

NORTHWEST ENVIRONMENTAL ADVOCATES



April 30, 2008

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Via E-mail: 303d@ecy.wa.gov

Re: 2008 Draft Assessment of Water Quality for the Clean Water Act Sections 303(d) and 305(b) Integrated Report

Dear Mr. Koch:

The following comments are submitted on behalf of Northwest Environmental Advocates (NWEA) on Washington's 2008 Draft Assessment of Water Quality for the Clean Water Act Sections 303(d) and 305(b) Integrated Report, including but not limited to the methodology established to prepare the list. Assessment of Water Quality for the Clean Water Act Sections 303(d) and 305(b) Integrated Report, Water Quality Program Policy 1-11 (hereinafter "Guidance"). Our comments on the listing methodology should be construed as comments on the proposed § 303(d)(1) list. In part our comments on the list are focused on the methodology because it is extremely difficult, if not impossible in some instances, to determine what Ecology has done: what sources of information it has sought and obtained and/or used, what data and information it has used for listings (i.e., Category 5) versus delistings and decisions not to list (i.e., all other categories). One has to spend an inordinate amount of time making queries of the database, as opposed to previous draft lists when Ecology set out excellent public information in decision matrices. The sheer amount of computer clicking is simply too onerous for the public attempting to comment on this proposal.

I. Failure to Use All Readily Available Data and Information

EPA's regulations require Washington to obtain and use "all existing and readily available water quality-related data and information" by actively soliciting local, state and federal agencies, the public, and academic institutions for research they are conducting or reporting, among other sources. 57 Fed. Reg. 33040, 33050 (July 24, 1992). Washington has failed to use all available data and information that exist on impacts to water quality and beneficial uses including some information Ecology has or could easily have in its possession. Moreover, having failed to provide a list of sources of data and information that the public and EPA could review, we can only guess at what sources Ecology has not used based on what appears to be missing from its listings.

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A. Available Data on Pollution Sources

One omission in the data that Ecology has apparently used, are data on sources of pollution. For example, the U.S. Army Corps of Engineers and electric utilities have 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. Despite this kind of information being readily available to Ecology, and that Ecology likely already possesses this data and information in other aspects of the agency's operations, 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. Likewise, it is impossible for the public to assess whether Ecology has obtained and used ambient water quality data collected by point and nonpoint sources.

B. Available Data from the National Marine Fisheries Service

There is no evidence in the materials made available to the public on Ecology's website that the agency has obtained 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.

C. Data from the U.S. Fish & Wildlife Service

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.

D. Data from the Washington Department of Fish & Wildlife

The Washington Department of Fish and Wildlife (WDF&W) also maintains information on causes of fish population declines and evaluates habitat conditions. There is no indication that all readily available data and information on beneficial use impairment were sought from WDF&W such that the Washington 303(d)(1) list includes listings based on data and information from WDF&W.

E. Other Sources of Data

Additionally, there are numerous other sources – universities, U.S. Geological Survey, federal agencies, Tribes, citizens, industry – from which Ecology is not likely to have sought data and information. We cannot, unfortunately, query for data source and there is no list of data sources we can evaluate for the purpose of commenting on whether Ecology has met the requirements of the regulation. We do, however, point out that Ecology has embraced a passive approach to obtaining data and information rather than an active one and we believe that this approach is counter to that required by the Clean Water Act and implementing regulations.

F. Failure to Use Information in the Absence of Data

Other sources of information on impairment of beneficial uses include readily available information on closures of commercial shellfish harvesting area although Ecology, as discussed below, does not use this data properly. NWEA strongly suspects Ecology dismisses most “information” because it is not “data,” despite EPA regulations that require the State to use both. It is impossible for us to comment on specific sources of information that Ecology has chosen to ignore or dismiss because of the problems with how this information has been made available to the public.

II. Failure to Interpret and Apply the Legal Definition of Water Quality Standards Including Narrative Criteria, Designated Use Support, and the Antidegradation Policy Requirement to Protect Existing Uses

Washington has failed to make listings based on streams’ noncompliance with narrative criteria, beneficial use support, and antidegradation policies -- all of which are essential components of water quality standards. As a result, Washington has failed to list waters of the state that are suffering from problems due to high levels of toxics, turbidity, temperature, habitat impairment, cumulative and synergistic impacts of multiple pollutants, 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.

A. Application of Beneficial Use Support

Water quality standards are defined as the designated beneficial uses in combination with the numeric and narrative criteria to protect those uses and an antidegradation policy. 40 C.F.R. 131.6. Numeric criteria adopted in water quality standards should 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. The U.S. Supreme Court decision in PUD No. 1 of Jefferson County v. Washington Department of Ecology, 114 S.Ct. 1900, 1905 (1994) 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." Jefferson County, *supra*, 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.*

Notwithstanding this decision, there do not appear to be any listings by Washington on the independent basis of beneficial use impairment and there is no mention of evaluating use impairment in the Guidance. This is borne out by the fact that there is no search parameter for use support or any specific uses on the "Simple Query Tool" on Ecology's Water Quality Assessment Draft 2008 Assessments for Public Review. [Http://apps.ecy.wa.gov/wats08/](http://apps.ecy.wa.gov/wats08/). This 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). To put a fine point on it, the statute says "water quality standards" not "numeric criteria." The Supreme Court, in Jefferson County, made clear what the role of beneficial use support is in water quality standards. Therefore, waters with impaired beneficial uses are in violation of standards and therefore belong on the 303(d)(1) list. There are numerous readily available sources of data and information on beneficial use impairment, none of which appears to have been considered by Ecology.

Ecology does discuss how to treat impaired uses in its listing process. First, it concludes that waters should be placed in Category 2 when "some credible data create concerns of possible impact to designated uses, but fall short of demonstrating that there is a persistent problem." Guidance at 11. Next, it places in Category 4C waters when "[s]ome designated uses of a waterbody segment may be impaired due to aquatic habitat degradation that does not cause an exceedance of a pollutant criterion." Guidance at 14. The only other discussion of listing on the basis of impaired uses is under the criterion of Bioassessment. There, Ecology determines that waters may be listed on the 303(d)(1) list based on macroinvertebrate assemblage data results or "five years of bioassessment monitoring using the methodology show a level of degradation that indicates the uses in the waterbody are impaired." Guidance at 25. Apparently, evidence of use

impairment without bioassessment monitoring is not itself sufficient basis for listing. This is a faulty reading of the law.

As a result, Ecology omits listings on the basis of impaired designated beneficial uses even though there are ample 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; the threatened and endangered status of species under the federal Endangered Species Act, populations of aquatic species showing local extirpations, suppressed populations, or other sources of impairment such as reproductive deformities, including aquatic-dependent mammals, reptiles, amphibians, fish, and birds. Sources of this information include but are not limited to the National Marine Fisheries Service, U.S. Fish and Wildlife Service, and Washington Department of Fish and Wildlife. All waters upon which impaired populations of species such as the marine mammals, threatened and endangered salmonids, etc. must be included on the 303(1)(list.

Moreover, Ecology has completely omitted wildlife from the designated uses to which any of its listing criteria apply. In fact, the only reference in the Guidance document to wildlife is in the section on setting priorities: "Risk to aquatic life and other water-dependent wildlife, especially threatened and endangered species." Ironically, since in its Guidance Ecology by definition omits all listings that affect wildlife as a designated beneficial use, it is difficult to understand how the agency can assess the risk to wildlife in setting priorities.

The failure to give independent meaning to the beneficial use component of the water quality standards, as required under Jefferson County, also incorrectly restricts 303(d)(1) listings for flow modification. Ecology takes the position that waterbodies are properly placed under Category 4C, and therefore excluded from the State's 303(d)(1) list, when the water body suffers from low flows, which themselves can be a demonstration of use impairment. Guidance at 14. Likewise, Ecology puts "[p]hysical habitat alterations," "[p]hysical barriers to fish migration, such as dams and culverts," "[l]oss of habitat due to invasive exotic species," "[f]low alterations, including low flows and flashier systems," and "[i]mpaired biologic communities, when the impairment is not linked to a specific pollutant" into Category 4C. Guidance at 14. It is, in fact, possible for Ecology to determine that, in some cases, physical habitat alterations, barriers, flow, and impaired biological communities are a degradation or loss of designated beneficial uses necessitating the placement of waterbodies on the 303(d)(1) list. It has chosen not to.

B. Application of Narrative Criteria on Toxics

As with its failure to list waters on the 303(d)(1) list for lack of full support for designated beneficial uses, Washington has failed to apply its narrative criteria as stand-alone, gap-filling components of water quality standards. One narrative criterion reads as follows: "concentrations

must be below those which have the potential . . . to . . . cause acute or chronic conditions to the most sensitive biota.” WAC 173-201a-260. As with support of designated uses, narrative criteria are components of water quality standards that Ecology is required to apply in developing its 303(d)(1) list. Notwithstanding this fact, the Guidance contains a short explanation of how Ecology purports to assess compliance with its narrative criteria that is both inconsistent with the law and unclear:

A segment will be placed in Category 5 on the basis of violating narrative criteria relating to pollutants when the information regarding that waterbody segment includes all 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.

Guidance at 16 (emphasis added). First, the statute requires listings based on compliance with standards including narrative criteria, not limited to pollutants as Ecology’s Guidance suggests. Second, the requirement that a waterbody with a documented use impairment (bullet no. 2) be augmented with documentation of anything else (bullet no. 1) flies in the face of the legal definition of a water quality standard. The first phrase of bullet no. 1 appears to mean that Ecology requires that some change in a parameter – chemical or physical – subject to its numeric criteria is required. What is intended by the phrase “indices of resource condition or resource characteristic” is not clear. Whatever is intended, it is clear that impairment of a designated beneficial use alone is not a sufficient basis upon which to place a waterbody on the 303(d)(1) list for failure to meet narrative criteria. This is contrary to the statute.

Ecology sheds some light on its ambiguous guidance in the Department of Ecology WQP Policy 1-11 - Responsiveness Summary which merely adds that where Ecology does not have numeric criteria, it will rely upon the USEPA Quality Criteria for Water, 1986 as revised and “other relevant information as appropriate.” Summary at 46. It goes on to say that

[i]f an assessment is based on data or information other than numeric criteria expressed in the current State Water Quality Standards or in 40 CFR 131, [it] will be considered in the assessment based on the narrative criteria describe[d] in the WQ standards, and according to section 6 of Policy 1-11. When applicable, concentration values other than those included in the standards may be used for category determination based on the narrative standards as described in the Policy

1-11.

Summary at 46. This description is circular and of no assistance whatsoever. The same is true of the remainder of this section:

Narrative information regarding non-pollutant impairments will be assessed in the same manner for possible placement in Category 4C (*Impaired but a TMDL is Inappropriate*).

Guidance at 16. The statute requires the placement of waterbodies not meeting water quality standards on the list, notwithstanding any distinctions about why the waters do not meet standards.

In the end, Ecology finally admits that it has no intention of using narrative criteria to place waters on the 303(d)(1) list:

Although the applicable narrative rule is cited in the parameter-specific sheets in the policy, Ecology tried to limit the information in these sections to those assessments based on numeric standards as most narrative assessments are performed on a case-specific basis. When applicable, concentration values other than those included in the standards may be used for Category 2 determinations.

Summary at 48 (emphasis added). In other words, Ecology will only use numeric guidelines to place waters on Category 2 but not on to the 303(d)(1) list.

As a result, Ecology has failed to evaluate data on use impairment related to levels of toxic contaminants, i.e. for pollutants that are at levels posing a risk to piscivorous wildlife such as eagles, mink and otter. For example, despite a report citing a technical report on the Columbia River that concludes "that river otter in the vicinity of RM 119.5 are in a critical or almost critical category based on reference level comparisons, abnormalities noted during necropsy, and histopathological observations of individuals," Ecology has not used this data as the basis of listing. The Health of the River 1990-1996, Integrated Technical Report, Tetra Tech, May 20, 1996, Figure 14, at 53 [hereinafter "Health of the River"]. This information is tied to toxic contaminants: "Concentrations of organochlorine insecticides, PCBs, and to a lesser extent PCDDs and PCDFs in the liver of river otters were highly correlated with each other and many were significantly related to baculum [penis bone] and testes size or weight." Health of the River at 52.

To the best of our ability to discern what Ecology has done, given the extreme difficulty of reviewing the list with only the query method to use, Ecology does not have any listings for toxic

contaminants in the Columbia River other than those where the levels exceed numeric criteria. For example, the Lower Columbia Water Quality Study found numerous locations where sediment contamination exceeds values believed to be protective of benthic organisms and wildlife. Health of the River, Figure 14, at 37. Listed are nine metals and one organic compound, Bis(2-ethylhexyl)phthalate. A spot check of the latter through the query system demonstrates that it is not on Washington's 303(d)(1) list. The document notes other contaminants of concern found in sediments as well, such as polynuclear aromatic hydrocarbons (PAH). Health of the River at 36.

The study found that "Reference levels were exceeded for aluminum, iron, cadmium, copper, lead, selenium, zinc, and silver. Copper and lead exceeded reference levels comparatively frequently, and deserve further evaluation. Additional testing is also recommended for silver and mercury. . ." Health of the River at 35. Moreover, despite findings that dissolved arsenic concentrations that "exceeded water quality criteria for the protection of human health in 15 of 16 samples collected from four sites in the Columbia River" arsenic does not show up in the query. Ecology also failed to use the data and information on other aquatic species in addition to bald eagles for which there is information about tissue residue levels, such as mink, otter, seals, gulls, etc.. At no time has Washington attempted to apply its narrative criterion on combinations of toxic chemicals to the toxic soup that is found in the Lower Columbia River.

Other toxic contaminants found in tissue is not used as the basis for listing although the study found that "The following chemicals were found in excess of reference levels, or were frequently detected in the river. . .barium, cadmium, chromium, copper, lead, mercury, and zinc. . ." Health of the River at 38. No tissue data for eagles, mink, otter, seals, etc. is mentioned. For example, the Bi-State study noted that "Historically, some individual mink contained PCB concentrations known to make adult female mink in laboratory studies incapable of producing young." Health of the River at 52. If this is not sufficient evidence of beneficial use impairment, clearly nothing short of extremely expensive studies and extreme impairment of species will satisfy Ecology that its narrative criteria for the protection of wildlife from toxic contaminants have been violated.

The problems identified for the Columbia River apply to other waterbodies as well, most notably areas of Puget Sound. The narrative standard exists to plug a significant gap in the application of Table 20 values; it works only if it is applied and Washington has failed to do so in preparing its 303(d) list. NWEA was able to find one instance where the narrative criterion on toxics apparently was used – on harbor seals where studies correlated high concentrations of PCBs with adverse health effects. If there are more, we were unable to find them given the difficulty in reviewing the draft proposed list.

Ecology identifies a range of data and information upon which it will list waters on the 4C category instead of the 303(d)(1) list including: aquatic habitat degradation; physical habitat

alterations; physical barriers to fish migration; loss of habitat due to invasive exotic species; flow alterations; impaired biologic communities. The query form provided by Ecology to examine listings, however, only allows the user to locate information on “fish habitat,” “instream flow,” “large woody debris,” and “invasive exotic species.” It appears, therefore, that either the State of Washington has no information on habitat degradation, physical barriers to fish migration, and impaired biologic communities or Ecology has chosen to ignore the regulatory requirement to use information. We believe that the latter is true and that Ecology must use all readily available data and information on all of these important sources of degradation of Washington’s waters.

C. Existing Use Protection Under Antidegradation Policy

There is no evidence that Ecology has considered obtaining data and information to assess whether existing uses, as defined in EPA regulations, have been protected as required. There is no reference to existing use protection requirements in the Guidance. However, there is the statement that “Data older than ten years will be used whenever necessary to determine historical natural conditions.” Guidance at 15. This statement is deeply troubling because it implies that data older than ten years are, in fact, evidence of historical conditions. This is patently not true. Moreover, it implies that Ecology is unaware that the date of existing use protection far exceeds ten years and actually dates to November 1975.

III. Assessment Methodology

The Guidance is the basis for most of Washington’s proposed Category 4 and 5 listing decisions as well as its exceptions to listing.

A. Category 2 – Waters of Concern

Ecology’s list is based on its Guidance that calls for some waters to not be listed because: (1) “Data show some exceedance of an applicable water quality standard, but there are fewer exceedances than are necessary to sufficiently determine the severity of the problem according to this policy;” (2) “Data show exceedances, but there are too few samples to gain confidence that it is not a sampling or analysis error;” (3) “The data suggest impairment, but there is substantial contradictory information;” or (4) “Narrative information raises concerns, but it is not sufficient for listing in Category 5.” While Ecology is more than willing to use professional judgment to override placement of waters on the 303(d)(1) list – see condition nos. 3 and 4 – it is not willing to go the other direction and use its professional judgment to list waters when there are too few exceedances but indications are there is a violation – see condition nos. 1 and 2. In addition, condition no. 4 suggests strongly that Ecology is not willing to use “information” – which is required by EPA regulations – to find violations of “narrative” criteria – which is also legally required as narrative criteria are part of the water quality standards, the violation of which requires listing.

B. Category 4B – Impaired Waters Not Needing a TMDL

We object to Washington’s reliance on EPA Guidance concerning assessment categories, including Category 4B, waters that are Impaired but Do Not Require a TMDL because “Has a Pollution Control Project” or “an effective clean-up project other than a TMDL is already in place.” Ecology has listed 75 waterbodies in this category and therefore has not listed these waters on its 303(d)(1) list despite evidence of impairment. Ecology’s Guidance is not consistent with EPA’s most recent Guidance on use of the 4B category. The public is precluded from commenting because Ecology has provided only the barest summary of an explanation on its query information. This summary information does not demonstrate the findings that are required either by the Ecology or the EPA Guidance. For example, Yellowjacket Creek, ID No. 19868, is listed on 4B based on

enforceable pollution controls through the current Forest Land Management Plan as amended by the Northwest Forest Plan. BMPs are included in the NWFP direction as standards and guides, in the Gifford Pinchot Forest Plan. The Plan has a monitoring and adaptive management component. Significant restoration, both passive and active, has been implemented in these watersheds. These activities have been monitored. Passive restoration continues to occur through time as a result of the NWFP Aquatic Conservation Strategy (ACS), especially the riparian reserve direction. The Yellowjacket plan identifies additional high priority active restoration needed to obtain ACS objectives, and outlines a strategy to implement and monitor activities identified in the plan.

Nothing in this explanation identifies why Ecology believes the planned actions will achieve water quality standards, the time frame in which standards will be achieved, and why Ecology believes the “adaptive management” component is the equivalent of EPA’s requirement that the sources make a “[c]ommitment to revise pollution controls, as necessary” rather than a decision to postpone necessary controls up front.

Likewise, Ecology delists Sinclair Inlet, ID No. 8713, because “the Navy has conducted remedial dredging and is monitoring the effectiveness of the cleanup as specified in the ROD. Since an existing cleanup plan consisting of the RIS/FS, ROD, and RA are already in place and is being implemented, this listing has been placed in category 4B.” However, Ecology does not address the possibility that the clean-up dredging itself and continuing pollution sources may cause decontamination, as has been the case in other contaminated sediment clean-ups. Again, the requirements of the state and federal guidance are not explained.

A third randomly chosen 4B delisting is Cow Creek, ID No. 40639, where “a Livestock Program designed to seek voluntary compliance with livestock owners to protect water quality in areas

where their livestock reside” has been instigated by Ecology. The notes on the queried data state that

[t]his program establishes riparian areas and controlled access to creeks in order to improve on degraded riparian corridors. Ecology has teamed up with conservation districts, local governments and landowners to implement best management practices that are already showing positive results in improving water quality in this affected watershed. Funding to implement these practices and improvements has been provided by a number of organizations.

We are heartened by the activities in this watershed however there is nothing in this summary that explains how it meets the requirements of delisting under 4B. For example, there are no time frames, no discussion of whether and how water quality standards will be achieved.

With regard to timeframes, Ecology’s Guidance state that the agency “will review each pollution control project that is submitted to determine if it meets these criteria. The timeframe for correcting the impairment will be considered reasonable if it is as fast as practical, given full cooperation of all parties involved, and if it is similar to the timeframe that would likely be developed under a TMDL.” Yet Ecology has not provided the results of this analysis to the public for review. In addition, it has not provided any evidence that it has generated a timeframe that would likely be developed under a TMDL to which the alternative approach can be measured against or evidence that activities that are being implemented are as fast as practical.

C. Category 4C – Impaired Waters Where TMDL is Inappropriate

We further object to Washington’s use of Category 4C, “Impaired but a TMDL is Inappropriate” as a basis for not placing such waters on the 303(d)(1) list of waters. Ecology’s Guidance states that “[s]egments are placed in this category when the failure to meet the applicable water quality standard is caused by a type of pollution that is not appropriately addressed through the TMDL process.” It gives examples, such as segments impaired: due to aquatic habitat degradation that does not cause an exceedance of a pollutant criterion; physical habitat alterations; physical barriers to fish migration, such as dams and culverts; loss of habitat due to invasive exotic species; flow alterations, including low flows and flashier systems; and impaired biologic communities, when the impairment is not linked to a specific pollutant. Ecology justifies its exemptions based on what it believes a TMDL is designed to accomplish. This, however, is irrelevant in light of the clear language of the statute. Waters where the impairment is not caused by a pollutant but rather by pollution are waters that by the plain language of the statute require listing pursuant to section 303(d)(1). In addition, although the EPA Guidance upon which Ecology relies misstates the statutory requirement for listing it also encourages states to “schedule these segments for monitoring to confirm that there continues to be no

pollutant-caused impairment and to support water quality management actions necessary to address the cause(s) of the impairment.” There is no indication that Washington has done this. For these reasons, no waters should be placed in Washington’s 4C Category. Therefore, all 75 segments of waters placed in category 4C for “fish habitat,” all 55 segments for “instream flow,” all three for “large woody debris,” should be moved to Category 5, the 303(d)(1) list.

Moreover, Ecology’s exclusion of invasive exotic species as not a pollutant flies in the face of the clear definition of “pollutant” in the statute which includes “biological materials.” 33 U.S.C. § 1362(6). *Northwest Environmental Advocates v. U.S. EPA*, No. 03-05760 (N.D. Cal., Sept. 18, 2006) (ordering that EPA’s regulatory exclusion from Clean Water Act permitting for “discharge incidental to the normal operation of a vessel” will be vacated on September 30, 2008), *appeal pending*, Nos. 03-74795, 06-17187, 06-17188 (9th Cir.). Therefore, all 238 record results produced by querying “invasive exotic species” that demonstrate a listing under category 4C are improperly listed under that category and should be listed under Category 5.

D. Parameter-Specific Assessment Methodologies

For some parameters, this document sets out some information on how Ecology has conducted the listing determination, how new data and information will be used to change or not change previous listings, but for others Ecology provides no information. For example, there is no discussion of aquatic weeds and algae. We strongly recommend that the agency set out this type of information for all parameters and pollutants in order that reviewers, including EPA, can make more reasoned comments and judgments on the proposed assessment methodologies.

1. Bacteria

Ecology’s Guidance states that it will consider “[f]ish and shellfish advisories issued by DOH or local health departments, or similar advisories from other agencies based on credible monitoring programs under the federal Food and Drug Administration rules . . . to directly assess the protection of designated uses.” Specifically, the Guidance states that waters will be listed on the 303(d)(1) list if “the risk assessment parameters or other assumptions used by the agency issuing the advisory are cumulatively less or no more protective than those incorporated into the state standards,” and “[c]losure or downgrades of approved shellfish beds by DOH that are based on assessment of actual fecal coliform data will be sufficient to place all marine grids overlapping the affected shellfish beds.” Conversely, “[i]f the parameters or assumptions used in issuing the advisory were based on more protective standards (that is, the advisory would be triggered by a less severe water quality problem), the segment will be placed in Category 2. Moreover, “[l]istings will not be based on shellfish closure zones around wastewater treatment plant outfalls, marinas, port facilities, or similar facilities unless the ambient bacteriological water quality standard is exceeded, nor on advisories for marine biotoxins, nor on geoduck bed closures

by the state Department of Natural Resources.” And, finally “[l]istings will be based on advisories for short-term conditions, such as storm events, if the conditions apply to 30 or more days in a year” and “[w]hen data showing exceedances are not representative of the waterbody segment, such as data collected only in localized swimming areas, the segment will be placed in Category 2.” Guidance at 20-21.

Ecology misstates its discretion to not list waters that fail to provide full protection for beneficial uses. It is irrelevant if the shellfish closures are based on more protective standards than the water quality criteria Ecology has adopted. The requirement to protect designated uses stands alone and in addition to the requirement to meet numeric water quality criteria. The closure of a shellfish bed due to water quality problems is both a violation of the requirement to protect uses and Ecology’s narrative criteria, both of which are “gap-fillers.” Likewise, there is nothing in the statute or EPA regulations that allows Ecology to not list waters because they happen to be near outfalls, marinas, port facilities, swimming areas, and other pollution sources. Water quality standards apply to waters of the State without exception. Finally, unless water quality standards approved by EPA specifically allow for unsafe levels of contamination 29 days a year, Ecology lacks the authority to omit 303(d)(1) listings because the time period of use impairment was not sufficient. Failure to protect beneficial uses during the equivalent of one month out of twelve is sufficient grounds for listing, TMDLs, and pollution controls over wet-weather sources.

2. *Bioassessment*

Ecology’s Guidance states that “[a]lthough the state water quality standards do not have numeric biocriteria limits, Ecology endorses and uses the River Invertebrate Prediction and Classification System (RIVPACS) multivariate model to help identify impairments of the biologic community.” Ecology misreads the statute in its policy that “[p]lacement of a waterbody segment in Category 4c for either RIVPACS or another model will be based on pollutant data and information that show the impairment is likely not the result of pollutant sources but from pollution.” As a result Ecology has made only 13 listings on its 303(d)(1) list for bioassessment. Ecology should also assess compliance with the existing biocriteria based on the degree to which the resident biological community has been disrupted by invasive species.

3. *Contaminated Sediment*

Ecology’s requirements for contaminated data listings are overly restrictive. First, data on sediment contamination must be from samples taken from “surface sediments 0 – 15 centimeters in depth (the biologically active zone).” This does not account for human or natural actions that can and will disturb contaminated sediments including but not limited to dredging and floods. Second, Ecology has determined that “[a] site can be placed in Category 1 if it has been determined by the Toxics Cleanup Program to meet the Sediment Management Standards.”

There is no time period associated with this determination, however. Given the experience in the State of Washington with clean-up programs that have resulted in recontamination of cleaned up sites – whether from dredging or failure to control on-going pollution sources – it is clear that a site’s meeting of the sediment management standards might be temporary. Therefore, Ecology must require many years of resampling before concluding that the clean-up has been successful such that the waterbody can be both delisted and placed in Category 1.

Third, Ecology’s Guidance states that since there are no numeric sediment quality standards in Washington regulations for chemical effects in freshwater or low salinity sediments, “information on chemical effects in these areas can be used to place a segment in Category 2.” This represents the State’s refusal to apply its narrative criteria. Last, Ecology’s Guidance improperly distinguishes between the types of sources that can be the basis of listing a waterbody on the 303(d)(1) list for violations of the State’s sediment quality standards:

[sites that] have been determined to exceed the SQS and will require further investigation and monitoring to determine if the exceedances are a result of an ongoing source, historic source, or a combination of both. * * * If the exceedance is determined to be caused solely by an historic source then further monitoring may be required.

Sediment quality standards, like water quality standards, apply to waterbodies, regardless of the source of the pollution. Ecology is not free to pick and choose which sources of contamination warrant listing waters on the State’s 303(d)(1) list.

4. *Dissolved Oxygen*

Ecology’s Guidance states that “[i]n freshwater, where a detailed vertical profile of dissolved oxygen data is collected, Ecology will average the data values within each stratified layer when stratification exists.” Guidance at 30. Nowhere does Ecology provide any justification for averaging stratified DO levels. Fish do not experience DO levels as an average. Instead, they experience the DO levels where they naturally feed, seek or avoid other water quality parameters (e.g., temperature), and hide from predators or predate. Low DO levels in the areas of a reservoir used by sturgeon are not mitigated or averaged by higher DO levels in areas that are not naturally sturgeon habitat. The same is true for salmon. Lack of or delistings based on this assessment methodology are flawed.

Ecology’s failure to list low DO levels where flow rates are lower than 7Q10 low-flow rate violates the requirement to provide full protection for populations of threatened and endangered species which cannot tolerate the added risk of low DO in low flow years regardless of the conditions of the numeric criteria.

5. *pH*

Ecology's Guidance calls for placing a waterbody on the 303(d)(1) list for pH violations where "at least ten percent of single grab sample values in a given year do not meet the criterion." This fails to take into consideration the seasonal variability of pH samples, as with temperature, and ways in which sampling can skew the results..

6. *Temperature*

Ecology's limitation of temperature listings based on flow rates "greater than the 7Q10 low-flow rate within the latest ten years" is an incorrect reading of its water quality standards. From the perspective of the fish or other aquatic life dependent upon cool or cold temperatures, it is irrelevant whether the flows are lower than 7Q10 low-flows. While some fish populations can survive years of high temperatures and/or low flows, populations that are threatened or endangered are more susceptible to the risks inherent in high temperatures. Therefore, Ecology is required to evaluate high temperatures at low flows considering their impact to existing uses that may be extirpated or even rendered extinct by such temperatures. In addition, Ecology has no evaluation of data on temperatures discharged by dams that may be too cold for aquatic life.

7. *Toxic Substances*

In its Guidance, Ecology states that "[t]oxic pollutants have significant potential to adversely affect designated water uses, aquatic biota, and public health when present at levels above those defined in water quality standards." Correctly, it does not say that these adverse effects are only found where toxic pollutants are at levels that exceed numeric criteria. The latter approach, however, is the one that Ecology has actually adopted for purposes of determining its 2008 303(d)(1) list. The problem starts with the agency's definition of which designated uses are potentially harmed by toxic pollutants in the Guidance, a list that includes only four uses: aquatic life, shellfish harvesting, recreational, water supply. Notably missing here is the protection of human health and wildlife even in the face of evidence that no other type of pollutant carried in water is likely to have more of a deleterious effect on wildlife than toxic substances.

The Guidance makes no reference to the role of fish consumption, as opposed to shellfish, advisories until its gets to the details of how listings will be based: "Segments covered in whole or in part by a fish or shellfish advisory will be categorized as follows." It is too time consuming to evaluate whether or how Ecology has incorporated either fish or shellfish advisories into its 303(d)(1) list using the query approach, however the Guidance explains. Rather than determining that the issuance of an advisory is a *de facto* determination that the designated use of human health is not protected, Ecology will not place a waterbody on the 303(d)(1) list if the agency issuing the advisory uses more protective standards than are adopted

in Ecology's numeric criteria (in this case, the National Toxics Rule). This is, once again, an incorrect reading of the law. An example is the removal of five waterbody segments for the pollutant Azinphos-Methyl (Guthion) in the 2008 Water Quality Assessment Public Review 4/16/08 - 4/30/08" with the rationale "no criterion in National Toxics Rule. *Id.* at 27. This particular example notes that there are insufficient data in addition to the rationale provided but we are confident that Ecology has used the lack of criteria as a rationale elsewhere. Unfortunately the listings are so difficult to penetrate that we cannot demonstrate that fact. The lack of a numeric criterion does not mean that the water quality standards, including narrative criteria and protection of existing and designated uses, have been met. Likewise, Ecology has removed waters with sufficient data but which do not violate the NTR numeric criteria for Mercury. *See, e.g.,* Waterbody ID No. 52632. There is no evidence that Ecology has evaluated these data in light of fish consumption levels, fish consumption advisories that might exist, or impacts to sensitive species. Instead, the rationale is that "[n]o samples exceeded the National Toxics Rule for mercury at this location." In fact, in each of these cases Ecology must evaluate if the measured levels violate narrative criteria, use support, and the requirement to protect existing uses before determining that the data do not demonstrate a violation of water quality standards.

Ecology's assessment methodology calls for placing a waterbody on the 303(d)(1) list

[i]f the risk assessment parameters or other assumptions used by the agency issuing the advisory are cumulatively less or no more protective than those incorporated into the state standards or the national human health-based water quality criteria (e.g., toxics or pathogens), the segment will be placed in Category 5 for the specific parameter.

Guidance at 40. Conversely, "[i]f the parameters or assumptions used in issuing the advisory were based on more protective standards (that is, the advisory would be triggered by a less severe water quality problem), then the segment will be placed in Category 2." *Id.* What Ecology does not seem to understand is the stand-alone quality of the protection of designated uses. If an agency charged with protecting the public health determines that the level of contamination is not protective of human health, that is a finding that the designated use is not protected. It is likely also a finding that the existing uses are not protected as required under Tier I of the antidegradation policy and that various narrative criteria have been violated.

For metals and ammonia, the Guidance concludes that "[m]odeled or otherwise estimated hardness values are not acceptable for the purpose of this assessment." This appears to be a conclusion without a rationale which is simply intended to limit the data that Ecology must use to list waters on the 303(d)(1) list.

Ecology's restriction of sufficient data for fish may eliminate useful data sources. For example,

the Guidance states that “[f]in fish fillet tissue samples, whole shellfish tissue samples, and edible shellfish muscle samples must have at least three single-fish samples or a single composite sample made up of at least five separate fish of the same species.” Guidance at 41. In fact, it can be difficult when electrofishing to obtain five fish of the same species. The fact that an agency or study has only been able to collect perhaps four or three of a species does not mean that it can simply switch from a composite sample and instead analyze all three or four individual fish because the cost of doing so is significantly greater. The Guidance goes on to say that “[f]in fish fillet tissue samples may be analyzed with skin on or skin off.” *Id.* However, this statement does not evaluate the implications of samples taken, for example, by industry or by studies that seek to evaluate human health implications of consuming fish in the manner of the dominate culture. Instead, the Guidance should state that fish tissue samples can and should be evaluated by normalizing for lipid content. For example, after normalizing for lipid content, no skin fillets of salmon in the Columbia River analyzed by the pulp and paper industry were demonstrated to have the same dioxin content as resident species which were a part of the National Toxics Study. Ecology should not dismiss data without fully analyzing it particularly considering the high cost of toxics analysis and the low amount of state resources put into toxics analysis of fish and shellfish, let alone wildlife. Likewise, the Guidance’s statement that “[a]ll fish samples must be from resident fish to be considered for Categories 1 or 5” is absurd. *Id.* First, the example just given demonstrates that anadromous fish tissue is of great utility in analyzing health concerns and pollution levels. Second, anadromous fish are designated beneficial uses which are required to be protected under state water quality standards. In fact, toxic contamination is known to have deleterious effects on salmon which do not help their survival as threatened and endangered species. Last, fish consumption is also a designated beneficial use that is required to be protected. Apparently Ecology is not aware that some people, such as the Columbia River Tribes, consume large amounts of salmon to such a degree as to cause a higher risk of disease.

In its Guidance, Ecology makes the statement that “[d]ata submitted for the assessment of toxic pollutants must be for the specific isomer, congener, chemical fraction, or compound group identified in the state water quality standards.” Guidance at 39. Our view of this statement is that regardless of its comments concerning narrative criteria, Ecology has no intention of applying its narrative criteria on toxics to the data, despite including a citation to it in the guidance. In this way, Ecology misconstrues the Clean Water Act and its implementing regulations.

Thank you for providing this opportunity to comment.

Sincerely,

Nina Bell
Executive Director