Clean Water Act and TMDLs

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Summary

Section 303(d) of the Clean Water Act requires states to identify waters that are impaired by pollution, even after application of pollution controls. For those waters, states must establish a total maximum daily load (TMDL) of pollutants to ensure that water quality standards can be attained. Implementation of this provision has been dormant until recently, when states and EPA were prodded by numerous lawsuits. The TMDL issue has become controversial, in part because of requirements and costs now facing states to implement a 25-year-old provision of the law. Congressional activity to reauthorize the Act, a possibility in the 2nd Session of the 105th Congress, could include TMDL issues, but the direction for any such action is unclear at this time.

Background

The Clean Water Act (CWA) contains a number of complex elements of overall water quality management. Foremost is the requirement in section 303 that states establish ambient water quality standards for water bodies, consisting of the designated use or uses of a water body (e.g., recreational, public water supply, or industrial water supply) and the water quality criteria which are necessary to protect the use or uses. Through permitting, states or EPA impose wastewater discharge limits on individual industrial and municipal facilities to ensure that water quality standards are attained. However, Congress recognized in the Act that, in many cases, pollution controls implemented by industry and cities would be insufficient, due to pollutant contributions from other unregulated sources.

Under the Act, states must identify lakes, rivers, and streams for which the local wastewater discharge limits are not stringent enough to achieve water quality standards. For each of these water bodies, a state is required to set a total

maximum daily load (TMDL) of pollutants at a level necessary to ensure that applicable water quality standards can be attained and maintained. States identify waters which do not meet water quality standards after implementation of technology-based controls by industrial and municipal dischargers. States are required to identify impaired water segments and develop TMDLs which include best estimates of pollution from point sources (industrial and municipal) and nonpoint sources (runoff from farms, forests, urban areas, etc.). A TMDL sets the maximum amount of pollution a water body can receive without violating water quality standards. If a state fails to do this, the Environmental Protection Agency (EPA) is required under section 303(d) of the Act to develop a priority list for the state and make its own TMDL determination.

Section 303(d) provides the analytical and regulatory means for using water quality standards to upgrade waters that remained polluted after the application of technologybased requirements. A TMDL includes a quantitative assessment of water quality problems, pollution sources, and pollution reductions needed to restore and protect a river, stream, or lake. TMDLs may address all pollution sources, including point sources such as sewage or industrial plant discharges, nonpoint sources, such as runoff from roads, farm fields, and forests, and naturally occurring sources, such as runoff from undisturbed lands. A Total Maximum Daily Load, as the name implies, is the sum of pollutants a waterway can absorb from all these sources, plus a margin of safety, and still meet water quality standards for designated uses such as drinking water, aquatic life, and recreation. According to EPA, a TMDL provides a holistic view of a watershed, measuring the effect of each pollution source on the entire system. It also provides a framework for identifying specific actions needed to reach water quality standards.

When TMDLs are established, wastewater treatment plants for communities and industry may need new technology. States and EPA enforce the TMDLs through permits which include the pollutant limits and a schedule for compliance. For waters impaired by nonpoint source runoff, because there are no federal controls over these sources under the Clean Water Act, the primary implementation measures will be state-run nonpoint source management programs coupled with state, local, and federal land management programs and authorities. Farmers and ranchers may be asked to use alternative methods in their operations to prevent fertilizers and pesticides from reaching rivers. Cities may be required to control and treat runoff from their streets.

Implementation

TMDLs are one element of water quality management programs conducted by states to implement the CWA Other activities include standard setting, monitoring, permitting, and enforcement. Most states have lacked the resources to do TMDL analyses, which involve complex assessment of point and nonpoint sources to ascribe and quantif' environmental effects for particular discharge sources. EPA has both been reluctant to intervene in the states and has also lacked resources to do so itself. Thus, there has been little implementation of the provision which Congress enacted in 1972. Until recently, EPA did little even to prod states to identify waters that remain pollution-impaired, much less undertake analyses to develop TMDLs, as required by the Act.

Responding to the failure of both states and EPA to meet these requirements, however, environmental groups have filed more than 20 lawsuits in the last few years. Environmentalists see implementation of section 303(d) as important both to achieving the overall goals and objectives of the Act, but also to pressuring EPA and states to address nonpoint and other sources which are responsible for many of the existing water quality impairments nationwide but have not been regulated up to this point. Courts in a number of states, including Oregon, Georgia,

Pennsylvania, and Arizona, have ordered that TMDLs be developed expeditiously.

The pending or active TMDL litigation falls into four general categories, according to EPA:

(1) situations in which a state has failed to perform any activities under section 303(d);
(2) situations in which a state has engaged in some but insufficient activities to implement section 303 (d);
(3) challenges to EPA's listing of impaired waters or 'MDL approval decisions or EPA's promulgation of TMDLs; and
(4) situations in which the plaintiff is using the TMDL requirements to achieve other CWA objectives, such as upgrading water quality monitoring programs. (See Table 1 for a summary.)

In an effort to address concerns with the existing TMDL program, in 1996 EPA convened a Federal Advisory Committee Act (FACA) group to help develop a consistent, national 'TMDL program. The FACA group is expected to make recommendations to the EPA Administrator in mid-1998. In the interim, however (because of the pending lawsuits and existing requirements of the law), EPA recently issued a policy which for the first time calls on states to develop long-term schedules for implementing TMDLs. Under the policy released in August, EPA is asking states to establish TMDLs in order to meet water quality standards within 13 years.[1]

The TMDL issue has been extremely controversial. States are concerned that they do not have the resources or necessary data to meet tight deadlines to develop and implement TMDLs. States do not necessarily disagree with implementing the TMDL provisions of the Act; for most, it is a resource question. A number of EPA regional officials echo the states' concerns that, given uncertainty in both federal and state environmental funding, recent TMDL policies with specific timetables may be overly aggressive. Further, states say that TMDLs are just one of many components of a state's water quality management program and that they should not necessarily be prioritized over other management elements. Environmentalists are critical that states appear unwilling to commit to aggressive deadlines for a program that has existed in the law for 25 years.

Issues for Congress

TMDL issues are likely to be of interest to policymakers when Congress considers Clean Water Act reauthorization in the future, possibly in the 2nd Session of the 105th Congress However, the direction of that consideration is unclear at this time. Interest groups and stakeholders have widely different views on the current program and how to improve it, either administratively or legislatively. So far no legislation has been introduced in the 105th Congress to address or modify the TMDL provisions of the Clean Water Act. A number of issues and options could be addressed.

- **Do nothing at this time.** At this point, EPA officials are hopeful that, working with the advisory committee, they can develop improvements to the TMDL program that would not require legislative changes to the Act, since the outcome of the legislative process is uncertain. Working with those stakeholders (the group is mandated to look at technical issues, not legislative concerns), EPA has not yet identified specific issues that

could only be resolved legislatively, but that could change when the committee presents its recommendations in 1998.

• **Strengthen the current program**. Environmentalists' agenda for the TMDL program could include a number of elements to strengthen and clarify the program, including: imposing clear deadlines on states and EPA to carry out section 303(d), as there are no statutory deadlines in current law; make clear that EPA has a non-discretionary duty to act if a state fails to do so and define what EPA actions and/or penalties would follow; and ensure that states periodically update lists of impaired waters, so that TMDL implementation evolves as water quality conditions change. The TMDL program would not be an issue today, environmentalists contend, if states and EPA had incorporated it in the nation's water quality management programs beginning in the 1970s.

• **Provide flexibility**. States who now must prepare and enforce TMDL programs and industry groups representing wastewater dischargers who could be subject to additional control requirements in order to meet TMDL requirements may seek more time and flexibility to implement TMDL plans and programs. States, in particular, favor policies that would not commit them to any specific timeframes for establishing and implementing TMDLs, but instead call for schedules to reflect the availability of sound science. Environmentalists respond that section 303(d) currently has so much flexibility that until recently its implementation has been disregarded by states and EPA.

• **The program's impact on nonpoint sources.** Section 303(d) currently does not speci~ whether TMDLs should cover nonpoint sources, where they partially or wholly contribute to water quality impairments, but EPA's long-standing interpretation is that sources of polluted runoff should be included, along with point sources. To do otherwise, to limit TMDL implementation only to point sources, would likely impose significant new pollution control requirements on cities and industries. However, farming and forestry groups, among others, would favor a clarifying interpretation that excludes these sources from the TMDL program, so that they do not bear the costs of implementation and pollution controls.

• **Consider the resource question.** EPA acknowledges that states face significant financial and technical resource challenges in implementing the TMDL program. EPA itself does, as well. The cost of TMDL development may average $1 million per study, with perhaps 50,000 required nationwide for all pollution-impaired waters.[2] EPA has identified financial assistance available both from EPA sources and other agencies, including CWA nonpoint pollution management grants and State Revolving Funds, as well as farm bill conservation programs such as the Environmental Quality Incentives Program. For FY1998, the Administration requested an additional $5 million for state grants to develop TMDLs (a 6% increase above FY1997 state CWA grant amounts). Congressional action on reauthorization and appropriation bills could focus on the issue of available resources for this program.

Finally, the recent attention to the TMDL program raises some challenging questions about the quality of the nation's

surface waters, those subject to the Clean Water Act. After 25 years of implementing that law, and investment of approximately $550 billion in public and private funds [3] which has yielded great improvements, EPA and states acknowledge that a substantial portion of the nation's waters still are impaired or threatened by pollution. The most recent national inventory of water quality reported that nearly 40% of surveyed water bodies remain too polluted for fishing, swimming, and other uses.[4] Yet those numbers only represent rivers and lakes actually surveyed annually by state monitoring programs - typically about one-third of all waters. This leaves unanswered what would be known if all waters were surveyed routinely.

On the other hand, the TMDL assessments now being developed by states, as a result of court orders or prodding by EPA, are yielding more precise water quality information. These assessments are identifying large numbers of stream segments which still require additional measures before water quality standards are attained (for example, 962 stream segments in Idaho and 340 in Georgia). Full implementation of the TMDL process is likely to inform policymakers more completely about water quality conditions nationwide. It is also likely to show that the remaining challenges to achieving the goals of the Clean Water Act are more numerous and difficult than many policymakers have assumed.

Table 1. Summary of TMDL Litigation (as of Aug.13, 1997)

STATES WITH RESPECT TO WHICH EPA IS CURRENTLY UNDER COURT ORDER TO ESTABLISH TMDLs IF STATES DO NOT ESTABLISH TMDLs

Oregon (1986 consent decree)
Alaska (1992 court order)
Georgia (1996 court order)
California (North Coast) (1997 consent decree)
Pennsylvania (1997 consent decree)
Arizona (1997 consent decree)
New Mexico (1997 consent decree)
West Virginia (1997 consent decree)

STATES WITH RESPECT TO WHICH PLAINTIFFS HAVE FILED LITIGATION SEEKING TO COMPEL 303(d) LISTS AND/OR TMDLs

New York
New Jersey
Delaware (consent decree filed with court 8/97)
North Carolina
Alabama
Louisiana
Kansas
Montana
Wyoming
California (Newport Bay)*
Washington
Oregon
Idaho

*** Complaint voluntarily dismissed pending settlement discussions**

STATES WITH RESPECT TO WHICH NOTICES OF INTENT TO SUE HAVE BEEN FILED

Alabama (pending notices in addition to complaint *filed* 3/97)
Florida
Mississippi
Colorado
Maryland
Oklahoma

EARLY TMDL CASES THAT HAVE BEEN DISMISSED

Lake Michigan I (WI, IL, IN, MI) (Scott v. City of Hammond 530 F. Supp. 288 (N..D. III. 1981)), *affd in part, rev'd in part,* 741 F.2d 992 ((7th Cir. 1984)))

Lake Michigan II (related case challenging EPA actions in response to Scott order, case dismissed 1991)

Minnesota (dismissed 1993)

Source: U.S. Environmental Protection Agency, Office of Water, TMDL Litigation, August 1997
http://www.epe.gov/OWOW/tmdl/lawsuit1.html

Endnotes

1 This is a longer timeframe than is being mandated as a result of some of the TMDL litigation. Courts in Georgia and Idaho have ordered or recommended, for example, that TMDLs be prepared for all impaired waters within 5 years.

2 Houck, Oliver A. "TMDLs, Are We There Yet?: The Long Road Toward Water Quality-Based Regulation under the Clean Water Act." *Environmental Law Review*, v.27, August 1997. p.10401.

3 Vogan, Christine R. "Pollution Abatement and Control Expenditures, 1972-1994," *Survey of Current Business,* Sept. 1996, pp.66-67.

4 U.S. Environmental Protection Agency. Office of Water. NATIONAL WATER QUALITY INVENTORY, 1994 REPORT TO CONGRESS, EXECUTIVE SUMMARY. December *1995.* 1 vol. Available at: http://www.epa.gov/305b/

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