



Focus on **Clean Water**

from Ecology's Water Quality Program, Watershed Management Section

January 2006 Update

Getting to Clean Water

Clean water is vital for our quality of life – for both economic development and a healthy environment. Unfortunately, some water bodies are so badly polluted they need extra help. One of the primary tasks of the Department of Ecology's water quality program is to identify and improve the quality of Washington's polluted streams, rivers, lakes, and marine waters. Ecology uses a system of rules and policy developed in compliance with federal and state law to help guide improvements to water quality. Washington's citizens help with this in many ways – by observing and measuring conditions in local streams, by participating on local groups that develop and implement water quality improvement plans or total maximum daily loads (TMDLs), and by changing their daily activities to produce less water pollution.

Water Quality Standards

The federal Clean Water Act proclaims a national goal that water should be "fishable and swimmable." To achieve this goal and meet legal requirements, Washington State has established water quality standards (WQS) to protect the beneficial uses of our bays, inland seas, lakes, rivers, and streams. These beneficial uses include drinking water, recreation, and habitat for fish and other aquatic life. The water quality standards address toxic chemicals, such as arsenic, and other pollutants, such as harmful bacteria. They also set limits on other conditions, such as the maximum temperature for a water body, because water that is too warm harms fish and other aquatic life.

The latest revision of the WQS was submitted to the federal Environmental Protection Agency (EPA) on August 1, 2003. This revision has not yet been approved or rejected by EPA.

To learn more about the water quality standards, visit our Web site at www.ecy.wa.gov/programs/wq/swqs

Water Quality Assessment

The Clean Water Act established a process to identify and clean up polluted waters. Every two years, all states are required to prepare a list of water bodies that do not meet water quality standards. This list is called the 303(d) list because the process is described in Section 303(d) of the Clean Water Act. All water bodies identified on the list must attain water quality standards within a reasonable period, either through a water quality improvement plan also known as a total maximum daily load or TMDL, or other pollution control mechanisms.

To develop the list, Ecology compiles its own water quality data and invites others to submit water quality data they have collected. All data submitted need to be collected and assessed using appropriate scientific methods as described in the agency's listing policy. Once the list is put together, the public has a chance to review it and give comments. The results of the assessment are submitted to EPA as an "integrated report" to satisfy federal Clean Water Act requirements of sections 303(d) and 305(b). The list helps us to use state resources more efficiently by focusing our limited time on water bodies that need the most work. The list of water bodies in



the assessment reflects local government, community, and citizen recognition of water quality problems in Washington, demonstrating citizen interest and commitment to clean water.

Washington has produced several 303(d) lists describing the state's water pollution problems. However, the story they told was not complete. A water body was either listed as polluted or it was not listed at all. This year, the state produced a list that tells a more complete story about the condition of Washington's waters. The new list divides water bodies into one of five categories:

Category 1 - Meets tested standards for clean waters.

Category 2 - Waters of concern, which includes waters where there is some evidence of a water quality problem for a given pollutant, but not enough to be considered a priority for a TMDL at this time.

Category 3 - No data or insufficient data.

Category 4 - Polluted waters that do not require a TMDL.

Category 5 - Polluted waters that require a TMDL or "the 303(d) list."

The state is required to prepare a 303d list every two years which means that additional water bodies are added to the list. As TMDLs are implemented, water bodies are removed from the 303(d) list. Ecology must eventually develop plans to improve the quality of all waters on that list.

EPA approved the latest 303(d) list of impaired waters on November 4, 2005. All water bodies identified on the list must attain water quality standards within a reasonable period, either through a TMDL, or other pollution control mechanisms. A TMDL identifies how much pollution needs to be reduced or eliminated to achieve clean water.

To learn more about the water quality assessment, visit our Web site at http://www.ecy.wa.gov/programs/wq/links/impaired_wtrs.html

Water Quality Improvement Plans (TMDLs)

Total maximum daily loads (TMDLs), or water quality improvement plans, describe the type, amount, and sources of water pollution in a particular water body; analyze how much the pollution needs to be reduced to achieve clean water; and provide strategies to control pollution.

As a result of a 1998 legal settlement, Ecology has a deadline of 2013 to develop and implement plans to address about 650 polluted water bodies throughout the state that were listed on the 1996 303(d) list. The settlement agreement established a schedule for completing the required water quality improvement plans by 2013. The schedule includes interim targets at five-year intervals. We achieved the first five-year target of 249 plans required by June 30, 2003. However, every time Ecology issues a new list, we find more water bodies that need TMDLs.

Ecology regulates point sources (pollution that generally comes out of a pipe or an activity that has a wastewater or stormwater permit) by placing limits on discharges. For pollution from

nonpoint sources (pollution that comes from many smaller, diffuse sources), Ecology works with other agencies, local governments, landowners, and citizens to identify and implement specific pollution controls or “best management practices.”

We have learned a lot from the TMDLs we’ve already done, and we are now implementing some new strategies because of what we’ve learned. These include addressing almost all problem pollutants in a watershed at one time, standardizing procedures and reports, and capitalizing on partnerships. In addition, future water quality improvement plans will benefit from working with existing committees and with entities that now have experience in the process. This experience should allow communities to move more quickly to take action to improve water quality. In any given year, Ecology is typically working on approximately 100 TMDLs at various stages of development.

There are many areas where we are seeing better water quality as a result of TMDLs. Some examples include reduced bacteria counts in the Chehalis River, Dungeness River watershed, Granger Drain, and the Skokomish and Stillaguamish rivers. Fish habitat improvements are resulting from implementation of the Simpson Timberlands temperature TMDL on the Olympic Peninsula. Local groups are hard at work maintaining the phosphorus levels in Lake Chelan. In addition, wastewater treatment plant upgrades, streamside plantings and fencing, and pet waste control, are happening all around the state. We are working to expand local involvement and the number of water bodies seeing improvements statewide.

Best Management Practices at Work through TMDLs



Before
Animals have access to the salmon stream.



After
TMDL work often includes fencing the riparian area (to reduce bacteria levels) and restoring the stream banks with native vegetation (to increase shading).

Each year, Ecology evaluates the need for new TMDLs in various parts of the state. Decisions on which plans are to be completed next are made with the help of local communities.

Water Quality Improvement Plan List (begin work July 2006)

Regional Office	Primary Location	Waterbody(s) Name	Pollution Problems
Northwest	Whatcom County	Drayton Harbor	Fecal coliform (bacteria)
Northwest	King County	South Lake Sammamish tributaries	Fecal coliform (bacteria)
Northwest	King, Snohomish counties	Snoqualmie River	Temperature
Southwest	Pierce County	Puyallup River	Fecal coliform (bacteria)

We are gathering initial information in the following counties to identify water bodies needing water quality improvement plans (begin work in July 2007):

- Western Washington: Clallam, Jefferson, Lewis, Grays Harbor, Pacific, San Juan, Whatcom
- Eastern Washington: Asotin, Chelan, Columbia, Douglas, Garfield, Walla Walla, Whitman, Yakima

Ecology is working with many local, state, and federal agencies to meet the TMDL schedule and improve the health of Washington’s waters. We are partnering with the EPA, U.S. Forest Service, U.S. Navy, King County Department of Natural Resources, and numerous local governments to clean up specific water bodies of special interest to those agencies.

To learn more about TMDLs, visit our Web site at http://www.ecy.wa.gov/programs/wq/links/impaired_wtrs.html

The Water Quality Data Act

In 2004, the Water Quality Data Act (WQDA) relating to the collection and use of water quality data was signed into state law and is now codified in 90.48 RCW. The law requires that data, meeting the principles laid out in the law, shall be used for determining the degree of support of designated uses, establishing a TMDL, and placement of a water body on the 303(d) list.

The law further requires Ecology to develop policy regarding water quality data use and collection. The main policy issues to be addressed are:

- Establish how scientific research and literature is used for modeling in TMDLs and for revisions to water quality standards.
- Describe criteria to establish data credibility for use in actions that involve characterizing the quality of a water body such as TMDLs and 303(d) listing.
- Recommend appropriate training and experience for data collection.

Ecology is developing the policy with the assistance of an advisory group of stakeholders. The policy is to be developed with a final report to the Legislature in late 2006. Progress and updates will be posted on Ecology's Web site as the policy is developed.

The policy will be developed in two phases. The first phase involves issues that are addressed in project planning documents such as a Quality Assurance Project Plan (QAPP) that covers the planning and execution of data collection.

The first phase draft is completed with the exception of recommendations for training activities for field data collection and sampling.

The second phase deals with how collected data are used by the agency in decisions relating to the water quality standards such as TMDL studies and 303(d) listings. A main point of the credible data bill is the requirement to develop policy that prescribes how scientific research is used when considering revisions to the water quality standards (WQS). Phase 2 includes the following issues:

- Using Ecology's Environmental Information Management database
- Requirements for data used in TMDL evaluations (technical reports)
- Requirements for modeling used in technical reports
- WQS revision procedures
- 303(d) data call protocol and impairment decisions

The second phase includes revision to the policy established in 2002 for the Water Quality Assessment which includes the 303(d) data call and impairment decisions. EPA approved the 2004 Water Quality Assessment (also known as the Integrated Report) which includes the list of impaired waters or 303(d) list. Revision of the policy is the first step toward the 2006 Water Quality Assessment for Washington State. Ecology includes public participation at each step of development of the report as a part of the process. The public participation process for the Water Quality Assessment policy development will be concurrent with the public process for the whole WQDA policy.

Revised Work Plan for Establishing Water Quality Data Policy

Schedule:

When	What
Summer '05-winter '05-'06	Draft policy phase 2 and Water Quality Assessment listing policy in preparation with internal advisors
Spring '06	External advisory meeting with presentation on the draft policy phase 2
Spring '06	Informal public review of draft policy phase 2
Spring '06	State Register notice and formal public review of WQDA and WQA policy package
Winter '05	Report to legislative committee
Spring '06	Internal and external advisory meeting
Summer '06	Public workshops and hearings
Summer '06	State Register notice and final policy with the response to comments

To learn more about the Water Quality Data Act, visit our Web site at <http://www.ecy.wa.gov/programs/wq/qa/index.html>

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