

Administrative Order CWA-03-2009-0313DN

Five-Year Summary of Activities

Respondent: **Salisbury Township**

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Date: October 21, 2014

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[update based on report]

Section 1: Progress Toward System Characterization

[Use each row in the tables in this section to describe the activities performed to characterize the system. Add or delete rows as necessary, if information regarding studies or results has not yet been presented to EPA, include that information in an appendix.]

Table 1-1: Flow Monitoring and Rehabilitation Effectiveness	
Flow Metering	Salisbury contracted Flow Assessment to install temporary meters in area 2, area 9, and area 10 from February 2011 to May 2011 which concluded with an RDII assessment to determine the sub-basins which exhibit the highest I&I potential. The locations for the initial monitoring were chosen based on an analysis that was performed using data from the Township's 13 permanent flow meters situated in the flow basins around the Township.
Rehabilitation Effectiveness Metering	The metering analysis helped to isolate areas and concluded that area 10, sub-basins 10b2, 10b, 10d, 10b4, 10b1, 10b3, 10e, and 10c represented the largest area of concern and the location to which the Township concentrated their efforts. Outside of area 10, area 2b, 2a, and 9 were also studied but considered minor in magnitude compared to area 10. After the initial metering, maintenance and repair work were scheduled in the isolated areas. Post-monitoring will help determine the effectiveness of the rehab work.
Rehabilitation Effectiveness Results	A remetering of all the areas studied during 2011 is currently out to bid and is set to commence between the months of October 2014 and December 2014. The analysis between the two metering events will help determine the rehabilitation effectiveness.
Model Recalibration Metering	Remetering event will be occurring in fall 2014. The 2011 and 2014 results will be compared using the EPA SSOAP software to determine the rehabilitation effectiveness.

[Include any SSES activities performed to date, add or delete rows as needed]

Table 1-2: Sanitary Sewer Evaluation Study Summary			
SSES Activities	SSES Activity	Catchments Completed	Catchments Identified for SSES
	Nighttime Weiring		*flow monitoring results from the permanent and temporary flow meters gave insight into areas of concern. Due to the small sanitary flow basins in the Township, the whole catchment area was considered for rehab work (such as the test and seal program) instead of isolating specific areas from weiring.
	Smoke Testing		*due to potential legal issues of concern from the Township Solicitor, smoke testing was not performed.
	Basement Inspections		*Basement inspection within the study area were performed approximately 15 years ago and very little new development has occurred since then. Considering the political issues associated with basement inspections, including resistance from property owners in allowing the Township to enter their homes and the legal issues associated with achieving compliance, new basement inspections were not performed at this time.
	Above Grade Storm Water		*See manhole inspections below
	Other: Known Cross Connections		No cross-connections were discovered
	Other:		
Manhole Inspections	184 total manholes were inspected between May and June 2012 as part of the above grade storm water inspection program. More inspections will be considered after the current round of test and seal is complete.		

CCTV Inspections	All of area 10 has been TV inspected to help identify candidates for the test and seal, dig repair, and other rehab programs. To date, 109,144 linear feet of CCTV inspections have been performed in the Township since the EPA Order was enacted.
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[Include information about any system modeling done to date, add or delete rows as needed.]

Table 1-3: Hydraulic Modeling	
Model Development	* Due to the small size of the Township's collection system pipes as well as the multiple connections into other sewer systems of the surrounding communities, a system model will likely not be technically feasible for this application. The flow data from the metering results as well as the Township's permanent meter installations will be sufficient for analysis of the sewer system and any capacity issues. Instead of building a system model, the Township chose to invest funding into the rehabilitation phase of the program enabling a larger return to be achieved.
Level of Service Analyses	Downstream flows shows no evidence of SSO's
Current System Upsizing	No system upsizing is planned.

[Include any other engineering activities that have occurred since the AO was issued. Examples include AO planning, workplans, trainings, studies, etc.]

Table 1-4: Other Engineering Activities	
Chemical Root Treatment Program	Annually, the Township identifies lines in their system that are flagged for chemical root treatment to help deter blockages and infiltration into the system.
Test & Seal Program	Spring 2013, Spring 2014 and Fall 2014. The initial round of test & seal targeted the highest RDII values followed by a second round of CCTV with test & seal, and a third round this fall which are targeted at the next batch of high RDII areas. All issues discovered from CCTV inspection will be pressure tested and grouted. After the fall 2014 program, the Township will have completed over 20,000 linear feet of lines. The program will likely continue beyond 2014 as part of the Township's Capital Improvement Plan.

Section 2: Progress Toward Eliminating Inflow

[Provide information on inflow sources removed, quantify sources removed to date. The page can be adjusted to landscape to make information fit. Add or delete rows or columns as needed.]

Table 2-1: Inflow Sources Removed					
Number of Basement Disconnections	Number of Manhole Dishes Installed	Number of Manhole Frame and Covers Reset/Replaced	Cleanout Repair / Cap Replacement	Roof Drains Disconnected	Other Lateral Repairs
-	-	-	-	-	-
*After the follow-up flow monitoring program which will begin in October 2014, inflow issues will be discussed and addressed in the Capital Improvement Plan					

Section 3: Progress Toward Eliminating Infiltration

[Provide information on infiltration sources removed, quantify sources removed to date. The page can be adjusted to landscape to make information fit. Add or delete rows or columns as needed.]

Table 3-1: Infiltration Sources Removed					
Number of Manhole Chimney Seals Repaired	Number of Manholes Lined	Number of Manholes Grouted	Cured-in-Place Pipe Line (LF)	Lateral Replacement (to Right-of-way)	Sewer Line Replacement (LF)
6	-	-	-	-	1,603 ft

Additional Work

Table 3-2: Infiltration Sources Removed					
Linear Feet of CCTV Inspection	Number of Laterals Grouted	Linear Feet of Chemically Treated Lines	Spot Repaired Lines	Linear Feet of Test & Seal	Number of Joints Tested/Number of Joints Sealed
109,144 ft	54	62,843 ft	24	13,077 ft	2,515 Tested 250 Sealed

*since 2009

Section 4: Other Related Projects

[Include any other projects related to the AO that were not outlined above. Add or delete rows as needed.]

Table 4-1: Other Related Projects	
Additional Work Beyond 2014	As part of the Capital Improvement Plan

Section 5: Progress Toward Cooperative Management of Flows

[Include any information about cooperation with other utilities under the AO, examples include partnerships, meetings, joint operations, etc. Add or delete rows as needed.]

Table 5-1: Progress Toward Cooperative Management of Flows	
Annual Signatory Meetings	Varies, usually December of each year. The Township meets with other signatories to discuss progress made towards complying with the A.O. as well as future cooperative planning.

Section 6: Funding

[Include costs of meeting the AO to date and anticipated future costs.]

Table 6-1: Financial Reports	
Cost of AO to Date	From July 2010 to July 2014, sum of all semi-annual reports from Salisbury indicated as "costs to comply with EPA Order" = \$1,020,071.85
Future Costs for Administrative Order Compliance	The anticipated costs to comply with the requirements of the A.O. is unknown.

Section 7: Future Activities

[Include all activities remaining that will need to be completed to eliminate SSOs and meet the AO requirements. Include a schedule for these activities. Add or delete rows as needed.]

Table 7-1: Future Activities and Schedule	
Activity	Estimated Completion Date
Test & Seal, Fall 2014	End of year 2014
Flow Monitoring, Late Fall 2014	End of year 2014
Continued Rehab as part of the Capital Improvement Plan will be discussed in the required January 31, 2015 Administrative Order Summary.	2015+