



Initial Steps Taken to Implement TMDL Program, Too Early to Determine Water Quality Improvements

at a glance

The Department of Environmental Protection has taken steps to address the concerns identified in our 2003 report. The department has assessed many of the state's waterways to determine their level of pollution; adopted priority lists of impaired water bodies; established total maximum daily load (TMDL) pollution limits for 52 water bodies; and negotiated basin plans to establish the specific actions necessary to achieve the TMDLs and reduce pollutant levels.

The department's efforts to develop and implement TMDLs are still in their early stages. As a result, it is too early to determine if the program has improved water quality in the state. Department managers believe it will take many years for a TMDL to produce demonstrable water quality improvements. In the interim, the department regularly should provide additional information to the Legislature to help it assess progress in developing and implementing TMDLs.

Scope

This progress report informs the Legislature of actions taken by the Department of Environmental Protection (DEP) in response to a 2003 OPPAGA report.^{1,2} This report presents the progress made by the department in implementing the Total Maximum Daily Load (TMDL) Program.

Background

State must establish water quality TMDLs

As part of the federal Clean Water Act of 1972, state water resource programs were required to establish water quality standards and to implement a water quality management program in areas where water bodies do not meet water quality standards. The act also requires states to develop total maximum daily loads for impaired water bodies. TMDLs represent the maximum amount of a pollutant from all sources that can be present in a water body with a particular designated use without

¹ Section 11.51(6), *F.S.*

² *Justification Review: Water Resource Management Program, Department of Environmental Protection, [Report No. 03-12](#), February 2003.*

violating water quality standards.³ TMDLs also provide the basis for identifying strategies to be used to help an impaired water body meet quality standards.

Florida's lack of progress in establishing TMDLs resulted in the a 1999 U.S. District Court decision ordering the federal Environmental Protection Agency (EPA) to establish TMDLs for 500 water bodies in Florida by 2012.⁴ Florida's Department of Environmental Protection is to develop TMDLs for those water bodies under the terms of an agreement with the EPA.

Department's approach for developing TMDLs

The Department of Environmental Protection develops and implements TMDLs based on a watershed management approach that manages water resources based on natural boundaries, such as river and estuary basins, rather than on political boundaries. As part of this process, the department organized the state's 29 naturally bounded watersheds into five "groups" of basins. The department plans to develop and implement TMDLs for each basin group in five phases over a five-year period. These phases include (1) conducting initial assessments, (2) coordinating monitoring to verify impaired waters, (3) analyzing data and developing TMDLs, (4) developing basin management action plans, and (5) implementing these action plans.

Program resources

The department received \$19.6 million and \$67 million from state and federal sources for funding the TMDL Program in Fiscal Years 2004-05 and Fiscal Year 2005-06, respectively.

³ Designated use refers to the present and future most beneficial use of a body of water. Florida water bodies may be assigned to one of five designated use classes: Class I-Potable Water Supplies (suitable for drinking); Class II - Shellfish Propagation or Harvesting; Class III - Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife; Class IV - Agricultural Water Supplies; and Class V - Navigation, Utility and Industrial Use.

⁴ *Florida Wildlife Federation, Inc., et al., v. Browner, et al.*, Case No. 4:98cv356-WS, Order Approving Consent Decree (N.D. Fla. Aug. 7, 1999).

Prior Findings

The department's overall approach for developing TMDLs was reasonable, but could be improved

Our 2003 review concluded that the department's general approach to developing TMDLs appeared reasonable. However, we recommended three actions to improve the program and better manage its costs.

- The department should further differentiate between types of water bodies, which would avoid designating canals and drainage ditches as impaired and having to establish TMDLs for such low priority water bodies. This would allow the department to focus attention on developing TMDLs for high priority water bodies.
- The Legislature should consider requiring the Department of Environmental Protection and the Department of Agriculture and Consumer Services to provide interim reports on progress towards establishing voluntary best management practices for reducing agricultural pollutants. These annual progress reports would provide the Legislature with information on whether the best management practices were being implemented as planned and help the departments determine whether any changes in pollutant levels could be reasonably attributed to these practices.
- The department should provide the Legislature with annual status reports on its efforts to allocate TMDLs under its watershed management approach. This would help the Legislature to make informed decisions about the establishment of TMDL policies and to set funding priorities.

Current Status ---

The department has taken steps to address the concerns identified in our 2003 report. However, the department's efforts to develop and implement TMDLs are still in the early stages, and it will take many years to determine whether they improve state water quality. In the interim, additional information will be needed to assess the department's progress in developing and implementing TMDLs.

The process of reclassifying low priority water bodies has begun. Since our 2003 report, the department has initiated projects to collect data that could be used to reclassify low priority water bodies. Water resource program managers have designed monitoring projects to provide the data necessary to determine the source of pollutants that cause water body impairment. In addition, they are developing more appropriate water quality standards that consider the most beneficial use of water bodies such as urban drainage ditches and canals. These efforts could reduce the number of low priority water bodies requiring TMDLs to be developed.

Some progress has been made in developing agricultural best management practices. The department, in coordination with the Department of Agriculture and Consumer Services, is developing agricultural best management practices for priority agricultural sectors such as citrus and cow/calf operations. The department also is working with agricultural producers and the University of Florida's Institute of Food and Agricultural Sciences to identify best practices that are practical and economically feasible while yielding water quality improvements. However, the department will need to monitor the industries to ensure that the best management practices are being implemented.

Department released report on the first five years of implementation of the TMDL Program. The Department of Environmental Protection and the Department of Agriculture and Consumer Services were not required to submit annual interim reports. However, the Department of Environmental Protection released a five-year report on the TMDL Program in March 2005. This report discussed efforts to implement agricultural and stormwater best management practices and concluded that these practices were in various stages of implementation. The report stated that the best management practice verification process needed to be improved to be more flexible and effective.

Process of establishing TMDLs has begun. The department has taken actions to begin implementing TMDLs. The program has now been underway for five years. During this period, the department has assessed many of the state's waterways to determine their level of impairment and it has adopted priority lists of impaired waters. To date, the department has established 52 TMDLs and has negotiated basin plans establishing the specific actions necessary to achieve the TMDLs and reduce pollutant levels. However, as of June 2005, only one Basin Management Action Plan has been fully developed and is in the process of being implemented.⁵

As a result, it is too early to determine if the program has improved water quality in the state.

Department managers believe it will take many years for the program to produce demonstrable water quality improvements.

Legislation passed in 2005 Session is intended to improve the TMDL Program. The 2005 Legislature passed legislation to improve the TMDL Program. Chapter 2005-291, *Laws of Florida*,

- authorized the department to set the preliminary allocation of pollutant loads and phased implementation of TMDLs;

⁵ The Lake Okeechobee Protection Program is the first TMDL implementation plan to be developed and large-scale implementation is underway.

- required Basin Management Action Plans and directed that such plans integrate the appropriate strategies to achieve the TMDLs;
- required the verification of best management practices at representative sites by the Department of Environmental Protection;
- required a report from the Department of Environmental Protection concerning the development of a pollutant trading process; and
- created an annual funding program to assist the department and DACS in implementing the TMDL Program.⁶

Additional information needed on water quality improvements resulting from TMDL Program. Given the potential financial resources needed to implement the TMDL Program, it is imperative that the department keep the Legislature informed of its efforts. While the total costs of the program are unclear, they are likely to be significant due to the testing and pollution control actions that will be required.

⁶ The Legislation creates the Water Protection and Sustainability Program to fund the implementation of water protection and development programs. While the actual funding level will depend on the amount of revenue deposited in the program's trust fund, current legislation provides for \$100 million in recurring funds at a minimum. For Fiscal Year 2005-06, 50% (\$50 million) is distributed to the department and DACS for implementation of the TMDL Program. In subsequent fiscal years, 20% of the funds deposited into the trust fund are directed for the TMDL Program

A survey conducted in the fall of 2001 by the Florida Stormwater Association indicates the capital costs to local governments for the TMDL Program will be between \$1 billion and \$5 billion. The state's potential share of these costs and the ongoing testing that will be required to monitor compliance with the TMDLs have not yet been estimated.

The department is not currently required to report to the Legislature on the progress being made in implementing the program, estimated future costs, or the program's long-term outcomes. To aid the Legislature in reviewing the TMDL Program's implementation and outcomes, the Legislature could consider requiring the department to report information for each basin group, including

- the number of TMDLs adopted;
- the number of Basin Management Action Plans adopted;
- the number of agricultural and non-agricultural best management practices adopted, implemented, and verified;
- water quality improvements occurring as a result of specific TMDLs;
- projected program costs for the state and local governments; and
- specific recommendations for statutory changes to implement TMDLs more effectively.

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