



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10**

1200 Sixth Avenue, Suite 900  
Seattle, Washington 98101-3140

Reply To  
Attn Of: OWW-134

JAN 29 2009

Mr. Kelly Susewind, Program Manager  
Water Quality Division  
Department of Environmental Quality  
PO Box 47600  
Olympia, Washington 98504-7600

RE: Approval of Washington State 2008 303(d) List

Dear Mr. Susewind:

The U.S. Environmental Protection Agency has conducted a complete review of Washington's 2008 Section 303(d) List and supporting documentation and information. Based on this review, EPA has determined that Washington's list of water quality limited segments (WQLSs) still requiring TMDLs meets the requirements of Section 303(d) of the Clean Water Act (CWA or "the Act") and EPA's implementing regulations. Therefore, EPA hereby approves Washington's 2008 Section 303(d) List. The statutory and regulatory requirements, and EPA's review of Washington's compliance with each requirement, are described in the enclosure to this letter.

EPA recognizes the enormous amount of hard work that went into the compilation of this comprehensive list of impaired waters. Ecology reviewed over 2 million sample data values and created a database containing over 26,000 water quality records. Over 1500 waters were added to the 303(d) list during the 2008 listing cycle including nearly 200 for temperature and fecal coliform and over 400 for dissolved oxygen. Ecology sponsored a thorough public participation process including public hearings around the state, solicitations of public comments and preparation of a responsiveness summary explaining how the State considered public comment in the final listing decisions. EPA believes Ecology's pioneering work in developing a listing methodology and listing waters for bioassessment provides an excellent foundation for future work in this area. EPA lauds Ecology's efforts in the creation of a thorough list through which water quality around the state will be improved.

Ecology submitted the initial documentation for Washington's 2008 303(d) list on June 23, 2008, and the final documentation for the 2008 303(d) list on December 23, 2008. The documentation included the 2008 303(d) list, a response to public comments on the list, the final list methodology, a priority ranking and an Integrated Report on the status of Washington's waters. EPA is acting only on the waters listed in Category 5 of the Integrated Report which constitutes the 303(d) list. EPA has reviewed Washington's submission, and has concluded that

the State developed its Section 303(d) list in compliance with Section 303(d) of the Clean Water Act and 40 CFR 130.7.

EPA appreciates the cooperation and hard work of Susan Braley and Chance Asher and their staffs and their willingness to involve EPA early in the list development process. We support this early involvement and believe it enables meaningful discussion to occur between EPA and Ecology staff which expedites EPA's final review of the documents. We recognize and appreciate the excellent work of staff and managers at Ecology in developing the final 2008 303(d) List. We look forward to continuing to work with you on this process to address the water quality issues in the state. If you have any questions please contact Donna Walsh of my staff at (206) 334-8412 or David Croxton, Manager, Watershed Unit at (206) 553-6694.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael A. Bussell". The signature is fluid and cursive, with the first name being the most prominent.

Michael A. Bussell, Director  
Office of Water and Watersheds

Enclosure

cc: Susan Braley, Ecology  
Chance Asher, Ecology

## STATUTORY AND REGULATORY BACKGROUND

### **I. Identification of WQLSs for Inclusion on Section 303(d) List**

Section 303(d)(1) of the Act directs States to identify those waters within its jurisdiction for which effluent limitations required by Section 301(b)(1)(A) and (B) are not stringent enough to achieve any applicable water quality standard, and to establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters. The Section 303(d) listing requirement applies to waters impaired by point and/or nonpoint sources, pursuant to EPA's long-standing interpretation of Section 303(d).

EPA regulations provide that States do not need to list waters where the following controls are adequate to implement applicable standards: (1) technology-based effluent limitations required by the Act, (2) more stringent effluent limitations required by State or local authority, and (3) other pollution control requirements required by State, local, or federal authority. See 40 CFR 130.7(b)(1).

### **II. Consideration of Existing and Readily Available Water Quality-Related Data and Information**

In developing Section 303(d) lists, States are required to assemble and evaluate all existing and readily available water quality-related data and information, including, at a minimum, consideration of existing and readily available data and information about the following categories of waters: (1) waters identified as partially meeting or not meeting designated uses, or as threatened, in the State's most recent Section 305(b) report; (2) waters for which dilution calculations or predictive modeling indicate nonattainment of applicable standards; (3) waters for which water quality problems have been reported by governmental agencies, members of the public, or academic institutions; and (4) waters identified as impaired or threatened in any Section 319 nonpoint assessment submitted to EPA. See 40 CFR 130.7(b)(5). In addition to these minimum categories, States are required to consider any other data and information that is existing and readily available. EPA's 1991 Guidance for Water Quality-Based Decisions describes categories of water quality-related data and information that may be existing and readily available. See Guidance for Water Quality-Based Decisions: The TMDL Process, EPA Office of Water, 1991, Appendix C ("EPA's 1991 Guidance"). While States are required to evaluate all existing and readily available water quality-related data and information, States may decide to rely or not rely on particular data or information in determining whether to list particular waters.

In addition to requiring States to assemble and evaluate all existing and readily available water quality-related data and information, EPA regulations at 40 CFR 130.7(b)(6) require States to include as part of their submissions to EPA documentation to support decisions to rely or not rely on particular data and information and decisions to list or not list waters. Such documentation needs to include, at a minimum, the following information: (1) a description of the methodology used to develop the list; (2) a

description of the data and information used to identify waters; and (3) any other reasonable information requested by the Region.

### **III. Priority Ranking**

EPA regulations also codify and interpret the requirement in Section 303(d)(1)(A) of the Act that States establish a priority ranking for listed waters. The regulations at 40 CFR 130.7(b)(4) require States to prioritize waters on their Section 303(d) lists for TMDL development, and also to identify those WQLSs targeted for TMDL development in the next two years. In prioritizing and targeting waters, States must, at a minimum, take into account the severity of the pollution and the uses to be made of such waters. See Section 303(d)(1)(A). As long as these factors are taken into account, the Act provides that States establish priorities. States may consider other factors relevant to prioritizing waters for TMDL development, including immediate programmatic needs, vulnerability of particular waters as aquatic habitats, recreational, economic, and aesthetic importance of particular waters, degree of public interest and support, and State or national policies and priorities. See 57 FR 33040, 33045 (July 24, 1992), and EPA's 1991 Guidance.

## ANALYSIS OF WASHINGTON'S SUBMISSION

### **I. Identification of Waters and Consideration of Existing and Readily Available Water Quality-Related Data and Information.**

EPA has reviewed Washington's submission, and has concluded that the State developed its Section 303(d) list in compliance with Section 303(d) of the Act and 40 CFR 130.7. EPA's review is based on its analysis of whether the State reasonably considered existing and readily available water quality-related data and information and reasonably identified waters required to be listed.

#### **A. Washington's List Development Process**

Washington's 2002/2004 303(d) list was used as the starting point for developing the 2008 303(d) list. The Washington Department of Ecology (Ecology) began their list development process with the preparation of their listing methodology called Water Quality Program Policy 1-11 (WQP Policy 1-11). The WQP Policy 1-11 is called the "listing methodology" in the rest of this document. A 30-day public comment period was held on the listing methodology from June 7, 2006 to July 7, 2006. During the comment period, workshops were held around the state describing the changes in the listing methodology from the previous assessment cycle and assisting potential commenters in commenting on the assessment process. Public workshops were held in Lacey, Mount Vernon, Longview, Spokane, Moses Lake and Yakima. Written comments were received, a Response to Comments was completed and the listing methodology, WQP Policy 1-11, was finalized on September 6, 2006.

Washington actively sought data collected by other federal agencies (including the U.S. Geological Survey, U.S. Forest Service and the Bureau of Land Management), state agencies, tribes, local governments, watershed councils and private and public organizations and individuals. A call for data was published in the State Register announcing the dates for submittal of information from September 6, 2006 to November 7, 2006. Postcards were sent to over 5900 names on the state's mailing list including federal, state, and local government agencies and other people expressing an interest in being on Ecology's mailing list. Ecology also uses an electronic mailing list that goes out to over 900 e-mail addresses. One of the new aspects of the listing methodology was a requirement to submit new data to Ecology through the Environmental Information Management (EIM) System (unless other arrangements were made). Because this was a new requirement, Ecology held training sessions in Lacey, Seattle, Spokane, and Yakima between September 11 and October 25, 2006 to teach potential data submitters how to work with the EIM system.

After the call for data, Ecology evaluated the data and prepared a statewide assessment. Over 2 million sample data values were reviewed. Ecology's 2008 Water Quality Assessment database contains over 26,000 water quality records, of which almost 15,000 are new records added during this listing cycle.

Ecology prepared a final list of impaired waters using data they collected and data received during the public processes that met QA/QC criteria and were consistent with Washington's list methodology. Ecology communicated its preferred data collection methods and QA/QC requirements to the public in the draft and final list methodologies, which were available in hard copy and on the Internet.

The draft 2008 IR and list of water quality limited waters were presented for public comment from February 5, 2008 to March 21, 2008. An announcement was published in the State Register on February 6, 2008. Workshops on the 2008 Integrated Report and list of water quality limited waters were held February 8-11, 2008 in Lacey, Yakima, Spokane and Bellevue. A special workshop was requested by the Center for Environmental Justice in Spokane and was held in addition to the public workshop on February 12 in Spokane.

In response to requests from the public, and because it was determined that some data had inadvertently been left out of the draft Integrated Report, a second public comment period was held from April 16 through April 30, 2008. Ecology wanted to provide the public the opportunity to comment on the new data which had not been presented in the draft Integrated Report available in the first public comment period. An announcement of the second public comment period was made in the State Register on April 16, 2008. A letter announcing the additional comment period was mailed to 85 addressees who had commented during the first comment period.

Ecology hand delivered Washington's 2008 Water Quality Assessment packet to Michael Gearheard, Director, Office of Water, U.S. Environmental Protection Agency, Region 10 on June 23, 2008. The Washington 2008 Water Quality Assessment Packet included the

following documentation: 1) Letter from Kelly Susewind, Interim Water Quality Program Manager to Michael Gearheard, Director, Office of Water US Environmental Protection Agency, Region 10, 2) Washington's Listing Policy, 3) information on reviewing the on-line data bases including the Simple Query Tool, the Integrated Mapping Tool and the Environment Informational Management (EIM) data base, 4) information on TMDL prioritization schedule, 5) Category 4b justifications, 6) a document titled Differences between 2004 and 2008 Sediment Category 5 Listings, 7) a spreadsheet of Category 4b sediment listings and 8) Public Process documents including the Response to Comments on Washington's Draft 2008 Integrated Report.

In response to questions and requests for additional information from EPA, Ecology sent another set of documents on July 24, 2008. The second submission included 1) a letter from Melissa Gildersleeve, Manager, Watershed Management Section, Department of Ecology to Dave Croxton, Manager, Watershed Unit, Office of Water, Environmental Protection Agency, Region 10, 2) the final 2008 303(d) list, 3) a summary of the 2008 Category 5 listings by parameter, 4) a table of 2004 Category 5 waters and the reasons they were moved or not moved to a different category in the 2008 Integrated Report, 5) a table showing the waters that were Category 5 in 2004 and are in Categories 4a and 4b in 2008, 6) tribal consultation documents, 7) the 1997 Memorandum of Agreement between EPA and Ecology on Implementing Section 303(d) which explains Ecology's prioritization process, and 8) a document providing additional information EPA requested on Ecology's listing decisions.

Another letter was sent from Melissa Gildersleeve, Manager, Watershed Management Section, Department of Ecology to Dave Croxton, Manager, Watershed Unit, Office of Water, Environmental Protection Agency, Region 10 on August 21, 2008. This letter documented some additional changes Ecology made to the 2008 303(d) list and Water Quality Assessment.

A final letter was sent from Chance Asher, Manager, Aquatic Lands Cleanup Unit, Toxics Cleanup Program to Dave Croxton, Manager, Watershed Unit, Office of Water, Environmental Protection Agency, Region 10 on December 23, 2008. This letter explains a revision of the contaminated sediments listing policy and how detection limit exceedances are used in listing contaminated sediment waters and the changes to the 2008 303(d) list from this revision. The letter describes additional changes to the contaminated sediments portion of the 303(d) list based on new total organic carbon values and some changes correcting errors that were made because data was originally submitted with incorrect units of measure. This letter also addresses monitoring of the contaminated sediment 4b listings. Ecology completed its 303(d) list submission on December 23, 2008.

## **B. Public Participation**

Washington went out for public comment on their listing methodology, the Water Quality Program (WQP) Policy 1-11 on June 7, 2006. The listing methodology was finalized on September 6, 2006. For the 2008 303(d) list, Washington solicited data from September

6, 2006 through November 7, 2006, seeking technical information and data on the conditions of Washington's surface waters. Data received during this call for data period and data collected by Ecology were used to develop the draft Integrated Report and 303(d) list. The draft 2008 Integrated Report and 303(d) list were released for public review from February 5, 2008 to March 21, 2008. In response to requests from the public and because it was realized some data had been inadvertently omitted from the first draft report, a second public comment period was held from April 16, 2008 through April 30, 2008. The second draft report provided the decisions made with the data inadvertently left out of the draft report released on February 5, 2008. The public comment periods provided the public an opportunity to look at and comment on the Integrated Report, including the draft 303(d) list. Ecology provided a Response to Comments on Washington's 2008 Integrated Report and 303(d) list with their submission. In their Response to Comments, Washington responded to general comments and waterbody specific comments.

### **C. EPA's Review Process**

EPA reviewed all of the documentation that Washington submitted on June 23, July 24, August 21, and December 23, 2008. EPA also reviewed an on-line version of Washington's database, which is available via Internet at: <http://apps.ecy.wa.gov/wats08/Default.aspx>. Using the on-line database called the Water Quality Assessment Simple Query Tool, EPA reviewed the waters in Category 5 in 2004 and the category in which they were found in 2008. EPA also identified waters found in Categories 1, 2, 4a and 4b in 2004 that had moved to Category 5 in 2008. The Simple Query Tool can also be used to identify waters by parameter or location.

Ecology improved their ability to identify waters listed for contaminated sediments in this listing cycle. Washington identifies the medium sampled to evaluate each waterbody. The waters listed for contaminated sediments are determined by the Toxics Cleanup Program while the waters identified by sampling water, tissue, and a medium identified as "other" are determined by the Water Quality Program in Ecology. (The "other" medium is used to describe the medium sampled in bioassessments.) In 2004, the waters listed for contaminated sediments were only available in a paper spreadsheet separate from the 303(d) list and database developed by the Water Quality Program. The waters listed for contaminated sediments have been added to the on-line Simple Query Tool database for the 2008 listing cycle. Though separate paper copies of the 303(d) lists developed by the Water Quality Program and the Toxics Cleanup Program were submitted to EPA, having access to the contaminated sediment database made it easier for the public and EPA to review the contaminated sediment listings.

Ecology provided separate crosswalks of waters taken off the 303(d) list for contaminated sediments and waters delisted for the other mediums. The Water Quality Program's "Crosswalk of Waters that Moved Off the 2004 Assessment (From Category 5 to Categories 4b, 4a, 3, 2, 1)" provides a summary of the water bodies listed in the mediums of water, tissue and bioassessment that are being removed from Washington's 303(d) list and the reasons they are being removed based on the 2008 evaluation of information.

The Toxic Cleanup Program provided a crosswalk of waters on the 303(d) list for contaminated sediments in the 2004 IR and where these waters appeared in the 2008 IR titled “2004 Sediment 303(d) Category 5 vs 2008 Listings.” EPA reviewed these crosswalks, and the reasons waters were removed from the 2004 303(d) list in detail. The contaminated sediment waters and the waters listed for water, tissue and other mediums are discussed separately below.

EPA reviewed both the waters that were removed from the 303(d) list and the waters that were added to the 303(d) list. The on-line database allowed greater accessibility to supporting data and records for individual water bodies. EPA extensively reviewed Washington’s drafts and final 2008 303(d) lists and several versions of the listing methodology. In addition, EPA communicated regularly with Ecology and developed an administrative record that includes the draft and final 303(d) lists, draft and final listing methodologies, prioritization schedule, public notices, and matrices showing the changes between the 2004 and 2008 303(d) lists. Ecology has provided descriptions of the data and information considered and its rationale for the changes in their listing policy in identifying waters for listing and removal from the list.

EPA concludes that the State properly assembled and reasonably evaluated all existing and readily available data and information, including data and information relating to the categories of waters specified in 40 CFR 130.7(b)(5). The State provided to EPA its rationale for not relying on particular existing and readily available water quality-related data and information as a basis for listing waters.

## **II. Waters not listed for Water, Tissue and Other Mediums**

There are 3507 water body segment/pollutant records on Washington’s 2008 303(d) list. 3291 waterbody segment/pollutant pairs were listed for parameters associated with water, tissue, or bioassessment mediums. (216 water body segment/pollutant pairs were listed for contaminated sediments. These waters will be discussed later in this document.)

Of these 3291 waterbody segment/pollutant pairs 1527 water body segment/pollutant records were added to the 303(d) list during the 2008 303(d) list cycle. (1764 waterbody segment/pollutant pairs in Category 5 of the 2004 IR remained listed in Category 5 of the 2008 IR.) Washington removed 608 previously listed water body segment/pollutant pairs from its 2008 303(d) list as described below.

### **A. Waters not required to be listed**

1. Waters Not Listed Due to Water Quality Standards Attainment 38 water body segment/pollutant pairs were removed from the 303(d) list because information shows they were meeting standards.

EPA believes Ecology removed these water body segments/pollutant pairs from Washington’s Section 303(d) list in compliance with Section 303(d) of the Act and 40 CFR 130.7 and in a manner consistent with Ecology’s list methodology. EPA concludes Ecology reasonably considered existing and readily available water quality-related data

and information and reasonably identified water body segments to be removed from the list because data showed water quality standards were being met. EPA has determined the removal of these water segments is consistent with 40 CFR 130.7(b)(6).

2. Waters Not Listed Due to TMDLs Approved. Washington has made considerable progress with developing and obtaining EPA approval of TMDLs. Ecology removed 388 water bodies paired with a pollutant from the 2008 303(d) list based on EPA approval of TMDLs for these waterbodies. These 388 water bodies were placed in Category 4A, TMDL Approved, of the 2008 Integrated Report. Under EPA regulations at 40 CFR 130.7, the 303(d) list is an inventory of waterbodies impaired by a pollutant and requiring a TMDL. EPA has determined that Ecology's removal from the 303(d) list of 388 water segments with an EPA approved TMDL is consistent with the requirements of 40 CFR 130.7.

3. Waters Not Listed Because Other Pollution Control Requirements Will Result in Attainment of Water Quality Standards Within a Reasonable Time The State's decision not to include the waters listed below on its 2008 Section 303(d) list is consistent with EPA regulations at 40 CFR 130.7(b)(1). Under 40 CFR 130.7(b)(1), States are not required to list water quality limited segments (WQLSs) still requiring TMDLs where effluent limitations required by the CWA, more stringent effluent limitations required by State or local authority, or other pollution control requirements required by State, local, or federal authority, are stringent enough to implement applicable water quality standards. The regulation does not specify the time frame in which these various requirements must implement applicable water quality standards to support a State's decision not to list particular waters.

EPA has determined that Ecology's removal of 31 waterbody/pollutant pairs from Category 5 of the 2004 IR and placement of those waterbody/pollutant pairs in Category 4b of the 2008 IR is consistent with section 303(d) of the CWA. EPA has also determined that Ecology's exclusion of an additional 53 waterbody/pollutant pairs from Category 5 of the 2008 IR and placement of these waterbody/pollutant pairs in Category 4b of the 2008 IR is consistent with the requirements of section 303(d) of the CWA. Ecology has demonstrated for these 84 waters that there are other pollution control requirements required by State, local or federal authority that will result in attainment of water quality standards within a reasonable time for the waterbodies and associated pollutants listed below. Evaluations of each of the pollution control plans developed for these waterbodies identify the controls to be relied upon; identify the authority under which the controls are required and will be implemented with respect to the sources contributing to the water quality impairment; and document how the control measures are generally applicable to the impairments and can reasonably be expected to reduce pollutant loadings and attain water quality standards. The 84 waterbody segment/pollutant pairs that were placed in Category 4b of the 2008 IR are shown in Table 1.

**Table 1**  
**Waterbodies Excluded from Category 5 and Placed in Category 4b**

<b>Listing ID</b>	<b>WRIA</b>	<b>Water Body Name</b>	<b>Pollutant</b>
3731	46	Entiat River	Temperature
7633	15	Dogfish Creek	Fecal Coliform
7636	15	Dogfish Creek	Fecal Coliform
7637	15	Dogfish Creek	Fecal Coliform
7639	15	Dogfish Creek	Fecal Coliform
7640	15	Dogfish Creek, E.F.	Fecal Coliform
7641	15	Gamble Creek	Fecal Coliform
7643	15	Gorst Creek	Fecal Coliform
7651	15	Martha-John Creek	Fecal Coliform
7652	15	Martha-John Creek	Fecal Coliform
7653	15	Martha-John Creek	Fecal Coliform
8713	15	Sinclair Inlet	PCB
10370	15	Burley Creek	Fecal Coliform
10371	15	Burley Creek	Fecal Coliform
10373	15	Burley Creek	Fecal Coliform
10374	15	Burley Creek	Fecal Coliform
10375	15	Bear Creek	Fecal Coliform
10376	15	Bear Creek	Fecal Coliform
10387	15	Purdy Creek	Fecal Coliform
10389	15	Purdy Creek	Fecal Coliform
18827	35	Deadman Creek	Temperature
18828	35	Deadman Creek	Temperature
18835	35	Tenmile Creek	Temperature
18836	35	Tenmile Creek	Temperature
19868	26	Yellowjacket Creek	Temperature
19869	26	Yellowjacket Creek	Temperature
20355	35	Tenmile Creek	Temperature
20356	35	Tenmile Creek	Temperature
23695	15	Dogfish Creek	Fecal Coliform
29317	35	Mill Creek	Temperature
29318	35	Couse Creek	Temperature
29320	35	Couse Creek	Temperature
38544	15	Dogfish Creek, WF	Fecal Coliform
38667	15	Kinman Creek	Fecal Coliform
40534	35	Deadman Creek, SF	Temperature
40554	35	Deadman Creek, SF	Fecal Coliform
40555	35	Deadman Creek, NF	Fecal Coliform
40557	35	Alpowa Creek	Fecal Coliform
40558	35	Alpowa Creek	Fecal Coliform
40634	34	Cow Creek	Temperature

<b>Listing ID</b>	<b>WRIA</b>	<b>Water Body Name</b>	<b>Pollutant</b>
40635	34	Cow Creek	Temperature
40636	34	Cow Creek	Temperature
40637	34	Cow Creek	Temperature
40638	34	Cow Creek	Temperature
40639	34	Cow Creek	Temperature
40640	34	Cow Creek	Temperature
40643	34	Cow Creek	Dissolved Oxygen
40644	34	Cow Creek	Dissolved Oxygen
40645	34	Cow Creek	Dissolved Oxygen
40646	34	Cow Creek	Dissolved Oxygen
40647	34	Cow Creek	Dissolved Oxygen
40648	34	Cow Creek	Dissolved Oxygen
40649	34	Cow Creek	Dissolved Oxygen
40653	34	Cow Creek	pH
40654	34	Cow Creek	pH
40656	34	Cow Creek	pH
40657	34	Cow Creek	pH
40661	34	Cow Creek	Fecal Coliform
40662	34	Cow Creek	Fecal Coliform
43034	15	Enetai Creek	Fecal Coliform
45958	34	Cow Creek	Fecal Coliform
45969	34	Cow Creek	Fecal Coliform
45990	34	Cow Creek	Fecal Coliform
45991	35	Alpowa Creek	Fecal Coliform
46020	34	Cow Creek	Fecal Coliform
47041	35	Alpowa Creek	Dissolved Oxygen
47042	35	Alpowa Creek	Dissolved Oxygen
47908	34	Cow Creek	Dissolved Oxygen
47909	34	Cow Creek	Dissolved Oxygen
48398	34	Cow Creek	Temperature
50348	35	Alpowa Creek	pH
51176	34	Cow Creek	pH
51177	34	Cow Creek	pH
53091	15	Lofall Creek	Fecal Coliform
53092	15	Dogfish Creek	Fecal Coliform
53094	15	Daniels Creek	Fecal Coliform
53095	15	Daniels Creek	Fecal Coliform
53098	15	Burley Creek	Fecal Coliform
53099	15	Burley Creek	Fecal Coliform
53101	15	Enetai Creek	Fecal Coliform
53102	15	Enetai Creek	Fecal Coliform
53110	15	Kitsap Creek	Fecal Coliform
53113	15	Indianola Creek	Fecal Coliform
53117	15	Jumpoff Joe Creek	Fecal Coliform

Monitoring should be scheduled for these waters to verify that the water quality standard is attained as expected in a reasonable time frame. Where standards will not be attained through implementation of the requirements listed in 40 CFR 130.7(b)(1) in a reasonable time, it is appropriate for the water to be placed on the Section 303(d) list to ensure that implementation of the required controls and progress towards compliance with applicable standards is tracked. If it is determined that the water is, in fact, meeting applicable standards when the next Integrated Report and 303(d) list are developed, it would be appropriate for the State to remove the water from Category 4b and place the waterbody in Category 1 at that time.

4. Waters removed from the list or not listed because they comply with the natural conditions water quality standard. The term natural condition describes the quality of water that exists in the absence of human-caused pollution or disturbance. Ecology has demonstrated for the waters discussed below why it is reasonable to conclude that natural conditions are the basis of the exceedance. Therefore, EPA has determined that removal of these 11 waters from the 303(d) list based on the operation of the natural condition water quality standards is consistent with section 303(d) of the CWA because waters whose criteria becomes the natural condition are meeting standards.

a. Waters not listed for pH due to natural conditions

Washington water quality standards state “It is recognized that portions of many water bodies cannot meet the assigned criteria due to the natural conditions of the water body. When a water body does not meet its assigned criteria due to natural climatic or landscape attributes, the natural conditions constitute the water quality criteria.” WAC173-201A-260(1)(a).

Eight water segments listed for pH in the Chehalis basin were removed from Category 5 of the 2008 IR based on the low pH found in the waters being due to naturally acidic conditions. The naturally acidic conditions are due to the headwaters of the spring fed streams originating in wetlands. The wetlands contain lower amounts of organic material and have a pH range of 3.0 to 7.0. The pH of the soil can also affect the pH of the water. Ions leach out of soils as water travels through them and the water can take on more of the pH characteristic of the soil. Lewis County Conservation District reports that soils in the Chehalis Basin are typically in the range of pH from 5.2 to 5.8. It is difficult to assess the degree of human influence on streams with low pH levels. However, the impaired sites occur in sparsely populated and remote areas mainly in the headwater areas of the Chehalis basin. In addition, human influences in the watershed have been mitigated by the TMDLs done for DO, temperature, and bacteria in the Chehalis/Grays Harbor Watershed and Ecology believes any human activities influencing the naturally low pH would cause the pH levels to rise, not fall. Therefore, Ecology is reasonable in assuming that the excursions from the pH standard are due to natural conditions. EPA has determined that Ecology’s not listing these waters based on the conclusion that the excursions from the pH criterion in these waters are caused by natural conditions is consistent with section 303(d) of the CWA.

b. Waters not listed for dissolved oxygen (DO) due to natural conditions  
Washington water quality standards regarding DO due to natural conditions read as follows: “When a water body's D.O. is lower than the criteria in Table 200 (1)(d) (or within 0.2 mg/L of the criteria) and that condition is due to natural conditions, then human actions considered cumulatively may not cause the D.O. of that water body to decrease more than 0.2 mg/L.” WAC 173-201A-200 (1)(d)(i)

Two waters segments of McAllister Creek and one water segment of Woodland Creek which were listed in Category 5 for DO in the 2004 IR, were listed in Category 2 for DO in the 2008 IR. TMDL studies were done for these waters, but no allocations were given to these water segments because the occasional low DO values appear to be due to natural conditions. The TMDL studies did not find evidence of anthropogenic sources sufficient to set an allocation. Ecology’s listing policy states that “For waterbodies 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.” (September, 2006, WQP policy 1-11, page 17) The natural conditions are sufficient to account for the slight water quality excursions in these waters. Though it is difficult to completely rule out anthropogenic activities as sources, it is reasonable to believe that these slight excursions are due to natural not anthropogenic causes. Also, TMDLs done for these waters for other parameters mitigate potential anthropogenic sources of low DO. Therefore, EPA has determined that Ecology’s decision to put these waters in Category 2 and to not list these waters in Category 5 of the 2008 IR is consistent with the requirements of section 303(d) of the CWA.

## **B. An Analysis of Waters Removed from Washington’s 2008 303(d) list**

Just Cause for not listing specific waters for the water, tissue, and other mediums

There are 3506 water body segment/pollutant pairs on the 2008 IR 303(d) list. The state has demonstrated good cause for not including 140 previously listed water body segment/pollutant pairs on its 2008 303(d) list for the test-mediums of water quality including water, tissue, and bioassessment. As provided in 40 CFR 130.7(b)(6)(iv), EPA requested that the State demonstrate good cause for not including these waters.

### Waters Removed from the 303(d) list due to Flaws in the Original Analysis

Consistent with 40 CFR 130.7(b)(6)(iv), EPA concludes that Ecology provided “good cause” for the decisions to remove 140 waterbody segments/pollutant pairs associated with test-mediums of water, tissue, or other test-medium from the 303(d) list. An aspect of good cause is a “flaw in the original analysis that leads to the water being listed in the categories at 130.7(b)(5).” Ecology removed these water segments paired with a pollutant from the 303(d) list due to flaws in the original analysis, due to technical listing errors, such as accidental comparison to incorrect criteria, sampling error and duplicate records. Therefore, EPA has determined the delisting of these 140 water segments paired

with a pollutant associated with water, tissue or other mediums is consistent with the requirements of 40 CFR 130.7(b)(6)(iv).

### **III. Waters not listed for Contaminated Sediments**

216 waterbody segment/pollutant pairs associated with contaminated sediments are listed on the 2008 303(d) list. In 2004, 226 waterbody segment/pollutant pairs associated with contaminated sediments were listed on the 303(d) list. Ecology substantially revised their listing policy for waters impaired by contaminated sediments between the 2004 and 2008 listing cycle. Washington's sediment management standards were incorrectly applied in the 2004 listing methodology. The 2008 revisions more closely aligned the 303(d) listing policy for contaminated sediments with the Sediment Management Standards 173-204 WAC (SMS) and reflect the correct method for applying the SMS. In addition to aligning the listing methodology more closely with the SMS, the listing policy revisions are expected to improve the accuracy of the contaminated sediment listings.

Several changes in identification methods for the contaminated sediment waters in this listing cycle made comparison of the 2004 and 2008 303(d) lists for contaminated sediment challenging.

#### **a. Grid size**

The size of the grid delineating the location of the contaminated sediment area was changed in the 2008 listing cycle. In 2004, contaminated sediment waters were listed based on a grid the same size as a water grid. However, in 2008, sediment grids were changed to be one quarter the size of the water grids. The larger grid size is appropriate for designation of a water body because of the dynamic nature of water. In order to be conservative and protective of a dynamic media, it makes sense to have a larger area to sample to ensure an exceedance is not missed. However, sediments are relatively stable. The less dynamic nature of sediments makes a smaller grid size a more accurate representation of sediment problems. A smaller grid size also makes sense for sediments because sediments can vary dramatically in terms of geochemistry or contaminant chemistry within a few hundred feet. Sediments in one area may show contamination, while the sediments a short distance away do not show contamination. The smaller grid size better reflects if the sediments are impaired and deserve a 303(d) designation and further cleanup actions.

Where numbers are given below, they specify the numbers of quarter size grids used in the new listing methodology. Since the grid used in 2004 is divided into four quarters in 2008, it is possible that one, two or three quarter segments of the formerly listed water will remain listed while another one, two or three quarter grids are taken off of the 303(d) list. For example, Port Gardner/Inner Everett Harbor was listed for eight parameters in 2004. In 2008, sediment bioassay data showed that the eight parameters were meeting standards (and therefore not listed) in one quarter grid and not meeting standards (and listed) in another quarter grid. No information was available for the other 2 quarter size grids.

b. Use of Township-Section-Range location identifier

Some contaminated sediment waters listed in 2004 used Township-Range-Section location as an identifier and some contaminated sediment waters were identified by water grid location. The Township-Section-Range location identifier is no longer used for identifying the location of contaminated sediment waters. Rather on the 2008 list all contaminated sediment waters are identified by water grid location. This has not resulted in the loss of information as all readily available data for contaminated sediments was reevaluated to identify the appropriate water quarter grid location. The quarter size grid representation in the 2008 list covers all waters in Washington State, so any data available for these waters was analyzed under the quarter grid and the water was placed in the appropriate category. However, because the Township-Range-Section identifier was not included in the quarter-size grid database, it is very difficult to track these waters specifically from the 2004 303(d) list to the 2008 303(d) list

c. Inclusion of contaminated sediment data in on-line database

A final factor that made tracking of waters from the 2004 listing cycle to the 2008 listing cycle difficult is the fact that the 2004 contaminated sediment water segments were listed on a separate spreadsheet, and were not included in the 2004 on-line database. The contaminated sediment listings are included in the 2008 on-line database and in the future, it will be easier to specifically track section 303(d) listings for contaminated sediments from one listing cycle to the next.

Where numbers of waterbody segments are shown below, the numbers are for the quarter size grids used in the 2008 listing cycle. However, numbers are not given for each of the categories below because of the difficulty of tracking waters from the 2004 listing cycle to the 2008 listing cycle. Though specific numbers in each category below are not given, information on each waterbody segment/pollutant pair on the 303(d) list in 2004 and the information available for the quarter size grids in 2008 can be found in a crosswalk provided by Ecology. Ecology's crosswalk identifies each water listed in 2004 and the reason each quarter size grid is found or not found on the 303(d) list in 2008. The exception to this is for the 32 waters listed using the Township-Range-Section location in the 2004 IR. These waters cannot be tracked specifically, but information available in the quarter size grids covering these locations was used to list waters in 2008.

**A. Waters not required to be listed for contaminated sediments**

1. Waters Not Listed Due to Water Quality Standards Attainment

Approximately 61 water body segment/pollutant pairs listed for contaminated sediments were removed from the 303(d) list for a quarter size grid because information showed they were meeting standards. Different quarter size grids for these same waterbody/segment pollutant pairs may have remained listed or been put in another category of the Integrated Report.

EPA believes Ecology removed these water body segments/pollutant pairs from Washington's Section 303(d) list in compliance with Section 303(d) of the Act and 40 CFR 130.7 and in a manner consistent with Ecology's list methodology. EPA concludes Ecology reasonably considered existing and readily available water quality-related data and information and reasonably identified water body segments to be removed from the list because data showed water quality standards were being met. Therefore, EPA has determined that the removal of these water segments is in accordance with 40 CFR 130.7(b)(6).

2. Waters Not Listed Due to TMDLs Approved

In January of 2002, the Bellingham Bay TMDL was approved. This TMDL addresses all the contaminated sediment waterbody segment/pollutant pairs listed in Category 4a of the 2004 and 2008 IRs. In 2004, 62 waterbody segment/pollutant pairs were listed in Category 4a. In 2008, 278 contaminated sediment waterbody segment/pollutant pairs were listed in Category 4a of the IR for being covered under the Bellingham Bay TMDL. Under EPA regulations at 40 CFR 130.7, the 303(d) list is an inventory of water bodies impaired by a pollutant and requiring a TMDL. Thus, EPA has determined that Ecology's exclusion from the 303(d) list of 278 water segments with an EPA approved TMDL is consistent with the requirements of section 303(d) of the CWA.

3. Waters Not Listed Because Other Pollution Control Requirements Will Result in Attainment of Water Quality Standards within a Reasonable Time

Waterbody locations that exceed the cleanup screening level and have a cleanup plan under the state's Model Toxics Control Act (MTCA) regulations and the federal Comprehensive Environmental Response Compensation and Liability Act (CERCLA) regulations are being appropriately placed in Category 4b. Clean up actions under MTCA and CERCLA represent an appropriate basis to determine that these are other pollution controls consistent with the requirements of 40 CFR 130.7. The regulatory structure and requirements of these two complementary statutes meet the requirements for placement of waters in Category 4b. Therefore, the 658 waterbody segment/pollutant pairs are properly excluded from the Contaminated Sediment Category 5, 303(d) list consistent with section 303(d) of the CWA. Ecology has provided a 74 page list of these waterbody segment/pollutant pairs which is included in EPA's record.

Ecology has demonstrated that the state and federal clean up programs, MTCA and CERCLA, respectively, contain the requirements to meet the Category 4b criteria, including that there are other pollution control requirements required by State, local or federal authority that will result in attainment of water quality standards within a reasonable time for the waterbodies and associated pollutants described above. Each of the pollution control plans developed for these waterbodies identify the controls to be relied upon; identify the authority under which the controls are required that will be implemented with respect to the sources contributing to the water quality impairment; and document how the control measures are generally applicable to the impairments that can reasonably be expected to reduce pollutant loadings and attain water quality standards. The enforcement authorities and requirements are under the State's Model Toxics Control Act (MTCA) WAC 173-340 and federal Comprehensive Environmental

Response Compensation and Liability Act (CERCLA) Title 42 CFR 103 cleanup programs.

Ecology has also agreed to monitor or require monitoring of all 4b contaminated sediment listings when EPA has determined final compliance with the clean-up goals of the Record of Decision (ROD) under CERCLA. Ecology will then move the 4b listings to Category 1 if they are found to be meeting standards or Category 5 if they are not meeting standards.

## **B. An Analysis of Waters Removed from Washington's 2008 303(d) list**

Just Cause for not listing specific waters for contaminated sediment: The state has demonstrated good cause for not including the previously listed water body segment/pollutant pairs discussed below on its 2008 303(d) list for contaminated sediments. As provided in 40 CFR 130.7(b)(6)(iv), EPA requested that the State demonstrate good cause for not including these waters.

### 1. Waters Removed from the 303(d) list due to Flaws in the Original Analysis

Consistent with 40 CFR 130.7(b)(6)(iv), EPA concludes that Ecology provided "good cause" for the decisions to remove approximately 16 waterbody segments/pollutant pairs associated with contaminated sediments. An aspect of good cause is a "flaw in the original analysis that leads to the water being listed in the categories at 130.7(b)(5)." Ecology removed these water segments paired with a pollutant from the 303(d) list due to flaws in the original analysis, due to technical listing errors, such as comparison to incorrect criteria, sampling error and duplicate records. Therefore, EPA has determined the delisting of these approximately 16 water segments paired with a pollutant associated with contaminated sediments is consistent with the requirements of 40 CFR 130.7(b)(6)(iv).

### 2. Waters Removed from the 303(d) list due to flaws in the application of the Sediment Management Standard (SMS)

Consistent with 40 CFR 130.7(b)(6)(i)&(iv), EPA concludes that Ecology provided "good cause" for not including waters on the list during this listing cycle because of errors in their application of the contaminated sediment water quality standards in the 2004 listing cycle. The listing methodology for contaminated sediments in 2004 was not based on the correct application of the Sediment Management Standards (SMS). In the 2008 listing cycle, Ecology revised their contaminated sediments listing methodology to reflect the correct way of applying the SMS. In addition to correcting the listing errors made in the previous listing cycle, the revisions to the listing methodology will better assure the accuracy of the contaminated sediment 303(d) listings.

Ecology provided EPA with sufficient explanation to demonstrate "good cause" for not including the waterbody segment/pollutant pairs on the 303(d) list due to flaws in the application of their sediment management water quality standards in the last listing cycle and corrections to those errors in this listing cycle as described below. Therefore, EPA

has determined the delisting of these contaminated sediment water segments paired with a pollutant is consistent with the requirements of 40 CFR130.7(b)(6)(iv).

a. Bioassay override of chemical data

The bioassay override of chemical data is a part of the SMS that was applied in the 2008 listing cycle. Some contaminated sediment water segments were removed from the 303(d) list due to the application of the bioassay override of chemical data.

Because the SMS were promulgated to protect the sediment benthic community, both biological and chemical data apply when determining whether sediments are exceeding the SMS. Some toxic effects may not be discovered looking only at individual chemical concentrations. In addition, the SMS has promulgated criteria for 47 chemicals, which is only a small subset of the potentially thousands of chemicals released to the environment. Toxicity to the benthic community can be caused by synergistic effects of a set of chemicals that individually may not exceed the chemical criteria, chemicals not present in the SMS suite of 47 chemicals, or chemicals which cannot be analyzed because of a lack of technology. Therefore, in addition to chemical criteria for the 47 SMS chemicals, the SMS also has biological criteria based on bioassays or benthic community analysis tests which can better capture these toxic effects.

The 2008 listing methodology describes a biological data point system designed to conform with the water quality sediment management standards (SMS), WAC 173-204-520(3)(d). The biological point system assigns points to monitoring stations that show exceedances of the Cleanup Screening Level (CSL) or the Sediment Quality Standards (SQS) in bioassay or benthic community assessment tests to determine if the water should be listed. The SMS requires that this biological data override chemical data (WAC 173-204 -310(2), -315, - 530(4)(c)). Therefore, if a water was listed on the 303(d) list for exceeding chemical standards and biological data (usually a bioassay) showed a different result (i.e., that the water was meeting standards), the biological results would override the chemistry results and the water would be removed from the list. Inversely, if chemical data showed no exceedances of the SMS criteria, but biological data showed the water was impaired, the water would be placed on the 303(d) list. EPA has determined the delisting of contaminated sediment water segments paired with a pollutant due to the application of the bioassay override of chemical data is consistent with the requirements of 40 CFR130.7(b)(6)(iv).

b. Requirement for data from three monitoring stations

The sediment management water quality standards require chemical data from three chemically similar and spatially distinct monitoring stations to show an exceedance of the Cleanup Screening Level (CSL) or for data from the three stations to average an exceedance of the CSL in order for the sediment monitoring stations to be designated a “cluster of concern.” A “cluster of concern” is the term used in the SMS to indicate that the sediments are exceeding the standard and require further investigation. This determination is the basis for the listing of waters on Washington’s 2008 303(d) list as described in the 2008 listing methodology. In 2004, the state incorrectly interpreted the SMS to require any water with a single CSL exceedance to be listed. Contaminated

water segments that were listed in 2004 due to a single CSL exceedance were removed from the list in the 2008 listing cycle. EPA has determined the delisting of these contaminated water segments paired with a pollutant is consistent with the requirements of 40 CFR 130.7(b)(6)(iv).

c. Errors in application of the data

1. Detection Limits (DL) greater than the CSL.

In 2008, the State did not list 182 contaminated sediment water segments because the available data did not support such a listing. In the 2004 listing cycle, waters were listed if they were tested for a chemical and the laboratory report stated that the DL was above the CSL even though the DL was not exceeded. This listing determination was not based on actual data. In the 2008 listing cycle, it was determined that waters should only be placed on the 303(d) list based on actual data. If data shows that the water exceeds the CSL, it is listed on the 303(d) list. However, if the chemical is not detected and the DL is above the CSL, the water will not be listed on the 2008 303(d) list, because it is not possible to tell if an exceedance of the CSL occurred. This listing determination resulted in not listing 182 waters where the DL exceeded the CSL and the DL was not exceeded. 168 of these waters in which the DL exceeded the CSL were put in Category 3 of the Integrated Report to reflect that more information should be gathered to determine if there is a problem. For 14 of these waters, new information was provided to prove that the chemicals did not exist in the sediments above the CSL criterion and these waters were placed in Category 1. EPA has determined that not listing these 182 contaminated sediment water segments paired with a pollutant is consistent with the requirements of 40 CFR130.7(b)(6)(iv).

2. Total Organic Carbon data re-evaluated.

Two waters were removed from the 2004 303(d) list because definitive in situ Total Organic Carbon (TOC) sediment data exists to prove the water is not impaired. When the data was re-evaluated based on dry weight, it was determined that there were no exceedances of the criteria. Therefore, EPA has determined the delisting of these 2 contaminated sediment water segments paired with a pollutant is consistent with the requirements of 40 CFR130.7(b)(6)(iv).

3. Incorrect units of measure submitted.

Twelve contaminated sediment waters were not included on the 303(d) list because it was determined that the data supporting the listing of the waters had been submitted with incorrect units of measure. When the correct units of measure were used, it was determined that water quality standards were met in these waters. Therefore, EPA has determined that not listing these twelve contaminated sediment water segments paired with a pollutant is consistent with the requirements of 40 CFR130.7(b)(6)(iv).

#### IV. **Priority Ranking and Targeting**

EPA also reviewed the State's priority ranking of listed waters for TMDL development as per 40 CFR 130.7(b)(4) "shall include a priority ranking for all listed water quality limited segments still requiring TMDL," and concludes that the State properly took into account the severity of pollution and the uses to be made of such waters. EPA reviewed the State's identification of WQLSs targeted for TMDL development in the next two years, and concludes that the targeted waters are appropriate for TMDL development in this period. In prioritizing and targeting waters States must, at a minimum, take into account the severity of the pollution and the uses to be made of such waters. See Section 303(d)(1)(A). As long as these factors are taken into account, the Act provides that States establish priorities.

Ecology fully describes its prioritization process and ranking and lays out the schedule for completion of TMDLs in a document submitted to EPA with its 2008 WQA packet titled "Prioritization of Category 5 for the 2008 Washington Water Quality Assessment." Washington established a prioritization process which was used to set TMDL priorities and schedules in 1997. The 2008 TMDL priorities and schedule document updates priorities identified by that process. The Memorandum of Agreement signed by Ecology and EPA on October 29, 1997, describes the criteria used in setting priorities and the rotating basin scoping process used by the state to establish the schedule for completion of TMDLs.