



Permitting for Environmental Results (PER)

NPDES Profile: Vermont

PROGRAM RESPONSIBILITY

State of Vermont: NPDES authority for base program, pretreatment

EPA Region 1: NPDES authority for federal facilities, biosolids

Program Integrity Profile

This profile characterizes key components of the National Pollutant Discharge Elimination System (NPDES) program, including program administration and implementation, environmental outcomes, enforcement, and compliance. EPA considers profiles to be an initial screen of NPDES permitting, water quality, enforcement, and compliance programs based on self-evaluations by the States and a review of national data. EPA will use the profiles to identify program strengths and opportunities for enhancements. For more information, contact Roger Janson, EPA Region 1, at (617) 918-1621 or Brian Kooiker, Chief, Direct Discharge Section, Vermont Department of Environmental Conservation, at (802) 241-3822.

Section I. Program Administration

1. Resources and Overall Program Management

The State of Vermont:

The Vermont Department of Environmental Conservation (VTDEC) in the Agency of Natural Resources (ANR) administers most of the water programs in Vermont. VTDEC received NPDES program authority from EPA on March 11, 1974. The Wastewater Management Division (WWMD) administers VTDEC's non-stormwater permit program, while the stormwater permit program is administered by the Water Quality Division (WQD). The stormwater permit program was transferred from WWMD to WQD in September 2001.

The WWMD administers the concentrated animal feeding operations (CAFO) permit program under NPDES. The Vermont Agency of Agriculture, Food & Markets (AAF&M) administers the State permit program related to large agriculture operations (the Large Farm Operations, or LFO, permit program). There is a memorandum of understanding (MOU) between ANR, VTDEC, and AAF&M, effective October 1999, concerning CAFO and LFO regulation. Although the Vermont legislature enacted a bill in June 2004 that deals with medium and small animal feeding operations, the State needs to decide how it will permit CAFOs consistent with EPA's requirements. The Region and the State are continuing their discussions to ensure that this issue is effectively resolved.

At present, VTDEC issues individual NPDES permits to 33 major facilities and 138 minor facilities. Thirteen communities are designated for Phase II stormwater permit coverage. There are no Phase I stormwater communities in Vermont. There are also two federal facilities (minor permits for fish hatcheries) that the State does not have the authority to permit. Permits for these facilities have been expired for more than 10 years and are accounted for in the Region's backlog reduction strategy.

In addition to the non-stormwater NPDES permit program, the WWMD administers the indirect discharge permit program, residuals management program, pretreatment program, and enforcement and compliance program. In addition to the stormwater permit program, the WQD administers several water quality-related programs that cover total maximum daily loads (TMDLs), water quality monitoring and assessment, water quality standards, nonpoint source management, lake and pond management, wetland management, watershed management, and river corridor management. The Water Supply Division within VTDEC administers the drinking water programs.

The WWMD expended \$662,383 in 2003 to support the NPDES program. These funds provided full or partial support for 15 positions. In light of the very low permit backlog (less than 5%) maintained by VTDEC, these resources appear to be adequate at present. The WWMD has not experienced turnover in the program sufficient to cause problems. Stormwater permitting continues to be an issue, particularly for sources not currently covered by the scope of EPA's Phase I and II programs. It is expected that several recent initiatives (the "Storm Water Docket") and legislative action will address the issues that have surrounded the stormwater program.

In 2003 the WQD expended \$275,000 to support the stormwater permit program. These funds provided full or partial support for seven positions that support not only the NPDES stormwater program but also a separate non-NPDES stormwater permit program authorized by State law that predates the NPDES stormwater regulations. Several of the State stormwater individual permits for discharges to impaired water bodies have faced legal challenges. As a result, Vermont has been working to enhance its stormwater permitting program and expand its capacity to issue water quality-based permits. In May 2004 the Vermont legislature approved additional funding for four full-time equivalents (FTEs) and \$400,000 for contractor support. Also, Vermont is in the process of developing an implementation bank and has dedicated approximately \$2.8 million of seed funds. The implementation bank, which will be used to fund stormwater mitigation projects, will be further funded by stormwater impact fees.

Vermont has not yet issued the stormwater general permit associated with industrial activities. The State indicates that the reasons for the delay are the loss of a key staff person, the impacts of resource shortages across the VTDEC generally, and the need to deal with a number of significant stormwater issues associated with construction activities. Vermont intends to fill a position that will be dedicated to issuing this general permit.

The State uses "on-the-job" training as its principal mechanism for training program staff.

Appeals of issued NPDES and state permits are reviewed and resolved by the Vermont Water Resources Board (WRB). The WRB has been in existence for several decades and consists of five citizen members appointed by the Governor for 6-year terms. During the 2004 spring legislative session, the legislature voted to disband the Board effective in January 2005. In the future, permit appeals will go to an expanded State "Environmental Court." The State will need to ensure that the procedures for adjudicating Vermont Pollutant Discharge Elimination System (VTPDES) permit appeals are consistent with applicable NPDES permit program requirements.

In addition to the expanded Environmental Court composed of two environmental judges, there will be a nine-member Natural Resources Board with two panels: a water resources panel and a land use panel.

The water resources panel of the Natural Resources Board will continue a number of the functions of the old WRB, including the adoption of water quality standards.

EPA Region 1:

In addition to the two minor federal facility permits, the Region is responsible for the general permits for stormwater associated with construction activities at applicable federal facilities in Vermont. The totality of EPA direct-issuance activity in Vermont has a de minimis impact on Regional resources. As noted above, the Region needs to ensure that it adequately addresses the two expired federal facility permits as it continues to implement its backlog reduction strategy.

2. State Program Assistance

Vermont has been authorized to operate all aspects of the NPDES program with the exception of federal facilities and biosolids. Neither the Region nor the State is actively pursuing assumption of this element at this time (the current Vermont NPDES universe includes only two minor federal fish hatchery facilities). The Region's current assistance efforts are concentrated on the State's development and implementation of its CAFO program consistent with the applicable federal requirements and on the State's current efforts to manage its stormwater permit program.

3. EPA Activities in Indian Country

There are no federally recognized Tribes in Vermont at this time. Therefore, the Region has no ongoing Tribal coordination effort in Vermont.

4. Legal Authorities

EPA is conducting a comprehensive review of the State's legal authorities. This review has not yet been completed. As a result, EPA is reserving this section of the profile; when the legal reviews are complete, EPA will update profiles to include the results of the reviews.

5. Public Participation

An evaluation of the State's legal authorities regarding public participation will be included in the legal authority review. As noted above, the legal authority review section of this profile is reserved pending completion of the legal authority review.

The State of Vermont:

VTDEC follows the public participation procedures specified in the Vermont Water Pollution Control Permit Regulations. At a minimum, a public notice announcing that the draft permit is available for comment is sent to the community in which the facility operates and to any other individual or organization that wishes to be included on the public notice mailing list. The notice is posted in a public location (generally the town or city hall in the jurisdiction where the affected facility is located) that is readily accessible to the general public. Upon request, a public hearing is held during the comment period. Vermont defines the term "person" in title 10 of the Vermont Statutes Annotated (VSA), section

1251, and indicates that the public (i.e., “person”) has access to all permit records, including fact sheets, permits, enforcement actions, and correspondence.

ANR and VTDEC provide considerable information regarding Vermont’s permit and compliance programs on the Internet on their respective Web sites (<http://www.vtwastewater.org> and <http://www.vtwaterquality.org>). Draft and final stormwater NPDES permits are posted on VTDEC’s Web site. Direct links to EPA New England’s Web site (<http://www.epa.gov/region1/npdes/vt.html>) are provided on the ANR and VTDEC Web sites. The Regional Web site provides final Vermont permits that have been recently issued. There are seven permits on the Region’s Vermont NPDES page that have been recently issued. For stormwater, Vermont provides specific regulatory and technical information concerning the stormwater permitting program on the WQD Web site. In addition, Notices of Intent (NOIs) and draft stormwater permits available for public comment are provided on WQD’s Web site for a minimum period of 10 days as specified in Vermont’s public notice requirements.

Vermont’s public notice process is open to all constituencies and places no restrictions on who may comment or participate in the process. To participate beyond that point, the State requires that a participant be a “party in interest,” i.e., a person affected by the permitted activity. This process, however, is conducted outside the jurisdiction of VTDEC. It is currently managed through the WRB. As discussed in section 1 above, however, recently enacted legislation in Vermont eliminates the WRB effective January 2005 and replaces it with an “Environmental Court.” The Region will need to work with the Agency and the Court as appropriate to ensure that any policies and procedures implemented conform to EPA’s requirements.

For those permit activities that the Region is responsible for, the Region follows the required public participation procedures applicable to the program, including a person’s right to appeal the provisions of a permit to the Agency’s Environmental Appeals Board.

6. Permit Issuance Management Strategy

The State of Vermont:

VTDEC has done an excellent job of keeping permits current. As of June 2004, 97% of the major permits and 94.2% of the minor permits were current. Since 2000 more than 90% of the major permits have been kept current, while the percentage of minor permits kept current steadily increased from 80.7% in 2000 to 94.2% through June 2004. VTDEC also uses general permits to improve efficiency and to effectively manage the permit universe.

EPA Region 1:

The Region is responsible for the two federal facility permits (fish hatcheries) in Vermont. These two permits (both minor permits) are the only permits for facilities in Vermont that have been expired for more than 10 years. These facilities, and all other expired permits for which the Region has direct issuance authority, will be managed through the Region’s recently implemented backlog reduction, or permit issuance, strategy. The Region is considering whether to develop a general permit for fish hatcheries given that there are a number of these in Massachusetts and New Hampshire, which are non-authorized NPDES States. The two facilities in Vermont either will be covered by the general permit, if developed, or will be reissued individual permits.

Table 1: Percentage of Facilities Covered by Current Permits in Vermont

	2000	Nat'l Avg.	2001	Nat'l Avg.	2002	Nat'l Avg.	2003	Nat'l Avg.
Major Facilities	91.2%	74%	94.1%	76%	100%	83%	97%	84%
Minor Facilities Covered by Individual Permits	80.7%	69%	81.7%	73%	89.8%	79%	96.2%	81%
Minor Facilities Covered by Individual or Non-stormwater General Permits	N/A	N/A	N/A	N/A	N/A	85%	N/A	86%

Source: Permit Compliance System (PCS), 12/31/00; 12/31/01; 12/31/02; 12/31/03. (The values in the National Data Sources column of the Management Report, measures #19 and #20, are PCS data as of 6/30/04.)

7. Data Management

The State of Vermont:

VTDEC uses a data management program other than the Permit Compliance System (PCS), called “Wastewater Inventory,” to track water compliance issues. Effluent monitoring data are exchanged via electronic transfer from the Wastewater Inventory to PCS. The Wastewater Inventory system is a more comprehensive data system than PCS in that it contains effluent monitoring data, compliance schedule information, inspection data, and operator certification data not only for NPDES major facilities but also for all NPDES minor facilities and pretreatment program permits.

VTDEC has historically done a good job of providing accurate and complete NPDES data in its State data system. Periodically, data errors appear in PCS due to problems with electronic data transfers from VTDEC resulting in inaccurate quarterly significant noncompliance (SNC) reports. For example, the quarterly noncompliance report (QNCR) for the third quarter of FY2003 erroneously contained a significant number of facilities in SNC for nonsubmission of discharge monitoring reports when in fact the data had been submitted to the State data system in a timely manner but there were problems with the transfer to PCS. This error is reflected in the National Data Sources column of the Management Report (measure #34), which reports that 91% of major facilities were in SNC when actually only 3% (one facility) were in SNC. VTDEC has adapted its system to help reduce problems associated with late data transfers. In addition, VTDEC has applied for a grant to upgrade its system to make it compatible with PCS modernization and to make data more accessible. The Region will continue to work with VTDEC to evaluate whether any additional improvements can be made.

EPA Region 1:

Because VTDEC is not a direct user of PCS, the Region enters permit and enforcement information (other than discharge monitoring data) based on documentation supplied by VTDEC. In an effort to improve entry of Water Enforcement National Data Base (WENDB) data elements, the Region has requested that the State provide additional documentation (e.g., permit applications) for the data elements provided. The Region will continue to work with VTDEC to enhance entry of all WENDB data elements.

Section II. Program Implementation

1. Permit Quality

The State of Vermont:

To the extent possible, Vermont uses electronic files to incorporate standard permit conditions and language into each permit. During each permit issuance or reissuance, VTDEC evaluates the adequacy of technology-based effluent limitations (TBELs) by reviewing available water quality-related information including monitoring data, application information, water quality studies, and modeling. Where TBELs are determined to be inadequate to meet water quality standards, water quality-based effluent limitations (WQBELs) are derived.

Data available for permit development typically consist of discharge monitoring reports, whole effluent toxicity (WET) testing, and other toxic chemical analyses. The results of ambient water quality and biological monitoring are also available. Data may be used to calibrate and run water quality models such as QUAL II and CORMIX or to perform simple dilution analyses. Other information typically available for permit development consists of the Vermont Toxic Discharge Control Strategy, EPA's "Technical Support Document for Water Quality-based Toxics Control," and the Vermont Water Quality Standards. EPA's Effluent Limitations Guidelines (ELG) development documents are also consulted for information on specific industrial discharges. VTDEC adheres to quality assurance/quality control (QA/QC) procedures to help ensure that data used in the development of effluent limits are of high quality. All ambient water quality data collected by the State are collected in accordance with quality assurance project plans.

"Reasonable potential" determinations are most commonly made by applying effluent monitoring data and in-stream dilution analyses to specific numeric water quality criteria. Statistical analysis of historical effluent monitoring data may be used in this process to determine the probability of exceeding an in-stream water quality criterion. The results of in-stream dilution analyses are used to make evaluations under the Vermont Toxic Discharge Control Strategy. For numeric water quality criteria such as those for dissolved oxygen, temperature, turbidity, and the like, water quality models such as QUAL II, WQMAP, and CORMIX are used to estimate in-stream conditions under proposed permit conditions. For general toxicity evaluations, WET test results are used with in-stream dilution analysis and evaluated by means of the Vermont Toxic Discharge Control Strategy.

Vermont's current NPDES permit application requirements do not require applicants for municipal NPDES permits to provide effluent monitoring data with the application. Instead, Vermont requires municipal permittees to provide effluent monitoring data as part of permit effluent monitoring requirements such that the required information is available at the time of permit reapplication. Such data are useful for reasonable potential determinations during permit development. During 2005 EPA will work with VTDEC to ensure that Vermont's application requirements for NPDES permits are consistent with the federal NPDES application requirements.

Prior to the release of draft permits for public review, the permits and fact sheets are reviewed within VTDEC for quality and accuracy. In-house reviews by experienced staff and managers ensure

consistency and quality among the permits. The internal review process conducted by VTDEC provides for valuable on-the-job training for permit writers. VTDEC relies primarily on in-house training to train permit writers. Draft municipal and industrial major permits are sent to the EPA Regional office for review.

During 2003 the Region reviewed several of Vermont's draft permits. In general, EPA Regional reviews are targeted and conducted in response to specific issues and/or controversy that may arise from Congressional, legal, or public concern and interest. The Region's review identified some possible omissions regarding combined sewer overflow (CSO) control requirements and the need for additional information in the permit fact sheet. Comments were transmitted to VTDEC. More recently, EPA Region 1 reviewed several final permits that had been issued by Vermont. The reviews found the fact sheets to be lacking information regarding 7Q10 flow (the lowest consecutive 7-day stream flow that is likely to occur in a 10-year period), dilution factors, reasonable potential calculations, and receiving water quality conditions, which made it difficult to determine whether water quality standards would be attained. The Region intends to work with the State program staff to continue to address these quality issues.

During 2002 EPA's Water Permits Division conducted a permit quality review of selected Vermont municipal and industrial permits. The review findings were transmitted to the Region and VTDEC in November 2002. The findings identified some potential areas for enhancement of the permits, including providing more detailed information in the fact sheets to better justify effluent limitations, as well as modifying standard permit condition language.

The Region discussed these issues with State staff, who were receptive to reviewing the concerns and incorporating upgrades into their permitting process. The State has responded that it continues to upgrade its fact sheets and to make sure that any calculations are clearly expressed and explained, including ensuring more accurate descriptions of any waste management zones appurtenant to any specific discharge. As part of its oversight responsibilities, the Region will continue to work with Vermont (and the other authorized States as well) to review and ensure that permit quality is attained and maintained.

VTDEC uses the Vermont Toxics Discharge Control Strategy, as referenced in Vermont's Water Quality Standards, to implement a WET program. In December 1994 the Region reviewed this strategy and identified some potential areas of concern with the strategy. Most notable are concerns with the limited amount of WET testing being required to determine whether WET limits are warranted. For certain types of discharges, the limited amount of WET data makes it difficult to conduct a reasonable potential determination. A more recent permit review conducted in May 2003 identified a similar concern. Notwithstanding this concern, in cases where VTDEC determines that a discharge has a reasonable potential to cause or contribute to exceedances of the State water quality criteria for aquatic life toxicity, acute and/or chronic effluent limitations for WET are included in the permit.

EPA Region 1:

The Region plans to improve its oversight of authorized State permit programs beginning in 2005. Part of the effort will include working with the States on issues such as permit quality. To foster the discussions, the Region will work with the States on using the various permit checklist tools that have

been developed to assist permit programs in developing and issuing quality permits. (The Region will also adapt these tools for the permits for which it has direct issuance authority.)

2. Pretreatment

The State of Vermont:

The authority for direct implementation of the federal pretreatment program was delegated to VTDEC pursuant to EPA program authorization on March 16, 1982. Significant industrial users (SIUs) are initially identified through review of applications received by other VTDEC permit programs and through outreach efforts at VTDEC regional offices. Identification of SIUs is a dynamic process (currently there are 15 SIUs¹). The program is fully coordinated and integrated into the VTPDES permit program because it is managed within the same office. A determination of the appropriate pretreatment standards is made at the time of initial application and reevaluated at the time of reissuance. VTDEC reports that 100% of SIUs are addressed by applicable pretreatment standards and requirements.

Vermont is one of only five States that issue permits directly to their SIUs (under section 403.10(e) of the Clean Water Act (CWA)) instead of delegating that activity to the publicly owned treatment works (POTW) level. Therefore, the EPA Regional Office is responsible for conducting the audit of Vermont's pretreatment program. An enhancement to the program would be to update the State pretreatment database to allow it to interface with PCS. EPA will work with Vermont as the PCS modernization process continues to ensure the availability of these data, although the State currently has no plans to become a direct PCS user.

3. Concentrated Animal Feeding Operations

The State of Vermont:

Since 1996 Vermont has issued permits to LFOs by means of a permit program administered by the Vermont Agency of Agriculture in close coordination with the ANR. Nineteen farms meeting the LFO size threshold have been issued individual permits under the LFO program. Among other things, an LFO permit requires nutrient management plans and prohibits discharges to waters at less than the 24-hour/25-year storm event. None of the LFOs met the animal threshold for regulation under the previous CAFO regulations. Seventeen LFOs are subject to the revised regulations based the newly defined criteria. Vermont reports that compliance inspections of permitted LFOs by VTDEC were not conducted because the LFOs were not subject to the previous CAFO regulations and, therefore, VTDEC lacked the appropriate authority. Vermont is aware that the VTDEC will need to inspect those farms subject to coverage under the amended CAFO regulations. EPA Region 1 is working with the State to ensure that the appropriate authority is included in the State's revised CAFO program. Since adoption of the new CAFO rule, the State has begun the process of revamping the LFO and NPDES/CAFO permit programs. The State plans to make necessary statutory changes in 2005, followed by development of a general CAFO permit and revised technical standards.

¹ At present, the National Data Sources column on the Management Report, measures #9 and #24, does not present data on SIUs in Vermont. This is because these measures, by definition, capture only SIUs discharging to approved pretreatment programs, while Vermont, as provided for under 40 CFR 403.10(e), issues permits directly to SIUs and there are no approved pretreatment programs. (Please see section I.7 on Data Management for more information.)

Vermont does not yet have technical standards in place that conform to the revised CAFO regulations but plans to issue them in 2005. As the CAFO nutrient management plans are rolled out in early 2006, they will be reviewed for compliance with the technical standards.

4. Stormwater

The State of Vermont:

Overall Vermont administers an NPDES stormwater program involving the issuance of general NPDES permits and a non-NPDES permit program that issues individual State permits. The non-NPDES program is in the process of being enhanced. The program does not address industrial discharges other than runoff from industrial areas that happen to meet the permitting criteria. Among other things, the program issues permits for (1) discharges of regulated stormwater from development, redevelopment, expansion, or any combination from impervious surfaces equal to or greater than 1 acre and (2) discharges of regulated stormwater runoff from an impervious surface of any size to stormwater-impaired waters if treatment is necessary to reduce the adverse impact of the discharge. The program also provides for the use of offsets and stormwater impact fees when issuing a permit for a stormwater discharge to a stormwater-impaired water.

At present, VTDEC has issued the following two NPDES general permits and is working on stormwater general permits for industrial activities and small site construction.

Municipal facilities: VTDEC has a stormwater general permit in place for small municipal separate storm sewer systems (Phase II MS4s). There are no Phase I MS4s in Vermont.

Construction activity: VTDEC issued a general permit to cover stormwater discharges from large construction sites disturbing more than 5 acres of land. At present, Vermont does not have a small construction general permit (Phase II) in place. The general permit has been drafted, it has been through public review, and a responsiveness summary has been completed. The permit is in final administrative review by the State, and it is anticipated that the general permit will be issued in the winter of 2004/2005. EPA's stormwater general permit associated with construction activities covers discharges from activities at federal facilities (no activities are currently covered).

Industrial facilities: VTDEC has not yet issued a final stormwater general permit for industrial facilities. The issuance of the industrial stormwater general permit has been delayed because of the loss of a key staff person. The permit has been drafted and is available on VTDEC's Web site. However, a formal public review process has not been initiated. VTDEC reports that the issuance of this general permit could be further delayed until adequate resources become available to oversee the permit. Vermont plans to fill a position that will be dedicated to completing this general permit. EPA will work with VTDEC to identify opportunities, including providing contractor support to assist Vermont in issuing this permit.

NOIs are tracked electronically for active general permits. The public has access to NOIs, and Vermont posts NOIs on its Web site.

5. Combined Sewer Overflows/Sanitary Sewer Overflows

The State of Vermont:

Twenty-seven Vermont communities have developed long-term control plans (LTCPs) in accordance with Vermont's 1990 CSO Control Policy. Twenty of these communities have implemented the LTCPs consistent with this policy. Of the seven remaining communities,² six communities are still in varying stages of implementing their LTCPs and one community has constructed a CSO treatment facility, which is subject to an NPDES permit. Vermont believes that all (100%) CSO communities have completed LTCPs. Although EPA agrees with Vermont that long-term control planning has been conducted or is under way in every CSO community, the Region believes, as discussed below, that additional work on the LTCPs for some communities may be necessary.³

Through implementing its 1990 CSO control policy, Vermont has made great progress in abating CSOs throughout the State. However, because Vermont's 1990 CSO control policy predates EPA's 1994 CSO Control Policy, the Region is working with Vermont to ensure that EPA's 1994 CSO Control Policy is fully implemented and that NPDES permits issued to CSO communities are consistent with the policy and attaining applicable water quality standards. For instance, because Vermont's policy requires communities to develop CSO controls based on a specific design storm, Vermont has presumed that implementation of the LTCPs will result in attainment of water quality standards without requiring post-construction monitoring. The Region has been discussing with the State the need to conduct confirmatory monitoring in these communities to evaluate whether any additional controls are necessary. As a result, the status of CSO discharges in the 20 communities that have implemented LTCPs needs to be defined further. Regional staff will continue their work with Vermont staff to complete the CSO picture.

There are two other issues to consider in the implementation of LTCPs in Vermont. First, Vermont provides grants for four categories of work: 100% for phosphorus removal; 35% for the abatement of the direct discharge of domestic waste; 50% for certain sludge and septage treatment projects; and 25% for CSO abatement. All grant funds come from the same source (an annual legislative appropriation to VTDEC) and are allocated based on a project priority system. The recent Lake Champlain Initiative, which places new requirements on certain facilities discharging to Lake Champlain or its tributaries to reduce their phosphorus discharges, means an additional demand on these limited funds. Second, the seven communities that have not completed work consistent with Vermont's CSO policy are some of the largest CSO communities in the State and a phased approach has been implemented for these communities (many of the smaller communities were able to complete their projects in a year or two).

At present, the Region is working with Vermont to address two issues. First, as mentioned above, the Region is discussing the need to conduct confirmatory monitoring to ensure that water quality standards have been met after LTCPs have been implemented. This monitoring is also needed to determine the exact universe of CSO communities that still exist. Second, the Region has been working with the State to ensure that the "nine minimum controls" are outlined as permit conditions in communities where

² These seven communities correspond to the number of CSO permittees shown in measure #10 of the Management Report.

³ The Management Report (measure #25) indicates that none (0%) of the CSO communities have done LTCPs.

CSOs are still present. This approach appears to have been successful because several recent draft permits sent to the Region for review have contained these controls.

Sanitary sewer overflows (SSOs) have historically occurred most frequently at collection system pump stations during power outages. Overflows during power outages have typically been attributed to inadequate storage, alarm systems, backup power supplies, and/or response plans. VTDEC does not maintain a database of SSOs. The Region will work with VTDEC to develop the universe of SSOs that exist in the State.

In 2000 VTDEC developed detailed guidance for the preparation of power failure plans, which POTWs are required to submit. As a result of the development and implementation of power failure plans, improvements have been and are being made to collection system pump stations to address these referenced deficiencies.

6. Biosolids

The State of Vermont:

Vermont does not currently have authorization to administer the federal program for biosolids. Biosolids requirements are included in all relevant permits. Vermont administers a State biosolids permitting program using individual permits issued under the State's solid waste program. The State issues permits to land application sites and to treatment plants. Approximately 60 to 70% of the biosolids generated by Vermont facilities are reused.

VTDEC has been pursuing authorization of the program since 1998. Although EPA's initial review of Vermont's proposal was delayed, EPA has concluded that the State would need to make a number of regulatory changes to its program to conform to current federal requirements. Vermont has no current plans to revise its regulations to take the biosolids program inasmuch as it believes that its program is technically and administratively sound and provides adequate controls over biosolids use and disposition. To the extent that ongoing oversight results in the need for definitive upgrades to Vermont's program overall, the Region will request that the State reconsider biosolids authorization.

Section III. Compliance Monitoring and Enforcement Response

In a separate initiative, EPA's Office of Enforcement and Compliance Assurance (OECA), EPA Regions, and the Environmental Council of the States have developed a tool for assessing State performance in enforcement and compliance assurance to ensure that States meet agreed-upon minimum performance levels and provide a consistent level of environmental and public health protection nationwide. OECA will use the State profiles to focus these efforts and identify areas needing further discussion and evaluation.

1. Enforcement Program

The State of Vermont:

Vermont's SNC rate is highly variable due to periodic problems with transfer of data from its Wastewater Inventory to PCS. Because Vermont has a small universe of major facilities, data transfer problems with only a few facilities can significantly affect the SNC rate.⁴ The Additional Data column of the Management Report reflects the actual value of 3% (one facility). Data transfer problems should be completely eliminated with PCS modernization. The Region will evaluate whether any steps can be taken to improve data transfer prior to modernization.

VTDEC has historically done a good job of addressing instances of SNC. On a yearly basis, the number of systems remaining unaddressed by either VTDEC or EPA and in SNC for more than one quarter is consistently low. (As noted above, the State's SNC rate is negatively affected by data transfer problems.) The Region will continue its efforts with VTDEC to ensure that any facilities that remain in SNC are appropriately addressed.

VTDEC uses its administrative enforcement authority as its primary method of enforcement.

The Region is not aware of any serious issues with the timeliness of formal enforcement response.

In February 2001 VTDEC issued a compliance procedure guidance that establishes communication and procedures for timely referral of violations for formal enforcement. It provides that cases should generally be referred within 1 month of an inspection or investigation and requires a standard form and content for referrals.

Case files reviewed by the Region have not raised issues concerning the adequacy of injunctive relief; this is a strength of the program. With respect to penalties, there are some areas for enhancement related to the appropriateness of penalty amounts and file documentation. Review of case files indicates that penalty amounts seem quite modest in light of the facts and circumstances of violations and the State's penalty policy; penalties should be at levels that remove all economic incentives for noncompliance and

⁴ As discussed above in section I.7, these data transfer problems have resulted in inaccurate characterization of the percentage of facilities in SNC on the attached NPDES Management Report (measure #34). The National Data Sources column on the Management Report indicates that 91% of the major facilities are in SNC. Region 1 staff will work to ensure that Vermont's compliance rate is reported accurately.

have general deterrence impacts. In addition, although VTDEC does consider and calculate economic benefit, it should ensure that calculations take into account the time value of money and avoided operations and maintenance costs in order to effectively recoup violators' economic benefit of noncompliance. VTDEC's practice of offering an automatic penalty reduction for parties agreeing to enter into settlements would be improved by limiting such an approach to situations where the violator has already reached compliance and agrees to execute a settlement promptly without negotiation of the amount. VTDEC can also enhance documentation of settlement penalty calculation and adjustments. The Region will continue discussions with VTDEC on these and related issues.

2. Record Keeping and Reporting

The State of Vermont:

As described above, VTDEC is an indirect user of PCS. VTDEC enters data into its State database in a timely, accurate, and complete manner. Periodically, errors occur during electronic data transfers to PCS, resulting in inaccurate SNC reports. However, as noted above in Item 1, VTDEC will be taking actions that should further eliminate these discrepancies.

3. Inspections

The State of Vermont:

VTDEC has a goal of annually inspecting approximately 70% of its major facilities and 33% of its municipal minor facilities. Each year some major facility inspections are replaced with inspections of minor facilities with known compliance problems. The Region is aware that the number of compliance evaluation inspections (CEIs) reported in PCS has fallen in recent years. At present, Vermont reports that 70% and 30% of major and minor facilities, respectively, were inspected.⁵ Some of Vermont's inspections may not qualify as full inspections. VTDEC conducts a number of reconnaissance inspections, which upon evaluation may, with little if any modification in scope, constitute CEIs. The Region will work to resolve this issue with Vermont by the end of 2004.

Facilities are targeted for inspection based on current compliance status, past problems at the facility, length of time since last inspection, change in facility personnel, status as new discharge, and other factors as appropriate. Current and past problems involving events that pose a significant risk to public health are given high priority for the purposes of targeting inspections.

File reviews are conducted as a normal part of field inspections.

⁵ The number for major facilities differs from that reported in the National Data column of the Management Report (see measure #32), which indicates that 55% of the major facilities were inspected. Reasons for this discrepancy are that Vermont's numbers are more current than those in the National Data Sources column and that some of Vermont's inspections may not count as full inspections (see text explanation).

4. Compliance Assistance

The State of Vermont:

VTDEC has an Environment Assistance Division that provides multimedia on-site and permitting assistance. Vermont also has one of the few State Small Business Development Centers (SBDCs) with funded environmental programs (funding is directed through an earmark from EPA). VTDEC has formed an Environmental Assistance Partnership through a formal MOU that includes VTDEC, its SBDCs, and other business and State organizations. This network works together to provide assistance in targeted areas. The SBDCs work only with business; other kinds of assistance (for schools, municipalities, and so forth) come from VTDEC. Priority sectors include auto salvage operations and the hospitality sector (hotels, ski resorts). VTDEC does some measurement of results (e.g., distribution of evaluation forms at workshops) but has not undertaken detailed measurement of outcomes.

Section IV. Related Water Programs and Environmental Outcomes

1. Monitoring

The State of Vermont:

Vermont's 2004 water quality inventory prepared under CWA section 305(b) indicates that 77% of rivers/streams and 24% of lakes/ponds are assessed for attainment of water quality standards and designated uses.⁶

Vermont is the first Region 1 State to submit a draft comprehensive monitoring and assessment strategy. Although the strategy is not fully developed, it follows the "10 Elements Guidance." The Region is working with each of the States to flesh out details within the strategy that will achieve goals within a 10-year period. For Vermont, as with most States, wetlands and groundwater will not be fully developed, but other surface water programs should be in good shape with respect to identification of gaps, priorities for filling gaps, and estimated resource needs toward achieving goals. The final strategy is expected to be completed by early 2005.

The strategy is not specific to NPDES facilities but is designed to detect stresses on the aquatic environment from all sources and stressors, including point and nonpoint sources. Vermont is working toward including a statistically based monitoring approach in its program, but will continue to support the existing rotating basin monitoring program that uses a fixed sampling station design and involves regular monitoring (approximately every 7 years) of these stations. In specific circumstances VTDEC will conduct monitoring prior to permit renewal if it believes monitoring is needed for reissuance of the permit.

2. Environmental Outcomes

According to the 2002 water quality inventory prepared under CWA section 305(b), 78% of Vermont's assessed river/stream miles and 58% of Vermont's assessed inland lake acres fully support all uses. The percentage of lake acres fully supporting water quality standards has increased significantly from that reported in the 2000 report (43%). This change is due to comprehensive reassessments performed by VTDEC since the year 2000 on about a quarter of the State's lakes. This trend of more lakes meeting water quality standards is likely to continue with the 2004 section 305(b) reporting. By the time of the release of the 2004 report, all lakes with known violations of water quality standards will have been comprehensively reassessed. The percentage of assessed river/stream miles fully supporting has remained about the same over the past two reporting cycles. However, VTDEC is continuing to expand its monitoring program (particularly the biological monitoring component) to river/stream segments not previously assessed.

⁶ See Management Report measures #47 through #50 for more specific measures of monitoring and assessment status.

Streams impaired by urban stormwater are among the State's priorities within both the TMDL and monitoring programs. The Region is assisting VTDEC by, among other things, providing funds and contractor services for the modeling work to support urban stormwater TMDLs or water quality remediation plans.

3. Water Quality Standards

The State of Vermont:

Vermont's water quality standards program is administered in the WQD. The WQD also administers the water quality monitoring and assessment program and the TMDL program. Water quality-related information, including pertinent water quality standards information that is relevant to the issuance permits, is provided to the WWMD during the development of permits. The transfer of information concerning water quality standards and permitting occurs through regular coordination between the WQD and the WWMD on an ongoing basis.

The triennial review of Vermont's water quality standards is overdue, although the State is in the process of revising its water quality standards. One of Vermont's proposed revisions involves the inclusion of Class B subcategories (B1, B2, and B3), which will be based on more specific aquatic life uses. Upon completion of the updated water quality standards, Vermont will submit them to the Region for review.

Vermont has already adopted numeric criteria for E. coli in its water quality standards. Because there are only fresh waters in Vermont, VTDEC believes that the E. coli criteria are adequate for protecting designated uses.⁷ Vermont has not adopted, nor does it have plans to adopt, enterococci criteria. Also, Vermont is in the process of collecting information in preparation for adopting nutrient criteria for waters throughout the State. Vermont has already adopted phosphorus criteria for Lake Champlain. Narrative criteria including nutrient enrichment in streams tend to be the most difficult to implement because the criteria are subject to interpretation and more difficult to defend. Vermont has provisions to consider use attainability analyses but has yet to do so.

Coordination between Vermont's NPDES program and the State's various other water programs is generally very good. However, EPA is concerned that the antidegradation provisions in Vermont's water quality standards might not always be considered during NPDES permit development. Furthermore, EPA is concerned about the absence of antidegradation implementation procedures. During the next year, EPA will work with VTDEC to address issues related to the implementation of the antidegradation provisions. The Region knows that Vermont is working on this issue and expects to complete its work in the near term.

4. Total Maximum Daily Loads

The State of Vermont:

When a TMDL is prepared, all permits (or dischargers) affected by the TMDL are listed in the TMDL. During permit development, all readily available water quality-related information, including applicable

⁷ Note that these standards are not reflected in the Management Report, measure #52, because Vermont is not a coastal state subject to the requirements of the BEACH Act and is therefore listed as n/a (not applicable) for this measure.

TMDLs, is reviewed. Based on the Region's review of selected permits for discharges to waters that are subject to a TMDL, VTDEC does a good job incorporating the TMDL allocations into the permit WQBELs. Vermont TMDLs do include sufficient information to support development of WQBELs. TMDLs for waters where general permits apply have not yet been completed. Vermont plans to develop watershed-based general permits for stormwater-impaired waters following the development of TMDLs. The general permits in these cases will be developed to reflect the allocation in the TMDLs.

TMDLs completed prior to permit issuance account for levels of the pollutants of concern. For example, the Lake Champlain TMDL allocates phosphorus loads to point sources, properly accounting for background. If a TMDL has yet to be completed, the derivation of effluent limits relies on the best information available at the time. This is consistent with the manner in which the Region issues its permits. Where no data are available, the State may assume zero background concentration. It will also assume a background concentration of 10 to 20% when it has reason to believe that the pollutant of concern is present even though it has no specific data. In other situations, the State will follow its standard wasteload allocation process, which has been in place for many years.

One hundred percent of the TMDLs prepared by VTDEC and submitted to EPA have been approved. Although Vermont has done a good job completing TMDLs (39 TMDLs for FY2003 and 7 TMDLs for FY2004), in comparison to the total number of TMDLs needed (266) the potentially slower pace for 2004 and 2005 is of concern. Vermont completed seven of the eight TMDLs committed to for 2004 and has committed to nine more for 2005. Delays in Vermont's TMDL production are primarily due to resource limitations that prevent TMDLs from being initiated. However, of the remaining TMDLs to be completed, very few are point source TMDLs, and as a result they will have minimum impact on the Vermont NPDES program.

EPA Region 1:

EPA Region 1 is expending considerable effort to help States pick up the pace of TMDL development. During the past year, the Region has been assisting VTDEC with contractor support to develop TMDLs for stormwater-impaired streams. Also, the Region is working with the States on a TMDL innovations project to help expedite TMDL development for stormwater impairments. The TMDL innovations project involves the assessment of a variety of existing and potential approaches for developing TMDLs for waters impaired by stormwater with a goal of developing an approach that would allow States to complete stormwater-related TMDLs in a timely manner. VTDEC has participated in this project and has provided invaluable insights from its TMDL-related work on stormwater-caused impairments.

5. Safe Drinking Water Act

The State of Vermont:

VTDEC coordinates drinking water and public health issues between SDWA units and water quality standards and NPDES permitting in multiple ways. In Vermont, this issue is most important when permitting sources that discharge into Lake Champlain, which is a primary drinking water source in the State. The two areas of Lake Champlain where this is most significant are Burlington Bay and Shelburne Bay. When permitting, VTDEC considers the location of intakes relative to outfalls. In some cases, mixing zone studies have been required. For example, one treatment plant was required to address trihalomethanes in order to protect the drinking water intake. Regarding the location of intakes relative to outfalls, effluent is generally discharged into the thermocline, whereas the drinking water intake is

generally located in the hypolimnion. For the rivers and streams in Vermont, the impact of effluent on drinking water intakes is not as much an issue because they are used less as drinking water sources.

The Region and States have been discussing the importance of accurately identifying the locations of permitted discharges in relation to public water supply intakes. Also, there is ongoing coordination between the stormwater permitting programs and underground injection control programs in the Region.

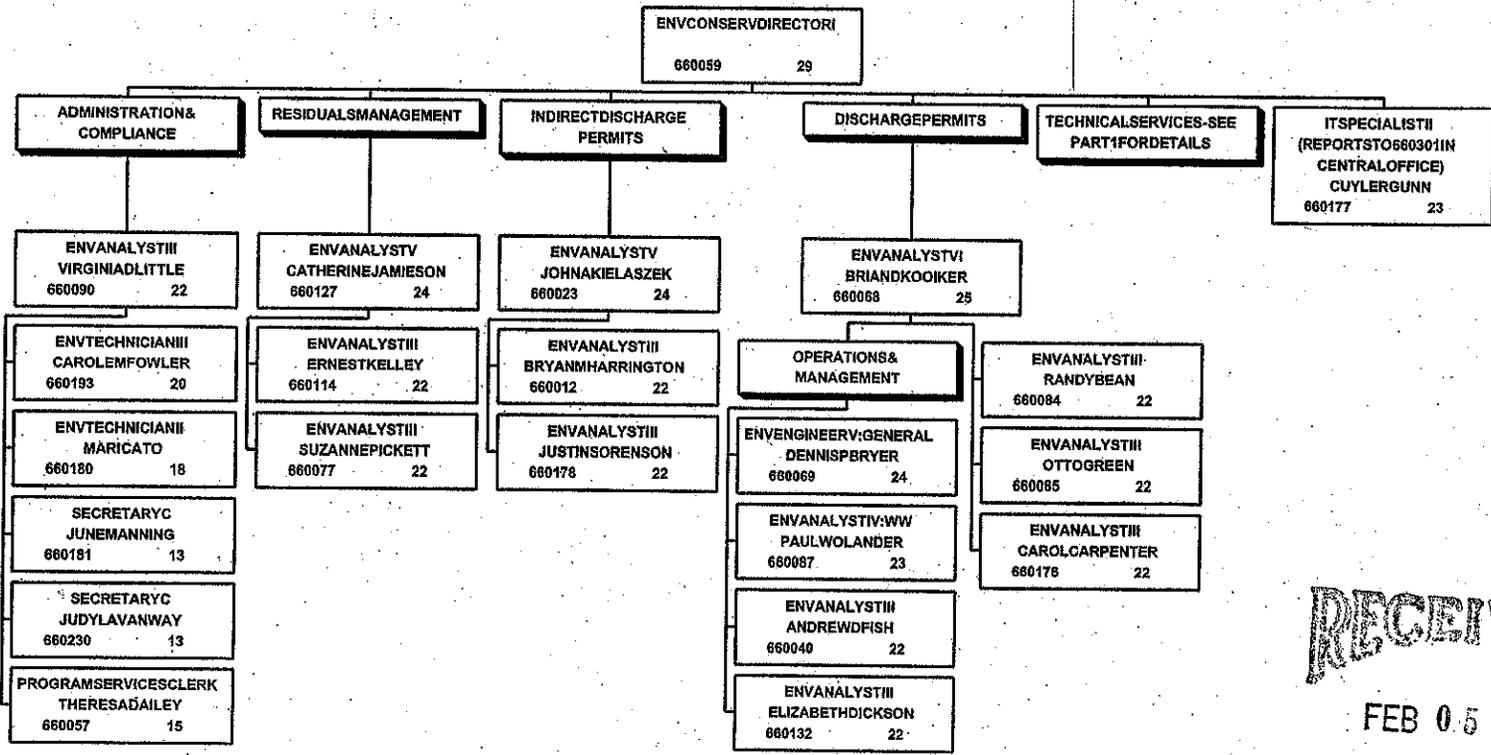
Section V. Other Program Highlights

Vermont operates a statewide stormwater permit program that addresses all discharges of State-regulated stormwater. The State program requires a stormwater discharge permit for the discharge of State-regulated stormwater from impervious surfaces equal to or greater than 2 acres and in some small watersheds, impervious surfaces equal to or greater than 1 acre. The State's stormwater program is more expansive than the federal NPDES program.

VERMONT

DEPARTMENT OF ENVIRONMENTAL CONSERVATION
ORGANIZATION CHART
WASTEWATER MANAGEMENT DIVISION
PART 2

November 17, 2003



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NPDES Management Report, Fall 2004

Vermont

			Profile Section	GPRA Goal	Nat. Avg.	National Data Sources		Additional Data	
						State Activities	EPA Activities	State Activities	EPA Activities
NPDES Progress									
Universe	1	# major facilities (6,690 total)	I.1		n/a	33	0		
	2	# minor facilities covered by individual permits (42,057 total)	I.1		n/a	138	0		
	3	# minor facilities covered by non-storm water general permits (39,183 total)	I.1		n/a	0	0		
	4	# priority permits (TBD)	I.6			--	--		
	5	# pipes at facilities covered by individual permits (142,761 total)	I.7		n/a	201	--		
	6	# industrial facilities covered by individual permits (32,505 total)	I.1		n/a	40	2		
	7	# POTWs covered by individual permits (15,197 total)	I.1		n/a	92	0		
	8	# pretreatment programs (1,482 total)	II.2		n/a	n/a	--		
	9	# Significant Industrial Users (SIUs) discharging to pretreatment programs (22,158 total)	II.2		n/a	--	--	15	
	10	# Combined Sewer Overflow (CSO) permittees (831 total)	II.5		n/a	7	--		
	11	# CAFOs (current and est. future) (17,672 total)	II.3		n/a	17	--		
	12	# biosolids facilities (TBD '05)	II.6			--	--		
NPDES Program Administration	13	State or Region assessment of State NPDES program (none (N)/assessment (A)/profile (P))	I.1	50 states 2004	n/a	A, P	P		
	14	% pipes at facilities covered by individual permits w/ lat/long in PCS	I.7		46.3%	26.4%	--		
	15	State CAFO legal authority expected (mo/yr)	II.3	2005	n/a	6/05	n/a		
	16	# Withdrawal petitions/legal challenges (22 total)	I.4		n/a	0	n/a		
	17	DMR data entry rate	I.7		95%	100%	--		
	18	# permit applications pending (1,011 total)	I.6		n/a	0	--		
NPDES Program Implementation	19	% major facilities covered by current permits	I.6	90%	83.7%	97.0%	n/a		
	20	% minor facilities covered by current individual or non-storm water general permits	I.6	90% 12/04	87.0%	94.2%	n/a		
	21	# major facilities w/permits expired >10 yrs. (56 total)	I.6		n/a	0	0		
	22	% priority permits issued as scheduled (TBD '05)	I.6	95% 2005		--	--		
	23	% pretreatment programs inspected/audited during 5 yr. inspection period	II.2		85.3%	n/a	--		
	24	% SIUs w/control mechanisms	II.2		99.2%	--	--	100.0%	
	25	% of CSO permittees with long-term control plans developed or required	II.5	75% 2008	82.2%	0.0%	--		
	26	% CAFOs covered by NPDES permits	II.3		35%	0%	--		
	27	% biosolids facilities that have satisfied part 503 requirements (TBD '05)	II.6			--	--		
	28	# Phase I storm water permits issued but not current (76 total)	II.4		n/a	0	0		
	29	# Phase I storm water permits not yet issued (5 total)	II.4		n/a	1	0		
	30	Phase II storm water small MS4 permits current (Y/N/D (draft) (35 States)	II.4	100% states 2008	n/a	Y	Y		
	31	Phase II storm water construction permit current (Y/N/D (draft) (49 States)	II.4	100% states 2008	n/a	D	Y		
NPDES Compliance Monitoring and Enforcement Response	32	% major facilities inspected	III.3		71%	55%	15%	70%	
	33	(inspections at minors) / (total inspections at majors and minors)	III.3		76%	53%	0%		
	34	% major facilities in significant non-compliance (SNC)	III.1		20%	91%	--	3%	
	35	% SNCs addressed by formal enforcement action (FEA)	III.1		14%	27%	--		
	36	% SNCs returned to compliance w/o FEA	III.1		70%	73%	--		
	37	# FEAs at major facilities (666 total)	III.1		n/a	2	0		
	38	# FEAs at minor facilities (1,660 total)	III.1		n/a	2	0		

Explanation of Column Headers:

Profile Section: For each measure, this column lists the section of the profile where the program area (including any additional data for the measure) is discussed.

National Data Sources: The information in these two columns is drawn from two types of sources:

(1) EPA-managed databases of record for the national water program, such as PCS, the National Assessment Database, and the National TMDL Tracking System. NPDES authorities are responsible for populating PCS with required data elements and for assuring the quality of the data. EPA is working to phase in full use of NAD and NTTs as national databases.

(2) Other tracking information maintained by EPA Headquarters for program areas such as CAFOs, CSOs, and storm water.

The [definitions document](#) accompanying this Management Report provides a detailed definition of each data element in the National Data Sources columns.

Additional Data: These columns provide additional data in cases where information from other data sources differs from information in the National Data Sources column for reasons such as different timing of the data "snapshot." Additional data should generally adhere to the same narrative definitions as data in the National Data Sources, and should be derived using similar processes and criteria. Our goal is to work with the States on these discrepancies to ensure consistent and accurate reporting. A State contact is available who can respond to queries. The profiles discuss each additional data element.

State Activities: Information in these columns reflects activities conducted by the State program. (Shaded cells in these columns indicate that the work may not be entirely the State's responsibility, but a breakdown of the data into EPA and State responsibilities is unavailable.)

EPA Activities: Information in these columns reflects activities conducted by the EPA Region within the State.

NPDES Management Report, Fall 2004

Vermont

		Profile Section	GPRA Goal	Nat. Avg.	National Data Sources		Additional Data		
					State Activities	EPA Activities	State Activities	EPA Activities	
Water Quality Progress									
Universe	39	River/stream miles (3,419,857 total)	IV.2		n/a	7,100	n/a		
	40	Lake acres (27,775,301 total)	IV.2		n/a	230,813	n/a		
	41	Total # TMDLs in docket at end of FY 2003 (52,795 total)	IV.4		n/a	266	--		
	42	# TMDLs committed to in FY 2003 management agreement (2,435 total)	IV.4		n/a	45	0		
	43	# Watersheds (2,341 total)	IV.2		n/a	--	--		
Water Quality Administration	44	On-time Water Quality Standards (WQS) triennial review completed (42 States)	IV.3		n/a	N	n/a		
	45	# WQS submissions that have not been fully acted on after 90 days (32 total)	IV.3	<25% submissions	n/a	n/a	1		
Water Quality Implementation	46	State is implementing a comprehensive monitoring strategy (Y/N) (TBD)	IV.1	all states 2005	--	--	--		
	47	% river/stream miles assessed for recreation	IV.2		13.8%	75.0%	n/a		
	48	% river/stream miles assessed for aquatic life	IV.2		22.0%	76.9%	n/a		
	49	% lake acres assessed for recreation	IV.2		49.4%	99.7%	n/a		
	50	% lake acres assessed for aquatic life	IV.2		48.5%	99.9%	n/a		
	51	# outstanding WQS disapprovals (23 total)	IV.3		n/a	0	n/a		
	52	WQS for E. coli or enterococci for coastal recreational waters (12 States)	IV.3	35 states 2008	n/a	n/a	n/a		
	53	WQS for nutrients or Nutrient Criteria Plan in place (13 States)	IV.3	25 states 2008	n/a	Y	n/a		
	54	Cumulative # TMDLs completed through FY 2003 (10,807 total)	IV.4		n/a	46	--		
	55	# TMDLs completed in FY 2003 (2,929 total)	IV.4		n/a	39	0		
Environmental Outcomes	56	# TMDLs completed through FY 2003 that include at least one point source WLA (5,036 total)	IV.4		n/a	10	--		
	57	% Assessed river/stream miles impaired for swimming in 2000	IV.2		--	10.2%	n/a		
	58	% Assessed lake acres impaired for swimming in 2000	IV.2		--	14.9%	n/a		
	59	# Watersheds in which at least 20% of the water segments have been assessed and, of those assessed, 80% or more are meeting WQS (440 total)	IV.2	600 2008	n/a	--	--		

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