

State Pollutant Discharge Elimination System Compliance Assurance Program

by Joseph DiMura

Past issues of *Clear Waters* have focused on various aspects of water pollution control and watersheds of interest such as Long Island Sound and Onondaga Lake. An important theme is always the protection and stewardship of New York State's waters. This issue of *Clear Waters* covers the important role that compliance and enforcement plays in maintaining and improving water quality.

This article is an overview of the New York State Department of Environmental Conservation's (NYSDEC) obligations, policies and efforts in ensuring compliance for the State Pollutant Discharge Elimination System (SPDES) program. This also touches on some of the challenges presented with increasing regulation of point sources of pollution such as stormwater runoff and Concentrated Animal Feeding Operations (CAFOs).

State Pollutant Discharge Elimination System (SPDES)

The NYSDEC actively protects New York State's water resources through various regulations, policies and partnerships. The NYSDEC's Division of Water (DOW) with support of legal staff



Polluted effluent flows from a NYS permitted discharge point (as posted) as a result of a failed wastewater treatment plant that was found to have a lack of routine maintenance.

manages the compliance and enforcement elements of the State Pollutant Discharge Elimination System (SPDES) permit program.

In 1975, the United States Environmental Protection Agency (EPA) authorized New York State to implement the National Pollutant Discharge Elimination System (NPDES) program to regulate all wastewater discharges to surface waters. The state's Environmental Conservation Law (ECL) established the SPDES program and provides NYSDEC with additional legal authority to regulate wastewater discharges to groundwater. The SPDES permits are issued pursuant to Article 17 of the ECL and state regulations to 6 NYCRR Part 750.

A SPDES permit establishes stringent performance standards and operating conditions that are designed to protect the state's waters. NYSDEC issues both individual permits and general permits. An individual SPDES permit applies to a single facility, in one location, possessing unique discharge characteristics and other factors. A general SPDES permit applies to a class of dischargers, which involve similar operations or pollutants. A general permit also requires similar effluent limits, operating conditions, or the same or similar monitoring.

These permits may incorporate current water quality standards, effective implementation of best management practices (BMPs) by permitted facilities, and timely sampling, analysis and reporting to NYSDEC on the quality of wastewater discharged under the SPDES permit.

A permit, once issued, requires the owner or operator to comply with specific conditions found in the permit. For larger, more complex facilities, these requirements typically include limits on physical, chemical or biological characteristics of the discharge. For smaller facilities, including those discharging to groundwater, the permit may simply require maintaining data and information at the facility site for review by NYSDEC staff during an inspection.

In addition to the specific conditions found in the document, the SPDES permit also references "general conditions" required by the SPDES regulations at 6 NYCRR Part 750-2. This regulation contains requirements that are applicable to all permittees including records retention, proper operation and maintenance of a treatment plant, and requirements to report treatment plant bypasses and non-compliance events to the NYSDEC.

Compliance Assurance Program

NYSDEC's compliance goals are to protect and improve water quality, ensure compliance with laws, regulations and policies, seek high levels of facility compliance, promote voluntary compliance and achieve state-wide consistency.

NYSDEC's obligations to ensure compliance with SPDES permits are specified in the 1987 Enforcement Agreement between the EPA and NYSDEC. Some elements of the agreement are:

- Monitoring permit compliance
- Maintaining and sharing compliance information with EPA
- Applying criteria to identify facilities in Significant Non-Compliance (SNC)
- Listing facilities that require action to restore compliance
- Timely and appropriate enforcement of SNC violations

Photo by David Jenne

Examples of Significant Non-Compliance (SNC):

- Exceeding permit effluent limits for TSS (total suspended solids) *four of six consecutive months*
- Exceeding permit effluent limit for TSS by *40 percent in two of six consecutive months*
- Any failure to start construction, end construction or attain final compliance within *90 days* of the permit schedule date
- *Any* schedule violation of an administrative consent order
- *Any* violation of a judicial order
- Failure to submit the discharge monitoring report by *30 days* or more

NYSDEC meets with EPA on a quarterly basis to cooperatively manage all 345 facilities that NYSDEC deems as major dischargers. Major permits are generally municipal wastewater treatment plants that are permitted to discharge 1.0 million gallons per day or more and industrial facilities that meet certain EPA scoring criteria for potential water quality risk. Minor permits are all individually permitted facilities that are not majors.

NYSDEC and EPA agree on enforcement responses to those facilities with SNC violations and other significant issues such as treatment plant bypasses, manure spills and citizen complaints. NYSDEC uses a similar process to manage compliance assurance across its nine regional offices to address violations of minor permits as well as major permits.

Effluent DMRs: One unique feature of the SPDES program is the requirement for “significant” permittees to submit monitoring data to NYSDEC on a Discharge Monitoring Report (DMR). DMRs are required on a monthly, quarterly or annual basis as specified in the facility’s SPDES permit. The DMR provides NYSDEC with effluent data that can be compared against permit effluent limits to determine compliance. Furthermore, this information is entered into the EPA’s data system which will detect and list permit violations and calculate the SNC. The NYSDEC collects and processes almost 22,000 DMRs each year. NYSDEC uses this information to help direct its compliance assurance activities. The public can review reported discharge data for SPDES permitted facilities by accessing the EPA Enforcement and Compliance History Online (ECHO) website at: www.epa-echo.gov/echo/index.html.

Active Enforcement

To further ensure compliance with SPDES permits, NYSDEC maintains an active field presence through nine regional and five sub-regional offices, with additional support from staff in the Albany headquarters. These staff members issue permits, perform inspections, collect samples, certify facility operation staff, provide technical assistance, review discharge data and respond to citizen complaints involving water quality. In the last three years, NYSDEC has conducted an average of 2,500 compliance inspections. *Figure 1* shows the number of enforcement actions taken over a five year period.

The NYSDEC staff evaluates the DMR, violation data, various reports and submittals along with inspections to determine if a permittee is in compliance with the requirements of the SPDES permit.

Examples of permit violations:

- Discharge that exceeds a permit limit
- Failure to submit a report on time
- Failure to implement best management practices or pollution prevention plans

- Failure to design and construct facility upgrades according to permit schedules
- Discharge causing a threat to the environment or public health
- Violation of water quality standards
- Discharge of untreated or partially treated wastewater

When NYSDEC encounters violations of a SPDES permit, it usually initiates action by sending a warning letter or a Notice of Violation (NOV) encouraging the permittee to correct violations or deficiencies. NYSDEC considers this an informal enforcement action. The NOV may, however, be used in conjunction with an Order on Consent or other formal enforcement action with required corrective measures.

NYSDEC’s goals for formal enforcement are for the violator to expedite corrective action and return to compliance and to implement solutions and behavior that sustain future compliance. Furthermore, NYSDEC’s enforcement efforts need to achieve fairness so that the violator does not have an unfair advantage over those who comply and to deter future violations by the violator and others across the regulated community.

Formal enforcement actions include an Order on Consent, Notice of Hearing and Complaint, Cease and Desist Directive, Commissioner’s Order, or ticketing by a law enforcement official (Environmental Conservation Officer). Most of NYSDEC’s enforcement actions take the form of a consent order. A typical consent order will require the violator to pay a penalty to NYSDEC and require a schedule to complete corrective actions such as a facility upgrade. The elements of a consent order are more thoroughly described on page 19.

It is important to note that the EPA can also take enforcement against a discharger to surface waters for violations of the Clean Water Act.

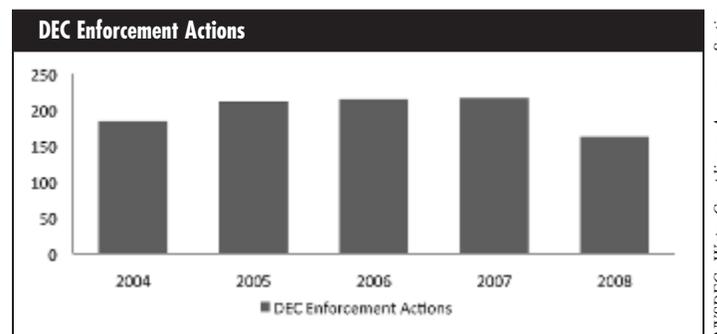


Figure 1. The five year trend in NYSDEC enforcement from 2004 through 2008

Addressing Expanded Permit Universe

From the inception of the federal Clean Water Act in 1972 until the mid-1990s, NYSDEC efforts focused on issuing individual permits to control point sources of pollution from municipal and industrial wastewater treatment plants. Since the late 1990s, NYSDEC has issued new general permits for activities such as stormwater runoff from construction, industrial, municipal areas and Concentrated Animal Feeding Operations (CAFOs). As a result, the number of SPDES-permitted facilities has nearly doubled since 1998 (*Figure 2*).

Nationally as well as in New York State, CAFOs, stormwater, combined sewer overflows (CSO) and sanitary sewer overflows (SSO) are significant contributors to water quality problems. Collectively, the EPA terms CAFOs, stormwater, CSO and SSO as “wet weather” NPDES programs. Given the water quality impacts from these

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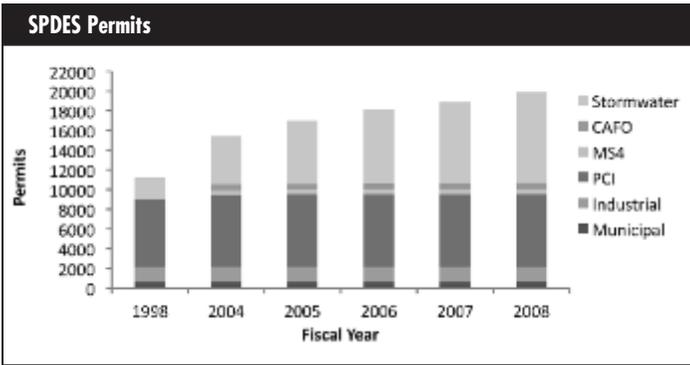


Figure 2. Recent trend for SPDES permits, including the baseline total in 1998

sources, the EPA has made these areas national enforcement priorities since 1998. NYSDEC efforts must be consistent with EPA priorities.

Although the number of permits has risen nearly 100 percent over the past 10 years, staff overseeing the activities of these permitted facilities has been nearly constant. The DOW has made significant changes to meet the compliance assurance challenges presented by the growth and diversity of the SPDES “universe” and EPA priorities. Prior to the growth in the SPDES universe, almost 100 percent of NYSDEC staff compliance and enforcement efforts was directed at wastewater treatment plants, whereas now, staff also must focus time and effort on wet weather priorities.

| | 1998 | 2004 | 2005 | 2006 | 2007 | 2008 |
|------------|------|------|------|------|------|------|
| Municipal | 602 | 624 | 624 | 624 | 630 | 635 |
| Industrial | 1591 | 1536 | 1538 | 1542 | 1553 | 1566 |
| PCI | 6788 | 7291 | 7332 | 7336 | 7339 | 7343 |
| Stormwater | 2229 | 4901 | 6407 | 7518 | 8232 | 9255 |
| MSGP | | 1128 | 1343 | 1398 | 1110 | 1356 |
| SWC | | 3773 | 5064 | 6120 | 7122 | 7899 |
| MS4 | | 490 | 495 | 499 | 497 | 501 |
| CAFO | | 587 | 582 | 588 | 586 | 590 |

In recent years, NYSDEC has broadened staff training and expertise into areas such as nutrient management for CAFOs, and erosion and sediment control for runoff at construction sites. Coupled with this training, NYSDEC has reallocated staff time from compliance assurance for wastewater treatment plants to facilities and activities regulated under the general permits.

Figure 3 details staff time expenditures for 2008, during which there were 70 full-time employees focusing on SPDES compliance and enforcement activities. The chart shows the shift of over

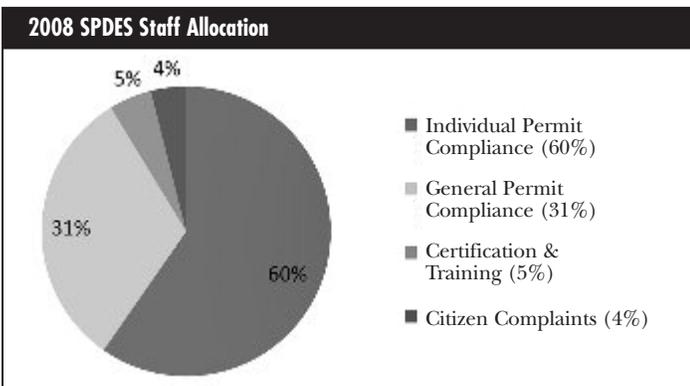


Figure 3. Staff time expenditures/levels in 2008

30 percent of NYSDEC compliance and enforcement efforts towards general permit compliance.

| | |
|-----------------------------------------------|-------------|
| Staffing Levels in Numbers: | 2008 |
| Individual Permit Compliance..... | 42 |
| General Permit Compliance..... | 22 |
| Certification & Training..... | 3 |
| Citizen Complaints..... | 3 |
| Total FTEs (full-time equivalent)..... | 70 |

NYSDEC staff determine compliance for sources such as CAFO and stormwater by evaluating compliance with general permit requirements. The CAFOs must implement Comprehensive Nutrient Management Plans to ensure that manure and dairy waste are stored, managed and land applied to maximize nutrient uptake by crops and minimize runoff. Construction sites that disturb more than one acre of land must implement a Stormwater Pollution Prevention Plan (SWPPP) to control soil erosion and sedimentation and minimize post-construction runoff.

Failure to comply with these requirements will result in informal and formal enforcement in a process similar to that for wastewater treatment plant permit violations. To learn more about CAFO and construction site enforcement, refer to the articles on page 28 and page 46.

Strong Permitting Strategy

While presenting challenges, the expansion of the SPDES permit universe to include “wet weather” sources of pollution provides NYSDEC with more enforceable requirements to reduce the impacts of these sources.

The permitting of these wet weather sources are designed to ensure that nutrients, bacteria, sediment, solids and other pollutants will be properly managed to minimize discharge to the waters of New York. The permitting of traditional point sources such as municipal and industrial wastewater treatment plants are intended to ensure proper design, operation and maintenance of these facilities to meet stringent effluent limitations.

The establishment of a strong SPDES permit program, coupled with strategic and targeted use of NYSDEC compliance and enforcement tools will continue to protect water quality statewide to benefit the aquatic environment, human health and the economy.

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