



April 6, 2018

Ms. Susan Braley  
Watershed Management Section  
Washington State Department of Ecology  
PO Box 47600  
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RE: WSDOT Comments regarding Public Review Draft Policy 1-11 Chapter 1

Dear Susan:

The Washington State Department of Transportation (WSDOT) appreciates the opportunity to review and provide comment on the Washington State Department of Ecology's (Ecology) Public Review Draft of Policy 1-11 Chapter 1<sup>1</sup> (draft Policy). As a whole, Policy 1-11<sup>2</sup> is a foundational document vital for ensuring consistency and transparency for evaluating data credibility and applying listing methodology for the Water Quality Assessment (WQA), which is a significant agency action under RCW 34.05.272 (Administrative Procedures Act<sup>3</sup>).

The Chapters within Policy 1-11 are inextricably linked, so omitting Chapter 2 from this revision has made public review disjointed and some comments easy to dismiss as relevant to Chapter 2. While many improvements throughout Chapter 1 of the draft Policy are apparent and appreciated, WSDOT continues to encourage Ecology to update Chapter 2 to describe the specific criteria used to evaluate data credibility as required by RCW 90.48.570-590 (Water Quality Data Act<sup>4</sup>). Additionally, improvements should continue to be made to the Environmental Information Management (EIM) system and WQA tool used to automatically review data within EIM.

**Executive Summary.** Application, Page iv, general comment:

**Comment:** Policy 1-11 is "intended as guidance for all parties submitting data for the WQA," therefore the WQA process, including the various roles and responsibilities of the data submitter(s) and Ecology, should be clear throughout. Additional clarity around who is doing what to ensure data credibility will improve both consistency and transparency. Data collection projects begin with the best intentions, however projects are designed with varying intended purposes, and best intentions do not ensure data credibility for significant agency action as required by laws.

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<sup>1</sup> Washington State Department of Ecology. Public Review Draft. Water Quality Program Policy 1-11 Chapter 1. Washington's Water Quality Assessment Listing Methodology to meet Clean Water Act Requirements. February 2018.

<sup>2</sup> Washington State Department of Ecology. Water Quality Program Policy 1-11, Chapters 1 and 2. July 2012.

<sup>3</sup> Washington State Legislature. Administrative Procedures Act. RCW 34.05.272.

<sup>4</sup> Washington State Legislature. Water Pollution Control. Water Quality Data Act Policy. RCW 90.48.570 -590. 2004.

**Recommendation:** Use an active voice to clarify the various roles and responsibilities for the various parties involved in the WQA process.

**Abbreviations, Acronyms, and Definitions.** Definitions, Pages vi – ix, general comment:

**Comment:** The list of definitions remains inadequate to ensure consistent interpretation of Policy 1-11. For example, some of the definitions of high importance (e.g., data validation and data verification) are slightly different from those found in Ecology’s Quality Management Plan<sup>5</sup> (QMP) and the reasons for the differences are unclear. For example, WSDOT understands that Ecology does not “validate” the data submitted into EIM, however the definition for data validation in Ecology’s QMP includes, “three key criteria to determine if data validation has actually occurred...” by the data submitter. The omission of the three key criteria in the draft Policy’s definition for data validation is of concern because it remains unclear how Ecology will determine whether data validation actually occurred by the submitter.

**Examples of commonly used terminology lacking definition:** Critical Condition, Natural Condition, Non-detect, Pollutant, Pollution, Replicate Sample, Field Replicate Sample, Sampling Event, QA Planning Level, QA Assessment Level, and Significant Human Impact.

**Recommendation:** Evaluate the use of terminology throughout the draft Policy to ensure terminology aligns with legal and scientifically accepted definitions, in conformance with Ecology’s QMP requirements and associated glossary. Include applicable definitions in Policy 1-11.

## **Part 1: General Assessment Considerations**

**1A. Introduction and Background.** Page 2, general comment:

**Comment:** The purpose of the WQA cannot be meaningfully understood without understanding the process, including roles and responsibilities of parties involved and the laws that govern the process. It is WSDOT’s basic understanding that the WQA process involves three main steps: assemble, evaluate and assess data.

- The assemble step is met when Ecology sends out a call-for-data to be entered into EIM.
- The evaluate step is met when Ecology determines the credibility of assembled data using specific criteria.
- The assess step is met when Ecology compares the data deemed credible against water quality standards and category determinations are made using listing methodology.

The evaluation of data credibility is a distinct step that must happen before the data is compared against water quality standards, yet the words evaluate and assess (or variations thereof) are sometimes used interchangeably (one example below).

**Example and Proposed Edit:** page 2, fifth paragraph: “To ~~evaluate~~ [assess] whether or not criteria are persistently being met, Ecology considers magnitude, frequency, and/or duration of the exceedance of the water quality standard.”

**Recommendation:** Ensure consistent and appropriate word use when describing the distinct steps of the WQA process. Additionally, a flow chart would help stakeholders better understand the WQA process.

**1A. Introduction and Background.** Page 2, fourth paragraph, general comment:

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<sup>5</sup> Washington State Department of Ecology. Quality Management Plan. Publication No. 15-030303. December 2015 – Version 4.

**Comment:** While appropriate to remind data submitters that it is illegal to knowingly falsify data, as written this paragraph could be interpreted to mean that data submitters are responsible for ensuring the credibility of data used in the WQA. While the credibility of data collected for a Quality Assurance Project Plans (QAPPs) intended purpose may be sound, that does not necessarily mean the data should be assigned a Level 3 or higher in EIM for use in the WQA. Ecology is responsible for ensuring data are credible and appropriate for use in the WQA.

**Recommendation:** Re-word the sentence to clarify that data submitters are responsible for ensuring data credibility relative to their QAPP and the intended purpose of the study, and Ecology has responsibility for ensuring use of credible data in the WQA.

**1D. Ensuring Data Credibility in the Assessment.** Pages 7 – 10, general comment:

**Comment:** The Water Quality Data Act requires Ecology to develop policy describing the specific criteria that determine data credibility. The draft Policy Chapter 1 nor current Chapter 2 contain baseline parameter specific criteria describing data credibility requirements, such as method and data quality objectives (which could be used to define QA or Planning Level 3 or higher in EIM). While the specific criteria could be documented outside of Policy 1-11, specific criteria must be described in policy available to the public to ensure transparent and consistent evaluation of data used in the WQA.

Ecology relies heavily on project adherence to QAPPs, Standard Operating Procedures (SOPs) and other guidance documents to meet the data credibility requirements of the Water Quality Data Act. However, the existing QAPP template and other guidance documents referenced in the draft Policy do not adequately describe the specific criteria to ensure the credibility of data submitted and utilized for the WQA. Further, it remains unclear why the QAPPs and SOPs are referred to as “helpful documents”, “useful” and “guidance” given Ecology’s reliance on them to meet the legal requirements of the Water Quality Data Act. Ecology and stakeholders are generating and approving QAPPs with different methodologies and quality objectives, which undermines the requirement to utilize credible data in the WQA.

**Recommendation:** The creation and required application of method and data quality objectives, such as those found in the Ecology’s Sediment Cleanup User’s Manual II<sup>6</sup> (Publication No. 12-09-057) or the Programmatic QAPP for Water Quality Impairment Studies<sup>7</sup> (Publication No. 17-03-107), to define a baseline level of acceptability for data used in WQA. Specifically, WSDOT recommends Ecology:

- Include method and data quality objectives in the existing QAPP template linked on page 8 of the draft Policy or the Guidelines for Preparing a QAPP<sup>8</sup> (Publication No. 04-03-030). Additionally, require use of the QAPP template(s) on: Water Quality Program grant funded projects, NPDES permit-related QAPPs, and Ecology’s internal monitoring projects in support of the federal clean water programs. Achievement of QAPP required method and data quality objectives should define data that can be assigned a QA or Planning Level 3 or higher in EIM.

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<sup>6</sup> Washington State Department of Ecology. Sediment Cleanup User’s Manual II (SCUM II). Guidance for Implementing the Cleanup Provisions of the Sediment Management Standards. Chapter 173-2014 WAC. Publication No. 12-09-057.

<sup>7</sup> Washington State Department of Ecology. Programmatic Quality Assurance Project Plan for Water Quality Impairment Studies. March 2017. Publication No. 17-03-107.

<sup>8</sup> Washington State Department of Ecology. Guidelines for Preparing as Quality Assurance Project Plans for Environmental Studies. July 2004 (Revised December 2016). Publication No. 04-03-030.

- Develop a programmatic QAPP for the WQA process that includes specific criteria used to evaluate credibility, such as method and data quality objectives. Include the internal procedures followed by Ecology during the WQA, which is a recurring data usability assessment project.

**1D. Ensuring Data Credibility in the Assessment.** Lab Accreditation Program, Page 9:

**Comment:** The language regarding the allowance of waivers for lab accreditation has been removed but remains in Chapter 2. Therefore, it is unclear as to whether Ecology will no longer allow waivers, or simply removed the language from Chapter 1 because the allowance is covered in Chapter 2.

**Recommendation:** Please clarify if lab waivers are still allowed.

**1E. Data and Information Submittals.** Page 11, first paragraph, last sentence, “Modeled data that meet credible data requirements will be allowed when the status of water quality is being determined in relation to natural conditions:”

**Comment:** The intent and scientific defensibility of this sentence are unclear. WSDOT sees “modeled data” as a misuse of terminology since models are assessment tools used to perform analyses on actual data. Model outputs represent extrapolated information which generates an approximation; not actual measured, sampled, or observed data. As written, it remains unclear in the draft Policy how modeled output will meet the credible data requirements.

**Recommendation:** Replace “modeled data” with “modeled output” and describe the specific criteria used to ensure modeled output will meet the credible data requirements.

**1E. Data and Information Submittals.** Quality Assurance Levels for Data Submittals to EIM, Pages 12 – 13, general comment:

**Comment:** The information leading up to the EIM Quality Assurance table should describe the difference between QA Planning and QA Assessment Levels (or referenced if this detail is found elsewhere). Additionally, the roles and responsibilities of the actions described in this section should be clarified for the various parties involved. For example, who examines the study quality control results for compliance with acceptance criteria specified? Who verifies that all field operations were controlled by the use of current and approved SOPs? Who verifies and assesses the data for usability? Who assigns QA Levels and how they are assigned?

**Recommendation:** Use an active voice throughout this section and edit the table as needed to clarify roles and responsibilities of the various parties involved in the EIM submittal and QA Level assignment procedures.

**1E. Data and Information Submittals.** Quality Assurance Levels for Data Submittals to EIM, Pages 11 – 14, general comment:

**Comment:** While data in EIM are available for the public review, the public cannot review QAPPs or other quality control documentation relevant to the data because EIM does not have the capability for data submitters to upload such documentation.

**Recommendation:** Provide EIM the capability to house documentation and require stakeholders submit the documentation necessary to achieve QA Planning and Assessment Levels of 3 or higher.

**1F. Category Descriptions.** Delisting from Category 5, Page 24, fourth paragraph, last sentence, “Exceptions to this general rule are described in the WQA considerations for specific pollutant parameters found in Parts 2 and 3 of this document:”

**Comment:** The use of “exceptions” and “considerations” within the same sentence creates ambiguity.

**Recommendation:** It appears “WQA considerations” could be replaced with “Category Determinations” to improve clarity and align with the applicable delisting sub-sections in Parts 2 and 3.

**1G. Other Assessment Considerations.** Natural Conditions, Pages 25-26, general comment:

**Comment:** The information necessary to determine natural conditions is not identified. The usage of “validate” seems inappropriate.

**Recommendation:** Clarify what information and data is required to make a natural conditions determination. Additionally, refrain from using the term “validate” unless clarified how such information and data is validated.

**1G. Other Assessment Considerations.** Natural Conditions, Page 25-26, general comment:

**Comment:** While appropriate to be transparent about when professional judgement is used, it is not clear how determinations based on Ecology’s professional judgement is being documented so stakeholders can be informed of the assumptions being made.

**Recommendation:** Standardize the process as much as possible to reduce the reliance on subjectivity to facilitate consistent decision making when judgment is applied for listing decisions. Clarify how professional judgment is documented when applied.

**Part 2: Specific Assessment Considerations for Water Quality Criteria.** Page 28, general comment:

**Comment:** The title of Part 2 creates ambiguity, specifically the word choices of “specific,” “considerations” and “criteria” when used together.

**Recommendation:** Edit the title of Part 2 and/or the pollutant specific sub-sections to clarify what information is considered specific criteria used to make category determinations versus considerations where exceptions or best professional judgment may be applied.

**2B. Benthic Biological Indicators.** Pages 34-39, general comment:

**Comment:** The draft Policy does not describe if and how data from the Puget Sound Stream Benthos (PSSB) database may be used in the WQA. The credibility of benthic data obtained from PSSB can’t be assessed in a manner consistent with quality assurance planning and assessment levels as defined in the Policy. The PSSB website neither requires nor allows data submitters to conform to data quality requirements outlined in the Policy, such that Ecology can deem the data credible for use in the WQA.

**Recommendation:**

- Refrain from pulling bioassessment data from the PSSB website or,
- Require users of PSSB to conform to the same credible data requirements in the Policy.

**2B. Benthic Biological Indicators.** Page 35, 1<sup>st</sup> bullet under Evaluating Bioassessment Data based on B-IBI:

**Comment:** The statement that “Benthic macroinvertebrate community data needs to be collected and reported in accordance with the SOPs...in order to be used in the WQA” is commended for clearly conveying requirements for collecting this data.

**Recommendation:** This language should be included for all other parameters where a current SOP exists.

**2B. Benthic Biological Indicators.** Page 35, 1<sup>st</sup> bullet under Evaluating Bioassessment Data based on B-IBI.

**Comment:** Directly following the above-cited wording, the language “This applies only to data collected after 2012, when the SOP was enacted” suggests that data collected prior to the SOP development do not meet data credibility requirements.

**Recommendation:** If sampling methodology and data quality requirements are included in the referenced SOP which was developed in 2012, B-IBI listings from prior to 2012 should be removed from Category 5 as they do not meet the minimum requirements for data credibility.

**2B. Benthic Biological Indicators.** Page 35, 1<sup>st</sup> bullet under Evaluating Bioassessment Data based on B-IBI.

**Comment:** The language, “B-IBI data collected using alternative protocols may be used in the WQA provided that the sampling and analysis methodology is at least as rigorous as the Ecology SOPs and results in data to which the B-IBI model can be applied” completely discounts the very clear statement on data collection requirements commended above.

**Recommendation:** This wording should be deleted. If Ecology doesn’t remove this wording, detail should be added to describe how Ecology will ensure that the sampling and analysis methodology are at least as rigorous as the Ecology SOP before the data is used in the WQA.

**2B. Benthic Biological Indicators.** Page 37, fourth paragraph, general comment:

**Comment:** The draft Policy provides a link to Guidance for stressor identification of biologically impaired aquatic resources. It is unclear if Ecology follows this guidance or the EPA’s CADDIS guidance when performing stress identification analysis.

**Recommendation:** Clarify which stressor identification analysis guidance Ecology follows and if the Ecology guidance is used, please initiate an effort to update the guidance.

**Appendix 1. Ecology’s Standard Operating Procedures (SOPs) for sampling, auditing, and field methodology.** Pages 87 – 89, general comment:

**Comment:** It is unclear as to whether and how Ecology relies on SOPs to describe specific criteria for determining data credibility as required by the Water Quality Data Act. As written, the SOPs are simply guidance. If adherence to SOPs is how data credibility is being evaluated, that must be made clear. It should be clear to stakeholders how to plan for and design a project that will result in data that will meet QA Planning and Assessment Levels 3 or higher.

**Recommendation:** Clarify how SOPs are utilized by Ecology to describe specific criteria and evaluate data credibility as required by the Water Quality Data Act.

Ms. Susan Braley

April 6, 2018

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Thank you for considering our comments. Again, WSDOT continues to encourage Ecology to update Chapter 2 to describe the specific criteria used to evaluate data credibility as required by the Water Quality Data Act. If you have questions or wish to discuss, please contact WSDOT's TMDL Lead, Elsa Pond, at 360-570-6654, or [ponde@wsdot.wa.gov](mailto:ponde@wsdot.wa.gov).

Sincerely,



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KMS:ep