

# ANNUAL REPORT FY 2021

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

October 28, 2021



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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 modified four times by agreement of all parties in 2011, 2013, 2014, and 2017. In December 2014, the SOC was eliminated by DEQ and HRSD is no longer under state enforcement.

The Consent Decree requirements include the following major tasks:

- Implement a flow, pressure, and rainfall monitoring program;
- Consult 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;
- Develop a Regional Wet Weather Management Plan in consultation with Localities;
- 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. 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. Specifically, this annual report summarizes the work and activities undertaken by HRSD from July 1, 2020, through June 30, 2021, and the resulting benefits to the sanitary sewer system.

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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 2021, HRSD has made several changes to its monitoring network. Table 2-1 below lists the significant changes in detail.

Table 2-1. FY 2021 Flow, Pressure, and Rainfall Monitoring Actions	
MMPS-319 (HRSD NF - Huxley Pl @ City Center Blvd)	Added one flow meter and one pressure sensor on 9/11/20
MMPS-234 (HRSD PCV - Wolf Trappe PCV)	One flow meter added on 10/7/20
MMPS-085 (Gloucester Point)	Flow meter added 4/5/21
MMPS-114-2 (Atlantic PRS) Flow_Pump1	removed 4/13/21
MMPS-114-2 (Atlantic PRS) Flow_Pump2	removed 4/13/21
MMPS-114-2 (Atlantic PRS) Flow_Pump3	removed 4/13/21
MMPS-114-2 (Atlantic PRS) Flow_Pump4	removed 4/13/21
MMPS-163 (Providence PRS)	Flow meter added 4/15/21
MMPS-114 (Atlantic PRS)	Flow meter added 4/27/21 – this replaced the 4 meters on MMPS-114-2

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 Rehabilitation Action Plan Implementation

The approved Rehabilitation Action Plan contains 67 projects to be completed in three phases. Table 2-2 shows the status of the Plan phases through June 30, 2020. One project in Phase 1 (CE-R3) was cancelled with EPA/DEQ approval and reduces the total to 66 projects. Additionally, VIP-R6 was moved from Phase 1 to Phase 2 on April 7, 2020.

Table 2-2. Rehabilitation Action Plan Phase Status				
Phase	Number of Projects Completed	Total Number of Projects	Estimated Cost of Completed Projects	Estimated Total Cost of All Projects in Phase
0	10	10	\$28,178,596	\$28,178,596
1	16	20	\$47,359,160	\$83,926,147
2	3	36	\$7,905,713	\$238,569,493

Projects completed this period are included in Appendix A project certifications and are as follows:

- Phase 1
  - CE-R2 Western Trunk Force Main Replacement
  - GN-R1 Manhole Rehabilitation/Replacement Phase I
  - JR-R2 Huxley to Middle Ground Force Main Extension
  - NP-R4 Suffolk Interceptor Force Main Section 1 Main Line Valving Replacement

## 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 completed all of these projects.

## 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 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 2021.

#### 2.4.1.1 MOM Program Update

HRSD updated its MOM Program in July 2021 based on policy and procedure changes, as well as organizational changes. The updated plan is included as an attachment to this annual report. The next major MOM Program update is anticipated in FY 2025.

#### 2.4.1.2 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 2021, HRSD has continued to support the Localities with their FOG control programs. HRSD provides enforcement initiatives to the Localities for food service establishments (FSE) after such Locality has exhausted all enforcement avenues. HRSD supports the HRPDC effort to institute a regional grease initiative and continues to actively participate in the HRPDC FOG Committee. In FY21 the HRPDC FOG committee updated the Hampton Roads Regional Technical Standards for Grease Control Devices, the Model FOG Ordinance, the FOG MOA (pending signatures in FY22) and the hrfog.com educational website and training program. In FY22 committee initiatives include an update to entire platform of the educational website to make it mobile friendly along with other site improvements.

#### 2.4.1.3 Ongoing Condition Assessment Activities

##### 2.4.1.3.1 Field Activities

See Section 4 of this report for details on the MOM-related Condition Assessment Field Activities.

#### 2.4.1.3.2 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. 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 program is reviewed to make that determination. A list of completed prompt repairs up through FY 2021 is covered in Section 4.4 of this document.

#### 2.4.2 Quantitative Performance Measures

The revised MOM Program includes 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 2021. The details of HRSD's performance are provided in Section 5 of this report.

### 2.5 Regional Wet Weather Management Plan

HRSD has agreed to a fifth amendment to the Consent Decree on June 29, 2020 and submitted an updated RWWMP consistent with the terms of the amendment at that time. That fifth amendment was expected to be lodged with the federal court by the end of 2020 and entered by the court in early 2021. As of the end of this reporting period, the fifth amendment was still awaiting signatures by the plaintiffs and had not been lodged. No schedule for lodging was provided by the plaintiffs. The fifth amendment includes a schedule for wastewater system improvements that accommodates the SWIFT program. That schedule requires that HRSD implement \$200 million worth of sewer overflow control projects between 2020 and 2030 and then another \$200 million in sewer overflow control projects between 2030 and 2040 to achieve a 69 percent total reduction of modeled overflows. These two sets of projects reflect further priority system improvements that HRSD is to implement along with the Project. The fifth amendment gives HRSD until 2032 to complete the SWIFT program. Finally, the fifth amendment provides that if HRSD does not fully implement the Project or delays full implementation past 2032 then EPA can require HRSD to accelerate some or all of the second group (\$200 million worth) of sewer overflow control projects to offset the avoided investment in the SWIFT program.

#### 2.5.1 Private Property I/I Abatement Program

HRSD has developed a regional program that will reduce infiltration/inflow (I/I) from private sources and included the approach in the Integrated Plan/RWWMP.

### 2.6 SSO Emergency Response Plan

On August 4, 2021 HRSD completed the an annual update of the approved Sanitary Sewer Overflow (SSO) Response Plan. This plan continues to be implemented by HRSD. A copy of the most recent plan is posted to the [www.hrsd.com](http://www.hrsd.com) website and is included as an attachment to this annual report.

## 2.7 Consultation with Localities

There were several consultation activities in FY 2021 with Localities. These activities included:

- Semi-Annual meetings of the Capacity Team to share progress on compliance with the Consent Decree (July 27, 2020 and February 24, 2021)
- Periodic updates for the Directors of Utilities Committee;
- The regional SharePoint website continues to be updated to collaborate with and provide documents to the regional Capacity Team; and,
- Copies of the Semi-Annual Report and Annual Report were provided from HRSD to the Localities via the regional SharePoint website.

## 2.8 Public Participation

HRSD conducted an annual information meeting regarding the progress of the Consent Decree on January 26, 2021. In addition, HRSD published a newsletter in February 2021, which is available on the [www.hrsd.com](http://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 2020 Annual Report and submitted it to the EPA and DEQ on October 30, 2020. This report covered Consent Decree activities from July 1, 2019, through June 30, 2020.

### 2.10.2 Semi-Annual Report

HRSD completed a FY 2021 Semi-Annual Report and submitted it to the EPA and DEQ on April 30, 2021. This report covered Consent Decree activities from July 1, 2020, through December 31, 2020.

### 2.10.3 Quarterly Briefing

Quarterly briefings per Paragraph 90 are no longer required.

## 2.11 Summary of Submittals

Table 2-3 summarizes the status of the documentation that HRSD has submitted to the EPA and DEQ under the Consent Decree in FY 2021.

Consent Decree Submittal	Submittal Date
Annual Report	October 30, 2020
Annual Public Meeting	January 26, 2021

Table 2-3. Summary of Consent Decree Submittals

Annual Newsletter	February 2021
Semi-Annual Report	April 30, 2021
Final RWWMP	June 29, 2020

## 2.12 Stipulated Penalties

HRSD made payment of \$68,350 to the plaintiffs on August 28, 2020 to satisfy US EPA's demand letter dated August, 24, 2020. This demand and associated payment covered all discharges subject to penalties in accordance with the Decree for the period January 1, 2018 through December 31, 2019.

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### 3. COMPLIANCE DEADLINES AND MILESTONES

In FY 2021, 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, including those with short timeframes for response. Table 3-1 below provides a general summary of the major Consent Decree deadlines and the status of each.

Table 3-1. 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 2015)	Complete
29	Interim System Improvements	Complete
33	Management, Operations, and Maintenance Program	Complete
39	Preliminary Capacity Assessment Report	Complete
40	Comparative Analysis	Complete
40	Alternatives Analysis Report	Complete
40	Regional Wet Weather Management Plan	Complete
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	Complete

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## 4. MOM PROGRAM CONDITION ASSESSMENT ACTIVITIES DURING FY 2021

HRSD has continued with its MOM-related Condition Assessment Field Activities in FY 2021. The following subsections describe the progress made in each aspect.

### 4.1 Gravity Main

HRSD completed 40,148 LF of gravity sewer inspections of its system in FY 2021. Approximately 129,117 LF of sewer main was cleaned.

### 4.2 Force Main

HRSD completed the model that analyzes the risk of our force mains and allows us to prioritize them for condition assessment. We identified the top ten riskiest force mains, and in FY21 we performed condition assessment on the top 8 that were not already programmed for replacement. Our plan is to continue condition assessment of all force mains based on this risk prioritization over the next few years.

External corrosivity has been identified as a high contributor to failure of our ferrous pipelines, so HRSD began corrosivity studies in FY21 along our ferrous force mains that will feed into our risk model.

In FY 2021, we continued to perform condition assessments on our force mains within 500 feet of drinking water reservoirs. We completed a total of 3,900 linear feet of inspections on a force main in Williamsburg.

### 4.3 Pumping Facilities

Regular inspection and preventive maintenance of pumping facilities was performed by HRSD staff.

### 4.4 Prompt Repairs

As part of the Condition Assessment Program, HRSD has identified 85 defects in the HRSD sanitary sewer system (primarily gravity sewer pipes and manholes) which have been deemed to be Prompt Repairs through June 30, 2021. These 85 defects have been grouped into repair work orders and are currently in various stages of planning, design, construction or are complete. Of the 85 defects, 81 have been repaired through June 30, 2021. The following Table 4-1 provides details on all the Prompt Repairs identified through FY 2021.

Table 4-1. Summary of Prompt Repairs

Name	Location	Jurisdiction	Line Number	Summary of defect	Number of Defects	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	1	Complete

Table 4-1. Summary of Prompt Repairs

Name	Location	Jurisdiction	Line Number	Summary of defect	Number of Defects	Status
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	1	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	4	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		
	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	3	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 St and 41st St	Newport News	NG-114	Mainline pipe defects	2	Complete
	Jefferson Ave between 39th and 40th St	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	3	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	3	Complete

Table 4-1. Summary of Prompt Repairs

Name	Location	Jurisdiction	Line Number	Summary of defect	Number of Defects	Status
	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	3	Complete
	Old Atlantic Avenue; near intersection with Liberty Street	Chesapeake	SG-148	Pipe lining failure		
	South of Steamboat Creek PS	Norfolk	SG-102	Manhole defects		
Witchduck	South Witchduck Road	Virginia Beach	SF-141	Corroded FM bolts	1	Complete
Pin Oak Rd	Pin Oak Road; Residential neighborhood	Newport News	NG-175	Mainline Pipe Defects	1	Complete
Bainbridge Blvd	Bainbridge Blvd near I-464	Norfolk	SG-145	Mainline Pipe Defects	2	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	2	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	2	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	1	Complete
Wythe Lagoon	Wythe Lagoon Siphon	Hampton	NG-151	Siphon defects	1	Complete
Pump Station Hatches	Ingleside Road Pump Station	Norfolk	PS#148	Wet Well Hatch	1	Complete
Pump Station Wet Wells	Rodman Ave Pump Station Wet Well	Portsmouth	PS#145	Wet Well Defects	1	Complete
Luxemburg Ave	Influent line to Luxemburg Avenue pump station.	Norfolk	SPS-113	Defect at manhole connection	1	Complete
Gowrie and Farragut	Manhole near creek at end of Gowrie Avenue	Norfolk	SG-068	Manhole defects	2	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	3	33 <sup>rd</sup> Street Repair Completed. The

Table 4-1. Summary of Prompt Repairs

Name	Location	Jurisdiction	Line Number	Summary of defect	Number of Defects	Status
	31 <sup>st</sup> Street	Newport News	31 <sup>st</sup> Street	Mainline pipe defects		two remaining projects are in Design-Construction.
	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	2	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	1	Complete
Berkley Avenue	Manholes on Berkley Avenue	Norfolk	SG-098	Manhole defects	2	Complete
	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	2	Complete
	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	1	Complete
Elizabeth River	East side of Elizabeth River Crossing	Chesapeake	SF-143	Thin wall	1	Complete
14 <sup>th</sup> Street	Manhole at Jefferson Ave and 14 <sup>th</sup> street	Newport News	NG-130X	Manhole Defect	1	Complete
Army Base	Baker Street and Hampton Blvd	Norfolk	SF-003	Pipeline defect	1	Complete
Mercury and Orcutt Intersection	W Mercury Blvd	Hampton	NG-127	Manhole Defect	1	Complete
Claremont Avenue Discharge	Harbor Lane and 14 <sup>th</sup> Street	Newport News	NG-130	Pipeline Defect	1	Complete
Boat Harbor Outlet	Jefferson Avenue and 25 <sup>th</sup> Street	Newport News	NG-169	Pipeline Defect	1	Complete
Hickman Branch	Factory Street	Portsmouth	SG-193	Pipeline Defect	1	Complete
Terminal Avenue	Terminal Avenue	Newport News	NG-125	Pipeline Defect	1	Complete
Swannanoa and Summerset	Intersection of Swannanoa Drive and Summerset Drive	Portsmouth	SF-206	Pipeline Defect	1	Complete
Orcutt Avenue Liner	Orcutt Avenue and 79 <sup>th</sup> Street	Hampton / Newport News	NG-127	Pipeline Defect	1	Complete
Bay Shore Lane	Bay Shore Lane	Hampton	NG-095	Manhole Defects	7	Complete

Table 4-1. Summary of Prompt Repairs

Name	Location	Jurisdiction	Line Number	Summary of defect	Number of Defects	Status
Warwick Blvd	Warwick Blvd	Newport News	NG-130	Pipeline Defect	1	Complete
Warwick and Woodhaven	Warwick Blvd to Thorncliff Drive	Newport News	NF-015	Pipeline Defect	1	Complete
Woodland Avenue	Woodland Avenue and Ballentine Blvd	Norfolk	SG-089	Manhole Defects	6	Complete
Indian River Road	Indian River Road near Campostella	Norfolk	SF-106	Pipeline Defect	1	Complete
Powhatan Ave	Powhatan Ave	Norfolk	SG-044	Manhole Defect	1	Complete
Euclid Road	Euclid Road and Southern Blvd	Virginia Beach	SF-197	Pipeline Defect	1	Complete
Dovercourt Road	Dovercourt Road	Norfolk	SPS-108	Manhole Defect	1	Complete
Beach Road South	Beach Road between Catalina Drive and Westlawn Drive	Hampton	NG-088	Pipeline Defect	1	Complete
Hampton Institute	Hampton Institute Pump Station	Hampton	NPS-211	Pipeline Defect	1	In Design
Portsmouth Blvd	Portsmouth Blvd	Newport News	NG-125	Pipeline Defect	1	Complete
Boat Harbor Influent	Terminal Avenue Junction Box	Newport News	NG-125	Pipeline Defect	1	Complete
Mercury/Big Bethel Manhole	Intersection of Mercury Blvd. and Big Bethel Road	Hampton	NG-057	Manhole Defect	1	Complete
Berkley Trunk Sewer Section S	State Street	Norfolk	SG-202	Pipeline Defect	1	In Design
Copeland PS Discharge FM	Copeland Pump Station	Newport News	NF-113-2539, NF-113-93255 to vault	Corroded appurtenances on pipeline	1	Complete
Shingle Creek Siphon	Shingle Creek PS	Suffolk	SG-191-21795 to SG-191-21788	Pipe Defect	1	Complete
Western Branch Sewers – State Hwy	APM Terminals Blvd	Portsmouth	SF-038	Force Main blockage	1	Complete
Bainbridge Blvd Gravity Sewer	Bainbridge Blvd & Holly Avenue	Chesapeake	SG-149-4932 to SG-149-4897	Pipe Defect	1	Complete

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### 5. MOM PERFORMANCE MEASURES FOR FY 2021

HRSD has implemented its MOM Program activities in conjunction with the requirements of the Consent Decree. Table 5-1 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, gravity sewer cleaning, and air vent inspections.

Table 5-1. MOM Performance Measures

Consent Decree Paragraph	Section	Goal	Performance Measure	Target	FY 2021 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	40,148 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	3,547 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	39,600 linear feet cleaned per year	129,117 LF Cleaned	Performance exceeded target	2.9
34.d.	Pump Station Annual PMS	Maintain the pump stations to protect the public safety, to protect the environment,	All pump stations are to receive the Annual Inspection as	83 pump stations inspected	83 (100%)	Performance met target	2.7

Table 5-1. MOM Performance Measures

Consent Decree Paragraph	Section	Goal	Performance Measure	Target	FY 2021 Actual Performance	Comment	MOM Program Section No.
	(Mechanical)	reduce SSOs and to achieve the maximum service life from the pump stations.	described in the Interceptor Systems Preventive Maintenance Manual.	per year			
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	81 (100%)	Performance met 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 backup generator is to receive an annual preventive maintenance inspection.	61 generators to receive PM per year	118	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	3,900 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. All stations that were online at the time of inspection received an annual PM.

## 6. SYSTEM PERFORMANCE DURING FY 2021

### 6.1 Modifications to HRSD Operating Pressures

HRSD revised its System Operating Pressure Policy with adoption by the HRSD Commission on December 16, 2014. It is based on the concept of a hydraulic grade line as opposed to the flat line of the previous policy. HRSD's interceptor system pressure is dynamic and varies based on the connection point and flow rate. HRSD will provide a range of pressures that a terminal pump station should expect to operate in. This range will be based on the RHM and available pressure meter data.

### 6.2 STP Performance

The HRSD system experienced construction, excessive rainfall, and operations related events in FY 2021 that led to unusual discharges from the facilities. Table 6-1 provides details on the thirty-seven (37) unusual discharges from July 1, 2020, to June 30, 2021. Fifteen of these occurrences involved treated effluent and four were the result of activities conducted by a third party.

### 6.3 Conveyance System Performance

For the reporting period of July 1, 2020, through June 30, 2021, HRSD experienced forty-four (44) sanitary sewer overflows (SSOs) from its system. Thirty-two (32) of the 44 SSOs were capacity-related. FY 2021 had numerous wet weather events. The North Shore service area recorded 61.1" of rainfall and South Shore service area 57.52". For comparison, FY 2020 recorded 47.08" and 47.49" respectively.

All of these events are detailed in the Sanitary Sewer Overflow Reporting System (SSORS). Details on all the FY 2021 SSOs for HRSD are available in Table 6-2.

### 6.4 Regional System Capacity Related SSOs

As required by Paragraph 88 of the Consent Decree, HRSD must report on wet weather or capacity related SSOs that occur in the Regional SS System. Table B-1 in Appendix B provides the listing of these SSOs along with a summary of cause and action being taken as reported by the applicable Locality in SSORS. HRSD has not independently verified these overflows.

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Table 6-1. Detailed Listing of HRSD Treatment Plant Unusual Discharges (July 1, 2020 to June 30, 2021)

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
7/18/2020	Chesapeake Elizabeth	Septic truck discharge line was disconnected from truck by driver to clear a clog and spilled the load in the septic receiving area.	65	Plant staff had the septic driver secure the discharge valve on their truck. HRSD P3 staff are evaluating the appropriate enforcement action to be taken against the permittee/truck owner.	1200	600	Raw Sewage	Storm drain to onsite BMP/Pond	third party action
7/22/2020	Nansemond	A new HVAC unit was installed that uses NPW for cooling water and it was discovered that the return (discharge) of the cooling water was piped to a storm drain. The piping of the unit was completed on 7/16/20 with intermittent operation up to the time of discovery.	6	The unit has been secured until repiping of the discharge can be completed to a plant drain that will return to head of the treatment process	60	60	NPW	Storm Drain	third party action
8/3/2020	Williamsburg	The plant effluent flow was over 30 MGD at 2238pm and the train A outfall valves didn't open. This resulted in short outfall discharges between 2238-2303 and 0022-0039.	201	Standby personnel entered the outfall vault and found one of the valve actuators in manual. The actuator was placed back in the automatic position and we resumed normal operation.	42000	42000	FNE	James River	
8/6/2020	York River	Centrate hose ruptured, causing the centrate sump to overflow.	85	Secured centrate feed line and recovered standing centrate with a sump pump,	620	500	CCT	Ground	
8/25/2020	James River	Centrate line clogged with struvite causing centrate to back up into hopper. Centrate spilled out into bay which overwhelmed the capacity of the plant drain system, backing up, and some centrate going down a storm drain.	30	Shut centrifuge down and blocked off nearby storm drain.	3870	1935	Centrate	Storm Drain	
9/17/2020	Nansemond	Both SWIFT sanitary well grinder pumps failed, groundwater from monitoring wells, and some process sample lines were pumping to the wet well and the well overflowed. Of the 150 gallons, we estimate 85% was groundwater, 5% SWIFT, and 10% Other (NPW)	90	Securing monitoring well pumps and sample points / sinks stopped the flow going to the wet well, the wet well was emptied using a submersible sump pump.	150	150	Groundwater, SCE, SWIFT	Ground	

Table 6-1. Detailed Listing of HRSD Treatment Plant Unusual Discharges (July 1, 2020 to June 30, 2021)

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
9/17/2020	York River	<p>The 60" Primary Clarifier Influent line failed causing a total of 6.808 million gallons of Screened Raw sewage to enter York River's Back Creek. 6.76 million gallons were lost from 9/17/20 at 2105 until 9/18/20 at 1600.</p> <p>On 9/19, at 2030 until 0130, one of the pumps being used to contain the spill lost prime causing an additional 3,000 gallons to go to Back Creek. On 9/21, at 0600, it was discovered that there was Screened Raw sewage coming from a Storm Drain located at the Break site. This was not leaking previously that we could notice, probably due to the Storm drain manhole being blocked by debris, not allowing flow to pass and then becoming unblocked during the morning hours of 9/21/20. The estimated spill amount from this occurrence is 45,000 gallons, for a total of 6.808 million gallons. Note: York River TP observed 4.0" of rainfall during the remnants of Hurricane Sally storm event</p>	5035	The immediate action taken was to set up portable pumps to keep up with the leak in order to keep the leak contained. Once installed and pumping, Contractors started setting up portable pumps to pump directly from the grit tanks in order to eliminate the flow going through the failed 60" line so that damage can be evaluated and repaired.	6,808,000	6,808,000	Screened RWI	Creek	Remnants of Hurricane Sally
9/18/2020	Army Base	Plant Operator discovered Primary clarifier overflowing during a rain event (remnants of Hurricane Sally). The Taussig Blvd PS saw a maximum rainfall of 0.41" in 15 minutes (9/18/20 at 03:15), with a total of 1.16" falling in 1 hour. The total rainfall observed at Taussig Blvd PS for the rain event was 5.40".	31	Plant Operator opened influent valves to offline primary clarifier.	800	800	Primary Clarifying Influent	Ground / Storm drain / Elizabeth River	Remnants of Hurricane Sally

Table 6-1. Detailed Listing of HRSD Treatment Plant Unusual Discharges (July 1, 2020 to June 30, 2021)

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
9/18/2020	Boat Harbor	No more than 10,000 gallons of process flow from the secondary clarifier distribution chamber was found to be overflowing into the fill dirt area on top of the secondary clarifiers. The process liquid filtered through the fill dirt between the tanks and spilled out onto and into the soil around the secondary clarifiers predominantly between secondaries 1 and 2, and 1 and 4. The flow came out of the expansion joint seams between the tanks and then traveled to the storm drain in the southwest corner of the plant near the electrical shop. Boat Harbor TP saw rainfall amounts of 4.2" over 24-hours, with a total of 0.87" falling in one hour during the remnants of Hurricane Sally.	165	Once the spill was noticed plant staff started assembling sump pumps and spill kits on top of the clarifiers. These sump pumps were able to pull the process flow from the fill area and pump it to the secondary clarifiers. Influent gates on the in-service tanks were opened up fully where they had been throttled down some. Secondary #5 which is OOS for coatings as well as a repair for a hole in the sidewall of the tank was used to provide some relief. With partial flow going into tank #5 the process flow stopped overflowing and plant staff maintained the level as low as possible to reduce the risk of spilling from the damaged area of tank #5. Plant staff stopped flow from going into the storm drain with a PIG drain cover and set up a sump pump to pump the remaining water into a nearby tote.	10000	9000	SCE	Ground	Remnants of Hurricane Sally
9/21/2020	Army Base	Gasket failure on non-potable water line on methanol fire suppression system	15	Closed potable water valve to fire suppression system which stopped discharge of water cannon.	100	100	AFFF/NPW	Elizabeth River	
9/29/2020	Williamsburg	Heavy rain in the area brought in significant flow. Both outfall trains functioned as intended but the flow (45MGD) exceeded their capacity for 1 hour and 32 minutes resulting in 250,000 gallons of treated effluent to be discharged through the short outfall into the James River.	92	No immediate action during event. Plant Staff verified the overflow point with a manual measurement and calculated the flow with information through the DCS.	250000	250000	FNE	James River	

Table 6-1. Detailed Listing of HRSD Treatment Plant Unusual Discharges (July 1, 2020 to June 30, 2021)

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
10/8/2020	Atlantic	Acid Phase Digester overflowed due to foaming. The level indicator was reading the liquid level correctly however it couldn't read the foam. This resulted in foam spilling out. It is estimated that 5000 gals of foam reached the ground. The overflow had stopped prior to discovery.	5	The spill on plant site was found and cleaned up. Foam was cleaned up using a Vactor truck and the top layer of ground was removed and disposed of. Topsoil was added after clean up and lime was spread on the ground. More foam from the spill was found the next day (10/9) on the other side of the fence line and was cleaned up with vactor trucks. The plant is running the Acid Phase Digester level lower to compensate for foam and prevent this from happening again.	5000	500	Digested Sludge	Ground	
10/27/2020	James River	Barb fitting failed causing centrate to spill on the ground and run into a nearby storm	10	Shut pump down and blocked off nearby storm drain	1200	600	Centrate	Storm Drain	
10/28/2020	Williamsburg	A contractor vacuum truck was dumping grit removed from plant tanks at headworks septic unloading station. We estimate that 100 gallons ran out of the bay and down the road with 50 gallons running down the storm drain before absorbent material could be put down to stop it.	5	Plant personnel mobilized and soaked up the remaining liquid in the road with absorbent materials.	100	50	RWI	Storm Drain	third party action
11/4/2020	Army Base	The plant operator was doing a wet well cleaning in the Preliminary Treatment Facility. The pumps were running in the wrong mode during the cleaning causing a surge at the intermediate pump station.	6	Wet well cleaning was stopped and the SOP was updated to include verifying the pump mode during cleaning and notifying maintenance of the wet well cleaning.	500	500	RWI	Storm drain to Elizabeth River	
11/12/2020	Army Base	High flows this morning from the heavy rains in the area caused the influent channel of the primary clarifiers to overflow. Taussig Blvd PS saw a maximum rainfall of 0.44" in 15 minutes (11/12/20 at 6:15 am), with a total of 1.29" falling in 1 hour. Total rainfall for the rain event for this rain gauge was 6.4".	29	Staff put a third primary clarifier in service	6000	6000	RWI	Storm drain to Elizabeth River	

Table 6-1. Detailed Listing of HRSD Treatment Plant Unusual Discharges (July 1, 2020 to June 30, 2021)

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
11/13/2020	Army Base	As the plant staff was draining the #1 secondary clarifier the drain line surcharged and overflowed aeration effluent at manhole 214. Heavy rains in the area 11/11/20-11/12/20 caused high flows making the plant drain surcharge as staff drained tanks and plant recycles flows were elevated. Taussig Blvd PS saw a maximum rainfall of 0.44" in 15 minutes (11/12/20 at 6:15 am), with a total of 1.29" falling in 1 hour. Total rainfall for the rain event for this rain gauge was 6.4".	15	The on-call operator closed the sec tank 1 drain line to stop the overflow.	2500	2500	ARE (RWI)	Storm drain / Elizabeth River	
12/7/2020	James River	11/11/20- 11/12/20 caused high flows making the plant drain surcharge as staff drained tanks and plant recycles flows were elevated. Taussig Blvd PS saw a maximum rainfall of 0.44" in 15 minutes (11/12/20 at 6:15 am), with a total of 1.29" falling in 1 hour. Total rainfall for the rain event for this rain gauge was 6.4".	30	The linkseal was tightened to stop the leak, the recirculation pump was shut off, and the critical valve was closed. In addition, the water/caustic mixture on the sidewalk was pumped into a nearby plant drain. The soil affected by the caustic spray was dug up and stored in totes for proper disposal following the recommendations of Potomac Environmental.	70	20	Sodium Hydroxide	Flax Mill Creek	
12/21/2020	Nansemond	Hot water line from boilers broke in polymer sump. This caused chemically treated potable boiler water to fill up a chemical sump and overflow into process area, with some leak by a door.	35	Staff placed sandbags by door to stop water from leaving the building, secured hot water transfer from boiler to hot water system, and pumped excess water from polymer sump into the plant drain system.	50	50	Potable Water / Trace Chem	Ground	
1/21/2021	Chesapeake Elizabeth	Underground NPW leak	60	Excavated leak area to find source of leak. The majority of the leak 450 gallons was recovered back to the plant drain, however, upon digging to repair on 01/21/2021, it was discovered that 50 gallons was lost into the ground. The plant isolated leaking line. Repaired NPW line.	500	50	NPW	Ground	

Table 6-1. Detailed Listing of HRSD Treatment Plant Unusual Discharges (July 1, 2020 to June 30, 2021)

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
1/26/2021	Williamsburg	The overflow sump pumps at Odor Station D tripped out and the storage tank overflowed scrubber blow down water into the containment area and then on the ground. We were able to recover 5595 gallons from the containment area but 3808 gallons overflowed the containment walls. The DCS alarmed at 02:06 but the overflow was observed at 07:00.	294	Setup submersible pumps to remove water from containment area and setup temporary pumps until the installed overflow sump pump electrical problem is resolved.	9403	3808	Scrubber blow down water	Ground / storm drain	
2/1/2021	Nansemond	Non-Potable Water line froze and broke on aeration tank #3 and leaked onto the ground around tank.	15	Closed supply valve and opened drain for line.	1000	1000	NPW	Ground	
2/3/2021	Williamsburg	During a planned power outage for contractors, the backup power supply to the outfall vault did not power the control panel and caused the outfall valves to close. The level in the contact tank began to rise and spilled over the short outfall weir for 35 minutes	35	A portable generator was connected to the control panel and reestablished power to the valves.	141,215	141,215	Fully treated Effluent	James River	
2/16/2021	Boat Harbor	Large amounts of rain (0.44" over 15 minutes, with 0.8" falling in one hour) caused the influent flow to rapidly increase 10 MGD within an hour. This caused a surge of flow into the secondary clarifier distribution chamber. With already abnormally high flows the influent gates of the secondary clarifiers were throttled down to help balance out solids distribution throughout the clarifiers and reduce solids loss. The increase in flow coupled with the gates not fully opened caused the secondary influent flow to spill out of the distribution chamber. The process liquid spilled out onto and into the fill dirt on top of the secondary clarifiers and then flowed down between secondary clarifiers #1 and #2 where it made its way to the storm drain in the southwest corner of the plant near the electrical shop.	50	The operator on duty noticed the increase in influent flow and went to check the distribution chamber on the secondary clarifiers. When he saw the overflow he immediately started to open the secondary clarifier influent gates which was enough to keep the flow in the chamber. After the event, on site solids were cleaned up.	56,000	52,250	SEC INF	Ground / storm drain	

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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
2/17/2021	Nansemond	Generator tripped during monthly run, when power came online it caused NRCY pumps to put a wave through the plant, FNE pumps didn't turn on due to circumstances of power loss.	4	Started FNE pumps manually once power was restored	5,000	1,200	FNE	Ground	
2/24/2021	Nansemond	Fitting on discharge side of Regional Residuals Facility (RRF) wetwell pump number 1 broke off causing RRF waste to spray out. Some of the waste leaked out and around concrete and ground surrounding the shed.	10	Turning off RRF wetwell pump stopped the source of the spill. The pump is currently out of service until parts for the repair are received and installed.	100	100	RRF	Ground	
2/25/2021	Army Base	Contractors working on plant site broke a Non-Potable Water (NPW) line causing NPW to spill into storm drain.	61	Valve was closed to secure non potable water flow and line was repaired.	300	300	NPW	Elizabeth River storm drain	third party action
3/24/2021	Army Base	Manhole overflowed after opening more flow to the drain of a secondary clarifier.	39	Valve was closed to secure the flow coming up through the manhole.	300	300	ARE	Ground / storm drain	
4/12/2021	Nansemond	Struvite Recovery Facility (SRF) sump overflowed when a pump float switch failed. NPW/struvite came out of the building and traveled further down the road	30	Secured SRF harvesting system. Replaced the damaged float switch, checked the secondary pump, and cleaned out the ball checks for both pumps.	50	50	NPW	Ground	
4/21/2021	Nansemond	GAC vessel no.2 was valved to start a backwash but before starting the pump flow was able to drain from the vessel through the backwash supply line and the check valve in the line was not seated. This allowed the water to reach the GAC pump station and cause it to overflow. Water in pump station is after biofiltration but prior to UV disinfection.	3	Closed the backwash supply valve for GAC vessel no.2 to stop flow from draining back to the GAC pump station. After closing the backwash supply valve, we valved the GAC vessels 1 and 2 for filter to waste and started the GAC feed pump to lower the pump station level.	150	150	Bio-filter effluent	Ground	
6/11/2021	Nansemond	A PVC line for the plant drain pumps ruptured in the headworks building. Around 6250 gallons of treated water from an out of service contact tank was spilled into the room. There were some other sources of	1	Secured the pump that was pumping to the broken line. The broken section of pipe was replaced.	6,250	625	Contact Tank	Ground	

Table 6-1. Detailed Listing of HRSD Treatment Plant Unusual Discharges (July 1, 2020 to June 30, 2021)

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
		water including the struvite recovery facility drain, and residual water in the plant drain station. Around 90% of the water was recovered as it stayed in the room and went into a barscreen channel.							
6/14/2021	James River	A barb fitting failed and although the discharge valving was closed, the line drained downhill into the grass.	255	The top 2 to 4 inches of soil were removed and placed into an impervious container until no evidence of ferric was present in the soil. The remaining exposed soil was treated with lime stabilizer. Volumes are estimates based upon visual observation of leak, area of contaminated soil, and length of time of the leak.	20	1	Ferric Chloride	Ground	
6/16/2021	Atlantic	An employee was flushing out our pressure washer (200 gallon capacity tank) with NPW, ~65' away from a storm drain. From the flush location, we inadvertently drained the pressure washer contents (NPW) down the street to a storm drain. It was discovered after 2 flush cycles had occurred. The first tank was filled potable water.	9	After discovering that the drainage from the pressure washer was going to a storm drain, the drain valve on the pressure washer was secured. At this point, all the NPW was already discharged, and none of it was recovered	200	200	NPW	Storm Drain	
6/17/2021	Atlantic	Operator accidentally left the scum trough open for primary clarifier #3, which over inundated the primary scum concentrator. The concentrator then overflowed, which then drained out into the street. Most of the flow went to a plant drain, but some made it to a storm drain nearby.	3	The midnight relief operator discovered the overflow, and responded by placing spill response snakes at the storm drain to stop the flow into it, and then discovered the opened scum trough and closed it. The rest of the scum concentrator overflow was captured in the nearby plant drain.	200	200	Scum	Ground / storm drain	
6/17/2021	Army Base	A non-potable water hose used to fill an aeration tank came out of the tank. Most of the non-potable water was contained inside the containment area. The flow made contact with part of the manhole cover causing a slight spray to leave the containment area. An estimated 100 gallons was not recovered.	5	Valve was closed to secure non potable water flow and the hose was secured to a railing to avoid a repeat incident.	100	100	NPW	Ground / storm drain	

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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
6/18/2021	Virginia Initiative	Ball check lid on scum pump was not tightened properly and backed off cause NPW and scum to spill on the floor filling the room. There were sand bags in place containing a majority of the water. Some leaked past bags onto the ground and surrounding area	20	Tightened the ball check lid back down securing the water leaking and added more sand bags to prevent anything else from leaking by. The remainder of water left in the room was pumped back into primary tank #6	200	75	Scum and NPW	Ground	
6/20/2021	Atlantic	Primary scum well overflow. Scum pump#1 plugged with rags. Pump was backflushed with Non-Potable Water (NPW) and was left on when completed. The well filled up and the floating solids overflowed out of the scum well hatch at the top of the tank. Also the 2 pumps that pump out of this tank did not turn on to pump out the well due instrumentation issues.	20	Turned off NPW backflushing valves. Re-aligned scum pump lead/lag ranking for the pumps to work in DCS Auto. Solids clean-up was performed by clearing the top hatch area of the scum well tank. Solids that overflowed onto the ground were cleaned up. The top layer of the dirt was also removed and replaced with clean topsoil. Contaminated dirt was disposed.	200	0	NPW / Solids	Ground	

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

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Table 6-2. Detailed Listing of HRSD SSOs (July 1, 2020 to June 30, 2021)

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 (gallons)**	Amount Reaching State Waters (gallons)**	DEQ IR	Occurred in previous five years at same location
7/22/2020 8:30	360 Barclay Road	NF-036	soaked into the ground/James River	Newport News	Infrastructure	Asbestos cement (AC) force main developed a circumferential crack and failed.	3 hour(s) 30 minute(s)	Isolated force main and installed a full circle repair clamp. -----July 24, 2020 01:25 PM-----	200	200	SSORS#202 1-T-105695	No
8/4/2020 4:38	1136 Saunders Drive, Suffolk, VA	Suffolk PS MH	Shingle Creek	Suffolk	Power Outages (Storm Event)	High winds associated with Tropical Storm Isias caused the station to lose power. The emergency bypass pump began operating but soon failed as well resulting in an overflow at the upstream siphon chamber.	0 hour(s) 5 minute(s)	Staff arrived onsite and manually started the emergency bypass pump. -----August 4, 2020 07:08 AM-----	250	250	SSORS#202 1-T-105703	No
8/15/2020 11:29	6000 Orcutt Avenue, Newport News, VA	Newmarket Pump Station	Government Ditch	Newport News	Capacity-Weather Related	Heavy rainfall - Weather related PS overflow	13 hour(s) 0 minute(s)	Overflow under control by HRSD personnel -----August 16, 2020 09:09 AM-----	132,650	132,650	SSORS#202 1-T-105720	No
8/15/2020 12:50	King Street @ I-64, Hampton, VA	King St @ I-64 manhole	Hampton River	Hampton	Capacity-Weather Related	Manhole overflow - Weather related - heavy rainfall. maximum rainfall of 0.44" in 15 minutes (8/15/20 at 06:45), with a total of 0.85" falling in 1 hour. Total rainfall for the rain event for this rain gauge was 2.7"	1 hour(s) 4 minute(s)	HRSD personnel ensured the overflow ended ----- August 16, 2020 09:17 AM-----	460	460	SSORS#202 1-T-105721	Yes
8/15/2020 23:22	1619 Taylor Rd, Newport News	Fort Eustis Pump Station	James River	Newport News	Capacity-Weather Related	overflow - weather related - heavy rainfall Fort Eustis PS saw a maximum rainfall of 0.32" in 15 minutes (8/15/20 at 16:45), with a total of 0.96" falling in 1 hour. Total rainfall for the rain event for this rain gauge was 3.5".	4 hour(s) 17 minute(s)	HRSD personnel ensured event was under control ----- August 16, 2020 09:23 AM-----	2,280	2,280	SSORS#202 1-T-105722	No
8/15/2020 20:58	602 S. England St., Williamsburg VA	Williamsburg Pump Station	Paper Mill Creek	Williamsburg	Capacity-Weather Related	Significant wet weather resulted in increased system flows and pressures. Pump failures at Rt. 199 and Williamsburg PS contributed to the overflow	2 hour(s) 2 minute(s)	Checked station to ensure all pumps were operating properly. Found pumps had failed and reset pumps. Overflow cleared after pumps reset and operating properly. -----August 19, 2020 03:41 PM-----	6,750	6,750	SSORS#202 1-T-105745	Yes

Table 6-2. Detailed Listing of HRSD SSOs (July 1, 2020 to June 30, 2021)

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 (gallons)**	Amount Reaching State Waters (gallons)**	DEQ IR	Occurred in previous five years at same location
9/1/2020 17:00	1136 Saunders Drive	Shingle Creek Siphon chamber	Shingle Creek	Suffolk	Infrastructure	A 4-inch hole developed in the top of the gravity pipe, which led to an overflow when the pipe was surcharged due to wet weather flows. The Suffolk PS recorded 1.0" over the course of the rain event. A nearby rain gauge at Lake Kilby PS recorded 2.8".	1 hour(s) 30 minute(s)	Turned on standby Godwin pump to pull down high well and relieve surcharge in the system. The pipe was repaired. -----September 2, 2020 03:25 PM-----	2,700	2,700	SSORS#202 1-T-105749	No
9/16/2020 8:37	2814 Arctic Avenue	Arctic Ave Pump Station	Stormwater system leading to Little Neck Creek	Virginia Beach	Maintenance-Other	While making improvements to the yard pipe at the Arctic Avenue Pump Station, HRSD removed the incorrect section of pipe. This resulted in an overflow impacting the site and the nearby storm sewer system.	0 hour(s) 10 minute(s)	Staff were able to isolate the flow and clean the surrounding areas by applying lime and pressure washing hard surfaces. Vactors that were deployed were able to capture 2,000 gallons prior to release to the local storm sewer system. -----September 21, 2020 10:59 AM-----	15,000	13,000	SSORS#202 1-T-105762	No
9/18/2020 2:40	1136 Saunders Drive	Suffolk Pump Station and Siphon Line	Shingle Creek	Suffolk	Capacity-Weather Related	The remnants of Hurricane Sally caused high flows and pressures in the Suffolk sewer system. As a result, the Suffolk PS duty pumps were unable to keep up with the flows entering the wet well. The standby pump was unable to prime for reasons unknown at this time. As a result, all flow entering the station overflowed into Shingle Creek. Simultaneously, it was discovered that a new hole had developed on the 16 inch siphon line crossing Shingle Creek. This line has been temporarily repaired two times in the past few weeks and an active repair is underway, but not yet complete. The Suffolk PS saw 1.30" of rain falling in 1 hour with 4.5" total over the event.	12 hour(s) 30 minute(s)	Staff are working with Godwin representative and repair crews to get the station bypass pump operational. HRSD's on-call contractor is mobilizing bypass pumps to bypass flow around the siphon lines so that this repair work can be completed immediately. ----- September 22, 2020 07:43 PM-----	2,489,000	2,489,000	SSORS#202 1-T-105767	Yes
9/18/2020 5:18	321 North Ave.	North Ave PS	ground	Newport News	Capacity-Weather Related	Significant rainfall from the remnants of Hurricane Sally resulted in increased system flows and pressures. Hilton School PS saw a maximum rainfall of 0.22" in 15 minutes, with maximum single hour total of 0.65". The total rainfall for this event was 3.4".	0 hour(s) 42 minute(s)	Verified that the pumps and pump stations were operating properly -----September 18, 2020 01:30 PM--- --	84	84	SSORS#202 1-T-105771	No

Table 6-2. Detailed Listing of HRSD SSOs (July 1, 2020 to June 30, 2021)

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 (gallons)**	Amount Reaching State Waters (gallons)**	DEQ IR	Occurred in previous five years at same location
9/18/2020 4:05	3541 Seay Avenue	Seay Avenue Pump Station	Storm drain to Elizabeth River	Norfolk	Capacity-Weather Related	The remnants of Hurricane Sally caused high flows and pressures in the Norfolk sewer system. As a result, the Seay Ave PS duty pumps and the standby emergency pump were unable to keep up with the flows entering the wet well. An overflow occurred into the Elizabeth River. The Virginia Beach Blvd PS saw a maximum rainfall of 0.38" in 15 minutes, with a total of 1.12" falling in 1 hour. Total rainfall for the rain event was 5.5".	3 hour(s) 11 minute(s)	Once downstream pressures decreased, the station pumps were able to keep up with flows coming into the station. -----September 22, 2020 02:48 PM-----	6,600	6,600	SSORS#202 1-T-105774	No
9/18/2020 4:36	5734 Chesapeake Blvd	Chesapeake Blvd Pump Station	Lafayette River via Wayne Creek	Norfolk	Capacity-Weather Related	The remnants of Hurricane Sally caused high flows and pressures in the Norfolk sewer system. As a result, the Chesapeake Blvd PS duty pumps were unable to keep up with the flows entering the wet well. An overflow occurred into Wayne Creek, which is a tributary to the Lafayette River. The Luxembourg Ave PS saw a maximum rainfall of 0.43" in 15 minutes, with a total of 0.92" falling in 1 hour. Total rainfall for the event was 5.1".	10 hour(s) 0 minute(s)	Once downstream pressures decrease, the station pumps will be able to keep up with flows coming into the station. -----September 22, 2020 02:53 PM-----	300,000	300,000	SSORS#202 1-T-105775	Yes
9/18/2020 4:33	503 Park Avenue	Park Avenue Pump Station	storm drain to Elizabeth River	Chesapeake	Capacity-Weather Related	The remnants of Hurricane Sally caused high flows and pressures in the Chesapeake sewer system. As a result, the Park Ave PS duty pumps were unable to keep up with the flows entering the wet well. Flow was released from manholes at 1500 Bainbridge Blvd as well. This overflow released to the Elizabeth River. Ferebee Ave PS saw a maximum rainfall of 0.43" in 15 minutes, with a total of 1.34" falling in 1 hour. The total rainfall for the event was 5.3".	2 hour(s) 4 minute(s)	Once downstream pressures decreased, the station pumps were able to keep up with flows coming into the station. Note: quantity on this report was increased to include manhole activity at Quick T's (SSORS ID 105784). -----September 22, 2020 02:58 PM-----	74,800	74,800	SSORS#202 1-T-105776	Yes

Table 6-2. Detailed Listing of HRSD SSOs (July 1, 2020 to June 30, 2021)

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 (gallons)**	Amount Reaching State Waters (gallons)**	DEQ IR	Occurred in previous five years at same location
9/19/2020 9:00	3900 Robin Hood Road	Norview-Estabrook Ext Div I Force Main	storm system to ditch to Wayne Creek/Lafayette River	Norfolk	Infrastructure	A failure occurred on the 12-in cast iron force main located on Robin Hood Rd just west of Sherwood Elementary School in Norfolk. The cause of the failure was attributed to an abandoned 2-in tap. Flow from the failure was conveyed to the local storm sewer system, then to a ditch, and ultimately into Wayne Creek.	2 hour(s) 0 minute(s)	HRSD staff arrived onsite and isolated the impacted section of force main. Pump and haul was utilized to maintain service to the surrounding area. The failed tap was removed and a new air vent was installed in its place. -----September 22, 2020 03:20 PM-----	84,000	84,000	SSORS#202 1-T-105781	No
10/28/2020 16:25	1221 Tyler Ave	Force Main NF-042	Storm drain to Lake Maury	Newport News	Infrastructure	Bolts on full circle repair clamp corroded causing the clamp to fail.	3 hour(s) 35 minute(s)	Replaced broken full circle repair clamp and returned system to normal operation. -----November 2, 2020 08:05 AM-----	34,075	34,075	SSORS#202 1-T-105796	No
11/12/2020 10:40	3541 Seay Avenue	Seay Ave Pump Station	Elizabeth River	Norfolk	Capacity-Weather Related	Significant wet weather resulted in increased system flows. Va Beach Blvd PS saw a maximum rainfall of 0.58" in 15 minutes (11/12/20 at 9:15 am), with a total of 1.58" falling in 1 hour. Total rainfall for the rain event for this rain gauge was 6.3".	9 hour(s) 52 minute(s)	Once downstream pressures decreased, the station pumps were able to keep up with flows coming into the station. -----November 13, 2020 06:22 AM-----	14,800	14,800	SSORS#202 1-T-105804	Yes
11/12/2020 10:27	5808 Monroe Place	Manhole at Monroe Place	Lafayette River	Norfolk	Capacity-Weather Related	Significant wet weather caused high flows and pressures in the Chesapeake sewer system. As a result, the Monroe Place PS duty pumps were unable to keep up with the flows entering the wet well. VIP TP saw a maximum rainfall of 0.41" in 15 minutes (11/12/20 at 9:00 am), with a total of 1.18" falling in 1 hour. Total rainfall for the rain event for this rain gauge was 5.4".	11 hour(s) 8 minute(s)	Once downstream pressures decreased, the station pumps were able to keep up with flows coming into the station. -----November 13, 2020 06:27 AM-----	66,800	66,800	SSORS#202 1-T-105805	Yes
11/12/2020 10:36	503 Park Ave	Park Ave Pump Station	Elizabeth River	Chesapeake	Capacity-Weather Related	Significant wet weather caused high flows and pressures in the Chesapeake sewer system. As a result, the Park Ave PS duty pumps were unable to keep up with the flows entering the wet well. Ferebee Ave PS saw a maximum rainfall of 0.44" in 15 minutes (11/12/20 at 9:15 am), with a total of 1.36" falling in 1 hour. Total rainfall for the rain event for this rain gauge was 6.4".	3 hour(s) 22 minute(s)	Once downstream pressures decreased, the station pumps were able to keep up with flows coming into the station. -----November 13, 2020 06:33 AM-----	54,540	54,540	SSORS#202 1-T-105806	Yes

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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 (gallons)**	Amount Reaching State Waters (gallons)**	DEQ IR	Occurred in previous five years at same location
11/12/2020 10:16	5734 Chesapeake Blvd	Chesapeake Blvd Pump Station	Lafayette River via Wayne Creek	Norfolk	Capacity- Weather Related	Significant wet weather caused high flows and pressures in the Norfolk sewer system. As a result, the Chesapeake Blvd PS duty pumps were unable to keep up with the flows entering the wet well. Luxembourg Ave PS saw a maximum rainfall of 0.43" in 15 minutes (11/12/20 at 9:15 am), with a total of 1.43" falling in 1 hour. Total rainfall for the rain event for this rain gauge was 6.2".	36 hour(s) 18 minute(s)	Once downstream pressures decrease, the station pumps will be able to keep up with flows coming into the station. -----November 17, 2020 09:21 AM-----	2,400,000	2,400,000	SSORS#202 1-T-105807	Yes
11/12/2020 8:32	321 North Ave	North Ave PS	Governmen t Ditch	Newport News	Capacity- Weather Related	Significant wet weather resulted in increased system flows. Hilton School PS saw a maximum rainfall of 0.47" in 15 minutes (11/12/20 at 8:15 am), with a total of 1.31" falling in 1 hour. Total rainfall for the rain event for this rain gauge was 4.8".	11 hour(s) 8 minute(s)	Verified pump station operating properly and monitored the SSO. -----November 13, 2020 08:01 AM-----	212,275	212,275	SSORS#202 1-T-105808	Yes
11/12/2020 8:29	720 Bayshore Ln	Bayshore PS	Chesapeake Bay	Hampton	Capacity- Weather Related	Significant wet weather resulted in increased system flows. Bayshore PS saw a maximum rainfall of 0.52" in 15 minutes (11/12/20 at 8:45 am), with a total of 1.55" falling in 1 hour. Total rainfall for the rain event for this rain gauge was 5.9".	17 hour(s) 21 minute(s)	Verified pump station operating properly and monitored the SSO. -----November 13, 2020 08:07 AM-----	162,125	162,125	SSORS#202 1-T-105809	Yes
11/12/2020 9:08	Victoria Blvd & Ivy Home Road	Victoria Blvd PS	ditch to Hampton River	Hampton	Capacity- Weather Related	Significant wet weather resulted in increased system flows. Bridge St PS saw a maximum rainfall of 0.64" in 15 minutes (11/12/20 at 8:30 am), with a total of 1.39" falling in 1 hour. Total rainfall for the rain event for this rain gauge was 5.6".	18 hour(s) 27 minute(s)	Verified pump station operating properly and monitored the SSO. -----November 13, 2020 08:18 AM-----	239,785	239,785	SSORS#202 1-T-105810	Yes
11/12/2020 9:17	612 Hope Street N	Hope and Chamberlain MH	Mill Creek	Hampton	Capacity- Weather Related	Significant wet weather resulted in increased system flows. Bayshore PS saw a maximum rainfall of 0.52" in 15 minutes (11/12/20 at 8:45 am), with a total of 1.55" falling in 1 hour. Total rainfall for the rain event for this rain gauge was 5.9".	2 hour(s) 50 minute(s)	Verified pump station operating properly and monitored the SSO. -----November 13, 2020 08:23 AM-----	17,000	17,000	SSORS#202 1-T-105811	Yes

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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 (gallons)**	Amount Reaching State Waters (gallons)**	DEQ IR	Occurred in previous five years at same location
11/12/2020 9:11	3904 Chesapeake Ave	Chesapeake and Clyde Ave	James River	Hampton	Capacity- Weather Related	Significant wet weather resulted in increased system flows. Bridge St PS saw a maximum rainfall of 0.64" in 15 minutes (11/12/20 at 8:30 am), with a total of 1.39" falling in 1 hour. Total rainfall for the rain event for this rain gauge was 5.6".	26 hour(s) 9 minute(s)	Verified pump station operating properly and monitored the SSO. -----November 13, 2020 08:27 AM-----	149,275	149,275	SSORS#202 1-T-105812	Yes
11/12/2020 12:10	3748 Chesapeake Ave	Chesapeake Ave MH	James River	Hampton	Capacity- Weather Related	Significant wet weather resulted in increased system flows. Bridge St PS saw a maximum rainfall of 0.64" in 15 minutes (11/12/20 at 8:30 am), with a total of 1.39" falling in 1 hour. Total rainfall for the rain event for this rain gauge was 5.6".	23 hour(s) 10 minute(s)	Verified pump station operating properly and monitored the SSO. -----November 13, 2020 08:30 AM-----	165,800	165,800	SSORS#202 1-T-105813	Yes
1/4/2021 10:11	1298 16th Street	NF-131	Salters Creek/Che sapeake Bay	Newport News	Infrastructure	Internal crown corrosion from undocumented high point resulted in failure of 36" Reinforced Concrete Pressure pipe.	69 hour(s) 9 minute(s)	Completed temporary repair and installed equipment for containment of leakage. Site cleanup to be completed by contractor. HRSD is monitoring site conditions, bypass work is ongoing, and pipe replacement is under construction. -----January 8, 2021 04:59 PM-----	29,068,05 7	29,068,057	SSORS#202 1-T-105886	No
1/22/2021 12:15	5558 Raby Rd	VA Beach Blvd Military Hwy Ext IFM	storm sewer to Broad Creek	Norfolk	Infrastructure	Sewage was discovered near a 12-in cast iron force main. The cause of the failure was a circumferential crack.	4 hour(s) 44 minute(s)	Staff excavated to the source of the failure. A full circle clamp was installed around a circumferential crack. The site was then restored and treated with lime. Vactors were used to capture leaking sewage. -----January 25, 2021 01:19 PM-----	2,177	980	SSORS#202 1-T-105895	No
2/5/2021 10:48	550 Independen ce Blvd	Central Trunk IFM Section A	Storm sewer leading to Western Branch of the Lynnhaven River	Virginia Beach	Damage By Others	The City reported buckled pavement and sewage leaking onto the ground. When HRSD staff arrived onsite sewage was reaching the ground surface at multiple locations. Once excavated, the leak was identified as coming from a circular hole in the side of the HRSD pipe. While the cause of this is unknown, it is suspected that another utility had impacted the side of the HRSD pipe with what appears to be a drill bit - likely during the attempted installation of their utility pipe across Independence Blvd. at that location. When this occurred and by whom is still under investigation.	9 hour(s) 22 minute(s)	City and Contractor staff closed the southbound lanes to traffic and six City pump stations were placed on pump and haul operation. Mainline valves were then closed north and south of the break to isolate the section of line. Once the pipe was exposed and the hole in the pipe was discovered, a CCTV inspection of the pipeline was completed to ensure the remainder of the pipeline in the immediate vicinity of the break was in good shape. The section of pipe containing the hole was cut out and replaced. -----February 9, 2021 04:10 PM-----	281,000	281,000	SSORS#202 1-T-105903	No

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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 (gallons)**	Amount Reaching State Waters (gallons)**	DEQ IR	Occurred in previous five years at same location
2/8/2021 15:00	8973 St. George Ave.	Ocean View Via Granby St.	storm sewer to Oastes/Mason Creek	Norfolk	Infrastructure	City of Norfolk DPU called in an emergency ticket for a water leak at the intersection of W. Bay Ave and St George Ave. When HRSD locator arrived to mark the ticket, they realized it was actually sewage leaking through the pavement from the HRSD force main. Once excavated, it was determined that internal corrosion from an unvented high point in the pipeline had caused the failure.	3 hour(s) 0 minute(s)	The overflow was controlled within the excavation with a vactor and the pump and haul of eight City pump stations. The leaking section of pipe was removed and replaced, and an air vent was installed to allow accumulated air at this high point to be removed in the future. -----February 11, 2021 02:43 PM-----	900	900	SSORS#2021-T-105904	No
2/13/2021 16:45	3748 Chesapeake Ave.	Manhole at Chesapeake Ave	Chesapeake Bay	Hampton	Capacity-Weather Related	Rainfall and increased groundwater level resulted in increased system flows.	1 hour(s) 45 minute(s)	Verified pump station was operating properly and monitored the SSO. -----February 18, 2021 04:54 PM----- -	173	173	SSORS#2021-T-105907	Yes
2/15/2021 0:51	3748 Chesapeake Ave.	manhole	Chesapeake Bay	Hampton	Capacity-Weather Related	Rainfall (0.5") resulted in increased system flows.	2 hour(s) 16 minute(s)	Verified pump station was operating properly and monitored the SSO. -----February 19, 2021 02:22 PM----- -	272	272	SSORS#2021-T-105908	Yes
2/16/2021 3:47	3904 Chesapeake Ave	manhole	storm drain to Chesapeake Bay	Hampton	Capacity-Weather Related	Rainfall resulted in increased system flows. Bridge Street Tide Gate saw a maximum rainfall of 0.55" in 15 minutes (02/16/21 at 2:15 am), with a total of 0.87" falling in 1 hour.	20 hour(s) 13 minute(s)	Verified pump station was operating properly and monitored the SSO. -----February 19, 2021 08:59 PM----- -	48,655	48,655	SSORS#2021-T-105910	Yes
2/16/2021 6:30	3820 Chesapeake Ave	manhole	storm drain to Chesapeake Bay	Hampton	Capacity-Weather Related	Rainfall resulted in increased system flows. Bridge Street Tide Gate saw a maximum rainfall of 0.55" in 15 minutes (02/16/21 at 2:15 am), with a total of 0.87" falling in 1 hour.	15 hour(s) 10 minute(s)	Verified pump station was operating properly and monitored the SSO. -----February 19, 2021 09:08 PM----- -	2,402	2,402	SSORS#2021-T-105911	Yes
2/16/2021 3:45	3748 Chesapeake Avenue	manhole	storm drain to Chesapeake Bay	Hampton	Capacity-Weather Related	Rainfall resulted in increased system flows. Bridge Street Tide Gate saw a maximum rainfall of 0.55" in 15 minutes (02/16/21 at 2:15 am), with a total of 0.87" falling in 1 hour.	20 hour(s) 15 minute(s)	Verified pump station was operating properly and monitored the SSO. -----February 19, 2021 09:12 PM----- -	98,200	98,200	SSORS#2021-T-105912	Yes
2/16/2021 6:30	3816 Chesapeake Ave	manhole	storm drain to Chesapeake Bay	Hampton	Capacity-Weather Related	Rainfall resulted in increased system flows. Bridge Street Tide Gate saw a maximum rainfall of 0.55" in 15 minutes (02/16/21 at 2:15 am), with a total of 0.87" falling in 1 hour.	13 hour(s) 30 minute(s)	Verified pump station was operating properly and monitored the SSO. -----February 19, 2021 09:16 PM----- -	1,860	1,860	SSORS#2021-T-105913	Yes

Table 6-2. Detailed Listing of HRSD SSOs (July 1, 2020 to June 30, 2021)

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 (gallons)**	Amount Reaching State Waters (gallons)**	DEQ IR	Occurred in previous five years at same location
2/16/2021 6:50	4301 Kecoughtan Rd	manhole	storm drain to Chesapeake Bay	Hampton	Capacity- Weather Related	Rainfall resulted in increased system flows. Bridge Street Tide Gate saw a maximum rainfall of 0.55" in 15 minutes (02/16/21 at 2:15 am), with a total of 0.87" falling in 1 hour.	10 hour(s) 15 minute(s)	Verified pump station was operating properly and monitored the SSO. -----February 19, 2021 09:04 PM----- -	1,505	1,505	SSORS#202 1-T-105914	No
2/17/2021 10:20	4562 Southern Blvd	Independen ce Blvd PRS	drainage ditch to Thalia Creek/West ern Branch of Lynnhaven River	Virginia Beach	Infrastructure	Leak discovered near a 36-in reinforced concrete force main	4 hour(s) 10 minute(s)	Staff closed valves to isolate the affected section of force main to stop the release. The site was too wet to excavate on 2/19, so staff will return to the site early next week to locate the source of the leak and make the necessary repairs. -----February 19, 2021 10:26 PM-----	100	100	SSORS#202 1-T-105916	No
2/18/2021 13:10	3748 Chesapeake Ave	manhole	storm drain to Chesapeake Bay	Hampton	Capacity- Weather Related	Rainfall and increased ground water level resulted in increased system flows. Bridge Street Tide Gate recorded 1.38" of rainfall during this event.	39 hour(s) 20 minute(s)	Verified pump station operating properly and monitored the SSO. -----February 22, 2021 03:39 PM-----	77,775	77,775	SSORS#202 1-T-105918	Yes
2/18/2021 14:00	3904 Chesapeake Ave	manhole	storm drain to Chesapeake Bay	Hampton	Capacity- Weather Related	Rainfall and increased ground water level resulted in increased system flows. The rain gauge at Bridge Street Tide Gate recorded 1.38" of rainfall during this event.	37 hour(s) 0 minute(s)	Verified pump station operating properly and monitored the SSO. -----February 22, 2021 03:45 PM-----	15,225	15,225	SSORS#202 1-T-105919	Yes
2/18/2021 14:15	5734 Chesapeake Blvd	Chesapeake Blvd Pump Station	Lafayette River via Wayne Creek	Norfolk	Capacity- Weather Related	Duty pumps were unable to keep up with the flows entering the wet well due to recent wet weather. The Luxembourg Ave PS saw a maximum rainfall of 0.18" in 15 minutes, with a total of 0.55" falling in 1 hour. The total rainfall for the rain event for this rain gauge was 1.63".	21 hour(s) 5 minute(s)	Once downstream pressures decreased, the station pumps were able to keep up with flows coming into the station. -----February 19, 2021 10:23 PM-----	1,630,000	1,630,000	SSORS#202 1-T-105921	Yes
2/19/2021 13:40	4301 Kecoughtan Rd.	Manhole	storm drain to Chesapeake Bay	Hampton	Capacity- Weather Related	Rainfall and increased ground water level resulted in increased system flows. Bridge Street Tide Gate rain gauge recorded 1.38" of rainfall during this event.	4 hour(s) 20 minute(s)	Verified pump station operating properly and monitored the SSO. -----February 22, 2021 03:51 PM-----	690	690	SSORS#202 1-T-105926	Yes

Table 6-2. Detailed Listing of HRSD SSOs (July 1, 2020 to June 30, 2021)

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 (gallons)**	Amount Reaching State Waters (gallons)**	DEQ IR	Occurred in previous five years at same location
3/11/2021 14:40	2017 Taussig Blvd	Taussig Blvd Pump Station	ground	Norfolk	Third Party Action	An overflow occurred at the discharge manhole outside of the Taussig Pump Station. The overflow was contained to a low-lying area within greenspace. No sewage was conveyed to the stormwater system. A portion of the overflow did infiltrate into the ground. Infiltration rate was assumed when estimating the quantity not recovered. There was evidence of surcharging in downstream manholes indicating a blockage may have occurred. No evidence of debris that could have caused this overflow was found.	0 hour(s) 1 minute(s)	Staff utilized a vactor to recover sewage that was contained to the low-lying area near the manhole. The impacted area was treated with lime. Staff cleaned the downstream gravity main. No evidence of a blockage or debris that could have led to a blockage was observed. Per Telog, the overflow may have occurred between 3/10 12:55 and 3/10 10:25pm but was discovered 3/11 at 2:40pm. -----March 16, 2021 02:20 PM-----	39,500	32,000	SSORS#202 1-T-105946	No
4/19/2021 12:13	Armistead Ave. @ I-64 On-Ramp Hampton, VA	Armistead Ave. @ I-64 On-Ramp	Newmarket Creek/Southwest Branch Back River	Hampton	Infrastructure	Cast iron force main failure	6 hour(s) 17 minute(s)	Excavated to determine cause of failure and repair method. -----April 19, 2021 05:12 PM----- Exposed casing pipe and found circumferential crack and large chunk of casing pipe missing. Missing casing pipe piece found resting on force main. Location of force main failure was not found. Mobilized downstream to LaSalle Ave. @ Carolina St. and installed isolation valve. Installed temporary above ground piping from YR4032-6 to manhole for Home Depot PS. Work performed isolated all flow from the failed force main. -----April 22, 2021 03:19 PM-----	9,425	9,425	SSORS#202 1-T-105968	No
4/30/2021 11:21	1500 block of Wilroy Rd	Suffolk IFM Section V	Nansemond River via Burnetts Mill Creek	Suffolk	Damage By Others	Contractor mistakenly cut the 30-in prestressed concrete cylinder pipe located along Wilroy Road near Burnetts Mill Creek. The size of the cut is approximately 6 inches in length.	1 hour(s) 24 minute(s)	City and HRSD vactors first arrived onsite and began capturing flow. Pughsville PRS was used to reduce pressures in the force main. HRSD staff repaired the pipe by fastening a steel plate and gasket to the damage section. -----May 5, 2021 08:57 AM-----	27,000	20,500	SSORS#202 1-T-105980	No

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## 7. PLANNED ACTIVITIES FOR FY 2021

HRSD will be continuing the overall program outlined in the Consent Decree in FY 2022. 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 2022, 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 2022, HRSD may modify the network and delete and/or relocate some monitoring points.

### 7.2 Condition Assessment Plan

HRSD will continue to implement the approved Rehabilitation Action Plan.

### 7.3 Interim System Improvements

HRSD completed all required Interim System Improvements as of November 1, 2018.

### 7.4 Management, Operations, and Maintenance Program

#### 7.4.1 Implementation of MOM Program

HRSD will continue to implement its MOM Program, including MOM-related Condition Assessment activities.

#### 7.4.2 Quantitative Performance Measures

In FY 2022, 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.

### 7.5 Regional Wet Weather Management Plan

HRSD will begin implementation when the 5<sup>th</sup> Amendment is entered by the court.

### 7.6 Short Term Wet Weather Operational Plan

HRSD will continue to implement the approved plan with periodic updates.

### 7.7 SSO Emergency Response Plan

HRSD will continue to implement its approved SSO Response Plan. An annual update to the plan will be submitted.

## 7.8 Consultation with Localities

HRSD will continue to actively participate and facilitate a wide variety of consultation activities in FY 2022. These activities include:

- Periodic meetings of the Capacity Team to discuss RWWMP development and other Consent Decree issues;
- Periodic briefings of the Directors' of Utilities Committee to share progress on compliance with the Consent Decree and MOA; and
- Maintain a regional SharePoint website to collaborate with and provide documents to the regional Capacity Team.

## 7.9 Public Participation

HRSD will have an annual information meeting and publish a newsletter by the next anniversary of the Date of Entry, February 23, 2022. Information and approved plans continue to be posted to HRSD's website which is accessible to the public.

## 7.10 Reporting

HRSD will prepare a Semi-Annual Report in addition to this Annual Report in FY 2022. HRSD continues to publish post-storm analysis for qualifying storms and submit those reports to EPA/DEQ within 15 days of finalization. Additionally, the annual SSO report is included as an attachment with this submittal.

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

HRSD continues to be concerned about potential challenges in meeting schedules that could be impacted by the COVID-19 pandemic. HRSD sent a General Force Majeure Notice on March 25, 2020 identifying the potential for delays due to COVID-19. At the time no specific compliance deadlines were in immediate risk of impact but the potential to complete all Rehab Action Plan projects by the established compliance dates has been identified as a probable impact. Growing delays in the world supply chain and labor shortages in the Hampton Roads area are beginning to impact HRSD construction projects. HRSD will continue to monitor this situation and will provide specific notice for specific projects when and if there are specific force majeure assertions to be made.

Continued delay in getting final approval for the 5<sup>th</sup> amendment threatens HRSD's ability to meet early compliance dates in the final plan. More than 11 months have elapsed since HRSD provided signatures (July 24, 2020).

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

None beyond the terms of the 5<sup>th</sup> Amendment and associated Final RWWMP pending final signatures, lodging and entry by the court.

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## APPENDIX A. PROJECT CERTIFICATION FORMS

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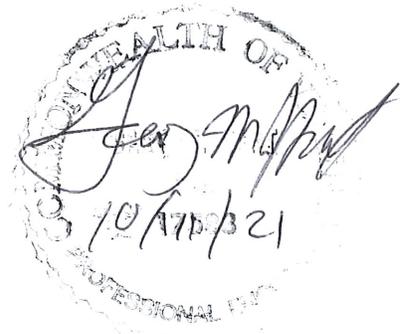
Rehabilitation Action Plan Projects  
Verification of Completion

As required by Section VIII of the Third Amended Consent Decree dated May 30, 2015, a set of Rehabilitation Action Plan projects have been identified that must be completed according to the schedule in that document. 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.

Through June 30, 2021, 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>
CE-R2	CE011700	Western Trunk Force Main Replacement	\$3,259,561	May 4, 2021
NP-R4	NP011300	Suffolk Interceptor Force Main Section 1 Main Line Valving Replacement	\$2,046,080	May 3, 2021

Hereby verified by



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



September 22, 2021

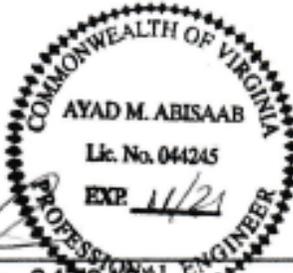
Rehabilitation Action Plan Projects  
Verification of Completion

As required by Section VIII of the Third Amended Consent Decree dated May 30, 2015, a set of Rehabilitation Action Plan projects have been identified that must be completed according to the schedule in that document. 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.

Through April 30, 2021 the following projects has 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>
GN-R1	GN-121-3	Manhole Rehabilitation/ Replacement Phase I	\$9,582,732	April 30, 2021
JR-R2	JR-121	Huxley to Middle Ground Force Main Extension	\$5,065,258	February 10, 2021

Hereby verified by



Ayad M. Abisaab, PE (No. 044245)  
Chief of Design and Construction, North Shore  
Hampton Roads Sanitation District

APPENDIX B. REGIONAL SS SYSTEM CAPACITY RELATED SSOS

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Table B-1. Regional SS System Capacity Related SSOs (July 1, 2020 to June 30, 2021)

Date and Time of Incident	Location	Sewer System Component	Jurisdiction	SSORS ID	Description of Incident from SSORS	Corrective Action from SSORS	Quantity from SSORS (gallons)	Comments* and Response
8/4/2020 7:35	7195 Merrimac Trail	Lift Station 5-4	James City	105704	Tropical Storm Isaias - Heavy Rain - 3.5"-4.5" inches in 12 hours	When the rain tapered off, extraneous flow reduced and pumps were able to keep up with the flow. -----August 4, 2020 04:52 PM-----	16,800	Tropical Storm Isaias covered the area with over 4 inches of rain.
8/4/2020 5:14	5349 Rockingham Drive	Lift Station 6-1	James City	105705	Tropical Storm Isaias - Heavy Rain - 3.5"-4.5" inches in 12 hour	Pump and hauled at lift station. When the rain tapered off, pressures in the system dropped and extraneous flow reduced and at 10:03 am the pumps were able to keep up with the flow. -----August 4, 2020 04:59 PM-----	10,800	Tropical Storm Isaias covered the area with over 4 inches of rain.
8/4/2020 7:36	8794 Six Mount Zion Road	Lift Station 9-7	James City	105707	Tropical Storm Isaias - Heavy Rain - 3.5"-4.5" inches in 12 hours	When the rain tapered off, pressures in the system dropped and extraneous flow reduced and at 9:02 AM the pumps were able to keep up with the flow. ----August 4, 2020 05:04 PM-----	4,300	Tropical Storm Isaias covered the area with over 4 inches of rain.
8/4/2020 5:41	115 Depot Street	Lift Station 6-8	James City	105708	Tropical Storm Isaias - Heavy Rain - 3.5"-4.5" inches in 12 hours	Pump & Hauled at the Lift station. When the rain tapered off, pressures in the system dropped and extraneous flow reduced and at 10:30 AM the pumps were able to keep up with the flow. -----August 4, 2020 05:11 PM-----	30,000	Tropical Storm Isaias covered the area with over 4 inches of rain.
8/4/2020 7:15	179 Albemarle Drive	Lift Station 4-8	James City	105709	Tropical Storm Isaias - Heavy Rain - 3.5"-4.5" inches in 12 hours	When the rain tapered off, pressures in the system dropped and extraneous flow reduced and at 8:15 AM the pumps were able to keep up with the flow. ----August 4, 2020 05:16 PM-----	2,600	Tropical Storm Isaias covered the area with over 4 inches of rain.
8/4/2020 15:30	3123 Petre Ct. Chesapeake, VA	PS-43	Chesapeake	105710	12 hour power outage due to tropical storm. Station began to overflow from wet well. Generator truck could not produce 400a required for the station. Vac truck could not access the station due to residential cars.	Deployed bypass pump to pump down station for long term until power is restored. Cleaned area with HTH. -----August 4, 2020 06:37 PM-----	900	Description attributes power failure as the cause.
8/4/2020 5:14	4820 Wellesly Blvd	Lift Station 6-2	James City	105711	Tropical Storm Isaias - Heavy Rain - 3.5"-4.5" inches in 12 hour	Pump and hauled at liftstation. When the rain tapered off, pressures in the system dropped and extraneous flow reduced and at 9:14 AM the pumps were able to keep up with the flow. -----August 5, 2020 11:44 AM--- --	13,600	Tropical Storm Isaias covered the area with over 4 inches of rain.

Table B-1. Regional SS System Capacity Related SSOs (July 1, 2020 to June 30, 2021)

Date and Time of Incident	Location	Sewer System Component	Jurisdiction	SSORS ID	Description of Incident from SSORS	Corrective Action from SSORS	Quantity from SSORS (gallons)	Comments* and Response
8/4/2020 21:30	3123 Petre Ct. Chesapeake, VA	PS-43	Chesapeake	105712	Extended power outage due to TS Isaias. Pumps inoperative and station's wet well overflowed. Generator truck amperage did not mate with station. Vac truck could not access location due to POV's obstructed station access.	Set up 6-inch bypass pump to run until power is restored. Cleaned up site with HTH. -----August 5, 2020 03:07 PM-----	400	Description attributes power failure as the cause.
8/6/2020 8:55	1805 ROCKWOOD DR	MILLVILLE	Chesapeake	105713	UNTRETTED DOMESTIC SEWAGE SPILLED FROM TWO CITY OF CHESAPEAKE MANHLOES AND RAN INTO THE DITCH. THIS ACTION OCCURRED BECAUSE OF THE TROPICAL STORM ISAIAS. THE STORM CAUSED A SERGE AND BLEW A FUES AT THE POWER POLE.. PUMP STATION UN ABLE TO RUN ON ITS OWN.	DOMINION POWER RECONNECTED FUSE, PUMP STATION MECHANICS RESTARTED PUMP STATION #250. AND CLEAN UP CREW WASHED AREA DOWN WITH WATER AND HTH -----August 6, 2020 12:29 PM-----	550	Description attributes power failure as the cause.
8/6/2020 21:06	743 Providence Rd. Chesapeake, VA	PS=107	Chesapeake	105715	Heavy downpour caused increased flow and lead wet well overflow. SCADA did not report HWBU.	Reset starter on control panel, cleaned area with HTH. Having electrician check HWBU float circuitry. -- ---August 7, 2020 09:27 AM-----	500	
8/15/2020 12:00	5207 Chestnut Ave Newport News, VA	Pump Station #4	Newport News	105723	severe rain event caused minor flooding in area and exceeded capacity of collector system and pump station	Bypass pump used at pump station to maintain flow. Clean any visible debris in spill area. SSO documented in Cityworks under WO#406764 ----- August 16, 2020 10:41 AM-----	5,000	Significant wet weather event covering the area with over 2.75 inches of rain
8/15/2020 17:45	1242 Gatewood Road	1242 Gatewood Road	Newport News	105724	SSO at PS HRSD218 due to capacity issue.	Picked up any visible debris. SSO documented in Cityworks under SR# 576692 and WO# 406762 ----- August 16, 2020 10:47 AM----- -----August 16, 2020 10:59 AM-----	11,875	Significant wet weather event covering the area with over 2.75 inches of rain
8/15/2020 19:01	7113 Merrimac Trail	Lift Station 5-4	James City	105725	Heavy Rain -High intensity at times, totaling between 2.67"-4.44" inches in 24 hours	When the rain tapered off, extraneous flow reduced and pumps were able to keep up with the flow. ----- August 16, 2020 01:00 PM-----	47,550	Significant wet weather event covering the area with over 2.75 inches of rain
8/15/2020 19:37	122A Watford Lane	Lift Station 4-1	James City	105726	Heavy Rain - 3" inches in 12 hours. Spilled twice during incident.	When the rain tapered off, pressures in the system dropped and extraneous flow reduced and at 9:13 PM the pumps were able to keep up with the flow. ---- -August 16, 2020 01:09 PM-----	1,170	Significant wet weather event covering the area with over 2.75 inches of rain

Table B-1. Regional SS System Capacity Related SSOs (July 1, 2020 to June 30, 2021)

Date and Time of Incident	Location	Sewer System Component	Jurisdiction	SSORS ID	Description of Incident from SSORS	Corrective Action from SSORS	Quantity from SSORS (gallons)	Comments* and Response
8/15/2020 20:52	8794 Old Stage Road	Lift Station 9-7	James City	105727	Heavy Rain, High intensity- 1.71" inches in 12 hours	When the rain tapered off, pressures in the system dropped and extraneous flow reduced and at 9:47 pm the pumps were able to keep up with the flow. ---- August 16, 2020 01:30 PM----- August 16, 2020 02:05 PM----	3,400	Significant wet weather event covering the area with over 2.75 inches of rain
8/15/2020 9:17	115 Depot Street	Lift Station 6-8	James City	105728	Heavy Rain, High intensity- 1.71" inches in 12 hours	When the rain tapered off, pressures in the system dropped and extraneous flow reduced and at 10:12 PM the pumps were able to keep up with the flow. ---- -August 16, 2020 01:54 PM----- August 16, 2020 02:04 PM----	8,740	Significant wet weather event covering the area with over 2.75 inches of rain
8/15/2020 19:04	109 W Kingswood Drive	Lift Station 4-3	James City	105729	Heavy Rain - 4.67 inches in 24 hours	When the rain tapered off, extraneous flow reduced and at 10:08 PM the pumps were able to keep up with the flow. ----August 16, 2020 02:02 PM----	4,490	Significant wet weather event covering the area with over 2.75 inches of rain
8/14/2020 18:35	174 Forest Heights Road	Lift Station 6-2	James City	105730	Heavy Rain - 2.68 inches in 24 hours	When the rain tapered off, pressures in the system dropped and extraneous flow reduced and at 9:16 pm the pumps were able to keep up with the flow. Pump and Hauled. ----August 16, 2020 02:12 PM----- August 17, 2020 10:15 AM----	25,900	Significant wet weather event covering the area with over 2.75 inches of rain
8/15/2020 17:42	174 Forest Heights Road	Lift Station 6-2	James City	105731	Heavy Rain - 2.11 inches in 12 hours	When the rain tapered off, pressures in the system dropped and extraneous flow reduced and at 11:15 pm the pumps were able to keep up with the flow. Pump and Hauled ----August 16, 2020 02:16 PM----- August 17, 2020 10:16 AM----	29,470	Significant wet weather event covering the area with over 2.75 inches of rain
8/14/2020 18:46	5349 Rockingham Drive	1-Jun	James City	105732	Heavy Rain - 2.68 inches in 24 hours	When the rain tapered off, pressures in the system dropped and extraneous flow reduced and at 8:13 pm the pumps were able to keep up with the flow. Pump and Hauled ----August 16, 2020 02:44 PM----- August 17, 2020 10:17 AM----	5,050	Significant wet weather event covering the area with over 2.75 inches of rain
8/15/2020 17:39	220A The Maine	Lift Station 1-8	James City	105734	Heavy Rain - 4.44 inches in 13 hours	When the rain tapered off, extraneous flow reduced and at 11:08 pm the pumps were able to keep up with the flow. ----August 16, 2020 02:53 PM----	21,450	Significant wet weather event covering the area with over 2.75 inches of rain
8/15/2020 19:30	4817 Hickory Signpost Road	Lift Station 3-6	James City	105735	Heavy Rain - 2 inches in 13 hours after 1 inch of rain on the 14th. Spilled twice during incident.	When the rain tapered off, extraneous flow reduced and at 8:46 pm the pumps were able to keep up with the flow. ----August 16, 2020 03:03 PM----	13,620	Significant wet weather event covering the area with over 2.75 inches of rain

Table B-1. Regional SS System Capacity Related SSOs (July 1, 2020 to June 30, 2021)

Date and Time of Incident	Location	Sewer System Component	Jurisdiction	SSORS ID	Description of Incident from SSORS	Corrective Action from SSORS	Quantity from SSORS (gallons)	Comments* and Response
8/15/2020 17:44	4888 John Tyler Highway	Lift Station 3-8	James City	105736	Heavy Rain - 2 inches in 13 hours after 1 inch of rain on the 14th	When the rain tapered off, extraneous flow reduced and at 12:11 am the pumps were able to keep up with the flow. -----August 16, 2020 03:09 PM-----	39,790	Significant wet weather event covering the area with over 2.75 inches of rain
8/14/2020 20:30	4888 John Tyler Highway	Lift Station 3-8	James City	105737	Heavy Rain - Between 0.67 and 1.91 inches of rain	When the rain tapered off, extraneous flow reduced and at 10:56 pm the pumps were able to keep up with the flow. -----August 16, 2020 03:17 PM-----	14,600	Significant wet weather event covering the area with over 2.75 inches of rain
8/15/2020 17:18	179 Albemarle Drive	Lift Station 4-8	James City	105738	Heavy Rain - 4.68" inches in 24 hours. Spilled twice during incident.	When the rain tapered off, pressures in the system dropped and extraneous flow reduced and at 9:46 PM the pumps were able to keep up with the flow. ---- -August 17, 2020 07:50 AM-----	8,410	Significant wet weather event covering the area with over 2.75 inches of rain
8/15/2020 19:44	430 Hempstead Road	Lift Station 1-5	James City	105739	Heavy Rain - 5.1" inches in 2 days. Area flooded and the manholes were underwater.	When the rain tapered off, pressures in the system dropped and extraneous flow reduced and at 9:10 PM the pumps were able to keep up with the flow. ---- -August 17, 2020 09:16 AM-----	106,470	Significant wet weather event covering the area with over 2.75 inches of rain
8/16/2020 14:00	99 Patrick Henry Dr	PS # 7	Williamsburg	105742	During heavy rain event pump station could not pump into force main	Pumps were monitored until normal operations resumed -----August 17, 2020 10:20 AM-----	-1	Significant wet weather event covering the area with over 2.75 inches of rain
8/16/2020 18:00	76z Carlton Ct	PS # 9	Williamsburg	105743	During heavy rain event pump station could not pump into force main	Pumps were monitored until normal operations resumed -----August 17, 2020 10:25 AM-----	-1	Significant wet weather event covering the area with over 2.75 inches of rain
8/15/2020 14:35	125 Winder Rd	Kings Villa Pump Station	York	105744	Overflow due to storm event.	Pump and haul. -----August 17, 2020 03:31 PM-----	25,000	Significant wet weather event covering the area with over 2.75 inches of rain
9/9/2020 10:30	1594 Jamestown Road	Jamestown Road Bridge	James City	105753	Heavy Rain - 4 inches in 12 hours.	When the rain tapered off, extraneous flow reduced and at 2:30 PM the pipe was able to handle the flow. -----September 10, 2020 01:33 PM-----	11,750	Significant wet weather event covering the area with over 2.25 inches of rain

Table B-1. Regional SS System Capacity Related SSOs (July 1, 2020 to June 30, 2021)

Date and Time of Incident	Location	Sewer System Component	Jurisdiction	SSORS ID	Description of Incident from SSORS	Corrective Action from SSORS	Quantity from SSORS (gallons)	Comments* and Response
9/9/2020 11:53	179 Albemarle Drive	Lift Station 4-8	James City	105754	Heavy Rain - 4 inches in 12 hours.	When the rain tapered off, pressures in the system dropped and extraneous flow reduced and at 12:42 pm the pumps were able to keep up with the flow. ---- -September 10, 2020 01:50 PM-----	2,900	Significant wet weather event covering the area with over 2.25 inches of rain
9/9/2020 14:08	174 Forest Heights Road	Lift Station 6-2	James City	105755	Heavy Rain - 4 inches in 12 hours	When the rain tapered off, pressures in the system dropped and extraneous flow reduced and at 2:36 pm the pumps were able to keep up with the flow. ---- September 10, 2020 01:49 PM-----	2,750	Significant wet weather event covering the area with over 2.25 inches of rain
9/9/2020 12:03	4888 John Tyler Highway	Lift Station 3-8	James City	105756	Heavy Rain - 4 inches in 12 hours	When the rain tapered off, extraneous flow reduced and at 12:03 PM the pumps were able to keep up with the flow. ----- September 10, 2020 01:55 PM-----	4,300	Significant wet weather event covering the area with over 2.25 inches of rain
9/11/2020 20:03	115 Depot Street	Lift Station 6-8	James City	105759	Heavy Rain, High intensity- 2"-3" inches in 6 hours	When the rain tapered off, pressures in the system dropped and extraneous flow reduced and at 9:57 PM the pumps were able to keep up with the flow. ---- -September 14, 2020 02:03 PM-----	10,070	Significant wet weather event covering the area with over 2.25 inches of rain
9/11/2020 21:25	5349 Rockingham Drive	Lift Station 6-1	James City	105760	Heavy Rain, High intensity- 2"-3" inches in 6 hours	When the rain tapered off, pressures in the system dropped and extraneous flow reduced and at 9:25 pm the pumps were able to keep up with the flow. Pump and Hauled ---- September 14, 2020 02:07 PM-----	1,065	Significant wet weather event covering the area with over 2.25 inches of rain
9/11/2020 20:15	174 Forest Heights Road	LS 6-2	James City	105761	Heavy Rain, High intensity- 2"-3" inches in 6 hours	When the rain tapered off, pressures in the system dropped and extraneous flow reduced and at 8:51 pm the pumps were able to keep up with the flow. ---- September 14, 2020 02:11 PM-----	3,230	Significant wet weather event covering the area with over 2.25 inches of rain
9/18/2020 3:12	7113 Merrimac Trail	Lift Station 5-4	James City	105764	Heavy Rain - totaling between 3 inches in 24 hours	When the rain tapered off, extraneous flow reduced and pumps were able to keep up with the flow. ---- September 18, 2020 09:00 AM-----	25,420	Significant wet weather event covering the area with over 3.5 inches of rain
9/18/2020 4:11	4888 John Tyler Highway	Lift Station 3-8	James City	105765	Heavy Rain, 3 inches in 24 hours	When the rain tapered off, extraneous flow reduced and the pumps were able to keep up with the flow. --- --September 18, 2020 09:12 AM-----	4,000	Significant wet weather event covering the area with over 3.5 inches of rain

Table B-1. Regional SS System Capacity Related SSOs (July 1, 2020 to June 30, 2021)

Date and Time of Incident	Location	Sewer System Component	Jurisdiction	SSORS ID	Description of Incident from SSORS	Corrective Action from SSORS	Quantity from SSORS (gallons)	Comments* and Response
9/18/2020 3:58	2351 W ISLAND RD	Lift Station 8-4	James City	105766	Heavy Rain, 3.48 inches in 24 hours	When the rain tapered off, extraneous flow reduced and the pumps were able to keep up with the flow. --- --September 18, 2020 09:38 AM----	1,570	Significant wet weather event covering the area with over 3.5 inches of rain
9/18/2020 4:47	651 Turlington Rd.	Turlington Road	Suffolk	105769	PS 162 failed to operate normal due high force main pressure. Staff staged an emergency bypass pump on site, but it was not able to overcome the force main pressure. The average rainfall amount as collected from 12 rain gauges throughout the City between 9/17/2020 and 9/18/2020 was 4.74" with the 24 hour peak of 4.65". Based on the City of Suffolk rain data, the rain event is being identified as a 5-year event 24 hour event. The rain event that occurred from 9/17/2020 through 9/18/2020 was a remnant from Tropical Storm Sally.	PS 162 is back in normal operation. The force main pressure is back where the station and bypass pump can operate normal. -----September 18, 2020 01:02 PM-----	500	Significant wet weather event covering the area with over 4 inches of rain
9/18/2020 3:42	Garfield Ave.	Boston	Suffolk	105770	PS 004 failed to operate normal due to high force main pressure. Staff did not observe this overflow, but Telog data indicates that an overflow occurred. The average rainfall amount as collected from 12 rain gauges throughout the City between 9/17/2020 and 9/18/2020 was 4.74" with the 24 hour peak of 4.65". Based on the City of Suffolk rain data, the rain event is being identified as a 5-year event 24 hour event. The rain event that occurred from 9/17/2020 through 9/18/2020 was a remnant from Tropical Storm Sally.	PS 004 is back in normal operation. The force main pressure are back where the pumps can operate normal. -----September 18, 2020 01:28 PM-----	16,200	Significant wet weather event covering the area with over 4 inches of rain
9/18/2020 4:17	216 Dumville Lane	Constance Rd. Sanitary Sewer	Suffolk	105779	PS 146 failed to operate normal due to high force main pressure. Staff staged an emergency pump on site, but it could not overcome the force main pressure. Telog data indicate that an overflow occurred. Staff was not able to observe the overflow site due to heavy vegetation.	PS 146 is back in normal operation. The force main pressure is back where the pumps can operate normal. -----September 18, 2020 04:32 PM-----	38,500	Significant wet weather event covering the area with over 4 inches of rain
9/18/2020 5:30	743 Providence Rd Chesapeake, VA	PS-107	Chesapeake	105780	Heavy rainfall within a short period of time throughout city(TS Sally). Both station pumps running but could not keep up with HRSD pressure, flooding and I&I.	HRSD pressure decreased and installed a bypass pump to assist station to get out over head pressure. Cleaned area with HTH. -----September 18, 2020 04:42 PM-----	12,000	Significant wet weather event covering the area with over 4 inches of rain

Table B-1. Regional SS System Capacity Related SSOs (July 1, 2020 to June 30, 2021)

Date and Time of Incident	Location	Sewer System Component	Jurisdiction	SSORS ID	Description of Incident from SSORS	Corrective Action from SSORS	Quantity from SSORS (gallons)	Comments* and Response
9/30/2020 0:12	7113 Merrimac Trail	Lift Station 5-4	James City	105788	Heavy Rain/High Intensity - totaling 2+ inches in 12 hours	When the rain tapered off, extraneous flow reduced and pumps were able to keep up with the flow. ----- September 30, 2020 11:12 AM-----	22,500	
9/30/2020 0:05	115 Depot Street	Lift Station 6-8	James City	105789	Heavy Rain/High Intensity/High forcemain pressures - 1.76 inches of rainfall	When the rain tapered off, pressures in the system dropped and extraneous flow reduced and the pumps were able to keep up with the flow. -----September 30, 2020 11:19 AM-----	1,960	
11/12/2020 10:45	2007 Atlantic Ave, Chesapeake, VA	Hempel St	Chesapeake	105803	10" cast iron force main break from PS009.	Shut down PS009 and closed valve at HRSD force main. Cleaned roadway. Put down HTH and washed street. Repairs will be made to force main and station will be put back online. Pump and haul is in progress and will continue until repairs are completed. Heavy rains and high head pressures. -----November 12, 2020 10:13 PM-----	20,250	Description attributes infrastructure as the cause.
11/12/2020 10:00	750 OLD LUCAS CREEK RD NEWPORT NEWS, VA	HRSD PS 216	Newport News	105815	PUMP STATION MALFUNCTION AT HRSD 216. SURCHARGED GRAVITY SYSTEM TO OVERFLOW.	HRSD STATION MALFUNCTION REPAIRED, NORMAL FLOW RESUMED -----November 13, 2020 09:29 AM----- SSO documented under Cityworks WO# 414383 -----November 17, 2020 11:19 AM-----	24,000	Significant wet weather event covering the area with over 4 inches of rain
11/12/2020 10:00	1240 Gatewood Rd.	HRSD218	Newport News	105816	Overflow due to HRSD218 pump station beyond capacity.	None -----November 13, 2020 09:41 AM----- SSO documented in Cityworks WO#414322 -----November 17, 2020 11:23 AM-----	198,000	Significant wet weather event covering the area with over 4 inches of rain
11/12/2020 10:00	8 LARCHMONT CRES. NEWPORT NEWS, VA	PUMP STATION #12	Newport News	105817	SEVERE RAIN EVENT ELEVATED HEAD PRESSURE MAKING PUMPS INEFFECTIVE.	SET UP BYPASS PUMP TO CONVEY SEWAGE ONCE HEAD PRESSURES WOULD ALLOW PUMPS TO FLOW -----November 13, 2020 09:52 AM----- SSO documented in Citywork WO#414314 --- --November 17, 2020 11:36 AM-----	32,000	Significant wet weather event covering the area with over 4 inches of rain
11/12/2020 11:05	100 CENTRAL PKWY NEWPORT NEWS, VA	Pump Station #77	Newport News	105818	SEVERE RAIN EVENT ELEVATED PUMP STATION FLOWS. PUMPS COULD NOT MAINTAIN AND OVERFLOWED GRAVITY SYSTEM	CONTINUE TO PUMP WITH STATION PUMPS UNTIL FLOWS WERE MAINTAINED AND GRAVITY SYSTEM WAS NORMAL LEVEL -----November 13, 2020 10:10 AM----- SSO documented in Citywork WO#414381 -----November 17, 2020 11:38 AM-----	6,250	Significant wet weather event covering the area with over 4 inches of rain

Table B-1. Regional SS System Capacity Related SSOs (July 1, 2020 to June 30, 2021)

Date and Time of Incident	Location	Sewer System Component	Jurisdiction	SSORS ID	Description of Incident from SSORS	Corrective Action from SSORS	Quantity from SSORS (gallons)	Comments* and Response
11/12/2020 10:30	321 Center Avenue	HRSD207	Newport News	105819	SSO due to HRSD207 Pump station beyond capacity. SSO documented on SR#585947 and WO# 414322.	None -----November 13, 2020 10:14 AM----- SSO documented in Cityworks WO# 414322 ----- November 17, 2020 11:49 AM-----	94,500	Significant wet weather event covering the area with over 4 inches of rain
11/12/2020 10:00	Teach St & Shell Rd	FA-102	Hampton	105820	Sewer overflow based on heavy rain event	System Caught up -----November 13, 2020 12:04 PM-----	33,250	Significant wet weather event covering the area with over 4 inches of rain
11/12/2020 10:45	Chamberlain & Hope St	FA-225	Hampton	105821	Heavy rain event	HRSD station caught up. -----November 13, 2020 12:10 PM-----	32,250	Significant wet weather event covering the area with over 4 inches of rain
11/12/2020 10:53	536 Settlers Landing	FA-225	Hampton	105822	Overflow based on heavy rain event	Station caught up -----November 13, 2020 12:14 PM-----	37,400	Significant wet weather event covering the area with over 4 inches of rain
11/12/2020 11:19	49 Orchard Av	FA-208	Hampton	105823	Overflow based on heavy rain event and hrds station being high	HRSD Station is catching up with the flows ----- November 13, 2020 12:35 PM-----	32,000	Significant wet weather event covering the area with over 4 inches of rain
11/12/2020 10:18	49 Wimbledon Terrace	FA-131	Hampton	105824	Heavy rain event	System Caught up with flows -----November 13, 2020 12:38 PM-----	34,225	Significant wet weather event covering the area with over 4 inches of rain
11/12/2020 9:30	King St & MacAlva	FA-217	Hampton	105825	Overflow based on heavy rain event	Rain ceased and system -----November 13, 2020 12:41 PM-----	3,000	Significant wet weather event covering the area with over 4 inches of rain
11/12/2020 10:15	17 Freeman Drive	FA-226	Hampton	105826	Heavy rain event caused the HRSD station to go on high water and manhole in front of station overflowed	Station caught up -----November 13, 2020 12:47 PM-----	2,625	Significant wet weather event covering the area with over 4 inches of rain

Table B-1. Regional SS System Capacity Related SSOs (July 1, 2020 to June 30, 2021)

Date and Time of Incident	Location	Sewer System Component	Jurisdiction	SSORS ID	Description of Incident from SSORS	Corrective Action from SSORS	Quantity from SSORS (gallons)	Comments* and Response
11/12/2020 10:10	SALT PONDS	FA-224	Hampton	105827	Heavy rain event caused the HRSD station on Silver Isles to go high	System caught up with the flows -----November 13, 2020 12:51 PM-----	35,200	Significant wet weather event covering the area with over 4 inches of rain
11/12/2020 20:22	5109 Goldsboro	FA-219	Hampton	105828	System up due to heavy rain event	System caught up with flows -----November 13, 2020 12:55 PM-----	18,050	Significant wet weather event covering the area with over 4 inches of rain
11/12/2020 15:16	410 caltapa	FA-208	Hampton	105829	over flow based on heavy rain event	system caught up -----November 13, 2020 01:02 PM-----	26,050	Significant wet weather event covering the area with over 4 inches of rain
11/12/2020 20:43	briarwood dr	briarwood	Hampton	105830	over due to heavy rain event	system caught up with flow -----November 13, 2020 01:08 PM-----	19,100	Significant wet weather event covering the area with over 4 inches of rain
11/12/2020 10:48	806A East Riverview Drive	Riverview # 2	Suffolk	105831	PS 003 failed to operate normal due to a capacity issue during a heavy rain event. PS 146 which is the terminal station that PS 003 lifts into was faulting due to high head conditions. PS 003 overflowed as a result of this issue. This overflow was not observed visually but was determined to likely have occurred based on a review of Telog data. The Telog data continues to be reviewed along with completion of calculations of an estimated volume of overflow. The report will be revised once the estimation has been completed. The average rainfall amount as collected from 14 rain gauges throughout the City between 11/12/2020 and 11/13/2020 was 6.4". Based on the City of Suffolk rain data, the rain event is being identified as a 10-year event. The rain event that occurred from 11/12/2020 through 11/13/2020 was a remnant from Tropical Storm Eta. This SSO was not visually observed, but may have occurred based on a review of pump station wet well data and the rim elevation of the	PS 146 force main pressure has returned back to normal. PS 003 is back in normal operation. ----- November 13, 2020 01:43 PM-----	207,497.79	Significant wet weather event covering the area with over 5 inches of rain

Table B-1. Regional SS System Capacity Related SSOs (July 1, 2020 to June 30, 2021)

Date and Time of Incident	Location	Sewer System Component	Jurisdiction	SSORS ID	Description of Incident from SSORS	Corrective Action from SSORS	Quantity from SSORS (gallons)	Comments* and Response
					lowest gravity sewer structure. The estimate is based on an analysis of pump station flow data during the event. Based on rainfall data collected from rain gauges within the City of Suffolk, the weather event appears to have been in excess of a 10-year event resulting in highly diluted flows.			
11/12/2020 9:08	Garfield Ave.	Boston	Suffolk	105832	PS 004 failed to operate normal due to high head conditions during a heavy rain event. This incident resulted in the manhole on Garfield Avenue overflowing. This overflow was not observed visually but was determined to likely have occurred based on a review of Telog data. The Telog data continues to be reviewed along with completion of calculations of an estimated volume of overflow. The report will be revised once the estimation has been completed. The average rainfall amount as collected from 14 rain gauges throughout the City between 11/12/2020 and 11/13/2020 was 6.4". Based on the City of Suffolk rain data, the rain event is being identified as a 10-year event. The rain event that occurred from 11/12/2020 through 11/13/2020 was a remnant from Tropical Storm Eta. This SSO was not visually observed, but may have occurred based on a review of pump station wet well data and the rim elevation of the lowest gravity sewer structure. The estimate is based on an analysis of pump station flow data during the event. Based on rainfall data collected from rain gauges within the City of Suffolk, the weather event appears to have been in excess of a 10-year event resulting in highly diluted flows.	The force main conditions have returned back to normal. PS 004 is back in normal operation. ----- November 13, 2020 01:56 PM-----	110,894	Significant wet weather event covering the area with over 5 inches of rain
11/13/2020 1:15	Garfield Avenue	Boston	Suffolk	105833	PS 004 failed to operate normal due to high head conditions during a heavy rain event. This incident resulted in the manhole on Garfield Avenue overflowing. This overflow was not observed visually but was determined to likely have occurred based on a review of Telog data. The Telog data continues to be reviewed along with completion of calculations of an estimated volume of overflow. The report will be	PS 004 force main condition has returned back to normal. PS 004 is back in normal operation. ----- November 13, 2020 02:02 PM-----	402,264	Significant wet weather event covering the area with over 5 inches of rain

Table B-1. Regional SS System Capacity Related SSOs (July 1, 2020 to June 30, 2021)

Date and Time of Incident	Location	Sewer System Component	Jurisdiction	SSORS ID	Description of Incident from SSORS	Corrective Action from SSORS	Quantity from SSORS (gallons)	Comments* and Response
					<p>revised once the estimation has been completed. The average rainfall amount as collected from 14 rain gauges throughout the City between 11/12/2020 and 11/13/2020 was 6.4". Based on the City of Suffolk rain data, the rain event is being identified as a 10-year event. The rain event that occurred from 11/12/2020 through 11/13/2020 was a remnant from Tropical Storm Eta. This SSO was not visually observed, but may have occurred based on a review of pump station wet well data and the rim elevation of the lowest gravity sewer structure. The estimate is based on an analysis of pump station flow data during the event. Based on rainfall data collected from rain gauges within the City of Suffolk, the weather event appears to have been in excess of a 10-year event resulting in highly diluted flows.</p>			
11/12/2020 10:31	Northgate Ln.	PS 012	Suffolk	105834	<p>PS 012 failed to operate normal due to high head conditions during a rain event. This incident resulted in the manhole on Northgate Ln. overflowing. This overflow was not observed visually but was determined to likely have occurred based on a review of Telog data. The Telog data continues to be reviewed along with completion of calculations of an estimated volume of overflow. The report will be revised once the estimation has been completed. The average rainfall amount as collected from 14 rain gauges throughout the City between 11/12/2020 and 11/13/2020 was 6.4". Based on the City of Suffolk rain data, the rain event is being identified as a 10-year event. The rain event that occurred from 11/12/2020 through 11/13/2020 was a remnant from Tropical Storm Eta. This SSO was not visually observed, but may have occurred based on a review of pump station wet well data and the rim elevation of the lowest gravity sewer structure. The estimate is based on an analysis of pump station flow data during the event. Based on rainfall data collected from rain gauges within the City of Suffolk, the weather event appears to have been in excess of a 10-year event resulting</p>	<p>PS 012 is back in normal operation. The force main pressure has returned back to normal. -----November 13, 2020 02:10 PM-----</p>	58,338	<p>Significant wet weather event covering the area with over 5 inches of rain</p>

Table B-1. Regional SS System Capacity Related SSOs (July 1, 2020 to June 30, 2021)

Date and Time of Incident	Location	Sewer System Component	Jurisdiction	SSORS ID	Description of Incident from SSORS	Corrective Action from SSORS	Quantity from SSORS (gallons)	Comments* and Response
					in highly diluted flows.			
11/12/2020 10:01	2273 Wilroy Rd.	Wilroy Road	Suffolk	105835	PS 031 failed to operate normal due to high head conditions during a heavy rain event. This incident resulted in the manhole on Wilroy Road overflowing. This overflow was not observed visually but was determined to likely have occurred based on a review of Telog data. The Telog data continues to be reviewed along with completion of calculations of an estimated volume of overflow. The report will be revised once the estimation has been completed. The average rainfall amount as collected from 14 rain gauges throughout the City between 11/12/2020 and 11/13/2020 was 6.4". Based on the City of Suffolk rain data, the rain event is being identified as a 10-year event. The rain event that occurred from 11/12/2020 through 11/13/2020 was a remnant from Tropical Storm Eta. This SSO was not visually observed, but may have occurred based on a review of pump station wet well data and the rim elevation of the lowest gravity sewer structure. The estimate is based on an analysis of pump station flow data during the event. Based on rainfall data collected from rain gauges within the City of Suffolk, the weather event appears to have been in excess of a 10-year event resulting in highly diluted flows.	PS 031 is back in normal operation. The force main pressure has returned back to normal. -----November 13, 2020 02:17 PM-----	7,893	Significant wet weather event covering the area with over 5 inches of rain
11/12/2020 10:22	417 Keaton Way	Berkshire Meadows	Suffolk	105836	PS 037 failed to operate normal due to high head conditions during a heavy rain event. This incident resulted in the manhole on Keaton Way overflowing. This overflow was not observed visually but was determined to likely have occurred based on a review of Telog data. The Telog data continues to be reviewed along with completion of calculations of an estimated volume of overflow. The report will be revised once the estimation has been completed. The average rainfall amount as collected from 14	PS 037 is back in normal operation. PS 037 force main pressure has returned back to normal. ----- November 13, 2020 02:37 PM-----	14,730	Significant wet weather event covering the area with over 5 inches of rain

Table B-1. Regional SS System Capacity Related SSOs (July 1, 2020 to June 30, 2021)

Date and Time of Incident	Location	Sewer System Component	Jurisdiction	SSORS ID	Description of Incident from SSORS	Corrective Action from SSORS	Quantity from SSORS (gallons)	Comments* and Response
					rain gauges throughout the City between 11/12/2020 and 11/13/2020 was 6.4". Based on the City of Suffolk rain data, the rain event is being identified as a 10-year event. The rain event that occurred from 11/12/2020 through 11/13/2020 was a remnant from Tropical Storm Eta. This SSO was not visually observed, but may have occurred based on a review of pump station wet well data and the rim elevation of the lowest gravity sewer structure. The estimate is based on an analysis of pump station flow data during the event. Based on rainfall data collected from rain gauges within the City of Suffolk, the weather event appears to have been in excess of a 10-year event resulting in highly diluted flows.			
11/12/2020 14:11	Huntersville Pl.	Huntersville #1	Suffolk	105837	PS 054 failed to operate normal due to high head conditions during a heavy rain event. This incident resulted in the manhole on Huntersville Pl. overflowing. This overflow was not observed visually but was determined to likely have occurred based on a review of Telog data. The Telog data continues to be reviewed along with completion of calculations of an estimated volume of overflow. The report will be revised once the estimation has been completed. The average rainfall amount as collected from 14 rain gauges throughout the City between 11/12/2020 and 11/13/2020 was 6.4". Based on the City of Suffolk rain data, the rain event is being identified as a 10-year event. The rain event that occurred from 11/12/2020 through 11/13/2020 was a remnant from Tropical Storm Eta. This SSO was not visually observed, but may have occurred based on a review of pump station wet well data and the rim elevation of the lowest gravity sewer structure. The estimate is based on an analysis of pump station flow data during the event. Based on rainfall data collected from rain gauges within the City of Suffolk, the weather event appears to have been in excess of a 10-year event resulting in highly diluted flows.	PS 054 is back in normal operation. The force main pressure has returned back to normal. -----November 13, 2020 02:46 PM-----	2,077	Significant wet weather event covering the area with over 5 inches of rain

Table B-1. Regional SS System Capacity Related SSOs (July 1, 2020 to June 30, 2021)

Date and Time of Incident	Location	Sewer System Component	Jurisdiction	SSORS ID	Description of Incident from SSORS	Corrective Action from SSORS	Quantity from SSORS (gallons)	Comments* and Response
11/12/2020 11:50	2209 Kentucky Ave.	Hollywood /Jericho	Suffolk	105838	PS 055 failed to operate normal due to high head conditions during a rain event. This incident resulted in the manhole on Kentucky Avenue overflowing. This overflow was not observed visually but was determined to likely have occurred based on a review of Telog data. The Telog data continues to be reviewed along with completion of calculations of an estimated volume of overflow. The report will be revised once the estimation has been completed. The average rainfall amount as collected from 14 rain gauges throughout the City between 11/12/2020 and 11/13/2020 was 6.4". Based on the City of Suffolk rain data, the rain event is being identified as a 10-year event. The rain event that occurred from 11/12/2020 through 11/13/2020 was a remnant from Tropical Storm Eta. This SSO was not visually observed, but may have occurred based on a review of pump station wet well data and the rim elevation of the lowest gravity sewer structure. The estimate is based on an analysis of pump station flow data during the event. Based on rainfall data collected from rain gauges within the City of Suffolk, the weather event appears to have been in excess of a 10-year event resulting in highly diluted flows.	PS 055 is back in normal operation. -----November 13, 2020 02:51 PM-----	6,426	Significant wet weather event covering the area with over 5 inches of rain
11/12/2020 10:43	147 lasalle ave	FA-208	Hampton	105839	overflow due to heavy rain event	pump stations able to pump down -----November 13, 2020 02:58 PM-----	45,250	Significant wet weather event covering the area with over 4 inches of rain
11/12/2020 9:23	North Main St.	North Main Street	Suffolk	105840	PS 063 failed to operate normal due to high head conditions during a rain event. This incident resulted in the manhole on North Main St overflowing. This overflow was not observed visually but was determined to likely have occurred based on a review of Telog data. The Telog data continues to be reviewed along with completion of calculations of an estimated volume of overflow. The report will be revised once the estimation has been completed. The average rainfall amount as collected from 14	PS 063 is back in normal operation. -----November 13, 2020 02:58 PM-----	4,774	Significant wet weather event covering the area with over 5 inches of rain

Table B-1. Regional SS System Capacity Related SSOs (July 1, 2020 to June 30, 2021)

Date and Time of Incident	Location	Sewer System Component	Jurisdiction	SSORS ID	Description of Incident from SSORS	Corrective Action from SSORS	Quantity from SSORS (gallons)	Comments* and Response
					rain gauges throughout the City between 11/12/2020 and 11/13/2020 was 6.4". Based on the City of Suffolk rain data, the rain event is being identified as a 10-year event. The rain event that occurred from 11/12/2020 through 11/13/2020 was a remnant from Tropical Storm Eta. This SSO was not visually observed, but may have occurred based on a review of pump station wet well data and the rim elevation of the lowest gravity sewer structure. The estimate is based on an analysis of pump station flow data during the event. Based on rainfall data collected from rain gauges within the City of Suffolk, the weather event appears to have been in excess of a 10-year event resulting in highly diluted flows.			
11/12/2020 11:32	Nansemond Pkwy.	Dayle Acres	Suffolk	105841	PS 108 failed to operate normal due to high head conditions during a rain event. This incident resulted in the manhole on Nansemond Pkwy. overflowing. This overflow was not observed visually but was determined to likely have occurred based on a review of Telog data. The Telog data continues to be reviewed along with completion of calculations of an estimated volume of overflow. The report will be revised once the estimation has been completed. The average rainfall amount as collected from 14 rain gauges throughout the City between 11/12/2020 and 11/13/2020 was 6.4". Based on the City of Suffolk rain data, the rain event is being identified as a 10-year event. The rain event that occurred from 11/12/2020 through 11/13/2020 was a remnant from Tropical Storm Eta. This SSO was not visually observed, but may have occurred based on a review of pump station wet well data and the rim elevation of the lowest gravity sewer structure. The estimate is based on an analysis of pump station flow data during the event. Based on rainfall data collected from rain gauges within the City of Suffolk, the weather event appears to have been in excess of a 10-year event resulting in highly diluted flows.	PS 108 is back in normal operation. The force main pressure has returned back to normal. -----November 13, 2020 03:04 PM----- -----November 18, 2020 01:27 PM-----	104,098	Significant wet weather event covering the area with over 5 inches of rain

Table B-1. Regional SS System Capacity Related SSOs (July 1, 2020 to June 30, 2021)

Date and Time of Incident	Location	Sewer System Component	Jurisdiction	SSORS ID	Description of Incident from SSORS	Corrective Action from SSORS	Quantity from SSORS (gallons)	Comments* and Response
11/12/2020 15:26	Mountainside Avenue	Reids Crossing	Suffolk	105842	PS 126 failed to operate normal due to high head conditions during a rain event. This incident resulted in the manhole on Mountainside Avenue overflowing. This overflow was not observed visually but was determined to likely have occurred based on a review of Telog data. The Telog data continues to be reviewed along with completion of calculations of an estimated volume of overflow. The report will be revised once the estimation has been completed. The average rainfall amount as collected from 14 rain gauges throughout the City between 11/12/2020 and 11/13/2020 was 6.4". Based on the City of Suffolk rain data, the rain event is being identified as a 10-year event. The rain event that occurred from 11/12/2020 through 11/13/2020 was a remnant from Tropical Storm Eta. This SSO was not visually observed, but may have occurred based on a review of pump station wet well data and the rim elevation of the lowest gravity sewer structure. The estimate is based on an analysis of pump station flow data during the event. Based on rainfall data collected from rain gauges within the City of Suffolk, the weather event appears to have been in excess of a 10-year event resulting in highly diluted flows.	PS 126 is back in normal operation. The force main pressure has returned back to normal. -----November 13, 2020 03:10 PM----- -----November 18, 2020 01:30 PM-----	26,032	Significant wet weather event covering the area with over 5 inches of rain
11/12/2020 7:50	125 Winder Rd	Kings Villa Pump Station	York	105843	Pressure increase in HRSD force main due to rain event, resulting in inability for County station to pump into force main.	. -----November 13, 2020 03:11 PM----- Monitored station. -----November 13, 2020 03:49 PM-----	15,000	Significant wet weather event covering the area with over 3.5 inches of rain
11/12/2020 11:30	Shoulders Hill Rd.	Bayberry Cove	Suffolk	105844	PS 130 failed to operate normal due to high head conditions during a rain event. This incident resulted in the manhole on Shoulders Hill Rd.overflowing. This overflow was not observed visually but was determined to likely have occurred based on a review of Telog data. The Telog data continues to be reviewed along with completion of calculations of an estimated volume of overflow. The report will be revised once the estimation has been completed. The average rainfall amount as	PS 130 is back in normal operation. The force main pressure has returned back to normal. -----November 13, 2020 03:15 PM----- -----November 18, 2020 01:31 PM-----	102,715	Significant wet weather event covering the area with over 5 inches of rain

Table B-1. Regional SS System Capacity Related SSOs (July 1, 2020 to June 30, 2021)

Date and Time of Incident	Location	Sewer System Component	Jurisdiction	SSORS ID	Description of Incident from SSORS	Corrective Action from SSORS	Quantity from SSORS (gallons)	Comments* and Response
					collected from 14 rain gauges throughout the City between 11/12/2020 and 11/13/2020 was 6.4". Based on the City of Suffolk rain data, the rain event is being identified as a 10-year event. The rain event that occurred from 11/12/2020 through 11/13/2020 was a remnant from Tropical Storm Eta. This SSO was not visually observed, but may have occurred based on a review of pump station wet well data and the rim elevation of the lowest gravity sewer structure. The estimate is based on an analysis of pump station flow data during the event. Based on rainfall data collected from rain gauges within the City of Suffolk, the weather event appears to have been in excess of a 10-year event resulting in highly diluted flows.			
11/12/2020 9:05	7113 Merrimac Trail	Lift Station 5-4	James City	105845	Heavy Rain/High Intensity - totaling 1.85 inches in 24 hours	When the rain tapered off, extraneous flow reduced and pumps were able to keep up with the flow. ----- November 13, 2020 03:16 PM-----	13,450	Significant wet weather event covering the area with over 2 inches of rain
11/13/2020 9:07	Pocahontas & Shell	FA-208	Hampton	105846	Overflow based on heavy rain event	System caught up -----November 13, 2020 03:18 PM-----	9,125	Significant wet weather event covering the area with over 5 inches of rain
11/12/2020 0:21	1090 Holland Rd.	Holland Heights	Suffolk	105847	PS 136 failed to operate normal due to high head conditions during a rain event. This incident resulted in the manhole on Holland Rd. overflowing. This overflow was not observed visually but was determined to likely have occurred based on a review of Telog data. The Telog data continues to be reviewed along with completion of calculations of an estimated volume of overflow. The report will be revised once the estimation has been completed. The average rainfall amount as collected from 14 rain gauges throughout the City between 11/12/2020 and 11/13/2020 was 6.4". Based on the City of Suffolk rain data, the rain event is being identified as a 10-year event. The rain event that occurred from 11/12/2020 through 11/13/2020 was a	PS 136 is back in normal operation. The force main pressure has returned back to normal. -----November 13, 2020 03:20 PM----- -----November 18, 2020 01:33 PM-----	76,229	Significant wet weather event covering the area with over 5 inches of rain

Table B-1. Regional SS System Capacity Related SSOs (July 1, 2020 to June 30, 2021)

Date and Time of Incident	Location	Sewer System Component	Jurisdiction	SSORS ID	Description of Incident from SSORS	Corrective Action from SSORS	Quantity from SSORS (gallons)	Comments* and Response
					remnant from Tropical Storm Eta. This SSO was not visually observed, but may have occurred based on a review of pump station wet well data and the rim elevation of the lowest gravity sewer structure. The estimate is based on an analysis of pump station flow data during the event. Based on rainfall data collected from rain gauges within the City of Suffolk, the weather event appears to have been in excess of a 10-year event resulting in highly diluted flows.			
11/12/2020 8:00	101 Leigh Rd	Goosley Road Pump Station	York	105848	Pressure increase in HRSD force main due to rain event resulting in inability of County station to pump into force main.	Initiated pump and haul operations. Spread lime in affected area and vactored surrounding areas. -----November 13, 2020 03:24 PM-----	3,000	Significant wet weather event covering the area with over 3 inches of rain
11/12/2020 21:15	1090 Holland Rd.	Holland Heights	Suffolk	105849	PS 136 failed to operate normal due to high head conditions during a rain event. This incident resulted in the manhole on Holland Rd. overflowing. This overflow was not observed visually but was determined to likely have occurred based on a review of Telog data. The Telog data continues to be reviewed along with completion of calculations of an estimated volume of overflow. The report will be revised once the estimation has been completed. The average rainfall amount as collected from 14 rain gauges throughout the City between 11/12/2020 and 11/13/2020 was 6.4". Based on the City of Suffolk rain data, the rain event is being identified as a 10-year event. The rain event that occurred from 11/12/2020 through 11/13/2020 was a remnant from Tropical Storm Eta. This SSO was not visually observed, but may have occurred based on a review of pump station wet well data and the rim elevation of the lowest gravity sewer structure. The estimate is based on an analysis of pump station flow data during the event. Based on rainfall data collected from rain gauges within the City of Suffolk, the weather event appears to have been in excess of a 10-year event resulting in highly diluted flows.	PS 136 is back in normal operation. The force main pressure has returned back to normal. -----November 13, 2020 03:24 PM----- -----November 18, 2020 01:35 PM-----	7,534	Significant wet weather event covering the area with over 5 inches of rain

Table B-1. Regional SS System Capacity Related SSOs (July 1, 2020 to June 30, 2021)

Date and Time of Incident	Location	Sewer System Component	Jurisdiction	SSORS ID	Description of Incident from SSORS	Corrective Action from SSORS	Quantity from SSORS (gallons)	Comments* and Response
11/12/2020 10:30	47 W Preston	FA-023	Hampton	105850	Station 34 could not get into FA-23 because 23 was high from the rain event	System on 23 caught up and station 34 was able to get in -----November 13, 2020 03:25 PM-----	43,075	Significant wet weather event covering the area with over 5 inches of rain
11/12/2020 9:08	216 Dumville Ln.	Constance Rd. Sanitary Sewer	Suffolk	105851	PS 146 failed to operate normal due to high head conditions during a rain event. This incident resulted in the manhole on Dumville Lane overflowing. This overflow was not observed visually but was determined to likely have occurred based on a review of Telog data. The Telog data continues to be reviewed along with completion of calculations of an estimated volume of overflow. The report will be revised once the estimation has been completed. The average rainfall amount as collected from 14 rain gauges throughout the City between 11/12/2020 and 11/13/2020 was 6.4". Based on the City of Suffolk rain data, the rain event is being identified as a 10-year event. The rain event that occurred from 11/12/2020 through 11/13/2020 was a remnant from Tropical Storm Eta. This SSO was not visually observed, but may have occurred based on a review of pump station wet well data and the rim elevation of the lowest gravity sewer structure. The estimate is based on an analysis of pump station flow data during the event. Based on rainfall data collected from rain gauges within the City of Suffolk, the weather event appears to have been in excess of a 10-year event resulting in highly diluted flows.	PS 146 is back in normal operation. -----November 13, 2020 03:33 PM-----	128,293	Significant wet weather event covering the area with over 5 inches of rain
11/12/2020 4:25	651 Turlington Rd	Turlington Road	Suffolk	105852	PS 162 failed to operate normal due to high head conditions during a rain event. This incident resulted in the manhole on Turlington Rd overflowing. This overflow was not observed visually but was determined to likely have occurred based on a review of Telog data. The Telog data continues to be reviewed along with completion of calculations of an estimated volume of overflow. The report will be revised once the estimation has been completed. The average rainfall amount as collected from 14	PS 162 is back in normal operation. The force main pressure has returned back to normal. -----November 13, 2020 03:37 PM----- -----November 18, 2020 02:06 PM-----	2,312	Significant wet weather event covering the area with over 5 inches of rain

Table B-1. Regional SS System Capacity Related SSOs (July 1, 2020 to June 30, 2021)

Date and Time of Incident	Location	Sewer System Component	Jurisdiction	SSORS ID	Description of Incident from SSORS	Corrective Action from SSORS	Quantity from SSORS (gallons)	Comments* and Response
					rain gauges throughout the City between 11/12/2020 and 11/13/2020 was 6.4". Based on the City of Suffolk rain data, the rain event is being identified as a 10-year event. The rain event that occurred from 11/12/2020 through 11/13/2020 was a remnant from Tropical Storm Eta. This SSO was not visually observed, but may have occurred based on a review of pump station wet well data and the rim elevation of the lowest gravity sewer structure. The estimate is based on an analysis of pump station flow data during the event. Based on rainfall data collected from rain gauges within the City of Suffolk, the weather event appears to have been in excess of a 10-year event resulting in highly diluted flows.			
11/12/2020 12:16	Cole Ave	Pughsville #1	Suffolk	105853	PS 056 failed to operate normal due to high head conditions during a rain event. This incident resulted in the manhole on Cole Avenue overflowing. This overflow was not observed visually but was determined to likely have occurred based on a review of Telog data. The Telog data continues to be reviewed along with completion of calculations of an estimated volume of overflow. The report will be revised once the estimation has been completed. The average rainfall amount as collected from 14 rain gauges throughout the City between 11/12/2020 and 11/13/2020 was 6.4". Based on the City of Suffolk rain data, the rain event is being identified as a 10-year event. The rain event that occurred from 11/12/2020 through 11/13/2020 was a remnant from Tropical Storm Eta. This SSO was not visually observed, but may have occurred based on a review of pump station wet well data and the rim elevation of the lowest gravity sewer structure. The estimate is based on an analysis of pump station flow data during the event. Based on rainfall data collected from rain gauges within the City of Suffolk, the weather event appears to have been in excess of a 10-year event resulting in highly diluted flows.	PS 056 is back in normal operation. The force main pressure has returned back to normal. -----November 13, 2020 03:47 PM----- -----November 18, 2020 02:08 PM-----	40,253	Significant wet weather event covering the area with over 5 inches of rain

Table B-1. Regional SS System Capacity Related SSORs (July 1, 2020 to June 30, 2021)

Date and Time of Incident	Location	Sewer System Component	Jurisdiction	SSORS ID	Description of Incident from SSORS	Corrective Action from SSORS	Quantity from SSORS (gallons)	Comments* and Response
11/12/2020 10:58	540 ASHFORTH WAY	CHESHIRE FOREST	Chesapeake	105856	UNTREATED DOMESTIC SEWAGE SPILLED FROM A CITY OF CHESAPEAKE SEWER MANHOLE (225-SMH-064) AND RAN INTO THE STORM DRAIN SYSTEM. THIS ACTION WAS DUE TO CAPACITY WEATHER RELATED..UNDETERMINED AMOUNT OF SPILL..	THE PUMP STATION WAS WORKING AS IT SHOULD. THIS WAS WEATHER RELATED CAPACITY. UNDETERMINED AMOUNT OF SPILL.. -----November 16, 2020 09:23 AM----- -----November 16, 2020 12:26 PM-----	800	Significant wet weather event covering the area with over 5 inches of rain
11/12/2020 11:38	1618 ELM AVE	INDIAN RIVER	Chesapeake	105857	UNTREATED DOMESTIC SEWAGE SPILLED FROM A CITY OF CHESAPEAKE SANITARY SEWER MANHOLE AND RAN INTO THE STORM DRAIN SYSTEM. THIS ACTION WAS DUE TO CAPACITY WEATHER RELATED.	PUMP STATION WAS WORKING AS IT SHOULD. THIS WAS WEATHER RELATED CAPACITY. UNDETERMINED AMOUNT OF SPILL..-0 ----- November 16, 2020 09:54 AM----- -----November 16, 2020 12:28 PM-----	925	Significant wet weather event covering the area with over 5 inches of rain
11/12/2020 10:22	2316 BATTERY PARK RD	BRENTWOOD	Chesapeake	105858	UNTREATED DOMESTIC SEWAGE SPILLED FROM A CITY OF CHESAPEAKE SANITARY SEWER INSPECTION BOX AND RAN INTO THE STORM DRAIN SYSTEM.. THIS WAS A CAPACITY WEATHER RELATED..UNDETERMINED AMOUNT OF SPILL..	PUMP STATION WAS WORKING AS IT SHOULD. UNDETERMINED AMOUNT OF SPILL. ----- November 16, 2020 10:26 AM-----	570	Significant wet weather event covering the area with over 5 inches of rain
11/12/2020 11:53	1954 DIAMOND HILL RD AND AROUND THE CORNER AT 1920 CAMPOSTELLA RD.	PORTLOCK	Chesapeake	105859	UNTREATED DOMESTIC SWEAGE SPILLED FROM TWO CITY OF CHESAPEAKE MANHOLES AND ONE CUSTOMER SANITARY SEWER CLEAN-OUT AND RAN INTO THE STORM DRAIN SYSTEM.. THIS WAS DUE TO CAPACITY. VERY HEAVY RAINS AND FLOODING IN THE AREA.	PUMP STATION WAS WORKING AS IT SHOULD.. UNDETERMINED AMOUNT OF SPILL. ----- November 16, 2020 10:53 AM-----	1,850	Significant wet weather event covering the area with over 5 inches of rain
11/13/2020 15:18	300 George Washington Hwy N. Chesapeake, VA	300 George Washington Hwy N.	Chesapeake	105860	Last clean-out on PS-18 line in Horton & Dodd parking lot. Pump Station running but line surcharged due to heavy rains.	Pulled to Vactor loads from parking lot. Cleaned area with HTH and Lime in grass areas. -----November 16, 2020 12:41 PM-----	5,000	Significant wet weather event covering the area with over 5 inches of rain
11/13/2020 8:30	39 Cooper Drive	clean out	Portsmouth	105861	System surcharged and overflowing due to inclement weather which caused Pump Station for the sewer basin to reach capacity. Per HRSD their trunk lines for that sewer basin were experiencing capacity issues as well causing a dominion effect on our sewer system.	Sewer crews did rounds checking sewer basin and surrounding Pump Stations and their status until the capacity issues were resolved. Once the sewer system was operating correctly crews cleaned up area and deodorized. Checked the areas on 11/15/2020 to insure they were operating correctly. --- --November 16, 2020 02:44 PM-----	-1	Significant wet weather event covering the area with over 5 inches of rain

Table B-1. Regional SS System Capacity Related SSOs (July 1, 2020 to June 30, 2021)

Date and Time of Incident	Location	Sewer System Component	Jurisdiction	SSORS ID	Description of Incident from SSORS	Corrective Action from SSORS	Quantity from SSORS (gallons)	Comments* and Response
11/13/2020 8:30	13 Cooper Drive	clean out	Portsmouth	105862	System surcharged and overflowing due to inclement weather which caused Pump Station for the sewer basin to reach capacity. Per HRSD their trunk lines for that sewer basin were experiencing capacity issues as well causing a domino effect on the City sewer system.	Sewer crews did rounds checking sewer basin and surrounding Pump Stations and their status until the capacity issues were resolved. Once the sewer system was operating correctly crews cleaned up area and deodorized. Checked the areas on 11/15/2020 to insure they were operating properly. --- --November 16, 2020 02:52 PM-----	-1	Significant wet weather event covering the area with over 5 inches of rain
11/13/2020 8:30	#2,#4,#6,& #8 Cooper Drive	clean out	Portsmouth	105863	System Surcharged and overflowed due to flooding which caused capacity issues for the City as well as HRSD.	Sewer crews checked stations by making rounds and when the capacity issues stopped and system was operating correctly they clean up areas of concern and deodorized. Checked that system was operating correctly on 11/15/2020. -----November 16, 2020 02:57 PM-----	-1	Significant wet weather event covering the area with over 5 inches of rain
11/13/2020 11:55	635, 634, 642 Douglas Ave.	clean out	Portsmouth	105864	System surcharged and overflowed due to flooding and capacity issues due to inclement weather.	Sewer crews did rounds checking sewer basins and surrounding Pump Stations and their status until capacity issues were resolved. Cleaned up area and deodorized after system was operating properly. Checked the areas on 11/15/2020 to insure system was operating properly. -----November 16, 2020 03:37 PM-----	-1	Significant wet weather event covering the area with over 5 inches of rain
11/13/2020 5:00	1360 Rockbridge Ave	1360 Rockbridge Ave	Norfolk	105865	Storm Eta dumped 8-inches of rain in Norfolk on Thursday 12 November. This backed up the sewer system and caused an overflow. A bypass pump was installed and stopped the overflow.	A bypass pump was installed on the sewer system to re-route the flow and stopped the overflow. ----- November 16, 2020 04:06 PM-----	1,000	Significant wet weather event covering the area with over 5 inches of rain
12/24/2020 21:55	7113 Merrimac Trail	Lift Station 5-4	James City	105881	Heavy Rain/High Intensity - totaling 1.8 inches in 6 hours	When the rain tapered off, extraneous flow reduced and pumps were able to keep up with the flow. ----- December 30, 2020 08:44 AM-----	13,648	
12/24/2020 20:44	174 Forest Heights Road	Lift Station 6-2	James City	105882	Heavy Rain/High Intensity & Pressures - totaling 1.8 inches in 6 hours	When the rain tapered off, pressures in the system dropped and extraneous flow reduced and the pumps were able to keep up with the flow. -----December 30, 2020 08:51 AM-----	16,663	
12/24/2020 20:59	115 Depot Street	Lift Station 6-8	James City	105883	Heavy Rain/High Intensity & Pressures - totaling 1.8 inches in 6 hours	When the rain tapered off, pressures in the system dropped and extraneous flow reduced and the pumps were able to keep up with the flow. -----December 30, 2020 08:56 AM-----	11,194	

Table B-1. Regional SS System Capacity Related SSOs (July 1, 2020 to June 30, 2021)

Date and Time of Incident	Location	Sewer System Component	Jurisdiction	SSORS ID	Description of Incident from SSORS	Corrective Action from SSORS	Quantity from SSORS (gallons)	Comments* and Response
12/24/2020 20:36	179 Albemarle Drive	Lift Station 4-8	James City	105884	Heavy Rain/High Intensity & Pressures - totaling 1.8 inches in 6 hours	When the rain tapered off, pressures in the system dropped and extraneous flow reduced, the pumps were able to keep up with the flow. -----December 30, 2020 09:09 AM-----	3,486	
2/18/2021 14:30	125 Winder Rd	Kings Villa Pump Station	York	105927	High pressure in HRSD interceptor.	Installed high pressure by-pass pump. -----February 19, 2021 03:28 PM-----	7,500	Rainfall intensity increased after several days of saturating low intensity rainfall.
2/19/2021 14:00	9 W CHAMBERLIN	W CHAMBERLIN	Hampton	105931	HEAVY RAINS CAUSED HIGH FLOW PRESSURES IN MAIN LINE AT HRSD MAIN ON E CHAMBERLIN + N HOPE WHERE CITY MAIN TIED INTO HRSD HIGH FLOW IN HRSD PREVENTED CITY MAIN TO FLOW PROPERLY CAUSING SSO FROM MANHOLE ON E CHAMBERLIN	CONTINUED TO MONITOR HRSD MAIN LEVELS. ONCE RAIN STOPPED FLOW IN HRSD SLOWED DOWN AND ALLOWED CITY MAIN LINE ON CHAMBERLIN AND MALLORY TO FLOW INTO HRSD. CREWS SPRAYED DOWN AREA AS NEEDED -----February 22, 2021 09:59 AM-----	60,000	Rainfall intensity increased after several days of saturating low intensity rainfall.
2/18/2021 10:00	10 MONROE	MONROE	Hampton	105932	OVERFLOW FROM CLEANOUT AND MANHOLE DUE TO BACKED UP MAINLINE ON GRANELLA ST + AUTOZONE WY	CLEANED MAIN WITH VATCON AND GOT LINE FLOWING BUT CAVE IN OVER MAIN FORMED. LINE BACKED UP DUE TO DEBRIS IN PIPE FROM CAVE IN. CREWS HAD TO SETUP BY PASS PUMP TILL REPAIR ON MAIN CAN BE COMPLETED ----- February 22, 2021 10:05 AM-----	50,400	Rainfall intensity increased after several days of saturating low intensity rainfall.
2/19/2021 10:00	163 LASALLE AVE	LASALLE AVE	Hampton	105933	HEAVY RAINS CAUSED HRSD PUMP STATION ON CHESAPEAKE AVE TO BACK AND CAUSE SSO FROM CLEANOUT AT 163 LASALLE AVE	CONTINUED TO MONITOR LEVELS TOWARDS HRSD PUMP STATION ALONG CHESAPEAKE AVE. EVENTUALLY RAIN SUBSIDED AND FLOW TO HRSD SLOWED DOWN AND ALLOWED HRSD PUMPS TO CATCH UP AT STATION. CREWS SPRAYED DOWN AREA AROUND CLEANOUT AS NEEDED -----February 22, 2021 10:12 AM-----	115,200	Rainfall intensity increased after several days of saturating low intensity rainfall.
2/18/2021 12:00	3 LACROSSE ST	LACROSSE ST	Hampton	105934	HEAVY RAINS CAUSED CITY PUMP STATION TO BACK UP WHICH TIED INTO HRSD WHICH WAS ALSO BACKED UP DUE TO RAIN. THIS CAUSED MANHOLE IN FRONT OF 17 LACROSSE TO OVERFLOW	CONTINUED TO MONITOR LEVELS IN AREA ONCE RAIN SUBSIDED AND FLOW LEVELS DROPPED PUMP STATION WAS ABLE TO CATCH UP AND LINES IN AREA BEGAN TO FLOW AT NORMAL LEVELS -----February 22, 2021 10:17 AM-- ---	12,000	Rainfall intensity increased after several days of saturating low intensity rainfall.
2/18/2021 9:00	28 W PRESTON	W PRESTON	Hampton	105935	HEAVY RAINS CAUSED CITY PUMP STATION TO BACK UP WHICH TIED INTO HRSD PUMP STATION WHICH WAS ALSO BACKED UP DUE TO HEAVY RAINS CAUSING OVERFLOW FROM MANHOLE ON 28 W PRESTON	MONITORED LINES IN AREA AND ONCE RAIN SUBSIDED BOTH CITY PUMP STATION AND HRSD PUMP STATIONS WERE ABLE TO CATCH UP LINES IN AREA BEGAN TO FLOW AT NORMAL LEVELS. CREWS SPRAYED DOWN AREA AROUND MANHOLE AT 28 W PRESTON ----- February 22, 2021 10:29 AM-----	24,000	Rainfall intensity increased after several days of saturating low intensity rainfall.

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Date and Time of Incident	Location	Sewer System Component	Jurisdiction	SSORS ID	Description of Incident from SSORS	Corrective Action from SSORS	Quantity from SSORS (gallons)	Comments* and Response
6/4/2021 19:30	1240 GATEWOOD DR NEWPORT NEWS, VA	HRSD P.S. 218 Gatewood Dr	Newport News	105996	HRSD PS 218 EXPERIENCED HIGH LEVELS IN WETWELL THAT SURCHARGED INTO GRAVITY SYSTEM AND OVERFLOWED	HRSD PERSONNEL RESPONDED TO PS 218 AND FIXED STATION ISSUE. NEWPORT NEWS PERSONNEL CLEAN OVERFLOW AREA AND PUT DOWN LIME (WO#431726). SSO DOCUMENTED UNDER WO# 431729. -----June 5, 2021 08:16 AM---- -	11,000	
6/11/2021 19:00	115 Depot Street	Lift Station 6-8	James City	105999	Heavy Rain/High Intensity & Pressures - totaling 2.8 inches in 6 hours	Pump and Hauled. When the rain tapered off, pressures in the system dropped and extraneous flow reduced and the pumps were able to keep up with the flow. -----June 13, 2021 03:05 PM-----	17,718	Significant wet weather event covering the area with over 4 inches of rain
6/12/2021 3:30	4888 John Tyler Highway	Lift Station 3-8	James City	106000	Localized flash flooding and heavy rain (See Pictures)	When the rain tapered off, flooding receded, extraneous flow reduced and the pumps were able to keep up with the flow. -----June 13, 2021 03:19 PM---- -	7,742	Significant wet weather event covering the area with over 4 inches of rain

\*Comments have been added for the Annual Report that were not part of the SSORS original report  
The remainder of the table is a subset of raw data extracted from SSORS