



EPA Consent Decree  
Annual Informational Meeting  
Regional Wet Weather  
Management Plan

January 25, 2022

### Agenda

- *Overview of Consent Decree and Progress to Date*
  - *Ted Henifin, General Manager, HRSD*
- *Questions and Answers*

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## Objective of the Consent Decree

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*“WHEREAS, this Fifth Amendment to the Consent Decree furthers the objective of the Clean Water Act to minimize or eliminate the discharge of pollutants to navigable waters by requiring that the Hampton Roads Sanitation District implement measures toward ensuring that the Regional Sanitary Sewer System and HRSD’s Sewage Treatment Plants have adequate capacity to convey and treat wet weather sewer flows within the Hampton Roads Region”*

Amendment 5 resets the compliance objective of the Consent Decree to attaining a **69 percent or greater reduction in baseline modeled SSOs by volume for the 5-year peak flow recurrence event**

- Consent decree amended to permit a regional approach estimated to save the region \$1 billion over original approach
- Localities and HRSD agreed in Memorandum of Agreement to Regionalized Approach
- HRSD will be responsible for capacity in the regional sanitary sewer system (Localities' systems and HRSD system) upon approval of the Amended Decree (Amendment 5)

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## Major Change in Compliance Orders

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- Special Order by Consent (SOC) modified in December 2014 focuses on Localities' Management, Operations and Maintenance (MOM) issues
  - Eliminates HRSD from SOC
  - Adds Norfolk to SOC and terminates prior Order
- Consent Decree Modification No. 4 references SWIFT and its relationship with the RWWMP. Requires that the approved RWWMP be a material modification to the CD subject to public comment and Court approval (i.e., Amendment 5)

- HRSD continues to implement requirements of Federal Consent Decree, which was originally entered with the court on February 23, 2010, as modified
- **All Consent Decree required submittals have been on time**
- **Final Regional Wet Weather Management Plan as submitted on June 26, 2020 will be approved when Amendment 5 is entered with the court.**

- Requires addressing specific features with condition defects identified in Consent Decree Condition Assessment Program (CAP)
- EPA/DEQ approved the plan in May 2015
- Addresses more than \$183M of required improvements in gravity mains, force mains, pump stations, and associated system components
- Implementation Plan has three phases through May 2025 – Total over \$255 million
  - **Phase 0 - Complete**
  - **Phase 1 (5/2021) – Complete**
  - **Phase 2 (5/2025) – 13% in construction or complete**

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## Interim System Improvements

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- Consent Decree includes requirement to complete 45 CIP projects totaling approximately \$ 400M.
- All are complete with the final project certification provided to EPA in December 2018.

COMPLETE

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

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- MOM Program approved by EPA/DEQ in 2011
- Updated in 2021
- Ongoing regular review and updates
- Performance measures are continuing to be tracked to evaluate the effectiveness of the programs

# Consent Decree Performance Measures Review

## Year-over-Year Performance Summary

Metric	Target	FY-12 Actual	FY-13 Actual	FY-14 Actual	FY-15 Actual	FY-16 Actual	FY-17 Actual	FY-18 Actual	FY-19 Actual	FY-20 Actual	FY-21 Actual
Pump Station Annual PM	82	84	83	83	84	85	87	89	85	82	83
Back-up Generator Annual PM	55	112	81	121	129	129	121	89	85	112	118
Force Main Air Vent PM	1,550	3,096	3,274	3,304	3,486	3,327	3,940	1,881	3,771	3,856	3,547
Non-Invasive Force Main Inspection (LF)	2,400	15,098	2,800	2,562	4,355	2,562	6,375	5,000	3,300	2,400	3,900
Gravity Sewer Inspection (LF)	39,600	72,730	98,185	81,841	89,757	71,595	94,009	40,307	55,394	45,459	40,148
Gravity Sewer Cleaning (LF)	29,400	234,463	207,724	194,838	208,059	190,160	203,206	57,025	141,999	167,353	129,117

FY 21 - Conveyed 56.3 billion gallons  
 Total volume lost 0.06739%

## HRSD SSOs

Year	# of SSOs	Volume (gal)	# of Unknown SSO Volumes (during wet weather)	Total Inches of Rain near ORF
CY2011	35	1,880,086	13	55
CY2012	40	22,850,543*	6	52
CY2013	14	722,237	2	50
CY2014	29	2,250,915	10	45
CY2015	18	516,704	3	53
CY2016	49**	6,148,239**	23**	69**
CY2017	21	259,057	4	42
FY2018	20	1,006,196	3	47
FY2019	14	1,366,725	2	53
FY2020	17	277,521	0	47
FY2021	44	37,918,968**	0	58

\*Included single SSO at Wilroy Road of 18,352,000 gallons. Remaining volume ~4,500,000 gallons for 2012

\*\*Included two major weather events in Hurricane Matthew and Tropical Storm Hermine

\*\*\* Included one infrastructure failure related SSO of 29,068,057 gallons. 11



FY 21 - Conveyed 56.3 billion gallons  
 Total volume lost (capacity) 0.06739%

## Capacity Related SSOs

Year	Total # of SSOs	Total Volume Of SSOs (gal)	Volume for Capacity (Gals)	# of Capacity SSOs	Named Storm
2011	35	1,880,086	1,409,796	16	Hurricane Irene
2012	40	22,850,543	4,249,483	31	Hurricane Sandy
2013	14	722,237	584,784	5	Remnants of Hurricane Andrea (1)
2014	29	2,250,915	681,392	15	None
2015	18	516,704	207,177	15	None
2016	49	6,148,239	2,133,775	35	TS Julia & Hurricane Matthew
2017	21	259,057	145,221	13	None
FY2018	20	1,006,196	134,886	10	None
FY2019	14	1,366,725	72,775	8	None
FY2020	17	277,521	16,530	2	None
FY2021	44	37,918,968	8,371,781	30	Remnants of Isaias & Sally

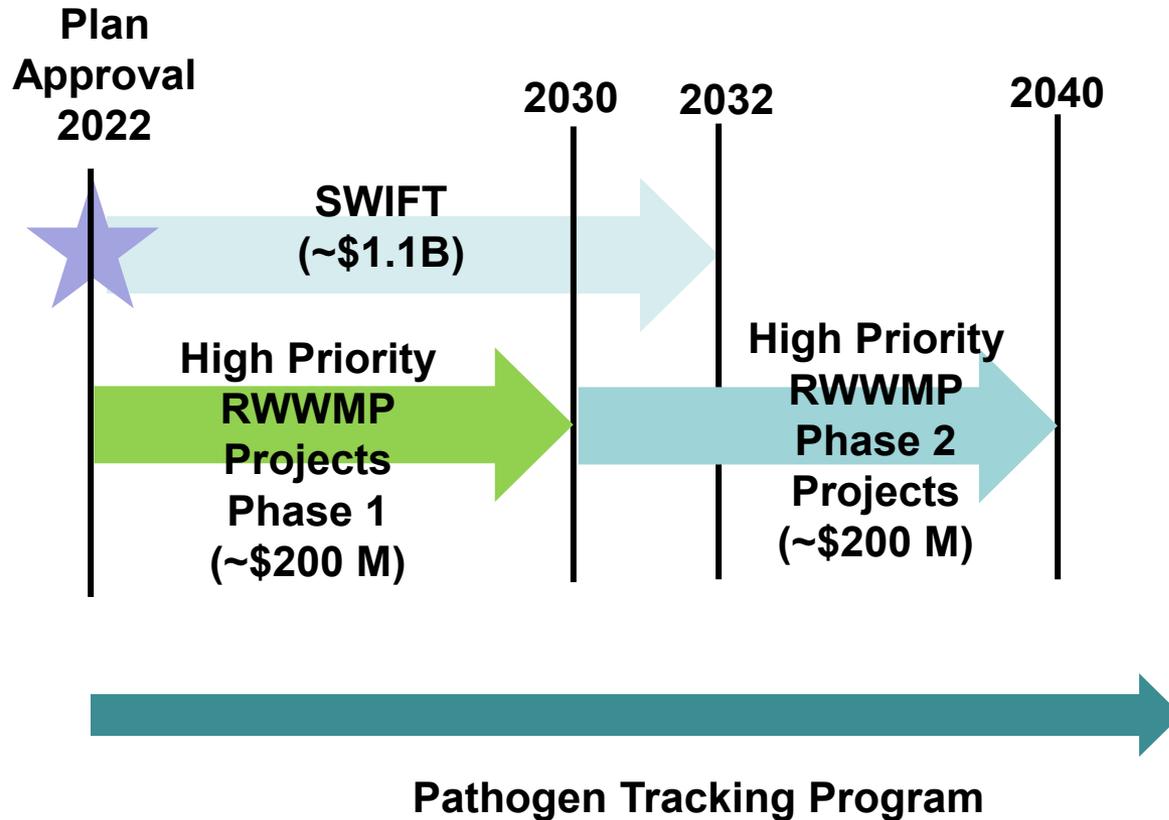
## Adaptive Regional Plan

**Table EX-1. Four Phases of the Adaptive Regional Plan**

Phase	Description	Timeframe	Cost
1	Planning, Interim System Improvements, Condition Assessment and Repairs, Rehabilitation Action Plan	2008 - 2025	\$700,000,000
2	Round 1 High-Priority Projects and Pathogen Source Tracking Program	2020 - 2030	\$218,000,000
3	Round 2 High-Priority Projects and Pathogen Source Tracking Program	2030 - 2040	\$212,000,000
4	Post-RWWMP Plan Performance Assessment	2040 - 2043	\$2,000,000
	<b>TOTAL</b>		<b>\$1,132,000,000</b>

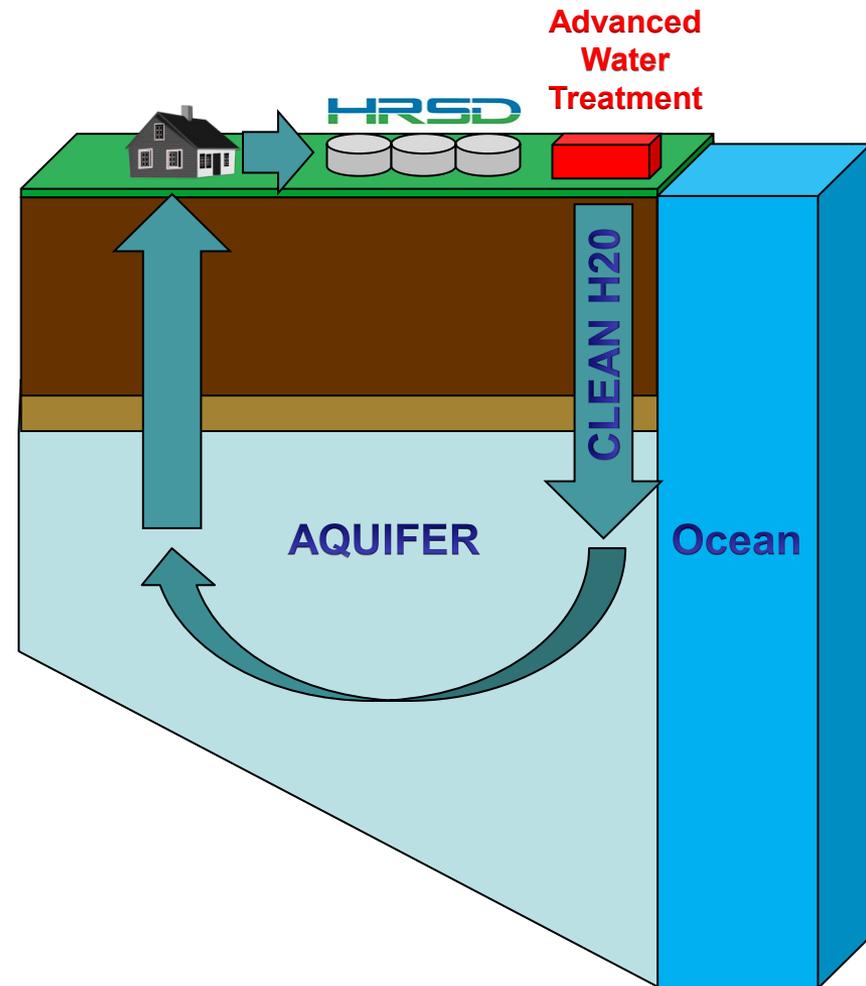
The HRSD aquifer replenishment initiative (SWIFT) informs the schedule. Adaptive regional plan schedule may be accelerated should SWIFT miss targeted completion (2032) or capacity.

# Sequence Places the Greatest Water Quality Benefits First

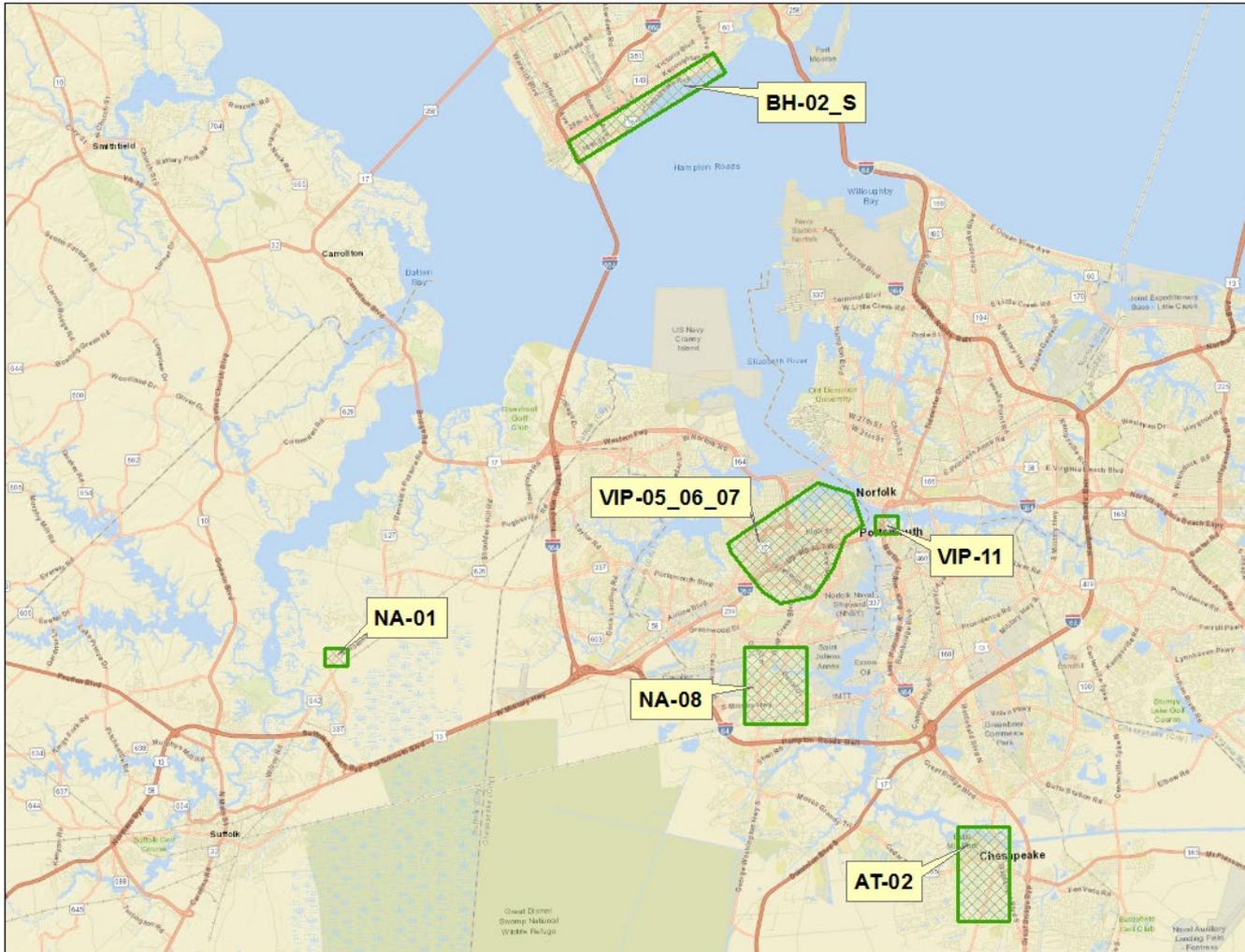


## SWIFT – Sustainable Water Initiative for Tomorrow

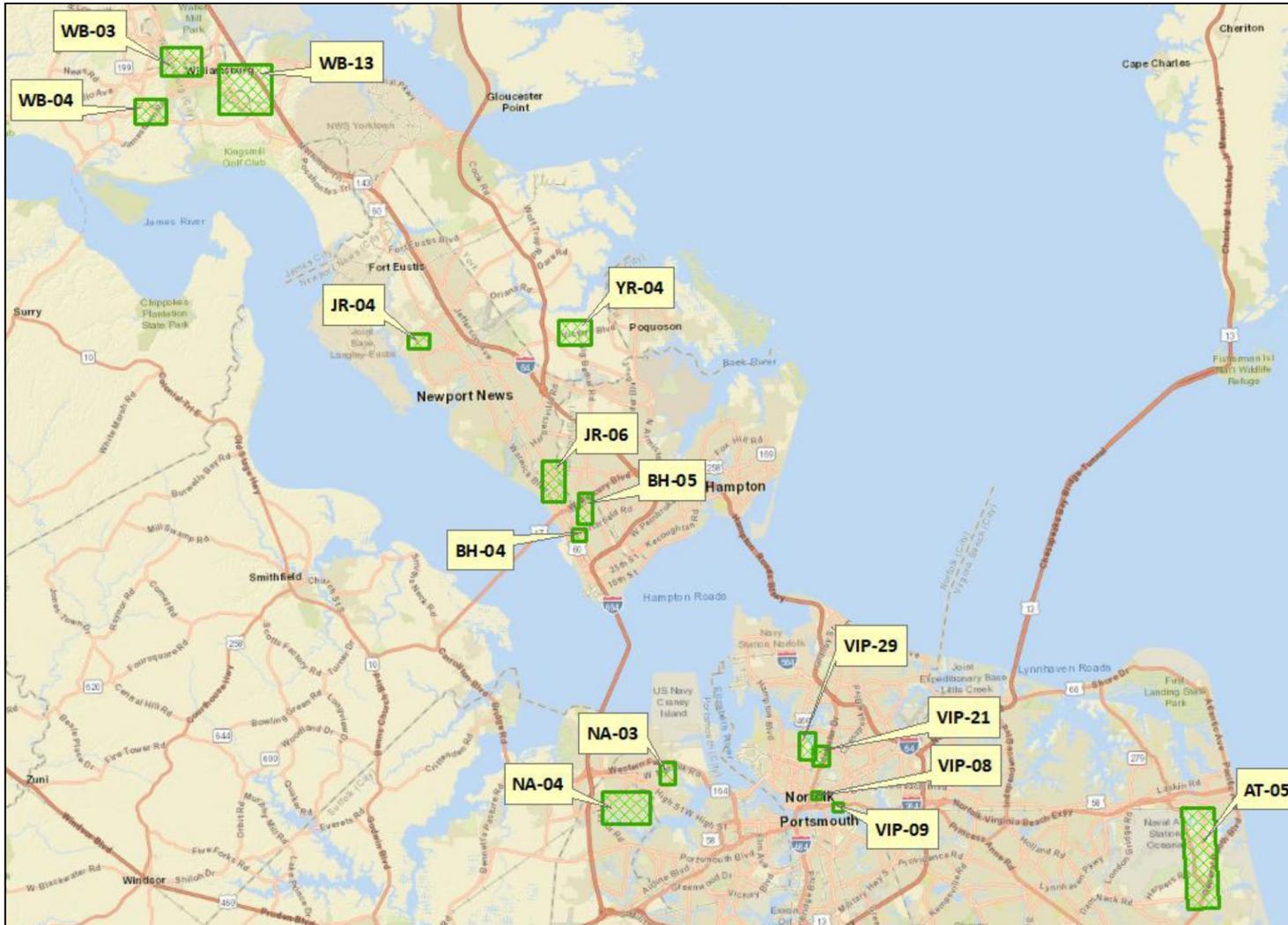
- Treat water to meet drinking water standards and replenish the aquifer with clean water to:
  - Provide regulatory stability for wastewater treatment
  - Reduce nutrient discharges to the Bay
  - Reduce the rate of land subsidence
  - Provide a sustainable supply of groundwater
  - Protect the groundwater from saltwater contamination



# High Priority Project Areas Phase 1

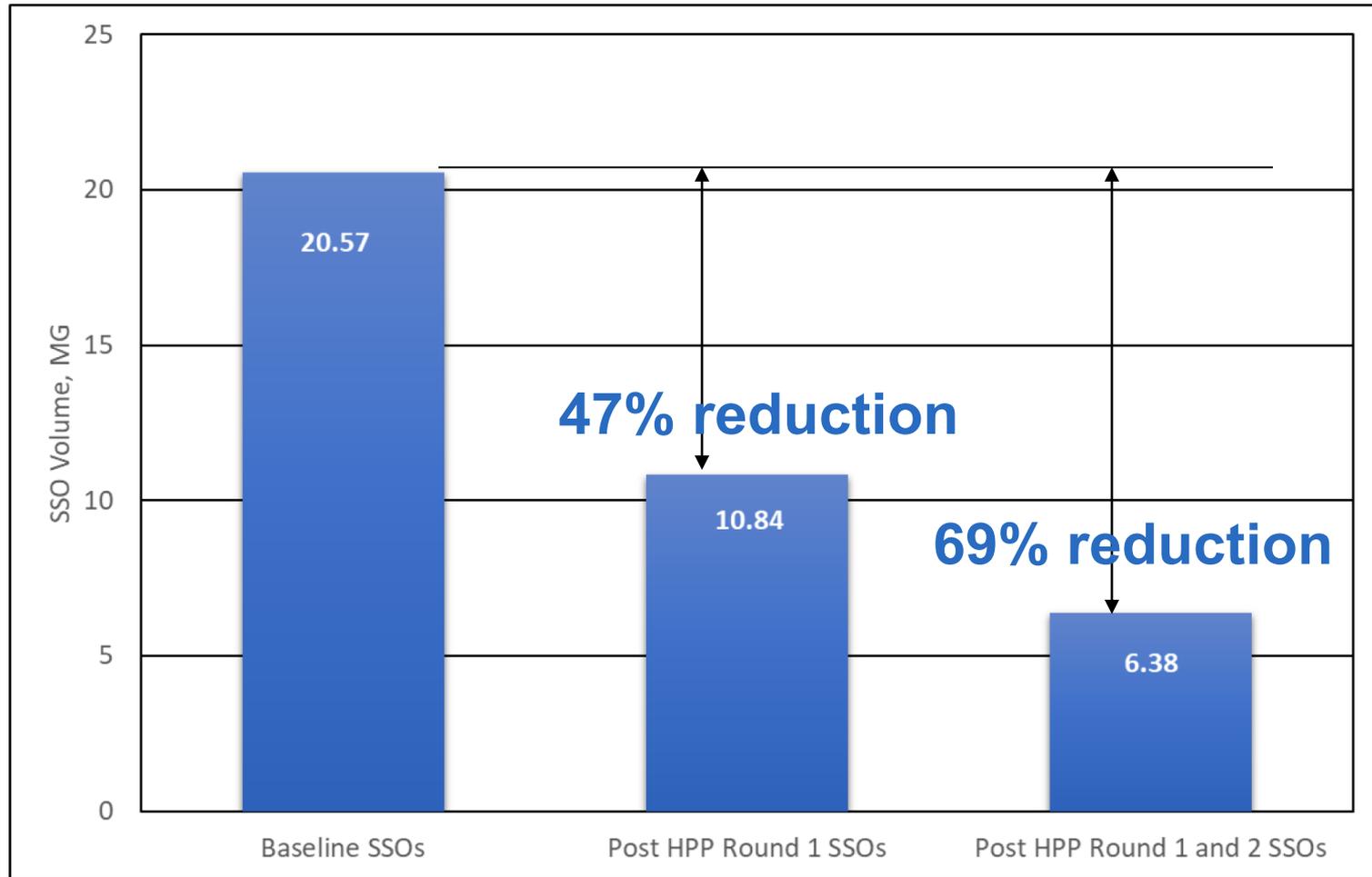


# High Priority Project Areas Phase 2



# Estimated High Priority Projects Reductions

Volume reduction as compared to RHM baseline simulation



- Periodic meetings of Capacity Team
- Monthly Directors of Utilities meetings
- HRSD providing GIS, flow, pressure and rainfall data to Localities
- Ad hoc coordination of bacteria source tracking program

- HRSD.com is maintained with all CD related documents
- Annual newsletter published in February of each year
- Annual public informational is held each January
- When SSOs occur, focused public outreach, news releases, etc.,...
- Project specific public meetings as each construction project is kicked off
  - Project specific construction progress details maintained on HRSD.com

- Sea level rise and recurrent flooding
- Magnitude and spatial patterns of growth
- Future of numerous major DoD facilities
- Long term trend in I/I
- Regional economic vitality and household income and employment levels
- Regional environmental and public health priorities

## Steps Citizens Can Take to Protect Receiving Waters

- Report Sanitary Sewer Overflows – Call your local utility department
- Inspect home, yard and sewer service pipes to ensure separation between storm and sanitary systems
- Reduce storm water runoff by using rain barrels, rain gardens and establishing a buffer



## Steps Citizens Can Take to Protect Receiving Waters

- Pick up animal waste
- Avoid feeding wildlife
- Support “No Dumping” and use boater pump out facilities

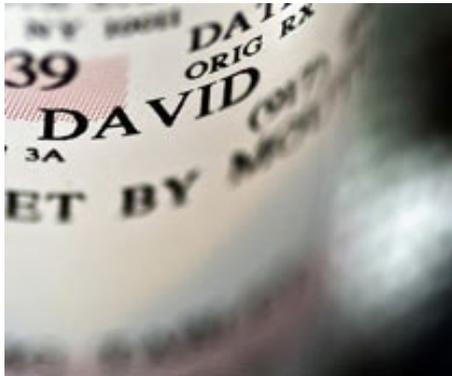


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## Steps Citizens Can Take to Protect Receiving Waters

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- Practice proper disposal of pharmaceuticals, household chemicals, food wastes and kitchen grease – minimize use of or eliminate garbage disposal



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## Steps Citizens Can Take to Protect Receiving Waters

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- Improve water quality by raising oysters
- Plant native plants – minimize groomed turf – managed meadow concept
- Limit fertilizer and other lawn chemical applications – use natural products like compost

