What is a TMDL?

Total Maximum Daily Loads (TMDLs) are developed as a tool to help restore and protect waterbodies where beneficial uses are impaired or threatened for aquatic life, recreation, public drinking water, or human health. According to the Clean Water Act, states must develop TMDLs for all the waters identified on their Section 303(d) list of impaired waters, according to their priority ranking on that list.

The objective of a TMDL is to determine the loading capacity of a waterbody and to allocate the load among different pollutant sources. A TMDL identifies the links between the waterbody use impairment, sources of impairment and the pollutant load reductions needed to meet the applicable water quality standards. It serves as a roadmap for measures that can be taken to improve water quality.

Under the TMDL, sources of pollutants are classified as either point sources, which receive a waste load allocation (WLA), or nonpoint sources, which receive a load allocation (LA). Point sources include all sources subject to regulation under the National Pollutant Discharge Elimination System (NPDES) program, including but not limited to wastewater treatment facilities and municipal separate storm sewer systems (MS4s). Nonpoint sources include all remaining sources of a pollutant as well as natural background loads. In addition to accounting for seasonal variations in water quality, a margin of safety (MOS) will be calculated to account for uncertainty in predicting how well pollutant reductions will result in meeting water quality standards. An allowance for future growth (AFG) can be included to account for anticipated new or increased pollutant loadings.

Nonpoint source load reduction actions under a TMDL involve collaboration between local, state, and federal partners and can include non-regulatory and incentive-based (e.g., a cost-share) programs. In addition, waterbody restoration can be assisted by voluntary actions on the part of citizen and/or environmental groups.

Basic Steps of the TMDL Process Include...

- **Assess the Situation**
  - Measure water quality by collecting chemical samples, examining and counting fish and aquatic insects and taking measurements of streams.
  - Compare data to water quality goals to determine if the waterbodies are healthy.
  - For healthy waters, no TMDL is needed and the waterbodies should continue to be protected.
  - For unhealthy waters, the causes and sources of pollution should be identified.

- **Develop a Strategy**
  - Estimate the existing amount and sources of pollution. Compare this to the amount allowable to meet water quality standards.
  - Divide the allowed amount among the point and nonpoint sources.
  - Recommend actions that will reduce the amount of pollution. A computer model to test what if scenarios may be used.
  - Prepare a report for comment, then submit to U.S. EPA for approval.

- **Implement the Strategy**
  - Where necessary, adjust discharge permits for industries and sewage treatment plants (point sources).
  - Offer grants, loans or other assistance to reduce polluted runoff from cities and farms (nonpoint sources).
  - Look for innovative ways to reduce pollution, such as green infrastructure or controlled drainage best management practices.
  - Work with other agencies and the public to encourage pollution reduction.

- **Evaluate and Adapt**
  - Use Adaptive Management approach to:
    - Assess water quality conditions as measures are implemented.
    - Identify successes in improving water quality.
    - Adjust strategies and timelines, where needed, to achieve water quality improvement goals.
    - Lop a new plan.
Does a TMDL give Ohio EPA any additional regulatory authority over non-point source pollution?

Preparing a TMDL does not give Ohio EPA additional regulatory authority over nonpoint sources of pollution that are targeted for load reduction under the TMDL. The TMDL contains “reasonable assurances” that load reductions from nonpoint sources can be accomplished, but this normally involves pointing to things like activities that are supported through various grant programs and other efforts, including voluntary measures, that reside outside of Ohio EPA.

Is there flexibility to adjust the implementation strategies under the TMDL to align other state water quality plans, such as H2Ohio?

Yes. The TMDL is predominantly a state-delegated program. While U.S. EPA is involved in reviewing state TMDL plans, states take a lead role in crafting and implementing the strategies within the TMDL to meet the pollutant reduction and water quality improvement goals. As part of the TMDL process, Ohio EPA would work in collaboration with key stakeholders at the local, state, and federal level in developing actions, measures, and timelines for meeting the goals in the TMDL. Using principles of adaptive management, the State works with partners to identify successes and continuously assess and adjust strategies needed for pollutant reductions and water quality improvements.

What is the process in creating the TMDL and how is the public involved?

Ohio has a robust five-step public involvement process for its TMDL program. These requirements are found in Ohio Revised Code (ORC) Section 6111.562 and allow for public participation in four key stages of TMDL development process:

1. the project assessment study plan;
2. the biological and water quality report;
3. the loading analysis plan;
4. the preliminary modeling results.

There is also opportunity for public comment and review on the official draft of the TMDL under ORC Section 6111.563. Stakeholders will be notified and asked to review and comment on each of the five steps. Each document through the preliminary TMDL modeling results will have a minimum 30-day comment period; the official draft TMDL receives a 60-day comment period.

How do I stay informed?

Ohio EPA sends announcements about the TMDL, its findings and associated public meetings to local newspapers and to those who express an interest. To be added to the list for updates, subscribe to Ohio EPA’s TMDL listservs at: ohioepa.custhelp.com/ci/documents/detail/2/subscriptionpage. For information about TMDLs in Ohio, visit: epa.ohio.gov/dsw/tmdl/index.aspx.