

## **Appendix E: Rehabilitation Performed During CAP**

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## List of Abbreviations

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CAP	Condition Assessment Program
CIP	Capital Improvement Program
DEQ	Department of Environmental Quality
EPA	Environmental Protection Agency
HRPDC	Hampton Roads Planning District Commission
MH	Manhole
PR	Prompt Repair
PS	Pump Station
SOC	Special Order by Consent
SSES	Sanitary Sewer Evaluation and Survey
SSOs	Sanitary Sewer Overflows

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## Section 1

# Introduction

This report is an Appendix to HRSD's Rehabilitation Action (Rehab) Plan to satisfy the requirements of the United State's Environmental Protection Agency (EPA) Consent Decree as well as the Virginia Department of Environmental Quality (DEQ) Special Order by Consent (SOC) for reporting on results of the Condition Assessment Program (CAP). This document summarizes rehabilitation activities that took place during the CAP. Appendices A, B, C, and D satisfy the remaining reporting requirements of the CAP.

Throughout the CAP inspection and reporting phases, HRSD continuously improved the condition of the sanitary sewer system. The purpose of this Appendix is to report the rehabilitation efforts that HRSD has completed.

### 1.1 Prompt Repairs

The HRSD Sanitary Sewer Evaluation and Survey (SSES) and Condition Assessment Plans described a Prompt Repair Program (also known as Find and Fix) to be done as part of the CAP. The Prompt Repair (PR) Program was established so that HRSD could correct defects which met one or more of the following criteria:

- Pose an immediate threat to the environment,
- Pose an imminent threat to public health and safety,
- Create operational problems that may result in sanitary sewer overflows (SSOs), or
- Contribute substantial inflow to the system.

HRSD established a committee to evaluate potential PR defects, identified by condition assessment activities, with the given criteria to determine if the defects were an actual PR. Each officially declared PR defect was assigned to a work order for corrective repair. All work performed during the PR Program utilized HRPDC Regional Construction Standards and HRSD's standard specifications and was subject to regular construction inspection. Table E-1 provides a summary of each official prompt repair as of October 15, 2013. The Prompt Repair Program was organized by work orders, and is referred to by names as shown in the first column.

Table E-1. Summary of Prompt Repairs (Updated February 2014)

Name	Location	Jurisdiction	Line or PS Number	Summary of Condition	Complete As of October 15, 2013
41st Street	41st Street east of intersection with Jefferson Ave; between MH-NG-112-12175 and MH-NG-112-11783	Newport News	NG-112	Pipe lining failure	YES
Beach Road	West side of Beach Road opposite of the intersection with Wade Road between MH-NG-088-0 and MH-NG-088-155.	Hampton	NG-088	Pipe connection at manhole needs repair	YES
	West side of Beach Rd. between intersection with Bonneville Dr. and Catalina Drive between MH-NG-088-1654 and MH-NG-088-1863	Hampton	NG-088	Defects at lateral connection to mainline	
	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 MH-NG-088-1260 and MH-NG-088-1316	Hampton	NG-088	Evidence of mainline puncture due to directional drilling of another utility	
Various Manholes	North King St.; MH-NG-078-4684	Hampton	NG-078	Manhole defects	YES
	North King St.; MH-NG-063-5818	Hampton	NG-063	Manhole defects	
	E. Pembroke Ave. at Washington St.; MH-NG-084-827	Hampton	NG-084	Manhole defects	
	Bainbridge Blvd. between Beech St. and Wilton St.; MH-SG-153-2733	Norfolk	SG-153	Manhole defects	
Jefferson Ave	Jefferson Ave. between 40th Street and 41st Street	Newport News	NG-114	Mainline pipe defects	YES
	Jefferson Ave between 39th and 40th Street	Newport News	NG-114	Mainline pipe defects	
Newtown Road	Newtown Rd. at Virginia Beach Blvd (NE corner of intersection)	Virginia Beach	SG-112	Manhole defects and mainline pipe defects	YES
	Newtown Rd. approx. 415 ft. north of Princess Anne Rd.	Virginia Beach	SG-113	Manhole defects	
	Newtown Rd. at Elam Ave.	Virginia Beach	SG-113	Manhole defects	
Mercury Blvd	West Mercury Blvd	Hampton	NG-057	Mainline pipe defects	NO
	West Mercury Blvd; near Beechwood Rd.	Hampton	NG-057	Mainline pipe defects	
	West Mercury Blvd	Hampton	NG-057	Mainline pipe defects	



Table E-1. Summary of Prompt Repairs (Updated February 2014)

Name	Location	Jurisdiction	Line or PS Number	Summary of Condition	Complete As of October 15, 2013
Various Repairs	North Hope Street	Hampton	NG-160	Pipe lining failure	YES
	Old Atlantic Avenue near intersection with Liberty Street	Chesapeake	SG-148	Pipe lining failure	
	South of Steamboat Creek Pump Station	Norfolk	SG-102	Manhole defects	
Witchduck	South Witchduck Road	Virginia Beach	SF-121	Corroded FM bolts	YES
Pin Oak Rd	Pin Oak Road; Residential neighborhood	Newport News	NG-175	Mainline Pipe Defects	YES
Bainbridge Blvd	Bainbridge Blvd near I-464	Norfolk	SG-145	Mainline Pipe Defects	YES
	Bainbridge Blvd near I-464 just upstream of PS	Norfolk	SG-145	Mainline Pipe Defects	
Shell Rd - Hampton	Shell Road; MH-NG-141-5329	Hampton	NG-141	Mainline Pipe Defects	YES
	Harris Creek Road; MH-NG-086-2323	Hampton	NG-086	Mainline Pipe Defects	
Pearl Street	Pearl Street near Ligon Street near I-464/I-264 Interchange	Norfolk	SG-202	Mainline Pipe Defects	YES
	Pearl Street near Ligon Street near I-464/I-264 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	YES
Wythe Lagoon	Chesapeake Ave at Wythe Lagoon	Hampton	NG-151	Siphon defects	YES
Shipyard Sewer	31 <sup>st</sup> Street	Newport News	31 <sup>st</sup> connector	Mainline Pipe Defects	NO
	33 <sup>rd</sup> Street	Newport News	33 <sup>rd</sup> Connector	Mainline Pipe Defects	
	38 <sup>th</sup> Street	Newport News	38 <sup>th</sup> Connector	Mainline Pipe Defects	
Pump Station Hatches	Ingleside Road Pump Station	Norfolk	PS#148	Wet well hatch not rated for traffic	YES
Pump Station Wet Wells	Rodman Ave Pump Station Wet Well	Portsmouth	PS#145	Wet Well Defects	NO
Chesterfield Blvd	East of Chesterfield Blvd Pump Station; SG-207-20845	Norfolk	SG-207	Mainline pipe defects	YES
	East of Chesterfield Blvd Pump Station; SG-207-20842	Norfolk	SG-207	Mainline pipe defects	
Luxemburg Ave	Influent line to Luxemburg Avenue pump station.	Norfolk	SPS-113	Defect at manhole connection	YES
Gowrie and Farragut	Manhole near creek at end of Gowrie Avenue; MH-SG-068-1795	Norfolk	SG-068	Manhole defects	YES
	Manhole near creek at end of Farragut Avenue; MH-SG-068X-230	Norfolk	SG-068	Manhole defects	
State Street FM	Near State Street PRS	Norfolk	SF-097	Thin pipe wall discovered	YES

**Table E-1. Summary of Prompt Repairs (Updated February 2014)**

Name	Location	Jurisdiction	Line or PS Number	Summary of Condition	Complete As of October 15, 2013
Berkley Avenue	Berkley Avenue downstream of State St PS; MH-SG-098-7818	Norfolk	SG-098	Wall defects	NO
	Berkley Avenue downstream of State St PS; MH-SG-098-7775	Norfolk	SG-098	Wall defects	
Newmarket Creek	Manhole upstream of Newmarket Creek PS north of creek; MH-NG-127-201	Newport News	NG-127	Wall defects	NO
	Intersection of Orcutt Ave and Paul Street	Newport News	NG-127	Corroded pipe	
Laskin Road	Birdneck Trunk Road FM; just south of Laskin Road PRS	Virginia Beach	SF-135	Hit by third-party contractor	YES
Elizabeth River Crossing	Crossing at Elizabeth River near Washington District PS	Norfolk	SF-143	Thinning Pipe Wall	YES
14th Street	Manhole at 14th Street and Jefferson Ave	Newport News	NG-130X	Manhole Defects	NO
Mercury Orcutt Intersection	Intersection of Mercury Blvd and Orcutt Avenue	Hampton	NG-127	Sinking asphalt	YES
Army Base	Intersection of Hampton Blvd and Baker St.	Norfolk	SG-003	Deterioration on crown of pipe	NO

## 1.2 Capital Improvement Program

Much of the rehabilitation work that was recommended in the initial phase of the Rehab Plan overlapped work that was already scheduled in the Capital Improvement Program. In these cases the current CIP project was included as a project in the Rehabilitation Plan. Rehab projects that were in the CIP and have reached substantial completion during the CAP (including preparation of the 2014 Update) include:

<b>Asset Type</b>	<b>Project Name</b>	<b>Rehab Project Number</b>	<b>CIP Number</b>	<b>Status</b>
APP	Battlefield Boulevard/Johnston Road Valve Replacement	AT-R4	AT-127	Complete
GM	Jefferson Avenue Emergency Gravity Repairs	BH-R10	BH-139	Complete
FM	Hampton Trunk Sewer Extension Division M Replacement	BH-R6	BH-121	Complete
PS	Bayshore, Copeland Park, and Newmarket Pump Station Elec Equip Improvements	BH-R7	BH-125	Complete
FM	South Trunk Sewer Section C 24-inch Force Main Replacement	VIP-R5	VIP-138	Complete
FM	South Trunk Sewers Section B and C 48-inch Force Main Replacement	VIP-R7	VIP-146	Complete

## 1.3 Scheduled Maintenance Program

HRSD has an ongoing maintenance program which identified and rehabilitated condition defects during the CAP. Asset repair and rehabilitation that took place during routine Operations and Maintenance that would have otherwise been included as part of the Rehab Plan is noted within the Condition Assessment Reports (Appendices B, C and D) as “Rehab during CAP.” Similarly, asset repair and remediation that took place during regularly scheduled capital improvements that would have otherwise been included in the Rehab Plan is noted within the Condition Assessment Reports (Appendices B, C and D) as “Rehab during CAP.”

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