the BioScore system, in addition to Category 5, need to define Categories 1, 2, 3, and 4 as is done for ChemScore.

38. **Part 3 (Sediment Quality Criteria), page 81.** The first four bullets at the top of this page seem out of place. Do they belong in the earlier Data Requirements section of this part?

39. **Part 3 (Sediment Quality Criteria), page 82, paragraph on Category 3.** The second sentence states: "For example, this could include sites where the ChemScore = 1 or 2 or where the *preliminary assessment criteria* are not met." It is not clear why a ChemScore of 1 or 2 necessarily leads to an assessment of Category 3 (AU lacks sufficient data). Should the sentence be talking about ChemStations? Please clarify.

40. **Part 3 (Sediment Quality Criteria), page 83, Category 1.** Suggested edits to the following sentence: "A quarter grid AU will be placed in Category 1 if it has been determined by Ecology to meet the SQS (WAC 173-204-320 through 173-204-340) ~~benthic SQS (WAC 173-204-320)~~." As written in the draft policy, only marine sediments are addressed by the sentence.

41. **Generally, when Ecology implements a revised Policy.** After the listing methodology in WQ Policy 1-11 has been revised, does Ecology plan to re-evaluate all existing data based on the new methodology and any new EPA-approved water quality standards? Examples: human health criteria, bioassessment, sediments, bacteria. Would re-evaluation be automatic or otherwise?

Typos and similar:

- **Exec. Summary, page iv, last sentence of para. 1:** "constitute" should be "constitutes"
- **Part 1A, page 2, last sentence of para. 1 of Introduction:** Is a word missing?
- **Part 1B, page 4, para. 1:** "commented" should be "comment"
- **Part 1C, page 4, para. 3:** "publically" should be "publicly"
- **Part 1.F, Cat. 4B, page 23:** Website link should be updated.
- **Part 1.F, Cat. 5, page 24:** Check and provide citation to "EPA 2006 Integrated Report Guidance" that is quoted. Is this the guidance cited at **Part 1G, page 25, line 1**?
- **Part 2A (Bacteria), "Category 3," page 31, sentence beg. "As additional data…":** Is a word missing? Also, suggest deleting "new."