

NORTHWEST ENVIRONMENTAL ADVOCATES



May 15, 2015

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P.O. Box 47600
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Via e-mail only: 303d@ecy.wa.gov

Re: **Washington's Draft Integrated Report and Section 303(d)(1) List of Impaired Waters**

Dear Mr. Lizon:

The following comments on Washington's proposed Clean Water Act Section 303(d)(1) list (hereinafter "303(d) list") are submitted by Northwest Environmental Advocates (NWEA). We note that Ecology submitted a marine-only 303(d) list—with no freshwater review—as Washington's 2010 list on December 28, 2011 and EPA approved that list, with no freshwater review, on December 21, 2012, referring to it as "Washington's 2010 Section 303(d) list." See Letter from Daniel D. Opalski, Director, Office of Water and Watersheds, EPA, to Kelly Susewind, Ecology, Re: Approval of Washington State 2010 303(d) List (Dec. 21, 2012). The last list with a review of data and information for freshwater water bodies was in 2008. As Ecology explains the status of the state's freshwater list, "[a]fter the 2008 Water Quality Assessment Ecology, with EPA approval, went to a rotating system for completing the assessment. This cycle focused on marine waters. The next cycle will focus on freshwater. The focus will continue to alternate between marine and freshwater cycles." Ecology, Water Quality, Washington State's Water Quality Assessment and 303(d) List, Differences Between the Recent 303(d) Lists, Current, *available at* <http://www.ecy.wa.gov/programs/wq/303d/ListDifferences.html> (hereinafter "List Differences"). It should be noted that this view of what is allowed under EPA's "rotating basin approach" is not consistent with EPA national policy, as discussed *infra*, notwithstanding EPA Region 10's apparent acceptance of it in its 2012 approval of the 2010 list.

Now Ecology refers to the 2010 list that was approved by EPA in 2012 as Washington's "2012" list, notwithstanding EPA's finding and even Ecology's own 2011 "call for data" that referred to the new data being for a "2012 assessment." See Ecology, WSR 11-13-129, Ecology Announces a "Call for Data" for the Freshwater Water Quality Assessment and Notice of Public Review of Policy 1-11 Revisions and River and Stream Map Presentation Changes (June 22, 2011). The date of EPA's approval does not make the 2010 list a 2012 list, notwithstanding Ecology's attempt to paper over its failure to complete a list for that year. See List Differences ("This Assessment and 303(d) list was approved by EPA in December 21, 2012. Once the next Assessment is approved, this Current Assessment will be given the title of "2012 Water Quality Assessment" *to reflect more on when the assessment was approved rather than when the assessment was scheduled for completion.*") (emphasis added). EPA has never approved a Washington "2012" list; rather, EPA quite clearly approved a partial 2010 list for Washington.

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Either Ecology must call the list presently out for public comment a “2012” list or it must acknowledge that—just as it failed in 2002, 2006, and 2010 for freshwater— so too did it fail to submit a list in 2012. One thing is clear: it is incorrect and misleading for Ecology to repeatedly refer to the “2012 Assessment” because there is no such thing. *See e.g.*, Frequently Asked Questions on the Assessment, Proposed Water Quality Assessment and 303(d) List for Washington State Using Fresh Water Data at <http://www.ecy.wa.gov/programs/wq/303d/freshwtrassessmnt/assessmentfaqs.html>. Even Ecology is confused because on that same website it states: “Ecology is overdue on the 2012 Water Quality Assessment.” *Id.* Ecology cannot both have a 2012 assessment completed and be overdue on a 2012 assessment.

Moreover, it makes no sense for Ecology to maintain a cut-off date for data and information upon which the proposed list is based that only goes through December 31, 2010—almost four and a half years ago—and to term this same list by whatever date EPA completes its review and approval, partial approval, or denial. Hypothetically the result could be as much as a six year gap between the cut-off date and the name of the list. This is just misleading to the public and to regulators. As Ecology acknowledges, the 303(d) list is not just for the development of Total Maximum Daily Loads (TMDL); it also has ramifications for any regulatory activity that relies on water quality standards including, importantly, the issuance of NPDES discharge permits. *See e.g.*, Ecology, Water Quality, Washington State’s Water Quality Assessment and 303(d) List, Proposed Water Quality Assessment and 303(d) List for Washington State, Frequently Asked Questions (hereinafter “FAQ”), How is permitting done when a facility is discharging to water that is 303(d) listed?¹ Ecology should change the cut-off date or name the list based on the cut-off date, namely a “2012 list,” and acknowledge it is now a year late starting on its 2014 list.

I. WASHINGTON FAILS TO USE ALL READILY AVAILABLE DATA AND INFORMATION IN ASSESSING ITS WATERS AND DEVELOPING ITS 303(D) LIST

Ecology has, for many years, failed to meet the requirements set out in federal regulations to “assemble and evaluate all existing and readily available water quality related data and information to develop the list[.]” 40 C.F.R. § 130.7(b)(5). EPA regulations specify that the meaning of that phrase includes but is not limited to four broad categories of waters, including waters identified as “threatened” in the state’s 305(b) report. Specifically called out is a requirement that states review data and information on “[w]aters for which water quality problems have been reported by local, state, or federal agencies; members of the public; or academic institutions.” 40 C.F.R. § 130.7(b)(5)(iii). The regulations instruct states that these groups should be “*actively solicited* for research they may be conducting or reporting.” 40 C.F.R. § 130.7(b)(5)(iv) (emphasis added).

A. Ecology’s Reliance on its “Call for Data” Violates EPA Regulations

1. EPA’s Regulations and Guidance

EPA has explained the meaning of its regulation in its primary guidance document on the development of state’s 303(d) lists with regard to the state’s obligation to “solicit” data and information:

¹ Available at <http://www.ecy.wa.gov/programs/wq/303d/freshwtrassessmnt/assessmentfaqs.html>

States should solicit data and information including, but not limited to, the types listed below:

- observed effects (see glossary)
- closures, restrictions and/or advisories applicable to swimming, fish consumption, and drinking water
- violations of Safe Drinking Water Act (SDWA) standards
- segment-specific ambient monitoring-chemical, physical, and/or biological
- large-scale probabilistic monitoring designs
- simple dilution calculations
- predictive (simulation) modeling,
- landscape analysis
- remote sensing
- complaints and comments from the public

EPA, Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act 30 (July 29, 2005) (hereinafter “2006 Guidance”). EPA lists the types of organizations and individuals who should be solicited for data and information. *Id.* at 31. It explains that “data and information should be drawn from existing compilations of information regarding water quality[.]” *Id.* at 30. And it notes that “EPA regulations provide that states should actively solicit organizations and individuals[.]” *Id.* at 31. The guidance explains that “EPA considers active solicitation as notifying local, state, and federal agencies, members of the public, and academic institutions that the state is seeking water quality related data and information . . . [and that] EPA recommends that states also request such data and information via letters sent to other state agencies, federal agencies and academic institutions that may have data/information.” *Id.*

EPA’s guidance notes that the state’s obligation to review data and information extends beyond the data and information provided by the solicited public:

The state should make reasonable efforts to obtain and consider sources of data and information not provided by commenters. If particular data/information referenced in the public comments are not provided, EPA expects states to make a reasonable effort to secure the data. Solicitation requests should note that at a minimum commenters should provide as much information as possible in order for the state to be able to obtain the data or information, and again emphasize any state criteria for considering and prioritizing data sets.

Id. at 32.

EPA also discusses the limitations of a state’s use of a “call for data” by ensuring greater public input into the development of a state’s 303(d) list. The guidance states that:

If state institutes a cutoff date for data submission, effective prior to establishing a draft list, there could also be a separate data solicitation step prior to compilation of a final 303(d) list. Under this scenario, the state would compile the preliminary list using all information it has at hand based on identified data sources.

Additional data submissions during the public comment period would then be evaluated, appropriate changes to the draft list would be made based on these new data or information.

Id. at 31. If, on the other hand, a state declines to provide more than a 30-day period in which the public and agencies can submit data and information and declines to use the public comment period on the list itself as an opportunity to submit additional data and information, EPA says that states should both make that clear and that “data submitted after that cutoff date would be considered during the next listing cycle.” *Id.* However,

States should provide a mechanism for an exception to the limit for the submission of data if the submitter can demonstrate that the data were readily available prior to the data cutoff date and should have been included in any reasonably diligent state review of data. EPA will generally limit its review of a state listing submission to the data and information assembled by the state prior to the data cutoff date if the state was reasonably diligent in assembling available data and information and soliciting data and information from the public.

Id.

Finally, EPA holds states responsible for obtaining reasonably available data and information regardless of the failure of commenters to bring the data and information to the state’s attention:

The state should make reasonable efforts to obtain and consider sources of data and information not provided by commenters. If particular data/information referenced in the public comments are not provided, EPA expects states to make a reasonable effort to secure the data. Solicitation requests should note that at a minimum commenters should provide as much information as possible in order for the state to be able to obtain the data or information, and again emphasize any state criteria for considering and prioritizing data sets.

Id. at 32. EPA’s subsequent 303(d) listing guidance documents, for the lists to be produced by states in 2008, 2010, 2012, and 2014 have not retracted any of EPA’s long-standing interpretations of its regulations at 40 C.F.R. § 130.7(b)(5) that are set out in its 2006 guidance.

2. Washington’s Failure to Follow EPA Regulations and Guidance

Since its 1998 303(d) list, Ecology has issued only four “calls for data.” The first sought data in a 60-day period, ending December 16, 2002. *See* WSR 02-20-087, Department of Ecology, Call for Data for the Assessment of Water Quality for the 303(d) List of Polluted Waters (Oct. 1, 2002). The second was also for a 60-day period ending November 7, 2006. *See* Ecology, Call for Data for the 2006 Water Quality Assessment (Aug. 23, 2006). The third requested only marine data by October 15, 2009, roughly a 90-day period. *See* WSR 09-15-174, Department of Ecology, Call for Data for the Water Quality Assessment (July 21, 2009). The last was for a “2012 assessment,” freshwater data only, limited to data collected before May 1, 2011 and received by August 31, 2011, roughly a 60-day period. *See* WSR 11-13-129, Department of Ecology, Ecology Announces a “Call for Data” for the Freshwater Water Quality Assessment and Notice of Public Review of Policy 1-11 Revisions and River and Stream Map Presentation

Changes (June 22, 2011). Summarized, over a 13 year period, Ecology has requested data for pollution on freshwater waterbodies three times and data on saltwater waters three times. In contrast, had Ecology followed legal requirements, it would have requested data seven times during that period or more than twice the opportunities for the public, nonprofit, and governmental agencies to submit data and information.

In none of the four solicitations to support the assessment has Ecology mentioned “information,” despite the fact that “data and information” are repeated throughout section 130.7(b) and despite the fact that not all aspects of water quality standards can be assessed strictly through the type of data Ecology requested. In its 2002 solicitation, Ecology stated that it was seeking “water quality data,” and noted that people submitting data “must document” that a quality assurance plan was followed.” Its 2006 and 2009 calls for data are identical with the exception of the latter’s including a statement that the person submitting the data “must provide ecology with a copy of the [quality assurance plan or approved sediment sampling and analysis plan] upon request.” The 2009 marine-only solicitation also stated that “[n]arrative information that provides conclusive evidence that a beneficial water use is being impaired must be submitted directly to the water quality program.” The 2011 freshwater-only solicitation replaces this statement with the following: “All data used in the assessment must have been collected in accordance with a quality assurance plan and must also be representative of ambient water quality conditions, including fish tissue sampling results.” In summary, three out of four solicitations omit any reference to Ecology’s acceptance of information on designated use support . No solicitation for freshwater data has referred to Ecology’s acceptance of such information, including the one that underlies the current proposed 303(d) list. All of the solicitations state that the person submitting the data must have access to the quality assurance plan. The result of this limitation is that members of the public are not free to submit data or analysis (“information”) collected and developed by others, governmental agencies, academic institutions, or other organizations to Ecology for its use in developing the 303(d) list. They are, apparently, only free to submit data that they themselves have collected or supervised.

These calls for data demonstrate Ecology’s 303(d) proposed list, as well as its lists in the past on which this one builds, are not consistent with federal requirements. With one exception for marine waters only, Ecology has not sought from the public or evaluated on its own any “information on water quality.” EPA’s regulations and guidance are consistently clear that states must consider information on water quality as well as data. EPA regulations that instruct states to review data and information for which “water quality problems have been reported” clearly indicates the use of information, not just data. *See* 40 C.F.R. § 130.7(b)(5)(iii). EPA’s 2006 guidance specifically defines “Existing and Readily Available Water Quality-Related Data and Information” to include, *inter alia*, “information found in watershed plans,” “information contained in reports,” “restrictions and advisories,” “any *observed effect*,” and results of surveys. EPA 2006 Guidance at 67-68 (emphasis in original). The glossary defines “observed effects” as:

Direct manifestations of an undesirable effect on waterbody conditions. For example, fish kills, fish lesions, depressed populations of certain aquatic species, and bioassessment scores are observed effects indicating changes in aquatic communities. Major algal blooms, undesirable taste and odor in raw and finished drinking water, and increased incidences of gastroenteritis and other waterborne diseases among swimmers are also observed effects. Depending on a state’s water quality standards and specific waterbody conditions, observed effects may form the basis of an impairment decision. For example, depending on the

magnitude and cause of a fish kill, this observed effect may or may not result in an assessment of “impaired.” Generally speaking, pollutants and pollution are not considered observed effects (e.g., lead, pesticides, phosphorus); rather, they are causes of observed effects.

Id. at 68. EPA’s guidance is consistent with its intent in adopting the current regulations. In explaining its consolidation of an original proposal to set out 16 categories, EPA described its consolidated four categories as including “[w]aters identified . . . as having impaired or threatened designated uses,” and “[w]aters impaired or threatened by nonpoint sources.” 54 Fed. Reg. 23667-8 (July 24, 1992). The focus on uses and threats is consistent with a requirement to use information in addition to data.

In our comments on Ecology’s last proposed freshwater 303(d) list, NWEA commented that Ecology did not appear to have gathered all readily available data and information.² Letter from Nina Bell, NWEA, to Ken Koch, Ecology, Re: 2008 Draft Assessment of Water Quality for the Clean Water Act Sections 303(d) and 305(b) Integrated Report (April 30, 2008). We specifically noted that Ecology did not appear to have solicited data and information from the U.S. Army Corps of Engineers and electric utilities for

data on the water quality impacts of hydroelectric dams. Some dam owners are producing water quality data in response to relicensing through the Federal Energy Regulatory Commission (FERC). Some dam owners are being required or requested to alter the method of drawing water from behind their dams to avoid thermal shock downstream. . . . there are no references in the listing data base to the impact of dams and culverts on fish or thermal shock. Washington’s 303(d)(1) list should include these issues as evidence of violations of water quality standards.

Id. at 2. We stated that Ecology did not appear to have obtained readily available data and information from the National Marine Fisheries Service (NMFS):

This would include, primarily but not exclusively, data and information regarding the threatened or endangered status of anadromous fish under the Endangered Species Act (ESA), as well as candidate species, as evidence of beneficial use impairment. In fulfilling its responsibilities under the ESA, NMFS completes Comprehensive Status Reviews for each listed species which identify, stream by stream, the causes of declines and population estimates. In addition, NMFS should have useful data and information in its recovery plans and subsequent monitoring of plan implementation as well as data and information on marine mammals. The Washington 303(d) list must include listings based on data and information from NMFS.

Id. Likewise, we noted that Ecology did not appear to have obtained readily available data and information from the U.S. Fish and Wildlife Service:

² We observed that it was impossible to ascertain what sources Ecology had used because the agency failed to provide a list of sources. *Id.* at 1. *See* discussion *infra*.

Similarly, the draft list apparently ignores data from the U.S. Fish & Wildlife Service (USF&WS) on toxic contaminants present in sediments and tissue of invertebrates, fish, and wildlife. Ecology's failure to obtain USF&WS data on toxic residue levels and beneficial use impairment creates serious omissions from the 303(d) list. This is particularly true given Ecology's refusal to apply its narrative criteria discussed further below. In addition, USF&WS also maintains data and information on the threatened or endangered status of resident aquatic species and wildlife under the ESA, which is evidence of beneficial use impairment. The Washington 303(d)(1) list must include listings based on data and information from USF&WS.

Id. Nor did it appear that Ecology had obtained readily available data and information from the Washington Department of Fish and Wildlife on "causes of fish population declines," "habitat conditions," and "beneficial use impairment." *Id.* at 3. In its response, purportedly to the issue of listing on the basis of "information," Ecology stated that state law does not allow it to "list segments based on speculation or broader studies that draw broad conclusions about the status of the water. To go into Category 5, impairments must be directly linked to a pollutant in the waterbody that can be the subject of a TMDL[.]" (The rest of the "response" has nothing to do with information.) Ecology, 2008 Water Quality Assessment–Response to Comments (hereinafter "2008 Response"). Besides the fact that Ecology did not respond to the comment and instead used it as a way to segue into a discussion of speculation, Ecology is simply wrong. As the U.S. Environmental Protection Agency (EPA) said upon reviewing and partially disapproving Oregon's 2010 list, and quoting its 2006 guidance, "if a designated use is not supported and the segment is impaired or threatened, *the fact that the specific pollutant is not known does not provide a basis for excluding the segment from Category 5.*" EPA, Enclosure 1: Review of Oregon's 2010 Integrated Report.

There is no indication Ecology has sought any information—as opposed to data—from any entity. While the methodology refers in several places to the notion that "information" can be used to determine impairment,³ in the methodology's discussions of specific parameters, the concept of "information" is only discussed with regard to 303(d) listings as a method of determining a pollutant's level is natural, that is to say as a basis for not listing it. Otherwise the basis for placing a segment into Category 3 is "information." Put another way, there is no evidence from the methodology that Ecology uses information for listing purposes.

Regardless of whether NWEA or others had or had not provided a list of sources of data and information on water quality, designated and existing use impairment, Ecology was obligated to

³ See e.g., Methodology at 8 ("Information other than numeric data, such as narrative information, may be submitted directly to the Assessment coordinator."), 17 ("A determination of impairment can be based on either numeric or narrative information."), 18 ("Because the impairment is not being caused by a pollutant, narrative information must be submitted in accordance with this policy (see Section 6, 'Assessment of Information using Narrative Standards')."), 18 ("A waterbody segment may also be placed in Category 5 if it is currently meeting standards, but credible trend information and data collected through a valid statistical methodology indicates that the water body is not expected to meet applicable water quality standards by the next assessment cycle."), 20 ("The Assessment of water quality can be based on narrative information."),

obtain the readily available data and information itself. *See* EPA 2006 Guidance at 32. For example, it begs credulity for Ecology to ignore data such as that from the studies on the Lower Columbia River, discussed *infra*, and the information from those studies in which risks to designated uses, such as fish, wildlife and human health, were evaluated.

There is no evidence that Ecology “actively solicited” agencies and academic institutions for data and information. An announcement soliciting submission of data is not an active solicitation in the meaning of the EPA regulations. There are several reasons for this. The “call for data” has been too infrequent, of too short a duration, and makes clear that Ecology does not accept data or information on designated use support, or information of any kind. Ecology’s failure to use readily available data and information that is easily accessed on agencies’ websites makes it abundantly clear that Ecology had no intention of using any additional information of the same kind had agencies taken the time to provide it. It is not even clear how those agencies or members of the public are supposed to evaluate Ecology’s treatment of data or information given that the database for Category 3 is not available for review. There is no reason why an agency that collects data and information on fish and wildlife, for example, would provide that data and information to Ecology when it is clear that Ecology will not consider it. Ecology’s own “call for data” and its narrow interpretation of its obligations to develop an adequate 303(d) list severely undermine the likelihood that outside parties would take the considerable time to compile data and information that was, without a doubt, going to be rejected. Further, there is no evidence that Ecology solicited agencies and research institutions by letter or telephone call.

Last, Ecology’s methodology contains no reference to listing of waters because they have been identified as “threatened” contrary to EPA regulations. 40 C.F.R. § 130.7(b)(5)(i). Ecology’s assessment database of waters does not include any method for the public to assess whether the agency has used waters identified as “threatened” as the basis for 303(d) listing. Therefore it can be deduced that Washington has listed precisely zero waters that have been listed as threatened.

B. Washington’s Purported Rotating Basin Approach is an Incomplete Assessment of State Waters

1. EPA Regulations and Guidance Pertaining to the Rotating Basin Approach

EPA’s 2006 Guidance states that:

EPA is aware that many states have turned to the rotating basin strategy as a technically sound approach for making assessment determinations of the state’s waters. In this approach, *the available monitoring resources are concentrated or targeted in one portion of the state for a specified period of time, thus allowing for data to be collected and assessed in a spatially and temporally focused manner.* Over time, every portion of the state is targeted for this *higher resolution monitoring* and assessment effort (often over a five-year period), however the state must consider all existing and readily available data and information during the development of its 2006 Integrated Report, regardless of where in the state the data and information were generated.

Id. at 32 (emphasis added). Thus, in 2006 EPA made clear that the use of the so-called rotating basin approach was intended to focus monitoring resources in a concentrated fashion, with

assessment tied to that monitoring, and in addition that states that chose to use this approach were not relieved of their obligation to conduct a complete statewide assessment. In its 2010 guidance, EPA discussed the rotating basin approach with more specificity. Again, EPA emphasized monitoring, stating that this approach would “allow[] for data to be collected and assessed in a spatially and temporally ‘focused’ manner. Over time, every portion of the state is targeted for monitoring and assessment (often over a four or five year period).” 2010 Guidance at 4.

EPA also explained that if states sought to use the rotating basin approach they should describe the approach, including “how the approach is incorporated into the State’s monitoring and assessment methodology” including such concerns as the schedule for each basin and the type of data and information being solicited in the targeted basin. *Id.* EPA also reiterated that “States will, consistent with their assessment and listing methodologies, continue to consider all existing and readily available data and information in making water quality attainment determinations,” and that “States using a rotating basin approach will continue to submit a 303(d) list/IR on a biennial basis that reports on the water quality status of all waters in the State.” *Id.* Likewise EPA stated in later guidance that “EPA expects that States will continue to submit their IR data to EPA in a manner that provides a *full refresh* of the water quality attainment status of all assessed waters and documents the availability of data and information for each water.” 2012 Guidance at 3 (emphasis added).

2. Washington Purported Rotating Basin is Inconsistent with EPA Regulations and Guidance

Washington had taken an approach to completing its 303(d) lists that is a mixture of not submitting lists and a purported “rotating basin” approach that is not consistent with EPA policy. Washington failed to submit a proposed 303(d) list for freshwater streams, rivers, lakes, and wetlands in 2002, 2006, 2010, 2012, and 2014. Ecology explains the status of the state’s freshwater list as using its own version of EPA’s rotating basin approach: “[a]fter the 2008 Water Quality Assessment Ecology, with EPA approval, went to a rotating system for completing the assessment. This cycle focused on marine waters. The next cycle will focus on freshwater. The focus will continue to alternate between marine and freshwater cycles.” List Differences. This purported “rotating” is not consistent with EPA national policy, notwithstanding EPA Region 20’s apparent acceptance of it at the time EPA approved Washington’s 2008 list. As quoted above, EPA policy quite clearly says that “[s]tates using a rotating basin approach will continue to submit a 303(d) list/IR on a biennial basis that reports on the water quality status of *all* waters in the State.” 2010 Guidance at 4 (emphasis added).

Contrary to this guidance, Washington has simply failed to produce a list for more years than it has produced one and has submitted 303(d) lists that do not include a “full refresh” of its freshwater 303(d) lists. It now purports to submit a list that it presumably thinks is a 2014 list, or maybe a 2016 list, without ever saying so. *Compare* FAQ (“Ecology is overdue on the 2012 Water Quality Assessment”) *with* FAQ (multiple references to a completed “2012 assessment”). Or, possibly, Ecology will call it by the year that EPA approves it (e.g., 2016). *See* List Differences (the name of the list will “reflect more on when the assessment was approved rather than when the assessment was scheduled for completion.”) This is not all semantics. Ecology states that this unknown-named list includes data only through the end of 2010, which is roughly four and a half years ago. *See* FAQ. It is misleading and confusing to refer to a list that reflects only data through 2010 as anything but a 2010 or 2012 list. It is certainly could not in any

stretch of the imagination be considered a 2014 or 2016 list notwithstanding when Ecology analyzed the data and when EPA might approve the list. That there might be some time lag between the data cut-off period and the date the list is due is understandable. But this proposal is utterly illogical. Either Ecology should name this list the 2010 list or it should change the data cut-off date.

Ecology suggests that the timeliness of its assessment is not a problem because any waterbody that needs to be on the 303(d) list will eventually get there and a TMDL can be done: “the purpose of the 303(d) list is to generate a list of waters needing TMDLs.” Ecology, Response to Comments, revisions to Policy 1-11 (July 2012) (hereinafter “2012 Response”) at 5; *see also* 2008 Response at 5 (similar text). It is correct that the 303(d) list is a list of waters that need TMDLs but it is not correct that the list serves only that purpose. The timeliness of the assessment and placement of waters on a 303(d) list is essential for proper issuance of NPDES permits. As Ecology informs the public:

How is permitting done when a facility is discharging to water that is 303(d) listed?

The NPDES permit process that is used in Washington when a waterbody segment is 303(d) listed but a TMDL is not completed, contains the following three components:

- Confirm water quality impairment at the point of discharge.
- Impose interim effluent limits where the water quality at the point of discharge is not meeting standards to prevent an increase in pollutant loading (this will likely result in performance-based limits).
- The facility is required to develop and implement a pollutant minimization plan.

FAQ. Ecology makes it quite clear that the completeness and timeliness of the 303(d) list is essential to appropriate pollution controls under CWA Section 402.

Not only is Ecology’s current proposed list inadequate from the standpoint of its freshwater rivers, streams, lakes, and wetlands but it is an inadequate list for all its waters, including marine and estuarine waters. This proposed list is “based on fresh water data.” *See* Ecology, Proposed Water Quality Assessment and 303(d) List for Washington State Using Fresh Water Data, at <http://www.ecy.wa.gov/programs/wq/303d/freshwtrassessmnt/index.html>. But this new list fails to be a “full refresh” of Ecology’s marine and estuarine waters as well, contrary to EPA guidance and regulations. The last review of marine and estuarine waters was the Washington 2010 303(d) list, submitted to EPA for approval on December 28, 2011 and covering data received by October 15, 2009. *See* Ecology, WSR 09-15-174, Call for Data for the Water Quality Assessment (July 21, 2009) at 1. Therefore, the current marine data on the current list are over five and a half years old. By the time that Ecology updates the marine 303(d) list it will likely be at least seven years old. This is neither a “full refresh” of all of the state’s waters, nor is it a rotating/alternating every four-year list, nor is it a “rotating basin” approach. This is simply contrary to law.

C. Washington Uses an Arbitrary Temporal Limit on “Available Data”

1. EPA Guidance on Temporal Limits to Data and Information

EPA’s 2006 guidance provides the most in-depth discussion of the allowed temporal and spatial limits to data and information. EPA points out that states and EPA must rely on extrapolation from individual data points because even in the best of circumstances “the percentage of all possible locations in time and space from which data has been collected is very, very small.” 2006 Guidance at 33. For this reason, all data and information should be used for assessments “unless a specific technical rationale is provided to support a determination that such data and information should not be used (see 40 CFR 130.7(b)(6)(iii-iv)).” *Id.* Because the burden rests on states to demonstrate that data and information should not be used and because of a general paucity of research information, EPA urges states to evaluate “contextual information [that] might indicate that levels of a pollutant under study are likely to have remained fairly constant over a certain period.” *Id.* at 34. EPA elaborates that,

data should not automatically be treated as unrepresentative of relevant segment conditions solely on the basis of its age without supporting information indicating that the data are not a good indicator of current conditions. However, older data should be evaluated with care. For example if the most recent data for a particular assessment unit is 10 years old, and that data indicated that average and/or peak conditions in a segment at that time were worse than those specified by an applicable WQC; and, since that time, all the sources of the pollutant in question had been required to dramatically lower the levels of the pollutant in their effluent, and few changes that would lead to increased loadings of the pollutant had taken place in the watershed, it could be reasonable to assume that the segment was now meeting the WQC for that pollutant. By contrast, if 15 year old data indicated that a segment was then just barely meeting WQS for several pollutants associated with urban runoff, and the watershed of that segment had since that time undergone considerable urbanization, a conclusion that the segment was no longer meeting WQC for some or all of those pollutants could be warranted.

Id. at 35.

2. Washington Fails to Justify its Arbitrary Temporal Limits

For its proposed list, Ecology relies on data almost exclusively limited to that collected through December 2010. FAQ. Ecology states that the public “call for data” was completed on August 31, 2011. *See* FAQ. In its 2012 proposed list, Ecology limits the data it uses to data collected since 2001. Methodology at 7 (“Data collected within ten years of the published call-for-data end date for each Assessment will be consolidated and assessed with other data of the same waterbody segment and parameter.”).

This approach is arbitrary for several reasons. First, Ecology has not necessary obtained and evaluated all data and information that was collected or analyzed prior to 2001. By way of example, in its approval of Washington’s 2004 list, EPA stated that it was acceptable for the state to not list waters impaired by “invasive exotic species” because there is no determination in such a circumstance that a pollutant is causing the impairment. *See* Letter from Michael

Gearheard, EPA Office of Water and Wetlands, to David Peeler, Ecology (Nov. 4, 2005) at 10. Ecology's current listing methodology similarly has one mention of invasive species that incorrectly states the law: "Some examples of *non-pollutants* that nonetheless cause impairment are: . . . Loss of habitat due to invasive exotic species." Methodology at 17 (emphasis added). This is an incorrect statement of the law. The term "pollutant" includes "biological materials." 33 U.S.C. § 1362(6). In *Northwest Environmental Advocates v. EPA*, No. C-03-05760-SI, 2005 WL 756614 (N.D. Cal. Mar. 30, 2005), a federal court found that ship discharges of invasive species was the discharge of a pollutant necessitating an NPDES discharge permit under section 402 of the Clean Water Act. Likewise, EPA in issuing the Vessel General Permit, concluded that: "many narrative criteria and anti-degradation and general policies of applicable state water quality standards do seek to prevent the types of degradation that is associated with the introduction of [invasive species] into receiving waters." EPA, Final Issuance of National Pollutant Discharge Elimination System (NPDES) Vessel General Permit (VGP) for Discharges Incidental to the Normal Operation of Vessels Fact Sheet (2013) at 111.⁴ Therefore, not only is Ecology's current methodology inconsistent with the law, Ecology's long-standing failure to ignore invasive species impairments means that it has been rejecting and/or ignoring data and information concerning invasive species impairments well before 2001. It is, therefore, arbitrary for Ecology to ignore data and information that pre-date 2001 that demonstrate that Washington waters are impaired by the pollutant of invasive species. This is not to say that if there is more recent evidence that the invasive species are no longer present that the new data or information would not supersede the old data or information. It is only this: the outcome should be the same as if Ecology correctly listed the waters as impaired prior to 2001 and has or has not found subsequently that the water quality has changed or remained the same.

There are numerous other reasons why Ecology's cut-off date for data is arbitrary and inconsistent with federal law. First, as explained *infra*, it is inconsistent with an evaluation of Tier I protections of the antidegradation policy, a required evaluation that dates to November 28, 1975, to exclude data before 2001. 40 C.F.R. § 130.7(b)(3). Second, there is no difference between data that Ecology obtained and evaluated previously which was used as the basis for a 303(d) listing and data that it received later in time but which would have been used as the basis for a listing had it been properly and timely obtained. In other words, Ecology's failure to obtain all readily available data and information for its past and very infrequent 303(d) listings cannot be used today as a rationale for not using the data and information because now it is, ostensibly, too old. Third, the fact that Ecology has used entirely arbitrary temporal limits in the past is not a rational basis for continuing to use such arbitrary temporal limits. This is even more important for a state that entirely missed many of its lists, as discussed above, evaluated only some data and information in its most recent freshwater list in 2008, and is for its proposed new list proposing to conduct only a review of freshwater data. Conducting infrequent lists clearly undermines any rationale Ecology has for eliminating consideration of older data. Last, there are limited budgets for monitoring and special studies. In the absence of information that suggests that water quality has improved, older data should be used, unless they are likely inaccurate. Professional judgment is a better method than arbitrary cut-off dates where expensive studies are not likely to be replicated. Ecology states that "[n]ew information is being generated continuously on water quality in the state of Washington." 2012 Response at 5. While facially true, it is not true that data and information is being generated continuously in all media, in all

⁴ Available at http://water.epa.gov/polwaste/npdes/vessels/upload/vgp_fact_sheet2013.pdf

waters, and on all parameters. In fact, there are plenty of waters and parameters and use support findings that have not been replicated due to the enormous cost of doing so and limited budgets for monitoring and special studies. This is particularly true for toxics. Contrary to the requirements set out in 40 C.F.R. § 130.7(b)(3), Ecology has not provided a “rationale for any decision to not use any existing and readily available data and information” but, instead, has simply stated an arbitrary outcome.

This arbitrary cut-off will become more apparent when, if ever, Washington updates its toxic criteria for human health and aquatic life, bringing them into this century. Ecology should review all of its data in light of adequately protective criteria, regardless of when the data were collected. While this is not an issue for this list, given Ecology’s foot-dragging revision of its water quality standards, it will presumably be an issue for the next list.

E. Submission of Readily Available Data and Information

As explained above, EPA regulations require Ecology to obtain and use “all existing and readily available water quality-related data and information” by “actively solicit[ing]” local, state and federal agencies, the public, and academic institutions for research they are conducting or reporting, among other sources. 40 C.F.R. § 130.7(b)(5). Ecology has failed to demonstrate that it has, in fact, actively solicited all sources of existing and readily available information and data. Nonetheless, it has failed to use all available data and information that exist on impacts to water quality and beneficial uses including some information Ecology has in its possession or could have readily obtained. Moreover, although two past proposed lists have included Ecology’s sources of data and information, discussed *infra*, contrary to 40 C.F.R. § 130.7(b)(6)(ii) this proposed list does not. Therefore, we can only guess at what sources Ecology does not have or has chosen to reject based on what appears to be missing from its listings and how its methodology is written.

We hereby submit the following data and information:

- Washington Invasive Species Council, Stop the Invasion: Viral Hemorrhagic Septicemia⁵
- Washington Invasive Species Council, Stop the Invasion: Brazilian elodea⁶
- Washington Invasive Species Council, Stop the Invasion: Bullfrog⁷
- Washington Invasive Species Council, Stop the Invasion: Common Reed⁸
- Washington Invasive Species Council, Stop the Invasion: Cordgrass⁹

⁵ Available at <http://www.invasivespecies.wa.gov/documents/priorities/VHSFactSheet.pdf>

⁶ Available at <http://www.invasivespecies.wa.gov/documents/priorities/BrazilianElodeaFactsheet.pdf>

⁷ Available at http://www.invasivespecies.wa.gov/documents/priorities/bullfrog_factsheet.pdf

⁸ Available at <http://www.invasivespecies.wa.gov/documents/priorities/CommonReedFactSheet.pdf>

⁹ Available at <http://www.invasivespecies.wa.gov/documents/priorities/CordgrassSpartinaFactSheet.pdf>

- Washington Invasive Species Council, Stop the Invasion: Eurasian Watermilfoil¹⁰
- Washington Invasive Species Council, Stop the Invasion: European Green Crab¹¹
- Washington Invasive Species Council, Stop the Invasion: Hydrilla¹²
- Washington Invasive Species Council, Stop the Invasion: Nonnative crayfish¹³
- Washington Invasive Species Council, Stop the Invasion: New Zealand Mudsail¹⁴
- Washington Invasive Species Council, Stop the Invasion: Parrotfeather¹⁵
- Washington Invasive Species Council, Tunicates, non-native¹⁶
- Washington Invasive Species Council, Stop the Invasion: Variable Leaf Milfoil¹⁷
- Aquatic Bioinvasion Research & Policy Institute, Portland State University, An assessment of marine biofouling introductions to the Puget Sound region of Washington State (May 2014)¹⁸
- Ralph Elston, Ph.D. AquaTechnics, Pathways and Management of Marine Nonindigenous Species in the Shared Waters of British Columbia and Washington (January 1997)¹⁹
- U.S.G.S., NAS - Nonindigenous Aquatic Species, Species Lists by State, Washington Query,²⁰
- Columbia Basin Bulletin, Study Details Toxic Accumulation in Puget Sound Seabirds Eating Fish, Including Columbia Chinook (Oct. 31, 2014) citing study by Northwest Fisheries Science Center²¹
- Ecology, Control of Toxic Chemicals in Puget Sound: Assessment of Selected Toxic

¹⁰ Available at http://www.invasivespecies.wa.gov/documents/priorities/eurasianwatermilfoi_factsheetl.pdf

¹¹ Available at http://www.invasivespecies.wa.gov/documents/priorities/europeangreencrab_factsheet.pdf

¹² Available at <http://www.invasivespecies.wa.gov/documents/priorities/HydrillaFactsheet.pdf>

¹³ Available at http://www.invasivespecies.wa.gov/documents/priorities/non-native_crayfish.pdf

¹⁴ Available at <http://www.invasivespecies.wa.gov/documents/priorities/NewZealandMudsailFactsheet.pdf>

¹⁵ Available at http://www.invasivespecies.wa.gov/documents/priorities/parrotfeather_factsheet.pdf

¹⁶ Available at <http://www.invasivespecies.wa.gov/priorities/tunicates.shtml>

¹⁷ Available at <http://www.invasivespecies.wa.gov/documents/priorities/VariableLeafMilfoilFactsheet.pdf>

¹⁸ Available at <http://wdfw.wa.gov/publications/01654/wdfw01654.pdf>

¹⁹ Available at <http://wdfw.wa.gov/ais/ballast/reports/pathways-management-marine-nonindigeous1997.pdf>

²⁰ Available at <http://nas.er.usgs.gov/queries/SpeciesList.aspx?Group=&Sortby=1&state=WA>

²¹ Available at <http://www.cbbulletin.com/432542.aspx>

- Chemicals in the Puget Sound Basin, 2007-2011 (Nov. 2011)²²
- Ecology, A Toxics-Focused Biological Observing System for Puget Sound; Developed by the Washington Department of Fish and Wildlife and NOAA Fisheries for the Puget Sound Partnership (Jan. 2010)²³
- Ecology, Control of Toxic Chemicals in Puget Sound Phase 2: Development of Simple Numerical Models, the long-term fate and bioaccumulation of polychlorinated biphenyls in Puget Sound (April 2009)²⁴
- Ecology, Control of Toxic Chemicals in Puget Sound Phase 2: Sediment Flux/Puget Sound Sediments Bioaccumulation Model – Derived Concentrations for Toxics Final Summary Technical Report(May 2009)²⁵
- Ecology, Phase 1: Initial Estimate of Toxic Chemical Loadings to Puget Sound (Oct. 2007)²⁶
- Ecology, Toxics in Surface Runoff to Puget Sound Phase 3 Data and Load Estimates (April 2011)²⁷
- Ecology, Control of Toxic Chemicals in Puget Sound, Phase 3: Study of Atmospheric Deposition of Air Toxics to the Surface of Puget Sound (Sept. 2003)²⁸
- Ecology, Control of Toxic Chemicals in Puget Sound Characterization of Toxic Chemicals in Puget Sound and Major Tributaries, 2009-10 (Jan. 2011)²⁹
- Ecology, Summary Technical Report Control of Toxic Chemicals in Puget Sound Phase 3: Loadings from POTW Discharge of Treated Wastewater (Dec. 2010)³⁰
- Ecology, Control of Toxic Chemicals in Puget Sound Phase 3: Primary Sources of Selected Toxic Chemicals and Quantities Released in the Puget Sound Basin(Nov. 2011)³¹
- Ecology, Persistent Organic Pollutants in Marine Plankton from Puget Sound (March 2011)³²
- Ecology, Persistent Bioaccumulative and Toxic Contaminants in Pelagic Marine Fish Species from Puget Sound (March 2011)³³

22 Available at <https://fortress.wa.gov/ecy/publications/publications/1103055.pdf>

23 Available at <https://fortress.wa.gov/ecy/publications/publications/1010004.pdf>

24 Available at <https://fortress.wa.gov/ecy/publications/publications/0903015.pdf>

25 Available at <https://fortress.wa.gov/ecy/publications/publications/0909069.pdf>

26 Available at <https://fortress.wa.gov/ecy/publications/publications/0710079>
other.pdf

27 Available at <https://fortress.wa.gov/ecy/publications/publications/1103010.pdf>

28 Available at <https://fortress.wa.gov/ecy/publications/publications/1002012.pdf>

29 Available at <https://fortress.wa.gov/ecy/publications/publications/1103008.pdf>

30 Available at <https://fortress.wa.gov/ecy/publications/publications/1010057>
other.pdf

31 Available at <https://fortress.wa.gov/ecy/publications/publications/1103024.pdf>

32 Available at <https://fortress.wa.gov/ecy/publications/publications/1110002.pdf>

33 Available at <https://fortress.wa.gov/ecy/publications/publications/1110003.pdf>

- Ecology, Toxic Contaminants in Harbor Seal (*Phoca vitulina*) Pups from Puget Sound (March 2011)³⁴
- Ecology, Control of Toxic Chemicals in Puget Sound Evaluation of Loading of Toxic Chemicals to Puget Sound by Direct Groundwater Discharge (April 2011)³⁵
- Ecology, South Puget Sound Dissolved Oxygen Study Interim Nutrient Load Summary for 2006-2007 (Jan 2011)³⁶
- Ecology, South Puget Sound Dissolved Oxygen Study Water Quality Model Calibration and Scenarios (March 2014)³⁷
- Ecology, Estuarine Flow in the South Basin of Puget Sound and its Effects on Near-Bottom Dissolved Oxygen (Oct. 2007)³⁸
- Puget Sound Partnership, Aquatic Invasive Species Guidebook (July 2009)³⁹
- Puget Sound Partnership, Marine Invasive Species Identification Guide (June 2009)⁴⁰
- Ecology, South Puget Sound Dissolved Oxygen Study Key Findings on Nitrogen Sources from the Data Report (Nov. 2008)⁴¹
- Ecology, South Puget Sound Water Quality Study Phase 1 (Oct. 2002)⁴²
- Ecology, Sensitivity to Eutrophication of the Southern Puget Sound Basin (2001)⁴³
- Ecology, Estimating Loads of Nutrients, Bacteria, DO and TSS from 71 Watersheds Tributary to South Puget Sound (2001)⁴⁴
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- NMFS, Recovery Plan for Southern Resident Killer Whales (*Orcinus orca*) (Jan. 17, 2008)⁴⁶
- NMFS, PBDEs and Killer Whales in Puget Sound (July 23, 2013)⁴⁷

³⁴ Available at <https://fortress.wa.gov/ecy/publications/publications/1110001.pdf>

³⁵ Available at <https://fortress.wa.gov/ecy/publications/publications/1103023.pdf>

³⁶ Available at <https://fortress.wa.gov/ecy/publications/publications/1103001.pdf>

³⁷ Available at <https://fortress.wa.gov/ecy/publications/publications/1403004.pdf>

³⁸ Available at <https://fortress.wa.gov/ecy/publications/publications/0703033.pdf>

³⁹ Available at <http://www.psp.wa.gov/downloads/ANS/NewANSGuide.pdf>

⁴⁰ Available at http://www.psp.wa.gov/downloads/ANS/MISM_Online.pdf

⁴¹ Available at <https://fortress.wa.gov/ecy/publications/publications/0810099.pdf>

⁴² Available at <https://fortress.wa.gov/ecy/publications/publications/0203021.pdf>

⁴³ Available at http://www.ecy.wa.gov/programs/eap/sps/psrc_2001_bos_poster.ppt

⁴⁴ Available at http://www.ecy.wa.gov/programs/eap/sps/psrc_2001_roberts_and_pelletier.pdf

⁴⁵ Available at http://www.nwfsc.noaa.gov/news/features/killer_whale_report/pdfs/bigreport62514.pdf

⁴⁶ Available at http://www.westcoast.fisheries.noaa.gov/publications/protected_species/marine_mammals/killer_whales/esa_status/srkw-recov-plan.pdf

⁴⁷ Available at <http://www.eopugetsound.org/sites/default/files/features/resources/PBDEs%20in%20KW-%20background.pdf>

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- NMFS, Puget Sound Ecosystem Monitoring Program (PSEMP) Puget Sound Marine Waters: 2013 Overview (2013)⁵⁰
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- NMFS, Southern Resident Killer Whales (*Orcinus orca*) 5-Year Review: Summary and Evaluation (Jan. 2011)⁵³
- NMFS, Endangered and Threatened Wildlife and Plants: Endangered Status for Southern Resident Killer Whales, Final Rule (Nov. 18, 2005)⁵⁴
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- Puget Sound Ecosystem Monitoring Program, Monitoring Priorities and Gaps: Puget Sound Ecosystem Monitoring Program Toxics Workgroup (Jan. 15, 2014)⁵⁸
- USF&WS, Changes in Productivity and Environmental Contaminants in Bald Eagles

⁴⁸ Available at http://www.eopugetsound.org/sites/default/files/features/resources/PBDEs_Puget_Sound_Report.pdf

⁴⁹ Available at <http://www.eopugetsound.org/sites/default/files/PBDE%20Recommendations.pdf>

⁵⁰ Available at http://www.psp.wa.gov/downloads/psemp/PSmarinewaters_2013_overview.pdf

⁵¹ Available at <http://www.fisheries.noaa.gov/pr/pdfs/fr/fr71-69054.pdf>

⁵² Available at http://www.fisheries.noaa.gov/pr/pdfs/criticalhabitat/killerwhale_sr.pdf

⁵³ Available at http://www.nmfs.noaa.gov/pr/pdfs/species/swkw_5year_review.pdf

⁵⁴ Available at <http://www.fisheries.noaa.gov/pr/pdfs/fr/fr70-69903.pdf>

⁵⁵ Available at http://www.fisheries.noaa.gov/pr/pdfs/recovery/whale_killer.pdf

⁵⁶ Available at http://www.psp.wa.gov/downloads/psemp/PSmarinewaters_2011_overview.pdf

⁵⁷ Available at <https://sites.google.com/a/psemp.org/psemp/toxics-workgroup/cec-subgroup/2013.01.31%20-%20Bioindicators.docx?attredirects=0&d=1>

⁵⁸ Available at <https://sites.google.com/a/psemp.org/psemp/toxics-workgroup/documents/psemp-toxics---priorities-and-gaps/PSEMP%20Toxics%20priorities%20and%20gaps%20-%20full%20report%20%282014.01.15%29.pdf?attredirects=0&d=1>

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⁵⁹ Available at <http://www.fws.gov/pacific/ecoservices/envicon/pim/reports/Portland/Bald%20Eagle.pdf>

⁶⁰ Available at <http://www.fws.gov/pacific/ecoservices/envicon/pim/reports/Portland/Bald%20Eagle.htm>

⁶¹ Available at <http://www.fws.gov/pacific/ecoservices/envicon/pim/reports/Portland/ridge.pdf>

⁶² Available at <http://www.fws.gov/pacific/ecoservices/envicon/pim/reports/Portland/BlueHeron.pdf>

⁶³ Available at <http://www.fws.gov/pacific/ecoservices/envicon/pim/reports/Portland/Cormorant.pdf>

⁶⁴ Available at <http://www.fws.gov/pacific/ecoservices/envicon/pim/reports/Olympia/2002OlympiaConboy.pdf>

⁶⁵ Available at <http://www.fws.gov/pacific/ecoservices/envicon/pim/reports/Olympia/HoodCanalEagle.pdf>

⁶⁶ Available at <http://www.fws.gov/pacific/ecoservices/envicon/pim/reports/Olympia/Padilla%20Bay.html>

⁶⁷ Available at <http://www.fws.gov/pacific/ecoservices/envicon/pim/reports/Olympia/DestructionIsland.pdf>

⁶⁸ Available at http://www.fws.gov/wafwo/species/osf/NR_final_28_Aug_2014.pdf

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 - NMFS, Landscape Ecotoxicology of Coho Salmon Spawner Mortality in Urban Streams (Aug. 17, 2011)⁷⁶
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 - USGS, Chemical contaminants in fish feeds used in federal salmonid hatcheries in the USA (Jan. 12, 2007)⁷⁹
 - Ecology, Perfluorinated Compounds in Washington Rivers and Lakes (Aug. 2010)⁸⁰

⁶⁹ Available at <http://www.fws.gov/wafwo/pdf/fish%20feed%20final%20report.pdf>

⁷⁰ Available at http://www.fws.gov/wafwo/pdf/ONMS_Final%20Sea%20Otter%20Report.pdf

⁷¹ Available at http://www.fws.gov/wafwo/pdf/Final%20Report%202009_1255.pdf

⁷² Available at http://www.fws.gov/wafwo/pdf/EC_TRUSLead%20Shot%20Poisoning%20Final%20Report.pdf

⁷³ Available at <http://www.fws.gov/wafwo/pdf/KootenaRiverWhiteSturgeonStudiesInfoSheetMay2008.pdf>

⁷⁴ Available at <http://www.fws.gov/wafwo/pdf/PSM%20Poster%202007.pdf>

⁷⁵ Available at http://www.fws.gov/wafwo/pdf/WA%20NSO%20SAR_Aug2008_final.pdf

⁷⁶ Available at <http://www.fws.gov/wafwo/pdf/journal.pone.0023424.pdf>

⁷⁷ Available at <http://www.fws.gov/wafwo/pdf/journal.pone.0028013.pdf>

⁷⁸ Available at <http://www.fws.gov/wafwo/pdf/Final%20MEPS%202007.pdf>

⁷⁹ Available at http://www.fws.gov/wafwo/pdf/Maule%20et%20al%202007%20Contam%20in%20fish%20food_final.pdf

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- Ecology, Relationships Between Sediment Quality, Dissolved Oxygen, and Benthic Invertebrates in Hood Canal (Dec. 2007)⁸⁵
- Ecology, The Influence of Sediment Quality and Dissolved Oxygen on Benthic Invertebrate Communities in Hood Canal (Dec. 2007)⁸⁶
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- Ecology, Sediment Quality In Hood Canal (2005)⁸⁹
- Ecology, Relationships between Dissolved Oxygen Levels and Benthos in Hood Canal⁹⁰
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⁸¹ Available at <http://www.ecy.wa.gov/programs/eap/psamp/DataSummaries/HoodCanal/HoodCanal.html>

⁸² <https://fortress.wa.gov/ecy/publications/publications/1003006.pdf>

⁸³ <https://fortress.wa.gov/ecy/publications/publications/1003005.pdf>

⁸⁴ Available at http://www.ecy.wa.gov/programs/eap/psamp/SedimentPublications_files/HCDOPposter2-21-08Final.pdf

⁸⁵ <https://fortress.wa.gov/ecy/publications/publications/0703048.pdf>

⁸⁶ Available at <https://fortress.wa.gov/ecy/publications/publications/0703047.pdf>

⁸⁷ Available at <https://fortress.wa.gov/ecy/publications/publications/0703040.pdf>

⁸⁸ Available at http://www.ecy.wa.gov/programs/eap/psamp/SedimentPublications_files/2007HoodCanalchem-tox%20poster3-21-07FINAL.pdf

⁸⁹ Available at http://www.ecy.wa.gov/programs/eap/psamp/SedimentPublications_files/SedQualHoodCanal.pdf

⁹⁰ Available at http://www.ecy.wa.gov/programs/eap/psamp/SedimentPublications_files/Dutch%20-%20PNWSETAC%20April%202005.pdf

⁹¹ Available at http://www.ecy.wa.gov/programs/eap/psamp/SedimentPublications_files/HoodCanalDOandbenthos.pdf

⁹² Available at <http://www1.dnr.wa.gov/nhp/refdesk/herp/speciesmain.html>

⁹³ *Id.*

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⁹⁴ *Id.*

⁹⁵ *Id.*

⁹⁶ *Id.*

⁹⁷ Available at <http://woodshole.er.usgs.gov/project-pages/stellwagen/didemnum/htm/oregon.htm>

⁹⁸ Available at http://woodshole.er.usgs.gov/project-pages/stellwagen/didemnum/htm/oregon_triangle.htm

⁹⁹ Available at <http://nas.er.usgs.gov/taxgroup/mollusks/newzealandmudsnail/distribution.aspx>

¹⁰⁰ Available at http://or.water.usgs.gov/pubs_dir/Pdf/columbia_bistate.pdf

¹⁰¹ Available at <http://water.usgs.gov/nasqan/docs/clmbfact/clmbfactsheet.html>

¹⁰² Available at http://www.estuarypartnership.org/sites/default/files/resource_files/Sec_3_3_1b.pdf

¹⁰³ Available at http://www.estuarypartnership.org/sites/default/files/resource_files/LCRBiStateFWS3.3.1a_CBFWA_WILD_ContamEcolSelectedFish%26WildinLCR96.pdf

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¹⁰⁸ Available at http://www.estuarypartnership.org/sites/default/files/resource_files/TC9968_05_sec4_1d.pdf

¹⁰⁹ Available at http://www.estuarypartnership.org/sites/default/files/resource_files/Sec_3_3_2b.pdf

¹¹⁰ Available at <http://www.fws.gov/pacific/Fisheries/sphabcon/Lamprey/pdf/Best%20Management%20Practices%20for%20Pacific%20Lamprey%20April%202010%20Version.pdf>

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¹¹² Available at http://www.dfw.state.or.us/fish/CRP/docs/lower-columbia/OR_LCR_Plan%20-%20Aug_6_2010_Final.pdf

¹¹³ Available at http://www.westcoast.fisheries.noaa.gov/publications/recovery_planning/salmon_steelhead/domains/interior_columbia/middle_columbia/mid-c-oregon.pdf

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¹¹⁵ Available at http://www.westcoast.fisheries.noaa.gov/publications/status_reviews/salmon_steelhead/steelhead/5-yr-mcr.pdf

¹¹⁶ Available at <http://pubs.usgs.gov/of/2012/1256/pdf/ofr20121256.pdf>

¹¹⁷ Available at http://www.estuarypartnership.org/sites/default/files/resource_files/Additions_C_id_of_pollutant_sources.pdf

¹¹⁸ Available at http://www.estuarypartnership.org/sites/default/files/resource_files/TC8526_01_reconsurvey1_1_task1d.pdf

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¹²⁰ Available at http://www.estuarypartnership.org/sites/default/files/resource_files/TC8526_06_reconsurvey2_1d_vol_2.pdf

¹²¹ Available at http://www.estuarypartnership.org/sites/default/files/resource_files/TC8526_06_reconsurvey2_1d_vol_4.pdf

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¹²³ Available at http://www.estuarypartnership.org/sites/default/files/resource_files/TC8526_06_reconsurvey2_1d_vol_3.pdf

¹²⁴ Available at http://www.estuarypartnership.org/sites/default/files/resource_files/TC8526_06_reconsurvey2_1d_vol_6.pdf

¹²⁵ Available at http://www.estuarypartnership.org/sites/default/files/resource_files/TC8526_06_reconsurvey2_1d_vol_5.pdf

¹²⁶ Available at http://www.estuarypartnership.org/sites/default/files/resource_files/TC8526_06_reconsurvey2_1d_vol_7.pdf

¹²⁷ Available at http://www.estuarypartnership.org/sites/default/files/resource_files/Sec_3_3_4a.pdf

¹²⁸ Available at http://www.estuarypartnership.org/sites/default/files/resource_files/Final_Columbia%20EMAP.pdf

¹²⁹ Available at http://www.estuarypartnership.org/sites/default/files/resource_files/Johnson%20EMPSWG_2012_Oct28.pdf

¹³⁰ Available at http://www.estuarypartnership.org/sites/default/files/resource_files/Roegner%20LCREP%202013%20DO.pdf

¹³¹ Available at http://www.estuarypartnership.org/sites/default/files/resource_files/JohnsonEtAl2013.pdf

¹³² Available at http://www.estuarypartnership.org/sites/default/files/resource_files/WaterSalmonReport.pdf

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¹³⁴ Available at http://www.estuarypartnership.org/sites/default/files/resource_files/Year%206%20Report_EMP_Final_reduced.pdf

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¹³⁸ Available at http://www.estuarypartnership.org/sites/default/files/resource_files/Year%203%20Ecosystem%20Monitoring%20Project%20Annual%20Report.pdf

¹³⁹ Available at http://www.estuarypartnership.org/sites/default/files/resource_files/Year%202%20Ecosystem%20Monitoring%20Annual%20Report%20_Final_reduced.pdf

¹⁴⁰ Available at http://www.estuarypartnership.org/sites/default/files/resource_files/Lower%20Columbia%20Estuary%20Historical%20Landcover%20Change%20final_2013_small.pdf

¹⁴¹ Available at http://www.estuarypartnership.org/sites/default/files/resource_files/Year%207%20Report_EMP_Final_reduced.pdf

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¹⁴⁵ Available at http://ecos.fws.gov/tess_public/reports/species-listed-by-state-report?state=WA&status=listed

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II. WASHINGTON FAILS TO USE THE LEGAL DEFINITION OF WATER QUALITY STANDARDS IN ASSESSING ITS WATERS

Given the Department of Ecology’s role in the pivotal U.S. Supreme Court case on the legal definition of a water quality standard, it is ironic and disappointing that Ecology continues to fail to make 303(d) listings based on waters’ noncompliance with narrative criteria, beneficial use support, and antidegradation policies and requirements—all of which are essential and required components of water quality standards. *See PUD No. 1 of Jefferson County v. Washington Department of Ecology*, 511 U.S. 700, 114 S.Ct. 1900, (1994). As a result, Ecology failed to list waters of the state that are suffering from problems due to unsafe levels of toxics, turbidity, sedimentation, fish passage, habitat impairment, cumulative and synergistic impacts of multiple pollutants, nutrients in non-lakes, pollutants without criteria, impairments by pollutants lower than existing numeric criteria, and impaired uses not yet associated with pollutants, to name a few. These water quality problems are directly responsible for impairment of the state’s most sensitive beneficial uses which the state’s water quality standards and the application of section 303(d) are intended to protect. *See* 40 C.F.R. § 130.7(b)(3).

¹⁵⁴ Available at http://or.water.usgs.gov/proj/Conhab/Alvarez_Perkins_etal.pdf

¹⁵⁵ Available at http://or.water.usgs.gov/proj/Conhab/Christiansen_Mehinto_etal.pdf

¹⁵⁶ Available at http://or.water.usgs.gov/proj/Conhab/Counihan_Waite_etal.pdf

¹⁵⁷ Available at <http://or.water.usgs.gov/proj/Conhab/Henny%20et%20al%202011.DilutionindexOspreyPBDE.pdf?eid=2-s2.0-79955924063&origin=inward&txGid=80520DD5F4CF6615842B4E7F760EB789.euC1gMODexYIPkQec4u1Q:1>

¹⁵⁸ Available at http://or.water.usgs.gov/proj/Conhab/Jenkins_Olivier_etal.pdf

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Ecology never explicitly recognizes the legal definition of a water quality standard in its methodology. Nor does it explicitly acknowledge the regulatory requirement to base its assessment on data and information. These huge gaps together result in Ecology's generally ignoring designated uses and narrative criteria and the data and information gathered that demonstrate impairments of uses and narrative criteria.

A. The Legal Definition of Water Quality Standards and Listing Requirements for the 303(d)(1) List

Water quality standards are defined as the designated beneficial uses in combination with the numeric and narrative criteria to protect those uses and antidegradation requirements. 40 C.F.R. §§ 131.6, 130.7(b)(3). Numeric criteria adopted in water quality standards are required to be promulgated to protect the "most sensitive use." 40 C.F.R. § 131.11(a)(1). However, since this is not always possible, the task of evaluating whether standards have been met also requires an assessment of the impacts to beneficial uses through the other parts of water quality standards. The U.S. Supreme Court decision in *Jefferson County* underscored the importance of protecting beneficial uses as a "complementary requirement" that "enables the States to ensure that each activity – even if not foreseen by the criteria – will be consistent with the specific uses and attributes of a particular body of water." *Id.* at 1912. The Court explained that numeric criteria "cannot reasonably be expected to anticipate all the water quality issues arising from every activity which can affect the State's hundreds of individual water bodies." *Id.* This concept does not seem to have been grasped by Ecology.

This legal definition is mirrored in EPA's implementing regulations for section 303(d) of the Clean Water Act. Specifically, these regulations require that,

[f]or the purposes of listing waters under §130.7(b), the term "water quality standard applicable to such waters" and "applicable water quality standards" refer to those water quality standards established under section 303 of the Act, including numeric criteria, narrative criteria, waterbody uses, and antidegradation requirements.

40 C.F.R. § 130.7(b)(3). When EPA adopted these regulations, it made clear its expectations of states:

[I]n today's final action the term "applicable standard" for the purposes of listing waters under section 303(d) is defined in § 130.7(b)(3) as those water quality standards established under section 303 of the Act, including numeric criteria, narrative criteria, waterbody uses and antidegradation requirements. In the case of a pollutant for which a numeric criterion has not been developed, a State should interpret its narrative criteria by applying a proposed state numeric criterion, an explicit State policy or regulation (such as applying a translator procedure developed pursuant to section 303(c)(2)(B) to derive numeric criteria for priority toxic pollutants), EPA national water quality criteria guidance developed under section 304(a) of the Act and supplemented with other relevant information, or by otherwise calculating on a case-by-case basis the ambient concentration of the pollutant that corresponds to attainment of the narrative criterion. Today's definition is consistent with EPA's Water Quality Standards regulation at 40 CFR part 131. EPA may disapprove a list that is based on a State

interpretation of a narrative criterion that EPA finds unacceptable.

EPA, Final Rule: Surface Water Toxics Control Program and Water Quality Planning and Management Program, 57 Fed. Reg. 33040, 33045 (July 24, 1992). EPA's listing guidance is consistent with both its regulation and the intent expressed by EPA at its adoption of the regulation in 1992.

1. Washington Fails to List Waters for Not Supporting Designated Uses

a. *Washington Implies That it Does Consider Designated Use Support in its Assessment*

As discussed more fully below in the discussion on narrative criteria, Ecology's methodology rarely uses data or information to find lack of designated use support. In fact, the only time when Ecology uses an actual impairment of uses as the basis for a 303(d) listing is where a health advisory has been issued for fish or shellfish consumption and swimming, and there only in some circumstances. As Ecology states in a number of places, its view is that "[b]eneficial use support is demonstrated by adherence to the numeric criteria and the anti-degradation policy . . . [and] the use of numerical and narrative criteria . . . provides the most direct link to the support of beneficial uses and the quality of water that is needed to support those uses." 2008 Response at 6. And, further, Ecology notes that "[d]etrimental characteristics [of pollutants] are established by the applicable criteria of the [water quality standards]." *Id.* at 7. This, of course, is completely antithetical to the explanation given by the Supreme Court when it decided *Jefferson County*:

EPA has not interpreted § 303 to require the States to protect designated uses exclusively through enforcement of numerical criteria. In its regulations governing state water quality standards, EPA defines criteria as "elements of State water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular use." 40 CFR § 131.3(b) (1993) (emphasis added). The regulations further provide that "[w]hen criteria are met, water quality will generally protect the designated use." *Ibid.* (emphasis added). Thus, the EPA regulations implicitly recognize that in some circumstances, criteria alone are insufficient to protect a designated use.

Jefferson County at 715.

This puts some context around Ecology's silly and gratuitous statement that "[t]he search for the cause of decline of uses is not the main role of the Water Quality Assessment." *Id.* at 6. It is difficult to understand Ecology's thinking when it claims that a criterion is a more "direct" link to determining if uses are supported than the state of the uses themselves. For example, reproductive failure or extirpation are pretty clear indications that uses have not been supported. Moreover, as will be demonstrated below, Ecology rarely applies its narrative criteria, instead relying almost exclusively on numeric criteria, which often fail to capture the level of protectiveness required and, in some instances, do not even address all the pollutants in Washington's waters.

Therefore, despite noting which broad categories of designated uses are affected by the named pollutants in the methodology, Ecology rarely states how it will directly assess designated use support to identify impaired waters. In addition, there is no search parameter in its on-line assessment database for designated use impairment of any kind. And, there is no mention of evaluating designated use impairment in the methodology other than as discussed above with regard to bacteria.

Put another way, Ecology does not assess designated support status for the following designated uses: water contact recreation, shellfish growing, domestic water supply, fish and wildlife, fishing, boating, aesthetic quality, aquatic life, salmon and steelhead spawning, resident trout spawning, cold-water aquatic life (salmon, trout, steelhead, mountain whitefish, char, cold-water invertebrates, and other native cold-water species), cool-water aquatic life (e.g., native sturgeon, Pacific lamprey, suckers, chub, sculpins, and some minnows), warm-water aquatic life (Borax Lake chub), core cold-water habitat, bull trout spawning and juvenile rearing, cutthroat trout, salmon and steelhead migration, human health – water and fish ingestion, and fish consumption. There is literally no reference in the methodology to the requirement to protect wildlife as a designated use; the word “wildlife” simply does not appear in the methodology. Yet wildlife is a designated use in Washington. *See* WAC 173-201A-600(1); *see also* WAC 173-201A-602, Table 602. The failure of Ecology to include 303(d) listings based on lack of support of beneficial uses is contrary to the statutory requirement that waters be listed on the 303(d)(1) list when effluent limits are not stringent enough to “implement any *water quality standard* applicable to such waters.” *Id.* (emphasis added).

b. *Submission of Data and Information on Failure to Fully Support Washington’s Designated Uses*

There are ample readily available data and information concerning the failure of Washington’s waters to support its designated uses. These sources include but are not limited to:

- closures of recreational and commercial shellfish harvesting beds;
- threatened and endangered status of species under the federal Endangered Species Act;
- sensitive and rare species in Washington;
- populations of aquatic species that have been locally extirpated;
- impaired populations such as populations with reproductive organ deformities and evidence of reproductive impairment, including aquatic-dependent mammals, reptiles, amphibians, fish, and birds; and
- low flows causing use impairment.

Sources of this information include but are not limited to the National Marine Fisheries Service, U.S. Fish and Wildlife Service, the U.S. Geological Survey, Washington Department of Fish and Wildlife, Washington Herp Atlas, institutions of higher learning, and Ecology itself.

We hereby submit as readily available data and information on lack of full support of designated uses, the data and information in Section I.E. of these comments, *supra*.

2. *Washington Fails to List Waters for Violations of Narrative Criteria*

Because Ecology includes in its methodology only discussions for the parameters bacteria, bioassessment, contaminated sediments, dissolved oxygen, pH, total phosphorus (in lakes),

temperature, total dissolved gas, toxic substances, and turbidity, it is difficult if not impossible to understand what Ecology does with data and information on other pollutants and parameters. For example, missing from this list is information on how—or even whether—Ecology assesses waters for aquatic weeds, invasive species, turbidity affecting drinking water, algae, toxicity from algal growth, excess fine sediment, nutrients not in lakes, toxics that affect wildlife, toxics for which there are no numeric criteria, and intergravel dissolved oxygen.

Ecology fails to list waters for impairment from biological pollutants including invasive exotic species. In 2008, Ecology rationalized that:

Invasive exotic species may be considered a pollutant under the definition of the CWA, but only when discharged from a point sources as found by ND Cal., 2006. Ecology does not allow or permit discharge of invasive exotic species and any TMDL would result in load allocations of zero. . . . EPA has not determined whether aquatic nuisance species are pollutants within the definition of CWA 502(b) and has not provided guidance to the states on how to address waters that may be impaired by aquatic nuisance species.

2008 Response at 8. This explanation fits Ecology’s narrative that somehow the 303(d) list is really just about only those “water segments involving discharge of effluents or pollutants that can be improved through the TMDL process are those that are amenable to reduced pollutant loading as from an effluent source.” *Id.* at 7. Not only is that a silly response in light of the fact that invasive species are discharged from point sources, but it is simply not true. For example, EPA noted to Oregon regarding its 2010 list that the listing requirement “applies to waters impaired by point and/or nonpoint sources, pursuant to EPA’s long-standing interpretation of Section 303(d).” EPA, Enclosure 1: Review of Oregon’s 2010 Integrated Report (March 15, 2012) at 1.¹⁶¹ Moreover, the state is not off the hook for 303(d) listings merely because EPA has not provided guidance. Nor is Ecology’s rationale logical as, for example, it is not Ecology but rather EPA that has issued NPDES discharge permits for invasive species. A search for “invasive exotic species” and all categories in the proposed draft assessment database results in 240 listings. In contrast, a search of “invasive exotic species” and Category 5 results in zero listings. These queries demonstrate the Ecology’s methodology means precisely what it says: contrary to federal law, Washington does not consider exotic invasive species to be a pollutant. Ecology is incorrect and must remedy its listings. As with many pollutants and impairments, Ecology has data and information that demonstrate noncompliance with its narrative criteria. WAC 173-201A-260(2) (“Toxic, radioactive, or deleterious material concentrations must be below those which have the potential, either singularly or cumulatively, to adversely affect characteristic water uses, cause acute or chronic conditions to the most sensitive biota dependent upon those waters, or adversely affect public health[.]”).

The methodology describes how Ecology makes impairment determinations for only a limited number of pollutants. Methodology at 20 (“Section 8 includes the basis for assessment decisions based on data requirements, general Assessment information, and the category determination process for each these parameters: Bacteria, bioassessment, contaminated sediments, dissolved oxygen, pH, total phosphorus (in lakes), temperature, total dissolved gas, toxic substances, and

¹⁶¹ Available at <http://www.deq.state.or.us/wq/assessment/docs/2010EPAenclosure1.pdf>

turbidity.”). Each of the sections in the methodology that address these subjects identifies the designated uses, the numeric criteria (if any), the “narrative standards” [sic] (if any), and the “unit of measure.” Few of these sections explain how, or whether, Ecology intends to make impairment findings based on the designated uses cited or the “narrative standards” [sic].

For those pollutants discussed above and pollutants not mentioned by Ecology’s methodology, the broad statements in the methodology constitute the agency’s method of assessing compliance with narrative criteria and designated use support. These are few and far between, as follows:

A determination of impairment can be based on either numeric or narrative information.¹⁶²

Waterbody segments impaired by a pollutant as determined by the methodology described in this policy, or by well-documented narrative evidence of impairment, will be placed in Category 5.¹⁶³

Generally numeric and narrative data will be used for assessment purposes, depending on the parameter.¹⁶⁴

A segment will be placed in Category 5 on the basis of violating narrative standards relating to pollutants when the information regarding that waterbody segment includes both of the following:

- Documentation of environmental alteration related to deleterious chemical or physical alterations, such as nutrients or sediment deposition, is measured by indices of resource condition or resource characteristic or other appropriate measure.
- Documentation of impairment of an existing or designated use is related to the environmental alteration on the same waterbody segment or grid.¹⁶⁵

The first statement above is a factual statement; Ecology “can” list on the basis of anything that is an applicable water quality standard. That is not a helpful comment and it does not shed any light on whether Ecology does, in fact, list on the basis of narrative criteria. The third statement is simply not true or Ecology’s interpretation of it is so constrained as to have rendered the statement meaningless. The second statement says first that the methodology is the basis for listing, which is self evident. The second part of that statement is that “well-documented narrative evidence of impairment” can be the basis of a 303(d) listing. That is consistent with the law but there is no evidence, from the methodology or the database, that Ecology acts consistent with this statement. For example, a 1999 study found that bald eagle reproductive failure in the Lower Columbia River was related to toxic contamination . See Buck, *et al.*, Changes in Productivity and Environmental Contaminants in Bald Eagles Nesting Along the

¹⁶² *Id.* at 17.

¹⁶³ *Id.* at 18.

¹⁶⁴ *Id.* at 19.

¹⁶⁵ *Id.* at 20.

Lower Columbia River (Aug., 12, 1999) at vi (“Previous contaminant studies conducted from 1985 to 1987 along the river found poor productivity associated with elevated DDE (dichlorodiphenyldichloroethane) and total polychlorinated biphenyls (PCBs) in eagle eggs. . . . results indicate that organochlorine contaminants continue to impact the breeding success of lower Columbia River eagles.”). Reproductive success in bald eagles in this portion of the Columbia River continues to be affected by toxic pollution.¹⁶⁶ There are no listings on this basis, however. Using both the database and map search features, there appears to be a single listing for PCBs in the Lower Columbia downstream of Puget Bar: Assessment Unit ID: 46123C5E5 Listing ID: 8772. This is not a listing for impairment of bald eagles but, rather, “excursions beyond the National Toxic Rule [human health] criterion in sturgeon, L. sucker and carp fillets in 1994 and 1995.” Likewise, the single listing for 4,4'-DDE, Assessment Unit ID: 46123C7H4, Listing ID: 8768, is for “excursions beyond the National Toxic Rule criterion in sturgeon fillets in 1994 and 1995.” Similarly, listings for these two toxic pollutants upstream of the Puget Bar in the Lower Columbia River are based on excursions beyond Washington’s numeric criteria for human health, the National Toxics Rule.

This demonstration is important for at least three reasons. First, it demonstrates that Ecology blatantly ignores readily available data and information on designated use impairment. Second, because there is no efficient way to do a similar search across the state—without spending hundreds of hours in the process—it serves to demonstrate Ecology’s policy. Third, it matters on what basis a waterbody is listed. The most clear example of this is Oregon’s TMDL for mercury in the Willamette River, which EPA approved despite its being designed solely to protect human health, not the health of more sensitive fish and wildlife. In pending litigation, EPA has made clear that it stands by this policy: the TMDL need only meet the specific uses for which it was listed as impaired. So long as EPA Region 10 takes this position, Ecology must list waters on the basis of all uses and all criteria for which data and information demonstrate impairment. Only this way may the public be assured that when a TMDL is done, it will address the most sensitive use and control pollution to the degree required. Not only are the NTR human health criteria wildly out of date in terms of protecting public health, they certainly are not sufficient to protect fish and wildlife. This requires the application of the narrative criterion as it is written and as intended by federal law: to fill the yawning gaps between the numeric criteria and protection of designated and existing uses.

But Ecology has another excuse that it pulled out of a hat in 2008 that we quoted above: “potential additional listings in the Columbia River will be considered along with existing water and sediment listings as EPA and other participants of the Columbia River Toxics Workgroup consider the collaborative strategy to assess and reduce toxics in fish and water in the Columbia

¹⁶⁶ See Oregon Public Broadcasting, What bald eagles are telling us about the Columbia (Oct. 27, 2011, updated Feb. 19, 2013) *available at* <http://www.opb.org/news/blog/ecotrope/what-bald-eagles-are-telling-us-about-the-columbia/> (“According to Jeremy Buck, a contaminant specialist for the U.S. Fish and Wildlife Service, the eggs offered at least four key insights about toxins in the Columbia River: DDT is still haunting fish and wildlife in the Columbia in the form of its byproduct DDE.”) (“One section of the lower Columbia River estuary have higher toxin levels than the rest of the river. Eagles in that section of the river – between Astoria and Cathlamet – have a lower reproduction rate than those in the rest of the river[.]”). If a radio station can obtain this information, surely the Washington Department of Ecology can as well.

River basin.” There is, in fact, no evidence that any “potential additional listings” were considered in the proposed 303(d) list out now for public comment. Yet that statement was made over six years ago. And, of course, most obviously, Ecology is required to list on the basis of readily available data and information, not on the basis of some “collaborative strategy” between “participants” in a “workgroup.” It is, quite frankly, amazing that Ecology could write such an absurdity.

Finally, turning to the last of the quoted items, Ecology states that it will list on the basis of narrative criteria when “both of the following” are true:

- Documentation of environmental alteration related to deleterious chemical or physical alterations, such as nutrients or sediment deposition, is measured by indices of resource condition or resource characteristic or other appropriate measure.
- Documentation of impairment of an existing or designated use is related to the environmental alteration on the same waterbody segment or grid

This language is ambiguous but appears to suggest that if Ecology does not have an index of resource condition no listing will be done. This is problematic since Ecology has not included in its methodology any indices of resource condition with the exception of bioassessment. A search of an obvious parameter in the database helps. Querying the database for “fine sediment” and all waters generates a mere 17 entries. All of these are for Category 5 with one exception, for Listing ID 17519 in Category 4A. The requirement, as stated above, that the measurement according to an index be accompanied by document of impairment of a use ensures that neither the occurrence of fine sediment by itself, along with professional judgment that the use has been affected negatively, nor documentation of a use impairment, along with professional judgment that the use impairment was caused by the pollutant, is sufficient. This, no doubt, is the reason behind the mere 17 entries but what accounts for so few entries, even if there are so few 303(d) listings? How in the entire State of Washington, with the abundance and importance of fisheries affected by fine sediment could Ecology only have data sets for only 17 waters? It begs credulity.

An example of the dual pronged approach to determining that fine sediment is exceeding water quality standards is shown in the text of one listing, Assessment Unit ID: 17110021000091, Listing ID: 6226. This consists of Lower Elwha Tribal data on fine sediment levels, combined with a report that found “[c]oho salmon and steelhead are depressed, Chum salmon are critical,” and the observation that “[i]nformation from the Lower Elwha Tribe show the habitat impact are due to forest practices in the watershed.” The finding on the fine sediments alone are a basis for finding a violation of WAC 173-201A-260(2)(a). Eight of the 17 entries for fine sediment are for waters covered under the Clarks Creek Watershed Dissolved Oxygen and Sediment TMDL. These listings are another demonstration of Ecology’s arbitrary requirement. For example, Assessment Unit ID: 17110014015982, Listing ID: 77239 states the following basis for the listing:

From 2010-2012, The Puyallup Tribe of Indians (PTI) conducted a sediment reduction project that showed sediment loading in the watershed was sixteen times what would occur naturally (Brown and Caldwell, 2013). In addition to observations by PTI (Marks, 2008), a survey of the streambed composition in Clarks Creek showed that the percentage of fine sediment and sand within the

main stem exceeds that of reference systems and impairs invertebrate and fish assemblages in the creek.

Applying the methodology's rules, a finding that sediment loading was 16 times natural and that the fine sediment exceeded reference systems was not sufficient. In addition, uses had to be impaired. This approach to listing for fine sediment has the effect of screening out almost all data and information that is available, a fact made apparent by the mere 17 listings for the entire state. In addition, because there is no apparent way to search for Category 3 entries, perhaps there are thousands of entries for fine sediment in Category 3 that reflect a measurement of an index but fail to demonstrate an impairment of a use or visa versa. The lack of access to this portion of the non-listed data entries makes it impossible for us to challenge Ecology's proposed determinations in any way other than by examining its methodology, its statements, and a sample of its database. But in any case, the notion that Ecology will only list waters when an impairment of a use is demonstrated but not when sufficient data and information are available to make a finding on a narrative criterion using an index is to ensure that Washington's uses will be, in some cases, irreparably damaged. Wait long enough to take the regulatory steps to cleaning up water pollution and uses will be extirpated and, in some instances, rendered extinct. But extirpation is a violation of the requirement to protect existing uses, which Ecology claims to honor. The short-sightedness of this position is stunning.

a. Bacteria

The bacteria standard may be considered violated by any agency advisory regarding fish, shellfish, or swimming purportedly in order "to directly assess the protection of designated uses." Methodology at 27; *see also id.* at 30. Nonetheless, Ecology will exclude any such advisory as a direct assessment of the protection of designated uses if such advisories are: (1) not based on more protective standards; (2) not based on non-segment specific data; (3) not based on advisories related to the presence of wastewater treatment plant outfalls, marinas, port facilities; (4) not based on advisories for marine biotoxins, geoduck bed closures; and (5) not based on any conditions, such as storm events, that apply to fewer than 30 calendar days a year. These exclusions do not make logical sense.

If an agency has issued an advisory, regardless of how it pertains to Ecology's outdated human health criteria, Ecology should honor that finding that a designated use is impaired. The mere fact that people are being asked to curtail or eliminate the use is a form of impairment. The same is true of at least some advisories in Categories 2 and 3 above. If a statewide advisory is in place but only some of the waters are demonstrated to be impaired or threatened, Ecology could limit its use of the advisory to those waters. Instead, Ecology appears to throw the baby out with the bathwater and simply ignore all advisories that are in whole or in part based on statewide data or the presence of pollution sources. If a wastewater outfall is always in compliance, that is a basis for Ecology to make the finding to ignore the preventative advisory; if there is any evidence that the outfall sometimes impairs uses, the advisory should be honored as the basis for a 303(d) listing. In other words, the burden should be on Ecology to demonstrate that the advisory should not lead to a listing. Finally, the 30 day exclusion is arbitrary. If, for example, swimming is only likely to take place during several months of a year and one month is impaired, why is that not an impairment that indicates the standards have been violated and the waterbody needs to be cleaned up? The same would be true of pollution effects to year-round uses. It is not a minor impact to designated uses to be not usable for one twelfth of a year. It also eliminates from consideration such storm-driven events as combined sewer overflows as if the frequency

established in the methodology is embedded in the standards. The narrative criterion says nothing about such frequencies.

b. Bioassessment

The bioassessment criteria are explicitly limited to River Invertebrate Prediction and Classification System (RIVPACS) and IBI scores. Methodology at 33. Ecology announces its new policy but provides no basis to support it.

c. Contaminated Sediment

Contaminated sediments can be deemed impaired based on chemical or biological tests. Methodology at 34. Ecology cites no authority for its conclusion that “[c]onfirmatory biological testing, in compliance with the SMS and Ecology requirements, may override chemical data.” *Id.* In the methodology, Ecology incorrectly identifies only the designated use of “aquatic life” as affected by contaminated sediments. This excludes, for example, the human impacts of contaminated sediment on fish and shellfish. Ecology makes no observations regarding how evidence of the effects of contaminated sediments on fish and wildlife will be used as direct evidence of harm to designated uses or violations of narrative criteria.

d. Total Phosphorus in Lakes

Ecology states that impairment by total phosphorus in lakes will be evaluated on the basis of narrative criteria as follows:

In the absence of available numeric criteria based on a lake-specific study or ecoregion action value, narrative standards will be assessed as described in section 6 of this policy. If a phosphorus assessment for a waterbody segment includes both numeric and narrative information, the Assessment will be based on the narrative standards unless more recent numeric total phosphorus data indicate that the quality of the waterbody has changed.

Id. at 41; *see also id.* at 42. The discussion in Section 6 of the listing methodology does not discuss the use of narrative criteria other than to state that data must show a deleterious alteration according to an index and that there is an associated use impairment. This dual requirement approach to interpreting Washington’s water quality standards is arbitrary, as discussed *supra*. Moreover, Ecology does not establish in this hide-the-ball approach to listing guidance whether there is any index that it will accept as an appropriate interpretation of data on total phosphorus in lakes. Nor has it explained why a use impairment without an exceedance of an index or an exceedance of an index without a measured use impairment is a requirement to demonstrate a violation of water quality standards. By requiring both, Ecology fails to give independent legal meaning to use designations and narrative criteria. It does seem to be an effective way of ensuring that there are limited listings for total phosphorus in lakes, which in turn is an effective way of ensuring that pollution is not limited nor will it be cleaned up. Of a total 227 entries in the database for total phosphorus in lakes, only 77 are in Categories 5 or 4a, excluding whatever entries are in Category 3 that are not seen by the public. A listing, chosen randomly, demonstrates that Ecology’s listing policy ensures that waters are fully impaired to the point of having an effect on public use of waters rather than based on data and information that measure impairment by water quality measurements. Assessment Unit ID: 17110016000122, Listing ID:

6348 shows that in 1992 the uses were impaired as follows: “Problems Encountered: Blue-green algae, hypolimnetic anoxia, aquatic macrophytes, low transparency, sediment phosphorus recycling.” In 2009 and again in 2010 “the summer epilimnetic mean concentration of total phosphorus samples exceeded the action value for this ecoregion (20 ug/L).” It is certainly poor public policy to not act on the action value for the ecoregion until the effects of a violation are measured in use impairment. If anything, this example indicates that the longer the state waits to act to control pollution, the more difficult it will be to remedy it.

f. Toxics

Finally, for toxic pollutants, Ecology notes that assessment decisions can be made “as defined by exceedances of either numeric criteria or narrative criteria, as determined by criterion tissue equivalent concentrations and fish advisories.” *Id.* at 47. This sentence appears to say that narrative criteria exceedances can be determined only by backcalculating from fish tissue levels and from fish consumption advisories issued by other agencies. This interpretation is supported by the remainder of this section, which discusses how Ecology can back-calculate to the National Toxics Rule criteria using tissue samples. *Id.* at 50. It further states that only fish tissue from resident fish may be used, without noting that as EPA did in the Columbia River Dioxin TMDL,¹⁶⁷ anadromous fish can be used for determining water quality impairments perfectly well. *Id.* And this section states that Ecology may use fish and shellfish advisories but only if they are based on “site-specific information and data associated with the specific segment.” *Id.* at 47. In addition, as with the bacteria-based advisories, the advisories cannot be based on more protective standards. *Id.* at 48.

This extremely narrow interpretation of Washington’s narrative criteria for protection of designated uses from toxic contaminants is entirely inconsistent with the applicable standards. WAC 173-201A-240(1); -260; -300—all of which are cited in the methodology as applicable “narrative standards [sic]” for the purpose of assessing compliance with water quality standards for toxics—include the following narrative criteria along with the entirety of the antidegradation provisions:

Toxic substances shall not be introduced above natural background levels in waters of the state which have the potential either singularly or cumulatively to adversely affect characteristic water uses, cause acute or chronic toxicity to the most sensitive biota dependent upon those waters, or adversely affect public health, as determined by the department.¹⁶⁸

Toxics and aesthetics criteria. The following narrative criteria apply to all existing and designated uses for fresh and marine water:

- (a) Toxic, radioactive, or deleterious material concentrations must be below those which have the potential, either singularly or cumulatively, to adversely affect characteristic water uses, cause acute or chronic

¹⁶⁷ EPA, Total Maximum Daily Loading (TMDL) to Limit Discharges of 2,3,7,8-TCDD (Dioxin) to the Columbia River Basin (Feb. 25, 1991)

¹⁶⁸ WAC 173-201A-240(1).

conditions to the most sensitive biota dependent upon those waters, or adversely affect public health (see WAC 173-201A-240, toxic substances, and 173-201A-250, radioactive substances).

- (b) Aesthetic values must not be impaired by the presence of materials or their effects, excluding those of natural origin, which offend the senses of sight, smell, touch, or taste (see WAC 173-201A-230 for guidance on establishing lake nutrient standards to protect aesthetics).¹⁶⁹

For example, limiting the evaluation of fish tissue levels to back-calculating to the NTR criteria is just another way of using the NTR criteria with data from a different medium. It is not consistent with the narrative criterion that requires limits on toxic substances that cause toxicity to “the most sensitive biota dependent upon those waters.” Biota likely to be the most sensitive are piscivorous birds and mammals whose body weight is small and fish consumption is high (e.g., mink, otter, eagles) or species with very high lipid content, such as orca whales.

In addition, Ecology has provided some other rationale in the past. In responding to public comments in 2008, Ecology stated:

The narrative criteria “concentrations must be below those which have the potential .. to .. cause acute or chronic conditions to the most sensitive biota” is often applied through the use of numeric criteria for individual toxic pollutants. Numeric criteria are compared quantitatively to criteria for toxic pollutants to determine status relative to the narrative criteria.

* * *

The examples of potential additional listings in the Columbia River will be considered along with existing water and sediment listings as EPA and other participants of the Columbia River Toxics Workgroup consider the collaborative strategy to assess and reduce toxics in fish and water in the Columbia River basin.

2008 Response at 8. This is an inane rationale for failing to conduct a complete evaluation of readily available data and information as compared to applicable narrative criteria for toxics. First, Ecology states that narrative criteria are met through the use of numeric criteria. This flies in the face of the Supreme Court’s explanation of the legal definition of water quality standards in *Jefferson County*. Speaking of the role of designated uses, general and specific criteria, the Court stated:

While enforcement of criteria will in general protect the uses of these diverse waters, a complementary requirement that activities also comport with designated uses enables the States to ensure that each activity—even if not foreseen by the criteria—will be consistent with the specific uses and attributes of a particular body of water. Under petitioners’ interpretation of the statute, however, if a particular criterion, such as turbidity, were missing from the list contained in an individual state water quality standard, or even if an existing turbidity criterion

¹⁶⁹ WAC 173-201A-260(2).

were insufficient to protect a particular species of fish in a particular river, the State would nonetheless be forced to allow activities inconsistent with the existing or designated uses. We think petitioners' reading leads to an unreasonable interpretation of the Act. The criteria components of state water quality standards attempt to identify, for all the water bodies in a given class, water quality requirements generally sufficient to protect designated uses. These criteria, however, cannot reasonably be expected to anticipate all the water quality issues arising from every activity that can affect the State's hundreds of individual water bodies. Requiring the States to enforce only the criteria component of their water quality standards would in essence require the States to study to a level of great specificity each individual surface water to ensure that the criteria applicable to that water are sufficiently detailed and individualized to fully protect the water's designated uses.

Id. at 717-718. Quite clearly, the Supreme Court said that each individual part of the water quality standard must be given legal meaning and the reason for doing so is that no state can anticipate all the numeric criteria that are needed or that will be sufficient. Accordingly, the requirement to protect uses directly and to use broad narrative criteria beyond interpreting them to mean exactly what the numeric criteria already mean, is at the essence of the legal definition of a water quality standard. Ecology's rationale that the protection of uses and the meeting of narrative criteria all boil down to one and the same, namely the meeting of numeric criteria, is illogical, nonsensical, and inconsistent with federal law.

Just as designated uses are part of the water quality standards against which Ecology is obligated to compare data and information in developing its 303(d) list of impaired waters, so too are the state's narrative criteria. While the 2012 methodology mentions narrative criteria, not only is there nothing substantive regarding the use of narrative criteria in the methodology, as demonstrated above, random samplings of the database demonstrate there is nothing there either. For example, data on toxics from the Columbia River are all assessed by Ecology in comparison to Washington's numeric criteria for human health, namely the National Toxics Rule. Likewise, the Department's methodology needs to discuss how it treats wildlife studies that demonstrate that levels of toxics are causing adverse effects to health and reproductivity of species such as mink, otter, eagles, falcons, and other piscivorous birds and mammals. *See* discussion above.

Ecology's fixation on evaluating tissue samples based on backcalculating from the NTR criteria fails to realistically account for the toxic effect of toxics in fish on a range of designated uses, as required by the narrative criterion. For example, most recently in 2012, the Oregon Department of Environmental Quality (ODEQ) found that while water column samples from the mid-Columbia River were generally within acceptable levels for toxics, toxics were present in fish tissue at well above the acceptable levels to protect human health. *See* ODEQ, Regional Environmental Monitoring and Assessment Program: 2009 Lower mid-Columbia river Ecological Assessment Final Report (2012).¹⁷⁰ Essentially, the study found that water column samples from a waterbody might have an acceptable level of toxics, but the fish in that same waterbody could contain so much toxic pollution that they are dangerous for human consumption. *Id.* As the DEQ website so clearly puts the contrast,

¹⁷⁰ Available at http://www.deq.state.or.us/lab/wqm/docs/2009%20columbia%20REMAP%20final%20report_DEQ_Complete.pdf

while the [Columbia] river's fish and bank habitat is degraded, its water quality is generally good, with low levels of metals and organic compounds known as polyaromatic hydrocarbons. Unfortunately, bass and largescale sucker fish fillets sampled from the river as part of this study show accumulation of potentially harmful levels of mercury, chlorinated pesticides and other toxic or cancer-causing chemicals, including dioxins, furans, and PCBs.

DEQ, Water Quality Monitoring, Lower Mid-Columbia River Ecological Assessment.¹⁷¹ See also EPA, Columbia River Basin: State of the River for Toxics – January 2009 at 1(2009).¹⁷²

However, as a result of the Ecology's limited interpretation of its own water quality standards, it has also failed to evaluate data on use impairment related to levels of toxic contaminants to piscivorous wildlife such as eagles, mink and otter, instead relying on outdated human health criteria. For example, despite a report on the Columbia River that concludes "that river otter in the vicinity of RM 119.5 are in a critical or almost critical category based on reference level comparisons, abnormalities noted during necropsy, and histopathological observations of individuals," Ecology has not used this data as the basis of listing. See *The Health of the River 1990-1996, Integrated Technical Report*, Tetra Tech, May 20, 1996, Figure 14, at 53.¹⁷³ These data and this information about the effects of pollutants on designated uses is tied to toxic contaminants in the waterbody: "Concentrations of organochlorine insecticides, PCBs, and to a lesser extent PCDDs and PCDFs in the liver of river otters were highly correlated with each other and many were significantly related to baculum [penis bone] and testes size or weight." *Id.* at 52. And this same study noted that "[h]istorically, some individual mink contained PCB concentrations known to make adult female mink in laboratory studies incapable of producing young." *Id.* at 52. Yet Ecology ignores this source of data and information. Similarly, Ecology ignores the results of the Lower Columbia Water Quality Study where it found sediment contamination exceeds values believed to be protective of benthic organisms and wildlife. *Id.* at 37, Figure 14. This is just one example of Ecology's ignoring sediment and tissue data and evidence of impacts of toxic substances on designated uses contrary to the explicit language of Washington's toxic narrative criterion.

Ecology is required to consider some minimum amount of information to use its narrative criteria correctly. Ecology surely must be in possession of the August 2012 NMFS jeopardy findings for Oregon threatened and endangered species—the same species found in Washington's waters and interstate waters shared with Oregon—for cadmium, copper, aluminum, and ammonia. See National Marine Fisheries Service, *Jeopardy and Adverse Modification of Critical Habitat Biological Opinion for the Environmental Protection Agency's Proposed Approval of Certain Oregon Administrative Rules Related to Revised Water Quality Criteria for Toxic Pollutants* (Aug. 14, 2012). Specifically, in light of information from NMFS that the freshwater criteria for these pollutants did not protect Oregon's designated uses of salmonids, Ecology was required to apply the gap-filling measure of its narrative criterion in

¹⁷¹ Available at <http://www.deq.state.or.us/lab/wqm/middlecolumbia.htm>

¹⁷² Available at http://www2.epa.gov/sites/production/files/documents/columbia_state_of_the_river_report_jan2009.pdf

¹⁷³ Available at <http://www.estuarypartnership.org/resource/bi-state-program-additional-reports-health-river-1990-1996-integrated-technical-report>

order to prevent the introduction of toxic substances at levels “below those which have the potential, either singularly or cumulatively, to adversely affect characteristic water uses, cause acute or chronic conditions to the most sensitive biota dependent upon those waters, or adversely affect public health[.]” NMFS provided evidence of harm that Washington’s numeric criteria do not guard against for species present in Washington and interstate waters. Moreover, NMFS’s biological opinion set out Reasonable and Prudent Alternatives that provide some guidance to Ecology on appropriate ways of interpreting and applying its narrative criterion to data and information on these pollutants. This presumably would be consistent with Ecology’s concern about the effects of copper in Puget Sound. See Ecology, Focus on Puget Sound, Puget Sound Toxics Assessment (Nov. 2011)¹⁷⁴ at 2 (“Low-levels of copper inhibit the ability of salmon to avoid predators and find their way back to spawning streams.”).

In addition, where Washington does not have numeric criteria, it must rely upon—or ignore completely—data and information on toxic effects of pollutants. For example, Ecology is concerned about flame retardants such as polybrominated diphenyl ethers (PBDEs). See *id.* Scientists are also concerned about PBDEs. See *e.g.*, Henny *et al.*, Wastewater dilution index partially explains observed polybrominated diphenyl ether flame retardant concentrations in osprey eggs from Columbia River Basin, 2008–2009 (“Only in 2006 and 2007 (Upper Willamette River, RM 61–157 and Lower Columbia River, RM 29–84) did PBDE concentrations in individual osprey eggs exceed 1,000 ng/g ww. In those 2 years, there was evidence that PBDE concentrations may adversely affect osprey reproductive rates.”). But Ecology does not have numeric criteria for PBDEs. Because it also declines to use its narrative criterion for toxics as it is written, neither the public nor EPA will be able to discern whether there is sufficient information upon which data could be evaluated to determine if PBDE loading was causing harm to species or was at levels that are known to cause harm to species. The same is true of Ecology’s study of perflourinated compounds, where Ecology found the “maximum osprey egg concentration (910 ng/g) was the second highest recorded value in the United States for that medium.” Ecology, Perfluorinated Compounds in Washington Rivers and Lakes (Aug. 2010). The same is true of whether Ecology could use bioindicators that are used for toxicological monitoring studies, including especially for “chemicals of emerging concern.”

f. *Submission of Data and Information Pertaining to Violations of Washington’s Narrative Criteria*

There are ample readily available data and information concerning the failure of Washington’s waters to meet its narrative criteria. These sources include but are not limited to data and information concerning:

- animal invasive species;
- plant invasive species;
- toxic substances that have accumulated in sediments;
- toxic substances that are found in Washington’s waters in combinations that are harmful;
- toxic substances that are bioaccumulated in aquatic life to levels that adversely affect public health, safety, or welfare;
- toxic substances that have bioaccumulated in aquatic life or wildlife to levels that adversely affect aquatic life, wildlife;

¹⁷⁴ Available at <https://fortress.wa.gov/ecy/publications/publications/1103060.pdf>

- toxics substances that have bioaccumulated in amounts, concentrations, that may be harmful;
- bio-assessment studies to monitor the toxicity to aquatic life of complex effluents, other suspected discharges, or chemical substances without numeric criteria;
- growths having a deleterious effect on stream bottoms, fish or other aquatic life, or that are injurious to health, recreation, or industry;
- of sufficient quality to support aquatic species without detrimental changes in the resident biological communities;
- bacterial pollution or other conditions deleterious to waters used for domestic purposes, , bathing, or shellfish propagation; and
- creation of tastes or odors or toxic or other conditions that are deleterious to fish or other aquatic life or affect the potability of drinking water or the palatability of fish or shellfish may not be allowed.

Sources of this information include but are not limited to the National Marine Fisheries Service, U.S. Fish and Wildlife Service, the U.S. Geological Survey, Washington Department of Fish and Wildlife,, institutions of higher learning, and Ecology itself.

We hereby submit as readily available data and information pertaining to violations of narrative criteria, the data and information in Section I.E. of these comments, *supra*.

3. Numeric Criteria

It is difficult to comment on the proposed assessment because Ecology's database does not allow searches for Category 3 listings. For example, the database query for bioassessment in Category 5 generates only 92 listings. Searching for bioassessment in all categories yields 277 entries. Based on the total entries, it appears likely that there are many entries in Category 3. Being able to comment on those entries where Ecology has determined that data are "insufficient" for a 303(d) listing is essential to being able to comment on Ecology's 303(d) list. The same is true for other pollutants for which listing is based primarily if not exclusively on water quality data as compared to numeric criteria in Washington's standards, namely bacteria, contaminated sediment, dissolved oxygen, pH, temperature, TDG, toxics, and turbidity. It seems that Ecology is only interested in giving the public an opportunity to provide information to remove waters from the list rather than to provide information that would suggest Ecology had incorrectly omitted waters from the list.

4. Washington Fails to List Waters for Violations of Antidegradation Policies and Requirements

a. *EPA's Requirements to List on the Basis of Antidegradation Policies*

As set out above, the statute and EPA's implementing regulations require that 303(d) listings be based on all components of applicable water quality standards, including the antidegradation policy. EPA reiterates this position in its 2012 Guidance, reminding states that

Antidegradation is an integral component of a State water quality standard (i.e., designated uses; criteria to meet those uses; and antidegradation policies) that focuses on maintaining and protecting the chemical, physical, and biological

integrity of the nation's waters, consistent with the CWA and its implementing regulations. CWA Section 303(d) and EPA's implementing regulations require States to identify waters not meeting any applicable water quality standard (CWA §303(d)(1)(A), 40 C.F.R. 130.7(b)(3)). EPA's listing regulations specify that "applicable water quality standards" refer to criteria, designated uses, and **antidegradation requirements** (40 CFR 130.7(b)(3)).

2012 Guidance at 7. EPA points out that "[b]y assessing waters in this manner, there is a greater opportunity to protect human health and wildlife values, achieve healthy watersheds, and fulfill in a more cost-effective manner the CWA's primary objective to restore and maintain the nation's waters." *Id.* EPA's 2014 guidance reiterates EPA's position and provides states with an example of how data and information could indicate a waterbody is not meeting a State's antidegradation requirements for Tier III. EPA, Information Concerning 2014 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions (Sept. 3, 2013) at 16.

b. *Washington's Failure to Comply with EPA Policies to List on the Basis of Violations of the Antidegradation Policy*

In its 2012 listing methodology, Ecology makes no reference to the state's antidegradation policy. Oddly, however, in its response to comments on the 2012 methodology, Ecology invokes the antidegradation policy as a basis to not make listings on the basis of lack of support for designated uses: "Beneficial use support is demonstrated by adherence to the numeric criteria *and the anti-degradation policy.*" 2012 Response at 2 (emphasis added). Likewise, in responding to public comments on its 2008 303(d) list, Ecology invoked the antidegradation policy using the exact same sentence for the same purpose. *See* 2008 Response at 6. Yet Ecology has no intention of listing waterbodies on the basis of the antidegradation policy. As Ecology states, the purpose of the listing methodology is to make sure that "data submitters provide the data . . . [and that] the data matches [sic] the objectives of the Water Quality Assessment." *Id.* at 5. If Ecology is relying on data submitters to "provide the data" and the submitters are limited to the listing methodology and the methodology is silent on the matter of soliciting data and information on compliance with the antidegradation policy, it is logical to assume that no data are being submitted on the antidegradation policy and if they were, Ecology would likely reject them. An example is given on that very page. Ecology states that it has, *inter alia*, data on the "presence of bull trout." *Id.* The presence and absence of a species is the very definition of compliance with Tier 1 of the antidegradation policy: "Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected." 40 C.F.R. § 131.12(a)(1). Existing uses are defined as "those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards." 40 C.F.R. 131.3(e). According to EPA, "[Tier I is] the absolute floor of water quality" providing "a minimum level of protection" to all waters. EPA, Questions and Answers on: Antidegradation 4 (August 1985)¹⁷⁵ If Ecology had evidence that bull trout that were present in a waterbody after November 28, 1975 are no longer there today, that would be evidence of a violation of the existing use protection of the antidegradation policy. Therefore, contrary to Ecology's assertion that the presence of species is merely to assist in developing

¹⁷⁵ Available at http://water.epa.gov/scitech/swguidance/standards/upload/2002_06_11_standards_handbook_handbookappxG.pdf

water quality standards, the presence and absence of species is specifically related to compliance with the antidegradation policy that it claims it relies upon for 303(d) listings.

Moreover, because Ecology's assessment database provides no ability to query the database to determine if Ecology has made any 303(d) listings based on violations of Tier I of the antidegradation policy that requires protection of existing uses, NWEA is forced to rely on the listing methodology and other sources of information to deduce Ecology's position. This is not solely a comment on the listing methodology; it is a comment on Washington's inadequate 303(d) list.

In addition, Washington's antidegradation policy supports the federal requirements. It states that "[t]he purpose of the antidegradation policy is to: Restore and maintain the highest possible quality of the surface waters of Washington." WAC 173-201A-300(2)(a). Placing waters on the 303(d) list is the primary route for restoring impaired water quality. Likewise, Washington's Tier I protection is similar to the federal requirement: "Tier I is used to ensure existing and designated uses are maintained and protected and applies to all waters and all sources of pollution." WAC 173-201A-300(2)(e)(i). The antidegradation policy requires protection of existing uses:

Existing and designated uses must be maintained and protected. No degradation may be allowed that would interfere with, or become injurious to, existing or designated uses, except as provided for in this chapter.

For waters that do not meet assigned criteria, or protect existing or designated uses, the department will take appropriate and definitive steps to bring the water quality back into compliance with the water quality standards.

WAC 173-201A-310(1), (2). It is unclear what more "appropriate and definitive steps" Ecology could take to protect waters where it has failed to protect existing uses than to place those waters on the 303(d) list, provide them with a higher level of interim protection than other waters (i.e., high quality waters that are assumed to have some assimilative capacity), and develop a TMDL to bring those waters into compliance with water quality standards.

As NWEA pointed out in its 2008 comments, there is no evidence that Ecology has sought out any data or information on existing uses and, moreover, its policy limiting data going back to ten years would often preclude making a finding that uses were present in 1975 but are no longer present. On the other hand, Ecology states that it has some data and information on "presence of bull trout and other ESA-listed species," the range of which has decreased along with populations with the effect of making them either threatened or endangered. Therefore not only are the data and information "readily available" but at least some of them are in the hands of Ecology itself. In addition, whether Ecology has obtained the data and information or not, Ecology could readily obtain it from its sister agencies, the Washington Department of Natural Resources ("DNR") and Washington Department of Fish and Wildlife ("WDFW"). For example, WDFW catalogues priority species, defined as requiring special protections because of, *inter alia*, "their population status [and] sensitivity to habitat alteration." See WDFW, Priority Habitats and Species List (Aug. 2008) at 1.¹⁷⁶ Species that have population problems often have

¹⁷⁶ Available at <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf>

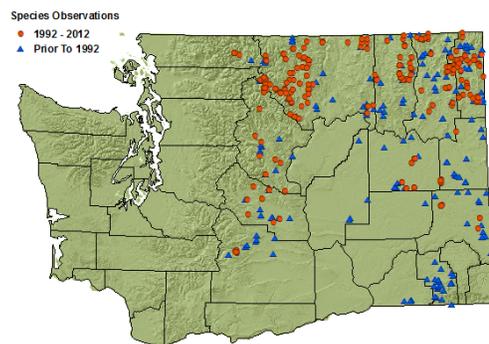
suffered local extirpations, the very definition of a violation of Tier 1 of the antidegradation policy.

The DNR sponsors the Washington Herp Atlas.¹⁷⁷ The Atlas includes a distribution map of each featured species, including 25 amphibians. The maps provide the historical context needed to determine compliance with Tier 1 protections for existing uses. *See e.g.*, Cope's Giant Salamander - Known Distribution.¹⁷⁸ With regard to this species, the Herp Atlas informs us that "[l]ocal declines and extirpations may have occurred but have not been documented. The main concerns for this species have to do with protection of stream integrity, mainly land uses that elevate stream temperatures and contribute to erosion and increased sedimentation." *See* Cope's Giant Salamander.¹⁷⁹ In addition, each entry discusses the types of "threats and management concerns" facing the species, including water pollution and pollutants:

Activities that alter the integrity of small and medium-sized forested streams are of concern, especially those actions that increase water temperature and sedimentation. Land management practices that fail to protect streams from sedimentation may be particularly problematic for salamander populations that occur in low-gradient streams, as increased silt deposition may eliminate crucial microhabitats. This happens when silt fills spaces between rocks and logs that would otherwise be used as sheltering, hiding and nesting sites.

Id. Moreover, the Herp Atlas helps identify sources of data and information about which Ecology might not be aware: "The Cooperative Monitoring Evaluation and Research (CMER) Committee and Adaptive Management Program [are evaluating] . . . the effectiveness of Forest Practice's prescribed riparian buffers along non-fish bearing streams [for four] . . . target species (Coastal Tailed Frog [*Ascaphus truei*] and three species of Torrent Salamanders [*Rhyacotriton*]) along with Cope's and Coastal Giant Salamanders (*Dicamptodon*)[.]" *Id.*

One example of a distribution map that appears to demonstrate an extirpation from waters after 1992 is for the Columbia spotted frog. For example, this map from the Washington Herp



¹⁷⁷ Available at <http://www1.dnr.wa.gov/nhp/refdesk/herp/herpmain.html>

¹⁷⁸ Available at http://www1.dnr.wa.gov/nhp/refdesk/herp/html/map_dico.html

¹⁷⁹ Available at <http://www1.dnr.wa.gov/nhp/refdesk/herp/speciesmain.html>

Atlas¹⁸⁰ shows that the Columbia spotted frog was seen in Walla Walla and Columbia counties prior to 1992 but no observations have been made since. Such maps are available for 25 amphibians; we have not downloaded or specifically cited each of them. Ecology's failure to use this readily available evidence of aquatic and aquatic-dependent species on the verge of extirpation in locations in Washington is a failure to assess compliance with Tier 1 of the state's antidegradation policy, contrary to the requirements of federal law.

c. *Submission of Data and Information that Demonstrate Violations of Tier I of the Antidegradation Policy*

We hereby submit as readily available data and information pertaining to violations of Tier I of the antidegradation policy, the data and information in Section I.E. of these comments, *supra*.

B. Ecology Fails to Protect Downstream Waters by Applying More Stringent Oregon Water Quality Standards As Required by Law

EPA's regulations require that a state's water quality standards "take into consideration the water quality standards of downstream waters and shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards or downstream waters." 40 C.F.R. § 131.10(b); *see also* EPA, Protection of Downstream Waters in Water Quality Standards: Frequently Asked Questions, EPA-820-14-001 (June 2014) (hereinafter "Downstream Guidance").¹⁸¹ Accordingly, Washington has adopted a procedure for applying its water quality criteria as follows: "Upstream actions must be conducted in manners that meet downstream water body criteria. Except where and to the extent described otherwise in this chapter, the criteria associated with the most upstream uses designated for a water body are to be applied to headwaters to protect nonfish aquatic species and the designated downstream uses." WAC 173-201A-260(3)(b). In this instance, the upstream action is the comparison by Ecology of its data and information to the applicable water quality standards. The applicable water quality standards are those that are the most stringent, namely Oregon criteria for human health and aquatic life protection. We are not here going to enumerate every criterion that is more protective but the facts are these. Oregon's human health criteria are based on a fish consumption rate of 175 grams/day, compared to Washington's National Toxics Rule (NTR) criteria, which are based on 6.5 grams/day. Ecology has prepared a chart comparing the Oregon human health criteria for toxics to Ecology's proposed criteria¹⁸²; we presume that Ecology could easily insert the NTR criteria to determine where Oregon's downstream criteria are more protective. For example, Ecology has produced another chart demonstrating the difference between the NTR criteria and its proposed criteria.¹⁸³ Likewise, unlike Oregon's water quality standards, for the most part, Washington's aquatic life standards for toxics have not been updated since they were adopted in 1992 and approved by EPA on March 18, 1993.

¹⁸⁰ Available at http://www1.dnr.wa.gov/nhp/refdesk/herp/html/map_ralu.html

¹⁸¹ Available at <http://water.epa.gov/scitech/swguidance/standards/library/upload/downstream-faqs.pdf>

¹⁸² Ecology, Washington Proposed HHC vs. Oregon Adopted HHC, available at <http://www.ecy.wa.gov/programs/wq/swqs/ECYPropvsORHHC.pdf>

¹⁸³ Ecology, Draft WA Human Health Criteria, available at <http://www.ecy.wa.gov/programs/wq/swqs/HHChemSummarysimplecomparisontable.pdf>

Specifically, the only updated aquatic life toxic criteria are for ammonia,¹⁸⁴ chronic marine copper,¹⁸⁵ and chronic marine cyanide.¹⁸⁶ This analysis must be applied to the Columbia River, which becomes an interstate waterbody at Rivermile 309¹⁸⁷ where Oregon water quality standards apply. It must also apply to all tributaries of the Columbia River that enter this interstate waterbody where Oregon's standards apply. There is certainly plenty of evidence that toxic pollutants from across the entire Columbia River basin come to rest in the sediment and tissue of the Lower Columbia River. *See e.g.*, EPA, Total Maximum Daily Loading (TMDL) to Limit Discharges of 2,3,7,8-TCDD (Dioxin) to the Columbia River Basin (Feb. 25, 1991). As EPA notes in its 2014 guidance, situations in which this issue arises include, but are not limited to:

- the pollutant accumulates over time in downstream waters (e.g., nitrogen or phosphorus); is persistent (i.e., resists degradation) in the environment (e.g., lead, mercury, arsenic, PCBs, dioxin); is bioaccumulative in aquatic life, wildlife, or humans (e.g., methylmercury); and/or transforms into a more toxic form downstream (e.g., some pesticide metabolites or disinfection byproducts);
- downstream waters are protected by more stringent or additional criteria;
* * *
- sensitive or rare aquatic species (e.g., state- or federally-listed threatened or endangered species) and/or species with particular economic or social importance exist downstream;

Downstream Guidance at 4. These examples are certainly applicable to this situation. Washington's narrative protecting downstream waters must be used in developing a 303(d) list. *See* Downstream Guidance at 7 ("one or more narrative upstream criteria can be written to reflect a quality of water that ensures the attainment and maintenance of downstream WQS. Such criteria(on) should provide a strong basis for implementation via water quality management actions (e.g., in NPDES permitting, Section 401 certification, TMDL programs, and Section 305(b)/303(d) *assessment/listing programs*.)") (emphasis added).

C. Ecology Failed to Use Legally Applicable Water Quality Standards in its 2012 Assessment

Ecology's use of its natural conditions provisions is inconsistent with EPA guidance. EPA addressed the issue in its 2008 guidance answering the question: How should States make 303(d) listing decisions when naturally occurring pollutants are present in a waterbody? 2008 Guidance

¹⁸⁴ Approved by EPA on February 6, 1998, revised in June 2003 and again in November 2006, and approved by EPA on February 11, 2008.

¹⁸⁵ Approved by EPA on February 6, 1998. Removed from the NTR on July 9, 2007.

¹⁸⁶ A site-specific criterion for Puget Sound was approved by EPA on February 6, 1998 and a marine chronic cyanide criterion for waters outside Puget Sound was approved by EPA on May 23, 2007. Washington was removed from all remaining aquatic life criteria in the NTR on July 9, 2007.

¹⁸⁷ *See e.g.*, EPA, Total Maximum Daily Loading (TMDL) to Limit Discharges of 2,3,7,8-TCDD (Dioxin) to the Columbia River Basin (Feb. 25, 1991) at 1-1.

at 10. Specifically, EPA addresses the question of “303(d) decision making *for waters impaired totally or in part* by a naturally occurring pollutant, *id.* (emphasis in original), concluding that where a waterbody that “receives pollutant loadings from both natural background and anthropogenic sources . . . the waterbody is considered impaired and belongs on the 303(d) list or Category 5,” *id.* at 11. Only where the exceedance of the applicable numeric criterion is “all natural” may the state not list the waterbody if it has a natural conditions provision in its standards. *See id.* at 11 (Figure 1). This is described by EPA as: “The waterbody receives pollutant loadings from only natural background sources, and the applicable numeric criterion is exceeded. The waterbody is considered impaired and belongs on the 303(d) list or Category 5 unless the State’s water quality standards include a natural conditions provision consistent with the standards provision quoted above.” *Id.* Therefore, EPA’s guidance has never allowed the removal of waters from the list based solely on some natural contribution to exceedances of numeric criteria.

EPA’s 2014 Guidance continues to makes the agency’s position clear: “EPA’s guidance on the appropriate use of natural conditions provisions for making 303(d) listing decisions remains unchanged for the 2014 reporting cycle. . . . If the pollutant concentrations do not meet the EPA-approved water quality standards, and anthropogenic sources of the pollutant are present, the water is considered impaired and should be included on the State’s Section 303(d) list *even if natural sources of the pollutant are present.*” 2014 Guidance at 5 (emphasis added). Only if a water fails to meet standards based “*solely due to naturally occurring levels of a pollutant*, and it has an approved applicable natural conditions provision, the State should include in its IR submission for the 2014 and future reporting cycles a rationale for either removing or not including the water/pollutant combination on the State’s Section 303(d) list.” *Id.* (emphasis added). The guidance goes on to establish that the State must explain the rationale for concluding the natural condition is the sole cause of the exceedance. *Id.* at 5-6.

Contrary to EPA’s guidance, Ecology states that waterbody segments will be found impaired only “when human activities cause, or have a strong potential to cause, *significant* impacts in addition to natural conditions.” Methodology at 21 (emphasis added). (Oddly, Ecology states that this is not a “presumption either way.” *Id.*) Ecology emphasizes the relationship between human and natural contributions:

For water bodies that appear to have natural conditions sufficient to override human influences, but the information is not conclusive, the waterbody segment will be placed in Category 2. In the absence of specific data to determine whether the exceedance is above or below the threshold allowance, the waterbody segment may be placed in Category 5 or Category 2, depending on available historic data and the best professional judgment of Ecology staff.

Id. Finally, Ecology asserts that its approach is not a “presumption either way,” *id.* at 21, but goes on to say that “[i]f the determination is made that potential human influences exist that could impact temperature, the waterbody segment will be placed in Category 5,” *id.* at 44. Because Ecology states that it after determining an exceedance it “*will take an additional step to determine if the water is impaired due to human influences,*” this latter statement is, in fact, a presumption that temperature exceedances are natural, notwithstanding Ecology’s assertion. According to Ecology, only if “the determination is made” that temperature exceedances are caused by humans will it list the water as impaired. This is the most obvious reason why Ecology’s listing methodology for temperature impairments is inconsistent with long-standing

EPA policy.

Further, Ecology's methodology is not consistent with EPA guidance because it requires that the human contribution be "significant." And it is not consistent with EPA guidance because it provides for Ecology's not placing waters that have violations of the numeric criteria into Category 5 where natural conditions may "override human influences." As EPA's illustration, in the 2008 memorandum shows, where there are natural pollutant loadings, that is considered the base and the anthropogenic loadings are considered an additional load. Ecology has inverted this approach to suggest that it is the natural conditions that are at fault and/or that the human influences can be disregarded because they are "override[n]." This is simply at odds with EPA's guidance. In addition, while Ecology states that it is not presuming one way or the other, it also states that in the absence of data to determine if the exceedance exceeds the threshold allowance, meaning the human use allowance, it has the discretion to place or not place the water on the 303(d) list. This is incorrect. In the absence of knowledge about whether human contributions are in excess of the allowance, the exceedance over the numeric criteria is sufficient by itself to warrant placement on the 303(d) list. It is required and Ecology does not have the discretion that it purports to have.

NWEA raised this issue in commenting on the Washington methodology finalized in 2012. In its response to our comments, Ecology cited EPA's 2006 guidance, concluding "we apply [our natural conditions provision] to water quality data where information strongly supports the natural condition." 2012 Response at 5. Ecology is doing far more than not list waters that are exceeding standards due solely to natural causes.

In addition to temperature and dissolved oxygen, Ecology uses a special treatment of arsenic for natural conditions. Methodology at 48. This states that: "[i]norganic arsenic . . . requires a natural conditions evaluation prior to a final listing determination." *Id.* Not only is this ambiguously worded but, in response a query from EPA, Ecology stated that "[u]pon further review of this proposed addition, we realize that this [natural condition evaluation] is not appropriate in the specific parameter descriptions, and we have removed the draft language that refers to the need for a natural conditions determination prior to making an arsenic listing in Puget Sound." 2012 Response at 39. Likewise, Ecology responded to NWEA's comment by saying that "Ecology is removing the draft language that refers to the need for a natural conditions determination prior to making an arsenic listing in Puget Sound." *Id.* at 41. And the 2008 response to comments stated that arsenic listings "were removed in the latest listing cycle due to inconsistency between the National Toxics Rule inorganic arsenic criteria, arsenic concentrations based on total arsenic, both organic and inorganic, and the natural background concentration of arsenic in state waters." 2008 Response at 8. Yet the current methodology contains the language quoted above which specifically calls for a "natural conditions evaluation" prior to a listing decision. While we have no way of knowing precisely what Ecology means, the language suggests that Ecology will not list a water exceeding arsenic criteria until it makes a determination that the arsenic is from human sources. This is an incorrect reading of Ecology's water quality standards and EPA's listing guidance.

The database demonstrates that with only two exceptions out of 35, all data on inorganic arsenic have been deemed to be in compliance with standards. Nineteen of 399 entries for arsenic are Category 5. None of the organic or inorganic arsenic listings is in freshwater. Picking one inorganic arsenic entry at random, Assessment Unit ID: 47122F6E2, Listing ID: 14811, Ecology offers the following rationale for delisting: "Johnson and Roose, 2002, conclude that the high

arsenic concentrations in tissue samples in this area are a natural condition based on a comparison to reference areas. Further, note that since very little of the total arsenic in fish or shellfish tissue is inorganic, listings based on total arsenic are likely not appropriate (Johnson, ECY/EAP, 2003).” This statement does not equate to a finding that there are no human sources of arsenic. The net result of Ecology’s approach will be to find nearly all arsenic is “natural,” because it will not do any kind of evaluation to determine whether there are, in fact, human contributions. Given the human health hazard from arsenic, this is not good policy.

III. THE SCOPE OF WASHINGTON’S LIST IS INCONSISTENT WITH FEDERAL REQUIREMENTS

A. Washington Fails to Evaluate and List Waters as “Threatened”

The definition of “water quality limited segment” in EPA regulations includes waters not expected to meet applicable water quality standards, which EPA refers to as “threatened” waters. 40 C.F.R. § 130.2(j). EPA Guidance indicates that a water should be placed in Category 5 of the 303(d) list when “[a]vailable data and/or information indicate that at least one designated use is not being supported or is threatened, and a TMDL is needed.” 2006 Guidance at 47. EPA recommends that states consider segments as threatened “those segments that are currently attaining WQS, but are projected as the result of applying a valid statistical methodology to exceed WQS by the next listing cycle (every two years). For example, segments should be listed if the analysis of existing data and information demonstrates a . . . projected trend will result in a failure to meet that standard by the date of the next list[.]” *Id.* at 59. EPA directs that “[t]he state assessment and listing methodology should describe how the state identifies threatened segments. *Id.*

Ecology has not identified threatened waters as a category for which it makes listing determinations in its methodology. There is no way to search for threatened waters on the Ecology database. Therefore, one can conclude that Washington does not include threatened waters in its 303(d) list.

B. Washington Fails to List Waters Impaired by Fish Passage Barrier Pollution

A culvert is a structure that often obstructs the passage of anadromous fish as they seek to reach their spawning habitats. There are many such forms of pollution in Washington that are having an effect on designated uses in violation of water quality standards including culverts and other physical blockages. Much information on the location of these barriers to salmon passage are readily available. For example, the Washington Department of Fish and Wildlife’s Fish Passage Program “maintains a centralized database of fish passage, diversion screening, fish use, and habitat information from inventory efforts conducted throughout Washington State. WDFW’s Fish Passage and Diversion Screening Inventory (FPDSI) database is a main data source for planning fish passage projects.” This database is readily available as GIS data¹⁸⁸ and in map form. *See* WDFW, Fish Passage Program, Fish Passage Barrier Map.¹⁸⁹ Ecology is required to

¹⁸⁸ Fish Passage Barriers Inventory *available at* https://fortress.wa.gov/dfw/public/PublicDownload/habitat/FishPassageBarrierInventory/FPBI_pgdb.zip (this data base was not downloaded and attached to these comments).

¹⁸⁹ *Available at* http://wdfw.wa.gov/conservation/habitat/fish_passage/data_maps.html

remedy its inadequate 303(d) list.

C. Washington Fails to List Waters Impaired by Invasive Species

As discussed above, Ecology is required to list waters that are impaired by invasive species. It could start with its own database layer, “Areas of Extreme Concern–Invasive Species.”¹⁹⁰ *See also supra.*

IV. WASHINGTON’S SUBMISSION TO EPA VIOLATES FEDERAL LAW

When a state submits its proposed 303(d) list to EPA for review and action, it is required to provide documentation to support its determinations to list or not list waters. 40 C.F.R. § 130.7(b)(6). This documentation must, at a minimum, include a description of the methodology, a description of the data and information used to identify the waters, and a rationale for any decision to not use any existing and readily available data and information[.] *Id.* at (i)-(iii). In addition to this documentation and the list, the state is required to include a priority ranking for all listed segments still requiring TMDLs and specifically include the identification of waters targeted for TMDL development in the next two years. 40 C.F.R. § 130.7(b)(4).

A. Washington Fails to Describe the Data and Information Used to Identify Waters as Impaired

Ecology has access to many studies and sources of data and information. However, the public cannot evaluate whether Ecology has in its possession all of the studies that it should have because it has not chosen to make that information available, as required. The only way in which the public can ascertain whether Ecology is using data or information is to tediously look up pollutants on individual waterbodies and see what references are there. As pointed out above, any data or information that has placed a waterbody into Category 3 will not be available for public review. It is extremely difficult to review the data base to evaluate what data Ecology has, what data it has used and what data it has discarded, and how it is treating the data. And this does not answer the question of whether Ecology has the data or information but is choosing not to use it because, for example, it has decided not to use tissue residue data or information on suppression of wildlife reproduction. Ecology’s comments in the database are frequently not clear in describing why the data or information are inadequate. Therefore, the reviewer is forced to rely heavily on the methodology to interpret the database. Relying on the methodology is particularly difficult, if not simply impossible, where the methodology provides very little if any information. And Ecology plays “Catch-22” by treating all comments on the methodology submitted in comments on the list as comments only on the methodology and therefore not worthy of response and all comments on the methodology as poor timing.

In the past, Ecology has provided the public with the information that it needs to make this analysis. For example, for its 1998 and 2004 303(d) lists, Washington created lists of references

¹⁹⁰ Ecology, Areas of Extreme Concern–Invasive Species (April 2014) map *available at* <http://www.ecy.wa.gov/services/gis/data/image.asp?name=extremeconcern>; database *available at* ftp://www.ecy.wa.gov/gis_a/enviro/FacilitySite.gdb.zip

cited.¹⁹¹ Using these lists, a quick word search for “eagle,” for example, demonstrates that for neither of those 303(d) lists did Ecology use the report issued in 2000 concerning contamination of bald eagles in Hood Canal. *See* Mahaffy, *et al.*, Environmental Contaminants in Bald Eagles Nesting in Hood Canal, Washington, 1992-1997 (July 29, 2000)¹⁹² at vi (“Total PCB concentrations measured in the Hood Canal eggs exceeded threshold levels described for normal bald eagle reproduction.”). Likewise, that same search demonstrates that in neither 303(d) list did Ecology use a 1999 report on bald eagle reproductive failure in the Lower Columbia River. *See* Buck, *et al.*, Changes in Productivity and Environmental Contaminants in Bald Eagles Nesting Along the Lower Columbia River (Aug., 12, 1999)¹⁹³ at vi (“Previous contaminant studies conducted from 1985 to 1987 along the river found poor productivity associated with elevated DDE (dichlorodiphenyldichloroethane) and total polychlorinated biphenyls (PCBs) in eagle eggs. . . . results indicate that organochlorine contaminants continue to impact the breeding success of lower Columbia River eagles.”). Both of these reports contain data and information demonstrating that a designated use—the bald eagle—was impaired reproductively by toxic contaminants in Washington waters.

In contrast, to see if Ecology has used data on PCB-related reproductive impairment of bald eagles in Hood Canal, a new tab must be opened, Hood Canal, North and South, and the single parameter of PCBs chosen. For this query, three reports come up, each of which demonstrates that the waterbody is in Category 1 for PCBs. Each individual toxic chemical must be checked separately instead of simply being able to see if a single report that examined many toxic parameters was even considered by Ecology. Turning to see if PCB-related reproductive impairment in bald eagles in the Columbia River has been used by Ecology, results in 27 reports for all sections of the Columbia River. Clicking on one report for a category 5 listing based on tissue, the basis of the listing is human health: “Laflamme and Gilroy, 1996. excursions beyond the National Toxic Rule criterion in sturgeon, L. sucker and carp fillets in 1994 and 1995.” Listing ID 8772, Assessment Unit ID: 46123C5E5. Similarly, another category 5 listing for WRIA 25 Grays-Elokoman shows the basis is human health: “Tetra Tech, 1993. 3 excursions beyond the national toxics rule criterion in the edible tissue of a individual White Sturgeon at RM 49.” Listing ID: 8765; Assessment Unit ID: 170800030900_01_03. Not only did this exercise take a lot more time than a simple word search for a title or author in a list of references but it remains unclear whether Ecology has or does not have the bald eagle reports. It certainly has not used them.

This exercise demonstrates the rationale behind EPA’s regulation, not that a regulation requires a rationale once it has been promulgated. The rules require that Ecology submit to EPA—unfortunately bypassing the public—“[a] description of the data and information used to identify waters, including a description of the data and information used by the State as required by § 130.7(b)(5).” 40 C.F.R. § 130.7(b)(6)(ii). The rules also require that Ecology provide EPA with

¹⁹¹ Ecology, Washington State’s Water Quality Assessment References Cited (May 2005), *available at* http://www.ecy.wa.gov/programs/wq/303d/2002/2004_documents/2004wqapubstudies.pdf; Ecology, References Cited [1998].

¹⁹² Available at <http://www.fws.gov/pacific/ecoservices/envicon/pim/reports/Olympia/hoodcanaleagle.pdf>

¹⁹³ Available at <http://www.fws.gov/pacific/ecoservices/envicon/pim/reports/Portland/Bald%20Eagle.pdf>

“[a] rationale for any decision to not use any existing and readily available data and information[.]” 40 C.F.R. § 130.7(b)(6)(iii). We have never seen an example of Ecology’s having provided a rationale for a decision to not use any existing and readily available data and information and no such document exists on Ecology’s website for any past 303(d) list submission. The responses to comments have been cursory and dismissive. Certainly one has not been provided for public review on this proposed 303(d) list. Given, as in this example, that federal regulations explicitly specify that “[f]or the purpose of listing waters under § 130.7(b), the term ‘water quality standard applicable to such waters’ and ‘applicable water quality standards’ refer to those water quality standards established under section 303 of the Act, including numeric criteria, narrative criteria, waterbody uses, and antidegradation requirements,” 40 C.F.R. § 130.7(b)(3), Ecology’s decision not to use the readily available data and information on bald eagle impairment due to toxic contaminants must be explained. That is just one example.

B. Washington Fails to Meet Federal Requirements to Provide a Rationale for Not Using Any Existing and Readily Available Data and Information

As discussed immediately above, federal regulations require that Ecology provide EPA with “[a] rationale for any decision to not use any existing and readily available data and information[.]” 40 C.F.R. § 130.7(b)(6)(iii). It is, of course, fully possible that Ecology will provide EPA with this rationale, despite its not having provided it for public review. All we have at this point is Ecology’s response to comments on the proposed methodology, finalized in 2012, and similarly unhelpful comments on the last revision of the freshwater 303(d) list, as well as our belief that in the past Ecology has not made any effort to provide this information nor is the information embedded in the assessment database (e.g., by providing the rationale for not using data in the description of those data that are used). Using the example above, concerning PCB-induced reproductive impairment in the designated uses of bald eagles, the response to comments provides some information as to Ecology’s rationale. For context, NWEA’s comment was as follows, tracking the requirements of 40 C.F.R. § 130.7(b)(3): “Ecology’s [methodology shows a continuing] failure to give full meaning to its water quality standards, including how it plans to assess full support of designated and existing uses.” 2012 Response at 2. Ecology’s response, in full, was as follows:

Beneficial use support is demonstrated by adherence to the numeric criteria and the anti-degradation policy. The search for the cause of decline of uses is not the main role of the Water Quality Assessment. The Assessment seeks to characterize state waters by the degree to which the quality of the water is contributing to the support of the beneficial uses. To this end, the use of numerical and narrative criteria (defined on page 16 of Policy 1-11) provides the most direct link to the support of beneficial uses and the quality of water that is needed to support those uses. For Category 5 waters, these numeric and narrative criteria also provide the means to implement the next step of the water quality improvement process, TMDLs, in a manner that promotes reasonable use of state resources. For Category 4C waters, other programs are relied on to improve upon the habitat degradation caused by the “pollution” source. For example, Ecology has an active program to address and correct the presence of noxious invasive aquatic weeds in state waters.

Clearly the intention of the statutory requirement that waters be listed on the

303(d)(1) list when effluent limits are not stringent enough to “implement any water quality standard applicable to such waters” is linked to water conditions that are affected by effluent limits. The load and wasteload allocations assigned during a TMDL are based on the presumption that limiting future discharges will allow the water segment to return to a condition where beneficial uses are fully supported. The water segments involving discharge of effluents or pollutants that can be improved through the TMDL process are those that are amenable to reduced pollutant loading as from an effluent source.

Waters that do not contain populations of endangered species as they may have in the past are not necessarily impaired. The water quality may be sufficient to support a balanced and indigenous population of organisms but other remote factors lead to the decline of the former population. *When a water segment is found to exhibit a characteristic linked to a pollutant that is detrimental to the survival of a normal population, such as temperature or other pollutant concentrations, the water will be listed. Detrimental characteristics are established by the applicable criteria of the water quality standards. The pollutant criteria are based on the sensitivity of endangered species and other organisms to the parameter under consideration.*

Id. at 2-3 (original italics removed; emphasis added). Putting aside Ecology’s gratuitous remarks about TMDLs’ being focused on effluent limits, this rationale for not using data and information that demonstrate designated use impairment is disingenuous. Ecology asserts that it will list waters based on “a characteristic linked to a pollutant that is detrimental to the survival of a normal population,” but makes clear in the text of both paragraphs one and three that it will only rely on numeric and narrative criteria (e.g., “[d]etrimental characteristics are established by the applicable criteria”). To further rationalize its sole reliance on criteria, Ecology states that the criteria are “based on the sensitivity of endangered species and other organisms to the parameter under consideration.” Put another way, this “rationale” is simply inconsistent with every legal definition of a water quality standard including the one that specifically applies to 303(d) lists. It is, therefore, no rationale at all for not ensuring the protection of designated uses.

To a large extent, the designated uses could be protected if Ecology did, as it asserts, apply its narrative criteria. Using our example of the bald eagles, there is, of course, no evidence that Ecology has ever evaluated the data on PCB-induced reproductive failure in bald eagles as data or information that demonstrates a violation of WAC 173-201A-240(1); -260; or -300. The effect of PCBs on bald eagles has not been found to be a violation of the prohibition on causing toxicity to “the most sensitive biota dependent upon those waters” or to have “adversely affect[ed] characteristic water uses.” Ecology has not explained why; to the best of our knowledge, it simply has not bothered.

Similarly, although the opening sentence of Ecology’s purported rationale invokes the antidegradation policy, there is nothing in Ecology’s methodology that would even hint at what Ecology means by this reference. The word does not even show up a single time in the methodology. The words “antidegradation,” “existing use,” and “Tier 1” do not show up in the “parameter” field of the assessment database. There is, in short, no evidence whatsoever that Ecology has any listings or any evaluation of data or information on the basis of the antidegradation policy. Since this response was given to a public comment that itself pointed out that Ecology appeared to have no method of assessing “full support of . . . existing uses,” which

are protected under the antidegradation policy, Ecology's answer that "[b]eneficial support is demonstrated by adherence to . . . the antidegradation policy" is simply tautological.

Finally on this point, Ecology states that "[w]hen a water segment is found to exhibit a characteristic linked to a pollutant that is *detrimental to the survival of a normal population*, . . . the water will be listed." Response to Comments at 3. It goes on to say that "[t]he pollutant criteria are based on the sensitivity of endangered species[.]" *Id.* There are a couple of illogical aspects to these statements. First, Ecology asserts that listing will only take place where a pollutant is detrimental to the survival of a "normal" population. This is inconsistent with the requirement to protect designated and existing uses. A population cannot be extirpated, made extinct, or impaired simply because other factors have caused its numbers to plummet to the point of no longer being "normal." There is no exception to the rule that the uses must be protected. Second, there is no evidence that the Washington numeric criteria are based on the sensitivity of threatened or endangered—or for that matter sensitive or candidate—species. While a few numeric criteria are, for example, based on the needs of ESA-listed species, such as salmonids, other Washington criteria are quite obviously not. One need only compare Washington's aquatic life criteria with the biological opinion issued for EPA's proposed approval of Oregon's toxic criteria for the protection of aquatic life to conclude that, for example, Washington's copper criteria are not sufficiently protective of the exact same species, which in some cases occupy the exact same interstate waterbodies. *See* NMFS, Jeopardy and Adverse Modification of Critical Habitat Biological Opinion for the Environmental Protection Agency's Proposed Approval of Certain Oregon Administrative Rules Related to Revised Water Quality Criteria for Toxic Pollutants (Aug. 14, 2012). The same would be true for the NMFS jeopardy findings, and subsequent EPA disapprovals, of Oregon's aquatic life criteria for cadmium, aluminum, and ammonia. That Washington's temperature criteria are ostensibly protective of threatened and endangered salmonids is wholly irrelevant to whether the numeric criteria for other pollutants and parameters are similarly protective. This discussion inevitably brings us back to the narrative criteria. Washington may assert all that it wants about the protectiveness of its narrative criteria but if they are not interpreted and used in ways to provide actual protection to sensitive species that the numeric criteria were never intended to protect, its assertions are simply disingenuous. Finally, threatened and endangered species are not always the most sensitive biota. For example, bald eagles are no longer listed under the Endangered Species Act yet they are one of the species that are highly sensitive to water-based contamination.

C. Washington Has Failed to Include a Priority Ranking for All Listed Water Quality Limited Segments Still Requiring TMDLs

Ecology's proposed list does not include a priority ranking for all listed water quality limited segments requiring TMDLs nor the identification of waters the state intends to develop TMDLs for in the next two years, and is therefore inconsistent with federal regulations.

V. WASHINGTON MANAGES TO EVADE MAJOR PROBLEMS WITH ITS 303(D) LIST

Ecology issued a proposed 303(d) list of impaired waters for 2008. NWEA submitted extensive comments on the list, much of which was deduced from Washington's listing methodology as an efficient method of assessing the list. In its response to comments, Ecology rejected those comments based on deduction, stating that "[m]any of NEA's comments are directed at disagreements with Ecology's listing policy. . . . We believe that we followed a good public

process to make changes to the policy, and must honor that commitment by not making further changes until the next listing cycle.”¹⁹⁴ 2008 Response at 9. Ecology subsequently invited public comments on its listing methodology in 2011. NWEA responded with a comment letter on the proposed revisions to the listing methodology as well as comments on the methodology as a whole, stating “[w]e have attached, and incorporate hereto, our comments on the Policy, without its proposed revisions, in our 2008 comments on the proposed 303(d) list.” Letter to Susan Braley, Ecology, from Nina Bell, NWEA, Re: 2011 Proposed Revisions to Water Quality Policy 1-11, Assessment of Water Quality for the Clean Water Act Sections 303(d) and 305(b) Integrated Report (Sept. 1, 2011). NWEA’s 2008 303(d) list comments were attached. In its response to comments on the methodology, Ecology completely ignored the 2008 comments that Ecology had earlier ignored on the basis that they constituted comments on the methodology. *See* Response to Comments, Revisions to Policy 1-11 (July 2012). Ecology is playing a cat-and-mouse game, simply rejecting comments as inconvenient every time it issues a list or a chance to comment on its methodology. It is always the wrong comment period and/or the wrong time. Yet Ecology never takes the older comments and answers them when it presumably would be a better time. In this way, Ecology has persisted in ignoring most of NWEA’s comments on its 303(d) list over the years and persisted in not comparing all readily available data and information to every legally required component of its EPA-approved water quality standards. It is time this comes to an end.

An example that highlights the jarring end result of Ecology’s policies is this. In September 2013, Washington and Oregon issued a joint fish consumption advisory for the consumption of resident fish between Bonneville and McNary dams on the Columbia River due to mercury and PCBs. *See* Oregon Health Authority (OHA) and Washington Department of Health, Limit consumption of some fish species near Bonneville Dam, middle Columbia River (Sept. 23, 2013).¹⁹⁵ In contrast, Assessment Unit ID: 170701051204_01_01, Listing ID: 17979 for a part of this waterbody places it in Category 2 for PCB and there is no entry for mercury. Mercury has been indicted as contributor to human health and ecological problems in the Columbia River, as discussed above, yet a query for mercury for all segments in the Columbia River for all categories in Ecology’s database results in 18 entries only one of which is for Category 5 (Listing ID: 9062 for exceeding the NTR). A startling 13 of those entries are for Category 1, a finding that the water is clean. Not just not impaired, but clean. *See e.g.*, near Cathlamet, Listing ID: 52596 Assessment Unit ID: 170800030900_01_02 (“Fish tissue data from the most recent year showed that the FTEC was met; therefore the Assessment Unit meets the requirements for a Category 1 determination.”).

Conclusion

We look forward to Washington’s completing a thorough evaluation of all available data and

¹⁹⁴ Ecology’s responses also provide irrelevant justifications that are not supported by federal law or policy. For example, Ecology responded to comments by stating that “[a]n aside [sic] note, we have used NOAA Fisheries, USFWS, WDFW, tribal data, and other governmental agency data and information quite extensively when developing new water quality criteria that are used to establish impairment in the assessment results.” Ecology, 2008 Response.

¹⁹⁵ Available at <http://www.oregon.gov/oha/news/Documents/2013-0923-mid-columbia-fish-advisory.pdf>

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information for state waters as compared to its applicable water quality standards, as defined by law. Such an accurate 303(d) list will support the regulatory programs of the Clean Water Act to ensure protection of the state's designated and existing uses.

We will close our comments with a quotation that pertains to the disdainful treatment Ecology has given our comments, and those of others, over the years. Our comments are always deemed to be submitted at an incorrect or inconvenient time, regardless of whether we file them on proposed lists or proposed methodologies. Whatever the reason, they are always almost uniformly ignored. In addition, Ecology's listing methodology makes clear that we have no business submitting data and information for which we do not control the quality assurance plans. This year's proposed list is just one action in a series in which Ecology has, over very many years, repeatedly ignored federal law and policy, and its own water quality standards. That it is the Washington Department of Ecology that turns its back on the leading Clean Water Act case in the country—the Supreme Court's *Jefferson County* decision—a case in which it was the defendant, is nothing short of disturbing. And that it does so by playing games with public participation is even more so. It's as disturbing and nonsensical as Alice found the Queen:

'The rule is, jam to-morrow and jam yesterday—but never jam to-day.' It *must* come sometimes to "jam to-day",' Alice objected. 'No, it can't,' said the Queen. 'It's jam every other day: to-day isn't any *other* day, you know.'

1871, Lewis Carroll, *Through the Looking Glass and What Alice Found There*

Sincerely,



Nina Bell
Executive Director

cc: David Croxton, EPA

Attachment: CD (via USPO Express Mail)