

# REGIONAL COOPERATION IN STORMWATER MANAGEMENT

FISCAL YEAR 2009-2010  
A STATUS REPORT



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SENIOR WATER RESOURCES PLANNER

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ASSISTANT GENERAL SERVICES MANAGER  
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REPROGRAPHIC COORDINATOR

**REGIONAL COOPERATION IN STORMWATER MANAGEMENT**

**FISCAL YEAR 2009-2010**

**A STATUS REPORT**

**This report was included in the HRPDC Work Program  
for FY 2010-2011, approved by the Commission at its Executive Committee  
Meeting on June 16, 2010**

**Prepared by the staff of the  
Hampton Roads Planning District Commission  
in cooperation with the  
Regional Stormwater Management Committee**

**September 2010**

## REPORT DOCUMENTATION

**TITLE:**  
**Regional Cooperation in Stormwater  
Management Fiscal Year 2009-2010:  
A Status Report**

**REPORT DATE**  
**September 2010**

**GRANT/SPONSORING AGENCY**  
**LOCAL FUNDS**

**AUTHOR:**  
Julia B. Hillegass

**ORGANIZATION NAME,  
ADDRESS AND TELEPHONE**  
Hampton Roads Planning  
District Commission  
723 Woodlake Drive  
Chesapeake, Virginia 23320  
(757) 420-8300  
<http://www.hrpdc.org>

### ABSTRACT

This document describes cooperative activities related to stormwater management undertaken by Hampton Roads local governments during Fiscal Year 2009-2010. Activities described include the Regional Information Exchange Process, Public Information and Education, Legislative and Regulatory Issues, Cooperative Regional Studies and Related Programs and Projects in which the localities participate. One of a series of Annual Reports, this document is used by the region's twelve localities with stormwater permits to assist them in meeting their permit requirements.

### ACKNOWLEDGMENTS

The Hampton Roads Planning District Commission, in cooperation with the Regional Stormwater Management Committee, prepared this report.

Preparation of this report was included in the HRPDC Unified Planning Work Program for FY 2010-2011, approved by the Commission at its Executive Committee Meeting of June 16, 2010.

The sixteen member local governments through the HRPDC Regional Stormwater Management Program provided funding.

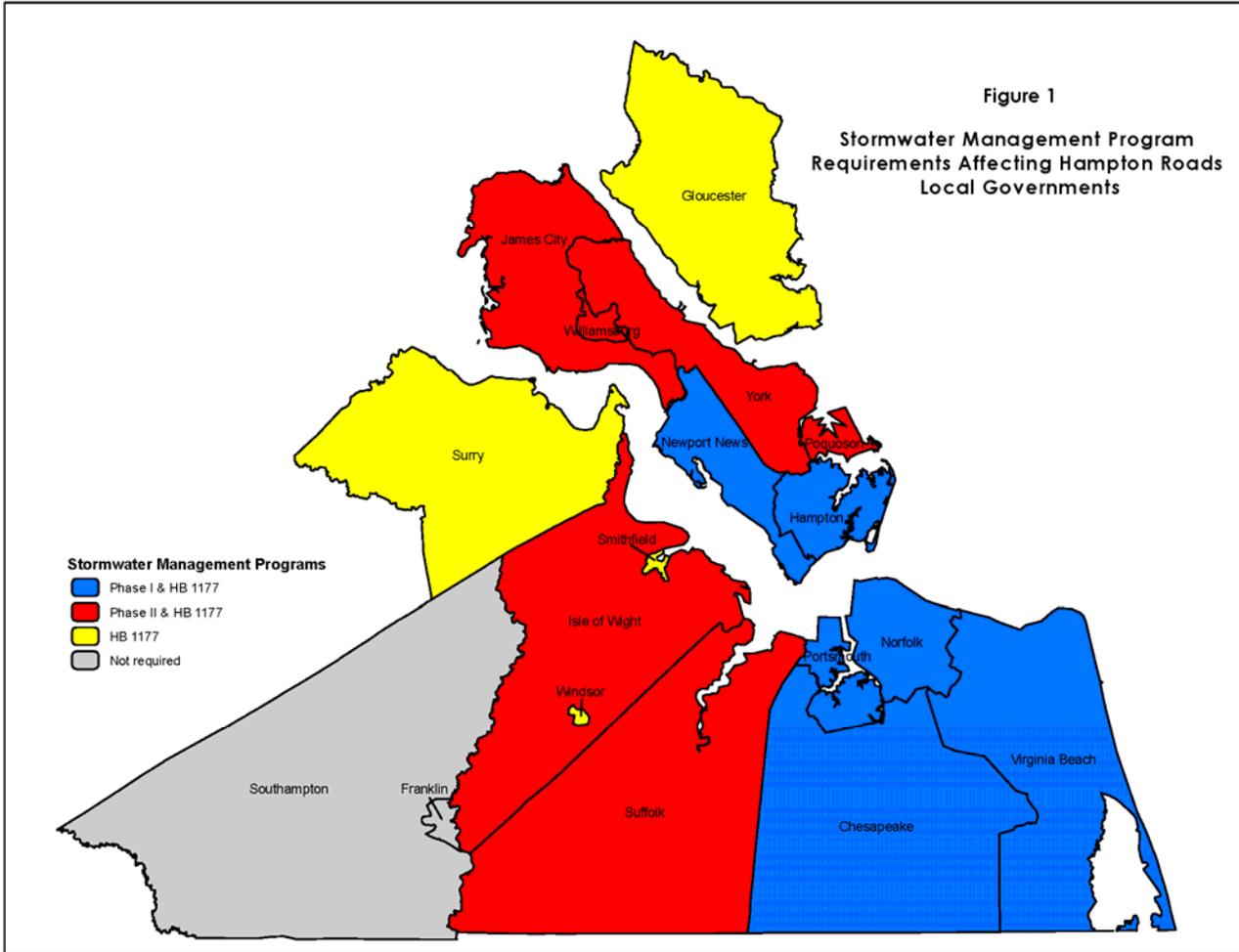
## **INTRODUCTION**

Working through the Hampton Roads Planning District Commission, the region's sixteen member cities and counties cooperated on a variety of stormwater management activities during Fiscal Year 2009-2010. This cooperative effort has been underway as a formal adjunct to the Virginia Pollutant Discharge Elimination System Permits (VPDES) for Municipal Separate Storm Sewer Systems (MS4) held by the Cities of Chesapeake, Hampton, Newport News, Norfolk, Portsmouth and Virginia Beach since Fiscal Year 1995-1996. Cooperative activities documented in this report represent a continuation of an ongoing effort, which has involved concerted activity since 1992.

## **REGIONAL STORMWATER MANAGEMENT PROGRAM GOALS**

The HRPDC and the Regional Stormwater Management Committee undertook a comprehensive effort in FY 1998-1999, called the Regional Loading Study. This effort was completed in September 1999. The project included development by the RSMC of a set of regional stormwater management goals to guide the regional program. The goals were presented to and adopted by the HRPDC at its Executive Committee Meeting in September 1999. They were reaffirmed in the January 2003 approval of the "Memorandum of Agreement (MOA) Establishing the Hampton Roads Regional Stormwater Management Program" and the March 2008 renewal of the MOA. The adopted Regional Stormwater Management Program Goals, which guide the regional program, are:

- Manage stormwater quantity and quality to the maximum extent practicable (MEP).
  - Implement BMPs and retrofit flood control projects to provide water quality benefits.
  - Support site planning and plan review activities.
  - Manage pesticide, herbicide and fertilizer applications.
- Implement public information activities to increase citizen awareness and support for the program.
- Meet the following needs of citizens:
  - Address flooding and drainage problems.
  - Maintain the stormwater infrastructure.
  - Protect waterways.
  - Provide the appropriate funding for the program.
- Implement cost-effective and flexible program components.
- Satisfy VPDES stormwater permit requirements.
  - Enhance erosion and sedimentation control.
  - Manage illicit discharges, spill response, and remediation.



**THE REGIONAL PROGRAM**

The HRPDC Regional Stormwater Management Committee (RSMC) recommended during FY 1995-1996 that a formal regional program be established at the HRPDC, to be funded by the participating member localities for an initial period of up to three years. The program, established in July 1996, initially focused on activities that supported the permit compliance efforts of the six communities with Phase I VPDES Stormwater System Permits, technical assistance to the region's non-permitted communities and regional education and training to support all of the communities. Development and refinement of the regional program is a cooperative venture between the HRPDC staff and the Regional Stormwater Management Committee. The Regional Program is evaluated annually by the RSMC.

## **PHASE I LOCALITIES**

The efforts of the Phase I localities have again this year centered on negotiating new permit conditions, as well as following the development of changes to the Virginia Stormwater Management Regulations. This intensive rule-making process has involved the work of various state-coordinated Technical Advisory Committees (TACs), in which several committee members and HRPDC staff have participated. In addition, a series of meetings between all of the Hampton Roads Phase I permitted localities, DCR and EPA has been the focus of much work of the committee and staff. Key permit issues have been resolved, while others remain under discussion. The anticipated final draft permit was not completed by the end of calendar year 2009 as expected and the state rulemaking process continues.

## **PHASE II LOCALITIES**

In late 1999, the U.S. Environmental Protection Agency promulgated the final Phase II Stormwater Permit Regulations. To facilitate review of the regulations, the HRPDC staff prepared a "Review and Summary of the Regulations." That review summarized regulatory requirements, highlighted differences between the Phase I and Phase II regulations, noted potential issues that needed to be considered by the Phase II localities in determining their response to the regulations and suggested alternative approaches by which the region's localities could meet the new requirements in a collaborative fashion. That report served as the basis for the region's six Phase II localities moving forward in a cooperative fashion to address the Phase II Permit requirements.

The localities that are covered under Phase II of the Permit Program requested that the HRPDC facilitate a joint approach to development of their permit reapplications and stormwater management program plans, where applicable. Through this cooperative effort, the HRPDC developed a regionally consistent stormwater management program in cooperation with the affected localities. Ongoing activities under the Phase II Permits, which were reissued in 2008, are addressing program development and implementation in a cooperative fashion.

## **INFORMATION EXCHANGE**

The cornerstone of the Regional Stormwater Management Committee's activities continues to be the exchange of information. This is accomplished through regular monthly meetings to address topics of regional importance, as well as crosscutting issues that affect local stormwater, planning, public works and public utilities staff. In addition, various agencies and organizations utilize this regional forum to engage and inform local governments, as well as to gather feedback.

### **Monthly Meetings**

The sixteen communities are represented on the HRPDC Regional Stormwater Management Committee, which meets monthly. These monthly meetings provide an opportunity to exchange information about successful stormwater management techniques, program activities, utility structures and policies, and a myriad of related environmental issues. Cooperating agencies such as DCR, VDOT, HRSD and the US Navy regularly participate in these meetings.

The monthly meetings provide a forum for exchange of information and coordination among the permitted communities, while providing educational background and preparation for staff from the non-permitted localities. Several related state programs, including those implementing the Virginia Stormwater Management Act, Erosion and Sediment Control Law, and Chesapeake Bay Preservation Act, as well as the evolving Chesapeake Bay Program water quality studies, including Tributary Strategies and the delisting of the Bay and its Tributaries as "impaired waters," govern all of the localities. Increasingly, the region's localities are affected by and involved in the state's TMDL (Total Maximum Daily Load) Studies and Implementation Plan processes. Issues associated with these programs are also addressed during the monthly meetings.

During FY 2009-2010, representatives of the Regional Stormwater Management Committee participated with representatives of the other HRPDC Environmental Committees, in assisting the HRPDC staff to design its comprehensive work program. The HRPDC work program continues to include a strategic planning initiative, identified previously as a high priority activity by this group. The Committee continued the long-term effort to better integrate the various reporting requirements associated with the state's stormwater management programs and to explore institutional approaches to further enhance the region's environmental planning and management programs.

## **State and Federal Agency Program Briefings**

Representatives of state and federal agencies frequently brief the Committee on developing issues, regulatory guidance and technical programs. During the year, the Committee was briefed regularly by representatives of the Virginia Department of Conservation and Recreation (DCR) on state initiatives related to the Virginia Stormwater Management Regulations, by representatives of the DCR Division of Chesapeake Bay Local Assistance on various aspects of the CBPA Regulations and associated guidance, by the U.S. Navy on their work, by DEQ staff on the TMDL process and by staff from DCR and DEQ concerning the Chesapeake Bay Program TMDL efforts.

The ongoing activities of both the York River Watershed Council and the Lower James River (Hampton Roads) Watershed Roundtable in support of related water quality initiatives were discussed. The Watershed Roundtable approach is Virginia's preferred approach to nonpoint source pollution management. All members of the RSMC participate in the Roundtables, along with representatives from other local government departments, regional and state agencies, Soil and Water Conservation Districts and private organizations.

## **PUBLIC EDUCATION**

### **HR STORM**

To support development and operation of the stormwater education program, a Public Information and Education Subcommittee consisting of local stormwater education/public information staff was established in 1997. The regional stormwater education program is known as HR STORM. The Public Information and Education Subcommittee (HR STORM) was established during FY 1997-1998 and meets on a monthly basis. The HR STORM Program and its accomplishments for the year are summarized in the [HR STORM Program Report for Fiscal Year 2009-2010](#).

Program funding supports, in part, HRPDC staff members, who also coordinate the region's water conservation education program (HR WET), the regional litter control and recycling education program (HR CLEAN), the regional wastewater (fats, oil and grease) educational program (fatfreedrains.com), as well as other regional environmental education, public information and training programs. The HRPDC staff is facilitating a number of cooperative ventures among these programs, which serve to enhance the effectiveness of all of them. These joint ventures have come to be known as HR Green. In FY 2009-2010, an RFP was circulated for consultant services to assist in more effectively integrating the various educational messages. The firm of Cahoon & Cross has been selected and is currently working on an overall Communications Plan. More detail about this effort is provided in the HR STORM Annual Report.

## TRAINING

Since 2004, the HRPDC staff has worked with the six Phase II communities to develop and conduct training programs for local government staff. These programs are designed to assist the localities in meeting the Good Housekeeping Management Measure. Program topics are reviewed and prioritized annually by the Phase II Subcommittee. The HRPDC staff coordinated the logistical and technical aspects of two regional training seminars this year. The first, an Illicit Discharge Detection and Elimination training, was attended by over thirty local government staff members, representing 9 localities within the region. An additional field training on LID practices in the area was coordinated for Phase II localities and was attended by all of the Phase II permittees. Training topics will be reviewed and evaluated periodically. The next training planned will likely deal with municipal parks and open space management, based on the training priorities below, and is tentatively scheduled for Winter 2011.

<b>Topic</b>	Last offered	Previous dates
Fleet Maintenance	Mar 2005	
Landscaping	Mar 2006	
IDDE	Oct 2009	May 2007 Feb 2008
General Pollution Prevention	Feb 2009	Mar 2004
Parks & Open Space Mgt.		
LID Practices	June 2010	

## LEGISLATIVE & REGULATORY MONITORING

This element of the program involves monitoring of state and federal legislative and regulatory activities that may impact local stormwater management programs. Based on this monitoring activity, the HRPDC staff develops briefing materials for use by the localities, including consideration by the governing bodies. As appropriate, the HRPDC staff in cooperation with the Committee develops consensus positions for consideration by the Commission and local governments. The level of effort devoted to this element has increased significantly over the past four years. During FY 2009-2010, the regional emphasis was continued participation in the evolving regulatory stormwater program of the Department of Conservation and Recreation, associated guidance and

pending regulations governing local stormwater management programs, permits for construction activities and permit fees.

The HRPDC staff participated on or monitored a variety of state Technical Advisory Committees (TACs) on behalf of localities impacted by various aspects of the Virginia Stormwater Management Program. Local government staff served on the Stormwater Management Regulations Technical Advisory Committee from June 2008 through September 2008. Staff continued to serve on the state BMP Clearinghouse TAC. This TAC was developed to review protocols for proprietary BMP pollutant removal efficiencies, and is a result of a similar regional effort explored by the HRPDC. The State testing and review protocol are currently in development, with recommendations from the TAC requiring approval by the SWCB.

Staff continued to monitor the Stormwater Regulation revision process through FY 2010. Staff and local governments attended meetings of the Virginia Soil and Water Conservation Board and DCR public hearings during Fall 2009 to provide comment and hear community input into the regulatory process. The HRPDC Commissioners were provided periodic updates on the process, as developments warranted.

## **REGIONAL STUDIES**

### **Extreme BMP Makeover**

HRPDC staff has assisted the Center for Watershed Protection with the Extreme BMP Makeover Project. The project involved a broad partnership among Virginia DCR, five early adopter communities and project partners with coordination and technical support provided by the Center for Watershed Protection.

The project emphasized the measurement and tracking of increased nutrient reduction by local communities at the site level through enhanced design of stormwater BMPs. A large portion of this work was incorporated into the revised Virginia Stormwater Management Program (VSMP) Permit Regulations Parts I, II, and III (4 VAC 50-60). While more accurate nutrient tracking systems were developed as a central element of the project, conservative initial computations suggest the project has significant nutrient reduction potential.

Norfolk, Portsmouth, Hampton, and James City County participated in the stormwater BMP survey component of the Study. Surveys were conducted in the Summer of 2008 and results were released in Spring 2009. In March 2010, HRPDC staff presented the Hampton Roads Regional Stormwater Management Program as an example of a monitoring consortium at the Rooftop to Bay Workshop held as part of this grant.

## **Bacteria Source Tracking**

Preliminary work was developed for a regional bacteria source tracking study. Top researchers will verify tracking protocol for the region to identify whether the bacteria sources are human, wildlife or domesticated animals. This information will enable future efforts to minimize bacteria in area waterways to be more effectively targeted. Dry weather sampling was conducted in Shingle Creek in Suffolk and Moores Creek in York County. Investigation of potential bacteria sources in Mill Dam Creek in Virginia Beach has continued over the last year. Wet weather sampling will occur as appropriate. The results of the Study are expected in the Summer of 2011.

## **Stormwater Program Matrix**

A comprehensive stormwater program matrix, including Phase I and Phase II communities, was developed which addresses both utility and programmatic issues. Staff endeavors to keep this information as up to date as possible.

## **TECHNICAL ASSISTANCE**

The HRPDC continues to serve as a clearinghouse for technical assistance to the localities, as well as a point of contact in arranging short-term assistance from one locality to another. The HRPDC Committee process also provides a forum, allowing state regulatory agency staff to meet with the region's localities to discuss evolving stormwater management and other environmental regulations. Comprehensive technical data and information is maintained in the HRPDC library for use by the participating localities as well as the public. In addition, the HRPDC staff provides technical information and advice to all of the participating localities on a wide variety of issues upon request. This past year, the HRPDC staff drafted a stormwater management program for the Town of Windsor, which adopted the program in January 2010. The HRPDC is also frequently requested by localities from other parts of Virginia and adjacent states for assistance due to its experience with stormwater management programs in Hampton Roads.

## **MEMORANDUM OF AGREEMENT**

The Regional Stormwater Management Program was established in 1996 as a formal program of the Hampton Roads Planning District Commission with support and participation from the sixteen member local governments. Due to increasing dependency upon the HRPDC to fulfill various permit requirements for both Phase I and Phase II localities, the HRPDC staff and RSMC developed a Memorandum of Agreement (MOA), formalizing the existing regional program, while providing a structure for future program evolution and regional cooperation. The MOA outlines the basic regulatory and programmatic premises for the cooperative program, incorporating the Regional Program Goals, outlined earlier in this report. It establishes a division of program responsibilities among the HRPDC and the participating localities and establishes the role and responsibilities of the Regional Stormwater Management

Committee. It formalizes the traditional method of allocating program costs, addresses questions of legal liability for program implementation and includes other general provisions. During this fiscal year, the MOA was reauthorized by the signatories.

## **PERMIT ADMINISTRATION AND REPORTING SYSTEM (PARS)**

In an effort to streamline reporting and capture data more effectively for local governments, the twelve permitted localities have pooled resources to develop the Permit Administration and Reporting System, or PARS. Based on local needs and anticipated Phase I permit requirements, as well as changes in the state stormwater management regulations, the region has contracted with URS Corporation to develop a web-based data tracking and reporting system. The first modules of the system are already being utilized by local governments to catalog development sites and their associated best management practices (BMPs). The system also enables localities to capture inspection information, as well as collecting documentation for future inspections or enforcement actions. In addition, localities can use the site to catalog stormwater outfalls, document illicit discharge investigations and record public education information. Users can then query a variety of reports to satisfy the reporting requirements of their stormwater permits. Future modules will be developed as more details of the state regulations and Phase I permits are finalized. It is anticipated that this system will serve as a model for statewide compliance.

## **RELATED PROGRAMS AND PROJECTS**

In various combinations, the twelve (12) MS4 communities, as well as their non-permitted counterpart communities, in Hampton Roads participate in a wide variety of related programs. These programs are noted here because of their relationship with stormwater management.

### **Chesapeake Bay Program**

Over the past several years, the Hampton Roads Region has devoted considerable attention to the ongoing Chesapeake Bay Program (CBP). To facilitate local government participation in Chesapeake Bay Program activities, HRPDC staff and RSMC members have participated in the deliberations of many CBP Committees and Work Groups dealing with urban stormwater, land development, watershed planning, land use development, modeling and local government's role in the Bay Program.

During the last year, staff has followed the EPA's development of the Chesapeake Bay TMDL by attending regularly scheduled webinars and conference calls of the urban stormwater workgroup. Staff also participated in Virginia's efforts to create its Watershed Implementation Plan for the Chesapeake Bay through attending the Stakeholder Advisory Group meetings and the stormwater workgroup meetings from December 2009 through August 2010.

## **Chesapeake Bay Preservation Act Program**

Fourteen of the sixteen member localities, including the six cities with Phase I MS4 Permits and the six localities with Phase II MS4 Permits, continue to implement programs in response to the Virginia Chesapeake Bay Preservation Act. Stormwater management is one component of those programs. Although the CBPA is not formally part of the multi-state Chesapeake Bay Program, described above, it serves as one element of local government implementation actions to comply with their MS4 Permits and to meet the goals of the Bay Program. Through the HRPDC Chesapeake Bay Committee, which also involves the region's non-permitted communities, staff members responsible for implementation of that program share information on successful program activities. These efforts are closely coordinated with the Regional Stormwater Management Committee. Routinely, the two Committees, meet jointly to address technical and regulatory issues of common concern.

## **Water Supply Planning**

Beginning with the drought of 2002, the Department of Environmental Quality embarked on an intensive effort to develop regulations governing water supply planning and permitting. This effort was directed by legislation enacted by the Virginia General Assembly in 2003. Through the HRPDC Directors of Utilities Committee, the HRPDC and sixteen localities were heavily involved in these efforts. The HRPDC, as recommended by the Committee, adopted a formal position in support of the water supply planning regulations as finally proposed. These Regulations, governing local and regional water supply planning, became effective in late 2005. The region was also heavily involved in the effort beginning in FY 2003-2004 to develop modifications to the Virginia Water Protection Permit Regulations as they apply to water supply projects. Those regulations became final in early 2006.

Beginning in late Fall 2005, the HRPDC Directors of Utilities Committee began discussions on possible approaches to meeting the planning requirements in a cooperative, regional fashion. With a small grant from DEQ, the HRPDC staff and Utilities Committee have developed a framework for accomplishing development of a regional water supply and educational materials on the state planning requirements. Work continues on the regional water supply plan, with anticipated completion by 2011.

## **Water Quality Management Planning**

Under the Clean Water Act, state legislation, water quality management planning regulations and a consent order involving the Commonwealth of Virginia and the federal government, the state is proceeding with development of a substantial number of TMDL (Total Maximum Daily Load) Studies and subsequent development of TMDL Implementation Plans. This work follows from the classification of the waters by the state as meeting or failing to meet water quality standards. Water bodies that fail to meet water quality standards are classified as "impaired," triggering the requirement to prepare the TMDL study. Once a TMDL Study is completed, state law requires the

development of an Implementation Plan, which will restore water quality in the water body to a level that meets water quality standards.

The HRPDC staff has coordinated regional involvement in the “impaired waters” listing process. This has entailed providing opportunities through the Joint Environmental Committee for education of local government staff on the TMDL process, development of technical comments on the “impaired waters” list and response to the development of TMDLs themselves.

The HRPDC staff is currently working with the region’s localities in participating in TMDL studies. To assist the region’s localities in addressing this requirement and ensuring that Implementation Plans are consistent with the ability of the localities to implement the recommendations, the HRPDC staff is working with DEQ to devise a cooperative regional partnership to coordinate the TMDL study process with the localities and to develop the required Implementation Plans. This initiative became increasingly important during FY 2009-2010, as TMDLs will have significant impacts on stormwater permits.

Staff worked with DEQ to facilitate local government involvement in the development of seven TMDL studies throughout Hampton Roads. Implementation Plans for bacterial TMDLs for the Back Bay and North Landing watersheds in Virginia Beach were finalized in August 2009. Draft Implementation Plans for bacterial TMDLs for the Upper Nansemond River Watershed in Suffolk and Mill and Powhatan Creek Watershed in James City County were developed in May 2010.

### **Sanitary Sewer Overflows**

In late 2004, the HRPDC staff began implementing an electronic reporting and record keeping system known as the Sanitary Sewer Overflow Reporting System (SSORS). This system is considered to be a model and HRPDC staff has provided informational briefings and presentations on this system to a variety of agencies across the state. SSORS enables localities to communicate information about sanitary sewer overflows across departmental lines, allowing for easier reporting. SSORS was the basis for the creation of PARS

Work continues under the Regional Special Order by Consent with DEQ, thirteen local governments, HRSD and HRPDC. The Order established the framework for sewer system evaluation, flow monitoring, determination of allowable levels of infiltration/inflow, system modeling, and the appropriate balance between system and treatment capacity and collection systems.

As a part of this effort, the regional fats, oils and grease abatement program (HR FOG) was invigorated. A variety of materials for restaurants and residents has been developed to inform the public of proper FOG disposal methods. This is relevant to the stormwater program because of the potential for illicit discharges into the stormwater system.

## **CONCLUSION**

Through the Hampton Roads Planning District Commission, the sixteen localities of Hampton Roads have established a comprehensive Regional Stormwater Management Program. This program provides technical assistance, coordination, comprehensive technical studies and policy analyses and stormwater education, supporting both permitted and non-permitted localities alike. The Regional Stormwater Management Program enables the region's localities to participate actively and effectively in state and federal regulatory matters. It has enhanced the ability of the twelve localities with VPDES Permits for their Municipal Separate Storm Sewer Systems to comply with permit requirements. Their long history of participating in the Regional Stormwater Management Program, enhanced the efforts by the localities that obtained Phase II MS4 Permits in 2003 to move forward cooperatively with permit applications and program development. In fact, their participation in the regional program over the past decade led to the establishment of the cooperative Phase II Permit component of the regional program.

Since the HRPDC staff also coordinates a number of other regional environmental initiatives, the program allows for effective coordination and regional balancing of the various activities. This characteristic of the regional programs facilitated efforts, beginning in FY 2002-2003, by representatives of the RSMC, Directors of Utilities and Hampton Roads Chesapeake Bay Committees and the regional wastewater and solid waste management agencies to address a number of environmental funding and regulatory issues of common interest. On several occasions over the last several years, the HRPDC formally endorsed recommendations developed through this coordinated initiative on state water quality and technology standards, funding guidelines, implementation strategies, as well as on state legislation addressing funding needs for water quality improvement programs.

The Regional Stormwater Management Program provides a mechanism through which the strengths of the sixteen local stormwater programs can be mutually supportive. It allows for cost-effective compliance with permit requirements, resolution of citizen concerns with stormwater drainage and water quality matters, and achievement of improved environmental quality throughout the Hampton Roads Region.