

Municipality/Organization: Town of Norwood, MA

EPA NPDES Permit Number: MAR041053AH

MaDEP Transmittal Number: W-036392

Annual Report Number Year 15
& Reporting Period: April 1, 2017 – March 31, 2018

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Tony Mazzucco

Title: General Manager

Telephone #: 781-762-1240

Email: tmazzucco@norwoodma.gov

Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: 

Printed Name: Tony Mazzucco

Title: General Manager

Date: 

Part II. Self-Assessment

1. Public Education and Outreach

The Town of Norwood is active in the Neponset Stormwater Partnership (NSP). The NSP is a regional stormwater collaborative which brings together communities (Foxborough, Medfield, Westwood, Dedham, Milton, Norwood, Canton, Quincy, Stoughton and Sharon) and the Neponset River Watershed Association to reduce stormwater pollution and streamline compliance with the MS4 permit.

In addition to the BMP's outlined in the Town of Norwood's NOI there are numerous events throughout the year where providing information and raising awareness is a major element. The Recreation Department's Earth Day works with the students of each school in Town to cleanup schools, parks, conservation lands and other Town owned properties. Information and assistance is provided from Waste Management with support from local businesses. The High School also has an ongoing program of Student Community Services Hours where similar work is provided. The Recreation Department also works with the local Boys and Girls Scouts clearing pathways along Hawes Brook

The Town wide Web page now gives access to information from the Recycling Coordinator, links to Mass Department of Environmental Protection and Mass Department of Public Health. There is information on reporting illegal dumping, leaf and brush disposal, benefits of rain barrels and composting etc.

The Town of Norwood has a curbside trash contract with Waste Management for Single Stream Recycling. Notices to households and informative meetings throughout Town were conducted to inform and educate the general public on the benefits (both environmentally and fiscally) of recycling. Since implementation, curbside recycling has increased from 14% to 30%.

The Town of Norwood also works with the local newspapers and public access cable to educate and inform the general public. Articles on Recycling Days, Household Hazardous Waste Days, Wetlands Month etc. not only announce the events but lists EPA and Town websites for additional information.

2. **Public Involvement and Participation**

Hazardous Waste Days – in addition to the biannual (spring/fall) Recycling Days, the Town of Norwood provides year round curbside pick-up of appliances and television/CRT sets, with DPW notification.

Household paint recycling – the Town of Norwood (Board of Health) now is selling waste paint hardeners to solidify latex paint for curb pick-up.

The Engineering Department has been responsible for the NPDES General Permit and has conducted meetings with various department heads concerning stormwater discharge and the implementation of Best Management Practices (BMP's). The Conservation Agent also requires BMP's on all projects filed for Development Plan Review.

3. **Illicit Discharge Detection and Elimination**

The Town of Norwood through the Department of Public Works (DPW) has been working to detect and eliminate the source of coliform bacteria seeping into Meadowbrook. The town completed a pilot sewer rehabilitation project in this area on Guild Street to assess the effectiveness of comprehensive sewer rehabilitation in improving water quality in the underdrain system. The project was completed in fall 2009 and included lining of sewer mains, service connections and manholes. Post construction monitoring has shown the approach to be highly effective in eliminating underdrain contamination and current sampling shows E. Coli levels at or near zero. The town completed construction of a larger project to further rehabilitate the sewer system in the Hospital and Florence Avenue areas to improve water quality in Meadowbrook. Construction work began in Fall 2010 and was completed in Spring 2012. The project was funded through the DEP SRF program. Preliminary indication shows an improvement in water quality in the underdrain system. The town continues to monitor and sample the underdrain system to track progress of its efforts to improve water quality. An additional rehabilitation project in the Hoyle Street area was completed in 2015 as well as a large \$2.7 Million rehabilitation project in a portion of the downtown area funded through the DEP SRF program. The Town of Norwood completed design of an additional rehabilitation project in Priority Areas 3 and 4 and construction was completed in spring 2018. This project has also received a \$2.7 Million SRF Loan. An additional rehabilitation project has been designed during this reporting period and is scheduled for bidding during summer of 2018.

In 2010, the town completed inspection and dry weather screening of all known stormwater outfalls. Work included location of the outfalls, performing visual and test kit sampling of water quality and other qualitative testing and observations. DEP also assisted in the sampling and evaluation of some of these outfalls including performing Human Marker Analysis testing in

select locations. Efforts during this reporting period have focused on outfalls at Alpine Street (#22), Harrow Road (#7B), Arcadia Road (#55), Baker Street (#40), Elda Drive (#75) and Yew Drive (#89). Work has included sampling of outfalls and sampling in the upstream portions of the drainage system, dye testing of individual properties and other follow-up action and coordination. Identified problems have been corrected soon after they have been identified. The Town continues to work closely with DEP in sampling and identifying sources of contamination in the drainage system, as well as performing follow-up monitoring after corrective action has been completed. Several indirect illicit connections were identified this year in the Fieldbrook Road area (Outfall 55) and the Alpine / Ash Street area (Outfall 22). These connections have been completed on 3 of the 4 of these identified illicit connections.- Ongoing work in these areas continues.

During the summer of 2017 the Town of Norwood conducted an outfall sampling program in accordance with the proposed Municipal Separate Storm Sewer System (MS4) standards. The outfall sampling program was a follow up to the ongoing program which began in 2010. The eighty-two outfalls included in this round of sampling and investigations were chosen because they had either been flowing, submerged or unable to be located during prior efforts. Outfall sampling was conducted over four days, often times with the assistance of Department of Environmental Protection staff. The sampling dates included June 15th 2017, August 2nd 2017, August 22nd 2017, and August 29th 2017. Through these efforts, an additional twenty outfalls were found to be dry and thus would not require follow up sampling until the next round of outfall sampling. A full breakdown of the MS4 sampling results are included in Table 2.

In conducting this outfall sampling program and subsequent Illicit Discharge Detection and Elimination (IDDE) follow up sampling outlined in Table 3, the Town was able to identify three additional sources of illicit flow. The investigations and sources will be detailed below but the addresses are #19 Hillcrest Avenue, #235 Ridgewood Drive and #65 Mill Pond Lane.

The Town also continues its efforts to reduce infiltration and inflow in the collection system. In 2011, the town completed design of comprehensive rehabilitation measures in the Westover Parkway section of the Hawes Brook area. The project received funding from the DEP CWSRF program and construction work is now complete. The Town has performed some additional spot gaging in Spring 2016 to identify additional areas to focus I/I reduction efforts. In December 2017 the town submitted an Infiltration / Inflow control plan to DEP.

In 2013, the Town entered into negotiations with EPA for an Administrative Order on Consent to identify and eliminate unauthorized discharges of sewage from is Small MS4. The final Order was executed on January 24, 2014. Major elements of the Order include developing and implementing an Underdrain Control Plan that will eliminate all identified unauthorized sewage discharges by December 31, 2023. The Underdrain Control Plan was submitted to EPA and DEP in 2014, and following receipt of comments from EPA, the plan was revised and resubmitted on July 25, 2014. The Order also identifies some specific actions regarding individual stormwater outfalls, and identifies reporting and compliance activities.

Furthermore, the Order eliminates the requirements and reporting identified in the August 26, 2009 Order for Compliance issued by EPA.

As part of the order, the Town was required to perform sampling and commence investigations at various outfalls in the stormwater system. A summary of the work performed in this period is presented below.

Outfall 75 – Elda Drive

The outfall which serves the Elda Drive and Orchard Lane drain system has had two documented illicit discharges removed by the town in previous reporting periods. This includes the addresses at #14 Elda Drive and #11 Orchard Lane which were identified through IDDE and dye testing. A third source of illicit discharge has now been removed from #9 Orchard Lane. The sewer lateral from #9 Orchard Lane, originally lined in 2011 was found to be impacting the drain system. The lining of this sewer service was expedited and completed in May of 2016. Confirmatory sampling is ongoing.

Outfall 89 – Yew Drive

The connection and issue associated with #11 Yew Drive has been CCTV'd by the Town of Norwood to confirm the corrective action has worked as intended. The outfall has again been visited during this reporting period and no dry weather flow was located. CDM Smith and the Town of Norwood will continue to monitor during this location but no further IDDE work is anticipated.

Outfall 22 – Alpine St and Ash St

Outfall 22 was identified by the town as a priority for upstream Illicit Discharge Detection and Elimination (IDDE) investigations following sampling by others and town-wide outfall screening in 2010. Work in this area has included repair of defective sewers, additional sampling and analysis (E. coli, ammonia, surfactants) dye water flooding of sewers, and dye testing of 28 homes. Through this follow up investigative work, the town identified a problem and resolved the issues with the sewer service at #24 Alpine Road. A sewer service has also been repaired at #5 Barberry Lane which likely contributed to the contamination at the outfall during this reporting period.

Confirmatory sampling in this area concluded that additional contamination is present, specifically upstream of the new junction manhole uncovered by the DPW last year at the intersection of Alpine Road and Springvale Road. The full sampling results for this outfall have been submitted to DEP as part of other compliance documents.

In response to continued sampling results above the water quality limit the Town of Norwood has rehabilitated approximately 672 linear feet of 8" sewer on Springvale Road using CIPP in September 2016. Following this work, sampling trends have been favorable and the water quality is improving. Confirmatory sampling and underdrain sampling will continue at this location until levels drop below the water quality limit. Additional sampling has been conducted at the

Alpine and Ash outfall #22 as well as upstream since the CIPP lining efforts. Outside of one result at 1,732 CFU/100mL there have been three samples taken at the outfall recorded at 320, 355 and 550 CFU/100mL which is just above the water quality limit (235 CFU/100mL). Of the E. coli samples taken up system, the highest value was recorded at the intersection of Springvale and Alpine street. This result was a modest 631 CFU/100mL downstream of previous CIPP lining. At the present time, additional sampling and CCTV may be necessary to check on previous repairs or make additional corrective actions.

Outfall 40 – Baker Street

As required by the Administrative Order on Consent, Outfall 40 located at Baker Street has continued to be investigated by the town. While some potential areas were eliminated from consideration using 48-hour dry-weather sandbagging, additional investigations are required to further locate the source of contamination if one exists. It is currently believed that the drainage system located east of Washington Avenue does not contain any illicit discharges or connections. Much of this area has been sandbagged previously and has not triggered any field screening values for ammonia or surfactants above the acceptable threshold.

During a sampling event in summer 2016, the outfall was consistently below the limit for all parameters. It contained .2 mg/l of ammonia, .25 mg/l of surfactants and 131 CFU/100mL of E. Coli, all below the allowable discharge limit. To confirm these results, the outfall was once again visited on July 28th 2016 found the outfall to be dry. A table including all IDDE sampling results including those for Outfall 40 have been submitted to DEP as part of other compliance documents.

Outfall 54B/C – Fieldbrook Drive

The Town has addressed illicit discharges in the Fieldbrook Drive area (previously referred to as outfall 50). Dye testing had identified direct connections from sewer or basement drains at #7 Fieldbrook Drive, #23 Fieldbrook Drive and #21 Garden Parkway during previous reporting periods. Two of the defective services have been repaired but additional dye testing or confirmatory sampling is needed for #23 Fieldbrook Drive.

Additional sampling and smoke testing in conjunction with closed-circuit-television (CCTV) of this outfalls drainage network determined that additional issues persisted after the initial CIPP lining in 2015. Through these efforts, it was determined that exfiltration between the sewer and drains lines is prevalent in this system especially along Garden Parkway. Approximately 2,135 LF of sewers are scheduled to be CIPP lined this summer in hopes these actions will prove to eliminate any potential sources of contamination to the drain system. Follow up sampling will be conducted post rehabilitation.

CIPP lining was completed on Garden Parkway and the remaining sewer lines and laterals on Fieldbrook Drive during this reporting period. The work included approximately 1,465 LF of CIPP lining, 26 full length service lateral liners and comprehensive manhole rehabilitation at eight manholes. Confirmatory sampling will be conducted in 2018 in this area.

Outfall 31 – East Hoyle / Hospital

The East Hoyle outfall had been included in the Administrative Order (AO) and has been monitored as part of the existing IDDE program and underdrain sampling program. The outfall which is sampled during the underdrain program has recently tested below the water quality limit as well. In April of 2017, laboratory testing indicated E. Coli levels of 210 CFU/100mL were present at the time. This latest sampling event was the lowest in six years at this location. Comprehensive rehabilitation within Areas 3 and 4 as detailed above is having a positive impact on this outfall location.

Outfall 39 – Railroad Bridge

The outfall near Railroad Bridge has seen improvement in water quality as a result of sewer rehabilitation. Of the five E. Coli samples taken as part of the underdrain sampling program three results found no flow while the other two had values of 2 CFU/100mL.

Outfall 63 – Mill Pond Lane

The Mill Pond Lane Outfall #63 had bacteria counts of 24,000 CFU/100mL during the initial outfall sampling on August 22nd, 2017. After these results were obtained a follow up sampling event was planned the following week for August 29th, 2017. During this event, the nearest upstream manhole was found to be mostly dry with not enough flow to sample.

Subsequent sampling events over the next month revealed that the last manhole before the outfall typically was flowing, while the rest of the system remained dry. Sampling at the drain manhole had bacteria counts of >24,196 CFU/100mL. With these recent results, CCTV was performed by the Town to determine the source of illicit flow. Knowing that only one sewer lateral crossed the drain in this location, a dye test was performed in conjunction with CCTV. The tapes revealed minor exfiltration from the service lateral of #65 Mill Pond Lane on November 28th, 2017. The Town is currently gathering information and evaluating options for removing this illicit flow.

Outfall 74 – Rt.1 / Elda Drive

The Rt1. / Elda Drive Outfall #74 primarily serves Hillcrest Road in Norwood. It remained on the list of flowing or unknown outfalls because it could not be located in 2010. There is no apparent receiving water body or outfall where the discharge is indicated on the Geographic Information System or (GIS). In 2010, the upstream manhole was dry, but when revisited in 2017, the upstream manhole at Westview Drive and Hillcrest Road was trickling.

During the initial sampling visit on August 29th, 2017 the nearest upstream manhole to the outfall had a strong sewage smell. Since there were only four additional manholes in the system, they all were inspected during this visit. It was found that the flow stopped by the third manhole upstream. Post inspection E. coli results yielded 241,000 CFU/100mL, a clear indication of a direct connection upstream.

Shortly after these bacteria results were returned, the Town deployed CCTV to determine the potential source of flow. A dye test of #19 Hillcrest Road utilizing CCTV was conducted on October 3rd, 2017 and showed a direct connection of the sewer pipe to the drain. Eventually, it was determined that the internal plumbing in the basement was crossed. This resulted in the sewer lateral being incorrectly tied to the drain and the foundation drain tied to the sewer. This connection was removed approximately two weeks later on October 18th, 2017.

Outfall 92 – Ridgewood Drive

The last of the three illicit connections found during this reporting period was located upstream out Outfall #93 on Ridgewood Drive. Outfall sampling had bacteria counts 4,352 CFU/100mL on August 29th, 2017.

Subsequent upstream sampling was conducted on two separate occasions and results ranged from 754 CFU/100mL to 14,136 CFU/100mL. Similar to the results above for Outfall #74, it was then found that flow upstream of the outfall was confined between two upstream manholes. After narrowing down the source of illicit flow, CCTV and dye testing of #235 Ridgewood Drive was conducted as it crossed the drain near the source of infiltrating flow to the drain. On November 6th, 2017 #235 Ridgewood failed a dye test. At this time, the Town is gathering information and evaluating options for removing this illicit flow. Potential removal options may include full length lateral liners for both #235 Ridgewood Drive.

In-stream Sampling

In conjunction with the Department of Environmental Protection Southeast Regional Office, additional sampling events beyond the MS4 program and IDDE program were conducted. The full results for these sampling events are included in Table 4. These results are very promising and depict a high quality water within the Neponset River and its tributaries.

6. Pollution Prevention and Good Housekeeping in Municipal Operations

The Town has completed construction of a new DPW facility. This new facility is located at the old DPW site. Features include vehicle wash bays and stormwater management systems.

Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16
1A Revised	Recycling & Rubbish Web Page	Manager's Office	Dates and information updated as needed.	The Computer Dept has redesigned the Town wide Web page. Information and links pertaining to stormwater and EPA have been added	The Town of Norwood, through its Recycling Coordinator will continue to update the Web page as needed.
1B Revised	Automatic Meter Reading (AMR)	Manager's Office	Town wide metering completed.	Town will continue to monitor abnormal water usage through billing cycles.	Continue to monitor the water usage of customers.
1C Revised	Recycling & Rubbish Flyers	Manager's Office (Billed through B.O.H.)	-12,000 flyers mailed – April 1600 flyers inserted in Light Dept. bill – Sept.	Continue Town wide notification of recycling/rubbish dates and general information. "Recycle Matters" newsletter mailed and general information inserted in light bills.	Continue Town wide notification of recycling/rubbish dates and general information.
 Revised					
 Revised	ADDITIONAL INFORMATION <i>See PART II – SELF ASSESSMENT</i>				
 Revised					

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16
2A Revised	“You Can Help” Web Site	Board of Health (BOH)	No direct volunteering from web posting. Most volunteers are repeat or word of mouth.	The Town of Norwood, through its Recycling Coordinator will continue to update the Web page as needed	The Town of Norwood, through its Recycling Coordinator will continue to update the Web page as needed
2B Revised	Household Hazardous Waste Days	Dept. Public Works (DPW) and BOH	Number of vehicles (Spring) Number of vehicles (Fall)	Notification through web page, flyers and cable TV. Contracted Clean Harbors for spring Hazardous Waste Day – The Board of Health now has 2 Hazardous Waste Days a year. 405 vehicles Spring 2017, 388 vehicles Fall 2017	Will continue to inform the public of the positive benefits of Hazardous Waste Days to increase participation. Continue with the Spring and Fall Hazardous Waste Days
2C Revised	Recycling Days	DPW / BOH	Number of vehicles	Notification through web page, flyers and cable TV. 500+/- vehicles attended Fall 2017	Will continue to inform the public of the positive benefits of Recycling Days to increase participation
2D Revised					
2E Revised	Compost Bin Sales	BOH changed to DPW	Number of bins sold (Permit Yr)	DPW information on bin sales included in Town web page, annual flyers and local newspaper ads. 16 Bins sold in Permit Year 15	DPW now selling two types of composters – a single and dual tumbler. Increase sales of compost bins through education and advertising.
2F Revised				ADDITIONAL INFORMATION <i>See PART II – SELF ASSESSMENT</i>	

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16
3A Revised	GIS - Develop Stormwater Data Layer	Engineering	Completed stormwater data layer.	Continue to correct (quality control) and update stormwater data layer as needed.	Completed.
3B Revised	Develop Sewer GIS	Engineering		The Town of Norwood to primarily work on the Stormwater layer before adding a sewer layer.	Completed
3C Revised	Visual inspection of outfalls	Engineering	Outfalls identified on GIS data layer from in-house information	Completed inspection of all known outfalls	Continue IDDE investigation in selected high priority areas.
3D Revised	Infiltration/Inflow Program	DPW	Ongoing program to identify and correct any observed I/I problems.	Spot gaging to identify areas with excessive infiltration	Follow-up action will be developed and initiated for future reporting years.

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16
4A Revised	Site Plan Review	Eng. / Planning Board	Site Plan Review currently in place	Through Site Plan Review – the Town has required the use of stormwater treatment systems.	Continue to work with design engineers, contractors and the general public to require the use of stormwater treatment systems.
4B Revised	Stormwater Management (Zoning Ordinance)	Eng. / Building Dept.	Bylaw currently in place.	Bylaw currently in place	Continue to work with developers to comply with the new By-Law requirements
4C Revised	Erosion Control (Zoning Ordinance)	Eng. / Building Dept.	Bylaw currently in place.	Bylaw currently in place	Continue to work with developers to comply with the new By-Law requirements
Revised					
Revised					
Revised					
Revised					

5. Post-Construction Stormwater Management in New Development and Redevelopment

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16
5A Revised	Stormwater Management (Zoning Ordinance)	Bld. Dept / Planning Board	Bylaw currently in place.	Bylaw currently in place	Continue to enforce new ordinances
5B Revised	Erosion Control (Zoning Ordinance)	Bld. Dept / Planning Board	Bylaw currently in place.	Bylaw currently in place	Continue to enforce new ordinances
5C Revised	Create Guidance / Design Manual	Bld. Dept / Eng.		Verbally direct design contractors to include post construction requirements	Provide written guidelines for design engineers
Revised					
Revised					
Revised					
Revised					

6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16
6A Revised	Site Selection – DPW Yard	Town Manager		ADDITIONAL INFORMATION <i>See PART II – SELF ASSESSMENT</i>	
6B Revised	Site Development - Construction			Employ BMP's on municipal site and roadway projects	Continue to employ BMP's on municipal site and roadway projects
6C Revised	Street sweeping	DPW	All streets swept a minimum of twice per year.	Streets swept a minimum of twice a year.	Engineering and DPW to work together to identify areas that may require more sweeping . (GIS Needs Assessment)
6D Revised	Catch basin cleaning	DPW	Percent cleaned annually	DPW uses high pressure cleaner/vacuum truck for the cleaning of catch basins.	Town to continue the cleaning of catch basins. Eng/DPW to coordinate additional catch basin cleaning as needed during outfall inspections. A new Vector has been purchased for use in CB Cleaning and other tasks.
6E Revised	Pet Waste Ordinance	BOH		Town has a Bylaw on pet waste. A Dog Park Committee has been started to look into possible sites around town.	Notices of pet waste ordinance and informational flier to be distributed at Town Clerk's office with license renewals.
	Illicit Discharge	DPW		The Town Sewer Use Ordinance prohibits discharge to anything but a municipal sewer or on-site sewage disposal system.	None.

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) << if applicable >>

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16
7A Revised	Visual inspect 303(d) listed outfalls	Eng.	See Part II – Self Assessment	All outfall inspections completed in 2010. additional inspections on going.	IDDE program in selected high priority areas have been either completed or are ongoing
7B Revised	Assess TMDL (pathogens)	B.O.H.	See Part II – Self Assessment		Perform IDDE Investigations in outfall areas that are suspected of having Illicit connections.
7C Revised	Implement Inspection	DPW	Identify any cross connections of stormwater/sewer	DPW continuing inspection of any cross connections.	Continue looking for illicit discharges
Revised					
Revised					
Revised					
Revised					