



New York State Department of Environmental Conservation

QUALITY ASSURANCE PROJECT PLAN

Chesapeake Bay Regulatory and Accountability Program

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New York State Department of Environmental Conservation

Division of Water

Chesapeake Bay Regulatory and Accountability Program

Quality Assurance Project Plan

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Introduction

The New York State Department of Environmental Conservation (DEC) received an Environmental Protection Agency (EPA) FY 2010 Chesapeake Bay Regulatory and Accountability Program (CBRAP) grant primarily for increased staff resources to accomplish the following activities listed as eligible activities in EPA's March 2010 Addendum to its October 2009 Grant Guidance:

- develop permits and ensure consistency with water quality needs, including Total Maximum Daily Load (TMDL) wasteload allocations
- compliance monitoring, enforcement follow-up, reviews, reporting, inspections, investigations, audits, corrective actions and assistance visits
- TMDL watershed implementation plan development
- improved tracking and accountability

DEC expects these activities to contribute to the "Protect and Restore Water Quality" goals of the Chesapeake Bay Program, including reduced nutrients (and sediment where appropriate) from:

- municipal and industrial wastewater facilities;
- agricultural lands and animal operations;
- developed lands;
- streamside riparian areas.

Program Description

The goal of the DEC Chesapeake Bay Regulatory and Accountability Program is to provide enhanced levels of permit development while ensuring consistency with water quality needs, compliance monitoring, enforcement, enforcement follow-up, inspections, TMDL watershed implementation plan development, and improved tracking and accountability.

DEC is the agency responsible for compliance assurance, permit development and issuance, and TMDL development and implementation planning. Responsibilities rest with both regional field offices and the central office in Albany. DEC will target actions at facilities, entities and activities within the Susquehanna and Chemung river basins in New York that contribute nutrient and sediment to Chesapeake Bay.

In principle part, DEC will focus its work on the facilities, entities and activities it regulates, including wastewater treatment plants, concentrated animal feeding operations and municipal separate storm sewer systems. In addition, although not directly regulated, DEC will also augment its work, under contract with the Federal Emergency Management Agency (FEMA), to audit and assist local government administration of floodplain development regulations enacted for participation in the

National Flood Insurance Program. All of this work will be located within the Susquehanna and Chemung river basins in New York and will assist in achieving nutrient and sediment reduction.

For reference, whereas the Chesapeake Bay Program describes the New York portion of the Chesapeake Bay watershed as “Susquehanna-New York”, DEC describes it as two separate drainage basins, the Susquehanna and Chemung river basins.

Federal Grants Associated with the Program

DEC receives Clean Water Act §319 and §106 funds in a Performance Partnership Grant (PPG) from EPA. DEC also receives Clean Water Act §604(b) grant funds from EPA and Community Assistance Program (CAP) grant funds from FEMA. The goal of the DEC Chesapeake Bay Program is to provide enhanced levels of program delivery above and beyond the work plan commitments of the current PPG, 604(b) and FEMA CAP grants.

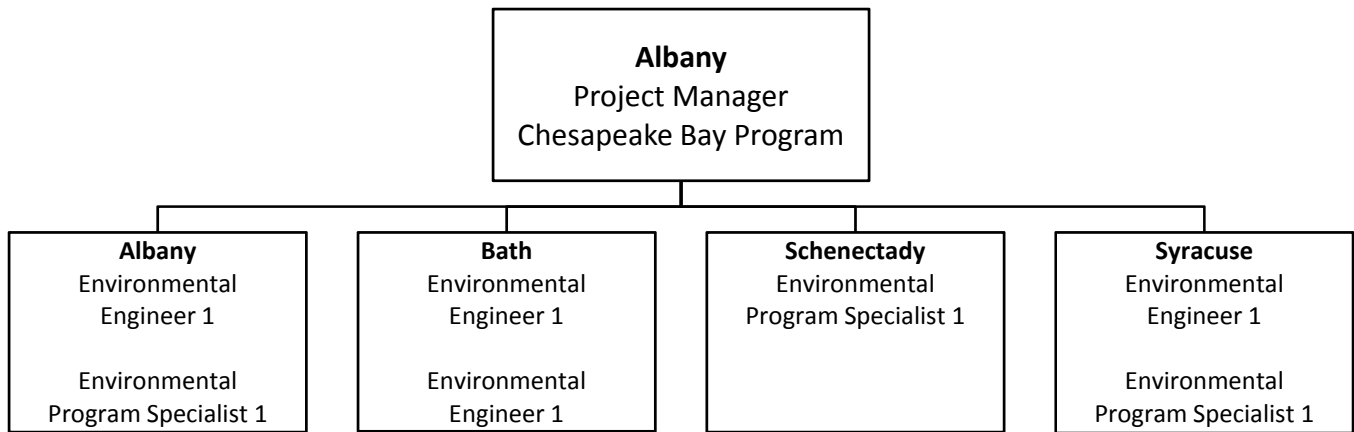
In addition to the EPA and FEMA grants received by DEC, the Tioga County Soil and Water Conservation District receives a Chesapeake Bay Program State Implementation Grant (CB-97375401-02). The primary focus of this grant is data collection and best management practice (BMP) implementation for the Susquehanna and Chemung river basins.

Program Management

Staff and Office Locations

Position	Location	DEC Region
Project Manager	Albany	Central Office
Environmental Engineer 1	Albany	Central Office
Environmental Program Specialist 1	Albany	Central Office
Environmental Engineer 1	Bath	Region 8
Environmental Engineer 1	Bath	Region 8
Environmental Program Specialist 1	Schenectady	Region 4
Environmental Engineer 1	Syracuse	Region 7
Environmental Program Specialist 1	Syracuse	Region 7

Organization Chart



Descriptions of Duties

Project Manager – Albany

The primary duties of this position will be to research improvements to Best Management Practices (BMPs) for road ditch maintenance, animal stream exclusion, enhanced phosphorus removal, nitrogen reduction technology, and riparian set back programs. In addition, the position will (1) recommend the course forward to achieve New York water quality goals and satisfy watershed requirements, (2) coordinate attendance or participation in various CBP committees and workgroups, as resources permit, and (3) track and assure completion of CBP activities and commitments in accordance with established schedules and priorities.

Environmental Engineer 1 – Albany

This Environmental Engineer will issue SPDES permit modifications for Bay-significant discharges; review and approve engineering plans; develop and issue SPDES permit modifications as necessitated by the Chesapeake Bay TMDL. Additionally, this Environmental Engineer will research improvements to the SPDES General Permits and associated technical requirements for subject areas, such as but not limited to, road ditch maintenance, animal stream exclusion, enhanced phosphorus removal and nitrogen reduction technology for urban runoff and riparian setback distances.

Environmental Program Specialist 1 – Albany

This Environmental Program Specialist will work with and assist members of the DEC Chesapeake Bay team to ensure completion of programmatic goals and commitments. Ensure that federal and state requirements regarding accountability and transparency are met and that sufficient information is

distributed to the general public at an appropriate level to understand same. Serve as liaison with USEPA Grants Administration Office.

(3) Environmental Engineer 1 – DEC Regions 7 & 8 (Syracuse & Avon)

These Environmental Engineers will conduct inspections and compliance follow-up activities for permitted activities including: wastewater discharges, Concentrated Animal Feeding Operations, municipal separate storm sewer systems and construction sites. These Environmental Engineers will issue SPDES permit modifications for Bay-significant discharges; review and approve engineering plans; develop and issue SPDES permit modifications as necessitated by the Chesapeake Bay TMDL. Additionally, these Environmental Engineers will conduct Community Assessment Visits and Technical Assistance Contacts for water quality protection and community assistance in floodplains.

(2) Environmental Program Specialist 1 – DEC Regions 4 & 7 (Schenectady & Syracuse)

This Environmental Program Specialist will conduct inspections and compliance follow-up activities for permitted activities including: wastewater discharges, Concentrated Animal Feeding Operations, municipal separate storm sewer systems and construction sites. This Environmental Program Specialist will conduct Community Assessment Visits and Technical Assistance Contacts for water quality protection and community assistance in floodplains. Additionally, this Environmental Program Specialist will develop and conduct training and outreach to permittees as necessitated by the Chesapeake Bay TMDL Watershed Implementation Plan.

Program Objectives

Objective 1 – Compliance and Enforcement of SPDES Permits

DEC Division of Water regional staff will ensure compliance with the terms and conditions of State Pollutant Discharge Elimination System (SPDES) permits through data and plan review, site inspections, and compliance assurance activities including technical assistance and formal enforcement actions. These activities will focus on the control of significant sources of nutrients and sediment and the implementation of the 1987 *DEC/EPA Enforcement Agreement for Water*.

Site Inspections

Inspectors will gather all available information prior to an inspection to determine facility compliance for the period and to identify trends based on the compliance history. The inspector will often review prior Discharge Monitoring Reports (DMR), complaints against a facility, prior inspection reports, and the conditions of the facility's permit.

After reviewing preparatory information, the inspector will conduct the inspection and will develop a rating based on the inspection categories found on the inspection form and any other information that is included in the applicable inspection checklist. Once the inspection is completed, an overall inspection rating is assigned.

Inspections will be conducted at:

- Bay-significant Wastewater Treatment Plants (WWTP). There are 26 municipal WWTPs with individual SPDES permitted discharge volumes of more than 0.4 million gallons per day (MGD) and two industrial WWTPs with equivalent nutrient loadings.¹
- Other WWTPs with individual SPDES permitted discharge volumes of less than 0.4 MGD. There are approximately 45 such surface discharges.
- Concentrated Animal Feeding Operations covered by SPDES General Permit GP-0-09-001; this permit is issued for CAFO-sized facilities that do not discharge or propose to discharge. Thirty-seven CAFOs in New York’s portion of the Chesapeake Bay watershed are covered by SPDES General Permit GP-0-09-001. These CAFOs are classified as shown in Table 1 below.

Table 1: NYS CAFOs Covered by SPDES General Permit GP-0-09-001

	Mature Dairy Cattle	Dairy Heifers	Sheep or Lambs	Horses	Swine (55 lbs. and Over)
Medium (36 total)	30	2	2	1	1
Large (1 total)	1	0	0	0	0

- Concentrated Animal Feeding Operations covered by SPDES General Permit GP-04-02; this permit is issued for CAFOs that discharge. Twenty-six CAFOs in New York’s portion of the Chesapeake Bay watershed are covered by SPDES General Permit GP-04-02. These CAFOs are classified as shown in Table 2 below.

Table 2: NYS CAFOs Covered by SPDES General Permit GP-04-02

	Mature Dairy Cattle	Dairy Heifers	Swine (55 lbs. and Over)
Medium (18 total)	16	2	0
Large (8 total)	6	1	1

- Other agricultural operations for which DEC receives citizen complaints or observations of water quality degradation.

¹ A list of Bay-significant wastewater treatment plants is in Appendix A.

- Municipal Separate Storm Sewer Systems (MS4) covered by SPDES General Permit GP-0-10-001. Twenty-six municipalities are presently covered by this permit in the Susquehanna and Chemung river basins.
- Stormwater discharges from construction activity covered by SPDES General Permit GP-0-10-001. There are currently 530 active sites covered by this permit in the Susquehanna and Chemung river basins.

Inspection reports may be delivered while the inspector is at the facility and inspection results may be communicated to the facility owner/operator while on-site. Often however, the inspection report is developed after returning to the office, and is later provided to the operator of the inspected facility. If serious violations are found, the inspector will discuss the issues with the facility operator and may pursue an enforcement action (either formal or informal).

After each inspection, the Division of Water will follow the procedures below in preparing, transmitting and storing inspection reports, and handling data entry into the EPA Integrated Compliance Information System – National Pollution Discharge Elimination System (ICIS-NPDES) and the DEC Water Compliance System (WCS).

- **Inspection report preparation, transmittal and storage:** DEC regional inspectors will prepare and transmit a final report to the permittee. The inspector will place an electronic copy in PDF format in the Division of Water Centralized Electronic Document Repository (CEDR).²
- **Inspection report data entry:** Inspection data is typically entered into the WCS database by the inspector. In some instances however, the inspector may pass the paper inspection form to an administrative staff person to record the core inspection data into these databases. Inspection data is transferred from WCS to ICIS-NPDES by the Division of Water SPDES Compliance Information Section (SCIS).

Guidance for SPDES Inspections

The DEC *SPDES Inspector Guidance Manual* guides inspectors in conducting consistent and effective municipal and industrial SPDES inspections.

Topics covered include inspection preparation, inspection forms, types of inspections, inspection procedures, sampling protocol, inspection reporting, and compliance follow-up procedures for the SPDES program. The guidance manual provides guidelines for conducting SPDES inspections including documentation of inspection findings that may be used for compliance and enforcement response to violations of permit requirements and violations of water quality standards.

² CEDR is an area on the DEC Division of Water's shared network drive that is designated for the storage and retrieval of final electronic documents. This area is accessible to all Division of Water employees, including regional employees, and helps prevent duplicate document storage and confusion about which is the final version of a document. All security procedures described in the *Data Security and Procedures for Emergency Situations* section apply to documents stored in CEDR.

As detailed in the *SPDES Inspector Guidance Manual*, the final step in completing a SPDES inspection is to enter the inspection information into the DEC inspection sampling database, called the Water Compliance System (WCS). Inspection data is then transferred from WCS to ICIS-NPDES by the SPDES Compliance Information Section. ICIS-NPDES is used for national tracking of NPDES permit information submitted by New York's SPDES permittees (for more information about ICIS-NPDES, see the *Compliance Assurance* section below). An inspection is not complete until it is entered into the WCS database. The DEC central office SCIS is responsible for data coding into ICIS-NPDES in accordance with EPA's *ICIS-NPDES User's Guide*.

The WCS database stores all of New York State's inspection data. The data can be queried and reports can be generated from this data. Only a few fields of information from the inspection form must be entered into the database; however, it is possible to enter more data into the system. The mandatory fields are: Facility, Inspector, Date, Time, Summary Rating, and whether the inspection is complete. This data should be entered into the inspection system within thirty days of the inspection. If the inspector chooses, all information from the inspection form can be entered into WCS. By entering all information from the form, the inspector will be able to generate reports and query data from all areas of the inspection form, rather than just from a few fields.

To effectively represent DEC, inspectors must have a working knowledge of legal responsibilities and authorities. Reference sources for SPDES legal authorities are maintained in regional offices and periodically reviewed by regional inspectors, particularly in preparation for comprehensive facility inspections. The Division of Water internal website has links to the legal reference sources mentioned above.

Specific guidance for CAFO inspections is attached as Appendix C: CAFO Inspection Instructions.

Compliance Assurance

The Division of Water, Bureau of Water Compliance tracks SPDES inspections and reports and pursues enforcement actions if necessary.

The data collected by SPDES permittees is a combination of analyzed onsite parameters and data acquired through samples analyzed by Environmental Laboratory Accreditation Program (ELAP)-certified labs. This data is maintained in the ICIS-NPDES database. Performance of compliance and follow up activities will be accomplished through analysis of data acquired directly from the ICIS-NPDES database.

DEC will identify priority violations in accordance with the Division of Water Technical and Operational Guidance Series (TOGS) 1.4.1 – *Water Integrated Compliance Strategy System (WICSS)*³, to assure SPDES compliance. Significant Non-Compliance (SNC) will be discussed as part of the Significant Non-Compliance Action Program (SNAP) process. Response to priority violations will be made in accordance with the Division of Water TOGS 1.4.2 – *Compliance and Enforcement of SPDES Permits*.

³ All Division of Water TOGS are available for download on the DEC website at <http://www.dec.ny.gov/regulations/2652.html>.

Violations identified by a DEC inspection within the Chesapeake Bay Watershed must be addressed in accordance with the appropriate wet weather strategy. For example, with regard to stormwater, to “address” means to take timely and appropriate formal or informal enforcement action designed to return the noncompliant MS4, construction site or industrial facility to compliance. Appropriate actions for an entity designated to be a “Significant Non-Complier” are generally formal enforcement actions such as administrative compliance orders or judicial referrals. Formal actions should establish enforceable schedules for complying with permit requirements. Informal actions may be appropriate in particular circumstances and include administrative penalty orders and notices of violation. In addition, a noncompliant entity is considered “addressed” if it returns to compliance in a timely manner without an enforcement action. With regard to CAFOs, the DEC *Regional Priority Action Implementation Plan* (PAIP) outlines procedures followed by DEC regional offices for addressing facilities. A facility is considered addressed by one of three ways: 1) no further action is needed; 2) the facility is in compliance; or 3) the facility is in violation and an appropriate enforcement action was taken to require compliance. When an enforcement action is required to return a CAFO to compliance, EPA and/or DEC will utilize EPA’s *Interim Wet Weather Significant Non-Compliance Policy*⁴, when deciding what action is most appropriate to address CWA violations at CAFOs.

Discharge Monitoring Report Submission

EPA Major and State Significant SPDES permittees are required to submit DMRs to the Division of Water on a regular basis. DMRs contain a summary of sampling results from the permittee’s wastewater discharge. Reported DMR data is compared with the effluent limitations established in the permit to determine if violations have occurred (there may also be influent limits). Late or unsubmitted DMRs are also tracked as violations.

Permittees prepare and submit DMRs as instructed by DEC’s *DMR Manual for Completing the Discharge Monitoring Report for the State Pollutant Discharge Elimination System (SPDES)*.⁵ Hard copies of DMRs are submitted by mail to both the central and regional DEC offices and sometimes other offices as required by the permit. The central office SCIS is responsible for data coding into ICIS-NPDES⁶ and producing Notices of Violation (NOV) for late or missing DMRs. Regional offices are responsible for evaluating the DMR against effluent limits to see if violations have occurred. Regional offices are also responsible for issuing enforcement actions relating to effluent exceedances.

A workflow diagram describing the DEC process for handling DMRs is in Appendix B: Discharge Monitoring Report Submittal Processing.

Objective 2 – Water Quality Protection in Floodplains

Under contract with FEMA, the DEC will conduct audits of local government administration of its floodplain development regulations and provide technical assistance as listed below.

⁴ EPA’s *Interim Wet Weather Significant Noncompliance Policy* is on the EPA website at <http://cfpub.epa.gov/compliance/resources/policies/civil/cwa/>.

⁵ The *DMR Manual* is available for download on the DEC website at <http://www.dec.ny.gov/chemical/8461.html>.

⁶ DMR data is entered into ICIS-NPDES in accordance with the EPA *ICIS-NPDES User’s Guide*.

- Community Assessment Visits, targeting municipalities with higher numbers of flood insurance policies, new or revised Flood Insurance Rate Maps, or higher development potential.
- Fifteen Community Assistance Contacts, targeting municipalities having greater propensity for flood damage related to road and culvert systems

Effective administration of these laws will help to improve and protect nutrient and sediment water quality. This will be accomplished by enhancing the current FEMA/State program, whereby the DEC conducts Community Assessment Visits and Community Assistance Contacts, works with municipalities to take corrective actions and reports resulting findings to FEMA. There are 262 municipalities in the Susquehanna and Chemung river basins in New York.

Objective 3 – Individual Permitting, MS4, Construction, and CAFO Permitting, and Non-point Source Technology

New York State has a state program, approved by the EPA, for the control of wastewater and stormwater discharges in accordance with the Clean Water Act. Under New York State law the program is known as the State Pollutant Discharge Elimination System⁷ and is broader in scope than that required by the Clean Water Act in that it controls point source discharges to groundwater as well as surface water.

The *New York State Tributary Strategy for Chesapeake Bay Restoration*⁸ calls for DEC to modify Bay-significant wastewater discharge permits. The DEC's Division of Water, Bureau of Water Permits will modify SPDES permits by issuing "action level/nutrient optimization" modifications that will contain a schedule of compliance requiring submission of Nutrient Optimization engineering plans to DEC for approval that describe how nutrient removal optimization will be implemented. Additional permit modifications for Bay-significant discharges are likely to result from the Chesapeake Bay TMDL.

The Bureau of Water Permits will also research improvements to the SPDES general permits and associated technical requirements for subject areas, such as but not limited to, road ditch maintenance, animal stream exclusion, enhanced phosphorus removal and nitrogen reduction technology for urban runoff and riparian setback distances.

All DEC SPDES permits comply with the following Division of Water Technical and Operational Guidance Series:⁹

- **TOGS 1.2.1 – Industrial Permit Writing:** Provides guidance to DEC staff responsible for writing SPDES permits for discharges of wastewater from industrial facilities and for writing requirements equivalent to SPDES permits for discharges from remediation sites. In writing

⁷ More information about the New York State SPDES program is on the DEC website at <http://www.dec.ny.gov/permits/6054.html>.

⁸ The *Tributary Strategy* is available for download on the DEC website at <http://www.dec.ny.gov/lands/33279.html>.

⁹ All Division of Water TOGS are available for download on the DEC website at <http://www.dec.ny.gov/regulations/2652.html>.

SPDES permits for industrial dischargers, DEC permit writers must determine three basic aspects of each permit: parameters to be regulated, allowable discharge limitations and monitoring requirements to demonstrate compliance with discharge limitations. As well as these basic aspects of discharge permits, there are numerous additional considerations such as Antibacksliding/Antidegradation review and the Great Lakes Initiative requirements.

- **TOGS 1.2.2 – Administrative Procedures and Environmental Benefit Permit Strategy for Individual SPDES Permits:**¹⁰ Provides the procedures for implementing the requirements for discharges authorized under the SPDES program, developing new SPDES permits, and renewing, modifying, priority ranking and tracking existing SPDES permits.
- **TOGS 1.3.3 – SPDES Permit Development for POTWs:** Provides technical guidance for permit writers in drafting SPDES permits for Publicly Owned Treatment Works (POTWs). This document provides the guidance necessary to draft a SPDES permit for a POTW of any size or classification. Areas that are not covered are SPDES Administration, Decentralization, Enforcement, Compliance, and Compliance Monitoring. These aspects of the SPDES permit program are covered elsewhere in the TOGS manual.

Objective 4 – Watershed Planning and Implementation

Watershed Implementation Plans and two-year milestones will be developed with appropriate stakeholder and technical resource input.

The *Final Phase I Chesapeake Bay TMDL Watershed Implementation Plan*¹¹ was submitted to EPA in December, 2010. The *Draft* and *Final* versions of the *Phase II Chesapeake Bay TMDL Watershed Implementation Plan* will be prepared and submitted to EPA according to established deadlines.

Progress toward achieving the initial New York 2009-2011 Chesapeake Bay milestones will be regularly assessed and lessons learned will be adaptively applied to gauge subsequent milestones for the 2012-2013 time frame. Quarterly coordination meetings of the DEC Chesapeake Bay Program team will be held to maximize information sharing and innovation regarding technological advances, and other opportunities for greater sediment and nutrient control, and to ensure all work plan tasks are completed, documented and reported to EPA.

The DEC Chesapeake Bay Program team will also actively seek opportunities to reach out to and coordinate with, stakeholders outside of DEC who have an interest in the Chesapeake Bay.

¹⁰ The Division of Water has proposed revisions to TOGS 1.2.2 in order to address concerns from EPA. The proposed revisions are available for download on the DEC website at <http://www.dec.ny.gov/permits/6054.html>. Scroll down to the header, "Proposed Revisions to TOGS 1.2.2".

¹¹ The *Final Phase I Watershed Implementation Plan* is on the DEC website at <http://www.dec.ny.gov/lands/33279.html>.

Objective 5 – Data Management

Because a large fraction of pollutant loading to the Chesapeake Bay is from non-point sources, it is important to maintain a high degree of confidence in the accounting of best management practice implementation and the processing of available water quality measurements. The goal of this objective is to facilitate the collection of best management practices implementation through improved management of data found in the plans and reports submitted to DEC by permittees covered by the SPDES general permits, especially construction stormwater and municipal separate storm sewer systems.

Stormwater Program Data Management

The DEC tracks the stormwater BMPs that are constructed statewide through the Stormwater Permit Program for Construction Activity. As part of this permit program, owners of regulated construction activities are required to identify the stormwater BMPs that will be constructed on their site in the Notice of Intent (NOI) which is submitted to the DEC central office to obtain permit coverage. This information is maintained in a Microsoft Access database.

Recommendations for data management system improvements will be made, and improvements to permit data management systems will be evaluated to make information collected within the Susquehanna and Chemung river basins more readily available for submission to EPA. In addition, various sources of water quality data will be effectively amassed to facilitate appropriate technical assessments.

DEC routinely collects data on stormwater best management practices (BMP) implemented under the stormwater permitting program through avenues such as MS4 annual reports and Notices of Intent (NOI). Permittees file a Notice of Intent (NOI) to be covered by a general permit and report planned post-construction stormwater BMPs.¹²

- **Construction stormwater:** Construction activities disturbing one or more acres of soil must be authorized under the *General Permit for Stormwater Discharges from Construction Activities*.¹³ Permittees are required to develop a Stormwater Pollution Prevention Plan (SWPPP) to prevent discharges of construction-related pollutants to surface waters. As aforementioned, information about the following BMPs (if used) is collected under the Construction General Permit:

¹² The stormwater database is described in more detail below in the *Information Management Systems* section.

¹³ The Construction General Permit is available for download on the DEC website at <http://www.dec.ny.gov/chemical/43133.html>.

- Ponds
 - Micropool extended detention
 - Wet pond
 - Wet extended detention
 - Multiple pond system
 - Pocket pond
- Filtering
 - Surface sand filter
 - Underground sand filter
 - Perimeter sand filter
 - Organic filter
 - Bioretention
- Wetlands
 - Shallow wetland
 - Extended detention wetland
 - Pond/wetland system
 - Pocket wetland
- Infiltration
 - Infiltration trench
 - Infiltration basin
 - Dry well
 - Underground infiltration system
- Open channels
 - Dry swale
 - Wet swale
- Verified proprietary practices

- Hydrodynamic
- Wet vault
- Media filter
- Alternative practices
 - Rain garden
 - Cistern
 - Green roof
 - Stormwater planter
 - Permeable paving

BMP information in the NOI is provided by a qualified individual (i.e. a person knowledgeable in the principles and practices of erosion and sediment control and/or stormwater management and treatment). For construction activities that require post-construction stormwater management controls, the DEC Construction General Permit requires the Stormwater Pollution Prevention Plan to be prepared by a qualified professional (e.g. Professional Engineer or Registered Landscape Architect).

DEC's Construction General Permit requires the owner of a construction activity to hire a qualified inspector to perform weekly inspections of the BMPs to ensure that they are constructed in accordance with the SWPPP and the State's technical standards. Once the project is complete, the qualified inspector is required to perform a final inspection and then certify in the Notice of Termination (NOT) that the BMPs have been constructed in conformance with the SWPPP. The NOT form is then submitted to DEC's central office.

Information Management Systems

The DEC Division of Water is currently engaged in a review of the information management processes used to support the SPDES program.

The Division of Water committed a number of years ago to using national EPA systems as its primary data management tool rather than maintaining separate State databases, and consequently, the legacy Permit Compliance System (PCS) system was a key system component used by the Division to support the SPDES program. The Division has played a key role in the design of the replacement Integrated Compliance Information System – National Pollutant Discharge Elimination System (ICIS-NPDES), has completed the data migration from PCS to ICIS-NPDES, and is a direct user of the new EPA system.

While the PCS, and now ICIS-NPDES systems have provided critical data management support to the Division of Water's SPDES functions, those systems have been unable to support all of the Division's information needs and so a number of additional State systems have also been developed to fill gaps in the functionality provided by the EPA systems. Examples of these information systems include:

- **SPDES Information System (SIS):** SIS is an application that allows users to query and view DMR data for a given permit. Exceedance values show in red. In addition to a simple DMR view, SIS also includes a trending feature that allows users to view a specific parameter over multiple reporting periods, or to show parameter statistics such as minimum and maximum ranges for reported values over a given date range. A number of export options are available, including comma delimited text, which can be viewed in Microsoft Office Excel format.

SIS displays DMR result values and identifies violations. It displays the limits, units of measure, daily average, and monthly max on a screen that is formatted like a paper DMR (the summary screen). SIS displays DMR data as submitted and calculates statistics based on the range of data specified by the user.

SIS is linked with DEC's corporate Facility Information System (FIS) and Department Application Review and Tracking (DART) systems, and is a read-only system used to track reported DMR data. SIS is populated from a custom monthly extract from ICIS-NPDES.

SIS data is most often used by DEC permit managers in both the central and regional offices when reviewing facility compliance history, preparing for an inspection, or when performing a technical review.

- **Water Compliance System (WCS):** DEC uses two versions of WCS: WCS – PowerBuilder and WCS – ColdFusion.
 - **Water Compliance System – PowerBuilder** is a simple desktop application used to manage 15 attributes specific to SPDES facilities. WCS – PB connects to the DEC's corporate database and implements the same Facility Search and Facility Detail screens as FIS, but also implements a special screen for managing a small number of SPDES-specific facility data attributes. These attributes are stored in a table called DOW_FACILITY in the corporate database. These attributes must be populated before data entry may commence in the WCS – ColdFusion system described in the following section. The attributes unique to WCS – PB relate to discharge type, discharge volume, basin and watershed.
- WCS – PB also allows the user to indicate to which regional office an inspector may input or edit inspection data. The list of inspectors is driven by the data in the corporate database's "public" table, filtered for those whose role is set to "water inspector".
- **Water Compliance System – Cold Fusion** is a web-based application used primarily by inspectors to enter inspection data. The system contains all the inspection form data elements for each combination of facility type and inspection type. The class of the selected facility drives the available inspection types. The combination of facility class and selected inspection type drives the content displayed on the Inspection Detail screen.

This system is also used by CAS to retrieve a list of marginal and unsatisfactory inspections. These inspections are then added to the Bureau of Water Compliance Program system for review during the WICSS process.

WCS – CF contains numerous reports, showing everything from detailed inspection reports to summarized totals of inspections by type. Report criteria options are robust, allowing for fine-tuning of reports. For example, it is possible to search for facilities that have not been inspected, using a specified date range. It is also possible to copy an inspection report into a Microsoft Office Word document (there is a copy button in WCS for this).

- **Bureau of Water Compliance Program (BWCP) System:** The BWCP system is a FoxPro system that stores detailed compliance monitoring information not previously tracked by the EPA system. This system is run in multi-user mode from the DEC network.
- **CAFO Access database:** The CAFO database is a relatively small Microsoft Office Access database that tracks CAFO permits, related facility and contact information, and annual report data. It contains reports for authorization and discontinuance letters, and for summarizing annual report data. This database is updated by Division staff located in Albany. Regional staff queries the database when needed.
- **Stormwater Access database:** The DEC enters and maintains BMP information from NOIs in a Microsoft Office Access database similar to the CAFO Access database. The Stormwater database tracks stormwater permits, related facility and contact information, annual report data, and best management practices used by permittees to manage stormwater.

Data Security and Procedures for Emergency Situations

Water quality data is stored electronically on secure Division of Water network drives that are part of the Storage Area Network (SAN) in the DEC's data center. The SAN is a redundant array of drives, and it is backed up nightly to tape. A set of tapes is rotated once a week to the New York State archives for secure off-site storage. Physical access to the data center is restricted by electronic card-key locks.

Network access is restricted to DEC employees with individual password-protected user accounts. Password security is established through mandatory employee Cyber Security training and quarterly password changes. Access to specific information and files on the Division of Water network drives is limited through permissions granted by Project Managers and managed by the Division System Administrator's application of read and/or write authorization.

Objective 6 – Grant Administration

DEC staff will provide supervision and administrative oversight and support to the Chesapeake Bay Regulatory and Accountability Program. This will assure that the outputs of this grant are conducted

consistently, timely, accurately and completely. The multiple and complex aspects of this program necessitate a concerted effort for program efficiency and effectiveness.

This QAPP shall govern the operation of the project at all times. Each responsible party listed in the Program Management section shall adhere to the procedural requirements of the QAPP and shall ensure that subordinate personnel do likewise.

This QAPP shall be reviewed at least annually to ensure that the project will achieve all intended purposes. All the responsible persons listed in the Program Management section will participate in the review of the QAPP. The Project Manager is responsible for determining that data are of adequate quality to support this project. The project will be modified as directed by the Project Manager and the Project Manager will be responsible for implementing changes to the project and for documenting the effective date of all changes made.

To guide regional staff, detailed workplans will be prepared for each regional office that will be contributing to tasks under the CBRAP grant. The workplans will outline program deliverables for each regional office and how they will be reported to the Project Manager.

It is expected that some changes will need to be made to the project. The Project Manager will authorize all changes or deviations in the operation of the project. Any significant changes will be noted in the next report to EPA, and shall be considered an amendment to the QAPP. All verification and validation methods will be noted in the analysis provided in the final project report.

General CBRAP Reporting Requirements

DEC will provide semi-annual status reports to EPA on CBRAP-funded activities such as compliance and enforcement, wastewater treatment plant inspections, quality assurance project plans, and progress in meeting workplan objectives and milestones.

SPDES Data Reporting Requirements

Per the 2011 CBPO Grant Guidance, Attachment 6, DEC will submit nutrient data for the period July 1, 2010 through June 30, 2011 to the CBPO by December 31, 2011.

DEC reports wastewater data for all Bay-significant dischargers¹⁴ within the Susquehanna and Chemung river basins to EPA on an annual basis. The reporting period is July 1-June 30. For each outfall, DEC provides average monthly flow and concentration data (in units of mg/L) for the following parameters:

- NH₃
- NO₃
- TKN

¹⁴ A list of Bay-significant dischargers is in Appendix A.

- TN
- PO₄
- TOP
- TP
- CBOD/BOD
- DO
- TSS

In each report, default or calculated values are marked with appropriate descriptions.

Industrial facility data is reported as average monthly flow and net concentrations for the reported month, as quantified.

When compiling and reporting nutrient data for wastewater facilities in the Susquehanna and Chemung river basins, DEC follows the process outlined by the CBPO in Appendix D: Wastewater Facility Nutrient Data Processing Flow Diagram.

Appendix A: Bay-Significant Wastewater Treatment Plants

Twenty-eight wastewater treatment plants in New York’s portion of the Chesapeake Bay watershed are classified as “significant dischargers.”

SPDES Permit No.	DEC Region	Facility Name	County	NYTME	NYTMN
NY0024414	7	BINGHAMTON-JOHNSON CITY	Broome	420.328	4661.039
NY0035742	8	CHEMUNG CO. SD #2 -Elmira	Chemung	352.931	4659.717
NY0027669	7	ENDICOTT (V)	Broome	409.942	4659.826
NY0036986	8	CHEMUNG COUNTY SD #1 -Lake St.	Chemung	350.741	4664.867
NY0027561	7	CORTLAND (C)	Cortland	404.987	4716.665
NY0031151	4	ONEONTA (C)	Otsego	491.609	4698.505
NY0023647	8	HORNELL (C)	Steuben	281.206	4687.604
NY0025721	8	CORNING (C)	Steuben	331.911	4666.954
NY0021423	7	NORWICH	Chenango	457.087	4706.682
NY0025798	7	OWEGO #2	Tioga	405.272	4657.229
NY0023906	8	ERWIN (T)	Steuben	326.938	4668.885
NY0029271	4	SIDNEY (V)	Otsego	466.767	4684.657
NY0029262	7	OWEGO (V)	Tioga	395.142	4660.966
NY0021431	8	BATH (V)	Steuben	309.825	4689.053
NY0022357	9	ALFRED (V)	Allegany	270.8	4682.882
NY0004308	8	POLLIO DAIRY	Steuben	319.667	4677.208
NY0020672	7	HAMILTON (V)	Madison	455.042	4740.419
NY0031089	7	WAVERLY (V)	Tioga	373.734	4651.064
NY0022730	7	OWEGO (T) #1	Tioga	398.162	4661.645
NY0213781	7	CHENANGO NORTHGATE	Broome	426.249	4667.717
NY0023591	4	COOPERSTOWN	Otsego	505.516	4725.905
NY0023248	8	CANISTEO (V)	Steuben	286.232	4682.842
NY0004189	7	KRAFT FOODS, INC	Chenango	473.719	4725.898
NY0031411	4	RICHFIELD SPRINGS (V)	Otsego	500.869	4743.663
NY0025712	8	PAINTED POST (V)	Steuben	327.609	4668.966
NY0021407	7	GREENE (V)	Chenango	436.49	4685.998
NY0021466	7	SHERBURNE (V)	Chenango	458.336	4725.167
NY0020320	8	ADDISON (V)	Steuben	316.317	4664.254

Appendix B: Discharge Monitoring Report Submittal Processing

The following workflow diagram illustrates the process for DMR data submissions.

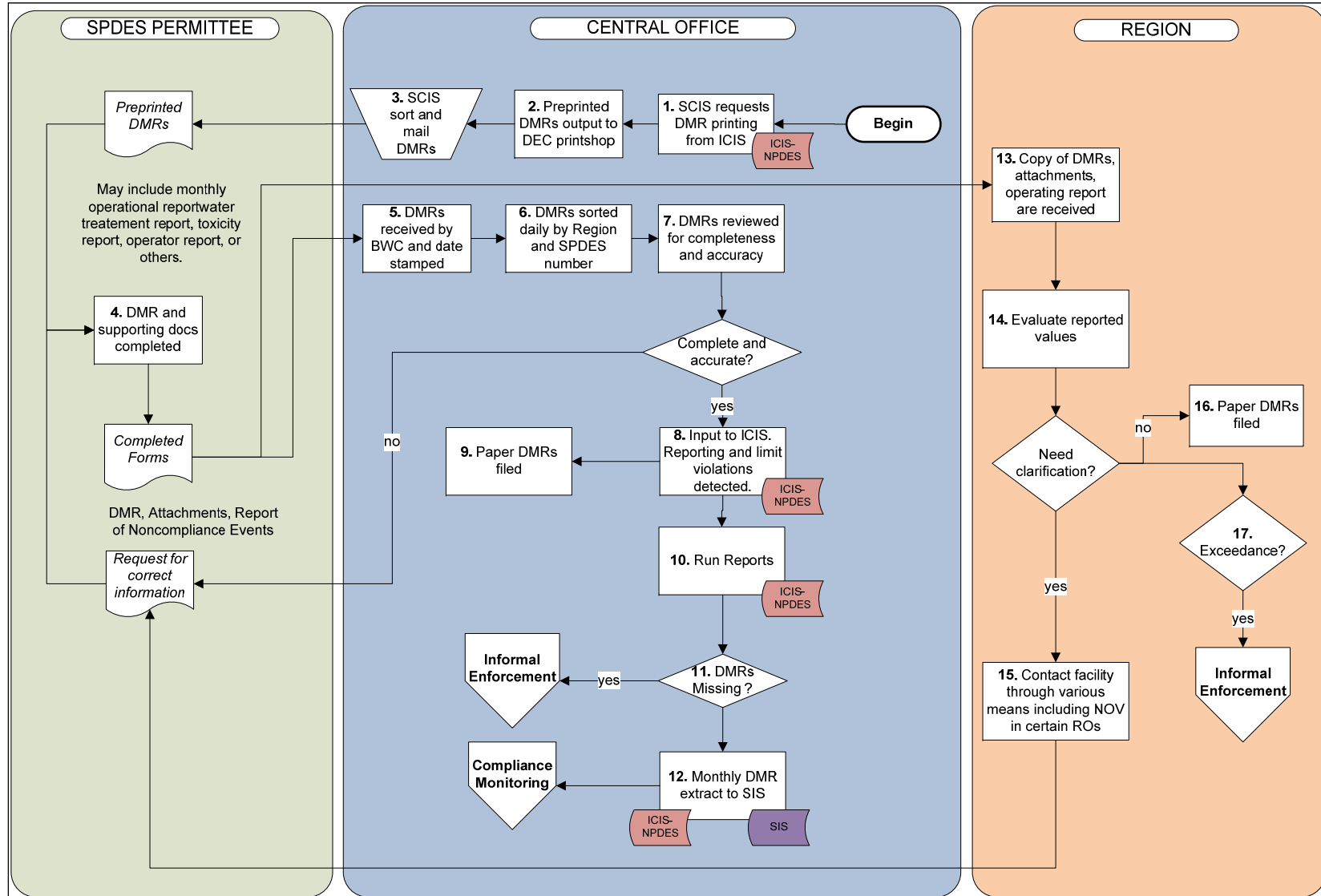


Figure 1: Workflow Diagram – DMR Processing

Each DMR process step is explained in detail in the numbered section below:

DMR Preprint and Facility DMR Preparation

1. When a permit is issued, information about the permit is entered into ICIS-NPDES. The information may include the permitted outfalls, discharge monitoring requirements, reporting frequencies, and specific effluent limits. After the permit information is input, SCIS runs a “DMR Preprint” report from ICIS-NPDES.
2. The preprinted DMRs are output to the DEC printer or stored on a secure portion of the DEC website.
3. SCIS staff sort the DMRs by SPDES number and mail the preprinted forms to the permittees. Some facilities retrieve their DMR from the DEC website using their facility-specific password.
4. When a reporting period ends, the permittee completes the DMR form, listing summarized sampling results for the period. Any required supplemental information is collected and attached to the DMR. Some examples of supplemental information might include lab reports, copies of log books, copies of non-compliance reports, Monthly Operating Reports (MORs), or Whole Effluent Toxicity (WET) reports.

Permittees may use their own DMR reporting forms, but they must be approved by DEC and match the exact layout and content of the DEC-provided forms. The original DMR is sent to the CO, and a copy is sent to the applicable RO.

Central Office DMR Processing

5. SPDES Compliance and Information Section (SCIS) staff receives and date stamps DMRs and attachments.
6. Complete DMRs are sorted into stacks, separated by RO and SPDES permit number.
7. DMRs are reviewed to ensure that all pages are present, all values are reported, and required signatures are present. If information is missing, the facility DMR contact is informed via email, mail or telephone of the deficiency and the correct information is requested. Some attachments are removed from the DMR packet to be reviewed and input into ICIS-NPDES, to fulfill compliance or permit schedules.
8. DMR data is coded into ICIS-NPDES.
9. Paper DMRs are filed at CO.
10. SCIS staff runs reports from ICIS-NPDES, identifying all missing DMRs for the period
11. If DMRs are missing, SCIS creates and issues an NOV for each missing DMR, and mails them to the permittees. No enforcement discretion is applied during this process.

SCIS has noted that many manual steps are required to generate NOVs. These include extracting a list of facilities that are missing DMRs from ICIS-NPDES, preparing extracted data in Excel, and using MS Word to perform a mail merge into the NOV template.

12. On a monthly basis, EPA extracts a flat-file from ICIS-NPDES containing all DMR data for the most recent period. The data is provided to DEC. DEC imports the DMR data into SIS, making a searchable version of DMR data available to staff.

Because of this process, DMR data is not very timely. Usually a month passes after a DMR is received before it is imported into SIS.

Regional Office DMR Processing

13. The RO receives DMRs from each permittee. The RO receives additional information with the copy of the DMR, such as Monthly Operating Reports (MORs), or any requested report of non-compliance.

Some ROs maintain local tracking spreadsheets to track the receipt of DMRs. Some ROs also input DMR data into spreadsheets for analysis.

14. DMRs are routed to the appropriate staff person for review. The manual process by which DMRs are sorted and distributed varies by RO, but most do undertake this effort. In some cases, only DMRs with violations are forwarded to the DOW facility manager.
15. If any clarification is needed, such as a missing, illegible, or improbable value on a DMR, RO staff contacts the facility for clarification. In some ROs, NOVs are immediately issued, in an effort to resolve reporting errors.
16. The paper DMR is filed by the RO.
17. If reported values exceed the effluent limits set forth in the permit, RO staff may issue an enforcement action, such as an NOV. The action taken is based on the enforcement discretion of RO staff.

Appendix C: CAFO Inspection Instructions

DEC inspections of Concentrated Animal Feeding Operations adhere to the following instructions:

1. Prior to the inspection, review all facility information that has been submitted to the Department including: appendix D CAFO annual compliance reports, appendix E incident reports, etc.
2. Request the following information from the facility prior to the inspection:
 - Site maps (or diagrams or aerial photos) of the farm, indicating neighboring surface waters and drainages, buildings, land tracks where manure is applied, where stormwater is routed, etc.
 - List of personnel (names) with descriptions of their responsibilities for various components of the operation (waste management, record-keeping, etc.).
 - A description of the waste handling systems on the farm, this should include a description of the waste storage area (i.e. construction materials, dimensions, types of waste stored, etc.), manure transfer and storage/treatment, handling of milkhouse waste and silage leachate control systems.
3. Provide copies of the Inspection Form and Self Evaluation Checklist to the facility prior to the inspection.
4. Inform facilities that the presence of their CNMP planner is encouraged but not required at the inspection.
5. The New York State Department of Agriculture and Markets or other qualified agency such as the NRCS, the local county Soil and Water Conservation District or Cornell Cooperative Extension should be invited to attend the inspection, when feasible.
6. Biosecurity issues should be addressed prior to commencement of the inspection in accordance with the DEC Biosecurity Guidance for Inspecting Concentrated Animal Feeding Operations and Other Facilities Housing Livestock (Telega & Finnerty).
7. Attach a map, either sketched by the inspector or provided by the permittee, of the entire agricultural operation, showing all structures, waste management areas, fields/pastures, surface waters, wells, drainage areas, and actual or potential discharges. Also provide approximate total acreage.
8. Inform facilities that all records submitted to DEC are subject to FOIL unless found to be confidential business information. Facilities may claim any materials submitted to NYSDEC to be confidential business information, please mark such materials confidential if retention is required, or return to permittee. A final determination on whether such materials qualify as

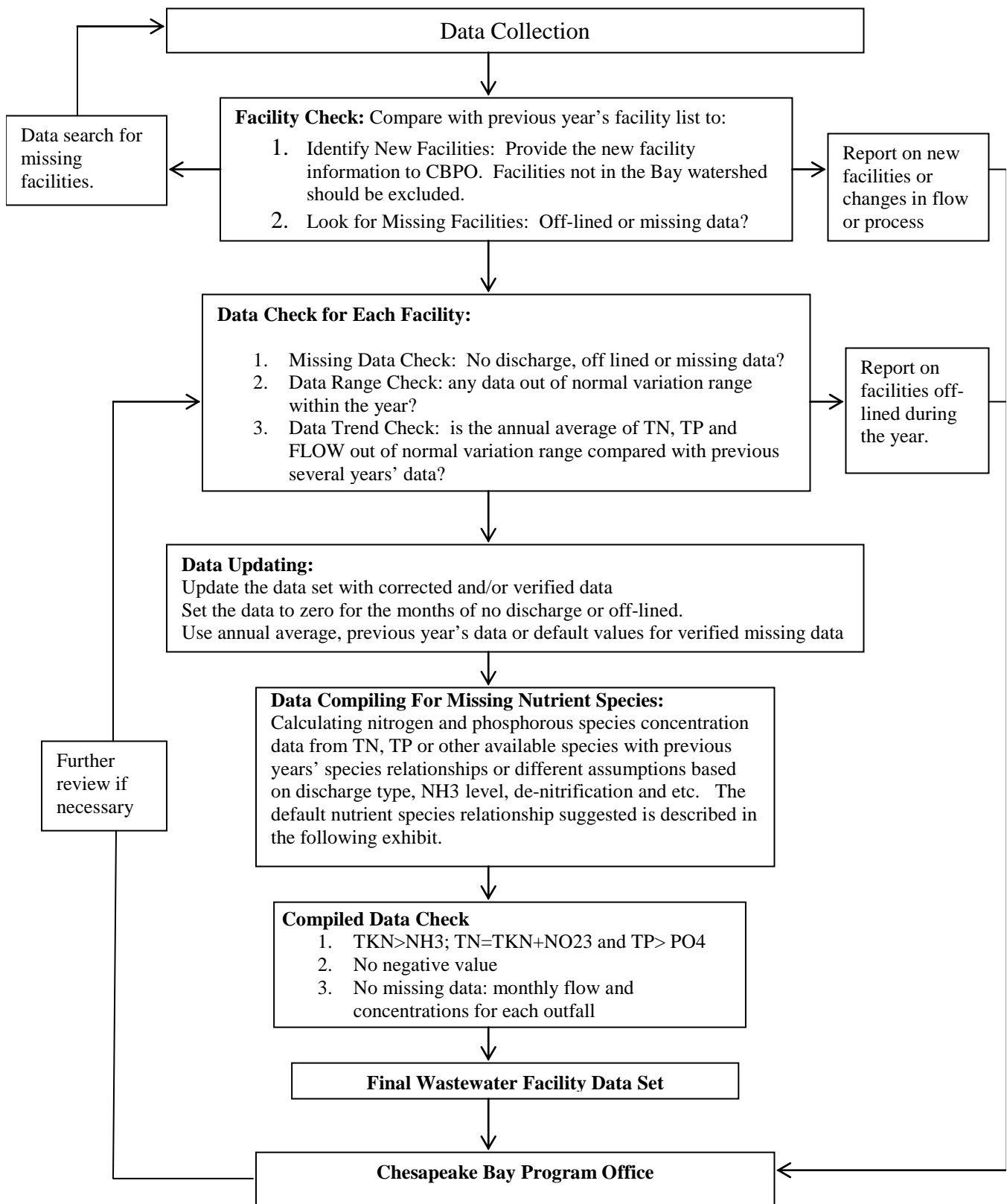
confidential business information will be made at the time an outside party requests such information.

9. Use the following codes for each rating required during the inspection:

- S = Satisfactory
- M = Marginal
- U = Unsatisfactory
- NI = Not Inspected
- NA = Not Applicable

10. Following completion of the inspection, photocopies of the completed forms must be provided by the Inspector to the Permittee.

Appendix D: Wastewater Facility Nutrient Data Processing Flow Diagram





AGRICULTURAL ENVIRONMENTAL MANAGEMENT

Tier 1

AEM Identification Number: _____ - _____

Date: ____ / ____ / ____

Evaluator Name: _____

Evaluating Agency: _____

Watershed Identification (WBD10): _____

Lat _____ .

Farm Name: _____

Lon - ____ .

Owner's Name: _____

Operator's Name: _____

Address: _____

Address: _____

Phone: _____

Phone: _____

Fax: _____

Fax: _____

Email: _____

Email: _____

Preferred Contact Point? (please check only one)

Owner Operator

1) Future Status of the Farm

A) Do you anticipate any major modifications on your farm within the next 5 years? Yes No

If yes, please check the condition(s) that best describes the modification(s):

Business Structure Expansion Retirement
 Operation Type Diversification of Farm Business Sale of Farm

B) Do you plan to subdivide any portion of your farm in the next 5 years? Yes No

2) Basic Farm Information

A) What **Primary** Farm Enterprise best describes your operation?

Dairy Beef Horses Fruit/Vegetables
 Poultry Swine Vineyard Greenhouse
 Sheep/Goats Cash Crop: (**Please Define**) _____
 Other: (**Please Define**) _____

B) Please indicate the following number of acres: **Owned** **Rented** **With Nutrients Applied**

Cropland Acres	_____	_____	
Grazed Land Acres	_____	_____	
Permanent Hay Land Acres	_____	_____	_____
Woodland Acres	_____	_____	
Total Acres	_____	_____	

C) Does your operation qualify for Ag Value Assessment? Yes No

3) Animal Numbers for your Primary Farm Type

Average Weight: _____	Number: _____	Average Weight: _____	Number: _____
Average Weight: _____	Number: _____	Average Weight: _____	Number: _____

4) **Management Questions** (Please check Yes or No)

Yes **No**

Do you spread manure?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a manure storage facility?	<input type="checkbox"/>	<input type="checkbox"/>
Do you generate process washwater from the cleaning of product or facilities? (i.e. milkcenter, egg wash, washing of produce)	<input type="checkbox"/>	<input type="checkbox"/>
Is there a barnyard or outdoor feedlot on your farm?	<input type="checkbox"/>	<input type="checkbox"/>
Do you store silage or other high moisture feeds on the farm?	<input type="checkbox"/>	<input type="checkbox"/>
Do you utilize pastureland on your farm?	<input type="checkbox"/>	<input type="checkbox"/>
Do you use commercial fertilizer?	<input type="checkbox"/>	<input type="checkbox"/>
Do you use pesticides (herbicides, insecticides, fungicides) on your farm?	<input type="checkbox"/>	<input type="checkbox"/>
Do you store and/or mix pesticides (herbicides, insecticides, fungicides) on your farm?	<input type="checkbox"/>	<input type="checkbox"/>
Does your operation utilize cropland for row crop production?	<input type="checkbox"/>	<input type="checkbox"/>
Is the water supply on your farm from a well or a spring?	<input type="checkbox"/>	<input type="checkbox"/>
Is there a waterbody within or adjacent to your farm?	<input type="checkbox"/>	<input type="checkbox"/>
Do you presently or do you plan to harvest timber on your farm?	<input type="checkbox"/>	<input type="checkbox"/>
Do you store fuel or other bulk petroleum products on your farm?	<input type="checkbox"/>	<input type="checkbox"/>
Have you received odor complaints or do you believe your farm has an odor concern?	<input type="checkbox"/>	<input type="checkbox"/>

NYS Agricultural Interest Assessment – check all that are of interest

- | | |
|---|--|
| <input type="checkbox"/> Agricultural Tax Relief | <input type="checkbox"/> Integrated Pest Management |
| <input type="checkbox"/> Agri-Tourism | <input type="checkbox"/> Irrigation Management |
| <input type="checkbox"/> Air Quality | <input type="checkbox"/> Manure Treatment Options |
| <input type="checkbox"/> Biofuels | <input type="checkbox"/> Neighbor-Farm Relations |
| <input type="checkbox"/> Biosecurity | <input type="checkbox"/> Nuisance Wildlife Control |
| <input type="checkbox"/> Conservation Easements | <input type="checkbox"/> Organic Farming |
| <input type="checkbox"/> Energy Conservation/Generation | <input type="checkbox"/> Pollution Credit Trading |
| <input type="checkbox"/> Environmental Management Systems | <input type="checkbox"/> Right To Farm |
| <input type="checkbox"/> Farmland Protection | <input type="checkbox"/> Stream Management |
| <input type="checkbox"/> Feed Management | <input type="checkbox"/> Water Conservation/Management |
| <input type="checkbox"/> Fisheries Habitat Management | <input type="checkbox"/> Wellhead Protection |
| <input type="checkbox"/> Forest Management/Timber Harvest | <input type="checkbox"/> Wetland Conservation |
| <input type="checkbox"/> Grasslands Farming | <input type="checkbox"/> Wildlife Habitat Improvement |

Would you like to receive a copy of the AEM Guide to Conservation Funding? Yes No

This document is also online at www.nys-soilandwater.org/aem/aemoutreach.html

(OPTIONAL)

Producer Questions & Comments:



AGRICULTURAL ENVIRONMENTAL MANAGEMENT

BMPs

AEM Identification Number: _____ - _____

Date: ____ / ____ / ____

Cropland BMPs

Riparian Forest Buffer	Length _____	Width _____	Date _____
Riparian Forest Buffer	Length _____	Width _____	Date _____
Riparian Grass Buffer	Length _____	Width _____	Date _____
Riparian Grass Buffer	Length _____	Width _____	Date _____
Wetland Restoration	_____ Acres	Date _____	
Ag Land Retirement	_____ Acres	Date _____	
Tree Planting	_____ Acres	Date _____	
Comprehensive Nutrient Management Plan	_____ Acres	Date _____	
Manure Sample	N _____ P _____	Date _____	
Hayland with Nutrients Applied	Type _____ Rate _____	_____ Acres	
	Type _____ Rate _____	_____ Acres	
Cereal Cover Crops (Early)	Rye Acres _____	Wheat Acres _____	Barley Acres _____
Cereal Cover Crops (Late)	Rye Acres _____	Wheat Acres _____	Barley Acres _____
Conventional Till land converted to Conservation Till	_____ Acres	Date _____	
Continuous No-Till	_____ Acres	Date _____	

Pasture BMPs

Off Stream Watering with No Fence	_____ Acres	Date _____
Off Stream Watering with Stream Fencing	_____ Acres	Date _____
OSW with Stream Fencing & Prescribed Grazing	_____ Acres	Date _____
-----	_____ Acres	Date _____
-----	_____ Acres	Date _____
Upland Rotational or Prescribed Grazing	_____ Acres	Date _____
-----	_____ Acres	Date _____
-----	_____ Acres	Date _____
Horse Pasture Management	_____ Acres	Date _____

Animal Waste Management

Precision Feeding Dairy - Animal Units Treated	AMUs _____	Date _____
Ammonia Emission Reductions	AMUs _____	Date _____
Animal Waste Management System		
Type _____	AMUs _____	Date _____
Type _____	AMUs _____	Date _____
Type _____	AMUs _____	Date _____
Barnyard Runoff Control System		
Type _____	AMUs _____	Date _____
Type _____	AMUs _____	Date _____
Type _____	AMUs _____	Date _____

Upper Susquehanna Coalition (USC)
Quality Assurance Project Plan
for
New York Work Plan for the Chesapeake Bay Program **2010**

USC Administrative Office:
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USC Watershed Coordinator and Project Manager
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Project Organization: Upper Susquehanna Coalition
Prepared by: James Curatolo, USC Watershed Coordinator and Project Manager

Approved:

By: _____
James Curatolo, Project Manager, USC

By: _____
Rich Batiuk, Associate Director for Science, EPA/ Chesapeake Bay Program

By: _____
Kevin DeBell, EPA/ Chesapeake Bay Program

By: _____
Mary Ellen Ley, QA Coordinator, USGS/Chesapeake Bay Program

Project Description

Two tasks have been selected for Quality Assurance Project Planning. Below is a short description of each task, a description of the data and how the data will be used.

1. GIS Support – The USC relies on a Geographical Information System (GIS) for strategic watershed planning efforts. It uses an ArcView GIS Stream and Wetland Assessment Tool that it developed in partnership with Penn State University. The relevant GIS data collection procedures will be discussed under the two tasks described below rather than separately under this task.

2. Baseline Data Collection– We will collect agricultural information needed for CBP modeling efforts. We will collect information as either point data or as a location within a CBP Version 5 watershed. We will report data by CBP Version 5 Watershed or other polygon as requested by the CBP. All information collected will follow CBP protocols and use the NYS NEIEN node for data submission.

Project Statement of Objectives

Goals:

The goal of the **Baseline Data Collection** efforts is to provide additional data for the CBP so they can better model the nutrient and sediment loading rates and reductions made in NY.

Level of Confidence:

The **Baseline Data** will be from USDA NRCS records and USC on-the-farm-surveys so it will be of comparable quality to the other data in the CBP model. The USC farm surveys are “Tier 1 and Tier 2” surveys developed by the NYS Department of Ag and Markets under the NY Agricultural Environmental Management (AEM) Program. The worksheets can be viewed at <http://www.nys-soilandwater.org>. These worksheets must be completed to obtain NY funds for cost sharing best management practices.

Key Project Staff

Overall Project Management: James Curatolo, USC Watershed Coordinator, jac3@htva.net
Overall QA/QC: and Computer software: Chris Yearick, USC GIS Specialist, cdy3@cornell.edu
Data processing and data verification: Chris Yearick, USC GIS Specialist, cdy3@cornell.edu

Time Line

Baseline Data Collection: ongoing

Data Types

Baseline Data Collection

Attachment 1 includes the USC-modified AEM Tier 1 worksheet and BMP data forms. That sheet summarizes all of the Ag and BMP data categories to be collected. The BMP categories are those used by the CBP and provided by Jeff Sweeney, CBP, to the USC as the correct categories for CBP modeling.

All information will come from USDA NRCS files and farm inventories conducted by the USC. Only data from the NRCS and USC files are acceptable. The original data in the NRCS files was collected to document implementation projects funded under EQIP, CRP and other programs. The USC data was originally collected to develop a database to help with watershed planning efforts. As the data is being collected in a CBP format for the CBP, the relevance to the project is self-evident.

Data Management Scheme

Baseline Data Collection: Data for each farm will be written on the USC-modified AEM Tier 1 worksheet and BMP Assessment form. The descriptors on the top of the page will allow for the data to be tracked back to the original source document (AEM ID). The data from the hard copy will be entered into a MS Access database and delivered to the CBP (Jeff Sweeney) through the NYS NEIEN node. We will do a simple analysis in Access to search for outliers in the database and compared with the appropriate hard copy when found. We will select 50 data sheets and compare the hard copy to the data entered. We will use this test as an estimate of data entry reliability and report the results. All hard copies will be available to the CBP for review if requested. The USC will store data on read only CD's guaranteeing the data cannot be changed or lost due to computer malfunction. Additional data storage, retrieval, data reduction and data entry in the computer model will be handled by and a responsibility of the CBP.

Data Processing and Agency Requirements

Baseline Data Collection: All data processing, compiling and analysis will be handled by the CBP.

Quality Assurance

Baseline Data Collection: We will do a simple analysis in Access to search for outliers in the database and compared with the appropriate hard copy when found. We will select 50 data sheets and compare the hard copy to the data entered. We will use this test as an estimate of data entry reliability and report the results.

Agency Information Resource Management Requirements

All data sets developed for a farm under the **Baseline Data Collection** located using an 10 digit WBD descriptor.

Reconciliation

Baseline Data Collection: Under this project we are providing data in a format defined by the CBP. The CBP, after analysis, will provide information to the USC for review with potential anomalies highlighted. The USC will suggest reasons for anomalies that have arisen in the CBP modeling efforts.