

Testimony

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House of Representatives

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CLEAN WATER ACT

Proposed Revisions to
EPA Regulations to
Clean Up Polluted
Waters

Statement of Peter F. Guerrero, Director,
Environmental Protection Issues,
Resources, Community, and Economic
Development Division



Mr. Chairman and Members of the Committee:

We are pleased to be here to discuss our recent analysis of economic and compliance issues associated with two recently proposed rulemakings by the Environmental Protection Agency (EPA) intended to strengthen its Total Maximum Daily Load (TMDL) program. The TMDL program is intended to ensure that the nation's waters meet water quality standards. TMDLs are used to restore water quality by identifying how much pollution a body of water can receive and still meet its standards. The amount of pollution entering the water is then reduced to that level.

TMDLs were first required by the Clean Water Act in 1972. EPA first issued regulations governing states' development of TMDLs in 1985 but did little to ensure that states enforced them. In recent years, lawsuits alleging inaction by EPA and the states have spurred increased attention to the development of TMDLs by imposing judicial deadlines on some states. Nonetheless, only about 1,300 of the up to 40,000 TMDLs estimated as needed to clean up the nation's polluted waters were approved by EPA through fiscal year 1999.

EPA's TMDL proposal is actually comprised of two parts. The first part (the TMDL regulation) would add requirements to clarify and strengthen how waters requiring TMDLs are identified, and would provide more specific requirements as to how TMDLs are developed. Specifically, the proposal would include requirements for implementation plans and other provisions intended to help ensure that pollutant reduction allocations in a TMDL will be implemented so that water quality standards will be attained and maintained.

The second part (the NPDES regulation) would revise EPA's National Pollutant Discharge Elimination System program that controls the discharge of pollutants from "point" sources of pollution (e.g., industrial facilities and municipal wastewater treatment plants that discharge pollutants through a pipe). The revisions would expand

EPA's authority to issue permits in certain circumstances. It would also require new large or significantly expanding facilities to obtain offsetting reductions in discharges from other facilities releasing pollutants into a polluted body of water before these new or expanding facilities can begin discharging into those waters. In addition, the revisions would allow, under certain circumstances, the use of point source discharge permits to control pollution from certain agricultural and silvicultural activities that have generally been treated as "nonpoint" sources. These revisions are intended to help states and EPA in developing and implementing TMDLs, and hence were issued at the same time as the proposed TMDL regulation.

Certain statutes governing federal rulemaking activities generally require EPA to evaluate the economic impacts of proposed regulations such as the two proposals discussed at today's hearing. Specifically, the Regulatory Flexibility Act requires an agency to prepare an "initial regulatory flexibility analysis" if it determines that a proposed regulation will have "a significant economic impact on a substantial number of small entities" such as small businesses and small governmental jurisdictions. In addition, if on the basis of a preliminary analysis an agency determines that a proposed regulation includes a federal mandate that may result in annual expenditures of \$100 million or more by state, local, and tribal governments in the aggregate, or by the private sector, the Unfunded Mandates Reform Act of 1995 requires more detailed analyses of costs, benefits, and alternatives. A similar directive is imposed on agencies by Executive Order 12866.

On the basis of its economic analyses, EPA concluded that neither proposed regulation would result in expenditures by governments and the private sector in excess of \$100 million in any one year, and therefore did not conduct more detailed analyses under the Unfunded Mandates Reform Act. With respect to the Regulatory Flexibility Act, EPA determined that because neither proposed regulation directly regulates small entities, neither would have a significant economic impact on a substantial number of small entities. As requested by the House Committee on Transportation and Infrastructure, our report assessed (1) the reasonableness of EPA's economic analyses for the two

proposed regulations and (2) whether EPA's determinations under the Unfunded Mandates Reform Act of 1995 and the Regulatory Flexibility Act were adequately supported.¹

In summary, Mr. Chairman, we found the following:

- Limitations with EPA's economic analyses of the proposed regulations for the TMDL and NPDES programs raise questions about their reasonableness and about the determinations that EPA has based on them. Of particular consequence, the outcomes of the analyses were heavily influenced by a number of key assumptions. Among the most important of these assumptions was that states are essentially in full compliance with current regulations, or will be as a result of existing statutory and regulatory requirements. Therefore, EPA included in its estimate only the costs that would result from the new requirements in the proposed regulations and not the costs of doing TMDLs generally. However, compliance with existing TMDL regulations has been problematic, and future compliance in the absence of the proposed regulation is uncertain. We found similar uncertainties with key "baseline" assumptions that affect the cost estimates associated with the proposed NPDES regulation. Another key limitation of the analyses was that they did not sufficiently recognize that the key water quality data available to EPA to identify the number of waters not meeting standards (and, hence, the number of TMDLs that will be needed) are incomplete, inconsistently collected by states, and sometimes based on outdated and unconfirmed sources. As a result of these limitations, EPA's cost estimates are subject to substantial uncertainty. Under these circumstances, it would have been appropriate for EPA to assess the effect of different assumptions on the agency's cost estimates. Had it done so, the agency would likely have produced a range of possible costs exceeding those included in its analyses.

¹Clean Water Act: Proposed Revisions to EPA Regulations to Clean Up Polluted Waters (GAO/RCED-00-206R, June 21, 2000).

□ Given the uncertainties surrounding EPA's cost estimates, we disagree with EPA that the agency's analyses adequately supported its determinations under the Unfunded Mandates Reform Act of 1995 that more detailed analyses of costs, benefits, and alternatives were not needed for either of the proposed regulations. However, in the case of the requirements for additional analyses under the Regulatory Flexibility Act, case law supports EPA's determination that because its proposed revisions to both regulations do not *directly* regulate small entities, additional analyses were not required.

Background

The primary changes in EPA's proposed revisions to its TMDL regulations include requiring the states to (1) establish a more comprehensive listing of waters that do not meet standards, (2) consider specific factors when prioritizing their listed waters, (3) develop TMDLs within 15 years once a water is listed, (4) include 10 specific elements in a TMDL, and (5) develop implementation plans that include 8 elements such as demonstrating "reasonable assurance" that a TMDL will be implemented. The reasonable assurance requirement is intended to help ensure that pollutant reduction allocations in a TMDL will be implemented so that water quality standards will be attained and maintained. This means that for point sources, states will issue enforceable NPDES permits and for nonpoint sources (such as farms), states must demonstrate that controls are likely to be implemented, such as through state programs requiring the use of "best management practices."

EPA estimated the annual cost that states would incur in implementing the proposed TMDL revisions to be between \$10.3 million and \$24.4 million per year (in 1999 dollars) from 1999 through 2015. The agency estimated costs for developing implementation plans (\$5.3 million to \$14.3 million per year); administrative costs to the states resulting from public participation requirements (\$4.8 million to \$9.5 million per year); and administrative costs to EPA for tasks such as reviewing implementation plans (about \$18,000 annually). The amounts do not include costs to meet current regulations,

consent decrees, and commitments states have made to EPA for developing TMDLs within a specified time period.

The primary changes to the NPDES program include requiring new large (or significantly expanding) dischargers to obtain an “offset” of up to 1.5 times their proposed discharge before releasing pollutants into an impaired water; giving states and EPA, under certain circumstances, discretionary authority to require dischargers of stormwater from forestry activities to have a NPDES permit; and giving EPA authority to designate certain sources (including some animal feeding operations and aquatic animal production facilities) as needing NPDES permits in cases where EPA develops a TMDL. The proposed NPDES regulation would also provide EPA authority to object to (and ultimately reissue) expired and state-issued permits that have been administratively continued for dischargers to impaired waters in NPDES-authorized states, where there is no TMDL or where the permit contains limits that are inconsistent with a TMDL.

EPA estimated the annual costs to private entities and federal and state governments in implementing the proposed NPDES regulation to be between \$17.2 million and \$65.2 million per year (1999 dollars) from 1999 to 2015. The major areas in which EPA estimated costs were for the construction industry and other storm water dischargers to obtain offsets (\$11.33 million to \$41.76 million per year); for the silvicultural industry to implement pollutant controls (\$3.45 million to \$12.93 million per year); for animal feeding operations and aquatic animal production facilities to implement pollutant controls (\$1.92 million to \$9.58 million per year); and for federal and state governments’ administrative costs (\$0.515 million to \$ 0.964 million per year).

Limitations in EPA’s Economic Analyses Raise Concerns About the Usefulness of its Cost Estimates

We found limitations with EPA’s economic analyses of the proposed regulations for the TMDL and NPDES programs that raise questions about their reasonableness and about the determinations that EPA has based on them. Some of these limitations are common to both of the analyses. Such is the case, for example, regarding EPA’s use of water

quality data that are incomplete and in some cases unreliable. Other limitations are more specific to the individual analyses. As a result of these limitations, EPA's cost estimates are subject to substantial uncertainty. Under these circumstances, it would have been appropriate for EPA to assess the effect of different assumptions on the agency's cost estimates.

EPA's Economic Analysis of the TMDL Proposal

We identified several limitations of EPA's economic analysis for the agency's proposed TMDL regulation that raise questions about its usefulness for decision-making. The most significant of these relate to EPA's assumption of full compliance with existing regulations and the agency's use of key water quality data that are of limited quality. Other limitations include the use of unverified information, the exclusion of private sector costs and costs to other federal agencies, and a limited analysis of benefits and discount rates.

□ Assumption of Full Compliance.

In our view, the most significant limitation of this analysis is its assumption that states are, or will be, in full compliance with existing regulations. The practical effect of this assumption on EPA's cost estimate is that the agency did not include costs associated with states' implementation of current TMDL regulations; it only included costs associated with the specific changes and additions to the TMDL program set forth in the proposed regulation. For example, EPA estimated the costs of developing implementation plans and for additional public participation requirements that are not currently required but are in the proposed regulation.

EPA believes that full compliance with existing regulations is a reasonable assumption in this case since at the time of its analysis (Dec. 1998), there were consent decrees in 11 states to enforce existing TMDL requirements and pending litigation in another 15 states. EPA officials also told us that the likelihood of future lawsuits would be sufficient to ensure that all states will be in compliance with existing regulations at some point in the

future. In addition, EPA cited the fact all states have submitted comprehensive schedules to EPA stating when they would develop TMDLs for their impaired waters. Agency officials said this was further evidence that full compliance was a reasonable expectation.

Nevertheless, it is clear that substantial noncompliance exists with current TMDL regulations, and there is uncertainty as to if, and when, states will achieve full compliance. Indeed, one of the stated purposes of the proposed TMDL regulation is to strengthen the existing program. Among other things, the proposed regulation would require states to develop TMDLs within 15 years of listing impaired waters, and would require reasonable assurance that controls will be implemented so that water quality standards will be attained and maintained.

Absent the proposed revisions to EPA's regulations, full compliance with the existing program's requirements is uncertain. For example, only about 1,300 of the up to 40,000 TMDLs that EPA estimates are needed had been developed by the end of 1999. Moreover, the litigation record indicates that not all lawsuits have resulted in consent decrees; a few of the existing decrees addressed only a subset of the waters in the state; and not all states have pending lawsuits. Furthermore, the commitments that many states have made to EPA to develop TMDLs within a certain time period are non-binding, and their fulfillment will likely depend on the availability of state funding. Given that funding for water quality management programs has been documented to be significantly less than needed, and that TMDL development competes with other priority activities (such as NPDES permitting and enforcement), we believe it is uncertain as to when states will be able to develop all needed TMDLs.

Uncertainties about compliance with existing regulations are addressed in both the OMB's "Best Practices" (for conducting economic analyses) and EPA's economic guidance. Both acknowledge that full compliance is often not a reality and that the degree of compliance with existing regulations can significantly affect the results of the

analysis. In addition, both documents state that an agency’s economic analysis should consider the way the world would look absent the proposed regulation (referred to as the “baseline”) and that many factors may influence this scenario—including the degree of compliance with existing regulations. EPA’s own guidance for conducting economic analyses states that, if noncompliance is known, then the economic analyses should consider both the costs of achieving full compliance with existing regulations as well as the costs of achieving full compliance with proposed regulations.

□ Limitations of Water Quality Data

Another limitation that directly affects the cost estimate for the proposed regulation is that EPA relied on water quality data that are known to be of limited quality.

Specifically, EPA relied on data from states’ “303d” lists regarding the number of waters that do not meet standards and which may therefore require TMDLs. These data represent only a portion of the nation’s waters, are collected inconsistently by states, and may be based on outdated or unconfirmed information. For example, our recent report, *Water Quality: Key EPA and State Decisions Limited By Inconsistent and Incomplete Data* (GAO/RCED-00-54) noted that only six states had a majority of the data they needed to fully assess their waters and less than half the states had a majority of the data needed to determine whether they should list waters they have assessed. While the economic analysis of the TMDL proposal acknowledges that additional waters needing TMDLs will “undoubtedly” be identified, EPA did not estimate costs for developing TMDLs for these waters.

□ Other Limitations

Unverified Data. EPA based its cost estimate for preparing a TMDL implementation plan on information obtained from one state official. However, the agency did not verify whether this information was representative of all states. As a result, EPA’s cost estimate for developing these plans may not be representative of costs likely to be incurred by other states.

Costs to the Private Sector. EPA did not include the costs that certain private sector entities will likely incur as a result of the proposed regulations because, according to agency officials, these costs would be incurred anyway under existing regulations and/or these entities will voluntarily implement controls. However, the proposed regulation includes new provisions that emphasize TMDL implementation by requiring implementation plans and “reasonable assurance” that pollution control activities will achieve their intended result. As a result of states’ implementation of the reasonable assurance requirement, nonpoint sources such as farms will likely incur costs to control discharges to waters that they may not have incurred under existing regulations. Officials from the U.S. Department of Agriculture (USDA) told us that they believe the private sector will incur additional costs as a result of the proposed regulation.

Costs to Other Federal Agencies. EPA did not include costs that other federal agencies might incur as a result of the proposed regulation. Of particular note, USDA officials told us that their workload may increase as a result of the proposed regulation for such activities as providing technical support to EPA, states, and farmers.

Analysis of Benefits. EPA did not quantify (and monetize) the proposed regulation’s benefits and, as a result, its analysis does not indicate whether the expected benefits of the regulation outweigh expected costs. EPA officials said that because the proposed regulation was not economically significant (i.e., would not have an annual effect on the economy of \$100 million or more) they did not believe they were required to quantify the benefits of the proposed regulation. Instead, qualitative benefits were briefly mentioned in the proposal for the regulation. Although EPA’s proposed regulation may well have benefits, without a monetary estimate of both the benefits and costs, one cannot confirm that the regulation is economically justified (i.e., that it would have positive net benefits).

Executive Order 12866 states that agencies shall assess both the benefits and costs of significant regulatory actions, regardless of whether the regulation is economically significant. EPA’s proposed regulation was deemed significant by the agency because it

addressed “novel legal or policy issues.” In addition, OMB officials told us that, ideally, federal agencies should assess both benefits and costs of proposed regulations to compare the net benefits of alternative regulatory actions.

□ Analysis Did Not Sufficiently Account for Uncertainty

In light of the uncertainty associated with several of EPA’s key assumptions and data, we believe that sensitivity analysis to assess the effect of alternative assumptions would have been appropriate. For example, given the uncertainty associated with future compliance by states with existing TMDL regulations, an analysis of the effect of alternative compliance rates on the cost estimate would have been particularly useful. Such analyses would likely have indicated a range of possible costs exceeding those estimated by EPA.

EPA’s Economic Analysis of the NPDES Proposal

We also found key limitations in EPA’s analysis of its proposed NPDES regulation. Two key limitations are that the analysis (1) used water quality data that are in some cases incomplete and unreliable and (2) assumed that federal agencies and most states have, or will have, enforceable authorities to control discharges from silvicultural operations. We have also identified other limitations that, taken together, indicate that the EPA cost estimates associated with this proposal are subject to substantial uncertainty.

□ Limitations of Water Quality Data

As in the case of its analysis of the TMDL regulation, EPA’s analysis of the NPDES regulation relied on water data of limited quality. Specifically, EPA used data from its National Water Quality Inventory to estimate the number of currently-impaired waters and the number of “offsets” required for new large or significantly expanding facilities (e.g., construction sites). It also relied on these data to estimate the number of permits needed to control discharges from silvicultural activities, animal feeding operations, and aquatic production facilities designated as point sources. As noted earlier, we recently reported that reliance on these data would likely lead to an underestimate of the number

of impaired waters requiring TMDLs because so few waters have been assessed. EPA's estimate does not include the additional costs to firms required to obtain offsets or permits as additional impaired waters are identified.

□ Federal and States' Authority Assumed to be Adequate

EPA assumed that existing authorities would be sufficient to control discharges from silvicultural activities on public and private lands in most states. However, this assumption is subject to substantial uncertainty. For example, EPA assumed that 30 states have, or will have, adequate enforceable authorities over silviculture, and that these states would therefore incur no costs as a result of the regulation. However, EPA's proposed regulation did not specify the types of controls that would be adequate to control silvicultural sources of pollution. Without such information, state foresters and forestry experts expressed concern to us that costs could be incurred as a result of additional control requirements. Their views are supported by data from EPA's National Water Quality Inventory, which indicate uncertainty as to whether current state programs effectively control discharges from silvicultural sources. In particular, some of the states with existing authorities to control silvicultural pollution have waters currently listed as impaired by silviculture, although it is unclear whether these impairments are a result of ineffective controls, lack of enforcement, or poor practices before the authority was established.

□ Other Limitations

Costs of Delay in Obtaining Offsets. EPA did not account for the potential cost of delay that a firm may incur in obtaining offsetting pollutant reductions needed from other firms discharging to the same impaired water. Although EPA's analysis recognized that delay is possible, it assumed these firms would be able to purchase an offset by the time the facility construction or expansion project is approved (about 3 years). However, the market for nonpoint source offsets is not well defined and there has been minimal trading to date. Thus, there is some uncertainty as to whether firms will be able to

purchase offsets, and any delay in time required to purchase offsets could impose additional costs on the firm.

Private Sector Costs. EPA's analysis does not account for the added costs to the private sector associated with more aggressive implementation by states of their existing authority. According to EPA, states will avail themselves of all existing authorities before using burdensome and costly NPDES permits. If this were true, this would create an added incentive for the states to implement their existing authorities more aggressively. Accordingly, more aggressive implementation would impose control costs on silvicultural, animal feeding, and aquatic production operations that would result from the proposed regulation.

Omitted Silvicultural Activities. EPA's estimate of the cost of applying best management practices for silviculture is based primarily on the volume and acres of timber harvested in counties with impaired waters. Although the proposed regulation states that a post-harvest activity, such as preparing the site for replanting, may cause significant adverse impacts on water quality, EPA did not estimate the costs of controlling pollution from these activities. Also, the cost of controlling discharges associated with pest and fire control activities were not included.

Benefits. EPA did not quantify (or monetize) benefits associated with the NPDES proposed regulation. The agency briefly discussion the proposal's benefits in the preamble to the regulation. As in the case of the TMDL regulation, although the proposed regulation may well have benefits, one cannot confirm that it is economically justified (i.e., that it would have positive net benefits) without a monetary estimate of both the benefits and costs.

□ Analysis Did Not Sufficiently Account for Uncertainty

Given the uncertainty associated with several of EPA's key assumptions and data, we believe that sensitivity analysis to assess the effect of alternative assumptions and data

would have been appropriate. In particular, given the uncertainty associated with future listings of impaired waters and, hence, the number of TMDLs needed, we believe that assessing the effect of additional future listings on the number of NPDES permits and associated costs would have been useful. Had such sensitivity analyses been undertaken, they would likely have indicated a range of possible costs exceeding those estimated by EPA.

Analyses Do Not Support EPA's Determinations Under the Unfunded Mandates Reform Act

Given the uncertainties surrounding EPA's cost estimates, we do not believe that the agency has established that the annual costs of its proposed regulations will not exceed \$100 million. Accordingly, we disagree with EPA that the agency's economic analyses adequately supported its determination under the Unfunded Mandates Reform Act that more detailed analyses of costs, benefits, and alternatives were not needed for either of the proposed regulations.

In the case of the requirements for additional analyses under the Regulatory Flexibility Act, case law supports EPA's determination that because its proposed revisions to both the TMDL and NPDES regulations do not *directly* regulate small entities, additional analyses were not required. Specifically, several court decisions discussed in our report have ruled in analogous situations that agencies' regulations were not subject to the Regulatory Flexibility Act's requirements for additional analysis.

Observations

Our major disagreement with EPA regarding its economic analyses was with its assumption of full compliance, the effect of which was to exclude any costs to be incurred by states that have yet to meet the requirements of the existing program. In excluding these costs, we believe EPA has underestimated the costs of implementing the proposed regulations. However, the larger issue is that regardless of whether one attributes the costs to develop and implement TMDLs to the existing or proposed

regulations, an indisputable fact remains—the costs to develop and implement TMDLs will be substantial. In addition, as we recently reported, states need more comprehensive data on water quality to both ensure they adequately identify impaired waters and to develop the TMDLs themselves.

This concludes our prepared statement, Mr. Chairman. We would be pleased to address any questions that you or other Members of the Committee may have.

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