Water Quality Program Policy

Chapter 1: ***WQP Policy 1-11***

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References: *Federal Clean Water Act, Section 303(d) [33 USC 1313(d)]*
40 CFR 25
40 CFR 130
40 CFR 131
Chapter 173-201A WAC
Chapter 173-204 WAC

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Assessment of Water Quality for the Section 303(d) List

Purpose: The State of Washington is required under Section 303(d) of the federal Clean Water Act to periodically assess and prepare a list of waters in which beneficial uses are impaired due to water quality problems and for which Total Maximum Daily Load water cleanup plans are required. This policy describes a series of categories to be used in the upcoming assessment process, including one for the 303(d) list itself and others that more broadly assess water quality conditions throughout the state. This policy also provides guidance for data submittal, data quality assurance and requirements, and criteria for assignment of specific waters to each category. This policy, in combination with the guidance documents referenced herein, constitutes the "Listing Methodology" for the Section 303(d) list as required by the Environmental Protection Agency.

Application: This policy applies to Ecology staff when conducting assessments for the Section 303(d) list. It is also intended as guidance for all parties interested in submitting data for the assessment process or developing data collection programs for use in future assessments.

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1. Introduction and Background

The state is required under Section 303(d) of the federal Clean Water Act (CWA) and the Environmental Protection Agency's (EPA) implementing regulations (40 CFR 130.7) to periodically prepare a list of waters in which beneficial uses are impaired, as determined through the use of the water quality standards. In Washington, this list is prepared by the Department of Ecology (Ecology).

The surface water quality standards to be used for the assessment process are in Chapter 173-201A WAC, *Water Quality Standards for Surface Waters of the State of Washington*, and the federal National Toxic Rule and Human Health Criteria in 40 CFR Part 131 (Federal Register Vol. 57, No. 246, and as updated). Ecology has been working on revisions to the state surface water quality standards. However, the revised standards will not be final by the time the assessment is conducted, so the existing standards will be used. For sediments, the standards are in Chapter 173-204 WAC, *Sediment Management Standards*.

The 303(d) list was last prepared in 1998. Information on the 1998 list can be found at www.ecy.wa.gov/programs/wq/303d/1998/1998-index.html. Because EPA was preparing new rules and guidance, no list was required in 2000. The next list is required in 2002.

This policy has been updated from 1998 in an effort to better refine and explain the assessment process, and to better judge the condition of each water and whether it should be listed as impaired. Significant changes in the updated policy since 1998 include:

- New categories, in addition to the 303(d) list itself, to better reflect conditions and circumstances of different waters
- Extended waterbody segments, to address data collected across segment boundaries
- Clarification of data quality assurance requirements
- More detailed discussion of the assessment criteria
- Changes in how the water quality standards are applied to temperature, dissolved oxygen, and some other pollutants
- More detail on how to prioritize TMDLs

The criteria in this policy have been developed to guide the assignment of waters into one of five categories. All waters in the state will be placed into one of the categories.

Only one category (Category 5, as described below) represents the 303(d) listed waters. The criteria for the 303(d) list were developed to identify only those waters for which there is good documentation of impairment. These waters, and only these waters, require the preparation of water cleanup plans, known as Total Maximum Daily Loads (TMDLs), in accordance with the CWA. Waters showing impairment because of natural conditions and with no significant human contribution will not be listed on the 303(d) list. Also, some waters that are impaired will nonetheless not be placed on the 303(d) list because, for various reasons, no TMDL is required for them (see Category 4). As part of the listing process, the waters placed on the 303(d) list will be prioritized and scheduled for doing TMDLs.

TMDLs are a key tool in the work to clean up impaired waters. In short, TMDLs identify the maximum amount of pollutant to be allowed to be released into a waterbody so as not to impair uses of the water, and allocate that amount among various sources (both point and nonpoint sources). The technical studies prepared for TMDLs also provide a more complete and consolidated view of the condition of the water, and a framework to help develop, focus, and evaluate activities to improve water quality. The public interactions in the TMDL process – from scoping through ongoing implementation – can provide a forum for discussing issues, pursuing solutions, and adjusting activity over time to ensure progress on improving water quality.

The remaining categories (Categories 1 through 4, including three subcategories of Category 4) are intended to inform other water quality efforts in Washington, and to inform the public about the known condition of the state's waters. These new categories include waters that meet the water quality standards but still prompt concerns, waters for which no data is available, and waters that are impaired but for various reasons do not require development of a TMDL.

When Ecology writes a wastewater discharge permit, it reviews all available water quality information, including data used in the 303(d) assessment. If the receiving water is listed on the 303(d) list and has a TMDL, then the permit is prepared in conformance with the TMDL. If there is not yet a TMDL for a listed water (and the discharge contains the pollutant for which the water is listed), then the discharge limits and other elements of the permit are adjusted to avoid worsening the listed water quality problems until such time as a TMDL can be prepared. If the receiving water is in the *Waters of Concern* category (as described below), then Ecology will review the data and – as part of the normal permitting process – will apply all available tools (such as receiving water studies, engineering reports, monitoring requirements, and effluent limits) to ensure that the permitted discharge is appropriate to the specific circumstances. These permitting procedures are followed for both water column and sediment column parameters. For complete information on permitting issues, see the Water Quality Program's Permit Writer's Manual, available at www.ecy.wa.gov/pubs/92109.pdf.

The draft results of the overall water quality assessment, including the draft 303(d) list, are scheduled to be ready for public comment in early 2003, with the final list and assessment information sent later to EPA. The entire assessment – all five categories – will be submitted to EPA and for public review, but only the 303(d) list (Category 5) is subject to EPA approval. EPA has authority to disapprove this list and to propose to add waters to it; these actions are also subject to public review.

Because the 303(d) list requires federal approval, the federal regulations for public notice requirements (40 CFR Part 25) will be used to solicit information collected by interested parties for revision of the proposed list. The requirements include notification, access to proposed documents, opportunity to provide comments, and consideration of and response to relevant comments by Ecology. In particular, interested parties will be notified to submit appropriate water quality and related data to Ecology during a 60-day "call for data," scheduled for Fall 2002. Data submitted for consideration need to include verification of appropriate Quality Assurance/Quality Control (QA/QC). Additional conferral with tribes and consultation with irrigation districts will occur in compliance with the existing Memorandums of Agreement with them, and also with EPA to ensure consistency with federal requirements.

Ecology will document the data and policies that lead to each assessment decision, especially on whether or not to include a water on the 303(d) list. In addition, new federal guidance expands the information that is requested on all waters, including those not listed as impaired. (See EPA, *2002 Integrated Water Quality Monitoring and Assessment Report Guidance*, November 2001.) Ecology will request and submit this additional information whenever possible.

All waters in Washington State (except on tribal reservation lands) will be reviewed anew during this assessment process. There will be no presumption either for or against listing based on whether a water was or was not listed previously. The data used to develop the 303(d) list in 1998 and before will be used again in this year's assessment, in conjunction with any new data, but will now be evaluated against the new requirements and assessment criteria in this policy. Assessment decisions will be based on this policy and on the currently available data. Waters previously included on the 303(d) list will not be listed if this year's review of the data, including of any new data received, does not indicate impairment according to this policy. Likewise, waters not previously listed will now be listed if the data and policy so indicate. If a water is proposed to be categorized in 2002 in a different way than it was categorized in 1998, Ecology will note the data or policy changes and the rationale that led to the decision to list or not list it.

If new situations or issues arise that are not covered by this policy, Ecology will document the policies used to make the assessment decisions.

2. Coordination with Tribes

In accordance with the Centennial Accord, this policy supports intergovernmental cooperation between the state and the federally recognized tribes in Washington State in the development of the state's 303(d) list. The policy relies on the 1997 *Cooperative Management of the Clean Water Act 303(d) Program for the Tribes in Washington State, the Washington State Department of Ecology, and the U.S. Environmental Protection Agency Region 10*.

Tribes have independent authority for setting water quality standards and implementing regulations for waters on reservation lands under the CWA. Washington State is bound under the Supremacy Clause of the United States Constitution, article VI; c1.2, to carry out the provisions of the United States Treaties and relevant federal court rulings. Thus, Ecology's

303(d) list will not address on-reservation waters. This policy is not intended to and does not enlarge, diminish, or define the jurisdiction of the state or the tribes, nor does this policy limit the right of the state or any tribe to act in other forums to protect its rights.

Ecology staff will confer on a government-to-government basis with the staff of each interested tribe with affected natural resources during the following steps in the development of the state's 303(d) list:

- Policy development
- Data assessment, and
- Preparation of final list and responsiveness summaries.

Cooperation on other 303(d) listing tasks such as gathering data, public involvement, and list submittal to EPA may be negotiated as desired by individual tribes. Disagreements should be handled at the staff level whenever possible. If necessary, dispute resolution should be pursued following the process in the 1997 cooperative management document.

Areas of specific cooperation during the 303(d) listing process that are developed with an interested tribe within Washington State and described in writing in a signed agreement will supplement this policy. There are not yet any such agreements in place.

If a tribe is interested in identifying impaired waters on-reservation in coordination with the state, the water quality program staff will cooperate with tribes who enter into an agreement to:

- Use the state's 303(d) process for a joint state and tribal submittal of 303(d) waters on reservation, or
- Establish a tribal listing process

However, a tribe may prefer to work directly with EPA to develop an on-reservation list and need not cooperate with the state. EPA encourages interested tribes to contact them as early as possible to discuss 303(d) listing of on-reservation waters.

Occasionally, data is submitted to Ecology about water quality of waters on reservation lands. Ecology will receive this information, but will not make listing decisions for such waters except in cooperation with the tribe.

Ecology’s desire is to, whenever possible, make listing decisions for off-reservation waters by mutual agreement through timely sharing of information, clarification, and discussion. The state and each individual tribe are responsible for making their own final listing recommendations to EPA within its respective delegated 303(d) program, insofar as program funding permits.

As of February 2002, the Chehalis Indian Tribe and Puyallup Indian Tribe have EPA-approved water quality standards under Section 303(c) of the CWA for on-reservation waters. In a separate action, EPA has promulgated federal water quality standards for the Colville Reservation that are in effect under the CWA. EPA has found that the Tulalip Tribe and the Spokane Indian Tribe are eligible under Section 518 of the CWA for treatment in the same manner as a state (TAS) to administer the CWA water quality standards program, but they do not yet have standards approved by EPA. The Kalispel Indian Tribe, Makah Indian Tribe, Lummi Nation, Spokane Indian Tribe, and Yakama Nation have applied to EPA for TAS eligibility

determinations to administer the water quality standards program. Those applications are under review, with no EPA action yet taken on their tribal water quality standards.

3. Public Participation

The participation of many and diverse members of the public is essential to completing an accurate and useful assessment of Washington's water quality. Much of the data used for the 303(d) assessments come from private organizations and individuals, not just government agencies. The review of the data, and the judgment of how to categorize waters in accordance with state and federal law and guidance, is best informed by the perspective and wisdom of many people. Ecology encourages everyone in Washington State to take a greater interest in our water quality, and to participate in this effort.

Individuals and organizations can participate in the assessment of Washington's waters, 303(d) listing, and TMDL process in any of the following ways:

- Review and comment on the listing policy and methodology (this document)
- Submit water quality data for assessment, during the "call for data" period
- Review and comment on Ecology's proposed 303(d) list and other assessment categories
- If EPA disapproves of the proposed 303(d) list or proposes additional waters for listing, then review and comment on EPA's actions
- Review and comment on the proposed TMDL priority list
- Participate in preparing and/or review and comment on subsequent TMDLs
- Participate in other water quality efforts, guided by the overall water quality assessment provided by all the categories in this assessment

The "call for data" is scheduled for Fall 2002, and the proposed 303(d) list and other assessment categories are scheduled to be available for public review in early 2003. Ecology will publicize the exact schedule.

Anyone with questions about this process, or wishing to receive updates, should contact Ecology at:

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4. Categories

All waters in Washington State (except on reservation lands) will be assigned to one of the five categories described below. These five categories are based on, though not identical to, the

categories recommended in EPA's *2002 Integrated Water Quality Monitoring and Assessment Report Guidance* (November 2001).

Only one category – Category 5 – constitutes the 303(d) list of impaired waters. All the categories together represent the statewide assessment of Washington's water quality and will be submitted to EPA and the public, but only the 303(d) list of impaired waters is subject to EPA approval. Also, only the 303(d) list requires the preparation of TMDLs in accordance with the CWA. Categories 1 through 4 are intended to inform other water quality efforts in Washington, and to inform the public about the condition of the state's waters.

Table 1. The Water Quality Assessment Assessment Categories.

<table>
<tr><td>Category 1. Meets Tested Standards</td><td rowspan="3">Not impaired, or not known to be impaired</td><td rowspan="3">EPA approval and TMDL not required</td></tr>
<tr><td>Category 2. Waters of Concern</td></tr>
<tr><td>Category 3. No Data</td></tr>
<tr><td>Category 4. Impaired But Does Not Require A TMDL
4a. Has a TMDL
4b. Has a Pollution Control Plan
4c. Impaired by a Non-Pollutant</td><td rowspan="2">Impaired</td><td></td></tr>
<tr><td>Category 5. The 303(d) List</td><td>EPA approval and TMDL required</td></tr>
</table>

When data is available on two or more water quality parameters in the same water, Ecology will do a separate assessment for each parameter. Thus, for example, a water that is placed on the 303(d) list due to one pollutant will also be placed in a different category if a second pollutant was tested for but did not show impairment, or a water will be listed twice if it shows impairment due to both pollutants. Ecology's assessment report to the public and to EPA will include the assessment results for each different parameter in each water.

Waters covered by this policy include rivers, streams, lakes, Puget Sound, the Straits of Juan de Fuca, coastal waters, waterways, and all other surface waters falling under the authority of Ecology. For purposes of this policy, all such waters are divided into segments, as described in Part 5 on *Waterbody Segments*.

Category 1. Meets Tested Standards

Where the available data shows attainment of the water quality standard for the parameter for which a waterbody segment has been tested or studied, the segment will be placed in the *Meets Tested Standards* category. To qualify for this category, some data must be available for a waterbody segment which show attainment of the applicable water quality standard; it is not sufficient merely to have a lack of evidence of impairment.

This category represents the waters in Washington that best meet the applicable characteristic uses, as far as is known according to the available data. However, placement in this category does not necessarily mean that all standards have been tested for or studied in the waterbody segment, and does not ensure that all characteristic uses are protected. Also, a water may be placed in this category for certain parameters while also being listed on the 303(d) list due to

impairment from a different pollutant. The assessment report will note which water quality standards have been met by which segments.

In addition, in the assessment report, Ecology will highlight those waterbody segments that show the highest levels of water quality, with high levels of data and certainty, as defined by the following (in addition to qualifying for the *Meets Tested Standards* category):

- Data showing that standards are met for all conventional pollutants, temperature, and dissolved oxygen
- No evidence of any impairment for any other reason
- Extensive and regular monitoring for water quality, and
- Strong evidence of healthy aquatic biota and habitat

All interested parties are encouraged to conduct future monitoring of all the waters in this category to determine if tested water quality standards continue to be attained or if untested water quality standards are attained.

Category 2. Waters of Concern

Sometimes data that are not sufficient for listing a waterbody segment as impaired may still raise a concern about water quality. Examples of this include:

- The data show some exceedances of an applicable water quality standard, but not enough exceedances as required for listing as impaired
- The data shows exceedances, but there are too few samples to gain confidence that it is not a random sampling or analysis error
- The data suggest impairment, but there is substantial contradictory data
- The data suggest impairment, but there are problems regarding quality assurance, sampling, laboratory procedure, or similar issues, or
- Narrative information raises concerns, but is not sufficient for listing as impaired. This includes segments that are near or between impaired segments and are believed to also be impaired, but that have insufficient data to include them as part of an extended segment or to place them on the 303(d) list even as part of an extended segment.

In these and similar cases, the waterbody segment will be placed in the *Waters of Concern* category. Some specific situations when segments should be included in this category are described in Part 9 on *Assessment Criteria*. Situations not specifically described will be assessed by Ecology on a case-by-case basis.

This category is not designed for all cases with less than absolute certainty nor for cases with a mere lack of evidence. Instead, it is for when some credible data create significant concerns of possible impairment to characteristic uses, but fall short of demonstrating impairment. To place a water in this category first requires a decision that no impairment can be shown according to this policy, and thus that the water should not be on the 303(d) list. Once that decision is made, waters will be placed in the *Waters of Concern* category when there are remaining concerns that reduce confidence that the tested standards are in fact met. Waters for which there is merely

insufficient data to determine whether a water quality standard is attained, but also with no evident cause for concern, will be placed in the *No Data* category.

The *Waters of Concern* category is intended to help Ecology and the public be aware of, track, and investigate these water quality concerns. No TMDL or other pollution control actions are mandated for these waters. The list of waters placed in the *Waters of Concern* category will be forwarded to sections of Ecology and to other agencies that have existing programs to confirm or refute possible impairment. It also will be forwarded to Ecology's permit writers for consideration of the concerns when preparing wastewater discharge permits. As with all receiving waters, the permit writers will review the data and – as part of the normal permitting process – will apply all available tools (such as receiving water studies, engineering reports, monitoring requirements, and effluent limits) to ensure that the permitted discharge is appropriate to the specific circumstances.

In addition, Ecology intends to, where possible, incorporate this category as a factor in determining priorities for grant funding (including for the Centennial Clean Water Fund and Section 319 grants and State Revolving Fund loans), monitoring projects (such as siting of ambient monitoring stations), and other voluntary water quality efforts. Ecology and others also should pursue as many opportunities as possible to conduct additional monitoring and sampling, incorporate the waterbody into existing studies, or find other means to confirm (and correct) or refute the suspected problem.

Category 3. No Data

When there is no data, or no usable data, regarding any water quality standard or characteristic use, the waterbody segment will be placed in the *No Data* category. This category is not designed for when data are available but leave some uncertainty, but instead is for when there are no data at all that can be used to make an assessment decision. This category will include all waters in Washington (except on tribal reservation lands) that lack sufficient information for placement in any other category. This category is not part of the 303(d) list.

Occasionally, Ecology receives completely unusable data. Data are considered unusable when they have such severe limitations that they cannot, as determined by Ecology, be relied upon to justify any assessment, whether it be a determination of impairment or nonimpairment or even mere concerns about water quality. Examples of unusable data include:

- The data do not indicate what pollutant was measured or what impacts were seen
- No quality control efforts are evident whatsoever, or
- No locational information is provided

This type of data will not be assessed, and the segment (in the absence of other usable data) would be placed in the *No Data* category.

In contrast, data that merely leaves some uncertainty would still be usable to place a segment in the *Waters of Concern* category. Examples of data that are less certain but still usable for this purpose include:

- The data indicate the pollutant or impact, but have a wide enough margin of error that there is low confidence as to whether a water quality standard is attained or exceeded

- Data quality control efforts are evident but fall short of the requirements in this policy, or
- Information on the location of sampling stations is given, but is imprecise enough to cause questions as to which segment the data should be assigned to

The *No Data* category is designed to highlight waters for which usable data has not yet been collected, and thus to help better target locations where it may be valuable to collect data in the future. All interested parties are encouraged to conduct future testing of these waters to determine if water quality standards are attained.

Ecology plans to prepare summary data on this category of waters, such as the number of them and their general location, but not individual descriptions of each waterbody segment in this category. Individual segments in this category can be identified as all segments not on reservation lands and not appearing in other categories.

Category 4. Impaired But Does Not Require a TMDL

This category acknowledges that some water quality impairments are not appropriate for a 303(d)listing, because either the impairment is already being properly dealt with or a TMDL is not the appropriate way to deal with it. As such, these waters that would otherwise result in a listing will instead be placed in the *Impaired But Does Not Require a TMDL* category. (In 1998 and before, these waters most often were placed on the 303(d) list, so any comparison between earlier lists and the 2002 list should be careful to count both Category 4 and Category 5 as impaired waters.)

These waters are still impaired; inclusion in this category should not be considered to deny nor excuse the water quality problems evident. However, for the reasons described below, the means of addressing the problems will not include a 303(d) listing.

This category has three subcategories.

<u>4a. Has a TMDL</u>

When data show that a characteristic use is impaired by a pollutant, but a TMDL addressing that impairment has already been developed and been approved by EPA, the waterbody segment will be placed in the *Has a TMDL* category. A 303(d) listing is not required because the primary purpose of a listing – to lead to preparation and implementation of a TMDL – has already been achieved. This will not include cases when EPA has disapproved the TMDL and not yet adopted a federal TMDL, nor when Ecology determines that the TMDL is not being successfully implemented. Progress on water quality improvements is an essential element in a successful TMDL. This category is not part of the 303(d) list.

Once a TMDL is approved, the assumption will be that the analysis and implementation measures included in it will be successful in bringing about improvements to water quality as needed to reach compliance within the time period scheduled in the TMDL. To make a determination that a TMDL is unsuccessful will require convincing evidence to the contrary. Considerations that may lead to such a determination include:

- Targeted water quality standards, including interim measures of progress toward them, have not been achieved by the time projected by the TMDL
- Required monitoring and other implementation actions as described in the Detailed Implementation Plan or elsewhere in the TMDL are not being conducted or not being conducted in a timely and effective way according to the plan
- A major event has dramatically changed the local conditions on which the TMDL was based, making it no longer applicable, or
- New information, that is recognized in the appropriate professional fields and applicable to the specific TMDL and conditions, is not being used as part of an adaptive management process

Specific quantitative criteria for determining the success of a TMDL will be based on the approved targets within the TMDL itself. A TMDL will be considered successful so long as an adaptive management process is being fully used to respond to new information or changed conditions and progress on water quality improvement is being made.

All segments covered by existing TMDLs will be reviewed during each assessment cycle. At some future date, either during or between assessment cycles, if Ecology determines that a TMDL is unsuccessful due to either implementation problems or lack of progress on water quality improvement, then, in consultation with EPA, the waterbody segment will be returned to the 303(d) list. Likewise, when a TMDL is approved by EPA for a segment on the 303(d) list, that segment will be moved to the *Has a TMDL* category, without waiting for the next assessment cycle. The rationale for moving the segment will need to be explained and documented.

In a future assessment cycle, if data indicate that the water is no longer impaired, then the segment will be placed in the *Meets Tested Standards* category. (This will not necessarily end further implementation of the TMDL. That will be determined by the terms of the TMDL.) If a TMDL has been declared completed and implementation has ended, but at that time or later the water is again shown to be impaired, then the segment will be returned to the 303(d) list.

If a TMDL has been developed and approved to address the impairment of one waterbody segment, a second segment is later determined to be impaired from the same sources, and Ecology determines that the TMDL for the first segment will also fully address the impairment of the second, then the second segment will also be placed in the *Has a TMDL* category.

4b. Has a Pollution Control Plan

When data show that a waterbody segment is impaired by a pollutant, but a local, state, or federal authority has approved a pollution control plan (or sediment clean up plan), and that plan is believed by Ecology to be reasonably expected to meet water quality standards in the near future, the segment will be placed in the *Has a Pollution Control Plan* category. A 303(d) listing is not required because the pollution control plan is designed to improve and attain water quality in a manner comparable to a TMDL that would be required by a listing. This will not include cases when Ecology determines that the plan is not being successfully implemented.

Progress on water quality improvements is an essential element in a successful pollution control plan. This category is not part of the 303(d) list.

The mere existence of pollution controls, such as permit requirements or water quality regulations, is not sufficient to qualify a waterbody segment for this category. To be placed in the *Has a Pollution Control Plan* category, rather than on the 303(d) list, the pollution control plan must meet all of the following criteria:

- Have enforceable pollution controls or actions stringent enough to attain the water quality standard or standards (or, for sediments, to clean up the sediments to sediment quality standards and prevent future sediment contamination)
- Be problem-specific and waterbody-specific
- Have reasonable time limits established for correcting the specific problem, including for interim targets when appropriate
- Have a monitoring component
- Have adaptive management built into the plan to allow for course corrections if necessary
- Be feasible, with enforceable legal or financial guarantees that implementation will occur, and
- Be actively and successfully implemented and show progress on water quality improvements in accordance with the plan

Ecology will review each pollution control plan that is suggested to meet 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. The plan must specifically indicate how the controls and other planned actions will be implemented to achieve attainment of water quality standards within the timeframe, and the actions must be implemented accordingly. Monitoring must be scheduled to verify that the water quality standards or interim targets are attained as expected. Modeling may be required to show that attainment of water quality standards is likely. Documentation must be provided to clearly explain and support how the pollution control plan meets the criteria for each specific pollutant and waterbody.

Examples that may qualify for this category, if they meet all of the criteria above, include:

- CERCLA, MTCA, or RCRA sites with signed legal agreements (e.g., Records of Decision) and source control measures to prevent future contamination
- Habitat Conservation Plans with specific plans to address water quality

Other types of plan also may qualify if they meet all of the criteria above.

If the pollution control plan addresses only one or some sources of impairment, but not all of them, then to qualify for this category that plan must be sufficient alone to fully correct the impairment without any further action regarding the unaddressed sources. Ecology will not place a waterbody segment in the *Has a Pollution Control Plan* category for the purposes of some sources while other sources continue to cause the same impairment. In this situation, the segment will be placed on the 303(d) list and the pollution control plan will instead be accounted for during the preparation of the TMDL.

All segments covered by existing pollution control plans that qualify for this category will be reviewed during each assessment cycle. At some future date, either during or between assessment cycles, if Ecology determines that the pollution control plan is unsuccessful or no longer meets the criteria above due to either implementation problems or lack of progress on water quality improvement, then, in consultation with EPA, the waterbody segment will be returned to the 303(d) list. Likewise, when a qualifying pollution control plan is approved for a segment on the 303(d) list, then, in consultation with EPA, that segment will be moved to *Has a Pollution Control Plan* category, without waiting for the next assessment cycle. The rationale for moving the segment will need to be explained and documented.

If two or more pollution control plans apply to the same pollutant in the same impaired waterbody segment, and neither plan is sufficient alone but their combined effect meets the requirements for this category, then the segment would qualify for this category as long as both plans are successfully implemented.

Like all other data and materials supporting an assessment determination under this policy, pollution control plans that qualify a segment for this category must be submitted to Ecology and will be available for public review during the comment period on the draft 303(d) list.

4c. Impaired by a Non-Pollutant

Some characteristic uses of a waterbody segment may be impaired due to aquatic habitat degradation that is not the result of a pollutant. When data show that a waterbody segment is impaired for such reasons, it will be placed in the *Impaired by a Non-Pollutant* category. A listing is not required because a TMDL would be ineffective in addressing this type of water quality problem. This is not part of the 303(d) list.

Under federal rules, pollution is defined as any impairment of beneficial uses of water. Most pollution is caused by pollutants, which are defined as inputs that are discharged or otherwise introduced into the water, such as toxic chemicals, waste material, nutrients, sediments, and heat. However, pollution can also be caused by things that are not pollutants, as legally defined. Some examples of non-pollutants that nonetheless cause impairment, and thus cause pollution, are:

- Physical habitat alterations, including:
    - Stream channelization
    - Loss of spawning gravels
    - Reduced pool/riffle ratios
    - Loss of large woody debris
- 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
- Impaired biologic communities, when the impairment is not linked or suspected to be linked to a pollutant

TMDLs are designed to allocate the input of pollutants among sources. In the case of non-pollutants, the cause of the impairment cannot be allocated, so the TMDL process is not appropriate. Other state and federal requirements, including other applications of the state water quality standards and other requirements to satisfy those standards, may apply.

If both a pollutant and a non-pollutant are involved with the same impairment or in the same waterbody segment, then the pollutant will be assessed separately and, if it exceeds the water quality standards according to this policy, the segment will be placed on the 303(d) list due to the pollutant. For example, low flow of water is a non-pollutant, but if low flow leads to high water temperatures, then the water can be listed for temperature (heat being the pollutant). Also, if channelization of a stream (a non-pollutant) leads to deposition of sediment (a pollutant), then a listing could be based on excessive sediment that impairs habitat use of the stream. In such cases, the existence of non-pollutants that affect water quality does not alter the applicable water quality standards nor the manner in which the assessment process is applied with regard to pollutants.

A determination of impairment can be made based on either numeric or narrative information. If the source of impairment is unidentified but is suspected to be a non-pollutant, instead of a pollutant, the segment will be placed in this category.

The list of waters placed in the *Impaired by a Non-Pollutant* will be forwarded to sections of Ecology and to other agencies that have existing programs to address the identified causes of impairment. In addition, all interested parties are encouraged to monitor waters placed in the category and to include them in any water quality management actions or programs that could improve water quality or eliminate impairment of characteristic uses. This might include basin plans, road management plans and improvements, or habitat restoration projects.

Category 5. 303(d) List.

Waterbody segments for which at least one characteristic or designated use is impaired, as evidenced by failure to attain the applicable water quality standard for one or more pollutants as described in this policy or by narrative evidence of impairment, or which are expected not to meet applicable water quality standards by the next assessment cycle, and which do not already have a TMDL or other adequate pollution control plan in place to address that impairment, will be placed in this category. This category will be submitted to EPA as the 303(d) list. A TMDL is required for each waterbody segment on this list, in accordance with the CWA, to guide efforts to bring it back into attainment. (The basis for prioritizing and scheduling TMDLs is found in Part 12 on *Prioritizing TMDLs*.)

For waters expected not to meet applicable water quality standards, listing will need to be based on clear trend information showing that, while they currently meet standards, they are likely to be impaired by the next assessment cycle.

A determination of impairment can be made based on either numeric or narrative information. If the source of impairment is unidentified but is suspected to be a pollutant (such as toxics, nutrients, or heat, as opposed to the non-pollutants described under *Impaired by a Non-Pollutant* above), the segment will be placed in this category.

A water that is placed on the 303(d) list due to one pollutant may also be placed in a different category for a different parameter. For example, if a second pollutant was tested for but did not

show impairment, the water would be placed in *Meets Tested Standards* for that pollutant. Also, a water will be listed more than once if it shows impairment due to multiple pollutants.

5. Waterbody Segments

The waterbody segmentation system to be used for this assessment will be the same one used for the 303(d) list in 1998. In this system, segments of rivers, streams, and lakes of less than 1,500 acres are defined as the portion of the waterbody lying within a given section of a township and range. In a few cases, where property is legally described in terms other than by section, the segments are defined by Donation Land Claims or other applicable legal description. In open waters – including marine waters, lakes of more than 1,500 acres, and estuarine areas (the lower end) of some large rivers – segments are defined by a rectangular grid sized at 4.5 seconds longitude by 4.5 seconds latitude (approximately 2,460 feet by 3,650 feet). Maps of this grid for each WRIA are available at: www.ecy.wa.gov/services/gis/maps/wria/townships/trspdf.htm. Ecology also maintains a GIS layer of this grid; contact Ecology staff for more information on this.

Upon receiving data, Ecology will locate the sample station based on the coordinates given with the data and will determine which segment the station is in. This segmentation system applies to both water column and sediment data.

Sometimes, two waters flow together within a segment, such as when a tributary enters a larger river. Where data showing impairment was collected in one of the waters, but not the other, and the waters flow together downstream of where the impairment was measured on the first water, then the second water will not be included in the listing for the impairment.

Extended Segments

Sometimes, data collected along a stretch of river or a large area of open water will extend across two or more waterbody segments. In these cases, data that accurately indicates the condition of the larger area of water can potentially be broken up by the segment boundaries so as to mask existing water quality problems. To prevent this, Ecology will consider data in extended segments.

Data related to the same pollutant from two or more adjoining segments will be combined when the data show at least one exceedance of the same applicable water quality standard in each segment. Narrative data will also be combined when the same water qualify problem is evidenced in each segment. Explanation must be provided as to why the exceedances or narrative problems in different segments appear to be related. The pooled data will then be assessed together for possible categorization of all such waterbody segments together as an extended segment.

Any number of adjoining segments can be combined as an extended segment as long as each individual segment includes at least one exceedance of the same standard or includes narrative evidence of the same problem. An extended segment can include one or more segments that

contains a sufficient number of samples and exceedances or sufficient narrative information to be categorized independently, as well as segments without sufficient information to be categorized independently.

An extended segment should normally include segments that adjoin on a side, but can include segments that touch only on a corner if the sampling pattern and/or river geography are such that they only minimally cross the neighboring segments that also touch on that corner. On rivers and streams, the adjoining segment must be immediately upstream or downstream (except for minimally crossing a corner).

If segments that are near or between impaired segments are believed to also be impaired, but there is insufficient data to include them as part of an extended segment or to place them on the 303(d) list even as part of an extended segment, then these segments will be considered for placement in the *Waters of Concern* category.

6. How to Submit Data

All interested parties are encouraged to submit data for this water quality assessment. Previously, data have been received from:

- Federal, state, and local government agencies
- Tribes
- Quasi-governmental entities, such as watershed planning councils
- Businesses
- Academic institutions
- Not-for-profit groups, and
- Private citizens

Ecology will assess all data from all sources that is received before the end of the "call for data" period. Ecology will publicize the exact schedule.

All data received will be maintained by Ecology, and will thereafter be available to Ecology staff and the public. Thus, there will be an opportunity for interested persons to use this data for future water quality assessment and environmental protection efforts in addition to this assessment.

Submittal of data in electronic format is much preferred. The most preferred format would be if the data are compatible with Ecology's Environmental Information Management database. Data received in this format will be most easily available for future users. Otherwise, a flat file, such as a spreadsheet, is preferred over a relational database. Information in paper hard copy also will be accepted.

For more information on how to submit data, see the Ecology 303(d) website at:
www.ecy.wa.gov/programs/wq/303d/index.html
Or contact Ecology staff at:

303d@ecy.wa.gov
(360)407-6386

To submit data, e-mail it to:
303d@ecy.wa.gov
Or send the data to:
303(d) Data Submittal
Steve Butkus
Department of Ecology
PO Box 47600
Olympia, WA 98504-7600

Sediments Data

For sediments, data need to be compatible with the SEDQUAL database. See www.ecy.wa.gov/programs/tcp/smu/sediment.html for information on the SEDQUAL database and submission requirements.

7. Data Quality Assurance

Quality assurance requirements must be met by all data used for this assessment. Sampling and analysis must be conducted under a documented quality assurance project plan or other quality assurance procedures that Ecology determines to be equivalent in providing for high quality data.

Guidance for preparing a quality assurance project plan is available from several sources. See Ecology: *Guidelines for Preparing Quality Assurance Plans for Environmental Studies,* publication #01-03-003 (available at https://fortress.wa.gov/ecy.publications/SummaryPages/0103003.html); *Guidelines and Specifications for Preparing Quality Assurance Project Plans*, publication #91-16; *Sediment Sampling and Analysis Plan Appendix: Guidance on the Development of Sediment Sampling and Analysis Plans Meeting the Requirements of the Sediment Management Standards*, December 1995 Draft; Department of Natural Resources: TFW-AM9-99-005, DNR publication 107; and EPA: *The Volunteer Monitor's Guide To Quality Assurance Project Plans,* EPA 841-B-96-003.

Documentation must be provided with all data submitted during this assessment process indicating that the objectives of the quality assurance project plan or equivalent quality assurance procedures were met. Parties submitting information collected by others must document that the required quality assurance objectives were met by the party that did the collecting. A form for this is available at www.ecy.wa.gov/programs/wq/303d/index.html. If this documentation (or other equivalent assurance) is not provided, the data will not be used in the assessment. This documentation requirement does not apply to data previously submitted during earlier assessment cycles.

The quality assurance project plan itself need not be submitted with the data. However, the documentation will require that it be available for review upon Ecology's request. If Ecology determines there are flaws in quality assurance planning or implementation that significantly

reduce confidence in any submitted data, including in data previously provided during earlier assessment cycles, then those data will not be used as a basis for placing a waterbody segment on the 303(d) list.

8. Data Requirements

General Requirements

Minimum information

The minimum information required in submitted data includes:

- The location of each sample station
- The date the sample was taken
- The pollutant measured
- The measured value
- The unit of measurement

It would be most helpful if submittals include additional information, including documentation of associated field conditions such as existing beneficial uses, adjacent land uses, weather during sampling, and suspected and likely sources of water quality problems, and identification of the persons conducting the sampling and analysis. Examples of beneficial uses include fish habitat, domestic supply, municipal supply, industrial supply, crop irrigation, stock watering, landscaping, and recreation. Examples of adjacent land uses include residential, industrial (specify the industry, if possible), municipal, and agricultural (dairy, cropping, forage crops, horse or cow pasture). Identification of the suspected or likely sources of water quality problem should be accompanied by an explanation of how that identification was made.

This additional information can greatly aid in assessing the data and the data quality, and in scoping subsequent TMDLs or follow-up monitoring. New federal guidance also requests this information. Aid in submitting this information is available at www.ecy.wa.gov/programs/wq/303d/index.html.

Sample location

Data submittals must include sufficient information on the location of the sample station to allow for accurate mapping. Both township, range, and section as well as longitude and latitude are desirable. For rivers, streams, and lakes under 1,500 acres, the township, range, and section is preferred. For marine waters, lakes over 1,500 acres, and the lower end of large rivers, the longitude and latitude of each sample station with the reporting format used, such as NAD27, is preferred. If neither is available, the data submittal must include a map or other clear description of the location of the sample station sufficient to allow identification of the correct segment. For contaminated sediments, the SEDQUAL database requires longitude and latitude in NAD27 format.

Data Age

Whenever possible, the assessment will be based on data collected in the previous ten years. The precise date will be ten years before the beginning of the "call for data" period. Ecology will publicize this date.

If data are available that are less than ten years old, that meet the other requirements of this policy, and that allow for a determination of impairment or nonimpairment with regard to a given segment and parameter, then data for that segment and parameter that are more than ten years old will not be used. If no newer data that meet these criteria are available, or if too little newer data is available to reach even the minimum number of samples to potentially support a listing, then data more than ten years old will continue to be used. Older data must meet all current data requirements, and will be compared against the current policy to make the assessment decision. Data that are more than ten years old but are not submitted until this assessment cycle will not be used unless specific information or rationale is provided that show that the data represent current conditions.

Data older than 10 years will be used whenever necessary to determine historical natural conditions.

Sample representation

Sampling should be conducted to represent the waterbody segment as a whole – spatially and over time – rather than limited or isolated conditions. Ideally, sampling would be done across a range of seasons or other appropriate conditions. Documentation should explain how the samples are representative both spatially and over time.

Targeted sampling during a specific season may be appropriate for a seasonal use such as anadromous fish spawning. Timing of sample collection should include the critical season for the pollutant and applicable designated use. Documentation should explain the significance of the sample timing in relation to the designated use.

Only one sample per day per segment will be used. Replicate samples taken at the same time and location will be averaged. Otherwise, the highest measurement will be used, except for dissolved oxygen, for which the lowest measurement will be used, and except for pH, for which the highest or lowest measurement will be used as applicable.

For more guidance on sampling issues and environmental study design, see Ecology: *Guidelines for Preparing Quality Assurance Plans for Environmental Studies*, publication #01-03-003; *Technical Guidance for Assessing the Quality of Aquatic Environments*, publication #91-78; and EPA Document QA/G-5S, *Guidance for Choosing a Sampling Design for Environmental Data Collection* (EPA, 2001).

Sampling

Laboratory samples should be analyzed at a state-accredited laboratory (per WAC 173-050 and Ecology Executive Policy 1-22; the list of laboratories can be found at https://fortress.wa.gov/ecy/laboratorysearch/). Data from use of the Winkler titration method for dissolved oxygen measurement is acceptable from a laboratory that is not accredited by the state, if the detectable difference is less than or equal to 0.2 mg/l. (See Standard Methods for the Examination of Water and Wastewater for method details.)

Metals should be sampled using clean sampling and analytical techniques, or appropriate alternate sampling procedures or techniques. (For guidance, see EPA, *Method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels,* 1996.)

Testing should be by an approved method with a quantitation limit that yields reliable analytical results at concentrations that are less than the criterion. (For guidance on quantitation limits refer to Tables VI-2 and VI-3 as updated in the Ecology Permit Writer's Manual, ECY Publication #92-109 and the *Sediment Sampling and Analysis Plan Appendix* for sediment analyses.) Sample data that are below the quantitation limit, but above the detection limit, will be considered to exceed criteria that are below the detection limit, but to not exceed criteria that are also above the detection limit.

Field instruments that were used should not require chemical tests for operation beyond those needed to calibrate them unless appropriate QA/QC information and documentation is provided. Field instruments, such as hydrolabs, should be operated and calibrated according to the manufacturer's recommendations, or other acceptable demonstrated method. Calibration information and any other appropriate documentation of accuracy should be submitted along with the data.

Unless data are sufficient to do otherwise, or unless the concentration can be attributed to a short term event, measurements of instantaneous concentrations will be assumed to represent the averaging periods specified in the state surface water quality standards for both acute and chronic criteria.

Specific Requirements

In addition to the general requirements above, the following specific requirements apply to data on the following topics.

Sediments

Assessment decisions for sediment contamination may be based on either chemical or biological data. The samples must be taken from surface sediments 0-15 centimeters in depth (the biologically active zone).

The method detection limit for the sample must be less than the Sediment Quality Standards (SQS). The target is to have the practical quantitation limit less than or equal to SQS. However, where the detection limit is over the SQS, and a pollutant is detected in a sample, the sample will be considered to exceed the SQS.

Data submitted for toxic pollutants must be for the specific isomer or chemical fraction that the criteria relate to.

Marine biological sediment tests must conform with WAC 173-204-315.

Toxics

For toxic pollutants in the water column, there must be at least two samples taken within a three-year period. The samples from the most recent three-year period with at least two samples will be used for the assessment. (For toxic pollutants in sediments, see the discussion of *Sediments* above.)

Fin fish muscle tissue samples and whole shellfish tissue 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. For tissue samples from anadromous or other nonresident fish, additional information should be provided to indicate the likely source of the toxic pollutant.

Data submitted for toxic pollutants in the water column must be for the specific isomer or chemical fraction that the criteria relate to. No data below the detection limit will be used in the assessment.

Fecal Coliform

Sample data for fecal coliform may be collected in 12-month reporting periods or, preferably, in reporting periods that represent distinct climatic regimes of less than a year. A distinct climatic regime may be a certain season or certain months, in whatever manner is relevant to fecal coliform and to the waterbody, and will be determined by Ecology case-by-case based on local circumstances.

Generally, a minimum of five samples is required to support placement on the 303(d) list. (In some cases, fewer than five samples can support placement on the 303(d) list, as described in Part 9 on *Assessment Criteria* below.) If done by distinct climatic regime, the data can be collected over several years, during the same reporting period each year, with no gaps in the data of greater than two years. Whenever there is sufficient data within a distinct climatic regime, the assessment period will be the distinct climatic regime.

In addition, in calculating the geometric mean in accordance with the water quality standards, averaging of data collected beyond a thirty-day period cannot be done when such averaging would mask periods of noncompliance. (WAC 173-201A-060(3)) In such circumstances, Ecology will determine an assessment period, which should be within a distinct climatic regime, must be at least thirty-days, and must be long enough to include at least five samples, but must not be so long as to include samples that would serve to mask periods of noncompliance.

Otherwise, the assessment period will be the entire year.

Furthermore, the collection (as distinct from the averaging) of fecal coliform data must not be grouped nor spread out over time so as to mask periods of noncompliance. For example, if there is evidence of problems with fecal coliform during a given season, data collection must not be limited to or primarily conducted during other seasons.

Other Pollutants

"Other pollutants" includes all quantifiable pollutants other than toxics and fecal coliform, such as temperature (heat), dissolved oxygen, pH, nitrogen, phosphorus, turbidity, and hardness. Assessments relating to these pollutants may be done based on either numeric or narrative information, as provided in the water quality standards. For example, nitrogen and phosphorus often will be evaluated using narrative criteria.

Temperature and dissolved oxygen will be assessed in one manner, and the remaining pollutants in another, as described in Part 9 on *Assessment Criteria* below.

9. Assessment Criteria

Sediments

Assessment decisions for toxic pollutants in sediments are based on the standards and procedures in Chapter 173-204 WAC, *Sediment Management Standards*.

In waters of Puget Sound (as defined in WAC 173-204-200(20)), segments will be placed on the 303(d) list for pollutants in the sediment if the segment is part of a site on Ecology's Toxic Cleanup Program's Contaminated Sediment Site List, including the 1996 published list (Ecology Pub. No. 96-1155-CP, May 1996) and unpublished sites identified since 1996. However, segments that have an active cleanup in process that meets the criteria listed for the *Has a Pollution Control Plan* category will instead be placed in that category. A segment will be placed in the *Waters of Concern* category when the segment is not included on this list but at least one sample taken within the segment exceeds the applicable Sediment Quality Standard. Waters outside Puget Sound were not considered for the 1996 Contaminated Sediment Site List. In marine waters not considered for the 1996 Contaminated Sediment Site List, segments will be placed on the 303(d) list for pollutants in the sediment if the segment is of potential concern because the average of the three highest concentrations for any chemical, biological effects, or

other reserved criteria exceeds the cleanup screening level, as described in WAC 173-204-500 through 173-204-590.

For freshwater or low salinity sediments, assessment for potential listing of segments on the 303(d) list will be based on biological tests in accordance with adopted narrative standards, and will be done on a case-by-case, site-specific basis, in accordance with WAC 173-204-330 and 173-204-340. There are no numeric sediment quality standards in WACs for chemical effects in freshwater or low salinity sediments. However, information on chemical effects in these areas can be used to place a segment in the *Waters of Concern* category. (See Ecology, *Creation and Analysis of Freshwater Sediment Quality Values in Washington State,* Pub. No. 97-323a, July 1997.)

Toxics

Toxic pollutants have significant potential to adversely affect characteristic water uses, aquatic biota, and public health – singularly or cumulatively, acutely or chronically – when present at levels above those defined in the water quality standards. Therefore, assessment decisions for toxic pollutants are based on clear detection of these substances at these levels, even if on limited occasions, rather than on the more prolonged persistence required for other pollutants.

A segment will be placed on the 303(d) list due to toxic pollutants in the water column when two or more samples within a three-year period exceed the numeric state water quality criteria or the National Toxic Rule criteria. A segment may also be listed due to toxic pollutants if it meets the criteria for narrative standards. A segment will be placed in the *Waters of Concern* category if any one sample exceeds the criteria.

A segment will be placed on the 303(d) list due to toxic pollutants in fin fish muscle or whole shellfish when either the average of the three single-fish samples with the highest concentration of a given chemical or one composite sample made up of at least five fish exceeds the criteria for human health impacts based on EPA's bio-concentration factors and water column criteria established under the National Toxic Rule. A segment will be placed in the *Waters of Concern* category when any one tissue sample exceeds the criteria.

Where a study area of tissue samples spans multiple river segments and the catch sites are identified, all waterbody segments containing a catch site will be categorized together. A rationale must be provided as to why the pollutants in fish caught in different segments appear to be related. Where a general area is identified, but no specific catch sites, the lowest downstream segment only will be placed in the appropriate category. For tissue samples from anadromous or other nonresident fish, Ecology will review information on the likely source of the toxic pollutant as it relates to the waterbody segment to be listed; if no further evidence is available to connect the pollutant to the segment, then the segment will be placed in the *Waters of Concern* category.
In addition to the above criteria, a segment will be placed on the 303(d) list if bioassay tests show adverse effects as measured by a statistically significant response relative to a reference or control (WAC 173-201A-040(2)), and the source of impairment is known or suspected to be a

pollutant. These tests will be evaluated by Ecology staff and documented on a case-specific basis consistent with WAC 173-201A-040.

Fecal Coliform

Regarding fecal coliform, the state water quality standards include provisions for determining violations based on both the average fecal coliform levels of a set of samples and the highest levels among the individual samples within that set. The assessment decisions for fecal coliform are based on these provisions.

A segment will be placed on the 303(d) list for fecal coliform when at least five samples are available within the assessment period (a year, a distinct climatic regime, or a shorter period as required to avoid masking noncompliance, as described in Part 8 on *Data Requirements* above) and the data show a violation of the water quality standard, based on either the standard for geometric mean value or the standard for more than 10% of the samples obtained for calculating the geometric mean value, with a minimum of two samples exceeding the latter. If the violation is shown for a distinct climatic regime or for a shorter period within that regime, the listing will apply only to the period of the regime, not for the entire year.

If fewer than five samples are available, a segment will be placed on the 303(d) list for fecal coliform when at least two samples violate the standard for more than 10% of samples used in calculating the geometric mean. (With fewer than five samples, the geometric mean will not be used.) Again, if appropriate, such a listing also will apply only to that period of a distinct climatic regime, not for the entire year.

A segment will be placed in the *Waters of Concern* category when the data do not meet the requirements above, but at least one individual sample exceeds the standard applicable to more than 10% of samples used in calculating the geometric mean.

In addition, regarding bacteria-related advisories from other government agencies, see the section on *Agency Advisories* below.

Temperature and Dissolved Oxygen

Temperature and dissolved oxygen vary on an annual cycle, and cause impairment only when there is too much or too little in the water. The water quality standards are designed to address the highest temperatures of the year and the lowest dissolved oxygen levels of the year, which both generally occur during summer months, or sometimes fall months for dissolved oxygen. Therefore, the assessment decision is based on the highest and lowest measurements of these pollutants, respectively.

When continuous monitoring data are available, Ecology will assess the seven-day average of daily maximum (for temperature) or minimum (for dissolved oxygen) measurements. When continuous monitoring data are not available, but data are available from at least seven days in any 30-day period, Ecology will assess the average of the highest (for temperature) or lowest (for dissolved oxygen) measurement on seven consecutive days on which measurements were taken.

In both cases, a waterbody segment will be placed on the 303(d) list for temperature or dissolved oxygen when at least one seven-day average shows a violation of the water quality standard.

When data are available from fewer than seven days in any 30-day period, Ecology will assess the highest (for temperature) or lowest (for dissolved oxygen) single measurement within that period. A waterbody segment will be placed on the 303(d) list for temperature or dissolved oxygen when these data show a violation of the water quality standard on at least one day in at least three different years.

Under the water quality standards, a measurement of temperature (or other pollutant) in excess of a standard is not a violation of the standard if the exceedance results from natural conditions. In the case of temperature and dissolved oxygen, when natural conditions exceed the standard, an allowance for human contribution is provided; a human contribution less than this allowance is not considered a violation, but a human contribution in excess of it is. Before categorization, Ecology will consider all relevant natural conditions issues relating to temperature and dissolved oxygen for which data or other evidence are available, such as by looking at peak hourly temperature increases and extreme air temperatures. Ecology will not automatically exempt the hottest days or years from consideration for listing based on temperature.

A segment will be placed in the *Waters of Concern* category when the data do not meet the requirements above but do show at least one violation of the water quality standard.

Other Pollutants

For total dissolved gas, pH, nitrogen, phosphorus, turbidity, and hardness (and any other pollutants besides toxics, fecal coliform, temperature, and dissolved oxygen), the assessment decision is based on persistence of the pollutant at levels in excess of the water quality standard. The criterion for persistence is when an exceedance of the standard is indicated for 10% of the water in the segment. This can be understood as addressing all of the water samples that theoretically could be taken from the segment, as opposed to only the water samples actually taken. The test is whether, with a given degree of confidence, the set of randomly collected samples accurately show that the water that the samples were taken from has a true exceedance percentage of at least 10%.

The true exceedance percentage will be determined using a binomial distribution method with a 90% confidence interval. A segment will be placed on the 303(d) list if, in applying this method, the data show a true exceedance percentage in the waterbody segment of 10% or greater. This method requires somewhat more than 10% of the water samples themselves to be exceedances. The precise number of exceedances required depends on the sample size. With a smaller sample size, a higher percentage of the samples must be exceedances to support a listing. With a larger sample size, the percentage of exceedances required to support a listing is lower and approaches 10%. Table 1 gives the exact number of exceedances required for sample sizes of up to 500 samples. With very small sample sizes, a minimum of three exceedances is required.

A segment will be place in the *Waters of Concern* category if the number of exceedances is below the minimum required to place it on the 303(d) list, but is 5% or more of the samples.

Table 2. Minimum number of exceedances required to place a waterbody segment on the 303(d) list, using a binomial distribution, with a 90% confidence that the true exceedance percentage in the waterbody segment is greater than or equal to 10%, for 1-500 samples.

Sample Size	Minimum Number of Exceedances	Sample Size	Minimum Number of Exceedances	Sample Size	Minimum Number of Exceedances
1-2	NA	157-164	22	334-343	42
3-11	3	165-173	23	344-352	43
12-18	4	174-182	24	353-361	44
19-25	5	183-191	25	362-370	45
26-32	6	192-199	26	371-379	46
33-40	7	200-208	27	380-388	47
41-47	8	209-217	28	389-397	48
48-55	9	218-226	29	398-406	49
56-63	10	227-235	30	407-415	50
64-71	11	236-244	31	416-424	51
72-79	12	245-253	32	425-434	52
80-88	13	254-262	33	435-443	53
89-96	14	263-270	34	444-452	54
97-104	15	271-279	35	453-461	55
105-113	16	280-288	36	462-470	56
114-121	17	289-297	37	471-479	57
122-130	18	298-306	38	480-489	58
131-138	19	307-315	39	490-498	59
139-147	20	316-324	40	499-500	60
148-156	21	325-333	41		

Narrative Standards

In addition to the numeric standards discussed above, the assessment of water quality can be based on narrative information. Commonly, for example, a listing may be based on narrative information showing that fish stocks are adversely affected by pollutants in the water, as distinct from numeric information that measures the level of the pollutants directly.

A segment will be placed on the 303(d) list on the basis of violating narrative standards 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, as measured by indices of resource condition or resource characteristic or other appropriate measure. Deleterious changes in physical fish habitat is not required. The alteration must be measured and documented using a generally accepted method based on site-specific information, with literature thresholds appropriate to the situation or with reference sites

- Documentation of impairment of an existing or designated use related to the environmental alteration on the same waterbody segment, and
- Identification of a human contribution to the environmental alteration

Decisions based on the impact of pollutants on fish, including on endangered species, under the narrative standards will be based on the most recently published information from and discussions with federal, tribal, and state fish management agencies. Any new data submitted for these decisions will be assessed by Ecology staff in consultation with federal, tribal, and state fish management agencies. Where agreement cannot be reached, the final recommendation on the support of designated uses, for purposes of this assessment, will be made and documented by Ecology.

Narrative information regarding non-pollutants will be assessed in the same manner for possible placement in the *Impaired by a Non-Pollutant* category.

A segment will be placed in the *Waters of Concern* category when the narrative information does not demonstrate impairment in accordance with the criteria above, but does raise lesser concerns about fish stocks, aquatic habitat, or other beneficial uses.

Non-Pollutants

A waterbody segment will be placed in the *Impaired by a Non-Pollutant* category when a characteristic use of the segment is identified as being impaired and the impairment is not the result of a pollutant. Examples of non-pollutants are given in the description of the *Impaired by a Non-Pollutant* category above.

Identification of segments to be listed for altered water flow will be based primarily on data collected and information produced through the efforts of the Salmon Recovery Act of 1998 (ESHB 2496), the Watershed Management Act (ESHB 2514) and the Statewide Strategy to Recover Salmon (1999). Segments not addressed through these efforts can be placed in this category if there is information on all of the following:

- In-stream flow measurements, including but not limited to hydrographs (synthesized hydrographs must be based on actual flow measurements from the specific stream)
- Documentation of how fish habitat in the specific stream is related to changed flow (e.g., scour from increased peak flows, In-stream Flow Incremental Methodology, Toe-Width, minimum flows set in rule or as conditioned by water rights, or other methods that may be appropriate in cases such as falling water or wide delta areas)
- Documented impairment of fish use on the same waterbody segment, as shown by data from SASSI, the state Department of Fish and Wildlife, or tribes, or by NWPPC Sub-basin plans, Ecology Basin Assessments, or other appropriate assessments, and
- Identified human contribution to the changed flows, such as documentation of diversions upstream of the waterbody segment or of changed storm runoff patterns related to land-use or cover changes

Assessments regarding inadequate water flows will be based only on considering the needs of in-stream designated uses, not on the needs of out-of-stream uses.

If both a pollutant and a non-pollutant are involved with an impairment, then the pollutant will be assessed separately for possible placement on the 303(d) list due to the pollutant.

Agency Advisories

Segments covered in whole or in part by a swimming, fish, or shellfish advisory issued by the state Department of Health (DOH) or by local health departments, or by similar advisories from other appropriate agencies, will be categorized as follows:

- 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 or the national human health-based water quality criteria (e.g., toxics or pathogens), then the segment will be placed on the 303(d) list
- If 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 the *Waters of Concern* category
- Closure of a shellfish bed by the state Department of Health, based on its Shellfish Policy, due to fecal coliform will be sufficient to place all segments overlapping the closed shellfish bed on the 303(d) list

The advisory must be based on fish, shellfish, sediment, or water column data specific to the waterbody segment. Ecology will directly assess the data prompting the advisory when available. Listings 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 Department of Natural Resources. Listings 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.

10. Other Assessment Considerations

Natural Conditions

Waterbody segments will not be placed on the 303(d) list when Ecology determines that the impairment of characteristic uses or the exceedance of a water quality standard is due to natural conditions or processes. In the absence of other reasons for listing, such waters will be placed in the *Meets Tested Standards* category. However, segments will be placed on the 303(d) list when human activities cause impacts in addition to natural conditions and the human impacts are in excess of the allowable limits on such impacts – where applicable, such as with temperature and dissolved oxygen, as provided in the water quality standards. (See Chapter 173-201A WAC for the significance of natural conditions in Washington's water quality standards, including the level of human contribution allowed beyond certain natural conditions.)

A determination regarding natural conditions will require data, with no presumption either way. The determination will be made with the data available at the time, without awaiting further studies. A decision not to list a waterbody segment because the impairment is from natural conditions will require, at minimum, identification of a likely natural source or process sufficient

to produce the impairment and reason to believe that there are no human impacts or none in excess of the allowable limits on such impacts. Wilderness areas or other areas with no significant human impact will be assumed to represent natural conditions. On the other hand, a decision to list a waterbody segment on the 303(d) list will require, at minimum, identification of a likely human source of the pollutant sufficient to produce the impairment or to exceed the allowable limits beyond natural conditions. Where absolutely no data at all are available regarding natural conditions or human sources, a segment will be placed in the *Waters of Concern* category.

The assessment report will note those segments not placed on the 303(d) list due to natural conditions. Documentation will be required that addresses the natural source or process and how it relates to the impairment, and to explain how or why potential human sources can be ruled out as contributing to the impairment of uses. Documentation should also include modeling results and related studies, whenever available. The assessment may include well-reasoned best professional judgment, but this must be accompanied by data that supports the determination.

Short-Term Impacts

Unless stated otherwise in applicable laws, regulations, or standards:

- For impairments related to transient and recurring short-term conditions, such as storm events or small spills, a waterbody segment will not be placed on the 303(d) list if those conditions occur on fewer than 30 days in a year. (This does not prevent listings based on samples taken over a period of fewer than 30 days, if those samples are associated with a non-transient condition.)
- For impairments related to longer lasting but still temporary conditions, such as large oil spills, a waterbody segment will be placed on the 303(d) list if the impairment is expected to exist until the next assessment cycle.

Seasonal Listings

Waterbody segments can be placed on the 303(d) list for seasonal impairments when the water quality standards are not attained or the characteristic uses are impacted only during a portion of the year. (This does not apply to temperature or dissolved oxygen listings, because standards for these are already based on the highest temperature or lowest dissolved oxygen levels over the course of the year.) To support a seasonal listing, the data must show both that the water is impaired during that season and that it is not impaired during the remainder of the year. Preparation of a TMDL is still required.

Ecology will determine the designated season. Documentation will be required showing that the season is appropriate for the specific pollutant in the specific waterbody. The seasonal listing must account for all the times of the year when the same general conditions exist that contribute to the water quality problems, not just the same days of the year as when the samples were taken or exceedances were found. This policy may not be used to create listings that are likely to mask periods of noncompliance with water quality standards, such as by listing an inappropriately short season or selectively listing only certain days.

Use of Previously Submitted Data

Data that were submitted for use in previous assessment cycles will not be used as the basis for placing a waterbody segment on the 303(d) list in any of the following situations:

- The data are more than ten years old, in those circumstances described in Part 8 on *Data Requirements* regarding data age
- The data requirements, water quality standards, or assessment criteria have changed, and the data do not meet the new requirements, standards, or criteria
- More sophisticated analysis using calibrated models of the data now shows that water quality standards are met, or
- Flaws in the data are identified that show water quality standards were in fact met. If the identified flaws are in the assessment based on that data, not in the data itself, the data will continue to be used, but will be assessed anew.

Otherwise, previously submitted data will be pooled with any newly submitted data that meets the requirements of this policy, and the assessment will be based on all of the data together.

Other Situations

Ecology reserves the right to make assessment decisions on matters not addressed by this policy or in a manner not in complete accordance with the details of this policy as needed to address unforeseen situations. The ultimate judgment in assessment decisions will be based on whether, based on the available data, characteristic uses in a waterbody segment are supported or impaired as determined in accordance with the water quality standards and the relevant state and federal laws and regulations.

Ecology will, in consultation with EPA, correct any errors identified in the 303(d) list or the overall water quality assessment as soon as it is aware of the error, without waiting for the next assessment cycle. This includes misidentified segments, misreading of the data, misapplication of this policy, and similar errors. This does not apply to requests to change an assessment decision based on new data prior to the next assessment cycle nor to disagreements with Ecology's judgment in making an assessment decision.

11. Prioritizing TMDLs

The waterbody segments placed on the 303(d) list will be prioritized by Ecology as high, medium, or low priority for preparing TMDLs. The prioritization will be based on the following primary criteria. These criteria are drawn from the Memorandum of Agreement between EPA and Ecology described below and on statutory requirements:

- Vulnerability of waterbodies to degradation
- Risks to public health, including drinking water
- Risk to aquatic life and other water-dependent wildlife, especially threatened and endangered species

If an impaired waterbody segment ranks high for any one of these criteria, the TMDL for that segment will be given a high priority. For example, if the pollution is severe enough to cause a high risk to public health, then it will be ranked as a high priority, even if there is no apparent vulnerability to further degradation or risk to other uses. If the segment ranks medium for any one of these criteria, and not high for any of them, the TMDL will be given a medium priority. Otherwise, it will be given a low priority.

Secondary criteria that may be considered where applicable are:

- Other designated uses
- Timing of grant and loan projects
- Discharge permit issuance and renewal
- FERC hydroelectric project re-licensing schedules
- Existing water quality management plans
- Public interest and support
- Priorities from other planning processes, including section 319
- Ecology's short-term programmatic needs and resources
- Technical feasibility
- Judicial orders and decisions
- National policies and priorities
- Likelihood of success
- Opportunities for pollution prevention

Whenever one or more of these secondary criteria is identified that would make a TMDL significantly more beneficial, effective, feasible, or timely, Ecology will raise the priority level of that TMDL. For example, an impaired segment that is considered to pose a medium risk to uses of the water may be raised to a high priority TMDL if, perhaps, grant funding is available and strong public interest is evident. These secondary criteria may also be used as tie-breaking factors in setting priorities. The secondary criteria will not be used to reduce a priority ranking.

In some cases, an impaired waterbody segment may be covered by new laws or regulations that set new permit or land use requirements designed to meet water quality standards. If these new requirements are designed and reasonably expected to correct the impairment, but there has not been sufficient time for the impact of those laws or regulations to be confirmed or reflected in the condition of the water, then that waterbody segment will be assigned a low priority for

preparing a TMDL. However, if the new requirements cover only some, but not all, of the sources of the impairment and due to this the new requirements are not expected to fully correct the impairment, then the TMDL will be prioritized normally and the new requirements will instead be accounted for during the preparation of the TMDL.

Priorities for TMDLs related to sediment listings will be set by Ecology's Toxic Cleanup Program.

The MOA on TMDLs

EPA and Ecology signed a Memorandum of Agreement (MOA) in 1997 regarding TMDLs. Under this MOA, waterbody segments on the 303(d) list in 1996 that are still on subsequent 303(d) lists must have TMDL studies completed by 2014. The MOA provides a watershed-based process to schedule TMDLs. This scheduling is prioritized using the same primary and secondary criteria listed above.

The process for prioritizing TMDLs under the MOA begins with annual TMDL scoping meetings in each Ecology region. Ecology assembles a cross-program team of staff to review the 303(d) listed waters and watershed conditions in designated Water Quality Management Areas (WQMAs) around the state. Four WQMAs, one in each region, are started through the process each year, on a five-year rotation cycle (so that every listed water in the state will be considered once every five years). The Ecology team then identifies a draft TMDL priority list for 303(d) listed waterbody segments in each of the four WQMAs.

These draft priority TMDL lists then enter a public process to be validated or revised. Following public input, the list of TMDLs and other studies is reviewed by Ecology's Environmental Assessment Program (EAP). EAP assesses the cost of each project and determines their capability to produce the work beginning in the next state fiscal year. Ecology management prioritizes the projects to fit within the current resources available. The result of this process is a draft Project List that contains the Statewide TMDL Priority List for the following fiscal year.

The Statewide TMDL Priority List is then shared with stakeholders and interested individuals statewide for comment. Public comments are received and responded to via a responsiveness summary. After weighing public comments, a final Statewide TMDL Priority List is produced and promulgated to the public via an Ecology Focus Sheet.

Consistent with intergovernmental cooperation with tribes, Ecology's preparation for scoping includes conferral with interested tribes on their priority water quality issues.

Between the 2002 assessment process and the MOA date of 2014, Ecology will complete two full rotations through the five-year watershed cycle. This will provide two periods for scoping and re-prioritizing TMDL schedules in each WQMA in response to new information and opportunities. Some TMDLs may be done out-of-cycle based on a threat to public health, such as drinking water, or to address ESA issues, or to take advantage of unique opportunities to coordinate with other efforts (such as watershed planning processes, opportunities to work with

other jurisdictions, or private initiatives). Out-of-cycle TMDLs may also be done by Ecology to better distribute work.

The settlement agreement in this case requires that TMDLs be completed for waters listed in 1996, unless the delisting of these waters is approved by EPA consistent with requirements of Section 303(d). Therefore, Ecology will identify waters not listed on the 2002 303(d) list which were on the 1996 303(d) list and whose removal was not previously approved by EPA in 1998.

While Ecology's MOA obligations are tied to the 1996 list of impaired waters, later listings will be incorporated into the same general schedule described here, in order to address waters that are high priority according to the criteria listed above and to gain efficiency in project management.

Abbreviations

CERCLA – Comprehensive Environmental Response Compensation and Liability Act (also known as Superfund)
CFR – Code of Federal Regulations
CSL – Cleanup Screening Level (for sediments)
CWA – Clean Water Act
Ecology – Washington State Department of Ecology
EPA – U.S. Environmental Protection Agency
ESA – Endangered Species Act
FERC – Federal Energy and Regulatory Commission
MOA – Memorandum of Agreement
MTCA – Model Toxic Control Act
QAPP – Quality Assurance Program Plan
QA/QC – Quality Assurance/Quality Control
RCRA – Resource Conservation and Recovery Act
SASSI – Salmon and Steelhead Statistical Inventory
SMS – Sediment Management Standards
SQS – Sediment Quality Standards
TMDL – Total Maximum Daily Load
WAC – Washington Administrative Code
WQP – Water Quality Program (of the Department of Ecology)
WQMA – Water Quality Management Area
WRIA – Water Resource Inventory Area

Approved: _____

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