

ANNUAL REPORT FY 2014



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

October 31, 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 for the purpose of fulfilling the objectives of the Clean Water Act and the Virginia State Water Control Law. This Consent Decree has been twice modified by agreement of all parties in 2011 and 2013, with a third modification being negotiated as of the end of FY2014.

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 annual report is submitted pursuant to Section XVII of the Consent Decree and Item 7 of Appendix A to the SOC. HRSD has prepared this 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 and the SOC. Specifically, this annual report summarizes the work and activities undertaken by HRSD from July 1, 2013, through June 30, 2014, and the resulting benefits to the sanitary sewer system. While there are a few requirements unique to the Consent Decree and SOC (e.g., a Short Term Wet Weather Operational Plan is required in the Consent Decree but not the SOC) that are not expressly mentioned in the other document, in the interest of efficiency, a single report has been prepared herein that satisfies the information called for in both documents.

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2. ACTIVITIES UNDERTAKEN PREVIOUS FISCAL YEAR

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 to verify data reliability. In FY 2014, HRSD has temporarily replaced a force main flow meter at Copeland Park Pump Station (PS) [MMPS-011] with a gravity flow meter, re-installed a gravity flow meter (GFM-63) at Orcutt Ave and 80th Street, re-installed a force main flow meter (MMPS-039) at Bancker Road, and removed flow meters from Kingsmill PS (MMPS-024), Center Avenue at North (MMPS-020), Monroe Place (MMPS-150), and Rodman Avenue (MMPS-167). In addition, the pressure meter at Center Avenue Discharge at North Ave (MMPS-020) was temporarily removed due to construction in the area.

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 and Action Plan

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 addressed in the February 2014 submittal. HRSD received a conditional approval letter on June 11, 2014, for the plan pending a few minor clarifications.

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 in FY 2013 has added eighteen (18) new projects for a total of fifty-one (51). Modification No. 3 which was entered by the court in August 2014 added two (2) projects and removed eight (8), leaving a total of forty-five (45) Interim System Improvement projects. HRSD has each of these projects scheduled as part of its Capital Improvement Program with completion prior to February 23, 2018, with the exception of the recent additions which have a December 2018 deadline. 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 milestones, and one project, Reference Number 21 (VIP-131: South Trunk Sewer Section C) was completed during this period. The certification form was submitted in the FY14 Semi Annual Report.

2.4 Management, Operations, and Maintenance 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 conveyance 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 2014.

2.4.1.1 HR FOG

HR FOG is a regional effort aimed at fats, oils, and grease (FOG) in the sewer system and is coordinated by the Hampton Roads Planning District Commission that includes participation from HRSD and the Localities. In FY 2014, HRSD has continued to support the Localities as they implement FOG reduction efforts. HRSD has also supported the region through various training workshops and an education effort to make food service establishments (FSEs) aware of the requirements.

2.4.2 Quantitative Performance Measures

The revised MOM Program, approved on September 27, 2011, included many performance measures that HRSD uses to evaluate its progress. Paragraph 34 of the Consent Decree established a list of six 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. Targets for all these six measures explicit in the Consent Decree were achieved in FY 2014. The details of HRSD's performance are provided in Section 5 of this report.

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 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. The Regionalization Study was completed and submitted to the EPA and DEQ on August 26, 2013. Modification number 3 was entered by the Court in August 2014 and establishes a new deadline of October 2017 for RWWMP submittal. See Section 7 of this report for additional details.

HRSD has continued in 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 and workshops were held with the EPA and DEQ on January 22 and April 1, 2014. Following presentation of the approach, HRSD received approval from the EPA and DEQ to proceed using it in the RWWMP.

2.5.1 Private Property I/I Abatement Program

HRSD has continued to work with Locality representatives through FY 2014 to develop a regional program that will reduce infiltration/inflow (I/I) from private sources over the long term. Work in FY 2014 largely consisted of pilot efforts.

In FY 2014, HRSD continued implementation of a set of pilot projects to evaluate the effectiveness of a private property I/I abatement program. The pilot project for the Campostella area in Norfolk was developed and well underway in FY2014, with a number of laterals identified that could potentially contribute I/I to the system. These laterals were repaired and HRSD will be monitoring the sewer basin flows for any impacts of the work.

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 website.

2.7 Coordination with Localities

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

- 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 Semi Annual Report and Annual Report were provided from HRSD to the Localities.

2.8 Public Participation

HRSD conducted an annual information meeting regarding the progress of the Consent Decree on January 28, 2014. In addition, HRSD published a newsletter in February 2014, which is available on the www.hrsd.com website. 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 November 1, 2013. This report covered SOC and Consent Decree activities from July 1, 2012, through June 30, 2013.

2.10.2 Semi-Annual Report

HRSD completed a FY 2013 Semi-Annual Report as required by the Consent Decree, and submitted it to the EPA and DEQ on May 1, 2014. This report covered Consent Decree activities from July 1, 2013, through December 31, 2013.

2.10.3 Quarterly Briefing

Quarterly briefings were held per Paragraph 90 of the Consent Decree, on July 23, 2013, and February 11, 2014, with attendance by HRSD, the EPA, and the DEQ. Representatives from Localities also attended the briefings. HRSD provided a summary for each of the briefings.

2.10.4 Technical Calls and Workshops

Workshops to discuss the technical details of the Consent Decree were held with DEQ, EPA and HRSD in January and April 2014.

2.11 Summary of Submittals

Table 1 summarizes the status of the documentation that HRSD has submitted to the DEQ under the SOC in FY 2014.

SOC Submittal	Submittal Date
SSO Response Plan Annual Update	December 10, 2013
Annual Report	November 1, 2013
Rehabilitation Action Plan	February 10, 2014

Table 2 summarizes the status of the documentation that HRSD has submitted to the EPA and DEQ under the Consent Decree in FY 2014.

Table 2. Summary of Consent Decree Submittals	
Consent Decree Submittal	Submittal Date
Quarterly Briefing	July 23, 2013
Regionalization Study	August 26, 2013
Annual Report	November 1, 2013
SSO Response Plan Annual Update	December 10, 2013
Final Condition Assessment Report and Rehabilitation Action Plan	February 10, 2014
Quarterly Briefing	February 11, 2014
Annual Newsletter	February 21, 2014
Semi-Annual Report	May 1, 2014

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3. COMPLIANCE DEADLINES AND MILESTONES

In FY 2014, HRSD expended considerable resources in both time and money to achieve the compliance goals of the SOC and Consent Decree. All deliverables were submitted on or before their due dates, including those with short timeframes for response. The table below provides a general summary of the major Consent Decree deadlines and the status of each.

Table 3. Consent Decree Milestones		
Consent Decree Paragraph	Consent Decree Submittal	Status
13	Quality Assurance Program Plan	Complete
15	Flow, Pressure, and Rainfall (FPR) Monitoring Plan Implementation	Complete
16	Interim and Final FPR Monitoring Reports	Complete
22	Regional Hydraulic Model Plan Implementation	Complete
23	Regional Hydraulic Model Report	Complete
25	Condition Assessment Plan Implementation	Complete
26	Preliminary Condition Assessment Report	Complete
27	Final Condition Assessment Report (FY 2013)	Complete
27	Final Condition Assessment Report (FY 2014)	Complete
29	Interim System Improvements	Ongoing
33	Management, Operations, and Maintenance Program	Complete
39	Preliminary Capacity Assessment Report	Complete
40	Comparative Analysis	Complete
40	Alternatives Analysis Report	Ongoing
40	Regional Wet Weather Management Plan	Ongoing
60	Short Term Wet Weather Operational Plan	Complete
69	Sanitary Sewer Overflow (SSO) Response Plan	Complete
71	Annual Updates to SSO Response Plan	Ongoing
77	Annual Informational Newsletters	Ongoing
78	Annual Public Meetings	Ongoing
87	Annual Reports	Ongoing
88	Semi-Annual Reports	Ongoing
90	Quarterly Briefings	Ongoing

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4. CONDITION ASSESSMENT ACTIVITIES DURING FY 2014

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 Force Main

As of June 30, 2014, all Level 1 inspections for Group 1, Group 2, and Reservoir segments have been completed (see Condition Assessment Plan for details on inspection approaches). The majority of this work was completed in the early part of the fiscal year with a compliance deadline of October 15, 2013. This work included Level 2 inspection of approximately 4,000 linear feet of ferrous pipe to complete the 90,000 linear foot requirement from the Condition Assessment Plan.

4.2 Prompt Repairs

As part of the Condition Assessment Program, HRSD has identified 54 defects in the HRSD sanitary sewer system (primarily gravity sewer pipe and manholes) which have been deemed to be Prompt Repairs through June 30, 2014. These 54 defects have been grouped into 32 repair work orders and are currently in various stages of planning, design, construction or are complete. Of the 54 defects, 40 have been repaired through June 30, 2014. The following Table 4 provides details on all the Prompt Repairs identified to date.

Table 4. 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
	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	
	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	
	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	

Table 4. Summary of Prompt Repairs

Name	Location	Jurisdiction	Line Number	Summary of defect	Status
Various Manholes	North King St.	Hampton	NG-063	Manhole defects	Complete
	North King St.	Hampton	NG-078	Manhole defects	
	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-057	Mainline pipe defects	Developing Work Order
	West Mercury Blvd; near Beechwood Rd.	Hampton	NG-057	Mainline pipe defects	
	West Mercury Blvd (addl defect)	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
Wythe Lagoon	Chesapeake Ave at Wythe Lagoon	Hampton	NG-151	Siphon defects	Complete

Table 4. Summary of Prompt Repairs

Name	Location	Jurisdiction	Line Number	Summary of defect	Status
Shipyards Sewer	31 st Street	Newport News	31 st connector	Mainline Pipe Defects	Developing Work Order
	33 rd Street	Newport News	33 rd Connector	Mainline Pipe Defects	
	38 th Street	Newport News	38 th Connector	Mainline Pipe Defects	
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	Developing Work Order
Chesterfield Blvd	Pipeline section near Chesterfield Blvd PS	Norfolk	SG-207	Mainline Pipe Defects	Complete
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	
State Street FM	Replace section of force main	Norfolk	SF-097	Thin pipe wall discovered	Complete
Berkley Ave	Manhole rehab	Norfolk	SG-098	Wall defects	Complete
	Manhole rehab	Norfolk	SG-098	Wall defects	
Newmarket Creek	Manhole upstream of Newmarket Creek PS north of creek	Newport News	NG-127	Wall defects	
	Orcutt Ave and Paul Street	Newport News	NG-127	Corroded pipe	Developing Work Order
	Orcutt Ave and Paul Street	Newport News	NG-127	Old repair needs correction	
Laskin Road	Replace section of force main	Virginia Beach	SF-135	Pipe damaged by contractor	Complete
Elizabeth River	Replace section of force main	Chesapeake	SF-143	Corroded pipe	Complete
14 th Street	Replace manhole	Newport News	MH-NG-130X-9601	Manhole defects	Developing Work Order
Mercury and Orcutt	Repair pipe and manhole	Hampton	MH-NG-127-3791 NG-127	Manhole and pipe defects	Complete
Army Base	Pipe repair	Norfolk	SG-003-13950	Pipe deteriorated	Complete
Claremont Avenue	14th Street near Harbor Lane	Newport News	NG-130X	Pipe liner failure	Developing Work Order

Table 4. Summary of Prompt Repairs

Name	Location	Jurisdiction	Line Number	Summary of defect	Status
Boat Harbor Outlet	Near 25th Street and Jefferson Avenue	Newport News	NG-169	Mainline defects	Developing Work Order
Hickman's Branch	Near Factory Street and Warwick Street	Suffolk	SG-193	Mainline defects	Developing Work Order
Terminal Avenue	Near Boat Harbor Treatment Plant	Newport News	NG-125	Mainline defects	Developing Work Order

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5. MOM PERFORMANCE MEASURES FOR FY 2014

HRSD has implemented its MOM Program activities in conjunction with the requirements of the Condition Assessment Program and other aspects of the Consent Decree and SOC programs. Table 5 below provides a status update on the specific Performance Measures listed in Paragraph 34 of the Consent Decree. HRSD has substantially outperformed key performance measures such as CCTV inspections (more than twice the required footage), gravity sewer cleaning (approximately eight times the amount required) and air vent inspections (more than twice the required number).

Table 5. MOM Performance Measures

Consent Decree Paragraph	Section	Goal	Performance Measure	Target	FY 2014 Actual Performance	Comment	MOM Program Section No.
34.a.	Gravity System CCTV Inspections	Internal inspection of the Gravity System lines provides useful information to assess the condition of the lines allowing proactive measures to be taken to reduce infiltration and identify conditions that may lead to failure.	Perform internal inspection of HRSD gravity sewers, linear feet inspected per year	39,600 linear feet inspected per year	81,841 LF Inspected	Performance exceeded target	2.9
34.b.	Force Main PM - Air Venting	Force mains must periodically have air and gases vented to prevent loss of efficiency of pump stations and to prevent corrosion of piping due to hydrogen sulfide gas.	Perform air release valve PM, No. of PMs per year	1,550 ARVs vented per year	3,360 ARV PMs	Performance exceeded target	2.8
34.c.	Gravity Sewer Cleaning	Obstructions in Gravity Sewer systems are a primary cause of SSOs in these systems, and the systematic cleaning of the system is necessary to remove debris and accumulations of solids from all sources and reduce SSOs.	Perform cleaning of HRSD gravity sewers to remove debris. Linear feet cleaned per year	26,400 linear feet cleaned per year	194,838 LF Cleaned	Performance exceeded target	2.9

Table 5. MOM Performance Measures

Consent Decree Paragraph	Section	Goal	Performance Measure	Target	FY 2014 Actual Performance	Comment	MOM Program Section No.
34.d.	Pump Station Annual PMs (Mechanical)	Maintain the pump stations to protect the public safety, to protect the environment, reduce SSOs and to achieve the maximum service life from the pump stations.	All pump stations are to receive the Annual Inspection as described in the Interceptor Systems Preventive Maintenance Manual.	81 pump stations inspected per year	82 (101%)	Performance exceeded target	2.7
34.d.	Pump Station Annual PMs (Electrical)	Maintain the pump stations electrical equipment to protect the public safety, to protect the environment, reduce SSOs and to achieve the maximum service life from the pump stations.	All pump stations are to receive the Annual Electrical PM as described in the Interceptor Systems Preventive Maintenance Manual.	81 pump stations inspected per year	82 (101%)	Performance exceeded target	2.7
34.e.	Annual PM for Back-up Generators	Preventive maintenance is performed on the emergency generators to protect the safety of the public, to protect the environment and reduce SSOs when electrical power to the pump motors from the public utility has been disrupted.	Each back up generator is to receive an annual preventive maintenance inspection.	55 generators to receive PM per year	121 (220%)	Performance exceeded target	2.7
34.f.	Non-Invasive FM Inspection Near Drinking Water Reservoirs	Inspect Force Mains Near Reservoirs to Identify Conditions that may lead to Problems Prior to Failure.	Perform non-invasive inspections of FMs to identify air pockets and leaks. No. of linear feet of FM inspected per year.	2,400 linear feet inspected per year	2,562 LF Inspected	Performance exceeded target	2.8

Annual Pump Station PM has been divided into two categories as seen in the fourth and fifth lines of the table. The Annual Mechanical PMs are performed by Interceptor Operations and Annual Electrical Pump Station PMs are performed by Facility Support.

6. SYSTEM PERFORMANCE DURING FY 2014

6.1 Modifications to HRSD Operating Pressures

HRSD has made no changes to its current Pressure Policy as detailed in the most recent version of “Development Plan 2000.”

6.2 STP Performance

The HRSD system experienced several significant wet weather events in 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 discharges from the facilities. Table 6 (below) provides details on the nine (9) discharges from July 1, 2013, to June 30, 2014. Nearly all of these occurrences were fully treated effluent. This is an extraordinary record for such a large system with nine major treatment plants particularly given the ongoing construction and weather events which we experienced during the period coupled with a number of upset conditions such as regional power failures.

6.3 Conveyance System Performance

For the reporting period of July 1, 2013, through June 30, 2014, HRSD experienced 17 sanitary sewer overflows (SSOs) from its system. Five (5) of the 17 SSOs were capacity-related and occurred on two days in response to significant wet weather events as follows:

- April 30 – Intense rainfall event with approximately 1.7 inches of rain in just over 3 hours accounted for 1 of the 5 capacity-related SSOs; and,
- May 16 - Intense rain event with single hour rainfall totals from 1.5 to 2.8 inches accounted for 4 of the 5 capacity-related SSOs.

All of these events are detailed in the Sanitary Sewer Overflow Reporting System (SSORS). Details on these events are available in Table 7.

6.4 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. 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 Localities regarding the four LOPs, which activated as described in more detail below. All of the activations occurred during the significant storm events on April 30 and May 16, 2014.

6.4.1 City of Williamsburg: LOP No. 30

The City of Williamsburg experienced an SSO from near their LOP No. 30 during this reporting period on April 30, 2014. This LOP activated during a rainfall event with the gauge at the nearby HRSD pumping

station recording 1.7" of rainfall within three hours with 0.5" of rain falling in a 15-minute period. HRSD is addressing pumping capacity as part of the Regional Wet Weather Management Plan.

6.4.2 James City Service Authority: LOP No. 49

JCSA experienced an SSO from their LOP No. 49 at LS3-3 during this reporting period on April 30, 2014. This LOP activated during a rainfall event with the gauge at the nearby HRSD pumping station recording 1.7" of rainfall within three hours with 0.5" of rain falling in a 15-minute period. Wastewater facilities in this area are being evaluated as part of the RWWMP to identify possible capacity improvements.

6.4.3 City of Portsmouth: LOP No. 65

LOP No. 65 is at Pennock Street and Deep Creek Blvd in Portsmouth. During the wet weather event of May 16, 2014, this LOP activated with 2.87 inches of rain being recorded in one hour at a nearby HRSD rainfall gauge along with significant tidal flooding. The City is currently implementing several projects to address the LOP and wastewater facilities in this area are being evaluated as part of the RWWMP to identify possible capacity improvements. This rainfall event was above a level of service that is feasible to attain, and therefore, no additional steps are appropriate.

6.4.4 City of Portsmouth: LOP No. 66

LOP No. 66 is at George Washington and Fiske Street in Portsmouth. During the wet weather event of May 16, 2014, this LOP activated with 2.87 inches of rain being recorded in one hour at a nearby HRSD rainfall gauge along with significant tidal flooding. The City is currently implementing several projects to address the LOP and wastewater facilities in this area are being evaluated as part of the RWWMP to identify possible capacity improvements. This rainfall event was above a level of service that is feasible to attain, and therefore, no additional steps are appropriate.

Table 6. Detailed Listing of HRSD Treatment Plant Unusual Discharges (July 1, 2013, to June 30, 2014)

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	
1/26/2014	Atlantic	A 2-inch NPW valve supplying washdown water to a primary clarifier cracked in the freezing weather. The temperature was below 15 degree Fahrenheit. The line leaked approximately 55 gallons of NPW which soaked into the ground.	30	The operator secured the in-ground shutoff valve to stop the flow. The damaged valve was replaced.	55	55	NPW*	ground	
2/4/2014	Army Base	The contractor partially filled the new aeration tanks with NPW in order to test the blowers. The contractor thought that all of the tank drain valves were closed. However, one of the valves was frozen open due to the recent cold weather although it appeared to be closed at first glance. This caused the plant drain system to overflow at three manholes.	25	Plant staff diverted the flow from the manholes into the intermediate pump station wet well. They closed all tank drain valves and placed a plug in the storm drain inlet to prevent additional NPW from flowing into it. The majority of the NPW had pooled on the roadway where it was pumped up and returned to the plant system.	11,250	1,125	NPW*	Elizabeth River	
2/13/2014	Army Base	The contractor was digging in the road and pulled up the 2-inch ferric chloride solution feed line.	25	The chemical feed was secured by plant staff and the line was flushed with NPW. The spill had pooled in the bottom of the contractor's excavation. It was recovered and the affected soil was dug up for disposal.	20	0	ferric chloride solution	not applicable	
5/16/2014	VIP	The plant received very high influent flow due to heavy rainfall that flooded the streets in Portsmouth and Norfolk. The rain gauge at the plant recorded 1.33" of rain within a 30-minute period with a total of 4.5" of rain for the day. The rain gauge at Rodman Avenue Pump Station in Portsmouth, which sends flow to VIP, recorded 2.87" of rain within one hour. All raw influent pumps were pumping at 100% but the influent wet well water level kept rising. Plant influent flows increased from 40 to 80 MGD in one hour. The plant was forced to open the bypass valve in order to prevent the flows from backing up in the system and causing overflows in the residential areas.	312	The bypass flow was chlorinated. Operators monitored the level of the plant influent wet well. An operator was stationed at the upstream manhole to ensure that closing the bypass valve did not cause the manhole to overflow.	1 MG	1 MG	chlorinated raw influent	Elizabeth River	

Table 6. Detailed Listing of HRSD Treatment Plant Unusual Discharges (July 1, 2013, to June 30, 2014)

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
5/16/2014	VIP	The plant received very high influent flow due to heavy rainfall that flooded the streets in Portsmouth and Norfolk. The rain gauge at the plant recorded 1.33" of rain within a 30-minute period with a total of 4.5" of rain for the day. The flow rate peaked above 80 MGD. The flow was above the designed diffuser flow and the excess flow discharged briefly via the permitted short outfall 002.	35	Plant staff checked the weir to the short outfall and observed a minimal amount of treated effluent splashing over the weir intermittently. The sporadic nature of the discharge made it impossible to estimate a flow amount. All discharge is fully treated, chlorinated and dechlorinated effluent.	unknown	unknown	NPW*	Elizabeth River	
5/17/2014	VIP	The process drain line at the chlorine contact tank was surcharged due to high flows received on May 16, 2014. Pressure on the line caused a plug to blow out at a cleanout point. The process drain was carrying foam from the chlorine contact tank. The foam overflowed out the cleanout onto the ground and into the canal leading to the Elizabeth River.	5	The contact tank scum gates were closed which stopped the flow through the drain line. The cleanout plug was replaced and a sandbag was placed on top of the cleanout. Plant staff recovered part of the foam but most of the foam flowed down the side of the canal and could not be recovered.	150	150	wastewater/foam	Elizabeth River	
6/16/2014	Army Base	Contractor hit a 6-inch NPW line during excavation.	9	Contractor immediately began building a berm to contain the spill. Plant staff closed the NPW valve to stop flow and isolate the pipe. Water that was contained was recovered and returned to the plant system. The remainder of the spill flowed down the road and into the river. Contractor repaired the damaged section of the pipe and placed it back into service.	10,800	3,600	NPW*	Elizabeth River	

*NPW – Non-potable water (treated effluent)

Table 7. Detailed Listing of HRSD SSDs (July 1, 2013 to June 30, 2014)

Date and Time of Incident	Location	Sewer System Component	Potential Receiving Waters	Spilled In Jurisdiction	SSO Classification	Description of Incident from SSORS	SSO Duration	Action Taken and Explanation of SSO*	Discharge Quantity**	Amount Reaching State Waters**	DEQ IR	Occurred in previous five years at same location
9/4/13 9:15 AM	54 Shore Road	Hampton University Pump Station	Hampton River	Hampton	Infrastructure	Failure of 12-inch cast iron discharge force main at pump station.	3 hour(s) 15 minute(s)	Spill is being contained at this time. Flow estimate may change after event information is evaluated. -----September 4, 2013 01:31 PM----- Pump and haul operations were utilized to maintain the station wet well until alternate piping was installed to isolate the pump station. Pipe is buried deep (~13 feet). Instead of excavating and repairing old pipe, a new pipe will be installed at a more accessible depth. Final repair will be completed after system is evaluated and new pipe configuration is designed. Original flow estimate was 40,000 gallons and was based on worse case scenario. Flow rate fluctuated with the operation cycle of pump station. Estimate was adjusted after more information about flow rate was available. -----September 6, 2013 10:55 AM-----	19,550	19,550	SSORS#2014-T-103811	Yes
9/27/13 10:44 AM	3601 Holly Rd	Force main	Linkhorn Bay	Virginia Beach	Damage By Others	A contractor was bore drilling in the area and hit an HRSD 16" force main. The line was marked by Miss Utility. Flow rate was approximately 75 gallons per minute and flow entered a nearby storm drain. Working with the City of Virginia Beach to determine the waterway receptor. Initial notification contained incorrect time of discovery and is now correct with time of 10:44 am. Amount of release was also adjusted based on corrected start time.	0 hour(s) 51 minute(s)	Diverted flow from the line and have a vaccon truck on site to contain any additional wastewater that may be released from the line during its repair. Repair is on-going but the spill is contained. -----September 27, 2013 02:29 PM----- Pipe was repaired with full circle clamp. Initial notification contained incorrect flow amount but has now been corrected. Receiving water of storm drain was confirmed by City of Virginia Beach staff. -----October 1, 2013 07:33 AM-----	3,825	3,825	SSORS#2014-T-103818	No
11/12/13 10:55 AM	203 Harpersville Road	force main	Ground	Newport News	Damage By Others	20-inch force main leak. The failure was the result of being struck by an auger during the installation of a new power pole. The pole was installed by a Dominion Power contractor sometime between May and July 2013. The SSO classification was changed from "infrastructure" to "damage by others" based on the investigation of the event.	1 hour(s) 17 minute(s)	Isolated pipe by valving system. Crew is excavating pipe for repairs. -----November 12, 2013 02:26 PM----- Pipe was repaired using full circle clamp. Initial notification estimated the amount released as 3000 gallons. The final amount was modified based on the further review of the event. The leak was contained quicker than originally reported. -----November 14, 2013 07:55 AM-----	1,925	1,925	SSORS#2014-T-103842	No
12/12/13 9:36 AM	4701 Victoria Boulevard	Bridge Street Pump Station	Hampton River	Hampton	Other	Pump Station tide gate opened briefly during test of system. Operations staff was conducting an evaluation of the flow meters at three pump stations. The level in the wet well rose quicker than the operator could react and the tide gate opened briefly.	0 hour(s) 2 minute(s)	System restored to normal operation. -----December 12, 2013 01:24 PM----- Operator immediately turned on the pumps at the station and the gate closed. -----December 13, 2013 10:47 AM-----	824	824	SSORS#2014-T-103855	Yes
1/15/14 1:40 PM	619 Harpersville Road	Air vent	storm drain to James River	Newport News	Infrastructure	Air vent leaking when city pump station operates due to failure of 2" galvanized riser pipe.	0 hour(s) 50 minute(s)	Using Vaccon truck to contain spill. -----January 16, 2014 06:31 AM----- Replaced riser pipe and ball valve for permanent repair. Cleaned area. -----January 17, 2014 11:52 AM-----	100	100	SSORS#2014-T-103873	No

Table 7. Detailed Listing of HRSD SSDs (July 1, 2013 to June 30, 2014)

Date and Time of Incident	Location	Sewer System Component	Potential Receiving Waters	Spilled In Jurisdiction	SSO Classification	Description of Incident from SSORS	SSO Duration	Action Taken and Explanation of SSO*	Discharge Quantity**	Amount Reaching State Waters**	DEQ IR	Occurred in previous five years at same location
2/2/14 5:49 PM	Intersection of Swannanoa & Sommerset Drive	force main	Hoffler Creek	Portsmouth	Infrastructure	Failure of 16-inch ductile iron force main. A Columbia gas line crosses over the pipe with a 12-inch separation between the two lines. The pipe failure occurred in the vicinity of the gas line crossover. The point of failure was approximately 10 inches long and 6 inches wide.	2 hour(s) 41 minute(s)	Contained spill. Amount is preliminary estimate and may be modified in final notification.-----February 3, 2014 07:41 AM---- - Coordinated with the City of Portsmouth to pump and haul nearby pump stations in order to isolate the section of the force main. Removed the damaged section and sleeved in a new ductile iron pipe. Flow estimate changed slightly from initial notification. Damaged section of pipe will undergo forensic analysis. -----February 6, 2014 10:47 AM-----	4,950	4,950	SSORS#2014-T-103885	No
4/1/14 3:15 PM	36 Westminister Drive	NF-072 force main	Newmarket Creek	Hampton	Infrastructure	Failure of 10-inch cast iron force main. There was a 2-inch hole in the bottom of the pipe and a 5-foot crack associated with it. Spill entered drainage ditch leading to creek.	1 hour(s) 45 minute(s)	Crew is enroute to site. System will be valved to divert flow and contain leak. -----April 1, 2014 03:59 PM----- Pipe was isolated and excavated. Damaged section was replaced. New pipe was installed with dresser couplings. -----April 2, 2014 12:51 PM-----	34,405	34,405	SSORS#2014-T-103923	No
4/9/14 8:40 AM	1423 London Bridge Road	Shipps Corner Pressure Reducing Station	ditches/ground	Virginia Beach	Other	A 4-foot long 4x4 piece of wood was pulled into one of the pump impellers at the station. It knocked out the inspection plate on the suction reducer causing wastewater to shoot up to the ceiling of the station. The wastewater sprayed all the electrical cabinets, drives, motors and overhead lighting in the station. Excess flow went out the doors of the station. The problem was discovered when HRSD staff arrived at the pump station to conduct routine maintenance.	0 hour(s) 15 minute(s)	System was revalved to stop flow to pump. Vaccons on site recovering as much of spill as possible. -----April 9, 2014 10:34 AM----- Electrical, instrumentation, and interceptor crews responded to the event. Electrical equipment was dried out using box fans and heaters. Wood debris was removed from the system. Two pump motors were replaced prior to returning to operation. The majority of the spill soaked into the ground and could not be recovered. Some wastewater was recovered from the ditch and returned to the system. The affected area was limed. The flow rate of the spill was calculated using Telog flow pressure data and the size of the opening. -----April 10, 2014 03:20 PM-----	45,000	40,000	SSORS#2014-T-103931	No
4/17/14 9:00 AM	353 Barclay Road	Force main	Ditch/ground	Newport News	Third Party Action	Force main leaking. The 12-inch A/C force main failed due to settlement of the soil. A private contractor had recently installed a new gravity pipe below the force main for a new subdivision. The HRSD force main had a circular crack in the section of the pipe directly above the gravity line.	1 hour(s) 30 minute(s)	Vaccon on site containing spill. -----April 17, 2014 01:20 PM--- -- Pipe was excavated and repaired with full circle clamp. Spill soaked into the ground and the bottom of the ditch and could not be recovered. -----April 21, 2014 07:58 AM-----	450	450	SSORS#2014-T-103938	No
4/17/14 10:50 AM	413 Tyler Avenue	Force main	ground	Newport News	Damage By Others	20-inch force main was leaking at the joint coupling. Crew uncovered pipe and discovered a 2-foot piece of rebar had been driven into the coupling.	1 hour(s) 10 minute(s)	Valved system to isolate pipe. Crew on site making repairs. --- --April 17, 2014 02:50 PM-----Pipe was excavated and the damaged coupling was replaced with a full circle clamp. Spill soaked into the ground and could not be recovered. -----April 21, 2014 08:11 AM-----	Unknown	Unknown	SSORS#2014-T-103940	No
4/23/14 1:00 PM	Warwick Boulevard/ South of Woodhaven Drive	force main	Warwick River	Newport News	Infrastructure	Force main failure. Estimated flow rate of 5 gpm. Bottom of 24-inch ductile iron pipe failed due to internal corrosion.	2 hour(s) 30 minute(s)	Spill contained until repairs can be made. -----April 24, 2014 06:23 AM----- System was valved to divert flow and stop leak. Pipe was excavated and repaired with full circle clamp. ----- April 25, 2014 12:55 PM-----	750	750	SSORS#2014-T-103944	No

Table 7. Detailed Listing of HRSD SSDs (July 1, 2013 to June 30, 2014)

Date and Time of Incident	Location	Sewer System Component	Potential Receiving Waters	Spilled In Jurisdiction	SSO Classification	Description of Incident from SSORS	SSO Duration	Action Taken and Explanation of SSO*	Discharge Quantity**	Amount Reaching State Waters**	DEQ IR	Occurred in previous five years at same location
4/30/14 5:46 PM	540 S. England Street	Williamsburg Pump Station	ground to Paper Mill Creek	Williamsburg	Capacity-Weather Related	High flows due to I/I caused the station wet well to overflow briefly. Flow went out the door of the station. The area received heavy rainfall from storms which caused the I/I. The rain gauge at the station recorded 1.7" of rainfall within three hours with 0.5" of rain falling in a 15-minute period.	0 hour(s) 25 minute(s)	Checked station to ensure pumps were operating properly. ---- -May 1, 2014 08:01 AM----- Cleaned and limed the affected ground. -----May 2, 2014 07:02 AM-----	220	220	SSORS#2014-T-103948	Yes
5/16/14 9:26 AM	5734 Chesapeake Blvd	Chesapeake Blvd Pump Station	Wayne Creek	Norfolk	Capacity-Weather Related	Station is overflowing due to high flows from heavy rain. Rain gauge at Luxembourg Avenue Pump Station recorded 1.41" of rainfall in 30 minutes with over 4" of rain in four hours. The intensity of the rainfall flooded streets.	9 hour(s) 49 minute(s)	Checked station pumps to ensure they are operating properly. -----May 16, 2014 11:02 AM----- Report modified on 5/20 because rain gauge location needed to be corrected. -----May 20, 2014 12:07 PM-----	178,467	178,467	SSORS#2014-T-103960	Yes
5/16/14 9:46 AM	2412 Rodman Avenue	Rodman Avenue Pump Station	Elizabeth River	Portsmouth	Capacity-Weather Related	Pump station overflowing due to high flows from heavy rain in the area. Rain gauge at station recorded 2.87" of rainfall in one hour.	1 hour(s) 22 minute(s)	Crew cannot get to the station due to street flooding. Interstate exits are closed due to flooding. -----May 16, 2014 11:07 AM--- -- Crew checked pump station to ensure pumps were operating properly. Pumps inside the station were operating. The bypass pump set up outside the station did not start automatically. Crew started pump manually to increase pumping capacity at station. -----May 20, 2014 11:50 AM-----	Unknown	Unknown	SSORS#2014-T-103961	Yes
5/16/14 10:23 AM	4701 Victoria Blvd	Bridge Street Pump Station	Hampton River	Hampton	Capacity-Weather Related	High flows from intense rainfall caused pump station to overflow out the tide gate. Rain gauge at station recorded 0.5" of rain within 15 minutes with 1.75" inches of rain falling in 2.5 hours.	1 hour(s) 19 minute(s)	Checked pump station. Cleared rags from one of the three pumps operating to ensure full pumping capacity was available. -----May 16, 2014 02:27 PM----- Initial notification had a different start time based on alarm readings. Final notification start time is based on visual verification of overflow by staff. Tide gate is under water and flow estimate cannot be determined. -----May 19, 2014 03:25 PM-----	Unknown	Unknown	SSORS#2014-T-103966	Yes
5/16/14 10:58 AM	720 Bayshore Lane	2 manholes	Chesapeake Bay	Hampton	Capacity-Weather Related	High flows at the Bayshore Pump Station caused two manholes beside the station to overflow briefly at a combined rate of 1 gpm. High flows were due to intense rainfall. Rain gauge at station recorded 2.5" of rain in 3 hours with 0.5" falling in a 15-minute period.	0 hour(s) 47 minute(s)	Checked pump station to ensure pumps were operating properly. -----May 16, 2014 03:14 PM-----	47	47	SSORS#2014-T-103969	Yes
5/16/14 4:12 PM	Effingham Street & Firehouse Lane	Force main	Elizabeth River	Portsmouth	Infrastructure	Failure at the crown of 24-inch concrete force main. Failure occurred where Portsmouth's 18-inch discharge line from city pump station transitions to the HRSD force. Area received intense rainfall during the day which resulted in high flows. Rodman Avenue PS recorded 2.87" of rainfall in one hour.	2 hour(s) 48 minute(s)	Coordinated pump and haul operation with City of Portsmouth for pump stations. Place steel plate over damaged section of pipe for temporary repair. -----May 17, 2014 01:39 PM----- Line will be CCTV'ed to determine appropriate method of permanent repair. -----May 20, 2014 12:04 PM-----	495,000	495,000	SSORS#2014-T-103971	No

*Comments have been added for the Annual Report that were not part of SSORS original report.

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7. PLANNED ACTIVITIES FOR FY 2015

HRSD will be continuing the overall program outlined in the Consent Decree and SOC in FY 2015. The following sub-sections provide specifics on this work.

7.1 Flow, Pressure, and Rainfall Monitoring Program

7.1.1 Implementation of the FPR Monitoring Plan

Although not required by the Consent Decree, HRSD intends to continue to collect data from flow, pressure, and rainfall sensors in FY 2015, and plans to continue to operate a portal to allow access for the Localities to the HRSD flow, pressure, and rainfall data from the FPR sites (Telog server data). In FY 2015, HRSD will modify the network and delete and/or relocate some monitoring points.

7.1.2 LOP Status

In FY 2015, HRSD will continue to coordinate with Localities following activation of an LOP in the Localities system. This will include meeting with the Locality to review the occurrence, assist with evaluation of the problem, and help the Locality with interim or final solutions to mitigate the LOP. This information will be documented in the upcoming annual reports.

7.2 Regional Hydraulic Model and Hydraulic Assessment

Meetings of the Model Users Group, facilitated by HRSD and attended by the Localities may continue to be held as needed.

7.3 Condition Assessment Plan

7.3.1 Implementation of the Condition Assessment Plan

7.3.1.1 Prompt Repairs

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

7.3.2 Final Condition Assessment Report and Action Plan

HRSD will submit the updated Rehabilitation Action Plan to the EPA and DEQ based on comments received in the conditional approval letter in June 2014.

7.4 Interim System Improvements

HRSD will continue to design and construct the projects listed in Appendix 5 of the Consent Decree. The Verification of Completion for these projects will be included in upcoming Annual Reports as the projects are completed.

7.5 Management, Operations, and Maintenance Program

7.5.1 Implementation of MOM Program

HRSD will continue to implement its MOM Program per the approved submittal.

7.5.2 Quantitative Performance Measures

In FY 2015, HRSD will continue tracking the performance measures to assess the program. This will include the list of six measures that are subject to stipulated penalties per Paragraph 34 of the Consent Decree.

7.6 Regional Wet Weather Management Plan

Based on the Modification No. 3 to the Consent Decree, the deadline for the RWWMP has been extended to October 2017 to allow HRSD time to collect flow data and condition assessment data from numerous locations in the regional system, including many locality sewer basins. This field work is intended to be completed by May 2015 to proceed with RWWMP development. In addition, HRSD will be working to prepare the RHM and Locality Hydraulic Models (LHM) for RWWMP development.

7.6.1.1 Private Property I/I Abatement Program

In FY 2015, HRSD continues to develop a Private Property I/I Abatement Program through pilot programs. HRSD will continue to perform pilot work to test the feasibility and effectiveness of a private property I/I abatement program.

7.7 Short Term Wet Weather Operational Plan

HRSD will continue to implement the approved plan.

7.8 SSO Emergency Response Plan

HRSD will continue to implement its approved SSO Response Plan. An annual update to the plan will be submitted in the second quarter of FY 2015.

7.9 Coordination with Localities

HRSD will continue to actively participate and facilitate a wide variety of coordination activities in FY 2015 amongst the regional parties to the SOC. These activities include:

- Periodic meetings of the Capacity Team to discuss RWWMP development and other 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.

7.10 Public Participation

HRSD will have an annual information meeting and publish a newsletter by the next anniversary of the Date of Entry, February 23, 2015. Information and approved plans continue to be posted to HRSD's website which is accessible to the public.

7.11 Reporting

HRSD will prepare a Semi-Annual Report in addition to this Annual Report in FY 2015. Quarterly Briefings will be held with the EPA and DEQ in or around July and January of FY 2015.

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8. FORESEEABLE ISSUES RELATED TO UPCOMING COMPLIANCE DEADLINES AND MILESTONES

8.1 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) and the hybrid regionalization alternative. In general, the Regionalization 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 was required at the time. The Consent Decree amendment which includes the full schedule relief for the Regionalization Study was approved with a lodging date of April 2013. This extended the RWWMP deadline to a variable deadline depending on the results of the Study and subsequent decision by the localities and HRSD.

HRSD completed a Comparative Analysis in July 2013 (detailing a cost comparison of regional versus non-regional approaches to the RWWMP and rehabilitation efforts) which was incorporated into the Regionalization Study, which in turn 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. Modification No. 3 to the Consent Decree which incorporates the hybrid approach to regionalization was negotiated with the EPA and DEQ and entered by the court in August 2014. The Localities and DEQ are currently negotiating a change to the SOC that addresses this significant change.

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

As of the drafting of this report, a modification or suspension of the Special Order by Consent has not been approved. Based on the Memorandum of Agreement (MOA) between HRSD and the Localities, the SOC must be modified or cancelled by December 31, 2014. If this does not happen, the MOA self-terminates. Termination of the MOA would cause a significant issue in the development and long term implementation of the RWWMP, and would likely require a change to the Consent Decree.

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10. SUMMARY OF SYSTEM BENEFITS FOR PREVIOUS FISCAL YEAR

As reported in the earlier sections of this report, HRSD continues to make important strides in the process of preparing a Regional Wet Weather Management Plan and overall system improvement. Some of the major milestones include:

- Maintenance of a web portal to allow Localities access to HRSD flow, pressure, and rainfall data;
- Implementation of multiple contracts for inspection of HRSD's gravity sewers, manholes, and force mains;
- Completion of the condition assessment of HRSD's pumping stations, gravity sewers, manholes, and force main inspection program;
- Completion of more than 40 Prompt Repair defects throughout the system;
- Completion and submission of the Final Condition Assessment Report and Rehabilitation Action Plan;
- Completion of a number of Interim System Improvements as required by the Consent Decree;
- Implementation of an approved MOM Program;
- Implementation of an approved SSO Response Plan;
- Ongoing use of a web portal to share information between HRSD and the Localities;
- Submission of an Annual Report and Semi-Annual Report;
- Facilitation of an annual public informational meeting and newsletter;
- Quarterly Briefings with the EPA and DEQ;
- Technical workshops with EPA and DEQ (January and April 2014);
- Periodic Capacity Team meetings to foster cooperation and coordination in the region; and
- Ongoing development of a regional Private Property I/I Abatement Program.

HRSD will continue in FY 2015 with implementation of the Consent Decree to develop a Regional Wet Weather Management Plan in coordination with the Localities for overall system benefit.

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