



## Permitting for Environmental Results (PER)

# NPDES Profile: Massachusetts and Indian Country

### PROGRAM RESPONSIBILITY

**EPA Region 1:** NPDES authority for base program, general permitting, federal facilities, pretreatment, biosolids

**EPA Region 1:** NPDES authority for all facilities in Indian Country

### 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, please contact Roger Janson, EPA Region 1, at (918) 617-1621 or Glenn Haas, State of Massachusetts, at (617) 292-5748.

## Section I. Program Administration

### 1. Resources and Overall Program Management

#### EPA Region 1:

The Region manages the drafting and issuance of NPDES permits in the State of Massachusetts because Massachusetts has not been authorized to operate the program. Massachusetts issues its own State discharge permits jointly with the Region pursuant to a 1973 agreement.

The permit universe for Massachusetts for which the Region is responsible is as follows:

	Major Permittees	Minor Permittees	Total <sup>a</sup>
Individual Permits	133	304	437
General Permits (non-stormwater)	N/A	196	196

<sup>a</sup> As of July 9, 2004

The Region has 26 staff members in the Office of Ecosystem Protection (OEP) assigned specifically to drafting and issuing all permits for which it has responsibility (including those in Massachusetts, which are the majority of permits for which the Region has primacy), as well as for providing oversight for authorized NPDES State programs. This member includes staff recently detailed to the program to assist with the backlog reduction effort.

Staff members are also assigned to the Municipal Assistance Unit to operate the pretreatment program and handle certain administrative elements such as mailing and receipt of applications, public noticing of draft permits and hearings, and distribution of final permit decisions. This group also provides assistance in reviewing notices of intent (NOIs) under certain general permits and in coordinating data issues with staff managing the Permit Compliance System (PCS). The program also uses several biologists from the Region's Surface Water Branch to support the development of permits for cooling water intakes and discharges associated mainly with power plant facilities. The permits program is supported by Regional Counsel staff (particularly during the appeal process but also with assistance when drafting particularly complex and contentious permits where it is known that the risk of appeal is high) and by staff in the Office of Environmental Stewardship (OES), who assist with several aspects of the Phase I and Phase II stormwater program and who manage PCS. Compliance and PCS staff in OES provide a valuable review of permits during the drafting process to ensure both enforceability and PCS compatibility.

The ever-increasing complexity associated with water quality-based effluent limitations (WQBELs), with emerging water quality standards for nutrients, and with the expectation of concentrating on the environmentally significant permit subset (commencing in FY2005) places a significantly high premium on the Region's ability to meet the backlog reduction challenge and to maintain the current expectation once achieved. It is likely that the current staffing level will be hard-pressed to keep up with program demand.

Although the program has maintained a relatively strong nucleus of permit writers over the past several years by balancing gains and losses, the trend is not likely to continue. Several of the more senior and experienced staff members are likely to retire over the next few years without any realistic expectation of replacement. This will only further challenge an already stressed corps of permit writers.

Enforcement and PCS staff work in OES. Approximately 4.25 full-time equivalents (FTEs) manage PCS for all the New England States, including Massachusetts. Massachusetts Department of Environmental Protection (MADEP) has divided the state into four geographic areas. Three PCS staff members and three technical staff members are currently assigned to these areas to handle enforcement and data issues, as well as to serve as contacts for both MADEP and the public.

## **2. State Program Assistance**

### EPA Region 1:

The Region has not recently provided significant assistance to Massachusetts in pursuing authorization of the NPDES program. Although Massachusetts has made several previous attempts to study program assumption (mostly through efforts funded by EPA), its interest has waned considerably over the last several years. The Region does not plan to promote program assumption in Massachusetts over the next 18 to 24 months, given the challenge of reducing the current backlog and the State's lack of interest in assuming the program as currently constructed. The Region will continue to work cooperatively with Massachusetts to maintain and/or enhance the State's assistance in drafting certain permits to achieve the Region's permit issuance goals.

In addition, Massachusetts is not likely to assume the program without substantial new resource investments. There currently appears to be little management support for pursuing authorization. Further, it is unlikely that Massachusetts would make this investment under current budget constraints. The State

has also professed that its interest in running the program coincides with its desire to manage a program that would undergo a number of fundamental changes, such as an increased emphasis on environmental results with a decreased emphasis on assigning individual pollutant effluent limitations, through any specific permit.

### **3. EPA Activities in Indian Country**

There is one federally recognized Tribe in Massachusetts, the Wampanoags, located in Aquinah on Martha's Vineyard. The Tribe does not have any individual NPDES permits issued to it. The Region's general permits for such activities as stormwater associated with construction activities cover eligible activities that the Tribe would undertake. The Region's outreach activities on permit issues have included all Tribes as appropriate and will continue to do so.

### **4. Legal Authorities**

EPA Region 1 implements the NPDES program in the State of Massachusetts using its authorities under the Clean Water Act (CWA).

### **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.*

#### EPA Region 1:

The Region takes its public participation responsibilities seriously and puts significant effort into ensuring that the public has the opportunity to participate in the process. The Region usually holds formal public hearings on draft permits when requested. For example, the Region held hearings in both Massachusetts and Rhode Island prior to issuing the complex and controversial Brayton Point permit. Information on the permit and its objectives was prepared and distributed in several languages well in advance of the hearing. Information was also posted on the Region's Web site.

The Region's approach includes meeting with dischargers and environmental interest groups during total maximum daily load (TMDL) and permit development to explain the impacts on and changes to their current effluent limitations. The Region takes this approach to better inform the interested constituencies, even though it knows that formal permit hearings may still be requested by one or more parties to the process.

A strong outreach and public participation effort resulted in the successful rollout of the Phase II stormwater program in Massachusetts. Staff from the Assistance and Pollution Prevention and Enforcement and Compliance programs in OES joined with OEP stormwater staff to develop a multidisciplinary, fully integrated program to educate the various affected Phase II entities about Phase II requirements and responsibilities; numerous sessions were held starting nearly 2 years before permit requirements went into effect. Nearly all Phase II municipal storm sewer system facilities (MS4s)

applied for coverage on time. In addition, many contractors and their associations now understand their responsibilities to control stormwater during construction activities.

The Region uses its Web site to post permits and fact sheets for all final permits issued after 2000. The Region continues to increase its posting of draft individual permits to make them widely available to interested parties. Draft general permits are also posted. Public notices indicate that pertinent documents are available from the site and advise that hard copies are available upon request. Hard copies are distributed to a fixed and permit-specific list of interested parties, which is updated periodically. The Region is continuing efforts to use the Internet to disseminate appropriate permit information.

Compliance data for facilities permitted in Massachusetts are available on the Internet to the extent that PCS data are captured in EPA's Enforcement and Compliance History Online (ECHO). A cost may be necessary if the response requires the copying of other data and information (for example, in response to a Freedom of Information Act [FOIA] request). Of course, information and data that are enforcement sensitive, predecisional, or attorney-client privileged are not made publicly available. Notwithstanding, the Region's standard procedure is to involve the public in the NPDES permit process to the maximum extent practicable.

## **6. Permit Issuance Management Strategy**

### EPA Region 1:

The Region does reasonably well in maintaining a nearly 80% level of current permits for major facilities in Massachusetts, particularly since it implemented its NPDES permit task force in late 1998 to address the serious backlog situation existing at that time. However, the percentage of current individual minor permits continues to hover between 20 and 30%, which is significantly below the national average. However, when general permits are included, approximately 50% of the minor facilities have current permit coverage. The Region has identified this performance as a program weakness. It has placed the highest priority on significantly reducing the minor facility backlog through the end of calendar year 2005. It also fully intends to maintain and improve the rate of issuing major permits while at the same time focusing its attention on environmentally significant permits that have been backlogged for more than 2 years beyond their original expiration dates. Coincidentally, environmentally significant permits constitute the bulk of the major backlog universe and often require a disproportionately higher staff investment to draft and issue. At times this circumstance can further exacerbate the backlog problem.

Concurrent with planning its strategy for reducing the backlog, senior management, including the Regional Administrator, recognized the need to enhance the Region's permit program capabilities. In response to this recognition, six staff members (five from outside OEP) were transferred to the permit program to assist with the effort. The Basic Permit Writers' Training Course was provided to these staff members to substantially minimize the learning curve and ensure their successful participation in the effort. Senior management also required the program to be strategic in its approach.

Accordingly, and to enhance its performance, the Region has recently developed and implemented its "Mission Possible" NPDES Permit Backlog Reduction Strategy. The strategy has been designed to greatly enhance the Region's permit issuance rate. Its principles include efficiency measures that are designed to make the best possible use of the permit writers' skills (e.g., increasing administrative

support, using interns to collect and analyze data, using the Office of Environmental Measurement and Evaluation [OEME] and OES staff to conduct site visits, prepare facility descriptions, and so forth); to streamline reviews and speed up the decision-making process (e.g., permit writers are required to identify key issues and decision points early on and to get management review and buy-in, work with State of Massachusetts counterparts to minimize their review and certification periods, establish monthly calls with State program managers to track progress on issue resolution, including assigning responsibility and maintaining accountability); and to provide for increased accountability and incentives to recognize achievement. The strategy projects that a backlog rated no greater than 20% will be achieved by the end of FY2005. It further projects that the national backlog goal of 10% or less will be achieved by the end of calendar year 2005.

The strategy also emphasizes that general permits will be accelerated to reduce the minor, lower-priority permit universe backlog. There is the potential to affect as much as 30 to 40% of the current minor universe through the development and issuance of strategically targeted general permits. In addition, OEP restructuring efforts and the assignment of additional staff to the program will positively affect the ability to significantly reduce the backlog. Expedited review procedures will also be used to assist in moving permits through the process.

The Region has been actively working on environmentally significant permits for some time, particularly on power plant discharges that have complex issues associated with CWA sections 316(a) (thermal discharges) and 316(b) (cooling water intakes). The Region has also been concentrating on municipal wastewater discharges where nutrient-impaired receiving waters compel very stringent WQBELs for phosphorus and/or nitrogen. These two classes of permits alone make up more than 10% of the major permit universe. It is anticipated that some of the minor permits will have environmental significance as well. The Region recognizes that it has to significantly improve its reissuance of permits that have been expired for more than 2 years. In particular, it needs to work on the subset that have been expired for longer than 10 years (currently this set for the minor universe is nearly 20%). The Region will integrate its Permit Issuance Plan (now being prepared) into the “Mission Possible” strategy document and will use these materials as the primary tools to manage and monitor progress in achieving the performance that it expects by the end of 2005.

**Table 1: Percentage of Facilities Covered by Current EPA-Issued Permits in Massachusetts**

	2000	Nat'l Avg.	2001	Nat'l Avg.	2002	Nat'l Avg.	2003	Nat'l Avg.
Major Facilities	68.3%	74%	72.9%	76%	77.9%	83%	76.9%	84%
Minor Facilities Covered by Individual Permits	14%	69%	16.6%	73%	22.9%	79%	26.7%	81%
Minor Facilities Covered by Individual or Non-stormwater General Permits	N/A	N/A	N/A	N/A	N/A	85%	46.9%	86%

Source: 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

### EPA Region 1:

The Region is a direct user of PCS and uses PCS to assist in managing the NPDES program. Information is entered into PCS for both minor and major NPDES facilities and general permits. MADEP has access to PCS for running reports but cannot enter data. The Region uses separate PC-based databases to track combined sewer overflows (CSOs) and sanitary sewer overflows (SSOs) reporting; these databases are not connected to PCS, but they will be added to ICIS-NPDES (modernized PCS) when available.

The Region enters most of the Water Enforcement National Data Base (WENDB) data elements. Because of resource limitations and program priorities, sludge program elements, pretreatment program information, and some latitude and longitude data for minor facilities and pipes at major facilities are not entered. Technical and PCS staff will review the missing elements to evaluate whether further enhancements to WENDB entry can be made. Latitude and longitude data are based on information in permit applications; an EPA contractor updated some of this information several years ago. State penalty information is not entered, as this is not a WENDB data element. The Region can enhance the accuracy of federal penalty data through greater coordination between legal staff, who are responsible for the paperwork associated with administrative penalty orders and judicial consent decrees, and PCS staff.

Routine data entry is quality assured by checking the data entry updates. Engineering staff members also flag anomalous data for PCS staff, who enter effluent data into PCS for permits issued by the Region. As part of its initiative to reduce the backlog of NPDES permits for minor facilities, the Region is reviewing and updating the facility status of minor permits to determine whether some permittees are no longer discharging and therefore permits can be terminated. This review and update should result in the deactivation of many permit records that do not have issuance or expiration dates and which appear on Management Report measure #18 as pending applications. During calendar year 2004, the Region expects to initiate and complete a comprehensive quality assurance program for NPDES minor facility effluent information. In addition, Regional engineering staff periodically review PCS data for errors.

In preparation for PCS modernization, the Region is actively participating in conference calls and meetings. The Region expects to have its staff fully trained as the data system modernization proceeds.

## **Section II. Program Implementation**

### **1. Permit Quality**

#### The State of Massachusetts:

MADEP 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 gathered by the State are collected in accordance with quality assurance project plans (QAPPs), many of which are approved by EPA.

#### EPA Region 1:

NPDES permits for regulated facilities in Massachusetts are developed by EPA Region 1. The Region strives to include the appropriate technology and WQBELs that are consistent with Massachusetts' State water quality standards and all implementing policies developed thereunder. In some cases the lack of water quality data and/or the lack of numeric criteria (e.g., for nutrients where there are often narrative criteria) make the establishment of the appropriate limits difficult. In these circumstances the Region pursues an adaptive management/iterative approach to establishing the appropriate effluent limit(s).

All permits are reviewed consistent with a long-standing practice that the Region instituted in the early 1980s. Each permit writer is expected to develop the appropriate limits. The permit is then reviewed by a water quality specialist and the permits team leader. It is further reviewed by the compliance and enforcement staff who check the permit for enforcement issues and PCS compatibility. At this point all appropriate changes are incorporated and the permit is sent to the State of Massachusetts permit staff for their expedited review prior to public notice. Although somewhat duplicative and with the potential for delay, the review process almost always results in the issuance of high quality permits. In addition, any number of permit quality issues, limits, and conditions are vetted throughout the development process by those involved in a specific permit development process.

The results of a program-wide permit quality review (PQR) conducted several years ago generally indicated that the permits were of high quality but showed that fact sheets could better explain certain limits and/or conditions. The PQR also cited certain missing appendices, leading the Region to make sure that the appropriate sets of conditions and appendices are incorporated into each permit. The Region recognizes that it could better use the tools developed to assist in identifying permit quality issues. The Region intends, as part of its overall implementation of its "Mission Possible" strategy, to make better use of a number of the available standardized tools to bring further efficiency and quality to the program.

The Region requires whole effluent toxicity (WET) monitoring for virtually all publicly owned treatment works (POTWs), and for industries discharging process wastewaters. The monitoring frequencies and limits are based on risk, as expressed by the dilution factor (i.e., discharges with low dilution factors are given more frequent monitoring and more stringent limits). For example, chronic limits are included for all discharges that discharge to receiving waters with low dilution, while acute limits are required for all discharges regardless of the receiving water dilution. In addition, reasonable potential determinations are conducted using both WET data collected by the facility and the available dilution of the receiving

water. The Region also uses the independent application approach to include specific effluent limitations where and when appropriate (e.g., independent limits are calculated and applied for specific metals such as copper, zinc, and aluminum, even though WET limit requirements may be expressed in the same permit). The Region will continue to evaluate its approach to determining reasonable potential using such tools as the “Technical Support Document for Water Quality-based Toxics Control” (TSD).

The Region requires permittees to address WET violations through toxicity identification evaluations (TIEs) and toxicity reduction evaluations (TRES) and maintains an expert in WET procedures and protocols in OEME to assist the Compliance and Enforcement staff in evaluating the results.

## **2. Pretreatment**

### EPA Region 1:

EPA is the approval authority for the 47 approved pretreatment programs in Massachusetts. As of July 2004, these pretreatment programs include 823 significant industrial users (SIUs) in Massachusetts.<sup>1</sup>

The Region attempts to conduct pretreatment audits once every 5 years; however, with the lack of State assistance on pretreatment activities, this goal is not always accomplished. The Region does not anticipate that it will make any significant improvements in this area for the foreseeable future as staff members have been assigned to other high priority program areas (e.g., drinking and wastewater treatment facility security, Drinking Water State Revolving Fund [DWSRF] and Clean Water State Revolving Fund [CWSRF] programs).

Following a pretreatment program audit, all findings are discussed with the POTW’s program managers. EPA typically requires a POTW’s response to the audit’s findings within 60 days. In conjunction with the audit procedures, EPA conducts industrial user inspections of such programs. Annual pretreatment reports are submitted by POTWs and are reviewed by the Region. The Region maintains an active pretreatment compliance and enforcement component and has successfully concluded a number of cases, often resulting in significant penalties.

Outside of the approved pretreatment programs, EPA has identified 13 SIUs to include categorical industrial users (CIUs), which report compliance to the Region twice per year. These industries are also inspected by EPA on an as-needed basis.

## **3. Concentrated Animal Feeding Operations**

### EPA Region 1:

Although much of New England is rural, agricultural runoff does not impact water quality as much as urban stormwater runoff, CSOs, industrial discharges, and other urban sources of pollution. Historically, EPA has dedicated resources to the concentrated animal feeding operations (CAFO) program that reflect the relative risk to public health and the environment.

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<sup>1</sup> The national Data Sources column on the Management Report shows 532 SIUs (measure #9). This discrepancy results from the Region not entering pretreatment data into PCS because of resource limitations. The Region will continue to look for opportunities to enhance the resources available for PCS data input.

In Massachusetts there is currently only one CAFO, and it is covered by an individual permit issued by the Regional office in 1999. When this permit is reissued, it will be upgraded to incorporate the current program requirements. The Region does not expect to issue a CAFO general permit but will continue to issue individual permits as appropriate. For permits issued under the revised CAFO rule, the Region will use the Natural Resources Conservation Service (NRCS) technical standards for nutrient application and management of phosphorus and nitrogen.

EPA has an excellent working relationship with the Massachusetts Department of Agriculture. The agencies meet at least twice a year to reevaluate and reconfirm their joint CAFO management plan. The Department of Agriculture will continue to conduct annual inspections of all animal feeding operations (AFOs), will identify potential CAFOs, and will continue to provide technical assistance to operations near surface waters. Should additional CAFOs be identified, the Region will issue individual permits for those operations unless the number of facilities increases dramatically, at which point the Region would consider the development of a general permit, borrowing heavily from the existing models. Massachusetts recently has begun to develop a comprehensive strategy to deal with water quality problems from farming operations that may require technical assistance, compliance assistance, or permits.

The Region has not issued any CAFO permits under the new requirements in non-authorized states (there are two known CAFOs: one in Massachusetts and one in New Hampshire). The Region expects to issue permits in a timely manner and will include nutrient management plan (NMP) requirements and technical standards based on the model standards currently being developed by EPA. In Massachusetts, the Region expects that the Massachusetts Department of Agriculture will review NMPs, as addressed in the memorandum of agreement (MOA).

#### **4. Stormwater**

##### EPA Region 1:

There are two MS4s in Massachusetts subject to the Phase I stormwater permitting requirements. These systems are the cities of Boston and Worcester. The Worcester permit expired on September 30, 2003, and the Boston permit expired on September 30, 2004. Activities geared toward reissuing both permits are currently under way.

Stormwater discharges from industrial facilities and construction activity are covered under the multisector general permit and the construction general permit, respectively. Massachusetts has not been delegated the NPDES program; therefore, EPA has primary responsibility for issuing and enforcing stormwater permits. The Region relies on the data supplied by the EPA NOI processing center to track permit coverage under these two permits. Since 2002, approximately 65 EPA stormwater compliance inspections have been conducted in Massachusetts. As a result of these inspections, enforcement actions ranging from non-penalty administrative orders to referrals to the Department of Justice have been issued by the Region for failure to comply with the provisions of EPA's stormwater general permits. The Region has also implemented an Expedited Settlement Offer program to address minor violations discovered during stormwater inspections of construction sites.

On May 1, 2003, the Region issued the small MS4 general permit. The permit regulates all municipalities in Massachusetts subject to Phase II permitting (cities/town; state/federal agencies; and

state highways). Annual reports on the first year of program implementation were due on May 1, 2004. The Region has spent a great deal of time on outreach and education on the small MS4 program. Only one out of approximately 270 regulated municipalities (in Massachusetts and New Hampshire), failed to submit a complete and accurate NOI.

## **5. Combined Sewer Overflows/Sanitary Sewer Overflows**

### EPA Region 1:

Historically, there were 24 communities in Massachusetts with CSOs. Two communities have eliminated CSOs through complete separation of the combined sewer systems. All the remaining CSO communities have enforceable mechanisms to implement applicable nine minimum controls (NMCs), and are implementing NMCs, except for one community that is in the process of fully separating its system. NPDES permits issued to CSO communities in Massachusetts require implementation of the NMCs consistent with the 1994 CSO Control Policy and the CWA. They also contain a narrative statement that discharges from CSOs shall not cause or contribute to violations of federal or State water quality standards. The Region issues permits to all communities in Massachusetts that own CSO outfalls, including "satellite" communities.

The Region uses enforcement tools much more frequently than permitting to require CSO mitigation. The principal reason for using enforcement tools is that they can be modified more quickly than permits based on new information about the configuration and operation of the system developed during CSO planning and abatement. The Region also typically uses a phased approach to CSO planning and mitigation. This approach enables early implementation of discrete, identifiable projects at the same time the CSO community develops alternatives for additional CSO planning.

Procedures for public notification of CSO events are set forth in permits. POTW permits require oral notification of all unauthorized discharges within 24 hours and written notification within 5 days. Mechanisms for CSO notification include signs, Web sites, phone calls to downstream users, and newspapers.

Two CSO communities have completed CSO abatement. The remainder of the communities are implementing an approved first phase of CSO abatement, while developing other CSO abatement measures. As with other CSO communities, barriers to more expeditious implementation of long-term control plans include financial and siting issues.

Permittees in Massachusetts are required to report SSO events to both the Region and MADEP. All SSOs must be reported. Permits require that unauthorized discharges that may endanger health or the environment be orally reported within 24 hours and that a written report be submitted within 5 days. The Region and Massachusetts have a suggested form to report SSOs. The Region maintains a database of SSO reports and is currently working with MADEP to define the universe of communities with SSOs of concern. Although the Region does not currently require permittees to implement a Capacity, Management, Operation and Maintenance (CMOM) program, the Region does include standard provisions in permits related to proper operation and maintenance of collection systems.

EPA has not typically issued NPDES permits to satellite communities; in some cases, the Region has included satellite communities as “co-permittees” for purposes of reporting of SSOs and operation and maintenance of the collection system.

## **6. Biosolids**

### EPA Region 1:

Conditions implementing the biosolids program are routinely included in all NPDES permits issued to POTWs or other treatment works treating domestic sewage (TWTDS). Annual reports are required to be submitted by February 19 of each year. PCS tracks the submission of reports, although actual data are not entered into the system. Currently three use or disposal practices consistently occur in the State of Massachusetts: land application, land fill, and incineration. In Massachusetts, the use of these practices is fairly equally common. Approximately 30% of biosolids generated in Massachusetts are beneficially reused. The Massachusetts Water Resources Authority (MWRA) is the largest generator of material that is beneficially used.

## **Section III. NPDES 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. Where the State (such as Massachusetts) is not authorized to implement the NPDES program, OECA will use the above process to evaluate regional performance in implementing the NPDES compliance and enforcement programs.*

### **1. Enforcement Program**

MADEP has divided the State into four geographic areas. Regional staff are assigned to each of these areas to serve as a contact for MADEP and the public. These assignments allow Regional staff to develop familiarity with permitted facilities and State counterparts. Regional staff meet at least quarterly with the State to review the quarterly noncompliance report (QNCR) and to discuss appropriate enforcement responses. The Region and MADEP coordinate efforts related to both inspections and enforcement. The Region believes that these procedures have worked well in the past. However, severe State budget cutbacks over the past 2 years and the resulting loss of experienced State enforcement staff may have a significant adverse impact on MADEP's ability to support the Region's NPDES enforcement and compliance efforts. Impacts may include the Region shifting NPDES resources to cover inspections and other enforcement activities in Massachusetts.

#### EPA Region 1:

The Region typically issues 12 to 16 administrative orders in Massachusetts each year to address various NPDES violations. It has increasingly used its administrative penalty authority to address more serious violations. Civil judicial referrals have been made in cases involving recalcitrant violators, a large economic benefit to the violator, or those requiring extended compliance schedules. These referrals have included large stormwater and CSO cases.

With regard to EPA enforcement actions, technical staff draft non-penalty administrative orders. The technical program manager and senior enforcement counsel review these orders prior to issuance. Case teams consisting of both technical and legal staff develop penalty orders and judicial referrals; the technical program manager and senior enforcement counsel also review penalty orders and referrals. Case teams document penalty calculations in memoranda that are maintained in case files. Case teams negotiate and draft settlement documents and handle follow-up, including monitoring compliance with enforcement orders and consent decrees. Although the majority of administrative penalty orders are resolved through settlement, case teams are responsible for litigating and handling appeals of those cases that do not settle.

Significant noncompliance rates for Massachusetts facilities have been higher than the national average in recent years due in part to issuance of permits with increasingly stringent water quality-based limits. The Region has developed some model administrative orders to address this issue, particularly with

regard to violations of water quality-based limits for copper. Massachusetts has indicated its intention to develop site-specific limits for copper. Until such time as Massachusetts adopts such limits, however, the Region anticipates continuing to issue orders as permits are reissued.

In addition to monitoring and responding to effluent violations, the Region has a very active wet-weather enforcement program, including CSOs, SSOs, and stormwater. With regard to CSOs, the Region's approach is to eliminate all CSO discharges when it is financially and technically feasible to do so; this is because discharges of untreated sewage violate applicable microbiological and aesthetic water quality criteria. The Region prioritizes its work on CSOs to protect areas such as bathing beaches, drinking water supplies, and shellfish beds.

With regard to SSOs, the Region looks for patterns of overflows due to either inadequate maintenance or inadequate hydraulic capacity. The Region focuses on repeat events at a single location during dry weather or wet-weather events during smaller storms. Again, the Region prioritizes its efforts to protect areas such as bathing beaches, drinking water supplies, and shellfish beds. With regard to stormwater, the Region recently has focused efforts on the construction sector and has targeted larger sites with no controls or inadequate controls.

The Region's enforcement actions comply with the national Enforcement Response Guideline for water enforcement actions. In addition, the Region uses the Interim Clean Water Act Settlement Penalty Policy to calculate bottom-line penalties in NPDES and pretreatment cases. In accordance with the policy, the Region uses BEN, an EPA-designed program that considers the net present value of delayed capital investment, one-time non-depreciable expenditure, and avoided operations and maintenance expenses, to calculate economic benefit. The Region recovers BEN in all actions in which it can be calculated or is not minimal.

The Region uses PCS to monitor compliance with enforcement orders. All major milestones in orders or consent decrees are entered into PCS. Some case teams also use manual tracking for actions with many interim milestones.

## **2. Record Keeping and Reporting**

### EPA Region 1:

The Region is a direct user of PCS.

See responses to Section I.7 (Data Management), above.

## **3. Inspections**

The Region works with MADEP to target coverage inspections of major and minor facilities. The Region and MADEP target based on a number of factors including meeting commitments to EPA headquarters for major coverage, time since last inspection, tips/complaints, watershed targeting, significant noncompliance, impaired waters, and support of integrated strategies (e.g., Departments of Public Works, colleges and universities) by inspecting municipalities and industries that have opted not to participate in the Region's various audit initiatives. Virtually all coverage inspections performed by

Regional staff include inspections of on-site laboratories and review of laboratory protocols and bench sheets. Beginning in 2001, Regional staff have conducted inspections to support an initiative in the stormwater construction sector. This has resulted in some increase in the number of minor inspections.

With respect to major coverage inspections, the Region and MADEP have made efforts to increase inspections since 2000. However, as a result of the loss of experienced inspection staff due to recent State budget cuts, the Region has some concerns that MADEP might not achieve sufficient inspection coverage of NPDES major facilities. Despite these concerns, the Region, in conjunction with MADEP, has been able to increase the percentage of major facilities inspected each year. In addition, for industrial facilities, MADEP uses a multimedia approach to inspection targeting, rather than committing to inspect a specific number of NPDES major facilities. Because of this approach and because MADEP does not enter NPDES inspection data directly into PCS, the Region is not certain that MADEP is reporting all its inspections to EPA and will work with the State to improve communications in this area. In addition, the Region will continue to work with MADEP to achieve an appropriate balance of major inspections and other priorities.

#### **4. Compliance Assistance**

##### EPA Region 1:

Region 1's Office of Environmental Stewardship has been a national leader in the development of integrated strategies, assistance tools, and innovative programs. Much of that work is managed by OES's Assistance and Pollution Prevention Office (A&P2), a 25-person unit that was created during a major regional reorganization in 1996. The overall goals of A&P2 are to provide assistance, to promote sustainable practices, and to test and encourage innovation. Many of A&P2's strategies are developed in consideration of how enforcement can also help promote these goals in an integrated way.

Much of A&P2's work is described on the OES Web page at <http://www.epa.gov/region1/enforcementandassistance>. Most of the A&P2 assistance work is multiprogram and organized by sector. Past and present sectors include marinas, metal finishers, hospitals, wood finishers, small drinking water systems, colleges and universities, and auto repair facilities. The work done with these sectors is customized to meet specific goals that include both compliance and overall environmental performance, including waste reduction and pollution prevention.

Work for each A&P2 sector has a separate written strategy that describes yearly goals, implementation milestones, and measurement methods. Methods of measurement range from on-site assessments using preestablished baseline measures, written and telephone surveys, case studies, statistics on Web site usage, and compliance indicators such as fulfillment of reporting requirements.

In addition to assistance, A&P2 also promotes innovation and works closely with the Deputy Regional Administrator on national and regional innovation efforts. The DRA cochairs a State/EPA innovations workgroup that has selected TMDL innovation as its first priority. The group is also sponsoring a State/EPA innovations symposium that will be held at the end of March, the theme of which is "Innovation for Results in Tough Financial Times." The Region expects future State/EPA innovation projects to be determined in large part by the results of this symposium.

In addition to sector projects, A&P2 has also devoted substantial resources to stormwater assistance. This assistance is focused on smaller entities (both municipalities and construction companies) that are subject to the Phase II stormwater regulations. Much of this assistance has been devoted to New Hampshire and Massachusetts, the two states in which EPA has primacy for the NPDES program, although there have been many efforts in other States as well. The kinds of assistance provided include workshops, development and distribution of fact sheets, development of model stormwater tools, an on-line “virtual trade show” of stormwater technologies, and publication of stormwater articles in trade journals.

One measure of the effectiveness of this work is the compliance rate for the notice of intent (NOI) submittal requirement established in the stormwater general permit. For example, to contrast “paper compliance” before outreach with paper compliance early in the outreach effort and then after a full year of outreach, the Region compared the number of NOIs for large sites that EPA received in Quarters (Qs) 3-4 2001 (April 1 to September 30) with the number of NOIs for large sites received in Qs 3-4 2002 and Qs 3-4 2003. By focusing on Qs 3-4, the Region captured the main season for building starts and held that constant across the years. Massachusetts and New Hampshire filings were counted separately to see if operators in those States responded differently to an approximately equivalent amount or type of outreach. The results of this assessment are presented below.

**Table 2: NOIs Filed for Large Construction Sites**

	2001 (Qs 3-4)	2002 (Qs 3-4)	2003 (Qs 3-4)
MA site or owner	50	103	244
NH site or owner	25	79	266

The numbers show that NOI filings for both Massachusetts and New Hampshire sites and operators more than doubled each of the 2 years after outreach began in earnest. New Hampshire filings more than tripled year-to-year, and the State’s 2003 absolute numbers exceeded those of Massachusetts, perhaps because there was extensive or effective outreach in New Hampshire.

#### The State of Massachusetts:

MADEP, and Massachusetts generally, have a national reputation for innovation and assistance work. Within MADEP, much of their assistance work has been done for small businesses in conjunction with their Environmental Results Program, or ERP. Sectors have included dry cleaners, photo processors, printers, and other sectors. This work includes development of performance indicators, customized assistance, and self-certification to multimedia standards.

Apart from MADEP, the Massachusetts Office of Technical Assistance (OTA) provides on-site assistance to sources that request it or are referred to OTA as a result of enforcement actions. OTA has extensive technical expertise and does hands-on training in targeted areas such as application of coatings.

Massachusetts also has a toxics use reduction law that established another group, the Toxics User Reduction Institute, or TURI. TURI, which is based at the University of Lowell, does detailed research on toxics use reduction practices.

Significant budget cuts have affected and scaled back the work of all these programs.

## **Section IV. Related Water Programs and Environmental Outcomes**

### **1. Monitoring**

#### The State of Massachusetts:

Permitting and monitoring follow a defined watershed schedule in Massachusetts; water quality assessment reports are developed prior to permit issuance. However, monitoring resources are so limited that adequate data for determining water quality-based limits are seldom available, and for many minor permits there are no water quality data. Efforts to enhance the utility of the assessment reports are ongoing but continue to be hampered by limited resources.

Massachusetts is developing a monitoring strategy and has recently submitted a draft strategy. EPA is reviewing the strategy and will provide comments to Massachusetts in the near future. The State's strategy is being evaluated for consistency with the 10 elements in the Elements of a State Water Quality Monitoring Program guidance.

Massachusetts has monitoring resources that have been reduced and/or redirected due to increasing priority or preference of targeted waters, such as TMDL listed waters, fixed monitoring stations, or other water programs. One goal of the CWA is for the State to have an understanding of conditions in all waters in all areas of the State. The State's comprehensive monitoring and assessment strategy is supposed to identify gaps in the monitoring and assessment program, prioritize the gaps that need to be filled to meet the objective of adequately assessing the State's waters, and provide estimates of resources that are needed to fill those gaps over a 10-year time span.

Massachusetts has elected not to participate in the New England wadeable streams and lakes/ponds projects. A few other agencies besides the Department of Environmental Protection have monitoring programs in Massachusetts, such as Coastal Zone Management and Department of Environmental Management, which have expressed interest in implementing STORET (an EPA database) and coordinating programs with MADEP. Coordination of monitoring programs and improved data sharing would be beneficial to optimizing statewide efforts toward each agency's goals and objectives. Improving communication and collaboration among agencies that generate monitoring data in Massachusetts is a major challenge toward comprehensive coverage and accurate assessment summaries.

### **2. Environmental Outcomes**

#### The State of Massachusetts:

According to the Massachusetts 2002 water quality inventory prepared under CWA section 305(b). Massachusetts's ambient monitoring program and overall assessments for attainment of water quality standards and designated uses are summarized below.<sup>2</sup>

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<sup>2</sup> See Management Report measures #47 through #50 for more specific measures of monitoring and assessment status.

**Table 4: Waters Assessed and Supporting Water Quality Standards**

	<b>Rivers/Streams</b>	<b>Lakes/Ponds</b>	<b>Estuaries</b>
Total Waters Assessed in 2002	1,791 Miles Assessed ( 22% of Total Miles)	112,598 Acres Assessed (74% of Total Acres)	227 Square Miles Assessed (8% of Total Acres)
Fully Supporting WQS in 2002	710 Miles Assessed (40% of Total Assessed Miles)	29,665 Acres Assessed (26% of Total Assessed Acres)	69.3 Square Miles Assessed (30% of Total Assessed Square Miles)

### 3. Water Quality Standards

#### The State of Massachusetts:

Good progress has been made toward integrating the water quality standards (WQS), TMDL, and NPDES programs in many areas. Coordination between the NPDES program and the standards program has been very good at the State and federal levels, but the triennial review of standards is considerably behind schedule. In some key areas integrating the two programs has been challenging. These include the following:

- The lack of numeric water quality criteria for nutrients continues to be a significant hurdle to establishing water quality-based NPDES limits that prevent eutrophication. Massachusetts is developing nutrient criteria and has submitted a plan for developing criteria for lakes and rivers. The Region is working with the State of Massachusetts to finalize the plan. Adoption of numeric criteria will greatly facilitate the issuance of permits to nutrient-impaired waters.
- The lack of ambient biocriteria results in excessive reliance on chemical criteria. This issue is further compounded by the limited resources available for chemical monitoring. With respect to the NPDES program, available WET data are always considered during permit development.
- The need to maintain adequate water quantity is not explicitly recognized in the standards as a necessary component of achieving and protecting designated uses.

Massachusetts has submitted draft WQS to the Region for review. MADEP has provisions for considering use attainability analyses (UAAs) and has, in one case, adopted revised standards based on a UAA related to CSO abatement. Presently, Massachusetts's WQS include fecal coliform criteria, but the State plans to adopt E. coli and enterococci criteria in its next WQS revisions.

#### EPA Region 1:

All permits undergo a reasonable potential determination by evaluating available effluent data, ambient water quality data, receiving water characteristics, and applicable water quality standards. If the data indicate exceedances or a reasonable potential to exceed, WQBELs are established. Also, for most pollutants ambient background data for the pollutant of concern are used, when available, to calculate WQBELs.

The same approach is used for discharges to impaired streams where a TMDL is not available. EPA conducts a reasonable potential determination and establishes permit limits that would prevent the facility from causing or contributing to violations of water quality standards. In cases where a TMDL study is under way and dischargers are likely to require WQBELs but there is insufficient information at the time of permit issuance to establish appropriate WQBELs, a re-opener clause is added to the permit and the dischargers might be required to conduct facility planning to evaluate treatment options to reduce pollutant loadings to various levels. In many cases, interim WQBELs are also established using available information, with the possibility that the WQBELs would be revised upon approval of the TMDL.

#### 4. Total Maximum Daily Loads

##### EPA Region 1 and the State of Massachusetts:

To date, the Region has approved 150 TMDLs submitted by MADEP. Massachusetts had a TMDL universe of 1,186 TMDLs as of November 2, 2004.<sup>3</sup> Over the next year or so the Region and MADEP will work on a project to deliver approximately 366 bacterial TMDLs. This effort will ultimately reduce the backlog of TMDLs by more than 30%. MADEP's TMDL priorities include the continued development of nutrient and bacteria TMDLs for estuaries impaired by both point and nonpoint sources and the development of TMDLs for nutrient-impaired rivers and streams involving numerous wastewater treatment plants. These TMDLs tend to be very complex, involving intensive data collection and water quality modeling, which typically take considerable time and funds to complete.

The Region provides technical and financial assistance for the TMDL programs in Massachusetts. Although the Region has been extensively involved in several TMDL efforts in Massachusetts, TMDLs are completed by the State and then submitted to the Region for approval.

The NPDES program and the Massachusetts and Regional TMDL programs have excellent coordination and are generally well aware of activities in each program. Both at the State and at EPA, program staff work closely together. As is the case in the Regional Office, the State of Massachusetts TMDL and permit program staff are housed in the same office; this maximizes the opportunities for coordination. The Regional permits program benefits substantially from having several staff members with prior TMDL preparation, review, and approval experience. These staff members work closely with the State TMDL program to ensure that TMDLs with wasteload allocations (WLAs) are developed and expressed in such a manner that they are readily translatable into specific effluent limitations. For example, EPA NPDES and TMDL staff members work together to provide input to the State throughout the development of TMDLs that involve permitted point sources. As a result of this coordination, WLAs from approved TMDLs are incorporated into applicable permits at the time of permit reissuance.

In situations where a permit is under development for a discharge into an impaired water body and the TMDL has yet to be developed, the Region works closely with the State to collect and analyze all available data to support the inclusion of a limit that will ensure that progress will be made toward achieving water quality standards. Typically, these discharges involve the control of nutrients.

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<sup>3</sup> This number differs from the universe presented in the Management Report (see measure #41) because of the different sources of data used. The Management Report is based on the 2002 list of impaired water bodies prepared under CWA section 303(d) while the Region's Massachusetts TMDL universe number is based on the latest draft of the 2004 303(d) list.

Massachusetts has a rotating basin plan (it spreads its 27 basins over 5 years, resulting in an approximately equal number of permitted facilities per year). However, the plan, which is permit workload based, is only loosely connected with the State's TMDL schedule. The State does make every effort to ensure that certain significant TMDLs (e.g., the Assabet River nutrient TMDL) are completed prior to permit reissuance. In the case of the Assabet River, four major and two minor facilities are affected. Given that the facilities are significant contributors to the impairment, the State prioritized this TMDL so that the permits will have appropriate limits when issued. Unfortunately, the development of TMDLs of this type is resource intensive, particularly in a heavily budget-constrained State, and takes several years to complete. The situation often affects the pace of TMDL development, as well as the permit backlog situation.

All Massachusetts TMDLs that involve regulated point sources, other than stormwater discharges, provide sufficient information to set numeric WQBELs. TMDLs addressing stormwater impairments typically provide only gross allotments for stormwater because of the lack of detailed information concerning source loadings and impacts. Consequently, stormwater TMDLs do not typically include allocations that are sufficiently specific to set WQBELs. The Phase II stormwater general permit for small communities issued by the Region includes language requiring that stormwater pollution plans submitted by regulated communities be consistent with WLAs for regulated stormwater in all applicable TMDLs.

## **5. Safe Drinking Water Act**

The NPDES permitting program coordinates with the drinking water program concerning the locations of public water supply intakes relative to NPDES discharge outfalls. Permitted facilities that are determined to represent a potential risk to a downstream public water supply are required to immediately notify the public water supplier in the event of an accidental bypass or plant upset. Also, during permit development reasonable potential determinations are conducted using human health and drinking water criteria to determine whether effluent limits are needed to protect the drinking water use.

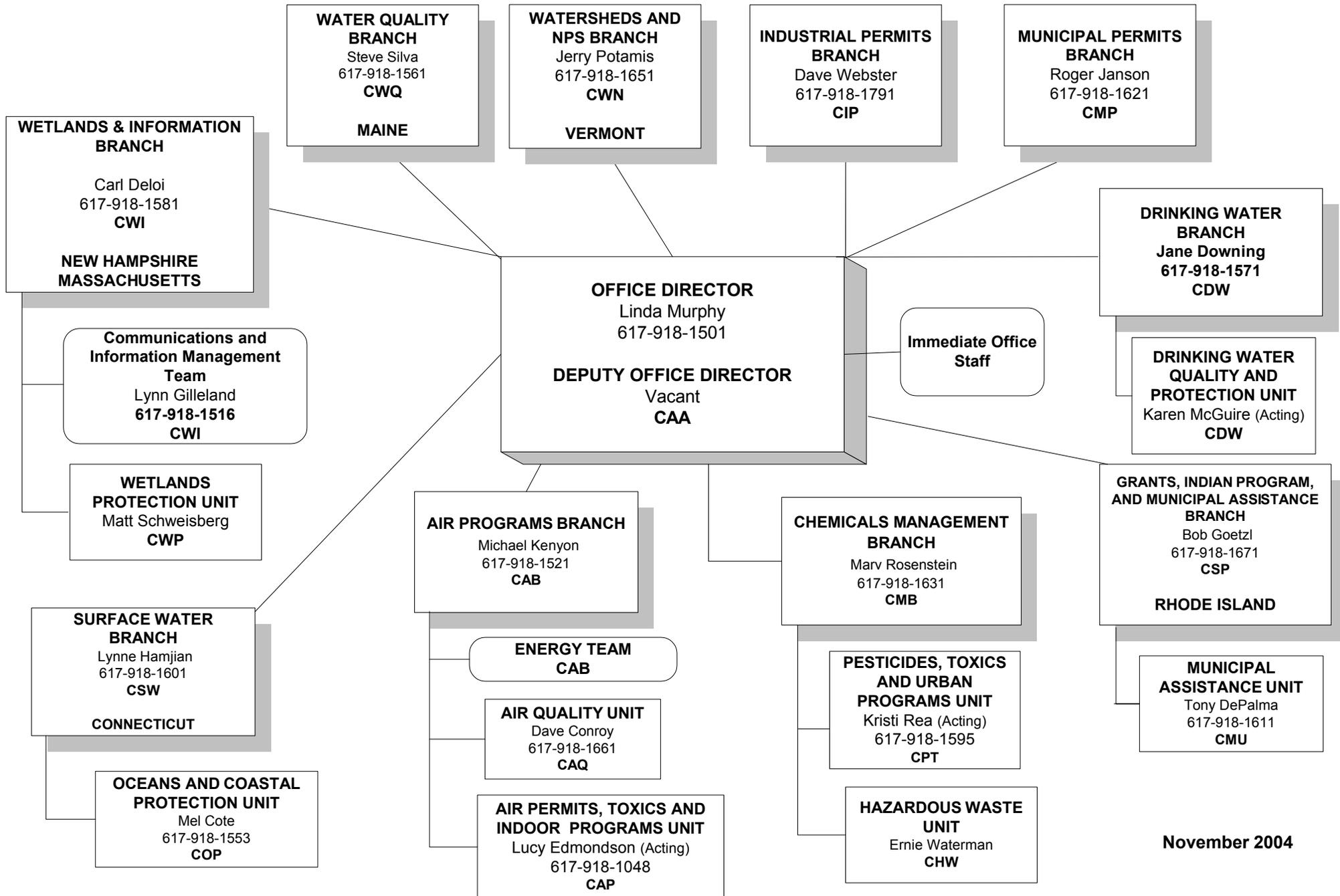
The Region and States have been discussing the importance of accurately identifying the locations of permitted discharges in relation to public water supply intakes. Also, there has been ongoing coordination between the stormwater permitting programs and underground injection control (UIC) programs in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

## **Section V. Other Program Highlights**

### **EPA Region 1:**

Within the context of operating the “standard” NPDES program, the Region has incorporated trading as a strategy available to permittees to assist them in meeting particularly stringent WQBELs. The Region believes that the experience gained in the development and implementation of the Long Island Sound TMDL and nitrogen credit exchange program are and will be valuable tools with which to educate others interested in the benefits of pursuing trading concepts within a watershed and the confines of a permit(s).

# OFFICE OF ECOSYSTEM PROTECTION



November 2004

# NPDES Management Report, Fall 2004

## Massachusetts

		Profile Section	GPRA Goal	Nat. Avg.	National Data Sources		Additional Data	
					State Activities	EPA Activities	State Activities	EPA Activities
<b>NPDES Progress</b>								
Universe	1	# major facilities (6,690 total)	I.1		n/a	n/a	133	
	2	# minor facilities covered by individual permits (42,057 total)	I.1		n/a	n/a	304	
	3	# minor facilities covered by non-storm water general permits (39,183 total)	I.1		n/a	n/a	196	
	4	# priority permits (TBD)	I.6			n/a	--	
	5	# pipes at facilities covered by individual permits (142,761 total)	I.7		n/a	n/a	1,451	
	6	# industrial facilities covered by individual permits (32,505 total)	I.1		n/a	n/a	286	
	7	# POTWs covered by individual permits (15,197 total)	I.1		n/a	n/a	125	
	8	# pretreatment programs (1,482 total)	II.2		n/a	n/a	47	
	9	# Significant Industrial Users (SIUs) discharging to pretreatment programs (22,158 total)	II.2		n/a	n/a	532	823
	10	# Combined Sewer Overflow (CSO) permittees (831 total)	II.5		n/a	n/a	22	
	11	# CAFOs (current and est. future) (17,672 total)	II.3		n/a	n/a	1	
	12	# biosolids facilities (TBD '05)	II.6			n/a	--	
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	n/a	P	
	14	% pipes at facilities covered by individual permits w/ lat/long in PCS	I.7		46.3%	n/a	31.3%	
	15	State CAFO legal authority expected (mo/yr)	II.3	2005	n/a	n/a	n/a	
	16	# Withdrawal petitions/legal challenges (22 total)	I.4		n/a	n/a	n/a	
	17	DMR data entry rate	I.7		95%	n/a	97%	
	18	# permit applications pending (1,011 total)	I.6		n/a	n/a	106	
NPDES Program Implementation	19	% major facilities covered by current permits	I.6	90%	83.7%	n/a	78.2%	
	20	% minor facilities covered by current individual or non-storm water general permits	I.6	90% 12/04	87.0%	n/a	50.4%	
	21	# major facilities w/permits expired >10 yrs. (56 total)	I.6		n/a	n/a	2	
	22	% priority permits issued as scheduled (TBD '05)	I.6	95% 2005		n/a	--	
	23	% pretreatment programs inspected/audited during 5 yr. inspection period	II.2		85.3%	n/a	89.4%	
	24	% SIUs w/control mechanisms	II.2		99.2%	n/a	97.9%	
	25	% of CSO permittees with long-term control plans developed or required	II.5	75% 2008	82.2%	n/a	90.1%	
	26	% CAFOs covered by NPDES permits	II.3		35%	n/a	100%	
	27	% biosolids facilities that have satisfied part 503 requirements (TBD '05)	II.6			n/a	--	
	28	# Phase I storm water permits issued but not current (76 total)	II.4		n/a	n/a	1	
	29	# Phase I storm water permits not yet issued (5 total)	II.4		n/a	n/a	0	
	30	Phase II storm water small MS4 permits current (Y/N/D (draft)) (35 States)	II.4	100% states 2008	n/a	n/a	Y	
	31	Phase II storm water construction permit current (Y/N/D (draft)) (49 States)	II.4	100% states 2008	n/a	n/a	Y	
NPDES Compliance Monitoring and Enforcement Response	32	% major facilities inspected	III.3		71%	46%	19%	
	33	(inspections at minors) / (total inspections at majors and minors)	III.3		76%	50%	49%	
	34	% major facilities in significant non-compliance (SNC)	III.1		20%	n/a	28%	
	35	% SNCS addressed by formal enforcement action (FEA)	III.1		14%	n/a	35%	
	36	% SNCS returned to compliance w/o FEA	III.1		70%	n/a	43%	
	37	# FEAs at major facilities (666 total)	III.1		n/a	0	16	
	38	# FEAs at minor facilities (1,660 total)	III.1		n/a	0	1	

### 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 NTS 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.

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# NPDES Management Report, Fall 2004 Massachusetts

		Profile Section	GPRA Goal	Nat. Avg.	National Data Sources		Additional Data		
					State Activities	EPA Activities	State Activities	EPA Activities	
<b>Water Quality Progress</b>									
Universe	39	River/stream miles (3,419,857 total)	IV.2		n/a	8,229	n/a		
	40	Lake acres (27,775,301 total)	IV.2		n/a	151,173	n/a		
	41	Total # TMDLs in docket at end of FY 2003 (52,795 total)	IV.4		n/a	1,646	--		
	42	# TMDLs committed to in FY 2003 management agreement (2,435 total)	IV.4		n/a	37	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%	11.7%	n/a		
	48	% river/stream miles assessed for aquatic life	IV.2		22.0%	16.4%	n/a		
	49	% lake acres assessed for recreation	IV.2		49.4%	40.9%	n/a		
	50	% lake acres assessed for aquatic life	IV.2		48.5%	20.1%	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	n/a		
	53	WQS for nutrients or Nutrient Criteria Plan in place (13 States)	IV.3	25 states 2008	n/a	N	n/a		
	54	Cumulative # TMDLs completed through FY 2003 (10,807 total)	IV.4		n/a	158	--		
	55	# TMDLs completed in FY 2003 (2,929 total)	IV.4		n/a	28	0		
Environmental Outcomes	56	# TMDLs completed through FY 2003 that include at least one point source WLA (5,036 total)	IV.4		n/a	25	--		
	57	% Assessed river/stream miles impaired for swimming in 2000	IV.2		--	31.0%	n/a		
	58	% Assessed lake acres impaired for swimming in 2000	IV.2		--	22.0%	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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