

TMDL Program

Protecting Our Nation's Waterways

ALTHOUGH OUR NATION HAS GREATLY IMPROVED THE QUALITY OF OUR WATERWAYS SINCE THE PASSAGE OF THE CLEAN WATER ACT THREE DECADES AGO, THERE ARE STILL HUNDREDS OF THOUSANDS OF MILES OF RIVERS AND STREAMS, AND MILLIONS OF ACRES OF LAKES AND PONDS, THAT FAIL TO MEET THE CLEAN WATER ACT'S GOALS OF "FISHABLE AND SWIMMABLE" WATERS. ONE OF THE MOST COMPREHENSIVE TOOLS WE HAVE TO TACKLE WATER POLLUTION IS THE TOTAL MAXIMUM DAILY LOAD (TMDL) PROGRAM UNDER THE CLEAN WATER ACT. HERE ARE SOME FREQUENTLY ASKED QUESTIONS ABOUT THE TMDL PROCESS AND ITS ROLE IN PROTECTING OUR NATION'S WATERWAYS.

What is the Clean Water Act?

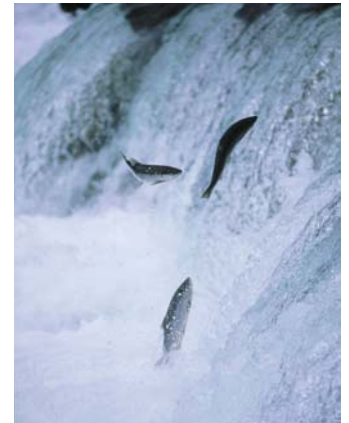
- The federal Clean Water Act is the nation's primary legal mechanism for addressing water quality problems. One of its basic goals is to restore and maintain water quality to ensure that the public can swim, fish and otherwise use our waters.
- The Clean Water Act plays a significant role in states that rely on coastal, freshwater and marine resources to support many different uses, including agriculture, aquaculture, recreation, tourism, sport and commercial fishing.
- The Clean Water Act uses a two-tiered approach to protect water quality. First, the Act limits discharges of pollution from "point sources," which include pipes, storm drains and culverts. Second, the Act uses a water quality based approach to regulate all discharges—from both point and nonpoint sources—according to their effect on the receiving water. "Nonpoint sources" include runoff from roads, golf courses and agricultural operations.



The TMDL program helps protect coastal areas such as Kaneohe Bay in Hawaii from water pollution (Photo courtesy of Douglas Peebles).

What are Water Quality Limited Segments?

- As an essential first step in the water quality based approach, states must identify which of their waters are polluted. Section 303(d) of the Clean Water Act requires each state to compile a list of all "Water Quality Limited Segments" (WQLSs), which are water bodies within the state's boundaries that do not currently meet – or are not expected to meet – state water quality standards despite the application of pollution controls on point sources. This list of WQLSs is known as a "303(d) list."
- Although each state is responsible for developing and updating its 303(d) list, EPA must review and approve (or disapprove) each list to ensure that it satisfies the Clean Water Act's requirements.
- Once a state identifies its WQLSs, it must publicize TMDLs for each water body on the 303(d) list.



Aquatic life greatly depend on healthy water quality (Photo by Galen Rowell/Mountain Light).

What is a TMDL?

- A Total Maximum Daily Load (TMDL) is the maximum amount of a given pollutant that may be discharged or "loaded" into a WQLS without violating water quality standards.
- Once this maximum load (known as "loading capacity") is determined, the TMDL must allocate it between

all the various current and future pollution sources as necessary to achieve the applicable water quality standards.

- Each TMDL must categorize all sources of pollution into either point or nonpoint sources, and identify the amount of pollution each individual source is permitted to discharge.



Lakes and ponds are also protected under the Clean Water Act's TMDL program (Photo by Galen Rowell/Mountain Light).

- For example, if a stream does not meet the water quality standards for nitrogen, a TMDL must be calculated to determine the maximum amount of nitrogen that can be discharged into the stream without violating water quality standards. If one golf course (nonpoint source), one storm drain (point source) and natural runoff (background source) contribute nitrogen to the stream, the TMDL must allocate the total maximum daily load among these sources. Since the stream is not meeting water quality standards, the TMDL will limit the amount of nitrogen that each source can discharge into the stream.

What does a TMDL do?

- TMDLs are important tools to remedy water pollution problems. By identifying the sources of water pollution and the steps necessary to remedy those problems, TMDLs establish a plan of action to achieve state water quality standards.
- TMDLs also serve as valuable measuring sticks regarding the adequacy of current pollution control measures. By establishing numeric targets, TMDLs inform state and federal agencies as well as the public about whether current efforts are sufficient, or if more needs to be done, to enable a water body to meet state water quality standards.

Who is responsible for issuing TMDLs?

- Each state is responsible for calculating TMDLs for all pollutants impairing each WQLS. EPA then must determine whether the TMDLs satisfy the requirements of the law and must approve or disapprove the TMDLs within 30 days.
- EPA may approve a TMDL only if it meets specific requirements established by the Clean Water Act and its implementing regulations.
- If EPA disapproves any TMDL, it must step into the state's shoes and, within 30 days, establish a TMDL that implements the applicable water quality standards.

What happens after a TMDL is approved?

- Each state must implement its TMDLs to bring the WQLSs up to water quality standards, ensuring that these waters will, once again, support and protect fish, shellfish and other wildlife.
- After a state establishes a TMDL, it must revise that TMDL as necessary to achieve the goal of restoring and maintaining the chemical, physical and biological integrity of the water body.



(Photo courtesy of US Forest Service)