

# SEMI-ANNUAL REPORT FY 2014

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Hampton Roads Sanitation District  
1434 Air Rail Avenue  
Virginia Beach, VA 23455

April 30, 2014

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### 1. INTRODUCTION AND PURPOSE

On September 26, 2007, the Hampton Roads Sanitation District (HRSD) entered into a Special Order by Consent (SOC) with the Virginia Department of Environmental Quality (DEQ) and thirteen (13) area Localities for the purpose of resolving certain alleged violations of environmental laws and regulations related to Sanitary Sewer Overflows (SSOs). On February 23, 2010, HRSD entered into an Amended Consent Decree (“Consent Decree”) with the United States of America and the Commonwealth of Virginia to address sanitary sewer overflows throughout the Hampton Roads region.

As part of both agreements, HRSD is required to perform, among other things, the following tasks:

- Implement a flow, pressure, and rainfall monitoring program;
- Cooperate with the Localities to develop a Regional Hydraulic Model;
- Prepare a plan for and conduct a condition assessment program;
- Construct specified interim system improvements;
- Develop and implement an SSO Response Plan;
- Coordinate with the Localities to develop a Regional Wet Weather Management Plan;
- Update and implement a Management, Operations and Maintenance (MOM) Program; and
- Prepare and submit a variety of periodic and event-driven reports.

This semi-annual report is submitted pursuant to Section XVII of the Consent Decree. HRSD has prepared this semi-annual report in accordance with the above requirements to apprise the EPA (representing the United States of America) and the DEQ (representing the Commonwealth of Virginia) of steps taken toward meeting the obligations of the Consent Decree. Specifically, this semi-annual report summarizes the work and activities undertaken by HRSD from July 1, 2013, through December 31, 2013, and the planned work for the remainder of FY 2014.

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## 2. MAJOR COMPLIANCE ACHIEVEMENTS

### 2.1 Flow, Pressure, and Rainfall Monitoring Program

#### 2.1.1 Ongoing System Monitoring

Following completion of the 12-month flow, pressure, and rainfall monitoring period on March 11, 2011, HRSD continues to maintain a wide-scale monitoring network. Regular manual data review has been conducted and unreliable data has been flagged in the system. In the first six months of FY 2014, HRSD has re-installed the force main flow meter at Copeland Park Pump Station (PS) [MMPS-011] which had been temporarily measured with a gravity flow meter (GFM-86), removed the flow meter at Kingsmill PS (MMPS-024), removed the flow meter at Center Avenue Discharge at North Avenue (MMPS-020) during construction of the new PS (with a new meter to be installed as part of the construction), and re-installed a gravity flow meter at Orcutt Avenue and 80<sup>th</sup> Street (GFM-63).

A portal to allow access for the Localities to the HRSD flow, pressure, and rainfall data from the FPR sites (Telog server data) was developed and implemented in February 2009 and continues to be used and enhanced.

### 2.2 Condition Assessment Plan

#### 2.2.1 Implementation of the Condition Assessment Plan

##### 2.2.1.1 Condition Assessment Field Activities

HRSD has completed the remaining Condition Assessment Field Activities prior to the completion milestone of October 31, 2013. See Section 4 of this report for details on the Condition Assessment Field Activities.

##### 2.2.1.2 Prompt Repairs

HRSD continues to implement a program to identify and address collection system infrastructure deficiencies found during the course of condition assessment field activities that require prompt attention (as defined in the approved Condition Assessment Plan). Defects are evaluated to determine if they:

- Pose an immediate threat to the environment;
- Pose an imminent threat to the health and safety of the public;
- Create operational problems that may result in SSOs; or
- Contribute to substantial inflow to the system.

If such a defect is identified through the inspection process, it is assessed to determine the appropriate repair necessary. Data received from the condition assessment contractors continues to be reviewed to make that assessment. See Section 4 of this report for details on the Condition Assessment Program Prompt Repair status.

## 2.2.2 Final Condition Assessment Report

HRSD expended significant effort during this reporting period on development of the Final Condition Assessment Report and the Rehabilitation Action Plan. These documents were submitted on February 12, 2014, as an update to the documents submitted in February 2013, per the Consent Decree and schedule in the Preliminary Condition Assessment Report. Comments had been received on June 10, 2013 for the February 2013 submittal. HRSD provided an initial response to these comments on August 8 with the remainder to be addressed in the February 2014 submittal.

## 2.3 Interim System Improvements

Appendix 5 to the Consent Decree lists thirty-three projects that are required to be completed within 8 years of the Date of Entry of the Consent Decree. The modification to the Consent Decree added 18 projects for a total of 51 to the list. HRSD has each of these projects scheduled as part of its Capital Improvement Program with completion prior to February 23, 2018. A number of these projects are underway with several in construction during this fiscal year. As required by Paragraph 32 of the Consent Decree, HRSD will provide a certification by a Professional Engineer that each of these projects was completed satisfactorily and in conformance with the scope as originally provided to the EPA and DEQ. HRSD is on schedule to meet the milestone, and one project, Reference Number 21 (VIP-131: South Trunk Sewer Section C) was completed during this period. The certification form is attached to the end of this report in Appendix A. A complete update for the fiscal year will be provided in the Annual Report.

## 2.4 Management, Operations, and Maintenance (MOM) Program

### 2.4.1 Implementation of MOM Program

HRSD continues to implement its MOM Program. This includes details pertaining to management, operations, and maintenance of nearly all aspects of HRSD's system, including quantitative performance measures, implementation of continuous improvement initiatives, and special programs coordinated in the region such as the HR FOG. HRSD performed an annual performance assessment of its MOM Plan in accordance with Section 5 of the MOM Program following completion of FY 2013.

### 2.4.2 Quantitative Performance Measures

The revised MOM Program, approved on September 27, 2011, included many performance measures to help HRSD understand the performance of program elements. Paragraph 34 of the Consent Decree established a list of six specific measures that are subject to stipulated penalties, including: gravity sewer main inspection, air release valve preventative maintenance, gravity sewer cleaning, pumping station annual preventative maintenance, back-up generator annual preventative maintenance, and non-invasive force main inspection near drinking water supply reservoirs. Work has continued to implement and track these performance measures and the results will be presented in the FY 2014 Annual Report. HRSD is on track to meet all the performance measures identified in Paragraph 34 of the Consent Decree.

## 2.5 Regional Wet Weather Management Plan

A modification to the Consent Decree was completed in 2013 that extended the completion date of the RWWMP from the current date of July 31, 2014, to either October 1, 2015, or October 1, 2016, depending on the result of the Regionalization Study and following decision of HRSD and the localities. See Section 7 of this report for a full description of the status of regionalization. The final Regionalization Study was submitted to the EPA and DEQ on August 26, 2013.



HRSD has continued in the first half of FY2014 to prepare for the RWWMP through updates to the Regional Hydraulic Model and refinement of an approach to hydrologic and hydraulic modeling of the various peak flow recurrence events. This information was presented to the EPA/DEQ in early 2014.

The EPA and DEQ provided comments on the Preliminary Capacity Assessment Report on July 18, 2013, and HRSD responded on August 14, 2013.

## 2.6 SSO Emergency Response Plan

On December 10, 2013, HRSD submitted an annual update of the approved Sanitary Sewer Overflow (SSO) Response Plan to the EPA and DEQ. This plan continues to be implemented by HRSD. A copy of the most recently approved plan is posted to the [www.HRSD.com](http://www.HRSD.com) website.

## 2.7 Coordination with Localities

There was a wide variety of coordination activities in the first half of FY 2014 amongst the regional parties to the SOC. These activities included:

- Model Users Group (MUG) meetings were held to coordinate data exchanges between HRSD and the localities;
- Briefings of the Directors' of Utilities Committee to share progress on compliance with the SOC and Consent Decree;
- A regional SharePoint website continues to be updated to collaborate with and provide documents to the regional Locality Team and Capacity Team; and
- Copies of the Annual Report were provided from HRSD to the Localities.

## 2.8 Public Participation

HRSD will conduct a second annual information meeting and publish a newsletter by February 23, 2014, the anniversary of the Date of Entry. Information and approved plans continue to be posted to HRSD's website, which is accessible to the public.

## 2.9 Post-RWWMP Implementation Monitoring and Performance Assessment

No action has been performed for this item as it is a later requirement of the Consent Decree.

## 2.10 Reporting

### 2.10.1 Annual Report

HRSD completed an FY 2013 Annual Report as required by both the SOC and Consent Decree, and submitted it to the EPA and DEQ on October 31, 2013.

### 2.10.2 Semi-Annual Report

HRSD received a second comment letter from the EPA/DEQ on the FY 2013 Semi-Annual Report on July 16, 2013. No response was required.

### 2.10.3 Quarterly Briefing

A quarterly briefing was held per Paragraph 90 of the Consent Decree, on July 23, 2013, with attendance by HRSD, the EPA, and the DEQ. A written summary of the briefing was issued on August 20, 2013. To supplement the Quarterly Briefings, HRSD has facilitated periodic Technical Calls/Workshops with the EPA and DEQ during the first half of FY 2014 to provide additional technical details on the work being conducted as part of the Consent Decree program.

### 2.11 Summary of Submittals

Table 1 summarizes the status of the documentation that HRSD has submitted to the EPA and DEQ under the Consent Decree in the first half of FY 2014.

Consent Decree Submittal	Submittal Date
Quarterly Briefing	July 23, 2013
Regionalization Study	August 26, 2013
Annual Report	October 31, 2013
Annual Update to SSO Response Plan	December 10, 2013

### 3. COMPLIANCE DEADLINES AND MILESTONES

In the first half of FY 2014, HRSD expended considerable resources in both time and money to achieve the compliance goals of the Consent Decree. All deliverables were submitted on or before their due dates and all milestones were met, including those with short timeframes for response.

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### 4. CONDITION ASSESSMENT ACTIVITIES

HRSD has continued with its Condition Assessment Program in FY 2014 with significant progress made in many aspects of the program. The following subsections describe the progress made in each aspect.

#### 4.1 Gravity Main

All gravity sewer main inspections were completed by the November 2011 milestone.

#### 4.2 Force Main

All force main inspections were completed by the October 2013 milestone. Details of this work are provided in the Final Condition Assessment Report submitted in February 2014.

#### 4.3 Pumping Facilities

All pump station inspection work was completed by the November 26, 2011 schedule deadline.

#### 4.4 Prompt Repairs

Through the Condition Assessment Program, HRSD has identified 50 defects in the HRSD sanitary sewer system (primarily gravity sewer pipe and manholes) which have been deemed to be Prompt Repairs. These defects have been grouped into larger repair work orders and are currently in various stages of planning, design, or construction. The following Table 2 provides details on all known Prompt Repairs as of December 31, 2013.

Table 2. Summary of Prompt Repairs					
Name	Location	Jurisdiction	Line Number	Summary of defect	Status
41st Street	41st Street east of intersection with Jefferson Ave; between MHs NG-112-12175 and NG-112-11783	Hampton	NG-112	Pipe lining failure	Complete
Beach Road	West side of Beach Road opposite intersection with Wade Road between MH NG-088-0 and NG-088-155.	Hampton	NG-088	Pipe connection at manhole needs repair	Complete
Beach Road	West side of Beach Rd. between intersection with Bonneville Dr. and Catalina Drive between MH NG-088-1654 and NG-088-1863	Hampton	NG-088	Lateral connection to mainline needs repair	Complete
	Approximately in front of 112 Beach Rd between MH NG-088-0636 and NG-088-0970	Hampton	NG-088	Mainline pipe defects	
	Beach Rd. approximately 170 ft. south of Wade Rd. intersection	Hampton	NG-088	Manhole defects	

Table 2. Summary of Prompt Repairs

Name	Location	Jurisdiction	Line Number	Summary of defect	Status
	West side of Beach Road opposite intersection with Hall Road. Between MHs NG-088-1260 and NG-088-1316	Hampton	NG-088	Mainline punctured by another utility directional drilling	
Various Manholes	North King St.	Hampton	NG-078	Manhole defects	Complete
	E. Pembroke Ave. at Washington St.	Hampton	NG-084	Manhole defects	
	Bainbridge Blvd. between Beech St. and Wilton St.	Norfolk	SG-153	Manhole defects	
Jefferson Ave	Jefferson Ave. between 40th Street and 41st Street	Newport News	NG-114	Mainline pipe defects	Complete
	Jefferson Ave between 39th and 40th Street	Newport News	NG-114	Mainline pipe defects	
Newtown Road	Newtown Rd. at Virginia Beach Blvd (ne corner of intersection)	Virginia Beach	SG-112	Manhole defects and mainline pipe defects	Complete
	Newtown Rd. approx. 415 ft. north of Princess Anne Rd.	Virginia Beach	SG-113	Manhole defects	
	Newtown Rd. at Elam Ave.	Virginia Beach	SG-113	Manhole defects	
Mercury Blvd	West Mercury Blvd	Hampton	NG-099	Mainline pipe defects	Engineering Work Underway
	West Mercury Blvd	Hampton	NG-057	Mainline pipe defects	
	West Mercury Blvd; near Beechwood Rd.	Hampton	NG-057	Mainline pipe defects	
Various Repairs	North Hope Street	Hampton	NG-160	Pipe lining failure	Complete
	Old Atlantic Avenue; near intersection with Liberty Street	Chesapeake	SG-148	Pipe lining failure	
	South of Steamboat Creek Pump Station	Norfolk	SG-102	Manhole defects	
Witchduck	South Witchduck Road	Virginia Beach	SF-141	Corroded FM bolts	Complete
Pin Oak Rd	Pin Oak Road; Residential neighborhood	Newport News	NG-175	Mainline Pipe Defects	Complete
Bainbridge Blvd	Bainbridge Blvd near I-464	Norfolk	SG-145	Mainline Pipe Defects	Complete
	Bainbridge Blvd near I-464 just upstream of PS	Norfolk	SG-145	Mainline Pipe Defects	
Shell Rd - Hampton	Shell Road	Hampton	NG-141	Mainline Pipe Defects	Complete
	Harris Creek Road	Hampton	NG-086	Mainline Pipe Defects	
Pearl Street	Pearl Street near Ligon Street near I-464/I-262 Interchange	Norfolk	SG-202	Mainline Pipe Defects	Complete
	Pearl Street near Ligon Street near I-464/I-262 Interchange	Norfolk	SG-202	Mainline Pipe Defects	
Deep Creek	Deep Creek force main on suction side of Deep Creek PRS	Chesapeake	SF-143	FM defects	Complete

Table 2. Summary of Prompt Repairs

Name	Location	Jurisdiction	Line Number	Summary of defect	Status
Wythe Lagoon	Wythe Lagoon Siphon	Hampton	NG-151	Siphon defects	Complete
Pump Station Hatches	Ingleside Road Pump Station	Norfolk	PS#148	Wet Well Hatch	Complete
Pump Station Wet Wells	Rodman Ave Pump Station Wet Well	Portsmouth	PS#145	Wet Well Defects	To be completed under existing CIP
Luxemburg Ave	Influent line to Luxemburg Avenue pump station.	Norfolk	SPS-113	Defect at manhole connection	Complete
Gowrie and Farragut	Manhole near creek at end of Gowrie Avenue	Norfolk	SG-068	Manhole defects	Complete
	Manhole near creek at end of Farragut Avenue	Norfolk	SG-068	Manhole defects	
Shipyard Sewer	Outside of 33 <sup>rd</sup> street Pump Station	Newport News	33 <sup>rd</sup> Street	Mainline pipe defects	Work order in development
	31 <sup>st</sup> Street	Newport News	31 <sup>st</sup> Street	Mainline pipe defects	
	38 <sup>th</sup> Street	Newport News	38 <sup>th</sup> Street	Mainline pipe defects	
Chesterfield Blvd	Gravity influent to Chesterfield PS	Norfolk	SG-207	Mainline pipe defects	Complete
	Gravity influent to Chesterfield PS	Norfolk	SG-207	Mainline pipe defects	
State Street FM	Force main at State St Pump Station	Norfolk	SF-097	Thin wall	Complete
Berkley Avenue	Manholes on Berkley Avenue	Norfolk	SG-098	Manhole defects	Under Construction
	Manholes on Berkley Avenue	Norfolk	SG-098	Manhole defects	
Newmarket Creek	Orcutt Avenue and Paul street at influent to Newmarket Creek PS	Newport News	NG-127	Manhole Defects	Engineering Work Underway
	Orcutt Avenue and Paul street at influent to Newmarket Creek PS	Newport News	NG-127	Pipeline defects	
Laskin Road	Laskin Road Force Main	Virginia Beach	SF-135	Hit by third party	Complete
Elizabeth River	East side of Elizabeth River Crossing	Chesapeake	SF-143	Thin wall	Complete
14 <sup>th</sup> Street	Manhole at Jefferson Ave and 14 <sup>th</sup> street	Newport News	NG-130X	Manhole Defects	To be completed with CIP
Army Base	Baker Street and Hampton Blvd	Norfolk	SF-003	Pipeline defect	Under Construction

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## 5. SYSTEM PERFORMANCE

### 5.1 STP Performance

The HRSD system was influenced by wet weather events in the first half of FY 2014 that led to flow increases at the treatment facilities. In addition, construction related to the nutrient control program was ongoing at several of the treatment plants with minor operational events that contributed to unusual discharges from the facilities. Table 3 provides details on the unusual discharges from July 1 to December 31, 2013. Both of these occurrences were fully treated effluent.

### 5.2 Conveyance System Performance

For the reporting period of July 1 through December 31, 2013, HRSD experienced no (0) capacity-related sanitary sewer overflows (SSOs) from its system. Several wet weather events occurred during this period with two in excess of 4 inches of rainfall, namely the July 21 event and from October 9 through 11; however, neither led to an SSO from the HRSD system.

### 5.3 LOP Status

As listed in Appendix 1 of the Consent Decree, seventeen (17) Locality Overflow Points (LOPs) have been identified in the Regional Sanitary Sewer System. Prior to the Preliminary Capacity Assessment Report, HRSD and the specific Locality coordinate any time an LOP activates to review the cause and circumstance of the SSO.

In this reporting period, HRSD has coordinated with the applicable Locality regarding the activation from their LOP, which is described in more detail below.

#### 5.3.1 City of Suffolk: LOP No. 53

The City of Suffolk experienced an SSO from their LOP No. 53 at City PS 48 (East Constance Road) during this reporting period on October 11, 2013. This LOP activated with an average of 4.47 inches of rain being recorded at the City's rainfall gauge network during a 72-hour period, estimated to be between a 1 and 2-year rainfall recurrence for the 72-hour period. The wet weather event produced conditions that exceeded the capabilities of the City PS 107. The City has implemented an SSES Program as well as a Find and Fix Program to reduce I/I in the collection system. Wastewater facilities in this area are being evaluated as part of the RWWMP to identify possible capacity improvements.

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Table 3. Detailed Listing of HRSD Treatment Plant Unusual Discharges (July 1 to December 31, 2013)

Date	Location	Description/Cause	Duration of Event (minutes)	Corrective Action	Estimated Quantity Discharged (gallons)	Estimated Quantity to State Waters (gallons)	Type of Overflow	Receiving Water	Comments
7/29/2013	Army Base	Contractor hit a 6-inch NPW line during excavation. The line had been valved off but the valve was not fully seated and the pipe leaked at an estimated rate of 3 gpm. The contractor pumped the flow out of the excavation and onto the ground where it flowed to the storm drain.	990	Plant staff stopped pumping operation as soon as they became aware of it. A cap was installed on the line to contain the flow until the valve could be repaired. Contractor was reminded to utilize the plant drain system to contain spills.	2,970	2,970	NPW*	Elizabeth River	
12/1/2013	York River	Drain manhole across from water reuse building overflowed. The drain line downstream of the manhole was clogged. This caused spent scrubber water from the odor control system to back up and overflow the manhole. Spent scrubber water is NPW with less than 1% sodium hydroxide by volume.	20	Plant staff shut off flow to the clogged drain system. The clog was cleared and the entire drain line was cleaned before it was returned to service.	920	920	NPW*	Back Creek	

\*NPW – Non-potable water (treated effluent)

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### 6. PLANNED ACTIVITIES

HRSD will be continuing the overall program outlined in the Consent Decree in the remainder of FY 2014. The following sub-sections provide specifics on this work.

#### 6.1 Flow, Pressure, and Rainfall Monitoring Program

##### 6.1.1 LOP Status

In the remainder of FY 2013, HRSD will continue to coordinate with Localities following activation of an LOP in the Localities system. This will include coordinating with the Locality to review the occurrence, assist with evaluation of the problem, and, if practicable, help the Locality with interim or final solutions to mitigate the LOP. This information will be documented in the upcoming Annual Report.

#### 6.2 Regional Hydraulic Model and Hydraulic Assessment

Periodic meetings of the Model Users Group, facilitated by HRSD and attended by the Localities will continue to be held as needed.

#### 6.3 Condition Assessment Plan

##### 6.3.1 Implementation of the Condition Assessment Plan

###### 6.3.1.1 Prompt Repairs

As the Condition Assessment Field Activities are performed, HRSD will continue to review the data for issues that meet the criteria set forth in the CAP for Prompt Repair. Once a defect is identified as requiring Prompt Repair, HRSD will implement an action plan to make the improvements necessary.

##### 6.3.2 Final Condition Assessment Report

The Final Condition Assessment Report was submitted in February 2014 documenting the completed work in HRSD's Condition Assessment Field Activities as well as the Rehabilitation Action Plan to address the issues identified.

#### 6.4 Interim System Improvements

HRSD will continue to design and construct the projects listed in Appendix 5 of the Consent Decree that are required to be completed within 8 years of the Date of Entry. The Verification of Completion will be included in upcoming Annual Reports as the projects are completed.

#### 6.5 Management, Operations, and Maintenance Program

##### 6.5.1 Implementation of MOM Program

HRSD will continue to implement its MOM Program.

## 6.5.2 Quantitative Performance Measures

In the second half of FY 2014, HRSD will continue tracking the performance measures to determine how HRSD is implementing the program. This will include the list of six measures that are subject to stipulated penalties per Paragraph 34 of the Consent Decree. Progress on these measures will be documented in the FY 2014 Annual Report.

## 6.6 Regional Wet Weather Management Plan

HRSD is actively working on the RWWMP with consideration for Regionalization as described in Section 7 of this report.

## 6.7 SSO Emergency Response Plan

HRSD will continue to implement the approved SSO Response Plan.

## 6.8 Coordination with Localities

HRSD will continue to actively participate and facilitate a wide variety of coordination activities in FY 2014 amongst the regional parties to the SOC. These activities included:

- Meetings of the Capacity Team and Locality Team, as needed, to discuss SOC issues, develop Regional Technical Standards Interpretations, and provide guidance to the region on RTS and Consent Decree issues;
- Meetings of the Model Users Group to discuss issues related to modeling;
- Periodic briefings of the Directors' of Utilities Committee to share progress on compliance with the Consent Decree and SOC; and
- Maintain a regional SharePoint website to collaborate with and provide documents to the regional Locality Team and Capacity Team.

## 6.9 Public Participation

HRSD will have an annual information meeting and publish a newsletter by the second anniversary of the Date of Entry, February 23, 2014. Information and approved plans continue to be posted to HRSD's website which is accessible to the public.

## 7. FORESEEABLE ISSUES RELATED TO UPCOMING COMPLIANCE DEADLINES AND MILESTONES

### 7.1 Regionalization Study and Schedule Revision

During FY 2014, the deliverable schedule for the Consent Decree continues to be impacted by the Regionalization Study to analyze the impact of merging the wastewater utilities across the Hampton Roads into a single entity. In general, the study (implemented by the HRPDC with an outside consultant) had a 12-month evaluation period (ending in August 2013), followed by 6 months for Localities and HRSD to decide on how to proceed (February 2014). HRSD and the Localities requested that the EPA and DEQ provide schedule relief from the SOC and Consent Decree so that the study could be performed. This would extend the submittal dates for the Localities' Rehabilitation Plans and the RWWMP. Because the SOC amendment tied the Rehabilitation Plans and the RWWMP submission to the Consent Decree schedule, the DEQ has stated that no further modification to the SOC is required.

In a letter dated July 31, 2012, the EPA proposed that the extension explicitly provided for in the Consent Decree (without court action or public comment) be used initially to extend the RWWMP deadline to July 31, 2014, while the remaining Consent Decree modifications can be negotiated. This stipulation to the Consent Decree was approved January 24, 2013. Additionally, a Consent Decree amendment which includes the full schedule relief for the Regionalization Study has been approved following a lodging date of April 2013. This extends the RWWMP deadline to a variable deadline depending on the results of the Study and subsequent decision by the localities and HRSD.

As part of the Regionalization Study, HRSD has performed a Comparative Analysis which identifies the impact of regionalization on the costs of rehabilitation and wet weather management plan improvements. For the non-regionalized scenario, the Localities provided preliminary peak flow estimates (PPFEs) on November 26, 2012, based on their draft Rehabilitation Plans, and these flows are being incorporated into the Comparative Analysis. This work was completed in July 2013, and incorporated into the Regionalization Study which was submitted to the EPA and DEQ in August 2013.

Although the Regionalization Study recommended that regionalization was the preferred choice, in the months following August 2013, the localities chose not to pursue full system regionalization (i.e., asset transfer) and instead the concept of a hybrid regionalization approach was developed. This approach where HRSD would fund and implement the full RWWMP as well as rehabilitation in locality systems to reduce infiltration/inflow was presented to the EPA and DEQ in October 2013. A Memorandum of Agreement was developed between HRSD and the localities supporting this concept and it has been approved by the governing bodies of all parties to the plan in February 2014. Negotiations are underway to modify the Consent Decree to accommodate the hybrid approach to regionalization.

Negotiating a modification to the Consent Decree for completing the RWWMP using the hybrid approach is a significant issue that affects the schedule and overall compliance.

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8. SIGNIFICANT ISSUES THAT REQUIRE A CHANGE IN THE  
CONSENT DECREE REQUIREMENTS

No issues to document in this Semi Annual Report other than the ongoing Consent Decree modification to accommodate the hybrid regionalization approach.

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## APPENDIX A. INTERIM SYSTEM IMPROVEMENTS

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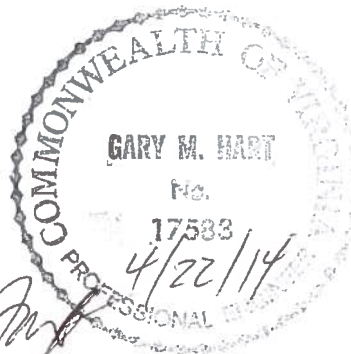
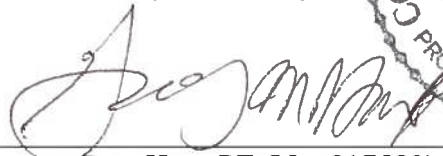
Interim System Improvements  
Verification of Completion

As required by Section IX of the Amended Consent Decree dated February 23, 2010, a set of Interim System Improvements have been identified that must be completed within 8 years of the Date of Entry. Paragraph 32 of that section requires a written certification of completion of each project or group of projects. For capital projects in excess of \$1,000,000, Paragraph 87a of the Consent Decree requires that verification be made by a Professional Engineer that the project was completed satisfactorily.

Between the period of July 1, 2013 through December 31, 2013, the following projects have been completed satisfactorily and consistent with the scope provided to the EPA and DEQ in the Consent Decree:

<u>Ref No.</u>	<u>CIP No.</u>	<u>Project Name</u>	<u>Project Cost</u>	<u>Completion Date</u>
21	VIP-131	South Trunk Sewer Section C 42-Inch Force Main Replacement	\$13,179,277	September 2, 2013

Hereby verified by



Gary Hart, PE (No. 017583)  
Chief of Design and Construction, South Shore  
Hampton Roads Sanitation District