

**SUCCESSFUL INTEGRATION OF ACT 167 STORM WATER PLANNING
AND
MUNICIPAL NPDES PHASE 2 MS4 PERMITTING PROGRAMS**

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INTRODUCTION

Recent federal regulations, as implemented by the Pennsylvania Department of Environmental Protection (DEP), mandate more than 1,000 urbanized area municipalities to obtain permits from DEP to address non-point source pollution from Municipal Separate Storm Sewer Systems (MS4). The new federal regulations have followed after the 1987 Congressional amendment of the Clean Water Act to require a phased implementation of a comprehensive national water pollution control program for addressing storm water discharges. The first phase was implemented on November 16, 1990 and required permits from medium and large MS4s, generally serving populations of 100,000 or more. The second phase of the program, titled “National Pollutant Discharge Elimination System” (NPDES), was published in the Federal Register on December 8, 1999, established a permit program affecting urbanized area municipalities with a population density of at least 1,000 people per square mile. The small MS4s were required to obtain permit coverage by March 10, 2003. The permit mandates implementation of a five-year storm water management program. Municipalities will need to expend significant financial resources in order to comply with the permit conditions. **However, at this time, there is no federal funding available for this program.**

The DEP, as the permitting authority, has identified the Storm Water Management Act (P.L. 864, No. 167, and known as Act 167) as a potential funding program to include reimbursement for eligible costs incurred by MS4s. Under Act 167, counties are required to develop a watershed based storm water management plan that is implemented by affected municipalities. These plans include provisions to protect and maintain water quality. The plans may also include all elements of the permit requirements. However, determining and defining specifics of expenditures and eligible costs for reimbursement is paramount to implementing the program.

By being proactive, the Dauphin County Conservation District (District) has encouraged several Dauphin County municipalities to work cooperatively with the District, DEP, and the District’s Consultant, Herbert, Rowland & Grubic, Inc. (HRG), to develop a program that would be acceptable to DEP and would pave the way for MS4s to receive reimbursement for implementation of their NPDES Phase II storm water programs.

This paper discusses how Dauphin County and several MS4 municipalities tackled the funding issues faced by the municipalities, and how a local partnership could effectively and efficiently carry out the municipal permit obligations.

INITIAL EFFORTS

Reading, deciphering, and attempting to understand the regulations was the first step toward seeing how the County could serve the local municipalities within its jurisdiction. Additionally, it was necessary for understanding the responsibilities required of the County as a MS4. As a consultant to the County, HRG assisted with this process. We attended DEP workshops, held meetings with DEP personnel, and studied the Environmental Protection Agency (EPA) Storm Water Phase II Compliance Guides. Meetings were held with both DEP Central Office staff and Regional staff.

MUNICIPAL OUTREACH

The District and HRG developed questionnaires and distributed them to the MS4s to not only gauge interest in establishing cooperative efforts amongst the municipalities, but to evaluate each municipalities' willingness to engage in comprehensive storm water management planning through Act 167. This was followed by a County-wide meeting, which included all Dauphin County MS4s, wherein open discussion was held regarding the individual responsibilities of each municipality. Additional discussion included areas of the regulations which would enable the MS4s to work cooperatively.

As a consultant to numerous municipalities across the state, HRG began holding seminars across the state from Erie to West Chester, including Dauphin County. The purpose of those seminars was to educate the MS4s of their pending responsibilities under NPDES Phase II and the financial burden associated with these responsibilities.

DEFINING THE COUNTY'S/DISTRICT'S ROLE

By evaluating the input received through the questionnaires and workshops, the District was able to assess their own staff resources combined with those of the cooperating MS4s and the consultants. This enabled the District to prioritize watersheds based on the likely success of ensuring Act 167 funding, which included cooperative effort, future development scenarios, and density of MS4s within each watershed. As a result, three main watersheds were identified: Paxton Creek Watershed; Spring Creek Watershed; and Beaver, Bow, and Manada Creek Watershed. These three watersheds have many common municipalities which had expressed interests in working cooperatively. These municipalities include: the City of Harrisburg, Susquehanna Township, Lower Paxton Township, Swatara Township, West Hanover Township, South Hanover Township, East Hanover Township, Penbrook Borough, and Paxtang Borough.

The District and their consultants then held meetings with each of these municipalities and DEP representatives with a more focused agenda aimed at coordinating efforts among municipalities and sharing ideas about NPDES Phase II compliance via Act 167 planning.

ACT 167 STORM WATER PLANNING/NPDES PHASE II COMPLIANCE

It was evident early that the Act 167 program included components which would satisfy the regulatory requirements of NPDES Phase II.

NPDES Phase II outlines six Minimum Control Measures (MCMs):

- Public Education and Outreach
- Public Participation/Involvement
- Illicit Discharge Detention and Elimination
- Construction Site Storm Water Runoff Control
- Post-Construction Storm Water Management in New Development/Re-Development
- Pollution Prevention/Good Housekeeping

All of the above mentioned control measures must be implemented during the permit term. In order to implement many of these MCMs, municipalities must have an ordinance or other regulatory mechanism in place.

The Pennsylvania Storm Water Management Program provides grant monies to counties to develop storm water management plans for designated watersheds which result in sound engineering standards and criteria being incorporated into local codes and ordinances. The program also provides reimbursements to municipalities for assisting with county preparation of a storm water plan and for implementing ordinances in compliance with the storm water plan.

In consideration of the overlap between the MS4 requirements and the Act 167 program, the municipalities agreed to proceed with the development of an Act 167 Storm Water Management Plan Scope of Study (Phase 1).

PHASE 1 SCOPE OF STUDY

The Phase 1 Scope of Study was developed by a Committee of Watershed stakeholders. These Watershed Plan Advisory Committee (WPAC) members consisted of municipal representatives, County Conservationists, the County Planning Agency, watershed organizations, technical consultants, and other stakeholders. The DEP representative attended meetings to provide necessary guidance.

At the time when the Scopes of Study were being developed, DEP was in the process of developing an NPDES Phase II guidance document for municipalities to use to comply with their MS4 permit requirements. This guidance document is known as the “Storm Water Management Protocol.” This Protocol was an outline of procedures and deadlines to be adhered to by each of the MS4s in order to comply with NPDES Phase II. Absent this Protocol, each MS4 would be responsible for preparing their own individual program designed to satisfy the requirements.

WPAC meetings focused on determining each municipality’s plans for NPDES Phase II compliance (i.e., Protocol or Individual Program), how each of the six MCMs would be addressed, and what would be the costs associated with compliance. It was agreed that all municipalities would take advantage of the Protocol for satisfying the MCMs, and HRG prepared a comprehensive budget form (see Table 1) to be used by all MS4s for requesting funding through the Act 167 program. It was determined by the WPAC

and DEP that each municipality would prepare a budget for their own compliance requirements. For example, some municipalities already had detailed mapping of their storm sewer systems, some had sufficient resources on staff to do Illicit Discharge screening, and others had virtually no available resources or background data and would rely strictly on consultants.

MUNICIPALITY: _____

WATERSHED: _____

Summary Sheet MS4 Cost Estimate

Public Education and Outreach	Staff Salaries	Contractual	Direct Costs	Other*	Total
Plan Development					
Media Dissemination					
Plan Implementation					

MCM Total =

Public Participation and Involvement	Staff Salaries	Contractual	Direct Costs	Other*	Total
Plan Development					
Plan Implementation					

MCM Total =

Illicit Discharge Detection and Elimination	Staff Salaries	Contractual	Direct Costs	Other*	Total
Storm Sewer System Mapping					
Outfall Mapping					
Ordinance Revisions and Enforcements					
Non-Stormwater Discharges Plan (Field Screening)					
Informing the Public					

MCM Total =

Construction Site Stormwater Runoff Control	Staff Salaries	Contractual	Direct Costs	Other*	Total
Ordinance Revisions					
Implement Procedures for Site Plan Review					
Implement Procedures for Consideration of Public Information					
Implement Procedures for Site Inspection & Enforcement					

MCM Total =

Post-Construction Stormwater Management	Staff Salaries	Contractual	Direct Costs	Other*	Total
Implement BMP Strategies					
Ordinance Revisions					

MCM Total =

Pollution Prevention and Good Housekeeping	Staff Salaries	Contractual	Direct Costs	Other*	Total
Plan Development					
Employee Training					

MCM Total =

	Staff Salaries	Contractual	Direct Costs	Other*	Total
SUBTOTAL MCM COST					

Administrative Costs	Staff Salaries	Contractual	Direct Costs	Other*	Total
Administrative					

Admin Total =

	Staff Salaries	Contractual	Direct Costs	Other*	Total
TOTAL COSTS					

*The scope of work for other costs shall be defined on a separate sheet of paper.

Table 1. MS4 – Municipal Cost Estimate Table

Once each municipality had completed its MS4 compliance budget, a comprehensive estimate of costs for preparation of the Act 167 Storm Water Management Plan was prepared in conjunction with the Phase 1 Scope of Study. The final document was compiled and submitted to DEP with a request for funding through Act 167.

CONTINUING EFFORTS

Not all of the MS4s within Dauphin County were able to participate in these efforts due to geographical constraints that would require either the cooperation of other counties or a redesignation of the Act 167 designated watersheds. Therefore, the District is continuing to pursue these options. Additional efforts are being made to coordinate some components of NPDES Phase II (e.g., Public Education and Outreach and Water Quality Ordinances) that could be used throughout the County without the benefit of an Act 167 plan.

In an effort to carry out its mission, the District strives to understand current regulations in order to seek new opportunities to serve the municipalities of Dauphin County in an effective and efficient manner.

REFERENCES

Lathia, P.E., Durla (02/12/98). "Pennsylvania Storm Water Management Program."

United States Environmental Protection Agency (March 2000). "Storm Water Phase II Compliance Assistance Guide."

Commonwealth of Pennsylvania, Department of Environmental Protection, Bureau of Watershed Management (December 2002). "Municipal Separate Storm Sewer System (MS4) Storm Water Management Program Protocol."