

The Department of Ecology's Response to: Nina Bell - Northwest Environmental Advocates (Comment 56)

Usability of the Query Tool

Ecology acknowledges the frustration you have expressed with not being able to readily seek the information you are looking for. It appears that some of the information needs would not be satisfied with the kind of database we have developed. The Query and Map Tool are largely designed on a geographic basis to aid people in reviewing waterbody listings specific to their area. It is not designed to answer broader questions (such as a list of all data submitters) in a quick manner. This is information that we will be submitting to EPA as part of our formal submittal of the Integrated report and candidate 303(d) List. The Query and Map tool for the draft 2008 Assessment has been well received by those familiar with database and query style information systems. With the large amount of data assessed (over 30,000 records), the paper-intensive versions of the past would not be realistic to easily use, and in fact would not be environmentally responsible, given the large amount of paper that would be required. The information that recent listings are based on can be found through references in the WATS and EIM database fields. Older listings will be referenced through the listing IDs and previous listing cycle documents maintained on the Ecology internet.

Failure to Use All Readily Available Data and Information

Ecology conducted a public call for data in Fall of 2006 that included a massive mailing, notification through agency list-servs, and training workshops on data submittals. Notification was made to many levels of government, tribes, and other public entities. Assessment staff drew data from Ecology's Environmental Information Management (EIM) System that includes both internal and external data submittals, from a variety of governmental agencies and tribes, local watershed groups, and private companies. Please see the website at <http://www.ecy.wa.gov/programs/wq/303d/2008/index.html> for a list of studies and data that were used. We actively solicited data and information from all of the agencies and sources you have questioned, and used whatever information was provided to assess data for listing purposes. This process for notifying data submitters is the same one that we have used in past listing cycles that EPA has subsequently approved.

WQ Policy 1-11 is designed to have the data submitter provide the data, including the Quality Assurance Project Plan, as well as any additional information required by the policy. This puts the responsibility of ensuring that credible data is used, and that the data matches the objectives of the Water Quality Assessment, on the data submitter. This ensures that Ecology does not use data inappropriately, or use data that does not meet the state requirements for credible data. As an aside 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. For example, data and information on fish spawning locations, presence of bull trout and other ESA-listed species, and timing windows for spawning, rearing and migration, are used to set criteria limits for aquatic life species. While these types of data are not directly applicable for use in the Water Quality Assessment, they are appropriate for the purpose of setting water quality standards that are used in the Assessment.

For the 2008 listing cycle, we used the Ecology database (Environmental Information Management System, or EIM) for organizing and evaluating environmental data with the accompanying feature that provides a level of quality assurance screening. An adequate amount of readily available data is included in this assessment to develop a candidate list of water segments for TMDL consideration and a valid representation of overall water quality for tested segments.

Failure to Use Information in the Absence of Data

Washington State law requires Ecology to use data and information drawn from the specific waterbody location in order to place the waterbody on the 303d list. These state requirements do not allow us to not 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 so that the listings have value in leading to an improvement in water quality. Narrative criteria that meets requirements in Policy 1-11 (page 16) can also be used for listing purposes, placing waters into either Category 5 (impaired by a pollutant) or Category 4C (impaired by pollution). EPA further provides guidance to states on when Category 5 or 4C is most appropriate.

“Segments should be placed in Category 4c when the state demonstrates that the failure to meet an applicable water quality standard is not caused by a pollutant, but instead is caused by other types of pollution. Segments placed in Category 4c do not require the development of a TMDL. Pollution, as defined by the CWA is “the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water” (section 502(19)). In some cases, the pollution is caused by the presence of a pollutant and a TMDL is required. In other cases, pollution does not result from a pollutant and a TMDL is not required. States should schedule these segments for monitoring to confirm that there continues to be no pollutant associated with the failure to meet the water quality standard and to support water quality management actions necessary to address the cause(s) of the impairment. Examples of circumstances where an impaired segment may be placed in Category 4c include segments impaired solely due to lack of adequate flow or to stream channelization.” (EPA Guidance for 2006 Integrated Report, page 56):

Application of Beneficial Use Support

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 in fact be fine for supporting 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 WQS. The pollutant criteria are based on the sensitivity of endangered species and other organisms to the parameter under consideration.

The exception to this approach for this assessment is the use of bioassessment information for listing. Future projects are proposed to help identify the stressors or potential pollutants that lead to the listing.

The purpose of the Clean Water Act is to protect and restore water quality. As we examine data and information from many sources from many water segments throughout the state, it becomes evident that as the amount of information increases, the likelihood of discovering any evidence of impairment in any water segment increases. This is even true for water segments in pristine wilderness areas where performing TMDLs would be wasteful of state resources that should be directed to areas that can actually be improved through the implementation of TMDLs. We aim to identify the waters that achieve the most benefit for the public from cleanup, striking a balance between over and under-protecting waters on the scale of impairment uncertainty.

Category 4B-Waters Not Needing a TMDL

We agree with the comments on documenting the placement of segments into Category 4B. Ecology is required by EPA to prepare a detailed analysis of each listing placed in Category 4B. In the past, these analyses were not considered complete until EPA approved the Integrated Report, which meant that they were in draft form at the time the list was released for public comment. For future lists, Ecology will prepare the 4B analyses in time to make them available for public review and comment along with the draft list. This will enable the public to review our reasoning and offer comments in time for Ecology to make changes to the list if necessary.

Category 4C-Impaired Waters Where TMDL is Inappropriate

EPA clearly interprets their own regulations for implementation of Sec 303(d) to direct states to consider only pollutants and not pollution when listing in Category 5. Invasive exotic species may be considered a pollutant under the definition of the CWA, but only when discharged from a point source 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 notes that states

have taken different approaches regarding identification of waters that may be impaired by aquatic nuisance species (also known as invasive or exotic species). The different approaches taken by the states may reflect the fact that 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. In addition, some states may not have appropriate methodologies for assessing aquatic nuisance species impairments. EPA intends to include clarification in the 2010 listing guidance on how monitoring and assessment methodologies should address the negative impacts of aquatic nuisance species on states' waters.

Application of Narrative Criteria on Toxics

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 data are compared quantitatively to criteria for toxic pollutants to determine status relative to the narrative criteria.

Toxic pollutants are the cause of Category 5 listings in many segments and grids throughout the Assessment, including the lower Columbia River. Specific examples provided by the commenter were not established as a Category 5 listing based on unidentified pollutants. 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.

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. From the Ecology report **Results and Recommendations from Monitoring Arsenic Levels in 303(d) Listed Rivers in Washington** “The data presented in this report suggest that arsenic concentrations in local rivers and streams are typically in the range of 0.2 - 1.0 ug/L. Concentrations greater than 2 to 5 ug/L may indicate contamination from anthropogenic sources. The arsenic levels in most 303(d) listed waterbodies are not clearly different from waterbodies that have no apparent sources and are comparable to rainwater. Exceedances of the NTR arsenic criteria are to be expected in Washington rivers and streams. Therefore, it is recommended that the 1998 303(d) listings for arsenic be removed for the Puyallup, Cowlitz, Spokane, and Columbia rivers (both the lower river and Franklin D. Roosevelt Lake).”

NEA Comments on the Listing Policy

Many of NEA's comments are directed at disagreements with Ecology's listing policy. Ecology revised WQ Policy 1-11 in September 2006 after an extensive public review process that included a broad notification mailing list, workshops, and response to comments. NEA should have received notification of the proposed revisions through both the mail out and the email listserv, and had an opportunity to comment with other members of the public. Details on the listing policy and response to comments can be found on the website at:

http://www.ecy.wa.gov/programs/wq/303d/response_summary.pdf. While we appreciate the substantial

comments NEA has made on how our listing policy directs the Assessment, we are not in a position to make changes at this point without further public process. 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.

Sediments - Assessment Methodology

- Category 4B - Impaired Waters Not Needing a TMDL (pp. 10-11)
 - The sediment Category 4B listing basis provided in the on-line query tool is a brief summary and complete information regarding contaminated sediment sites can be found in the Cleanup Action Plan or Record of Decision. Sediment Category 4B listings are contaminated sediment sites with an active cleanup in progress that is documented through a Cleanup Action Plan, Record of Decision, Corrective Measure, or other approved legally enforceable cleanup plan. Cleanup of sediment sites is primarily conducted using either CERCLA authority under the EPA "Superfund" program or the *Model Toxics Control Act Chapter 173-340 WAC* and the *Sediment Management Standards Chapter 173-204 WAC*. The *Sediment Management Standards* have been promulgated under MTCA and the Clean Water Act and have been approved by the EPA as Water Quality Standards.
 - The major steps and definitions in the cleanup process can be found at: www.ecy.wa.gov/programs/tcp/cu_support/cu_process_steps_defns.htm. The cleanup process includes multiple public comment periods and these general steps include: 1) Remedial Investigation/Feasibility Study which establishes cleanup criteria that must be in compliance with the *Sediment Management Standards*; 2) Cleanup Action Plan that details cleanup goals, objectives, and a remedial time frame that must be in compliance with the *Sediment Management Standards*; 3) Operation and Maintenance Plan which includes post-cleanup monitoring to verify the effectiveness of the remedy and determine if recontamination has occurred due to continuing sources or failure of the remedy; 4) 5-year reviews post-cleanup to verify that the cleanup goals are being met; and 5) Institutional Controls to prohibit activities that may result in exposure to contaminants. The Cleanup Action Plan or Record of Decision includes source control and adaptive management strategies to manage continuing sources and potential recontamination.
- Parameter-Specific Assessment Methodologies
(EPA commented that “*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 cm 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.*
 - The *Sediment Management Standards* require compliance within the biologically active zone. This generally includes a depth of 0 - 15 cm from the surface water-sediment interface. However, sediment cleanup sites can, and do, include cleanup at depths deeper than 15 cm if the

Remedial Investigation/Feasibility Study (RI/FS) shows there is potential for contaminant exposure to either humans or the biological community. The remedy determined during the RI/FS process must be permanent to the maximum extent practicable and includes protection from human or natural process disturbances.

- Second, *Ecology has determined that “[a] site can be placed in Category 1 if it has been determined ... to meet the SMS.” There is no time period associated with this determination, however.*
 - A review of post-cleanup conditions and monitoring data may be required at least every five years to ensure that human health and the environment are being protected by the cleanup actions.
 - All grids are evaluated with the most recent data during the 303(d) process. Therefore, if new data has been collected and is in Ecology's environmental database it will be evaluated regardless of how a grid was previously listed.

- 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.*
 - Ecology applies the Sediment Management Standards narrative criteria and bioassay results in freshwater and low salinity environments for listing. Grids in freshwater or low salinity sediment areas were evaluated based on bioassay results for listings in Category 1, 2, 3, or 5. Category 4B listings were based on completion of a Cleanup Action Plan or Record of Decision.

- Last, *Ecology’s Guidance improperly distinguishes between the types of sources that can be the basis of listing a waterbody ...*
 - For sediment listings, there is no limitation placed on the type of contamination sources evaluated for the sediment 303(d) list. All surface sediment data in SEDQUAL as of December 31, 2006 was evaluated for listing regardless of the contamination source, either current or historic.