Appendix B

Profiles of State CSO Programs

State Profile Connecticut—Region 1

CSO Permits

5

Permitted CSO Outfalls

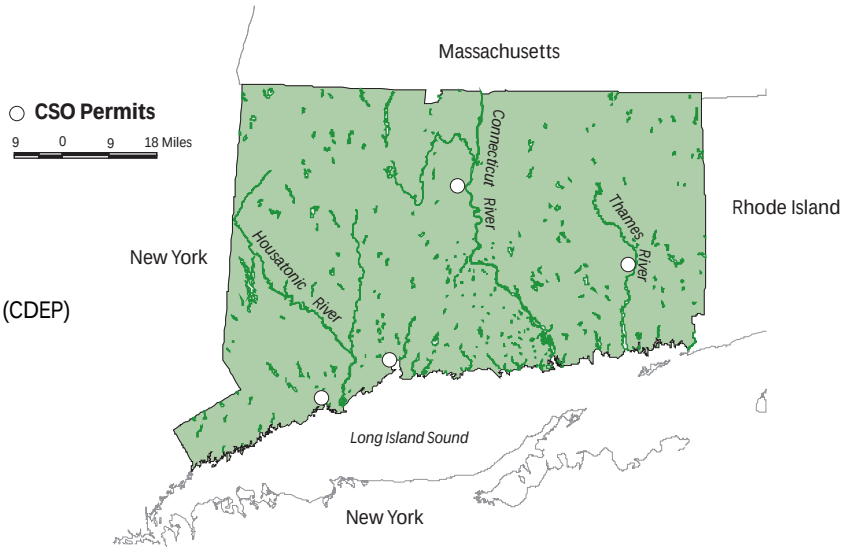
122

NPDES/Water Quality Standards Authority

Connecticut Department of Environmental Protection (CDEP)

Online Resources

http://dep.state.ct.us/index.htm
http://dep.state.ct.us/wtr/index.htm



Status of CSO Policy Requirements	Number of Permits	Percent
BMP Requirements		
NMC	5	100%
Some BMPs	0	0%
No BMPs	0	0%
Total	**5**	**100%**
Facility Plan Requirements		
LTCP	5	100%
Other Facility Plan	0	0%
No Facility Plan	0	0%
Total	**5**	**100%**

Program Highlights

- Connecticut has encouraged sewer separation.
- All CSO communities have done at least some sewer separation.
- NMC and LTCP were not required where complete separation was underway.
- CDEP's initial CSS assessments identified 14 CSO permittees; there are currently five CSO permittees.

State Profile — Maine—Region 1

CSO Permits

44

Permitted CSO Outfalls

229

NPDES Authority

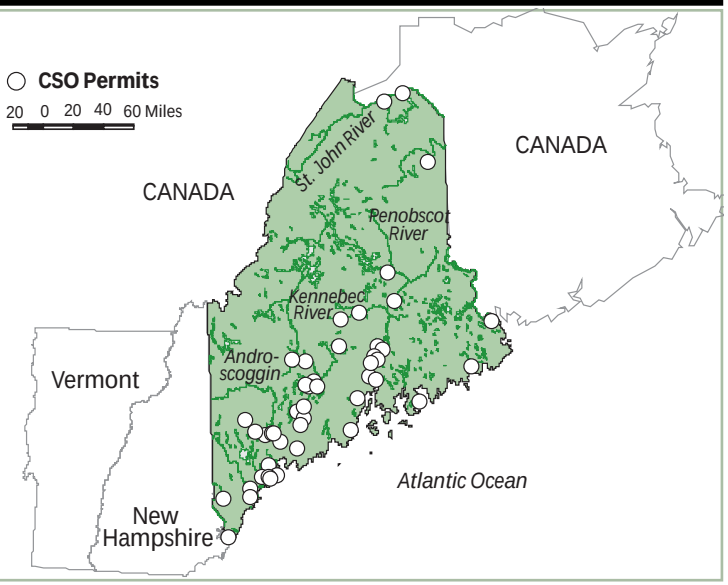
EPA Region 1 (through December 2000)
Maine Department of Environmental Protection (MDEP) (as of January 2001)

Water Quality Standards Authority

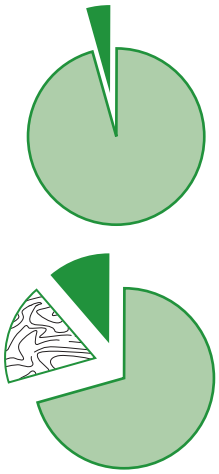
MDEP

Online Resources

http://janus.state.me.us/dep/blwq/



Status of CSO Policy Requirements	Number of Permits	Percent
BMP Requirements		
NMC	42	95.5%
Some BMPs	0	0%
No BMPs	2	4.5%
Total	**44**	**100%**
Facility Plan Requirements		
LTCP	31	70.4%
Other Facility Plan	8	18.2%
No Facility Plan	5	11.4%
Total	**44**	**100%**



Strategy for CSO Control and NPDES Permitting

MDEP first issued Program Guidance on Combined Sewer Overflow Control Plans in January 1990, which outlined components of effective CSO programs. The guidance encouraged communities to convey wet weather flows to the WWTP for primary treatment and disinfection. In 1994, MDEP released *Program Guidance on Combined Sewer Overflow Facility Plans*, which includes information on developing monitoring plans, implementing best management practices, and selecting controls when developing a CSO Master Plan. The concepts discussed in this document are similar to those outlined in EPA's 1994 CSO Control Policy. Maine has also provided grants (for 25 percent of funding needs) to assist municipalities in completing its CSO Master Plans. Plans submitted to the state since 1990 show that nearly all Maine communities have focused abatement efforts on sewer separation, transporting wet weather flows to the WWTP for treatment, or some combination thereof. Sixteen communities in Maine completed separation of its combined sewers prior to the CSO Control Policy.

Program Highlights

- Nearly all Maine communities have focused CSO abatement efforts on transporting wet weather flows to the WWTP for treatment, sewer separation, or some combination thereof.
- 42 communities are required (in permits) to implement NMC (two of the 44 CSO permittees are not required to implement NMC); all have complied. Of these, 34 are required to implement LTCPs: 30 of those required have submitted LTCP documentation to the state, and 26 LTCPs have been approved.
- Changes to Maine's water quality standards and designated uses were made in 1995 to allow CSO communities to request temporary CSO subcategories, which may suspend designated uses for short periods following wet weather events.
- Maine has provided grants (for 25 percent of funding needs) to assist municipalities in completing CSO Master Plans.
- Initial CSS assessments of the state identified 60 CSO permittees; there are currently 44 CSO permittees.

Permitting Program

Prior to January 2001, EPA's Region 1 office served as the NPDES authority for the State of Maine. Maine issued state waste discharge licenses to any discharger receiving an NPDES permit from the EPA Region with similar terms.

Permits issued since 1994 have generally conformed with the CSO Control Policy. All of the 42 Maine communities with permit requirements to implement the NMC have complied. Of these, 34 communities also have enforceable requirements to develop LTCPs. The eight, out of the 42, communities without LTCP requirements are typically small communities and are actively implementing sewer separation. Currently, 30 communities with requirements to develop LTCPs have submitted plans to the state, and the state has approved 26 plans. To date, 21 of the 60 communities in Maine, identified in the pre-1994 assessment of the state, have fully controlled its CSOs, and another 18 are working to implement approved control plans.

Water Quality Standards Program

Following a two-year stakeholder process, changes to Maine's water quality standards and designated uses were made in 1995 to allow CSO communities to request temporary CSO subcategories. The site-specific CSO subcategories will remove designated uses for short periods of time (determined on a site-specific basis) after rain storms and snow melt in areas affected by existing CSOs. The application of the subcategories is determined based on modeling and monitoring data developed by the community. This change allows communities to continue to make progress in controlling CSOs without undue financial hardship and to meet State water quality standards. Maine received a grant from EPA in 2001 to pilot test the application of the temporary CSO subcategories in select communities.

Enforcement Program

Most ongoing enforcement actions within the State of Maine have been initiated by EPA Region 1's Water Enforcement Program. EPA Region 1 currently has nine CSO-related enforcement actions in Maine. The majority of these focus on CSO Master Plan implementation schedules that exceed five years. Maine also has its own enforcement authority; it has initiated three CSO-related consent decrees to communities failing to comply with the terms of their license.

State Profile — Massachusetts—Region 1

CSO Permits

23

Permitted CSO Outfalls

311

NPDES Authority

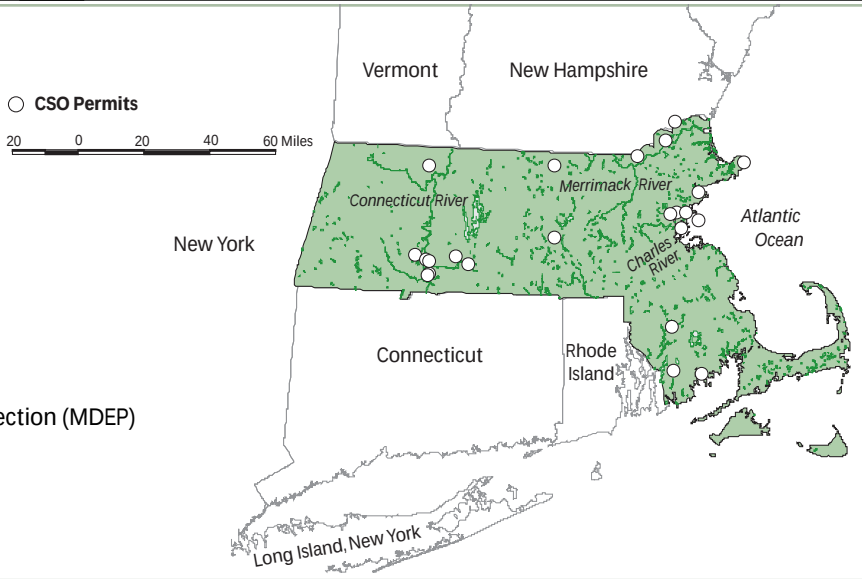
EPA Region 1

Water Quality Standards Authority

Massachusetts Department of Environmental Protection (MDEP)

Online Resources

www.state.ma.us/dep/dephome.htm



Status of CSO Policy Requirements	Number of Permits	Percent
BMP Requirements		
NMC	23	100%
Some BMPs	0	0%
No BMPs	0	0%
Total	**23**	**100%**
Facility Plan Requirements		
LTCP	20	87.0%
Other Facility Plan	1	4.3%
No Facility Plan	2	8.7%
Total	**23**	**100%**

Program Highlights

- Massachusetts' CSO Program is coordinated through EPA Region 1 and MDEP.
- NMC are required in all CSO permits.
- 21 communities have LTCP requirements in their enforcement orders, 15 communities have submitted LTCPs, and 10 communities have had LTCPs approved.
- Massachusetts developed a watershed-based approach for CSO control planning and a protocol for UAA that reflects CSOs.
- Massachusetts developed an approach for water quality standards evaluation and redesignations.
- Initial CSS assessments of the state identified 26 CSO permittees; there are currently 23 CSO permittees.

Strategy for CSO Control and NPDES Permitting

The primary approach in Massachusetts has been the use of the NPDES permitting process to initiate CSO planning and to follow up with combined enforcement and compliance assistance efforts to help communities initiate projects and develop program milestones and schedules. Communities are required to implement less-costly controls (i.e., NMC) as an initial means to abate CSOs. For those requiring more long-term solutions, the community must develop a phased approach for identifying and implementing control solutions. The community is encouraged (through the LTCP process) to use technologies that maximize environmental benefits. Elimination of CSOs is preferred; where elimination of CSOs is determined to be infeasible, a protocol has been developed for considering alternate class/designations, variances, and partial use designations. The long-term planning efforts are formalized in administrative orders, consent decrees, or other enforceable mechanisms. This approach was formalized in MDEP State CSO Control Policy.

Massachusetts was the first State to initiate a watershed-based approach to prioritize CSO controls along with other critical environmental needs. Massachusetts also is one of the three states that has established use category designations for CSO-impacted waters. In addition, it has identified a UAA process for communities that believe achieving levels set in the State standards is not feasible or appropriate for a specific water body.

Permitting Program

EPA Region 1's NPDES Permit Task Force issues wastewater discharge permits for Massachusetts. CSO communities are typically issued Phase I NPDES permits that require implementation and documentation of the NMC, containing a special CSO section that the CSO community meet water quality standards or equivalent. The CSO section also includes a narrative requirement. Therefore, if the CSO community implements the NMC and cannot effectively eliminate the CSOs, the permittee is in violation of the permit. EPA Region 1 and MDEP are now in the process of developing Phase II CSO permits which will establish effluent limits for those communities that have completed their LTCP planning process.

Water Quality Standards Program

MDEP establishes and reviews water quality standards. DEP developed the State CSO policy, which in turn led to the formal protocol for classifying and evaluating CSO-impacted waters. MDEP's CSO policy and water quality standards approach serve as the basis for CSO permitting and enforcement activities conducted by EPA Region 1.

MDEP developed a hierarchical list of surface water classifications to regulate CSO discharges where CSO elimination was determined to be infeasible, based on the frequency and impact of each overflow. The regulatory options for CSOs include:

- Class B—indicates that CSO discharges have been eliminated.
- Class B(CSO)— a partial use designation indicating that elimination of all CSO discharges is not feasible and that the impacts from the remaining CSOs will be minor.

A designation of Class B(CSO) is made only if MDEP community planning process and watershed planning efforts demonstrate that the allowance of minor CSO discharges is the most environmentally protective and cost-effective option available. In general, MDEP does not consider the Class B(CSO) designation to be a significant downgrading of water quality, but believes that current water quality standards would be met most of the time, and that the CSO impacts from the minor discharges are at a level comparable with the water quality goals. Furthermore, this designation is only allowed in "non-critical resource areas." Critical areas would include beaches, shellfish habitats, drinking water intakes, endangered species habitats, etc.

Specifically, MDEP's CSO control policy allows Class B(CSO) designations for discharges that can meet water quality standards more than 95 percent of the time (equivalent to control of untreated CSO discharge up to a three-month frequency storm; each event assumed to last a period of four days). The highest achievable/affordable control to meet this level of standards must be identified and implemented through the LTCP process. A UAA must be developed for communities to document that achieving a higher level of CSO control is not feasible or appropriate.

MDEP also allows for variances and partial use designation for CSO-impacted waters. Variances allow for short-term modifications of Massachusetts water quality standards when interim control measures or further analyses are warranted. Thus, variances allow communities to comply with temporary water quality standards in their NPDES permits

while progress is being made to comply with the existing standards. Variances are issued by MDEP and can be both discharger- and pollutant-specific, and are time-limited; they do not change the current water body class designation (e.g., Class B). MDEP grants partial use designations (based on results from a UAA) in CSO-impacted waters, where MDEP is certain that the designated uses or standards cannot and will not be attained on a permanent basis. Partial use generally indicates a short-term impairment of uses and can be defined by seasons or a particular storm event when a use such as primary public recreation contact and bathing will be unattainable in CSO-impacted waters. The use must be fully protected downstream, in other seasons, or during smaller storm events.

In areas where MDEP determines that designated uses cannot and will not be met on a permanent basis, MDEP will then consider a change in classification from Class B to Class C (a downgrading of water quality). This option is a last resort and must be based on UAA findings that the designated use cannot be reasonably attained.

To date, MDEP has listed portions of Boston Harbor as Class B(CSO) and has approved variances for the CSO-impacted areas of the Charles and Mystic Rivers.

Enforcement Program

EPA Region 1's Water Enforcement Program is responsible for conducting compliance monitoring and enforcement activities. Region 1's Office of Ecosystem Protection (OEP) issues NPDES permits. Most CSO communities are under a Consent Degree or an Administrative Order in Massachusetts. EPA Region 1 requires (in permit) that the CSO community must meet water quality standards. If this cannot be achieved through the NMC required in the permit, the community is in a noncompliance situation. Region 1 then intervenes and works with the community to develop an approach and a schedule for initiating and developing a LTCP. This is formalized in an enforceable schedule within an Administrative Order and then reaffirmed during reissuance in the Permit Fact Sheet developed by OEP.

State Profile New Hampshire—Region 1

CSO Permits

5

Permitted CSO Outfalls

44

NPDES Authority

EPA Region 1

Water Quality Standards Authority

New Hampshire Department of Environmental Services (NHDES)

Online Resources

www.des.state.nh.us/water_intro.htm
www.des.state.nh.us/factsheets/wwt/web-9.htm

Status of CSO Policy Requirements	Number of Permits	Percent
BMP Requirements		
NMC	5	100%
Some BMPs	0	0%
No BMPs	0	0%
Total	**5**	**100%**
Facility Plan Requirements		
LTCP	4	80%
Other Facility Plan	1	20%
No Facility Plan	0	0%
Total	**5**	**100%**

Program Highlights

- EPA Region 1 and NHDES coordinate New Hampshire's CSO program.
- NMC are required in all CSO permits.
- Enforcement and compliance assistance lead the development and schedule for long-term CSO planning efforts.
- New Hampshire developed an approach for water quality standards evaluation and redesignations.
- Initial CSS assessments of the state identified six CSO permittees; there are currently five CSO permittees (Berlin, Nashua, Portsmouth, Lebanon, and Manchester).

Strategy for CSO Control and NPDES Permitting

EPA Region 1's approach in New Hampshire has primarily relied upon the use of the NPDES permitting process to initiate CSO planning and follow-up. Combined enforcement and assistance efforts have been used to help communities initiate projects, develop program milestones, and establish schedules. Communities are encouraged to implement less costly, nonstructural controls (i.e., NMC) as a means to abate its CSOs. For those requiring more long-term solutions, the community must develop a phased approach for identifying and implementing control solutions, encouraging the use of technologies that maximize environmental benefits (through the LTCP process). The long-term planning efforts are formalized in administrative orders, consent decrees, or other enforceable mechanisms. In 1987 EPA Region 1 developed an NPDES Policy for Control of CSOs that was used to address all of the CSOs in the state.

Permitting Program

EPA Region 1's NPDES Permit Task Force issues wastewater discharge permits for New Hampshire. CSO communities are typically issued NPDES permits that require implementation and documentation of the NMC for control of CSOs outlined in a special CSO section. In this section, the permit also requires in a narrative statement that the CSO community must meet water quality standards or equivalent. Therefore, if the CSO community implements its NMC and cannot effectively eliminate its CSOs, the CSO community is in violation of its permit.

Water Quality Standards Program

The NHDES establishes and reviews state water quality standards. The state's 1989 CSO control strategy outlines the two step-process:

- Determine the volume and strength of CSO discharges and its impact on the water quality of the receiving waters.
- Where it is determined that CSOs violate New Hampshire's Surface Water Quality Regulations (N.H. Administrative Rules, Env-Ws 1700), the community must then develop a comprehensive CSO Facility Plan (i.e., LTCP) to determine the most cost-effective solution to abate CSO pollution.

New Hampshire has also developed a surface water partial-use designation called Temporary Partial Use (TPU) or Class B (TPU). A designation of Class B(TPU) is made only if the community planning process and watershed planning efforts demonstrate that the allowance of minor CSO discharges is the most environmentally protective and cost-effective option available. In general, NHDES does not consider the Class B(TPU) designation to be a significant downgrading of water quality, but believes that current water quality standards would be met most of the time and that the impacts from the CSO discharges would be at a level comparable with the water quality goals. Furthermore, this designation is only allowed in "non-critical resource areas." Critical areas would include beaches, shellfish habitats, drinking water intakes, and endangered species habitats.

Enforcement Program

EPA Region 1's Water Enforcement Program is responsible for conducting compliance monitoring and enforcement activities in New Hampshire. Region 1's Office of Ecosystem Protection (OEP) issues NPDES permits. Most CSO communities are under a Consent Degree or an Executive or Administrative Order in New Hampshire. EPA Region 1 requires (in permit) that the CSO community must meet water quality standards. If this cannot be achieved through the NMC (required in the permit), the community is in a noncompliance situation. EPA Region 1 intervenes and works with the community to develop an approach and schedule for initiating and developing an LTCP. This is formalized in a schedule within an Administrative Order. The schedule is then reaffirmed during permit reissuance in the Permit Fact Sheet developed by OEP.

State Profile — Rhode Island—Region 1

CSO Permits

3

Permitted CSO Outfalls

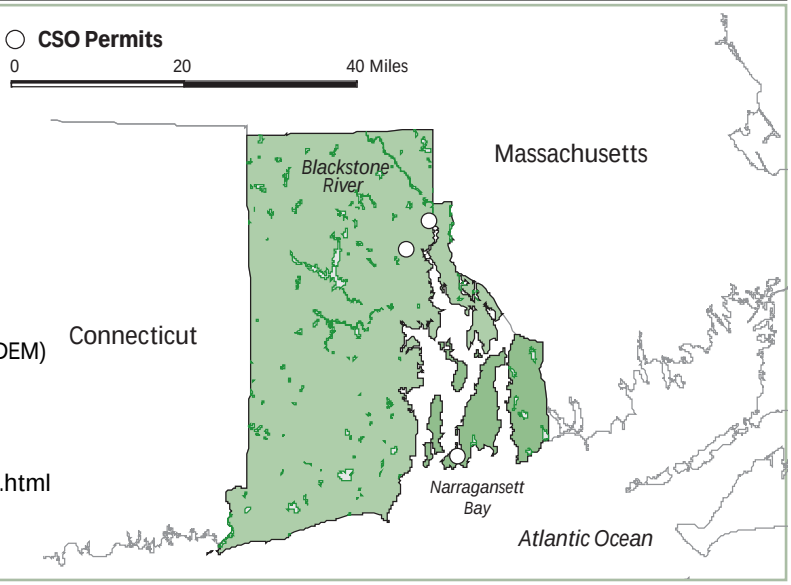
87

NPDES/Water Quality Standards Authority

Rhode Island Department of Environmental Management (RIDEM)

Online Resources

www.state.ri.us/dem/
www.state.ri.us/dem/programs/benviron/water/quality/index.html



Status of CSO Policy Requirements	Number of Permits	Percent
BMP Requirements		
NMC	3	100%
Some BMPs	0	0%
No BMPs	0	0%
Total	**3**	**100%**
Facility Plan Requirements		
LTCP	3	100%
Other Facility Plan	0	0%
No Facility Plan	0	0%
Total	**3**	**100%**

Program Highlights

- Rhode Island's 1990 CSO policy requires primary treatment or equivalent for all CSO discharges; higher levels of treatment are required when necessary to meet water quality standards.
- A stakeholder-based LTCP was developed by the Narragansett Bay Commission. A three-phase abatement plan has been approved that limits CSO events to four per year. The primary control is deep rock tunnel storage and pump-back for treatment. The final design of Phase I has been approved (except for pump station and instrumentation and controls).
- Newport has built two CSO abatement facilities, but the older facility does not comply with state or federal CSO policy. RIDEM is requiring further planning to assess the need for additional controls at both facilities.

State Profile — Vermont—Region 1

CSO Permits

7

Permitted CSO Outfalls

64

NPDES Authority

Vermont Department of Environmental Conservation (VDEC)

Water Quality Standards Authority

Vermont Water Resources Board (VWRB)

State Online Resources

www.state.vt.us/wtrboard/

Status of CSO Policy Requirements	Number of Permits	Percent
BMP Requirements		
NMC	0	0%
Some BMPs	7	100%
No BMPs	0	0%
Total	**7**	**100%**
Facility Plan Requirements		
LTCP	0	0%
Other Facility Plan	7	100%
No Facility Plan	0	0%
Total	**7**	**100%**

Program Highlights

- All CSO requirements have been handled through administrative orders.
- Vermont provided up to 50 percent of the total cost for CSO correction projects through state grants and interest free loans.
- Initial CSS assessment by VDEC identified 27 CSO permittees. 20 of these communities have separated their systems, leaving seven CSO permittees.

Strategy for CSO Control and NPDES Permitting

VDEC published a state Combined Sewer Overflow Control Policy in1990. The state CSO policy included a listing of Vermont's CSO communities and outlined a strategy for CSO compliance. The strategy required communities to identify all overflow structures within their collection systems as part of the permit application process. Once the overflows were identified, VDEC determined which outfalls were subject to the guidelines of the state CSO policy.

CSO outfalls that were not in compliance with Vermont water quality standards and federal minimum technology-based limitations were issued an administrative order outlining a compliance schedule. Administrative orders were generally issued immediately following issuance of the community's NPDES permit. The state CSO policy encouraged complete elimination of CSOs (e.g., sewer separation) when other CSO control alternatives were determined to be technically and economically equal.

Communities that opted for CSO separation were required to be able to capture and provide full treatment for a minimum design flow generated by a 24 hour, 2.5-inch rainfall. Vermont provided funding up to 50 percent of the total cost for CSO correction projects through state grants and interest free loans. The majority of communities in Vermont (20 out of 27) chose sewer separation as their primary method for CSO control.

Permitting Program

Vermont's NPDES permits do not require CSO communities to implement the NMC. However, communities that receive approval from VDEC to continue to operate CSO outfalls are required by the state CSO policy to implement a series of BMPs as part of their CSO corrective plan. The BMPs required by VDEC are similar to a subset of the NMC and include:

- Solids and floatables control
- Proper operation and maintenance of the collection system
- Maximum use of collection system storage
- Maximization of flows to the wastewater treatment facility

Approximately 40 percent of the CSO communities in Vermont were required in either their permits or administrative orders to implement a combination of the state BMPs as part of their CSO control plan. Vermont did not require CSO communities to submit a formal document for their LTCP. Instead, communities were required under administrative orders to submit a preliminary engineering report that outlined their CSO correction plans and funding needs. Following submission of each engineering report, VDEC adjusted statements in the community's administrative order regarding the compliance schedule, based on project needs and funding availability.

Water Quality Standards Program

VDEC is responsible for determining if approved CSO discharges are in compliance with water quality standards. Disinfection is required for all CSO discharges under the state CSO policy. VDEC may require additional in-stream monitoring, either through the community's permit or administrative order, to ensure attainment of water quality standards. Over 30 percent of the communities were required to develop a monitoring program. Under the state CSO policy, communities are required to eliminate all CSOs that discharge to Class B waters. Vermont does not have a specific procedure for the reclassification of CSO receiving waters. Communities that determine complete CSO elimination to be unattainable can follow the standard state procedure and petition VWRB to reclassify the receiving water. The majority of communities in the state achieved compliance with state water quality standards by eliminating all CSO outfalls through sewer separation.

Enforcement Program

Vermont required implementation of CSO controls through state-issued administrative orders. Communities that did not meet the requirements set in the administrative order were issued a consent order. Only four communities in Vermont received a state-issued consent order for violation of administrative orders. Approximately 74 percent of the communities in the state have completed construction on their CSO control projects. During the next permit cycle, VDEC plans to review the effectiveness of each community's CSO control plan. If the community continues to be in violation of the state CSO policy, VDEC will issue another administrative order outlining any additional requirements and compliance schedules the community must meet. To date, only one community has been issued a second administrative order, because its sewer separation project did not completely eliminate all CSO discharges for the required design flow.

State Profile — New Jersey—Region 2

CSO Permits

31

Permitted CSO Outfalls

274

NPDES Authority/Water Quality Standards Authority

New Jersey Department of Environmental Protection (NJDEP)

Online Resources

http:/www.state.nj.us/dep/
http://www.state.nj.us/dep/dwq/

Status of CSO Policy Requirements	Number of Permits	Percent
BMP Requirements		
NMC	30	96.8%
Some BMPs	0	0%
No BMPs	1	3.2%
Total	**31**	**100%**
Facility Plan Requirements		
LTCP	0	0%
Other Facility Plan	4	12.9%
No Facility Plan	27	87.1%
Total	**31**	**100%**

Program Highlights

- New Jersey has highly regionalized collection, conveyance, and treatment systems with portions of the CSSs owned/operated by different local government entities.
- The CSO program is administered using a combination of individual and general NPDES permits.
- NJDEP provides substantial funding for the planning, design, and construction of CSO control facilities and for infrastructure rehabilitation and improvement.
- LTCP development is incorporated into the ongoing state-wide watershed management and TMDL process in accordance with the TMDL development schedule contained in a Memorandum of Understanding with EPA Region 2.
- NJDEP has adopted and is implementing a comprehensive solids and floatables control requirement, supported with state financial assistance.

Strategy for CSO Control and NPDES Permitting

New Jersey has highly regionalized collection, conveyance, and treatment systems with portions of the sewer systems owned/operated by different local government entities. The wastewater treatment facilities generally serve multiple local governments. Collection systems and corresponding CSO points are generally owned/operated by municipalities, while conveyance and treatment facilities are owned/operated by independent treatment authorities; however some utility authorities do own/operate CSOs.

The CSO program is administered using a combination of individual and general NPDES permits. The program requires CSO communities that own or operate any portion of a CSS to develop and implement technology-based control measures, including the NMC. These enforceable commitments also initiate the first phase of LTCP planning activities by requiring development of calibrated and field-verified SWMM models of the CSS.

NJDEP has adopted a far-reaching solids and floatables control requirement that has resulted in reductions to the size of areas served by CSSs and the number of CSO outfalls. CSO communities are required to capture, remove, and properly dispose of all solids and floatables materials from all CSOs on an enforceable compliance schedule.

Under the New Jersey Sewerage Infrastructure Improvement Act (SIIA, enacted in 1988), NJDEP initiated a program that provides planning and design grants for the development and implementation of solids/floatables control measures and for the identification and elimination of dry weather overflows. Grants are awarded for implementation of control measures that capture and remove solids/floatables materials from CSO discharges and that remediate or modify the CSS to eliminate dry weather overflows. Most often, "in-line" or "end-of-pipe" screen technologies have been selected. New Jersey estimates that $340 million will be spent for the planning, design, and construction of solids and floatables control measures. LTCP development is incorporated into the ongoing statewide watershed management and TMDL process, in accordance with the TMDL development schedule contained in a Memorandum of Understanding with EPA Region 2.

NJDEP uses the SRF Program to assist in the construction of CSO control facilities and infrastructure rehabilitation and improvement.

Permitting Program

NJDEP serves as the NPDES authority. The CSO program is administered using a combination of individual and general permits. The general permit contains regulatory requirements applicable to collection and conveyance systems and CSOs. Approximately 16 local government entities and approximately 231 CSOs are regulated under the general permit. The general permit contains appropriate provisions of the NMC applicable to owners/operators of collection and conveyance systems and CSOs, including:

- Prohibition of dry weather overflows
- Solids/floatables control
- Development and implementation of proper operation and regular maintenance programs
- Maximization of flow to the WWTP
- Public notification/reporting requirements

The general permit also initiates LTCP development, by requiring the development of calibrated and field-verified SWMM models of the CSS

Regulatory requirements applicable to wastewater treatment systems are generally contained in individual NPDES permits. Each wastewater treatment facility and any CSOs owned by the treatment authority are regulated under an individual permit issued to the treatment facility. Individual NPDES permits issued to wastewater treatment authorities contain appropriate provisions of the NMC applicable to owners/operators of WWTPs, including:

- Maximization of conveyance and treatment of wastewater at the WWTP
- Minimization of nondomestic discharges (during wet weather)
- Development and implementation of proper operation and regular maintenance programs

If the treatment authority also owns or operates CSOs, then the permit contains provisions similar to those in the general permit.

Water Quality Standards Program

The water quality standards program is also administered by NJDEP. NJDEP is using a watershed process to develop watershed restoration plans. During the watershed process, water quality standards and uses will be considered as NJDEP develops management responses that may include TMDLs, LTCPs and other appropriate activities. CSO communities have not yet formally approached NJDEP to request the initiation of changes to the surface water quality standards.

Enforcement Program

NJDEP uses a range of enforcement actions to implement CSO controls and has initiated numerous enforcement actions against communities determined to be out of compliance with the CSO provisions of their NPDES permits. NJDEP has entered into judicial consent orders in state superior court with five CSO communities, including one that was the result of a citizen's suit, and has entered into administrative consent orders with six CSO communities. In addition, NJDEP has filed complaints in state superior court against two CSO communities that are in noncompliance with their NPDES permits, and is currently developing administrative consent orders with four additional local government entities.

State Profile — New York—Region 2

CSO Permits

74

Permitted CSO Outfalls

1,098

NPDES Authority/Water Quality Standards Authority

New York State Department of Environmental Conservation (NYSDEC)

Online Resources

www.dec.state.ny.us/
www.dec.state.ny.us/website/dow/index.html

Status of CSO Policy Requirements	Number of Permits	Percent
BMP Requirements		
NMC	72	97.3%
Some BMPs	0	0%
No BMPs	2	2.7%
Total	**74**	**100%**
Facility Plan Requirements		
LTCP	33	44.6%
Other Facility Plan	1	1.4%
No Facility Plan	40	54.1%
Total	**74**	**100%**

Program Highlights

- 33 of the 74 New York CSO communities are required to develop LTCPs. These LTCPs cover 71 percent of the CSO outfalls in the state.
- NYDEC developed a set of 15 BMPs, which it asserts are equivalent to eight of the NMC. The ninth, "pollution prevention" is addressed through several alternate BMPs designed to minimize pollution.
- The suite of applicable BMPs for each community is determined on a site-specific basis..
- NYDEC implemented its Environmental Benefits Permit Strategy to identify permits whose reissuance would provide the greatest environmental benefit.
- NYDEC is participating in New York City's Use and Standards Attainment (USA) Project to assess highest reasonably attainable use for its CSO-impacted waters.
- Initial CSS assessments identified 90 CSO permittees; there are currently 74 permits.

Strategy for CSO Control and NPDES Permitting

NYSDEC first issued its Combined Sewer Overflow Control Strategy (the Strategy) in October 1993. The Strategy provided guidance to NYSDEC staff on developing NPDES permit conditions, compliance, and enforcement strategies, surveillance, and technical reviews to address the abatement of CSO impacts. The goal of the Strategy was the elimination of all CSO-related water quality impairments, and it gave special emphasis to controlling floatable materials. The Strategy also recognized that the state's CSO problems and abatement needs were dominated by the major metropolitan areas: New York City, Buffalo, and Syracuse.

Twelve BMPs designed to minimize the water quality impacts of CSOs were outlined in the Strategy. Six of the BMPs were equivalent to the six minimum measures required by the CSO Control Strategy. NYSDEC has since added three BMP measures, such that the set of 15 BMPs cover activities and actions described by eight of the NMC. The ninth,

"pollution prevention", is addressed through several alternate BMPs designed to minimize pollution. The 15 BMPs are:

- Development of a CSO maintenance and inspection program.
- Optimization of the collection system to maximize in-system storage.
- Consideration of CSOs in approved industrial pretreatment programs.
- Maximization of flow to WWTPs.
- Development and implementation of a wet weather operating plan.
- Prohibition of dry weather overflows.
- Elimination or minimization of floatable and settleable solids in discharges.
- Replacement of combined sewers with separate sewers to the greatest extent possible.
- Prohibition on introduction of new sources of storm water.
- Prohibition of new connections in areas with recurring sewage back-ups.
- Prohibition of the discharge or release of septage or hauled waste upstream of a CSO.
- Implementation of practices and technologies to control runoff from new development.
- Installation and maintenance of signs at CSO outfalls.
- Characterization and monitoring of the CSS.
- Submission of annual reports summarizing BMP implementation.

Applicability of the 15 BMPs is determined on a site-specific basis, but 72 of 74 New York CSO communities currently have permit requirements to implement at least one of the BMPs.

Permitting Program

NYSDEC issued its Environmental Benefit Permit Strategy (EBPS) in September 1992. The EBPS established a process for prioritizing reissuance of permits based on the environmental benefits that would be gained, rather than reviewing permits in chronological order. NYSDEC's goal is to revise the top 10 percent of the state-issued NPDES permits on the priority ranking list each year. This equates to approximately 60 NPDES POTW permits per year.

Under the EBPS, each permit receives a numerical score for each of 15 factors as they apply to that particular permit. The two factors relevant to CSO control are permit requirements to implement the 15 BMPs, and permit requirements to develop and submit an LTCP. Each factor is then multiplied by a "water quality enhancement multiplier" (which ranges from 1–10) that describes the benefit of modifying the permit to address the factor.

In response to an EPA Office of the Inspector General audit survey, NYSDEC reviewed all of the NPDES permits with CSOs and elevated the priority of any permits that have deficiencies with respect to CSO controls. As a result, most of the permits for CSO communities will be reviewed within the next three years. Currently 33 of New York's 74 CSO communities have permit requirements to develop LTCPs; these 33 LTCPs cover 71 percent, of the state's 1,098 CSO outfalls.

Water Quality Standards Program

Only New York City has approached the state to request a review of water quality standards for its CSO-impacted waters. New York City initiated a use and standards attainment (USA) project to assess the highest reasonably attainable use for its CSO-impacted waters. NYSDEC also anticipates that Buffalo and Syracuse may have an interest in standards reviews, but they have not yet initiated a formal process with NYSDEC.

The goals of the New York City USA Project are as follows:

- Define, through a public process, more specific and comprehensive long-term beneficial use goals for each water body, including habitat, recreational, wetlands and riparian goals, in addition to water quality goals, thus maximizing the overall environmental benefit.
- Develop technical, economic, public, and regulatory support for prioritizing and expediting implementation of projects and actions needed to attain the defined goals.
- Provide the technical, scientific, and economic basis to support the regulatory process needed to define water quality standards for the highest reasonably attainable use to allow water quality standards to be attained upon implementation of recommended projects.

Enforcement Program

NYDEC uses both NPDES permits and enforceable orders to require implementation of minimum measures and LTCP requirements in CSO communities. This has resulted in a high rate of compliance with state submittal schedules and implementation progress.

NYDEC issued permits to New York City on September 27, 1988, requiring that CSO abatement be addressed by a series of Facility Planning Programs. Facility plans were to be developed for nine area-specific segments: Flushing Bay, Paerdegat Basin, Jamaica Bay, East River, Inner Harbor, Outer Harbor, Coney Island Creek, Newtown Creek, and the Jamaica Drainage Area tributaries. New York City failed to start and/or complete facility plans by the specified date for the Inner Harbor, Outer Harbor, East River, and the Jamaica Bay Tributaries. As a result of these violations, DEC and New York City signed an Order of Consent dated June 25, 1992. The order established a 14-year compliance schedule to plan, design, and construct CSO abatement (storage) facilities which will prevent violations of dissolved oxygen and coliform permit limits. Although significant progress has been made, New York City is not in compliance with some of the requirements of this order.

The Amended Consent Judgement for Onondaga County (Syracuse) requires the implementation of an LTCP designed to meet the presumption approach with a commitment to spend approximately $145-$150 million on CSO controls. Binghamton-Johnson City is under a consent order to implement an LTCP to meet the presumption approach.

In addition, a number of CSO communities in New York are under enforcement orders related to violations at their WWTPs. These violations can often be traced to the wet weather impacts that the CSS is having on the operation of its treatment facility.

State Profile — Delaware—Region 3

CSO Permits

2

Permitted CSO Outfalls

39

NPDES/Water Quality Standards Authority

Delaware Department of Natural Resources and Environmental Control (DNREC)

Online Resources

www.dnrec.state.de.us/dnrec2000/

Status of CSO Policy Requirements	Number of Permits	Percent
BMP Requirements		
NMC	1	50%
Some BMPs	0	0%
No BMPs	1	50%
Total	**2**	**100%**
Facility Plan Requirements		
LTCP	1	50%
Other Facility Plan	1	50%
No Facility Plan	0	0%
Total	**2**	**100%**

Strategy for CSO Control and NPDES Permitting

Delaware currently has two CSO communities. The Division of Water Resources within the DNREC is responsible for administering the NPDES program. The Division developed its CSO Strategy in 1991, prior to the adoption of EPA's CSO Control Policy. Because of the small number of CSO communities, the Division chose to address each CSO community on a case-by-case basis, incorporating the appropriate permit conditions to address each community's CSOs as its NPDES permit came up for renewal.

Program Highlights

- Delaware has two CSO permittees: Seaford and Wilmington.
- Seaford has been working to separate its eight CSOs through sewer separation. Work has progressed as funding becomes available. One CSO was eliminated prior to the development of the community's CSO control plan in 1994. Two CSOs were eliminated in 1996, one in 1997, and three in 2000. Separation of the one remaining CSO is expected to be completed by 2003.
- The NPDES permit for Seaford was reissued with an effective date of September 1, 2000. An extension for the reissued permit requires elimination of all CSOs within 30 months of the permit's effective date (i.e., no later than January 31, 2003).
- Wilmington has drafted an LTCP that outlines a strategy combining underground storage, pump station upgrades, and sewer separation to minimize the number of overflows and provide treatment for 85 percent of the combined flow reaching the sewer system.

State Profile Washington, District of Columbia—Region 3

CSO Permits

1

Permitted CSO Outfalls

60

NPDES Authority

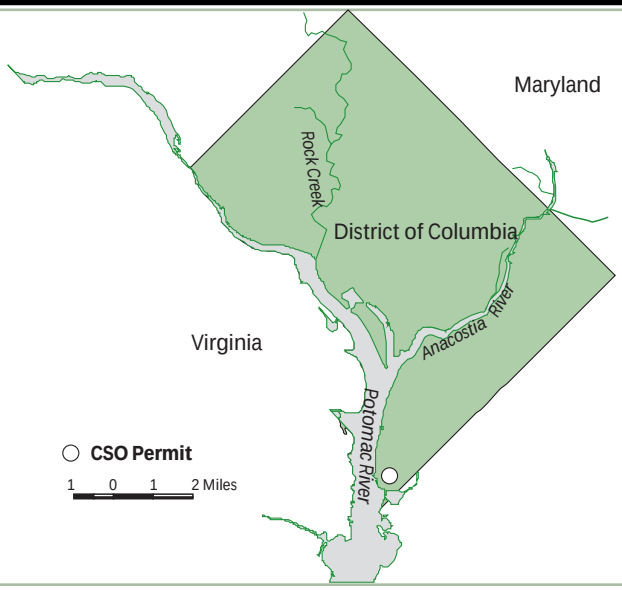
EPA Region 3

Water Quality Standards Authority

District of Columbia Department of Health (DCDOH)

Online Resources

www.environ.state.dc.us
www.epa.gov/reg3wapd/cso/index.htm



Status of CSO Policy Requirements	Number of Permits	Percent
BMP Requirements		
NMC	1	100%
Some BMPs	0	0%
No BMPs	0	0%
Total	**1**	**100%**
Facility Plan Requirements		
LTCP	1	100%
Other Facility Plan	0	0%
No Facility Plan	0	0%
Total	**1**	**100%**

Program Highlights

- The District of Columbia Water and Sewer Authority (WASA) is the sole CSO permittee.
- EPA Region 3, as the NPDES authority, requires NMC documentation and LTCP submission.
- DCDOH reviews and comments on the LTCP, determines compliance with water quality standards, and serves on the CSO stakeholder committee.

Strategy for CSO Control and NPDES Permitting

Approximately one-third of the District of Columbia is served by a CSS. The community has implemented the NMC and is in the process of developing its LTCP. The proposed CSO Control Program includes three storage tunnels, pump station rehabilitation, regulator improvements, and low impact development retrofits. There are a total of 60 CSO outfalls listed in the District of Columbia's NPDES Permit that discharge to Rock Creek, the Anacostia River, the Potomac River and tributary waters.

Permitting Program

EPA Region 3 is the NPDES authority for the District of Columbia. Documentation of the NMC was submitted to EPA Region 3 in 1996, with follow-up reports in 1999 and 2000. WASA began developing its LTCP in 1998, and submitted a draft LTCP to EPA Region 3 and DCDOH in June 2001.

Through the review of the LTCP and water quality certification process, DCDOH exercises regulatory authority. DCDOH has submitted to EPA a final TMDL for BOD in the Anacostia River that includes an allocation for CSOs.

Water Quality Standards Program

DCDOH is responsible for the development, issuance, and enforcement of the District of Columbia's water quality standards program. The District of Columbia had wet weather provisions in its water quality standards in prior years, but these have since been removed at the request of EPA Region 3. As part of the LTCP, WASA is requesting that wet weather provisions be brought back into the water quality standards program. This request will be reviewed by DCDOH.

Enforcement Program

EPA Region 3 is responsible for ensuring enforcement and compliance with NPDES permits within the District of Columbia. DCDOH is responsible for ensuring attainment of water quality standards within the District of Columbia through the District of Columbia Water Pollution Control Act of 1985.

State Profile Maryland—Region 3

CSO Permits

8

Permitted CSO Outfalls

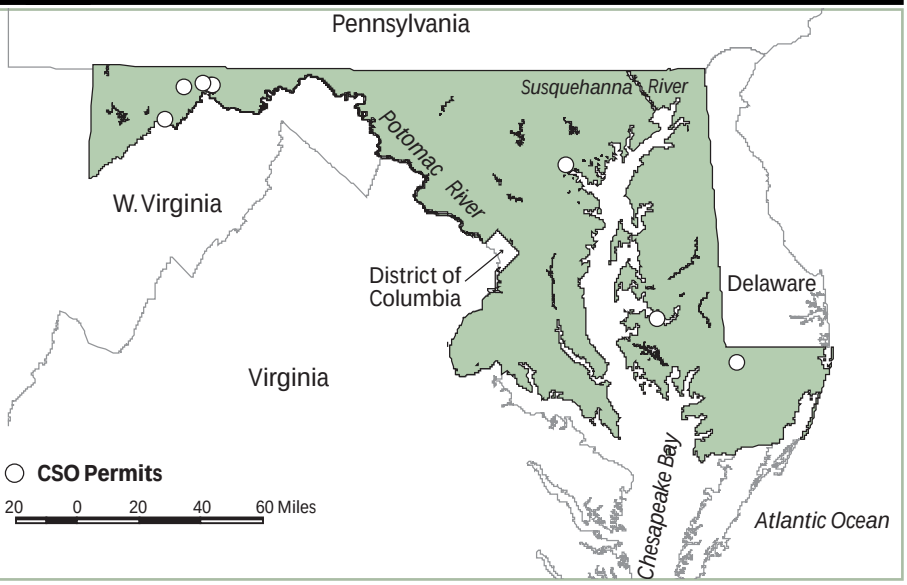
58

NPDES/Water Quality Standards Authority

Maryland Department of the Environment (MDE)

Online Resources

www.mde.state.md.us/index.html



Status of CSO Policy Requirements	Number of Permits	Percent
BMP Requirements		
NMC	8	100%
Some BMPs	0	0%
No BMPs	0	0%
Total	**8**	**100%**
Facility Plan Requirements		
LTCP	8	100%
Other Facility Plan	0	0%
No Facility Plan	0	0%
Total	**8**	**100%**

Program Highlights

- All eight CSO communities are required to implement NMC in their permits.
- All eight CSO communities are required to implement LTCPs under administrative or judicial orders, as well as through their permits.
- Smaller communities are subject to a less formal implementation process.
- Maryland is attempting to negotiate consent decrees with five communities currently under administrative orders for failing to develop an LTCP.
- Initial CSS assessments of the state identified nine CSO permittees; there are currently eight CSO permittees.

State Profile Pennsylvania—Region 3

CSO Permits

155

Permitted CSO Outfalls

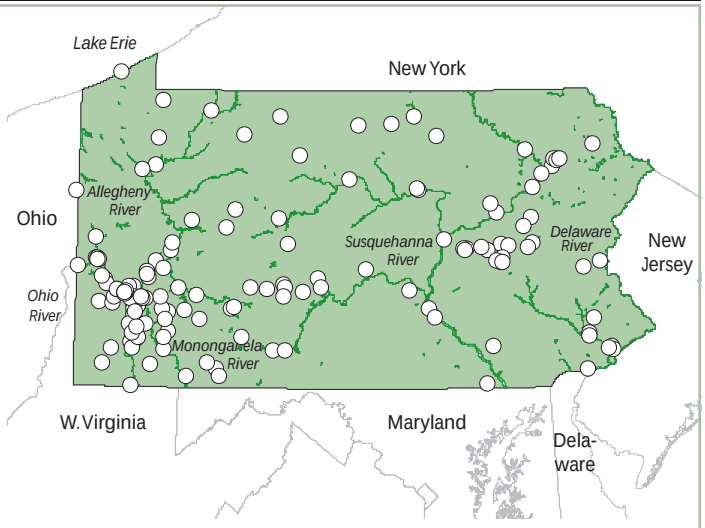
1,662

NPDES/Water Quality Standards Authority

Pennsylvania Department of Environmental Protection (PADEP)

Online Resources

www.dep.state.pa.us/dep/deputate/watermgt/wsm/facts/fs2655.htm



Status of CSO Policy Requirements		Number of Permits	Percent
BMP Requirements			
	NMC	153	98.7%
	Some BMPs	0	0%
	No BMPs	2	1.3%
Total		**155**	**100.0%**
Facility Plan Requirements			
	LTCP	144	92.9%
	Other Facility Plan	2	1.3%
	No Facility Plan	9	5.8%
Total		**155**	**100.0%**

Program Highlights

- Pennsylvania has the greatest number of CSO communities (155) and CSO discharge points (1,662) in the nation.
- PADEP developed a 1991 State CSO Strategy, which was revised in 1995 to reflect the 1994 EPA CSO Control Policy; a State Policy is expected in 2001.
- PADEP is not currently considering revisions to State water quality standards for CSO-impacted areas, but will explore them in the upcoming triennial review.
- 55 CSO communities have submitted LTCPs (three in draft format) and 24 have been approved by the state (two conditionally). NMC documentation has been submitted by 112 communities.
- The number of CSSs identified in the state rose from an initial 147 to 155, primarily due to inclusion of combined satellite collection systems.

Strategy for CSO Control and NPDES Permitting

PADEP developed its initial state CSO Strategy based on the 1989 National CSO Control Strategy. In 1995, PADEP revised the Strategy to include the elements identified in the CSO Control Policy. The revised Strategy required municipal dischargers to identify CSO locations and implement the NMC with additional long-term controls being required, as necessary, to comply with water quality standards. CSO communities undergoing reissuance of an NPDES permit, or those eligible for and seeking coverage under a general CSO permit, were issued permits that reflected the Strategy's requirements and a compliance schedule.

Permitting, enforcement, and compliance activities related to the revised Strategy were delegated to the regional PADEP offices. PADEP encouraged communities to use the national guidance documents available for NMC and LTCPs in meeting their permit requirements. PADEP also co-hosted an EPA-funded two-day workshop for officials from communities with CSSs to better engage them in the program in 1997.

Permitting Program

PADEP's six regional offices (Northeast, Southeast, Southcentral, Northcentral, Southwest, and Northwest) are responsible for NPDES permitting (including CSOs) within their geographic areas. In response to the initial state CSO Strategy, PADEP began requiring implementation of the six minimum measures (or NMC) in permits of CSSs. When the Revised Strategy was issued in 1995, PADEP added the remaining three NMC and the LTCP requirements, which have been included in permits reissued since 1995.

PADEP also developed a CSO general permitting process. General permits were made available only to small communities that met specific eligibility requirements and mainly included satellite collection systems that operate and maintain a CSS, but send wastewater to another town or regional facility for treatment. Notice-of-intent submittal requirements for coverage under a CSO general permit were minimal; however, coverage included many of the same CSO requirements as the individual NPDES permit.

Most CSO communities in Pennsylvania have CSO requirements in their permits. Approximately 112 communities have submitted NMC documentation and 55 have submitted LTCPs (three in draft format).

Water Quality Standards Program

Development and implementation of water quality standards in Pennsylvania is also a primary responsibility of PADEP. A change in water quality standards must be approved through an independent regulatory review commission, submitted to the Environmental Quality Board for review and approval, and then sent to the state legislature for final approval. Based on the involved state process for altering standards and negative connotations of lowering or downgrading water quality standards, PADEP does not believe UAAs or revisions to state standards for CSO-impacted waters are workable. These issues will be explored in the upcoming triennial review.

Enforcement Program

PADEP regional offices are responsible for enforcement and compliance activities, including review of all CSO documents and reports required to be submitted according to the NPDES permit compliance schedule. PADEP activities have focused on getting requirements into NPDES permits, ensuring that CSO programs are being initiated, and reviewing submitted documentation. The Southwest Regional PADEP office, having the most CSO communities, has a review system in place for NMC based on the suggested evaluation checklist provided in the EPA publication, *Guidance for Nine Minimum Controls*. Informal enforcement notices of violations and noncompliance with the NMC are often issued, and consequently, updates to NMC documentation are required to demonstrate full implementation of the NMC. The other regional offices have incorporated enforcement of the CSO requirements through normal permitting and enforcement activities within the regional water quality management programs.

As permits that have CSO requirements expire and facilities apply for reissuance, PADEP determines their overall compliance status. EPA Region 3 has enforcement oversight, and has indicated that permits that are not in compliance with the schedule listed in the expiring NPDES permit should be brought into compliance through an enforcement action (rather than reissuing the permit with a new/revised compliance schedule).

State Profile — Virginia—Region 3

CSO Permits

3

Permitted CSO Outfalls

99

NPDES/Water Quality Standards Authority

Virginia Department of Environmental Quality (VDEQ)

State Online Resources

www.deq.state.va.us/
www.deq.state.va.us/water/

Status of CSO Policy Requirements	Number of Permits	Percent
BMP Requirements		
NMC	3	100%
Some BMPs	0	0%
No BMPs	0	0%
Total	**3**	**100%**
Facility Plan Requirements		
LTCP	3	100%
Other Facility Plan	0	0%
No Facility Plan	0	0%
Total	**3**	**100%**

Program Highlights

- Lynchburg is using sewer separation and interceptor replacement as components of its CSO implementation.
- Richmond implemented the NMC and developed an LTCP that provides controls for each CSO outfall and is designed to protect sensitive areas. Primary LTCP controls include a storage tunnel and retention basin. CSO planning was coordinated with watershed-based receiving water monitoring and earned Richmond First Place in EPA's 1999 CSO Control Program Excellence Awards.
- Alexandria has separated its entire CSS, except for Old Town. The City is using the NMCs as its LTCP. Alexandria is required to submit annual reports to VDEC documenting the volume frequency and duration of overflow events, based on results of a collection system model.
- Initial CSS assessments by VDEC identified four CSO permittees; there are currently three CSO permittees.

State Profile — West Virginia—Region 3

CSO Permits

58

Permitted CSO Outfalls

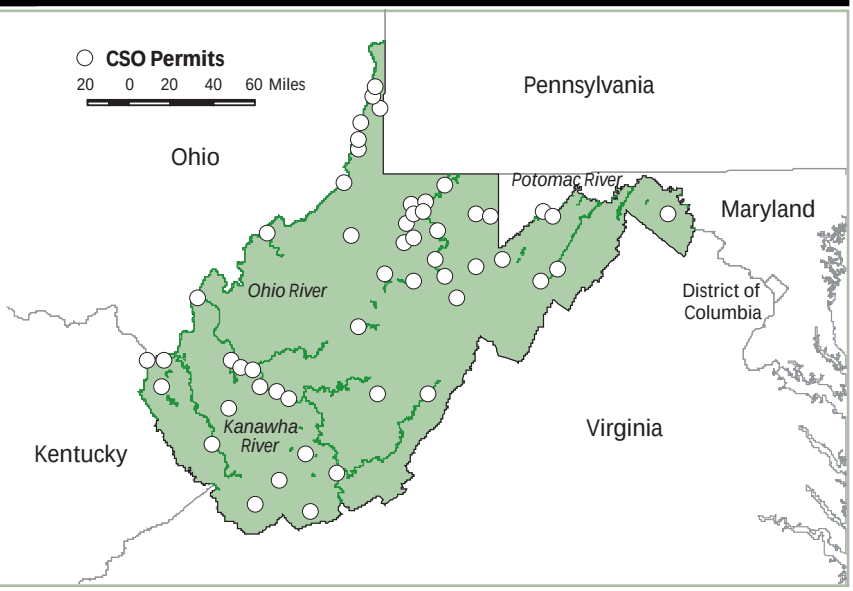
776

NPDES/Water Quality Standards Authority

West Virginia Division of Environmental Protection (WVDEP)

State Online Resources

www.dep.state.wv.us/
www.dep.state.wv.us/wr/OWR_Website/index.htm



Status of CSO Policy Requirements	Number of Permits	Percent
BMP Requirements		
NMC	58	100%
Some BMPs	0	0%
No BMPs	0	0%
Total	**58**	**100%**
Facility Plan Requirements		
LTCP	58	100%
Other Facility Plan	0	0%
No Facility Plan	0	0%
Total	**58**	**100%**

Program Highlights

- The NMC are required in all West Virginia CSO permits. 54 of 58 communities have documented some implementation of the NMC, and 43 have implemented all of the NMC.
- LTCPs are required in all CSO permits. To date, 16 LTCPs have been received by WVDEP and one has been approved.
- WVDEP requires that all CSO communities conduct water quality studies, which evaluate water quality impacts of CSOs on receiving waters. Approximately 21 communities have submitted water quality studies.
- Initial CSS assessments by WVDEP identified 56 CSO permittees; there are currently 58 CSO permittees.

Strategy for CSO Control and NPDES Permitting

West Virginia has adopted EPA's CSO Control Policy, with some additional requirements specific to the state. All NPDES permits for communities with CSOs contain requirements to comply with the NMC and to develop an LTCP. WVDEP has not issued any enforcement orders for violations of these permit requirements.

State-specific requirements include documentation of implementation of the NMC in a report titled "CSO Final Plan of Action," and documentation of a required water quality study that must be conducted by each permittee on its CSO receiving waters. To date, 54 communities have submitted CSO Final Plans of Action, with 43 communities documenting implementation of all of the NMC.

The purpose of the water quality study is to evaluate the water quality impacts of CSOs on receiving waters. Communities are required to collect dry weather receiving water samples at least once a month, and wet weather receiving water data during at least