



Frequently Asked Questions about Total Maximum Daily Loads (TMDLs)

from Ecology's Water Quality Program, Watershed Management Section

Q: What are TMDLs?

A: The terms Water Cleanup Plan and TMDL are often used to mean the same thing. However, it is often best to think of a Water Cleanup Plan as a process to return water bodies to a healthy condition and a TMDL as the technical part of that process. TMDLs are technical studies that describe the type, amount, and sources of water pollution in a water body; they look at how much the pollution needs to be reduced or cut out to meet water quality standards; and provide targets and recommendations to control the pollution. A Water Cleanup Plan is the actual public process in which local organizations and citizens plan actions to reduce the pollution in order to bring a water body back to a healthy condition.

Q: Aren't TMDLs just more regulation?

A: No. A TMDL may result in lower permit limits or additional pollution reduction activities, but federal and state laws already require the discharge to be clean. TMDLs are a tool required by the federal Clean Water Act (CWA) passed in 1972 but do not add any more regulation beyond the CWA. What TMDLs do is focus and coordinate programs and groups already working on water quality issues. When a TMDL is underway in a watershed, local government agencies, the local community, and the scientific community work together to restore the water body to a healthy condition. Often, the TMDL can become the focus of interest groups, financial resources, and other agencies that may offer planning and financial support to the process. Most often, the TMDL studies find that if current programs are implemented and existing regulations are enforced, water quality can be restored and protected.

TMDLs address two types of pollution: point sources and nonpoint sources. Point sources include industries or municipalities that are permitted to discharge wastewater. They are regulated under the CWA National Pollutant Discharge Elimination System (NPDES).

For pollution that comes from many, varied sources such as septic tanks, vehicles, farms, pets, household and garden chemicals, and more (nonpoint pollution) – the pollution we all create –, the focus is on reducing the sources through various voluntary best management practices (BMPs) but not creating new regulations.

Q: If a TMDL study is completed and the data indicate the water quality standards are being met, will that end the process?

A: If a TMDL study is completed and the data indicates that a water body both meets water quality standards and is anticipated to meet standards during critical periods (seasons or years that are problematic to meeting water quality standards), Ecology will recommend to the Environmental Protection Agency (EPA) that the water body be removed from the 303(d) list (list of impaired water bodies). However, there may still be a need to monitor the water body, or continue the implementation of ongoing BMPs to ensure that the standards will continue to be met over time.

Q: Do TMDLs subject landowners around a stream or lake to more or stricter enforcement actions?

A: The nature of enforcement actions taken by the state of Washington does not change whether or not there is a TMDL on a water body. Under the Revised Code of Washington (RCW) 90.48, it is illegal to pollute waters of the state. Regardless of whether or not a TMDL is being implemented, RCW 90.48 gives Ecology authority to take enforcement actions against pollution if no corrective actions are being taken on the sources. It is possible that through state or local resources, technical and financial assistance and enforcement could become focused in certain areas as part of the TMDL. Corrective actions taken as part of any enforcement activity would not be stricter with a TMDL in place. However, individuals regulated by permits could receive additional requirements based on the TMDL. Corrective actions taken as part of a TMDL should lead to a reduction or elimination of the pollution problem thereby reducing the need for enforcement. Individuals not regulated by a permit are encouraged to participate voluntarily in the water cleanup or TMDL process to reduce pollution coming from their land.

Q: Shouldn't a TMDL identify the specific sources of the pollution?

A: Specific pollution sources are typically identified during the water cleanup process. A TMDL study is usually the first level of evaluation. It is used to verify the extent of the impairment and to locate the general areas of the watershed that are contributing most to the problem. In many cases, the scientific study may be able to identify only where the concentrations of pollution are the highest. The ability to identify specific sources is limited by a number of factors: the size of the water body being studied, the amount of data available, whether the source is already known, whether the source is at one location or spread out over a large area, and whether the source is steady or periodic. Subsequent monitoring during water cleanup helps identify pollution sources and measure effectiveness of the source controls. To identify each and every source is rarely possible, but a TMDL usually succeeds in identifying major sources and improves our understanding of which areas should be the focus of cleanup efforts. Local understanding of land-use practices by individual landowners and businesses is essential to focus specific source-identification monitoring and water cleanup efforts.

Q: Why do the same water quality standards apply to streams where natural conditions (such as wildlife) are a factor in the pollution problem?

A: Water quality standards take into account the acceptable levels for a pollutant, regardless of the source. The water quality standards are designed to protect water for various beneficial uses (swimming, fishing, water supply, etc.). Natural levels of bacteria, minerals, and other naturally-occurring substances are generally not considered pollution. If the natural condition of a stream is above the standards, then that natural condition becomes the state standard for that water body. However, the beneficial uses of the stream or lake remain the same. To protect those uses, the human-caused sources would be required to reduce their input to prevent further degradation of the water body. TMDLs take into consideration the natural conditions, so greater contributions from natural sources means less from human-caused sources.

Q: How do we know that water quality met these water quality standards fifty or more years ago?

A: A TMDL's goal is not to return water quality to what it was many years ago but instead protect it for the ways we may want to use it today and into the future. Numerous laboratory and field studies have been undertaken to help scientists determine levels of pollutants safe for people, fish and other wildlife.

Historical water quality data are available for some water bodies. Today's water quality standards are based on up-to-date information on what is necessary to protect streams and lakes for current and future uses.

We know that 50 years ago, some practices, including the discharge of raw sewage, made some water bodies much more polluted than they are now. Others were more pristine. We can use scientific methods such as monitoring, computer modeling and comparison to natural, undeveloped watersheds to estimate historic or natural conditions.

Q: How are Water Cleanup Plans implemented?

A: TMDLs are implemented through collaborative efforts by local, state and federal governments, industries, businesses, and citizens in the watershed. Ecology or EPA issues discharge permits for point sources (discharge that generally comes out of a pipe or an activity that has a wastewater or stormwater permit) that include limits on the amount of pollution that can be discharged to the body of water. For pollution from nonpoint sources (pollution that comes from many, varied sources such as septic tanks, vehicles, farms, pets, household and garden chemicals, and more), Ecology works with other agencies, local governments, landowners, and citizens to identify and implement BMPs or other specific pollution controls. Education of watershed residents about ways to reduce pollution is almost always a key component to the water cleanup process.

Q: How does Ecology ensure compliance with TMDLs?

A: Where Ecology administers its NPDES permit programs (for potential point source pollution), we will work with permittees to reach the goal of clean water within an acceptable timeframe. However, nonpoint pollution sources currently represent the biggest impact on water quality. Therefore, Ecology works with local governments, tribes, watershed groups, and private landowners to ensure that BMPs are implemented and managed. Our goal is to identify solutions and water quality improvement activities with the assistance and support of local landowners and help implement those actions on a voluntary basis.

In the event of a significant pollution discharge from a private property or facility, Ecology would approach the owner or operator to encourage BMPs or pollution control that will reduce or eliminate the adverse effects of the discharge, or the situation may be referred to the local conservation district or other entity for technical assistance on improved practices, plans, or correction. Ultimately, Ecology, other agencies and local government will use a combination of tools – including education, technical and financial assistance, wastewater discharge permits, and compliance actions to improve water quality. Ecology may rely on enforcement when the discharge is serious, or when other approaches have not worked.

Q: How do we know that the TMDL is working?

A: Monitoring is an essential part of the TMDL process and a monitoring program is identified as a component of the Detailed Implementation Plan. Often local people assist by conducting effectiveness monitoring during and after TMDL implementation activities and after best management practices have been installed. Where local monitoring efforts are lacking, Ecology will conduct monitoring on TMDL projects. The results of this monitoring will show whether or not the waters are becoming cleaner. If waters are not improving, these data will act as a catalyst for adaptive management. Under adaptive management, Ecology reviews what activities were taken to improve local water quality and will work with all parties to develop additional or more appropriate pollution controls.

If all efforts to meet standards are exhausted, the water body will be re-entered on the 303(d) list for a new TMDL.

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