

What is a TMDL?

Amanda Abnee, Extension Associate for Environmental and Natural Resources Issues
Kimberly Henken, Extension Associate for Environmental Issues

A total maximum daily load, or TMDL, estimates the maximum amount of a pollutant that a water body can receive and still meet water quality standards. A TMDL is required when a stream is assessed as being impaired. An impaired stream means the stream does not meet one or more of its designated uses. Designated uses may include supporting aquatic life, swimming, wading, drinking water supply use, fish consumption, etc.

Once a stream is determined to be impaired, a TMDL is required, and the stream is placed on the impaired waters list, known as the 303(d) List of Waters. The 303(d) List and the subsequent TMDL are requirements of the Clean Water Act. The 303(d) List is generated by states during most even numbered years and is based on stream and lake assessment information.

The TMDL process includes three major steps:

1. Establish the TMDL
2. Allocate pollutant amounts
3. Plan for TMDL implementation

Establish the TMDL

Establishing a TMDL includes gathering data about the sources of the pollutant, including both point and nonpoint sources. Point sources of pollution are those that can be traced directly to a point of origin like a discharge pipe. Nonpoint sources cannot be traced back to a single point of origin. Nonpoint pollutants are often carried in runoff and can be a combination of several sources.

Allocate Pollutant Amounts

After establishing a TMDL for a water body, the pollutant loads or amounts are allocated between the various identified sources. The process involves establishing a natural background as well as setting an allocation for point and nonpoint sources of pollution. The calculation includes a margin of safety to ensure that the water body can be used for its designated purposes and an allowance for seasonal variation in water quality. While the allocation for point sources can be divided between the various contributors; the allocation for nonpoint sources typically cannot be divided. In general, the nonpoint source allocation is the remainder after subtracting the point source loading and natural background contributions from the total allowed.

Plan for TMDL Implementation

In Kentucky, the TMDL program is administered through the Kentucky Division of Water. The Division maintains a web site for the program, which includes approved and proposed TMDLs. The site is accessible at: <http://www.water.ky.gov/sw/tmdl/>. TMDLs are implemented through the Watershed Management Framework, a coordinated effort to more effectively and efficiently manage the resources within KY's major river basins.

TMDLs are developed by individual states or by the Environmental Protection Agency if states cannot develop them. EPA regional offices review and approve TMDLs developed by states.

Additional information about the entire TMDL process is available through the U.S. Environmental Protection Agency web site at: <http://www.epa.gov/owow/tmdl/>.

Sources:

Kentucky Division of Water. 2005. *Kentucky Total Maximum Daily Load Program*. <http://www.water.ky.gov/sw/tmdl/>.

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