



EPA Consent Decree
Annual Information Meeting
Regional Wet Weather
Management Plan

January 22, 2013

Requirements of the Consent Decree

- *“...after providing reasonable notice on its webpage and in a newspaper of general circulation”*
- *“...shall hold an annual informational meeting open to the Localities and the public”*
- *“HRSD shall convey information on the status of the RWWMP, HRSD – Locality cooperation and steps citizens within the Localities can take to protect the receiving waters”*

Objective of the Consent Decree

- “HRSD, working in coordination with the Localities, to fulfill the objectives of the Clean Water Act with a goal of eliminating Sanitary Sewer Overflows (SSOs)”
- The Regional Wet Weather Management Plan will establish the Level of Service for elimination of SSOs



HRSD and the Regional Sewer System

HRSD System

- ~ 430 miles of large diameter force main
- ~ 50 miles of gravity sewer
- 81 pump stations
- 13 treatment plants

Regional Network

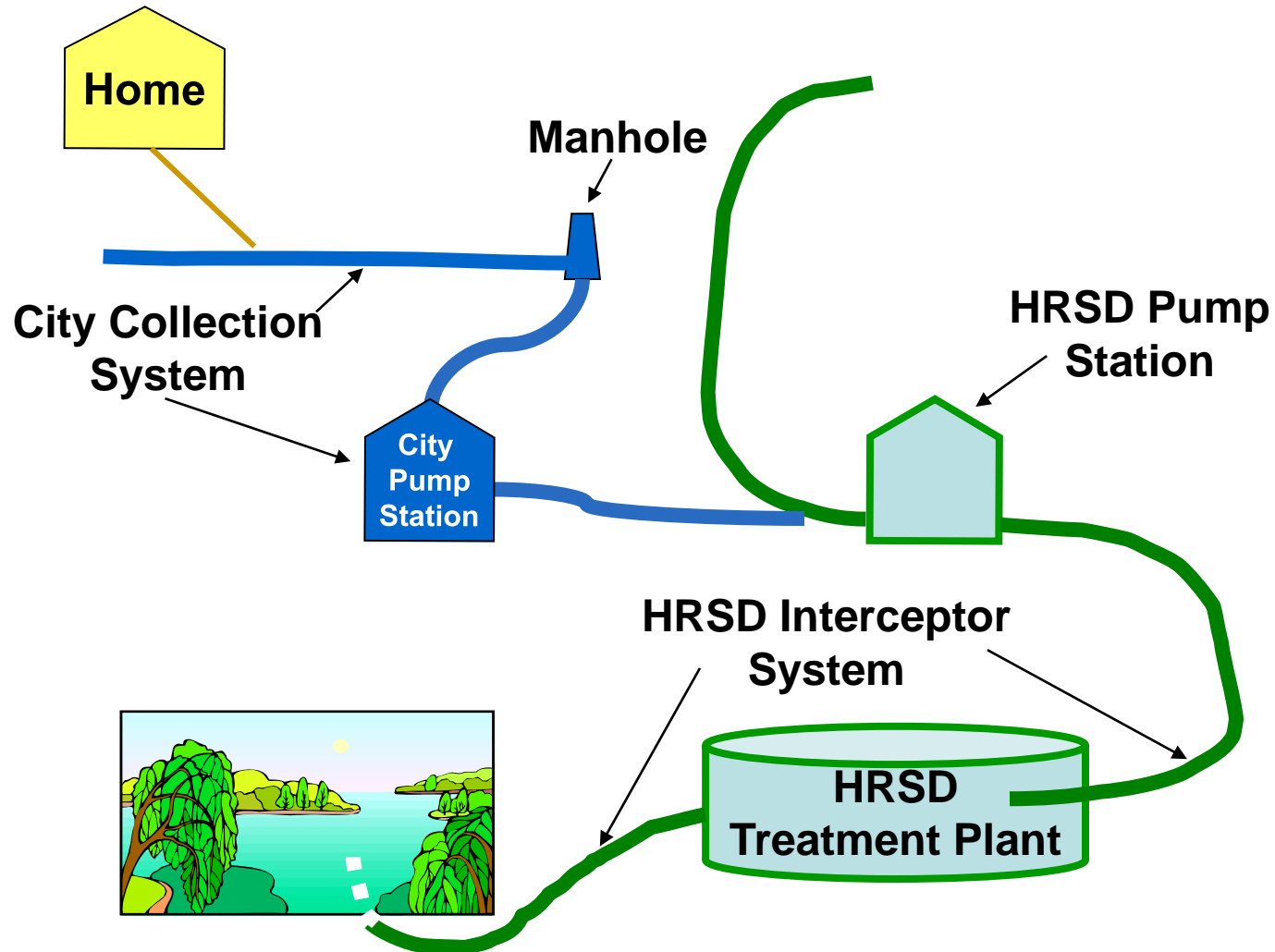
- 1.6 million served
- 5,800 miles of gravity sewer
- 1,500 pump stations
- 1,200 miles of force main

HRSD is Partnered With Localities

Localities in State Order

- Chesapeake
- Gloucester
- Hampton
- Isle of Wight
- James City Service Authority
- Newport News
- Poquoson
- Portsmouth
- Smithfield
- Suffolk
- Virginia Beach
- Williamsburg
- York County

Regional Sanitary Sewer System



- Participants include EPA, DEQ and localities
- Twice per year in quarters when annual or semiannual reports are not due (July and January)
- Next briefing will be held today (January 22, 2013)

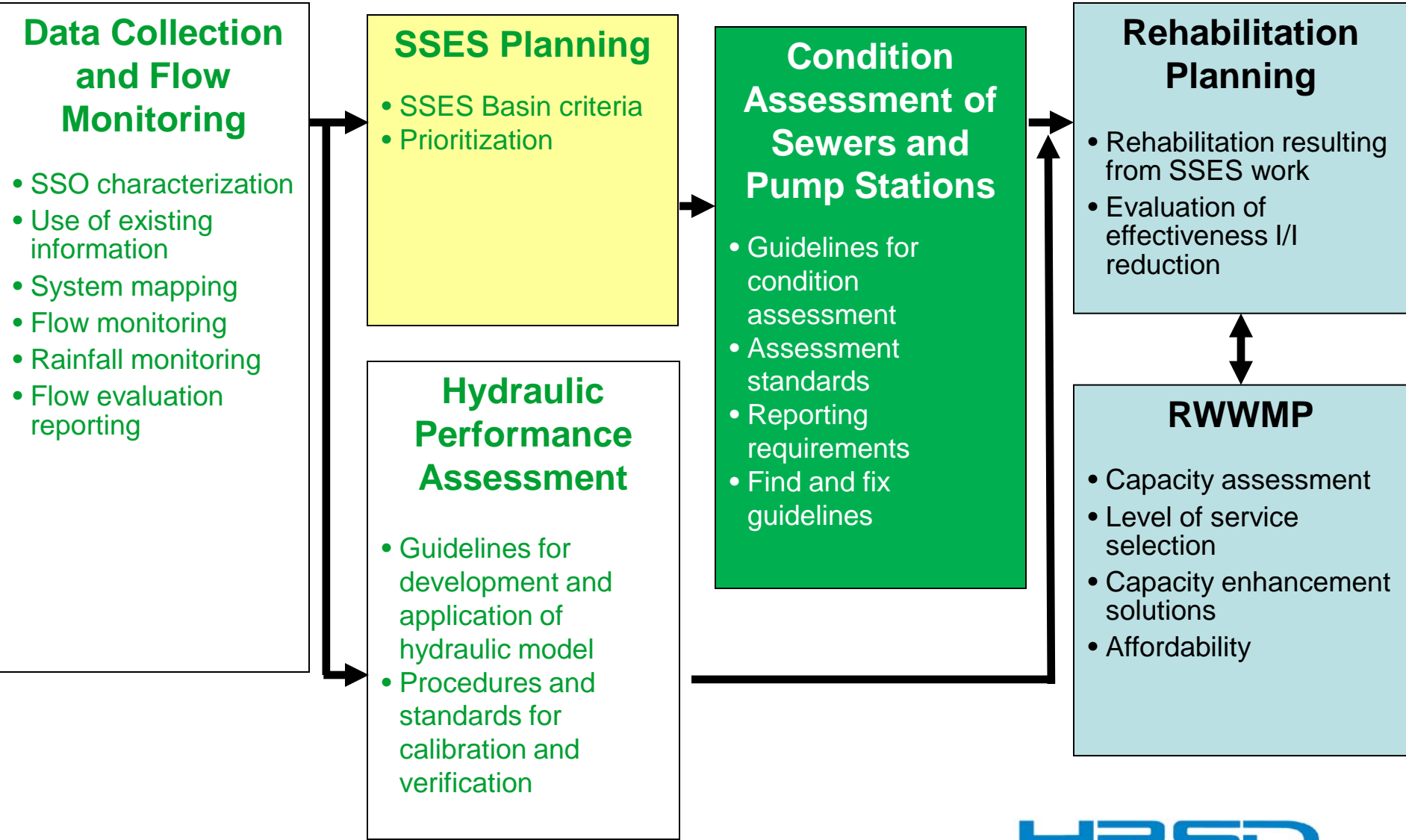
Overall Regulatory Status

- Region is in compliance with DEQ Special Order by Consent
- Federal Consent Decree was entered with the court on February 23, 2010
- All Consent Decree required submittals have been on time

Major Consent Decree Compliance Requirements

- Flow, Pressure and Rainfall Monitoring
- Regional Hydraulic Model and Assessment
- Condition Assessment Plan
- Interim System Improvements
- Management, Operations and Maintenance (MOM)
- Regional Wet Weather Management Plan (RWWMP)
- Post RWWMP Implementation Monitoring and Performance Assessment

State Consent Order Overview



Regional Data Collection Efforts

- Consent Decree flow monitoring requirements completed in 2011
- HRSD is maintaining an extensive Flow, Pressure and Rainfall network (greater than 360 measurement instruments) operational since completion of requirements
- Data Quality Assurance Program is in place

Regional Hydraulic Model

- Regional Hydraulic Model Report (submitted on July 31, 2011) was accepted with no further comments by EPA/DEQ in July 2012
- Extensive coordination with localities continues on model inputs

Condition Assessment Program

- First major milestone of November 26, 2011 was met
- Consent Decree requirements are nearing completion
 - 20 force main segments remain for wall thickness inspection (by October 2013 deadline)
- Prompt Repair contract is ongoing to address severe defects
- Final Condition Assessment Reports being prepared for submittal to EPA/DEQ on February 12, 2013

Condition Assessment Program

Inspection Type	Performance To Date
Force Main Inspection	
- Level 1 Inspections	155,994 LF (Requirement Complete)
- Reservoir FM Inspection	19,019 LF (included in Level 1 above)
- Level 2 Inspections	12 of 15 required by Level 1
- Group Ferrous Inspections	58,201 LF (31,342 LF remaining)
Gravity Main Inspection	260,000 LF (Requirement Complete)
Manholes/Structures	1,293 Manholes or Structures (Requirement Complete)

Prompt Repairs Program

- Systematic review of data to identify defects requiring Prompt Repair
- 50 individual sewer system defects have been identified as meeting criteria
- 29 of 50 Prompt Repair defects have been completed

Rehabilitation Action Plan

- Addresses condition defects identified in Consent Decree Condition Assessment Program
- Due on February 12, 2013
- Will include results of field activities, list of assets requiring action, the proposed action, a schedule and cost for the improvement
- Addresses gravity mains, force mains, pump stations, and associated system components

Interim System Improvements

- Consent Decree includes requirement to complete 33 CIP projects totaling \$140 million by February 23, 2018.
- Several projects completed, many in construction, most of remainder in design
- On track for completion by 2018 deadline

Interim Improvements

CD Ref Number	CIP Number	Project Name	Project Status
1	BH-111	Claremont Avenue Pump Station Rehabilitation	Project Complete
2	AT-100	Atlantic Pressure Reducing Station Emergency Generator Replacement	Project Complete
3	AT-113-2	Lake Ridge Interceptor Force Main Section B - Contract 2 (Land)	Project Complete
4	YR-100	Big Bethel Road to J Clyde Morris Boulevard Interceptor Force Main Replacement	Project Complete
5	JR-109-1 & 2A	Williamsburg-James River Connection Force Main Section II and Lucas Creek-Woodhaven Interceptor Force Main Replacements - Phase 1 & 2A	Project Complete
6	YR-108	Route 171 Interceptor Force Main	Project Complete
7	YR-104	Kiln Creek Interceptor Force Main	Project Complete
8	VIP-120	South Trunk Sewer Section F 20-Inch, Section H 8-Inch, and Section H 12-Inch Interceptor Force Main Replacement and Gravity Sewer Chesterfield Blvd. Replacement	Project Complete

Interim Improvements (Cont.)

CD Ref Number	CIP Number	Project Name	Project Status
9	AT-108	Eastern Branch Sections A & B, Green Run Section C, and 24-Inch Kempsville Road Force Main Replacements	Project Complete
10	VIP-106	North Trunk Sewer Section W 8-Inch and 12-Inch Force Mains and Larchmont Force Mains (Formerly Siphon Lines) Replacements	Design Phase
11	VIP-105	North Trunk Sewer Section R 6-Inch Interceptor Force Main and 10-Inch Gravity Replacement	Construction Phase
12	VIP-104	North Trunk Sewer Section D 24-Inch Interceptor Force Main Replacement	Construction Phase
13	AT-112-1	Hilltop/Point O'Woods Interceptor Force Main Replacement - Phase I	Project Complete
14	AT-112-2	Hilltop/Point O'Woods Interceptor Force Main Replacement - Phase II	Project Complete
15	WB-107	Williamsburg Interceptor Force Main Contract A Replacement	Design Phase
16	BH-100	33rd Street Pump Station Replacement/Rehabilitation	Design Phase

Interim Improvements (Cont.)

CD Ref Number	CIP Number	Project Name	Project Status
17	VIP-133	Sanitary Sewer System Portsmouth VA Contract A Clifford Street Force Main	Construction Phase
18	BH-114	James River Diversion 35th Street Phase III and Boat Harbor Outlet Sewer Relocation I-664 Rehabilitation	Project Complete
19	BH-112	Hampton Trunk Sewer Division A Replacement	PER Phase
20	JR-106	Lucas Creek Pump Station Upgrade	On schedule for PER in 2013
21	VIP-131	South Trunk Sewer Section C-42 inch Force Main Replacement	Construction Phase
22	AB-105	Section W Force Main Replacement	PER Phase
23	YR-101	Coliseum Drive Pressure Reducing Station	Construction Phase
24	JR-100	Center Avenue Pump Station Replacement	Construction Phase

Interim Improvements (Cont.)

CD Ref Number	CIP Number	Project Name	Project Status
25	VIP-130	Norchester St Pump Station Replacement/Rehabilitation	Design Phase
26	AT-114	Providence Road Pressure Reducing Station Modifications	Design of Interim PRS underway, Final Project on schedule for beginning design in 2014
27	BH-101	58th Street Connecting Sewer Rehabilitation	Design Phase
28	BH-116	Bridge St. Pump Station Replacement/Rehabilitation	On schedule to begin in 2013
29	VIP-132	South Trunk Sewer Section G 36-Inch and 30-Inch Force Main Replacement	Design Phase
30	GN-128	Interceptor Systems Pump Station Control and SCADA Upgrades and Enhancements	Design Phase
31	NP-106	Wilroy Pressure Reducing Station, Pughsville PRS Upgrades, Suffolk PS Upgrades	Design of Wilroy Interim PRS underway. Final Wilroy PRS, Pughsville PRS, and Suffolk PS design in preliminary engineering phase
32	AB-100	Army Base 24-Inch and 20-Inch Transmission Main Replacements	Portion of pipeline completed. Remaining pending design scheduled for 2013
33	JR-108	Normandy Lane Interceptor Force Main Replacement	Design Phase

Management, Operations, and Maintenance Program

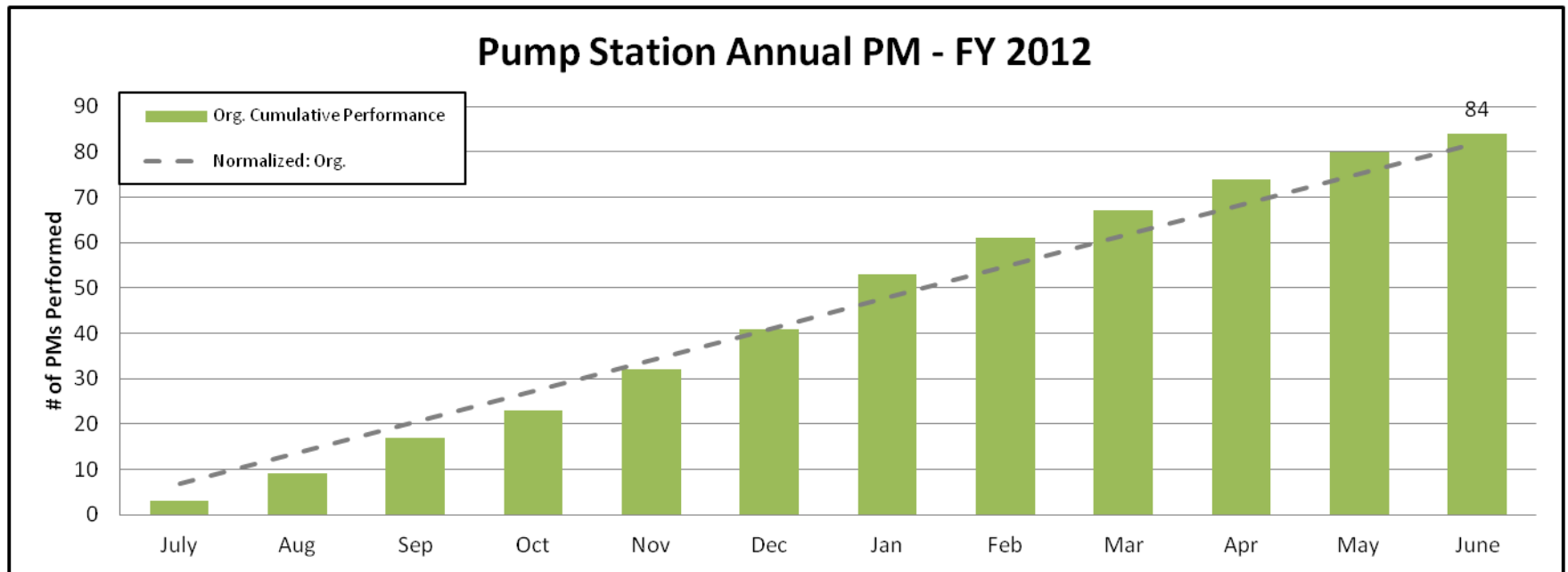
- MOM program approved in 2011
- Implementation of enhancements to existing programs is ongoing
- Performance measures are continuing to be tracked to evaluate the effectiveness of the programs

FY2012 MOM Program Performance

- 54 metrics targeted for FY2012
- 44 met or exceeded specified goals
 - Includes 6 Consent Decree required metrics
- 5 require updated tracking mechanisms
- 5 metrics fell short of targets
 - SSO Response Within 2 Hours (79%, most due to Hurricane Irene)
 - Cathodic Protection (14%)
 - ROW and Easements(93%)
 - Work Safety Inspection (99%)
 - CIP Planning/Project Completion (68%)

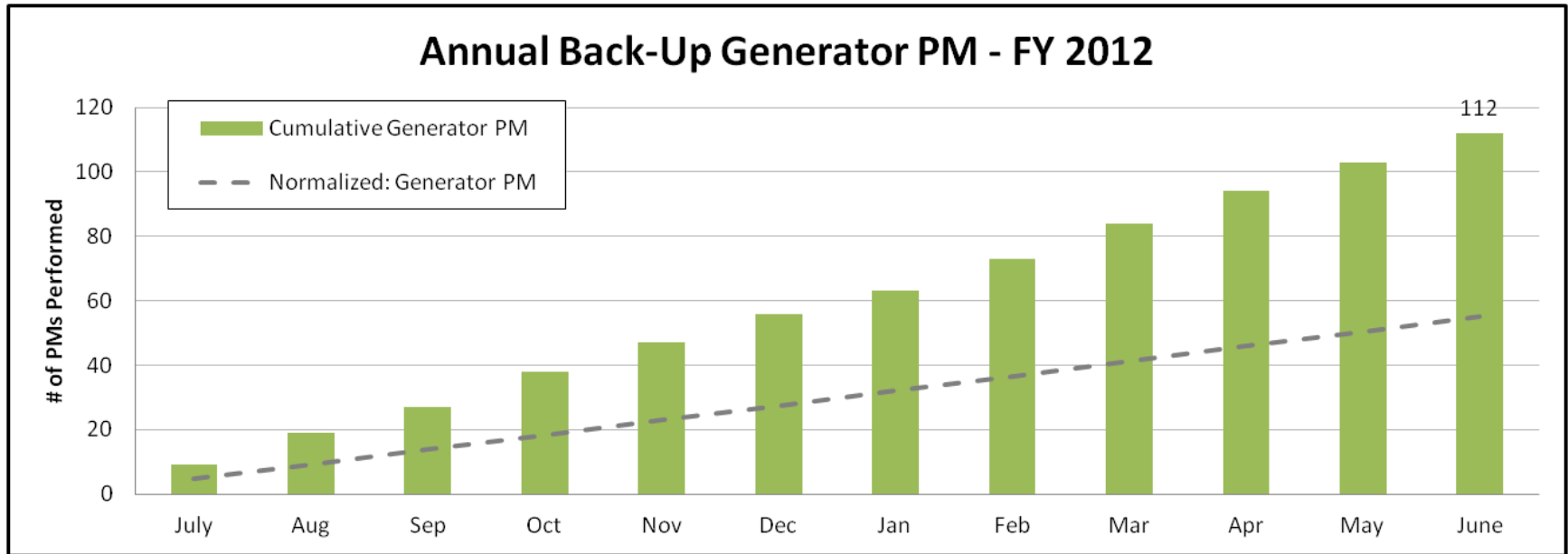
Consent Decree Performance Measures Review

Annual Pump Station preventative maintenance; Goal 82 performed per year



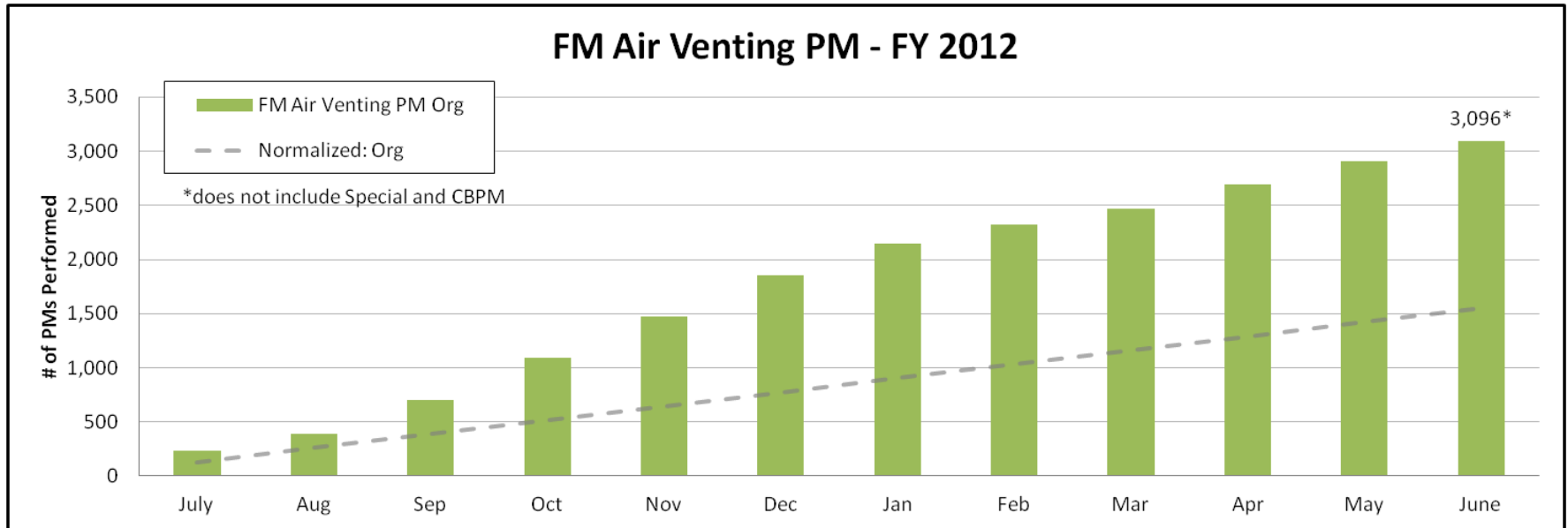
Consent Decree Performance Measures Review(Cont)

Annual Generator preventative maintenance; Goal: 55 performed per year



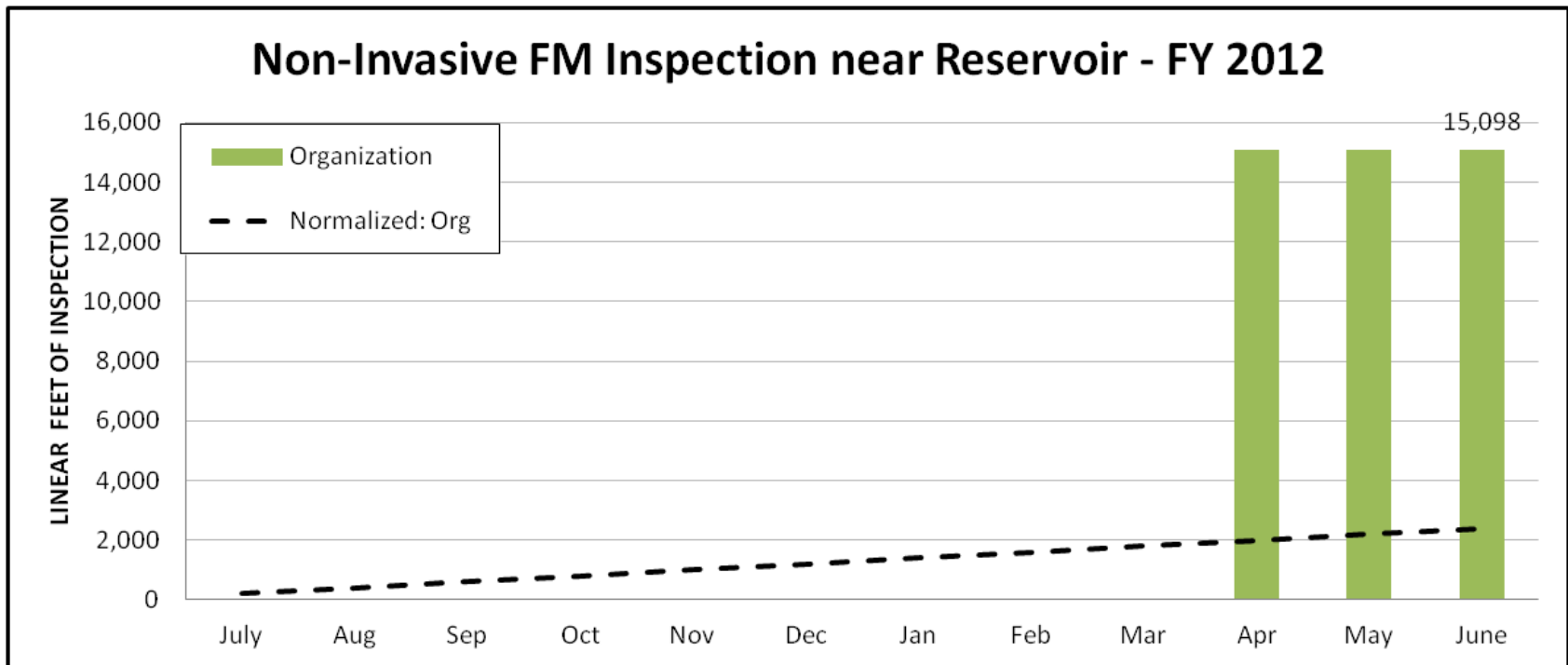
Consent Decree Performance Measures Review (Cont.)

Air Release Valves preventative maintenance; Goal: 1,550 performed per year



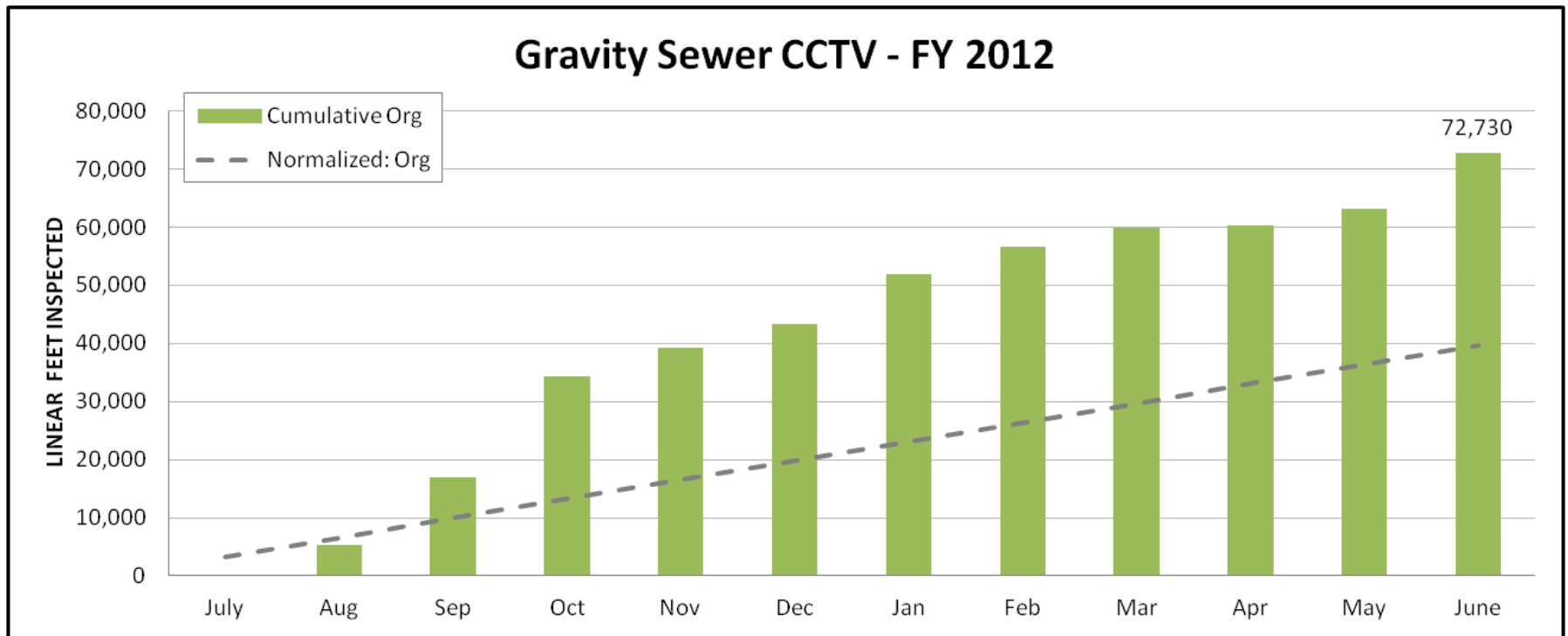
Consent Decree Performance Measures Review (Cont.)

Non-invasive Force Main Inspection (near reservoirs); Goal: 2400 LF per year



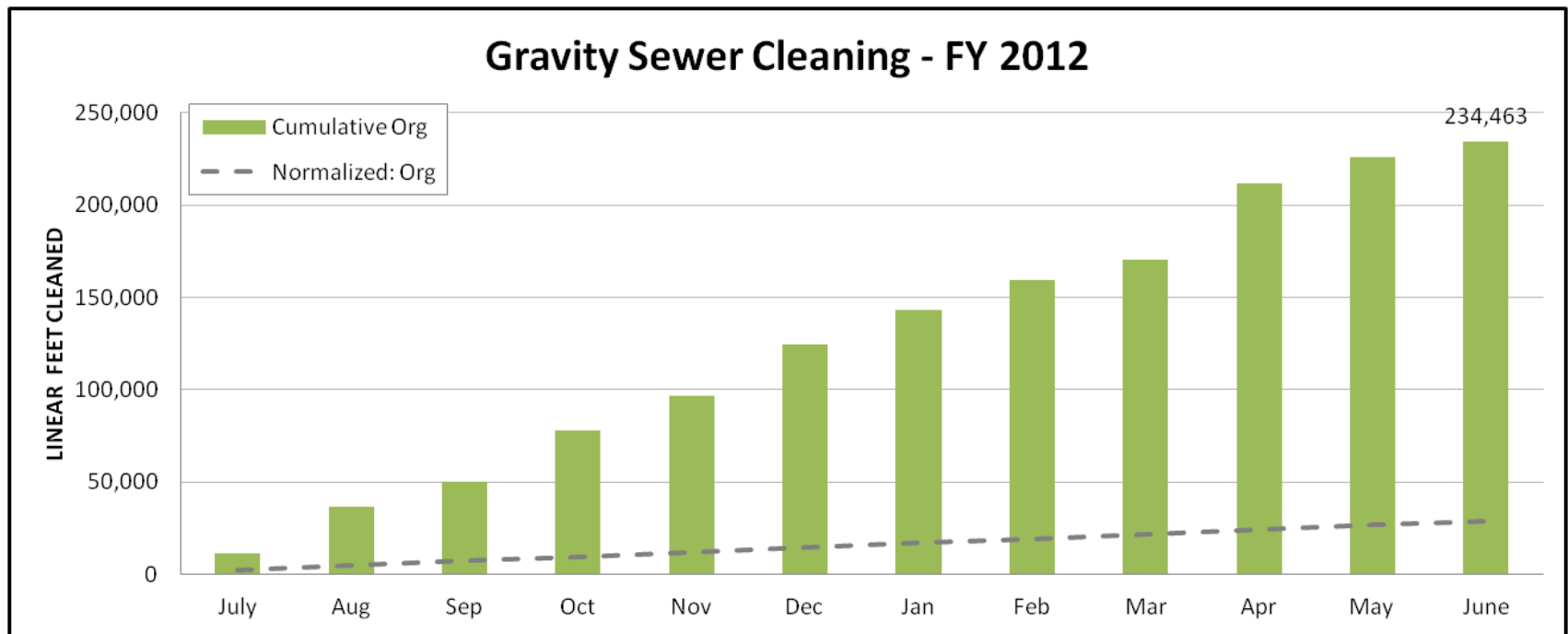
Consent Decree Performance Measures Review(Cont)

Gravity Sewer Inspections; Goal: 39,600 linear feet per year



Consent Decree Performance Measures Review (Cont.)

Gravity Sewer Cleaning; Goal: 24,600 linear feet per year



Consent Decree Performance Measures Review

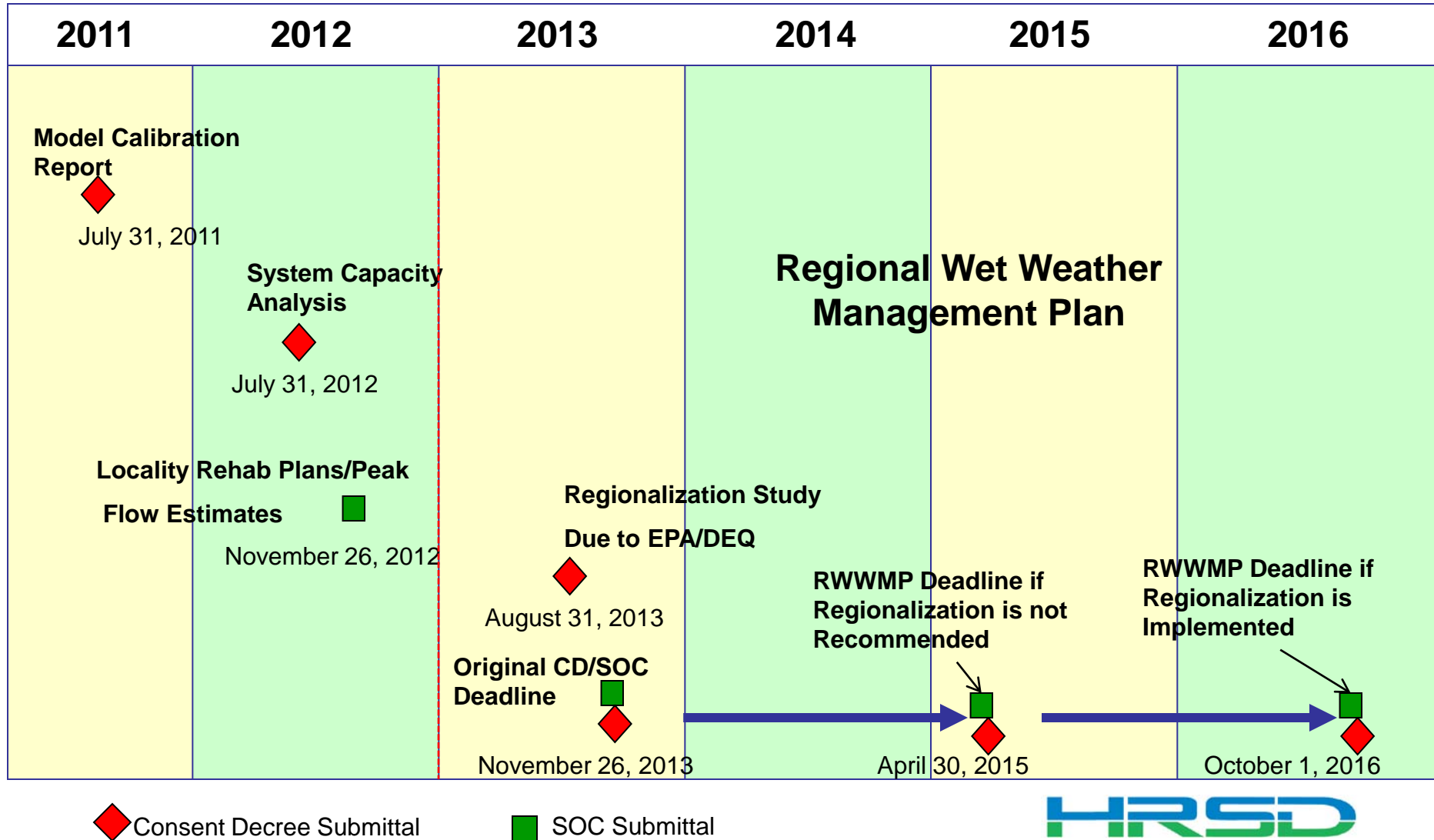
Year over Year Performance Summary

Metric	Target	FY2011 Actual	FY2012 Actual
Pump Station Annual PM	82	82	84
Back-up Generator Annual PM	55	105	112
Force Main Air Vent PM	1,550	3,225	3,096
Non-Invasive Force Main Inspection	2,400 LF	3,921 LF	15,098 LF
Gravity Sewer Inspection	39,600 LF	169,317 LF	72,730 LF
Gravity Sewer Cleaning	29,400 LF	170,818	234,463 LF

- Extensive coordination will be necessary with localities
- RWWMP will establish the projects, costs and schedule to address capacity challenges to a selected level of service
- Approved RWWMP will be incorporated into the Consent Decree by reference
- RWWMP development schedule is very tight

- Regional Hydraulic Model achieved final calibration
- Pilot storage project under construction
- Preliminary Capacity Assessment submitted to EPA/DEQ
- Localities have shared their Preliminary Rehab Plans and Associated Preliminary Peak Flow Estimates

Consent Decree RWWMP Development Schedule



Short Term Wet Weather Operational Plan

- Purpose of the Plan is to identify how to get the most capacity out of the existing system prior to RWWMP
- EPA/DEQ approved plan on April 23, 2012

- Purpose of the plan is to document SSO response, reporting, recordkeeping and resolution practices
- Original plan approved by EPA/DEQ
- Updated Plan submitted to EPA/DEQ in December 2012

SSO Response Plan

	2010 SSOs	2010 Volume (gallons)	2011 SSOs	2011 Volume (gallons)	2012 SSOs	2012 Volume (gallons)
HRSD	59	3,378,912	35	725,785	40	22,847,617**
Localities	446	~4,363,667	361	~3,150,447	257	~2,412,721

2010 HRSD SSOs of Unknown Volume: 3
 2011 HRSD SSOs of Unknown Volume: 13
 2012 HRSD SSOs of Unknown Volume: 6

2010 Total Rain near ORF: 53 inches
 2011 Total Rain near ORF: 55 inches
 2012 Total Rain near ORF: 52 inches

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

- Ongoing meetings of Capacity Team and Locality Team
- Ad hoc committees with HRSD and locality representatives are reviewing key SOC deliverables
- HRSD providing GIS, flow, pressure and rainfall data to localities

- Annual newsletter (third due out before February 23, 2013)
- Annual public informational meeting with public notice (January 22, 2013)
- Public outreach regarding overflows
 - *“...a public outreach program to inform the public of any SSO Outfalls within the Regional SS System, the possible health and environmental effects of SSOs and that recreational activities, such as swimming, should be limited as a result of such SSOs.”*

Reporting Requirements

- Annual report was submitted November 1, 2012 for period through June 30, 2012
- Semi annual report is due May 1, 2013 for period of July 1, 2012 through December 31, 2012

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
- Practice proper disposal of pharmaceuticals, food wastes and kitchen grease – minimize use or eliminate garbage disposal
- Reduce storm water runoff by using rain barrels, rain gardens and establishing a buffer

Steps Citizens Can Take to Protect Receiving Waters (Cont.)

- Improve water quality by raising oysters
- Limit synthetic fertilizer and other lawn chemical applications – use natural products like compost
- Pick up animal waste
- Avoid feeding wildlife
- Support “No Dumping” and use boater pump out facilities

Questions?

Agenda for Quarterly Briefing with EPA/DEQ

- Overview of Meetings with EPA/DEQ since Last Briefing
- Regional Data Collection Efforts
- Condition Assessment
- Interim System Improvements
- MOM Program
- Regional Wet Weather Management Plan
- **Regionalization Study**
- Coordination with Localities
- Reporting Requirements
- Upcoming Deliverables