Year 5 Annual Report
Massachusetts Small MS4 General Permit
Reporting Period: July 1, 2022-June 30, 2023

Please DO NOT attach any documents to this form. Instead, attach all requested documents to an email when submitting the form. Also ensure any websites included on this form are to publicly accessible sites

Unless otherwise noted, all fields are required to be filled out. If a field is left blank, it will be assumed the requirement or task has not been completed. Please ONLY report on activities between July 1, 2022 and June 30, 2023 unless otherwise requested.

Part I: Contact Information

Name of Municipality or Organization: Town of Norwood

EPA NPDES Permit Number: MAR041053

Primary MS4 Program Manager Contact Information

Name: Tony Mazzucco Title: Town Manager

Street Address Line 1: 566 Washington Street

Street Address Line 2:

City: Norwood State: MA Zip Code: 02062

Email: tmazzucco@norwoodma.gov Phone Number: 781-762-1240

Stormwater Management Program (SWMP) Information

SWMP Location (publicly available web address): https://www.norwoodma.gov/storm_water_management_plan_(swmp).php

Date SWMP was Last Updated: 9/27/2022

If the SWMP is not available on the web please provide the physical address:

Part II: Self-Assessment

First, in the box below, select the impairment(s) and/or TMDL(s) that are applicable to your MS4. Make sure you are referring to the most recent EPA approved Section 303(d) Impaired Waters List which can be found here: https://www.epa.gov/tmdl/region-1-impaired-waters-and-303d-lists-state

Impairment(s)

☐ Bacteria/Pathogens ☐ Chloride ☐ Nitrogen ☒ Phosphorus
☒ Solids/ Oil/ Grease (Hydrocarbons)/ Metals

TMDL(s)

In State: ☐ Assabet River Phosphorus ☒ Bacteria and Pathogen ☐ Cape Cod Nitrogen
☐ Charles River Watershed Phosphorus ☐ Lake and Pond Phosphorus

Out of State: ☐ Bacteria/Pathogens ☐ Metals ☒ Nitrogen ☐ Phosphorus

Clear Impairments and TMDLs

Next, check off all requirements below that have been completed. ***By checking each box you are certifying that you have completed that permit requirement fully.*** *If you have not completed a requirement leave the box unchecked. Additional information will be requested in later sections.*

Annual Requirements

☒ Provided an opportunity for public participation in review and implementation of SWMP and complied with State Public Notice requirements

☒ Kept records relating to the permit available for 5 years and made available to the public

☐ The SSO inventory has been updated, including the status of mitigation and corrective measures implemented

- ○ This is not applicable because we do not have sanitary sewer
- ◉ This is not applicable because we did not find any new SSOs
- ○ The updated SSO inventory is attached to the email submission
- ○ The updated SSO inventory can be found at the following publicly available website:

☒ Updated system map due in year 2 as necessary

☒ Provided training to employees involved in IDDE program within the reporting period

☒ Properly stored and disposed of catch basin cleanings and street sweepings so they did not discharge to receiving waters

☒ All curbed roadways were swept at least once within the reporting period

☒ Enclosed all road salt storage piles or facilities and implemented winter road maintenance procedures to minimize the use of road salt

☒ Implemented SWPPPs for all permittee owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities

- ☒ Updated inventory of all permittee owned facilities as necessary
- ☒ O&M programs for all permittee owned facilities have been completed and updated as necessary
- ☒ Implemented all maintenance procedures for permittee owned facilities in accordance with O&M programs
- ☒ Implemented program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- ☒ Inspected all permittee owned treatment structures (excluding catch basins)

Optional: If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

Bacteria/ Pathogens (Combination of Impaired Waters Requirements and TMDL Requirements as Applicable)

Annual Requirements

*Public Education and Outreach**

- ☒ Annual message was distributed encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- ☒ Permittee or its agents disseminated educational material to dog owners at the time of issuance or renewal of dog license, or other appropriate time
- ☒ Provided information to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria
  - ☐ This is not applicable because there are no septic systems present

** Public education messages can be combined with other public education requirements as applicable (see Appendix H and F for more information)*

Optional: If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

Nitrogen (Combination of Impaired Waters Requirements and TMDL Requirements as Applicable)

Annual Requirements

*Public Education and Outreach**

- ☒ Distributed an annual message in the spring (April/May) that encourages the proper use and disposal of grass clippings and encourages the proper use of slow-release fertilizers
- ☒ Distributed an annual message in the summer (June/July) encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- ☒ Distributed an annual message in the fall (August/September/October) encouraging the proper disposal of leaf litter

** Public education messages can be combined with other public education requirements as applicable (see Appendix H and F for more information)*

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

☒ Increased street sweeping frequency of all municipal owned streets and parking lots subject to Permit part 2.3.7.a.iii.(c) to a minimum of two times per year (spring and fall)

Structural BMPs

☒ Completed the evaluation of all permittee owned properties identified as presenting retrofit opportunities or areas for structural BMP installation under permit part 2.3.6.d or identified in the Nitrogen Source Identification Report, including: *(select the items of the evaluation that have been completed below)*

- ☒ Next planned infrastructure, resurfacing, or redevelopment activity planned for the property (if applicable) OR planned retrofit date
- ☐ Estimated cost of redevelopment or retrofit BMPs
- ☐ Engineering and regulatory feasibility of redevelopment or retrofit BMPs

☒ Completed a listing of planned structural BMPs and a plan and schedule for implementation

- ◉ The BMP list and implementation schedule is attached to the email submission
- ○ The BMP list and implementation schedule can be found at the following publicly available website:

☐ Any structural BMPs listed in Attachment 3 to Appendix F already existing or installed in the regulated area by the permittee or its agents was tracked and the nitrogen removal by the BMP was estimated consistent with Attachment 3 to Appendix F. The BMP type, total area treated by the BMP, the design storage volume of the BMP, and the estimated nitrogen removed in mass per year by the BMP were documented.

- ◉ No BMPs were installed
- ○ The above referenced BMP information is attached to the email submission
- ○ The above referenced BMP information can be found at the following publicly available website:

Total estimated nitrogen removed in lbs/year from the installed BMPs: 0

Optional: If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

Phosphorus (Combination of Impaired Waters Requirements and TMDL Requirements as Applicable)

Annual Requirements

*Public Education and Outreach**

☒ Distributed an annual message in the spring (April/May) encouraging the proper use and disposal of grass clippings and encouraging the proper use of slow-release and phosphorus-free fertilizers

☒ Distributed an annual message in the summer (June/July) encouraging the proper management of pet waste, including noting any existing ordinances where appropriate

☒ Distributed an annual message in the fall (August/September/October) encouraging the proper disposal of leaf litter

** Public education messages can be combined with other public education requirements as applicable (see Appendix H and F for more information)*

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

☒ Increased street sweeping frequency of all municipal owned streets and parking lots subject to Permit part 2.3.7.a.iii.(c) to a minimum of two times per year (spring and fall)

Structural BMPs

☒ Completed the evaluation of all permittee owned properties identified as presenting retrofit opportunities or areas for structural BMP installation under permit part 2.3.6.d or identified in the Phosphorus Source Identification Report, including: *(select the items of the evaluation that have been completed below)*

- ☒ Next planned infrastructure, resurfacing, or redevelopment activity planned for the property (if applicable) OR planned retrofit date
- ☐ Estimated cost of redevelopment or retrofit BMPs
- ☐ Engineering and regulatory feasibility of redevelopment or retrofit BMPs

☒ Completed a listing of planned structural BMPs and a plan and schedule for implementation

- ◉ The BMP list and implementation schedule is attached to the email submission
- ○ The BMP list and implementation schedule can be found at the following publicly available website:

☐ Any structural BMPs already existing or installed in the regulated area by the permittee or its agents was tracked and the phosphorus removal by the BMP was estimated consistent with Attachment 3 to Appendix F. The BMP type, total area treated by the BMP, the design storage volume of the BMP, and the estimated phosphorus removed in mass per year by the BMP were documented.

- ◉ No BMPs were installed
- ○ The above referenced BMP information is attached to the email submission
- ○ The above referenced BMP information can be found at the following publicly available website:

Total estimated phosphorus removed in **lbs/year** from the installed BMPs: 0

Optional: If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

Solids, Oil and Grease (Hydrocarbons), or Metals

Annual Requirements

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

☒ Increased street sweeping frequency of all municipal owned streets and parking lots to a schedule that targets areas with potential for high pollutant loads

- ⦿ The street sweeping schedule is attached to the email submission
- ○ The street sweeping schedule can be found at the following publicly available website:

☒ Prioritized inspection and maintenance for catch basins to ensure that no sump shall be more than 50 percent full; Cleaned catch basins more frequently if inspection and maintenance activities indicated excessive sediment or debris loadings

Optional: If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

Optional: Use the box below to provide any additional information you would like to share as part of your self-assessment:

Part III: Receiving Waters/Impaired Waters/TMDL

Have you made any changes to your lists of receiving waters, outfalls, or impairments since the NOI was submitted?

- ○ Yes
- ◉ No

If yes, describe below, including any relevant impairments or TMDLs:

Part IV: Minimum Control Measures

Please fill out all of the metrics below. If applicable, include in the description who completed the task if completed by a third party.

MCM1: Public Education

Number of educational messages completed **during this reporting period**: 6

*Below, report on the educational messages completed **during this reporting period**. For the measurable goal(s) please describe the method/measures used to assess the overall effectiveness of the educational program.*

BMP:Public Education

Message Description and Distribution Method:

Distrubuted pet waste info with dog licenses
Spring fertilizer and grass clippings campaign
Summer pet waste campaign
Fall leaf waste campaign
Regional education mailing
Septic system owner outreach
Classroom Education- partnered with NepWRA

Targeted Audience: Residents

Responsible Department/Parties: Town Clerk/ Dept. of Public Works

Measurable Goal(s):

Town mailings included with utility bills
Information posted on website year round
Facebook/ Instagram ad Impressions

Message Date(s): Mailing dates vary
Social media posts on 7/10/22, 10/5/22, 10/24/22, 4/20/23
Classroom Ed in 2022

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐

Was this message different than what was proposed in your NOI? Yes ○ No ◉

If yes, describe why the change was made:

Add an Educational Message

MCM2: Public Participation

Describe the opportunity provided for public involvement in the development of the Stormwater Management Program (SWMP) **during this reporting period**:

The Town of Norwood has established a Sustainability Commission with public involvement to educate the community on Norwood's sustainability initiatives and resources in creating a greener Norwood. Town events must reflect a sense of commitment to sustainability and the environment. Town events make continuous improvements to sustainability by offering recycling and composting. The Commission will be working on metrics (ie weight of solid waste collected, weight of recyclable material collected, volume or weight of compost accumulated and total residential energy and water usage. The Commission is looking to have these metrics available to the public on the Town website to allow residents to track the status of various sustainability areas and monitor progress and improvement at the Town level.

Was this opportunity different than what was proposed in your NOI? Yes ○ No ○

Describe any other public involvement or participation opportunities conducted **during this reporting period**:

Hazardous Waste Day- May- 394 vehicles
Hazardous Waste Day- September- 322 vehicles

MCM3: Illicit Discharge Detection and Elimination (IDDE)

Sanitary Sewer Overflows (SSOs)

Check off the box below if the statement is true.

☐ This SSO section is NOT applicable because we DO NOT have sanitary sewer

Below, report on the number of SSOs identified in the MS4 system and removed ***during this reporting period.***

Number of SSOs identified: 0

Number of SSOs removed: 0

MS4 System Mapping

Optional: Provide additional status information regarding your map:

DPW, Engineering, and the Town's consultants, have been working on the assest management project for the stormwater system. The Town purchased a new GPS device that has been used to obtain more accurate locations for drainage assets and develop the map.

The Town's consultant CDM Smith helped the town with the development of a new impervious layer to advance the storm water utility.

Screening of Outfalls/Interconnections

If conducted, please submit any outfall monitoring results from this reporting period. Outfall monitoring results should include the date, outfall/interconnection identifier, location, weather conditions at time of sampling, precipitation in previous 48 hours, field screening parameter results, and results from all analyses. Please also include the updated inventory and ranking of outfalls/interconnections based on monitoring results.

- ○ No outfalls were inspected
- ◉ The above referenced outfall screening data is attached to the email submission
- ○ The above referenced outfall screening data can be found at the following publicly available website:

Below, report on the number of outfalls/interconnections screened ***during this reporting period.***

Number of outfalls screened: 22

Below, report on the percent of outfalls/interconnections screened ***to date.***

Percent of outfalls screened: 0

Optional: Provide additional information regarding your outfall/interconnection screening:

Catchment Investigations

If conducted, please submit all data collected during this reporting period as part of the dry and wet weather investigations. Also include the presence or absence of System Vulnerability Factors for each catchment.

- ◉ No catchment investigations were conducted
- ○ The catchment investigation data is attached to the email submission
- ○ The catchment investigation data can be found at the following publicly available website:

Below, report on the number of catchment investigations completed ***during this reporting period.***

Number of catchment investigations completed this reporting period: 0

Below, report on the percent of catchments investigated ***to date.***

Percent of total catchments investigated: 0

Optional: Provide any additional information for clarity regarding the catchment investigations below:

IDDE Progress

If illicit discharges were found, please submit a document describing work conducted over this reporting period, and cumulative to date, including location source; description of the discharge; method of discovery; date of discovery; and date of elimination, mitigation, or enforcement OR planned corrective measures and schedule of removal.

- (●) No illicit discharges were found
- ( ) The illicit discharge removal report is attached to the email submission
- ( ) The illicit discharge removal report can be found at the following publicly available website:

Below, report on the number of illicit discharges identified and removed, along with the volume of sewage removed ***during this reporting period.***

Number of illicit discharges identified: 0

Number of illicit discharges removed: 0

Estimated volume of sewage removed: 0 gallons/day

Below, report on the total number of illicit discharges identified and removed to date. At a minimum, report on the number of illicit discharges identified and removed ***since the effective date of the permit (July 1, 2018).***

Total number of illicit discharges identified: 0

Total number of illicit discharges removed: 0

Optional: Provide any additional information for clarity regarding illicit discharges identified, removed, or planned to be removed below:

Employee Training

Describe the frequency and type of employee training conducted **during this reporting period**:

Each year DPW crews assemble to reinforce their understanding of different types of illicit discharges to the municipal storm water system, how to identify them, and how to prevent them from occurring. This illicit discharge training includes inspecting storm water outfalls recognizing flows in dry periods, the importance of controlling stockpiled materials, use of fertilizers, and proper disposal of pet waste.
In addition to the annual training the DPW Sewer & Drain Division along with the Engineering Department attended a Virtual Classroom Webinar on Illicit Discharge Detection and Elimination on 4/6/2023

MCM4: Construction Site Stormwater Runoff Control

Below, report on the construction site plan reviews, inspections, and enforcement actions completed ***during this reporting period.***

Number of site plan reviews completed: 2

Number of inspections completed: 51

Number of enforcement actions taken: 6

Optional: Enter any additional information relevant to construction site plan reviews, inspections, and enforcement actions:

The Town has adopted a set of Stormwater Bylaws and is currently developing regulations of the enforcement of the bylaws.

MCM5: Post-Construction Stormwater Management in New Development and Redevelopment

Ordinance or Regulatory Mechanism

Date update was completed (due in year 3):

Website of ordinance or regulatory mechanism:

As-built Drawings

Below, report on the number of as-built drawings received ***during this reporting period.***

Number of as-built drawings received: 0

Optional: Enter any additional information relevant to the submission of as-built drawings:

The Town has adopted a set of Stormwater Bylaws and is currently developing regulations of the enforcement of the bylaws.

Street Design and Parking Lots Report

Below, describe any changes made or planned to be made to local regulations and guidelines based on the report completed in Year 4:

The Planning Board has been reducing requirements for site plans in an effort to reduce impervious area. The Board is exploring the option of making reduced requirements formal.

Green Infrastructure Report

Below, describe progress towards making green infrastructure practices allowable based on the report completed in Year 4:

As per Green infrastructure report in YR 4 here are no Town regulation prohibiting the implementation of green infrastructure practices.

Retrofit Properties Inventory

Below, list remaining permittee-owned properties that could be modified or retrofitted with BMPs to mitigate impervious areas (must maintain a minimum of 5 sites in inventory until less than 5 sites remain):

Savage Center
Cleveland School
Callahan School
Prescott School
Evergreen Circle
Lancelot Court

Below, list all properties that have been modified or retrofitted with BMPs to mitigate impervious area that were inventoried as part of 2.3.6.d of the permit. Non-MS4 owned properties that have been modified or retrofitted with BMPs to mitigate impervious area may also be listed, but must be indicated as non-MS4.

Alandale Parkway-2022- reduced impervious area and increased green space
Willett School-2023- reduced impervious area and increased green space
Oldham School-2023- reduced impervious area and increased green space
Norwood Airport- installed subsurface water quality control structures

MCM6: Good Housekeeping

Catch Basin Cleaning

Below, report on the number of catch basins inspected and cleaned, along with the total volume of material removed from the catch basins ***during this reporting period.***

Number of catch basins inspected: 4,248

Number of catch basins cleaned: 4,248

Total volume or mass of material removed from all catch basins: 0 [Select Units]

Below, report on the total number of catch basins in the MS4 system.

Total number of catch basins: 4,248

If applicable:

Report on the actions taken if a catch basin sump is more than 50% full during two consecutive routine inspections/cleaning events:

Street Sweeping

*Report on street sweeping completed **during this reporting period** using one of the three metrics below.*

- (●) Number of miles cleaned: 220
- ( ) Volume of material removed: [Select Units]
- ( ) Weight of material removed: [Select Units]

Stormwater Pollution Prevention Plan (SWPPP)

*Below, report on the number of site inspections for facilities that require a SWPPP completed **during this reporting period**.*

Number of site inspections completed: 0

Describe any corrective actions taken at a facility with a SWPPP:

Additional Information

Monitoring or Study Results

Results from any other stormwater or receiving water quality monitoring or studies conducted during the reporting period not otherwise mentioned above, where the data is being used to inform permit compliance or permit effectiveness must be attached.

- (●) Not applicable
- ( ) The results from additional reports or studies are attached to the email submission
- ( ) The results from additional reports or studies can be found at the following publicly available website(s):

If such monitoring or studies were conducted on your behalf or if monitoring or studies conducted by other entities were reported to you, a brief description of the type of information gathered or received shall be described below:

Additional Information

Optional: Enter any additional information relevant to your stormwater management program implementation during the reporting period. Include any BMP modifications made by the MS4 if not already discussed above. If any of the above year 5 requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

Activities Planned for Next Reporting Period

Please confirm that your SWMP has been, or will be, updated to comply with all applicable permit requirements including but not limited to the year 6 requirements summarized below. (Note: impaired waters and TMDL requirements are not listed below)

Yes, I agree ☒

Annual Requirements

- Annual report submitted and available to the public
- Annual opportunity for public participation in review and implementation of SWMP
- Keep records relating to the permit available for 5 years and make available to the public
- Properly store and dispose of catch basin cleanings and street sweepings so they do not discharge to receiving waters
- Annual training to employees involved in IDDE program
- Update inventory of all known locations where SSOs have discharged to the MS4
- Continue public education and outreach program
- Update outfall and interconnection inventory and priority ranking and include data collected in connection with the dry weather screening and other relevant inspections conducted
- Implement IDDE program
- Review site plans of construction sites as part of the construction stormwater runoff control program
- Conduct site inspection of construction sites as necessary
- Inspect and maintain stormwater treatment structures
- Log catch basins cleaned or inspected
- Sweep all curbed streets at least annually
- Continue investigations of catchments associated with Problem Outfalls

- Implemented SWPPPs for all permittee owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities
- Review inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment; update if necessary
- Review O&M programs for all permittee owned facilities; update if necessary
- Implement all maintenance procedures for permittee owned facilities in accordance with O&M programs
- Implement program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- Enclose all road salt storage piles or facilities and implemented winter road maintenance procedures to minimize the use of road salt
- Review as-built drawings for new and redevelopment to ensure compliance with post construction bylaws, regulations, or regulatory mechanism consistent with permit requirements
- Inspect all permittee owned treatment structures (excluding catch basins)
- Identify additional permittee-owned properties that could potentially be modified or retrofitted with BMPs to reduce impervious areas so that the permittee maintains a minimum of 5 sites in their inventory, until such a time when the permittee has less than 5 sites remaining

Provide any additional details on activities planned for permit year 6 below:

Part V: Certification of Small MS4 Annual Report 2023

40 CFR 144.32(d) Certification

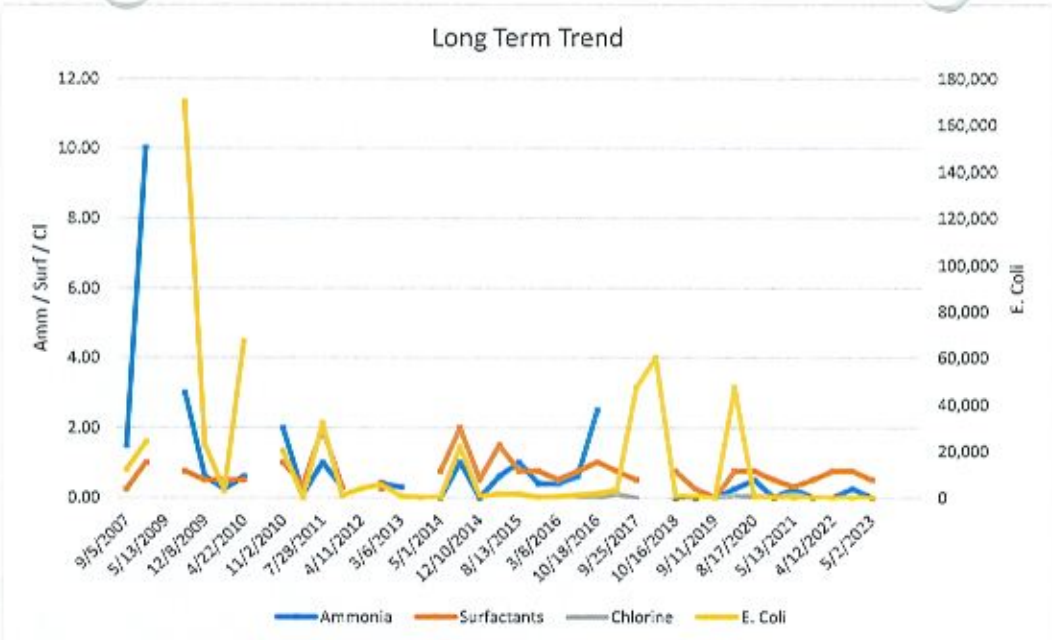
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that 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.

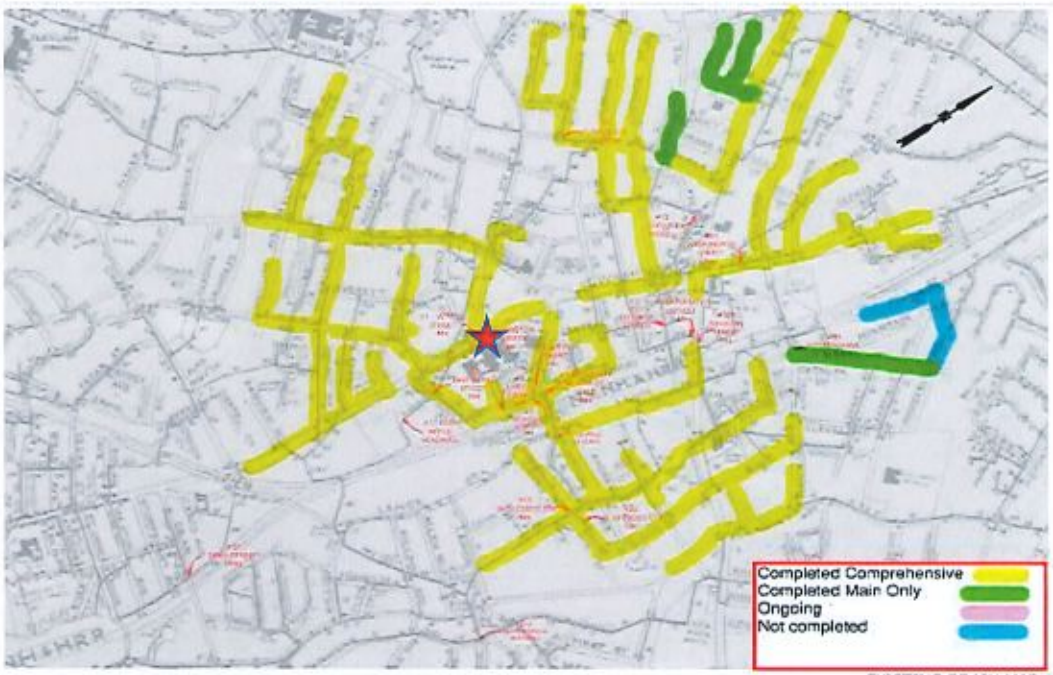
Name:	Tony Mazzucco	Title:	Town Manager
Signature:		Date:	12-6-2023

[Signatory may be a duly authorized representative]

Site 2: Washington @ Winter					
Sample Date	Ammonia	Surfactants	Chlorine	E. Coli	Notes
9/5/2007	1.50	0.25		12,000	
10/16/2007	10.00	1.00		24,000	
5/13/2009					No flow
11/5/2009	3.00	0.75		170,000	
12/8/2009	0.60	0.50		23,000	
1/19/2010	0.25	0.50		3,000	
4/22/2010	0.60	0.50		67,000	
9/2/2010					H2S Alarm
11/2/2010	2.00	1.00		20,000	
5/26/2011	0.10	0.35		34	
7/28/2011	1.00	2.00		32,000	
8/25/2011	0.30	0.30		920	
4/11/2012				4,000	
8/8/2012	0.40	0.25		5,600	
3/6/2013	0.30			580	
1/17/2014				61	
5/1/2014	0.00	0.75		230	
9/18/2014	1.00	2.00		22,000	
12/10/2014	0.00	0.50		770	
4/28/2015	0.60	1.50		1,600	
8/13/2015	1.00	0.75		1,600	
11/18/2015	0.40	0.75		170	
3/8/2016	0.40	0.50		480	
6/29/2016*	0.60	0.75	0.00	1,200	
10/18/2016	2.50	1.00	0.00	1,700	
4/11/2017		0.75	0.10	3,500	
9/25/2017	0.50	0.50	0.00	47,000	
5/9/2018				60,000	
10/16/2018	0.00	0.75		686	
4/23/2019	0.00	0.25		649	
9/11/2019	-	-	-	-	
5/27/2020	0.25	0.75	0.06	47,186	Some sediment
8/17/2020	0.50	0.75	0.04	461	Hospital closed
11/19/2020	0.00	0.50	0.04	186	
5/13/2021	0.25	0.31	0.09	24	
9/22/2021	0.00	0.50	0.00	18	
4/12/2022	0.00	0.75	0.00	<1	
8/30/2022	0.25	0.75	0.00	64	
5/2/2023	0.00	0.50	0.00	81.97	

Notes:
Independent Site - no upstream influence.
Improvement since hospital closure. Evaluate future action pending hospital plan.

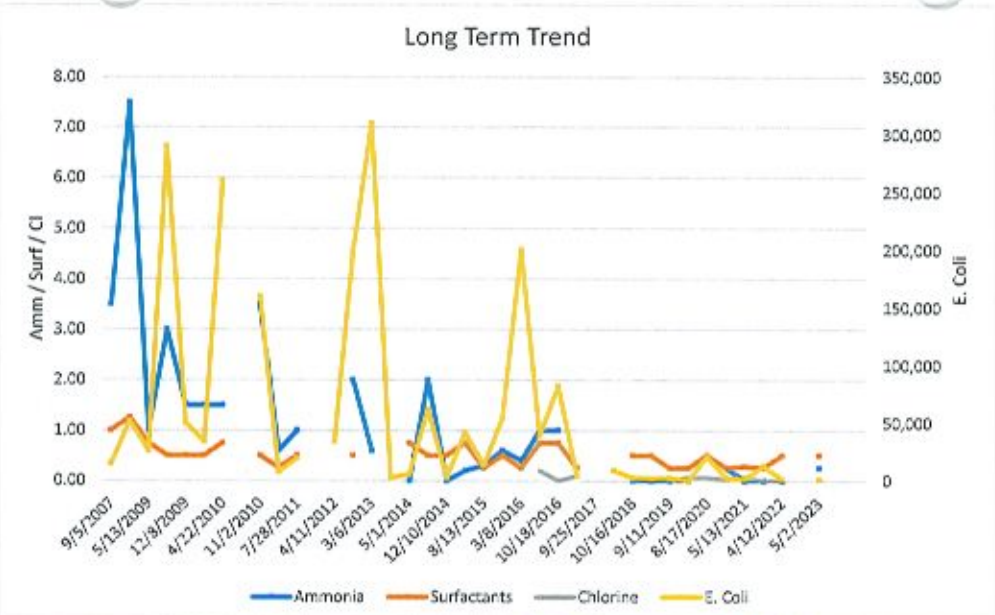


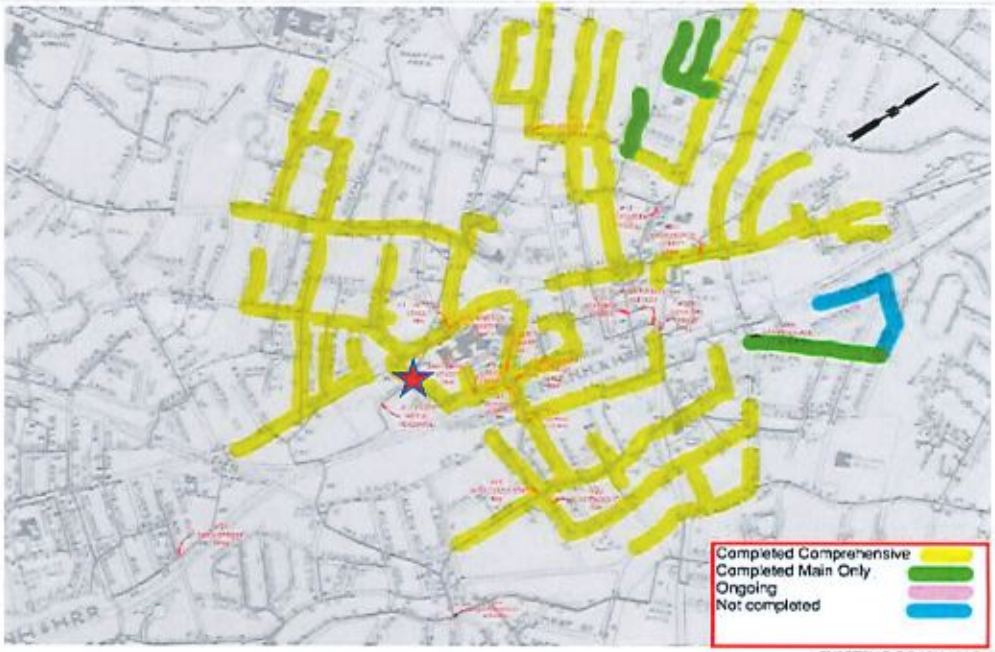


EXISTING DRAIN MAP

Site 3: East Hoyle Street (Beehive)					
Sample Date	Ammonia	Surfactants	Chlorine	E. Coli	Notes
9/5/2007	3.50	1.00		15,000	
10/16/2007	7.50	1.25		52,000	
5/13/2009	1.00	0.75		26,000	
11/5/2009	3.00	0.50		290,000	
12/8/2009	1.50	0.50		50,000	
1/19/2010	1.50	0.50		34,000	
4/22/2010	1.50	0.75		260,000	
9/2/2010					H2S Alarm
11/2/2010	3.50	0.50		160,000	
5/26/2011	0.60	0.25		7,500	
7/28/2011	1.00	0.50		20,000	
8/25/2011					MH Flooded
4/11/2012				34,000	
8/8/2012	2.00	0.50		200,000	
3/6/2013	0.60			310,000	
1/17/2014				2,400	
5/1/2014	0.00	0.75		5,500	
9/18/2014	2.00	0.50		62,000	
12/10/2014	0.00	0.50		2,700	
4/28/2015	0.20	0.75		42,000	
8/13/2015	0.30	0.25		13,000	
11/18/2015	0.60	0.50		54,000	
3/8/2016	0.40	0.25		200,000	
6/29/2016*	1.00	0.75	0.20	39,000	
10/18/2016	1.00	0.75	0.00	82,000	
4/11/2017		0.25	0.10	4,000	
9/25/2017					MH Flooded
5/9/2018				8,700	
10/16/2018	0	0.5		2,419	
4/23/2019	0.00	0.50		1,733	
9/11/2019	0	0.25	0	2,422	
5/27/2020	0.00	0.25	0.07	281	Flowing, clear
8/17/2020	0.50	0.50	0.06	20,994	
11/19/2020	0.25	0.25	0.03	2,412	
5/13/2021	0.00	0.28	0.07	1,414	
9/22/2021	0.00	0.25	0.00	12,591	Some sediment
4/12/2022	0.00	0.50	0.00	1,203	
8/30/2022					Backed up, no sample
5/2/2023	0.25	0.50	0.00	1,046.24	

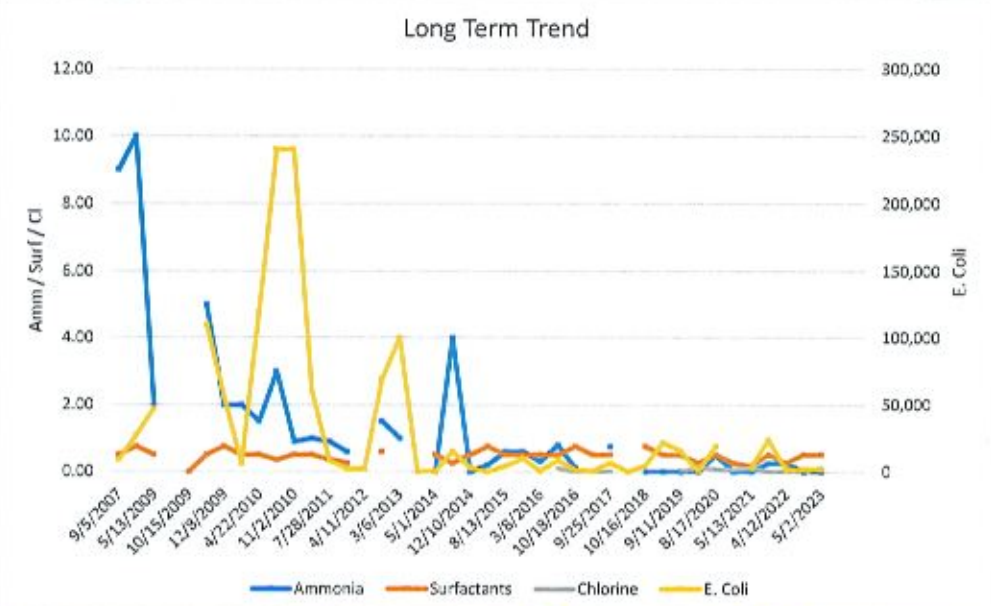
Notes:
Impacted by upstream sites / systems including Site 1 & 2
Persistent high E coli numbers. Recommend sample at Site 1 to confirm no issues from that area previousl cleared, then intiation of activities in area to include dye testing of buildings.

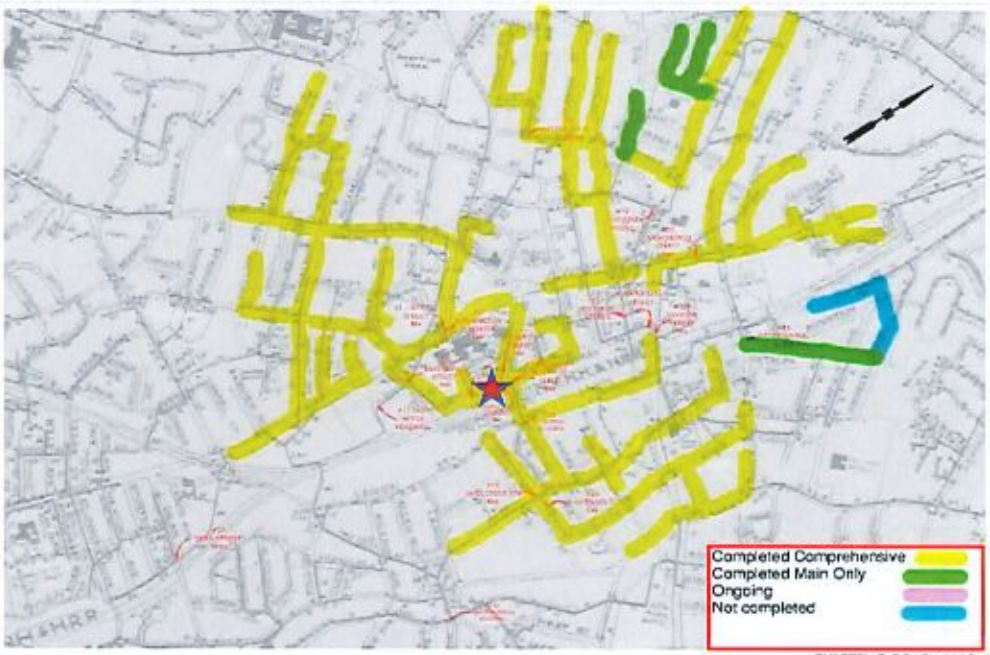




EXISTING DRAIN MAP

Site 5: Broadway at Guild					
Sample Date	Ammonia	Surfactants	Chlorine	E. Coli	Notes
9/5/2007	9.00	0.50		9,000	
10/16/2007	10.00	0.75		27,000	
5/13/2009	2.00	0.50		47,000	
8/6/2009					H2S Alarm
10/15/2009		-			
11/5/2009	5.00	0.50		110,000	
12/8/2009	2.00	0.75		56,000	
1/19/2010	2.00	0.50		5,900	
4/22/2010	1.50	0.50		120,000	
9/2/2010	3.00	0.35		240,000	
11/2/2010	0.90	0.50		240,000	
5/26/2011	1.00	0.50		61,000	
7/28/2011	0.90	0.35		8,200	
8/25/2011	0.60	0.25		2,000	
4/11/2012				2,000	
8/8/2012	1.50	0.60		69,000	
3/6/2013	1.00			100,000	
1/17/2014				<1	
5/1/2014	T	0.50		120	
9/18/2014	4.00	0.25		15,000	
12/10/2014	T	0.50		2,800	
4/28/2015	0.20	0.75		<1	
8/13/2015	0.60	0.50		4,000	
11/18/2015	0.60	0.50		9,900	
3/8/2016	0.30	0.50		330	
6/29/2016*	0.80	0.50	0.10	8,500	
10/18/2016	0.10	0.75	0.00	1,400	
4/11/2017		0.50	0.00	280	
9/25/2017	0.75	0.50	0.00	6,400	
5/9/2018				<10	
10/16/2018	0.00	0.75		4,134	
4/23/2019	0.00	0.50		21,614	
9/11/2019	0	0.5	0	15,424	
5/27/2020	0.00	0.25	0.13	517	Flowing, clear
8/17/2020	0.50	0.50	0.07	18,644	
11/19/2020	0.00	0.25	0.06		no results
5/13/2021	0.00	0.16	0.11	2,898	
9/22/2021	0.25	0.50	0.00	23,822	
4/12/2022	0.25	0.25	0.00	1,414	
8/30/2022	0.00	0.50	0.00	1,733	
5/2/2023	0.00	0.50	0.10	1,413.61	



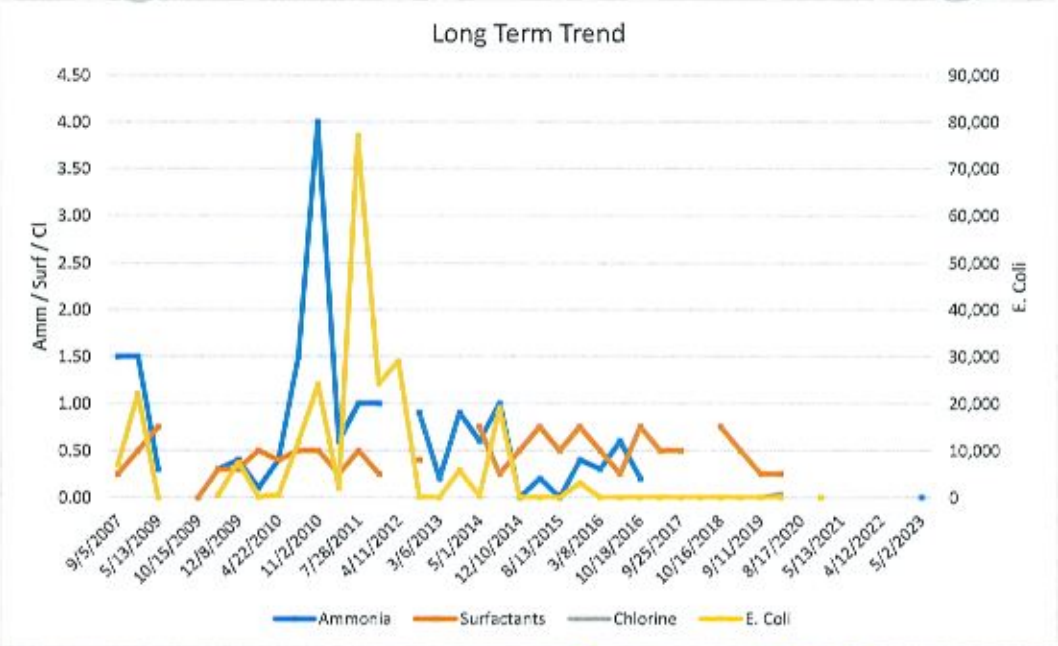


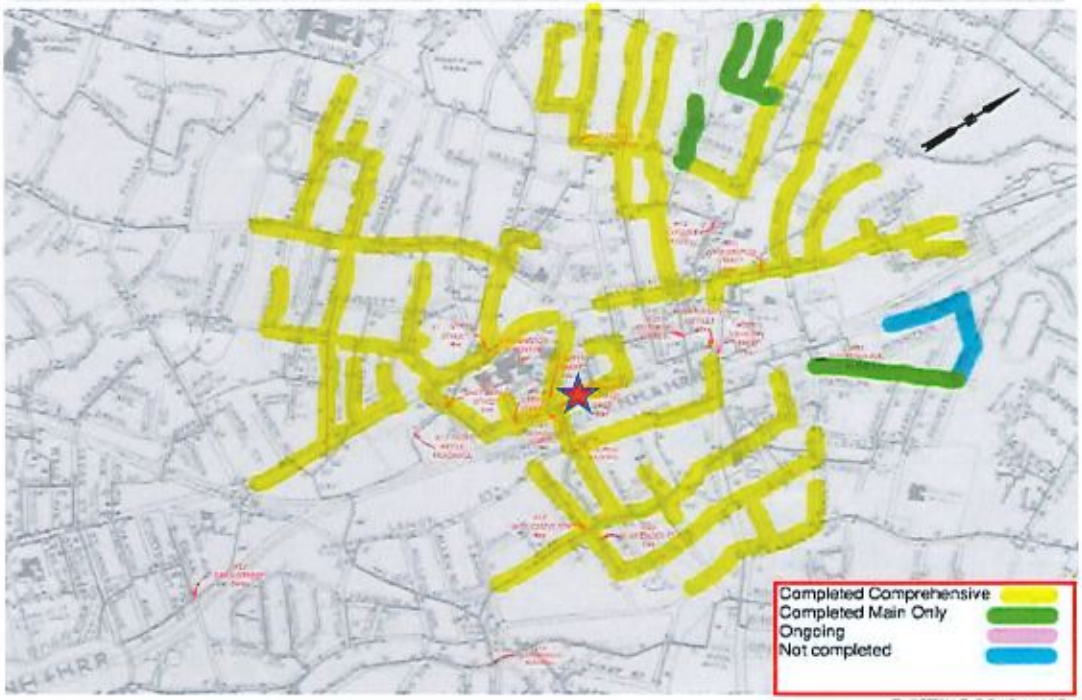
EXISTING DRAIN MAP

Notes:
Impacted by upstream Sites (1, 2, & 3)
5/21 - perform investigations reccomended at Site 2

Site 7: Broadway north of Guild					
Sample Date	Ammonia	Surfactants	Chlorine	E. Coli	Notes
9/5/2007	1.50	0.25		7,000	
10/16/2007	1.50	0.50		22,000	
5/13/2009	0.30	0.75		110	
8/6/2009					H2S Alarm
10/15/2009		-			
11/5/2009	0.30	0.30		590	
12/8/2009	0.40	0.30		7,600	
1/19/2010	0.10	0.50		190	
4/22/2010	0.40	0.40		520	
9/2/2010	1.50	0.50		12,000	
11/2/2010	4.00	0.50		24,000	
5/26/2011	0.60	0.25		2,000	
7/28/2011	1.00	0.50		77,000	
8/25/2011	1.00	0.25		24,200	
4/11/2012				29,000	
8/8/2012	0.90	0.40		160	
3/6/2013	0.20			7	
1/17/2014	0.90			5,800	
5/1/2014	0.60	0.75		330	
9/18/2014	1.00	0.25		19,000	
12/10/2014	T	0.50		77	
4/28/2015	0.20	0.75		51	
8/13/2015	T	0.50		78	
11/18/2015	0.40	0.75		3,100	
3/8/2016	0.30	0.50		<2	
6/29/2016*	0.60	0.25	0.00	35	
10/18/2016	0.20	0.75	0.00	26	
4/11/2017		0.50	0.00	46	
9/25/2017	0.00	0.50	0.00	8	
5/9/2018				20	
10/16/2018	0.00	0.75		52	
4/23/2019	0.00	0.50		10	
9/11/2019	0	0.25	0	43	
5/27/2020	0.00	0.25	0.04	3	Flowing, mostly clear
8/17/2020					No Test - good
11/19/2020				4	
5/13/2021					
9/22/2021					
4/12/2022					
8/30/2022					
5/2/2023	REMOVED FROM UNDREDRAIN SAMPLING PROGRAM				

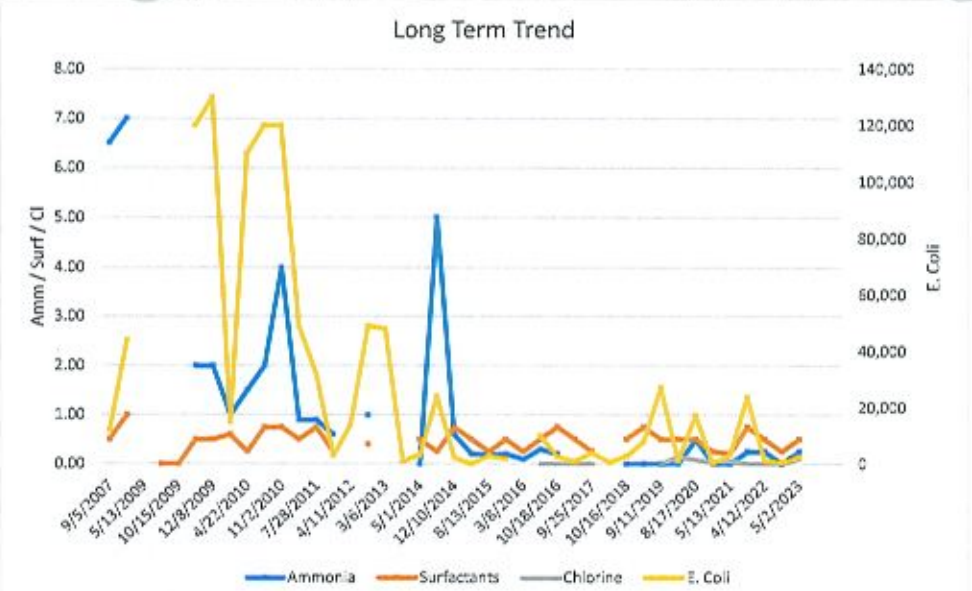
Notes:
Independent Site - no upstream influence.
Area Cleared

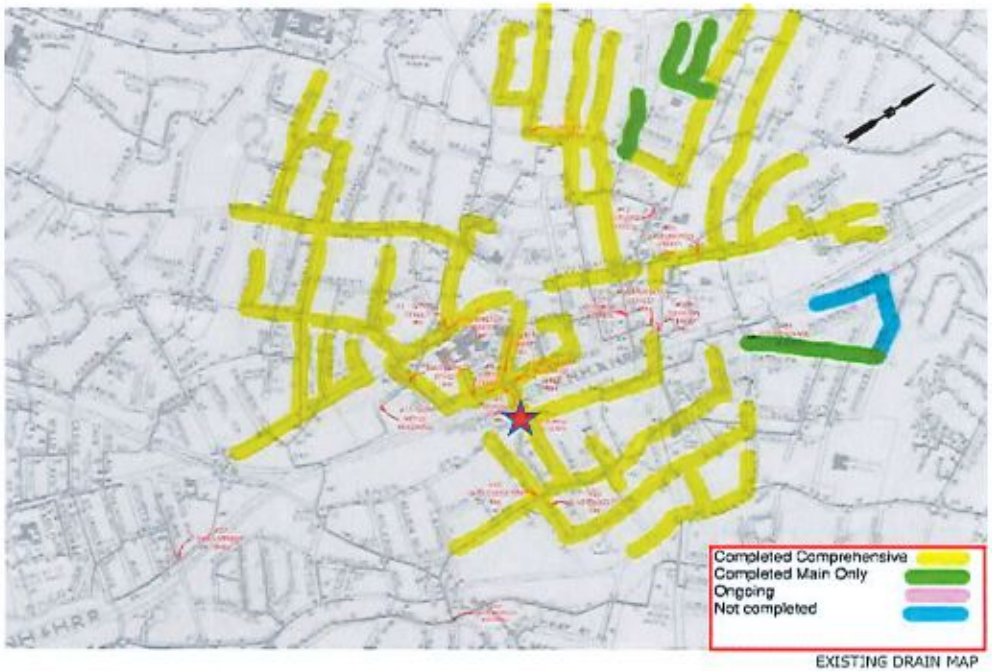




EXISTING DRAIN MAP

Site 8: Plimpton @ Lennox					
Sample Date	Ammonia	Surfactants	Chlorine	E. Coli	Notes
9/5/2007	6.50	0.50		12,000	
10/16/2007	7.00	1.00		44,000	
5/13/2009					No flow
8/6/2009		-			
10/15/2009		-			
11/5/2009	2.00	0.50		120,000	
12/8/2009	2.00	0.50		130,000	
1/19/2010	1.00	0.60		15,000	
4/22/2010	1.50	0.25		110,000	
9/2/2010	2.00	0.75		120,000	
11/2/2010	4.00	0.75		120,000	
5/26/2011	0.90	0.50		49,000	
7/28/2011	0.90	0.75		32,000	
8/25/2011	0.60	0.25		2,900	
4/11/2012				14,000	
8/8/2012	1.00	0.40		49,000	
3/6/2013				48,000	
1/17/2014				870	
5/1/2014	T	0.50		3,200	
9/18/2014	5.00	0.25		24,000	
12/10/2014	0.60	0.75		2,100	
4/28/2015	0.20	0.50		19	
8/13/2015	0.20	0.25		2,900	
11/18/2015	0.20	0.50		1,700	
3/8/2016	0.10	0.25			lost sample / spilled
6/29/2016*	0.30	0.50	0.00	10,000	
10/18/2016	0.20	0.75	0.00	2,400	
4/11/2017		0.50	0.00	870	
9/25/2017	0.25	0.25	0.00	3,900	
5/9/2018				440	
10/16/2018	0.00	0.50		2,672	
4/23/2019	0.00	0.75		7,900	
9/11/2019	0	0.5	0	27,080	
5/27/2020	0.00	0.50	0.15	1,203	Flow, some sediment
8/17/2020	0.50	0.50	0.08	17,148	
11/19/2020	0.00	0.25	0.04	112	
5/13/2021	0.00	0.21	0.06	3,192	
9/22/2021	0.25	0.75	0.00	23,593	
4/12/2022	0.25	0.50	0.00	1,120	
8/30/2022	0.00	0.25	0.00	659	
5/2/2023	0.25	0.50	0.10	2,419.57	

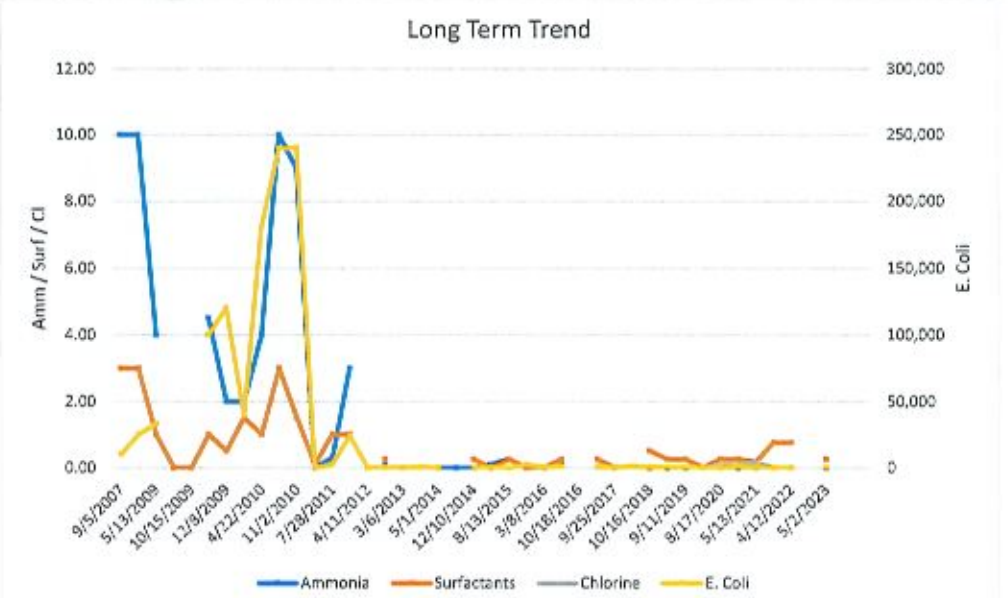


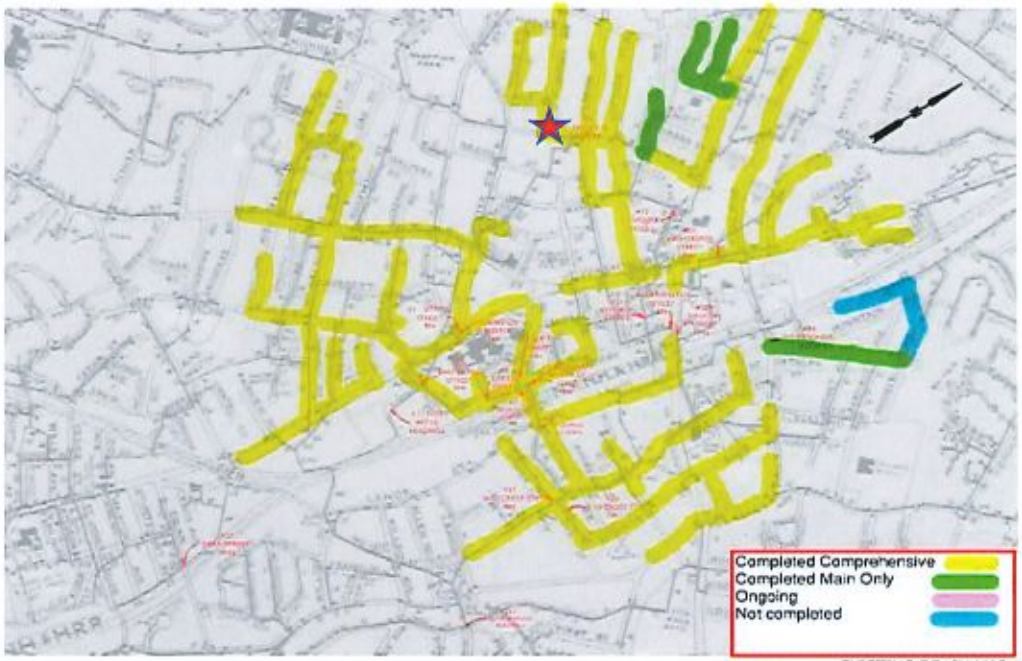


EXISTING DRAIN MAP

Notes:
Impacted by upstream hospital area Sites 1-7
5/21 - perform investigations reccomended at Site 2

Site 9: Florence at Nichols					
Sample Date	Ammonia	Surfactants	Chlorine	E. Coli	Notes
9/5/2007	10.00	3.00		10,000	
10/16/2007	10.00	3.00		25,000	
5/13/2009	4.00	1.00		33,000	
8/6/2009		-			
10/15/2009		-			
11/5/2009	4.50	1.00		100,000	
12/8/2009	2.00	0.50		120,000	
1/19/2010	2.00	1.50		40,000	
4/22/2010	4.00	1.00		180,000	
9/2/2010	10.00	3.00		240,000	
11/2/2010	9.00	1.50		240,000	
5/26/2011	0.00	0.10		120	
7/28/2011	0.30	1.00		2,800	
8/25/2011	3.00	1.00		24,200	
4/11/2012				85	
8/8/2012	0.10	0.25		180	
3/6/2013				58	
1/17/2014				440	
5/1/2014	0.00	T		160	
9/18/2014	no flow				
12/10/2014	0.00	0.25		200	
4/28/2015	0.10	T		400	
8/13/2015	0.25	0.25		91	
11/18/2015	T	T		2,400	
3/8/2016	T	T		480	
6/29/2016*	0.10	0.25	0.00	1,200	
10/18/2016					Town hydrant flushing
4/11/2017		0.25	.1 (T)	1,300	
9/25/2017	0.00	T	0.00	360	
5/9/2018				1,000	
10/16/2018	0.00	0.50		437	
4/23/2019	0.00	0.25		770	
9/11/2019	0	0.25	0	461	
5/27/2020	-	-	-	-	No Flow
8/17/2020	0.00	0.25	0.09	47	
11/19/2020	0.00	0.25	0.09	770	
5/13/2021	0.00	0.16	0.16	236	
9/22/2021	0.00	0.75	0.00	32	
4/12/2022	0.00	0.75	0.00	44	
8/30/2022					Dry
5/2/2023	0.00	0.25	0.00	547.5	

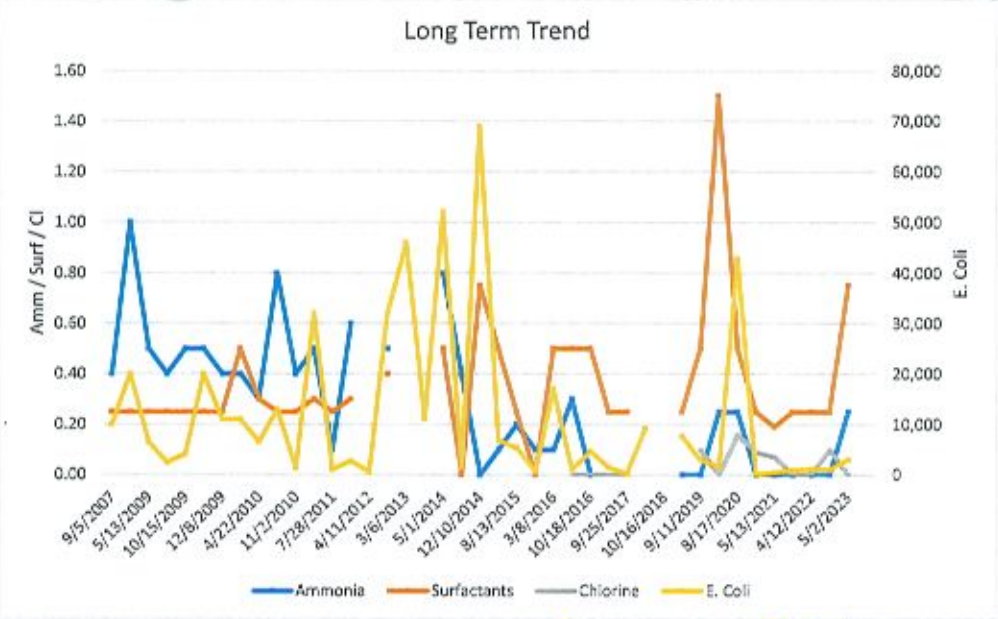


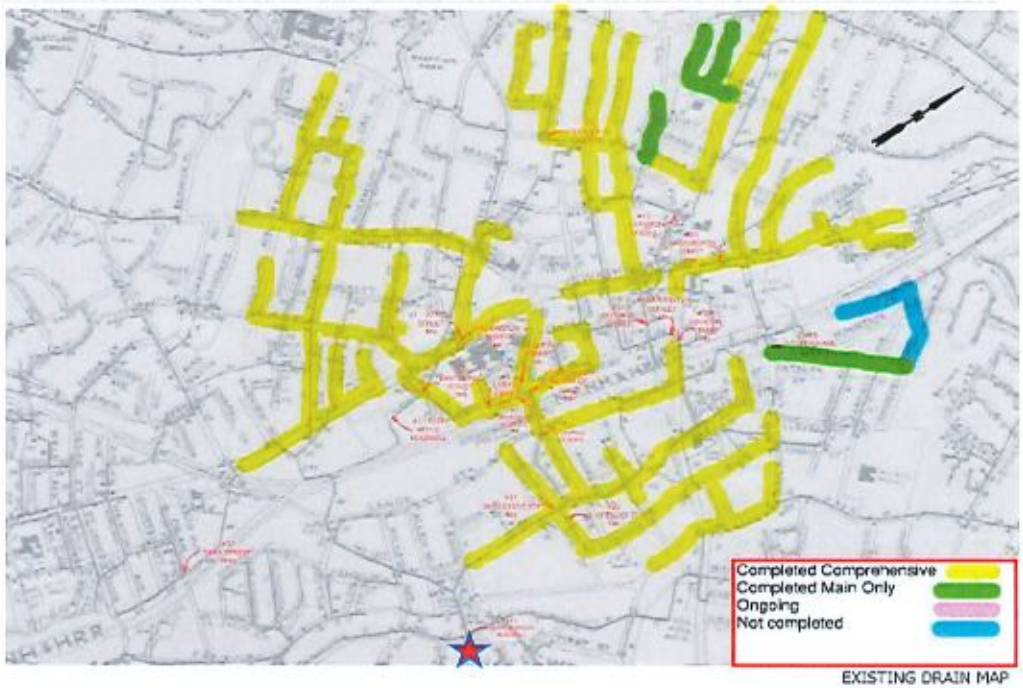


EXISTING DRAIN MAP

Notes:
Independent Site - no upstream influence.
Ultimate discharge at East Hoyle Headwall (Site 12).
Approaching compliance

Site 10: Meadowbrook Headwall					
Sample Date	Ammonia	Surfactants	Chlorine	E. Coli	Notes
9/5/2007	0.40	0.25		10,000	
10/16/2007	1.00	0.25		20,000	
5/13/2009	0.50	0.25		6,500	
8/6/2009	0.40	0.25		2,400	
10/15/2009	0.50	0.25		4,100	
11/5/2009	0.50	0.25		20,000	
12/8/2009	0.40	0.25		11,000	
1/19/2010	0.40	0.50		11,000	
4/22/2010	0.30	0.30		6,500	
9/2/2010	0.80	0.25		13,000	
11/2/2010	0.40	0.25		1,300	
5/26/2011	0.50	0.30		32,000	
7/28/2011	0.10	0.25		1,000	
8/25/2011	0.60	0.30		2,700	
4/11/2012				520	
8/8/2012	0.50	0.40		32,000	
3/6/2013				46,000	
1/17/2014				11,000	
5/1/2014	0.80	0.50		52,000	
9/18/2014	0.40	T		1,600	
12/10/2014	0.00	0.75		69,000	
4/28/2015	0.10	0.50		6,800	
8/13/2015	0.20	0.25		5,400	
11/18/2015	0.10	T		610	
3/8/2016	0.10	0.50		17,000	
6/29/2016*	0.30	0.50	T	980	
10/18/2016	0.00	0.50	0.00	4,700	
4/11/2017		0.25	0.2 (T)	1,400	
9/25/2017	0.25	0.25	0.4 (T)	173	
5/9/2018				9,200	
10/16/2018					
4/23/2019	0.00	0.25		7,678	
9/11/2019	0	0.5	0.1	2,960	
5/27/2020	0.25	1.50	0.00	1,553	Stagnant, clear
8/17/2020	0.25	0.50	0.16	42,852	Questionable
11/19/2020	0.00	0.25	0.09	121	
5/13/2021	0.00	0.19	0.07	344.8	
9/22/2021	0.00	0.25	0.00	866	
4/12/2022	0.00	0.25	0.00	1,046	
8/30/2022	0.00	0.25	0.1	969	
5/2/2023	0.25	0.75	0.0	2,992	



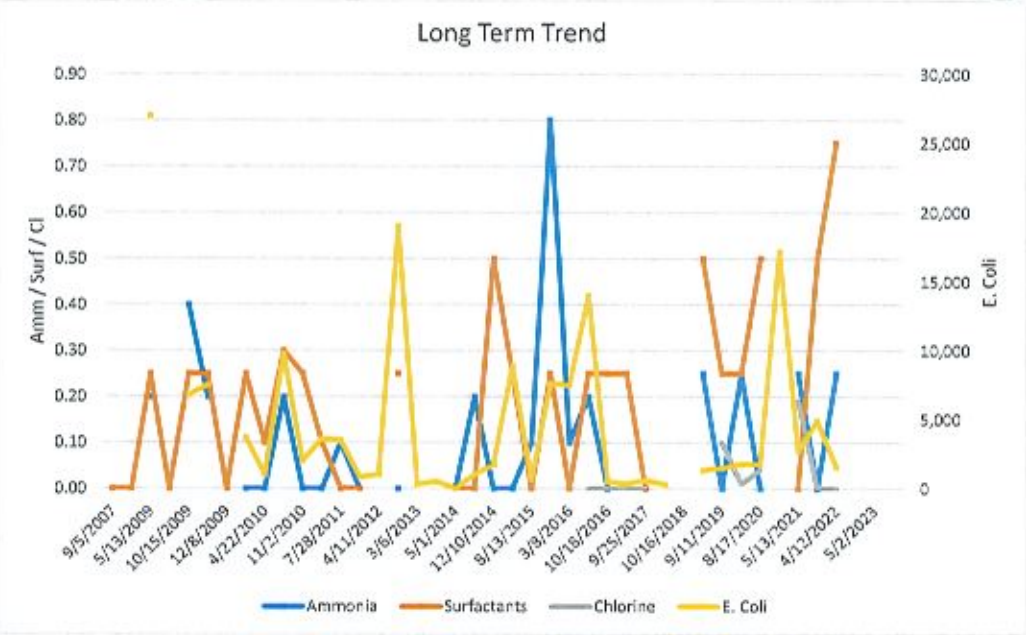


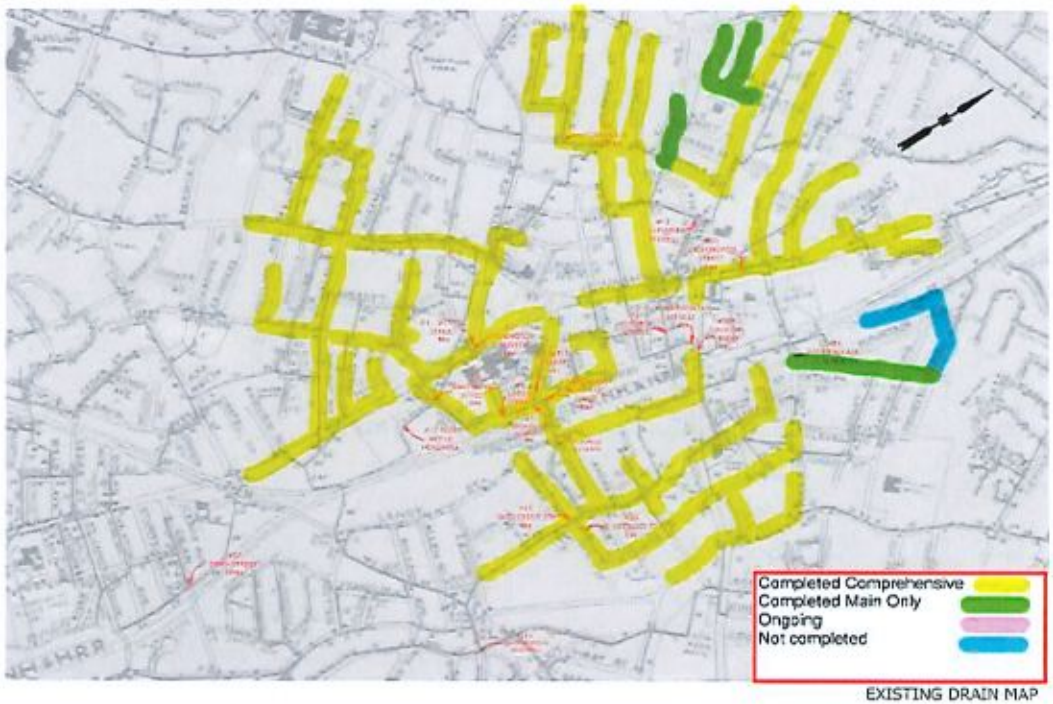
EXISTING DRAIN MAP

Notes:
Downstream of the majority of the Underdrain System
Discharge to surface water
5/21 - Results indicate solid performance of rehabiliation efforts

Site 11: Plantingfield Brook					
Sample Date	Ammonia	Surfactants	Chlorine	E. Coli	Notes
9/5/2007		-			
10/16/2007		-			
5/13/2009	0.20	0.25		27,000	
8/6/2009		-			
10/15/2009	0.40	0.25		6,800	
11/5/2009	0.20	0.25		7,500	
12/8/2009		-			
1/19/2010	0.00	0.25		3,700	
4/22/2010	0.00	0.10		1,000	
9/2/2010	0.20	0.30		9,800	
11/2/2010	0.00	0.25		2,000	
5/26/2011	0.00	0.10		3,600	
7/28/2011	0.10	T		3,500	
8/25/2011	T	T		820	
4/11/2012				980	
8/8/2012	T	0.25		19,000	
3/6/2013				290	
1/17/2014				490	
5/1/2014	T	T		690*	
9/18/2014	0.20	T		980	
12/10/2014	0.00	0.50		1,700	
4/28/2015	0.00	0.25		8,900	
8/13/2015	0.10	T		610	
11/18/2015	0.80	0.25		7,600	
3/8/2016	0.10	T		7,500	
6/29/2016*	0.20	0.25	0.00	14,000	
10/18/2016	0.00	0.25	0.00	460	
4/11/2017		0.25	0.00	320	
9/25/2017	T	T	0.1 (T)	550	
5/9/2018				280	
10/16/2018					
4/23/2019	0.25	0.50		1,300	
9/11/2019	0	0.25	0.1	1,476	
5/27/2020	0.25	0.25	0.01	1,733	Flowing, clear
8/17/2020	0.00	0.50	0.04	1,733	
11/19/2020				17,148	
5/13/2021	0.25	-	0.19	2,700	
9/22/2021	0.00	0.50	0.00	4,874	
4/12/2022	0.25	0.75	0.00	1,553	
8/30/2022					No sample
5/2/2023					No sample

Notes:
Not in Underdrain Area - IDDE Location
5/21 - Resume IDDE efforts

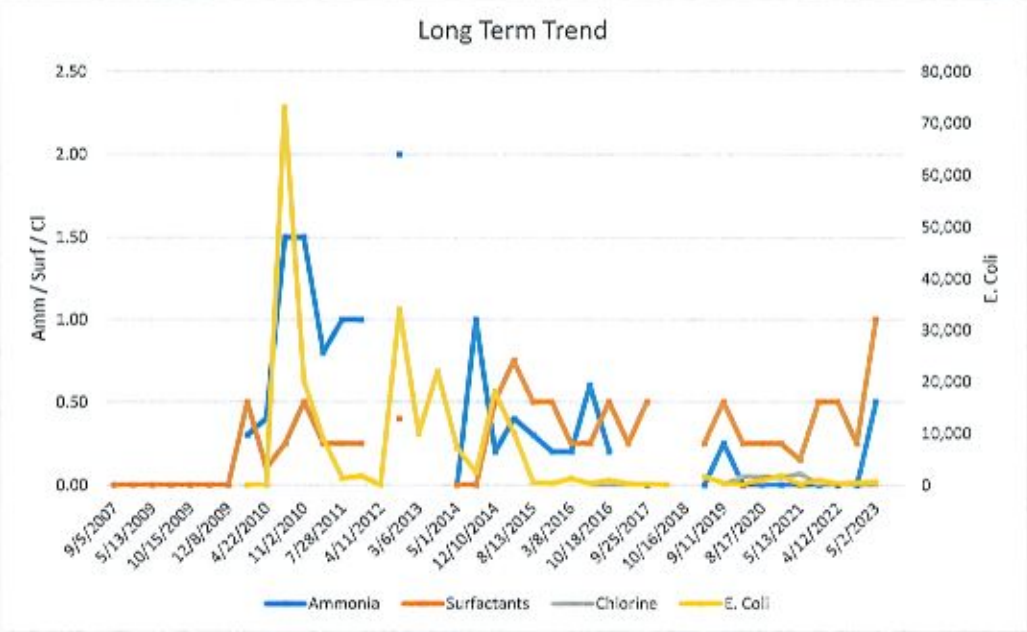


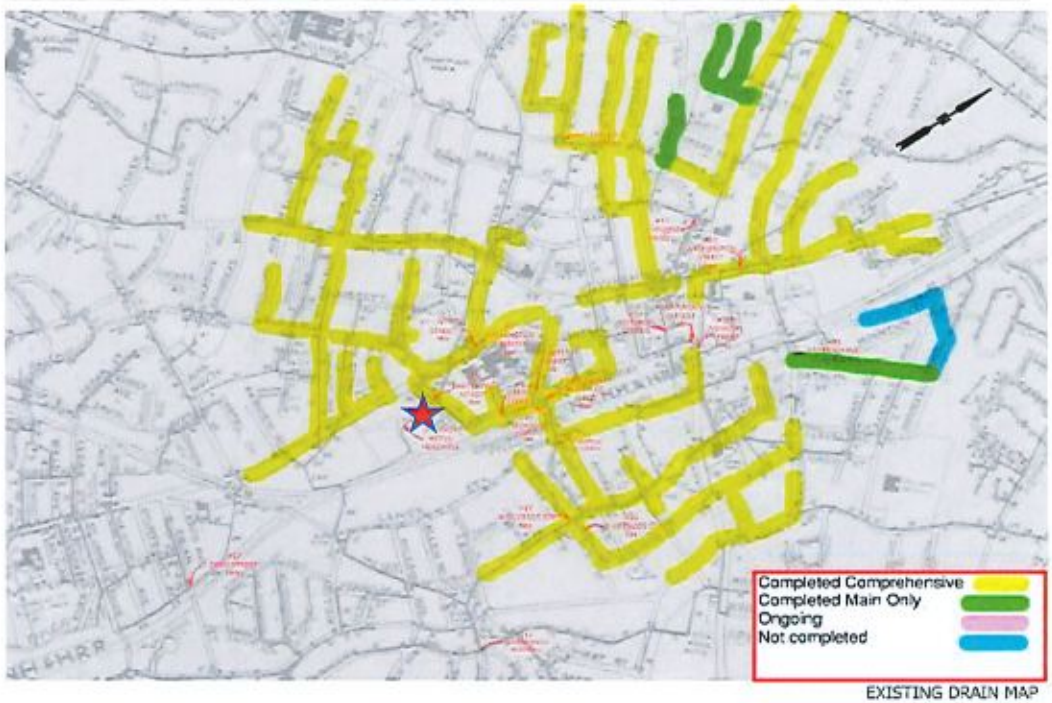


EXISTING DRAIN MAP

Site 12: East Hoyle Headwall					
Sample Date	Ammonia	Surfactants	Chlorine	E. Coli	Notes
9/5/2007		-			
10/16/2007		-			
5/13/2009		-			
8/6/2009		-			
10/15/2009		-			
11/5/2009		-			
12/8/2009		-			
1/19/2010	0.30	0.50		2	
4/22/2010	0.40	0.10		0	
9/2/2010	1.50	0.25		73,000	
11/2/2010	1.50	0.50		20,000	
5/26/2011	0.80	0.25		8,800	Florence Lined
7/28/2011	1.00	0.25		1,300	
8/25/2011	1.00	0.25		1,700	
4/11/2012				28	
8/8/2012	2.00	0.40		34,000	
3/6/2013				9,900	
1/17/2014				22,000	
5/1/2014	0.00	T		7,100	
9/18/2014	1.00	T		2,400	
12/10/2014	0.20	0.50		18,000	
4/28/2015	0.40	0.75		10,000	
8/13/2015	0.30	0.50		460	
11/18/2015	0.20	0.50		290	
3/8/2016	0.20	0.25		1,200	
6/29/2016*	0.60	0.25	T	240	
10/18/2016	0.20	0.50	0.00	870	
4/11/2017		0.25	0.00	210	
9/25/2017	0.00	0.50	0.3 (T)	86	
5/9/2018				20	
10/16/2018					
4/23/2019	0.00	0.25		1,553	
9/11/2019	0.25	0.5	0	307	
5/27/2020	0.00	0.25	0.05	114	Flow, some sediment
8/17/2020	0.00	0.25	0.05	866	
11/19/2020	0.00	0.25	0.04	1,720	
5/13/2021	0.00	0.15	0.07	70	
9/22/2021	0.00	0.50	0.00	870	
4/12/2022	0.00	0.50	0.00	210	
8/30/2022	0.00	0.25	0.00	411	
5/2/2023	0.50	1.00	0.00	547.5	Turbid/gray

Notes:
Underdrains from Area 3 (Walpole St) and Florence St included in discharge
Re-enters culverted system tributary to Site 10 - Meadowbrook at Sunnyside

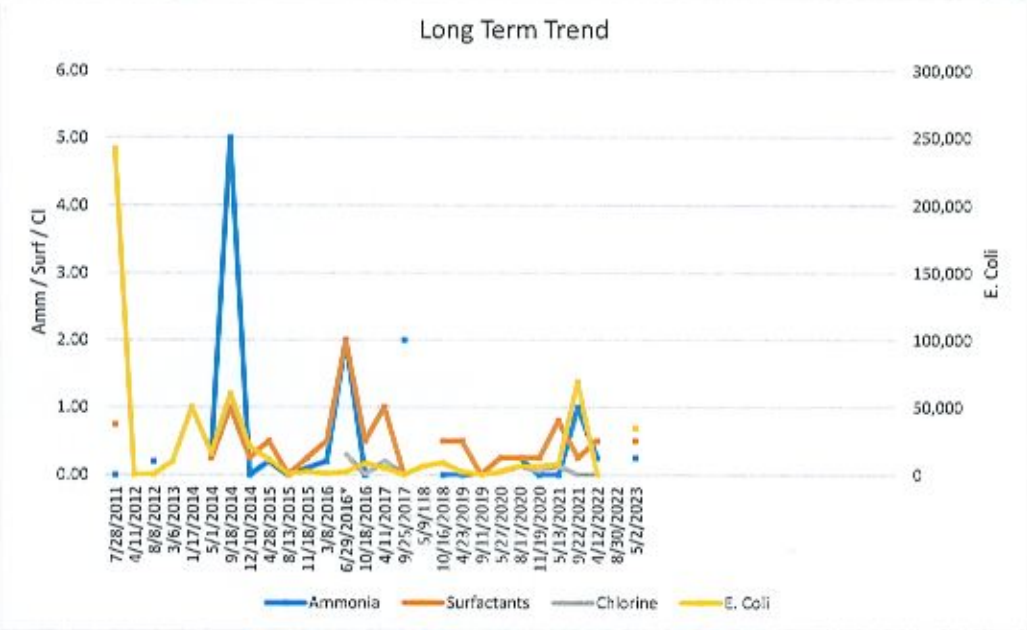


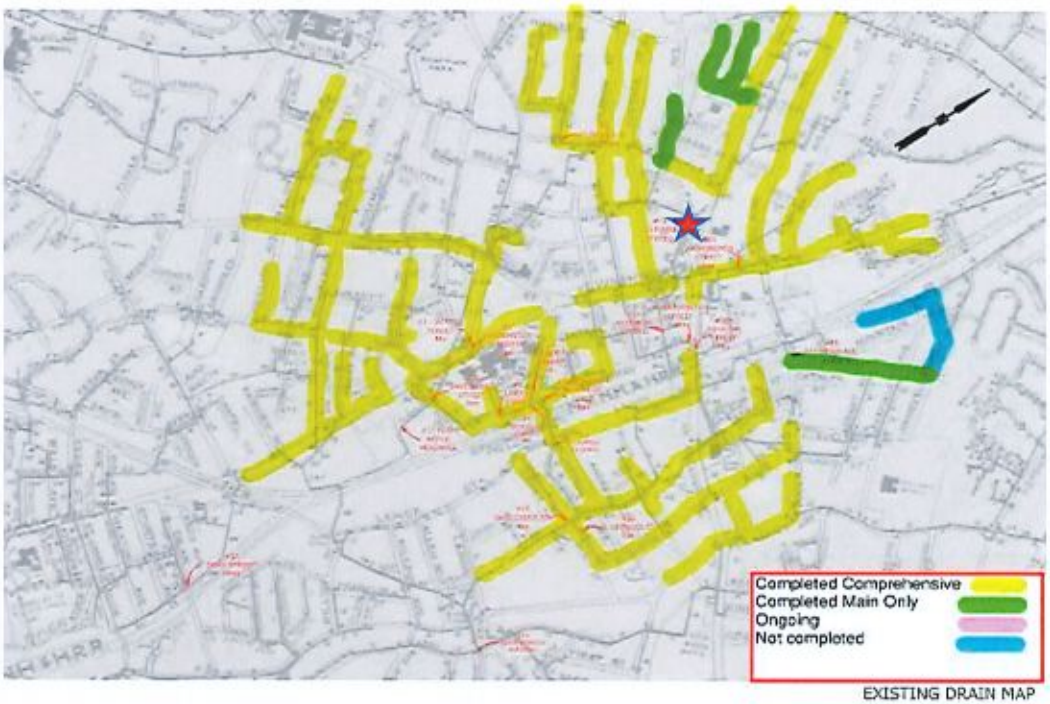


EXISTING DRAIN MAP

Site 13: #10 Maple Street					
Sample Date	Ammonia	Surfactants	Chlorine	E. Coli	Notes
7/28/2011	10+	0.75		242,000	
4/11/2012				<1*	
8/8/2012	0.20	T		<1*	
3/6/2013				9,900	
1/17/2014				50,000	
5/1/2014	0.40	0.25		16,000	
9/18/2014	5.00	1.00		60,000	
12/10/2014	0.00	0.25		21,000	
4/28/2015	0.20	0.50		11,000	
8/13/2015	T	T		610	
11/18/2015	0.10	0.25		2,400	
3/8/2016	0.20	0.50		770	
6/29/2016*	2.00	2.00	0.30	1,800	
10/18/2016	0.00	0.50	0.00	8,400	
4/11/2017		1.00	0.20	4,700	
9/25/2017	2.00	T	0.4 (T)	<1	
5/9/118				6,100	
10/16/2018	0.00	0.50		8,642	
4/23/2019	0.00	0.50		1,958	
9/11/2019	-	-	-	-	
5/27/2020	0.25	0.25	0.04	2,420	Flowing, clear
8/17/2020	0.25	0.25	0.12	6,358	
11/19/2020	0.00	0.25	0.06	6,178	
5/13/2021	0.00	0.80	0.13	7,572	
9/22/2021	1.00	0.25	0.00	68,667	
4/12/2022	0.25	0.50	0.00	268	
8/30/2022					Dry
5/2/2023	0.25	0.50	0.20	34,480	

Notes:
Likley impacted from upstream areas.
Continue to monitor

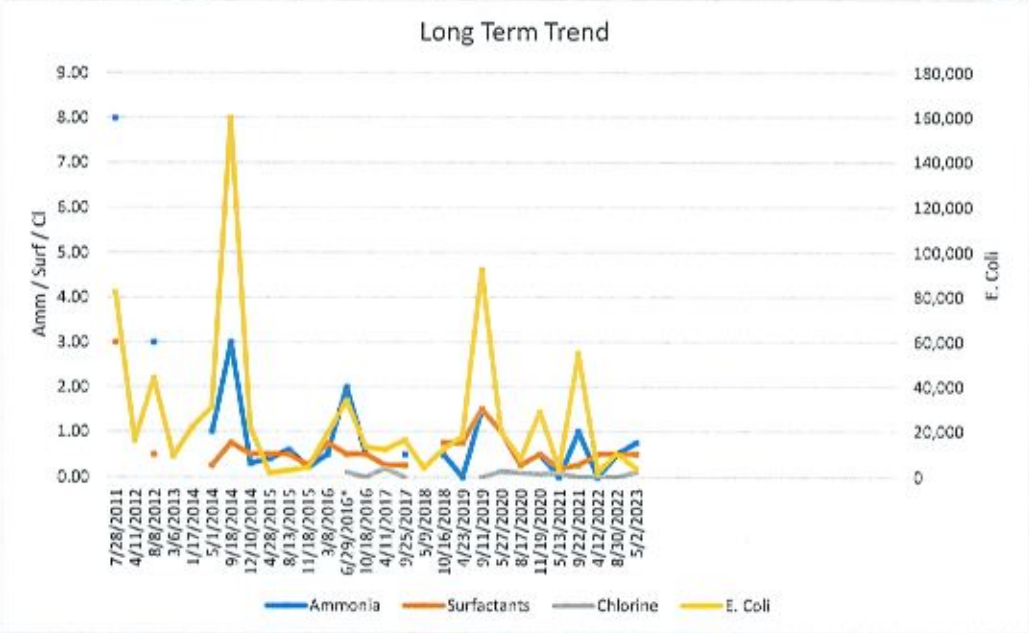


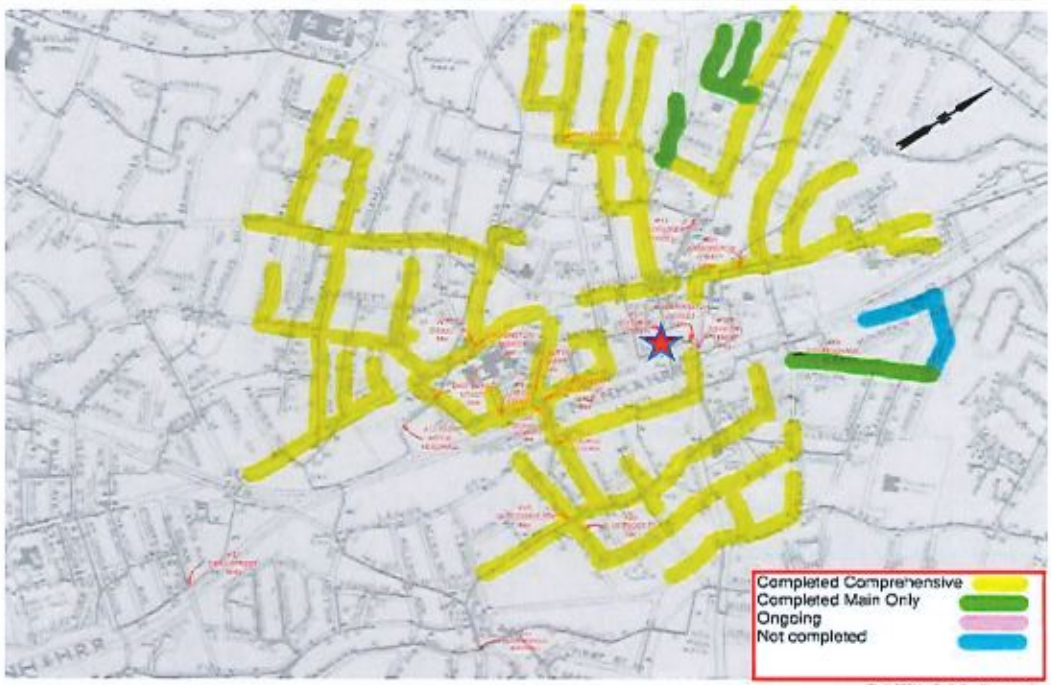


EXISTING DRAIN MAP

Site 14: Cottage Street					
Sample Date	Ammonia	Surfactants	Chlorine	E. Coli	Notes
7/28/2011	8.00	3.00		82,000	
4/11/2012				16,000	
8/8/2012	3.00	0.50		44,000	
3/6/2013				9,100	
1/17/2014				22,000	
5/1/2014	1.00	0.25		31,000	
9/18/2014	3.00	0.75		160,000	
12/10/2014	0.30	0.50		22,000	
4/28/2015	0.40	0.50		1,700	
8/13/2015	0.60	0.50		2,800	
11/18/2015	0.20	0.25		4,000	
3/8/2016	0.50	0.75		19,000	
6/29/2016*	2.00	0.50	0.10	34,000	
10/18/2016	0.50	0.50	0.00	13,000	
4/11/2017		0.25	0.20	12,000	
9/25/2017	0.50	0.25	0.3 (T)	16,000	
5/9/2018				3,900	
10/16/2018	0.50	0.75		12,030	
4/23/2019	0.00	0.75		17,718	
9/11/2019	1.5	1.5	0	92,222	
5/27/2020	1.00	1.00	0.12	19,708	Flowing, clear
8/17/2020	0.25	0.25	0.09	7,862	
11/19/2020	0.50	0.50	0.06	28,774	
5/13/2021	0.00	0.18	0.09	3,424	
9/22/2021	1.00	0.25	0.00	54,750	
4/12/2022	0.00	0.50	0.00	1,989	
8/30/2022	0.50	0.50	0.00	10,122	
5/2/2023	0.75	0.50	0.10	3,592	

Notes:
Uncertain tributary area.

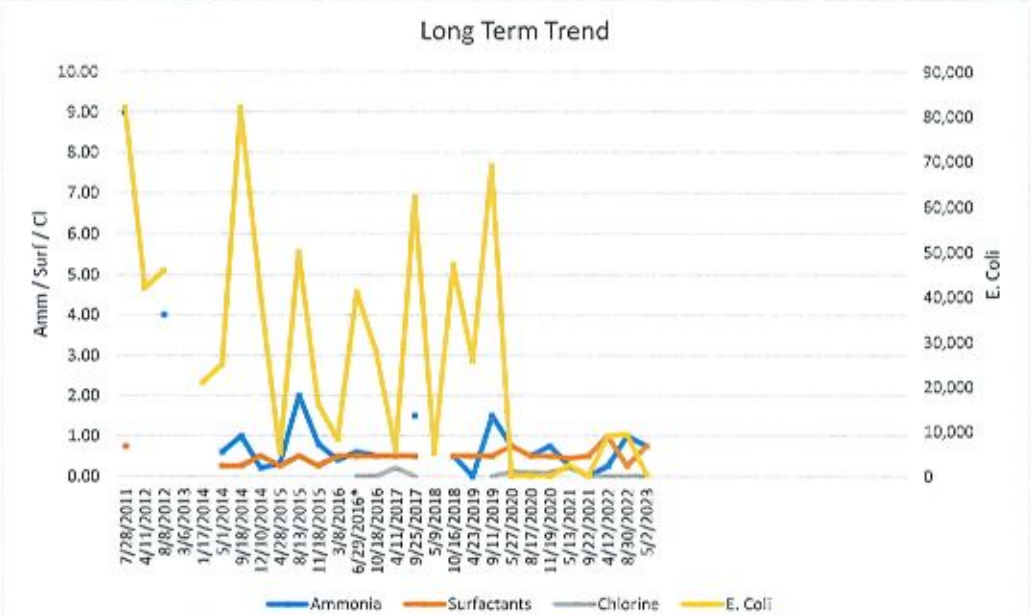


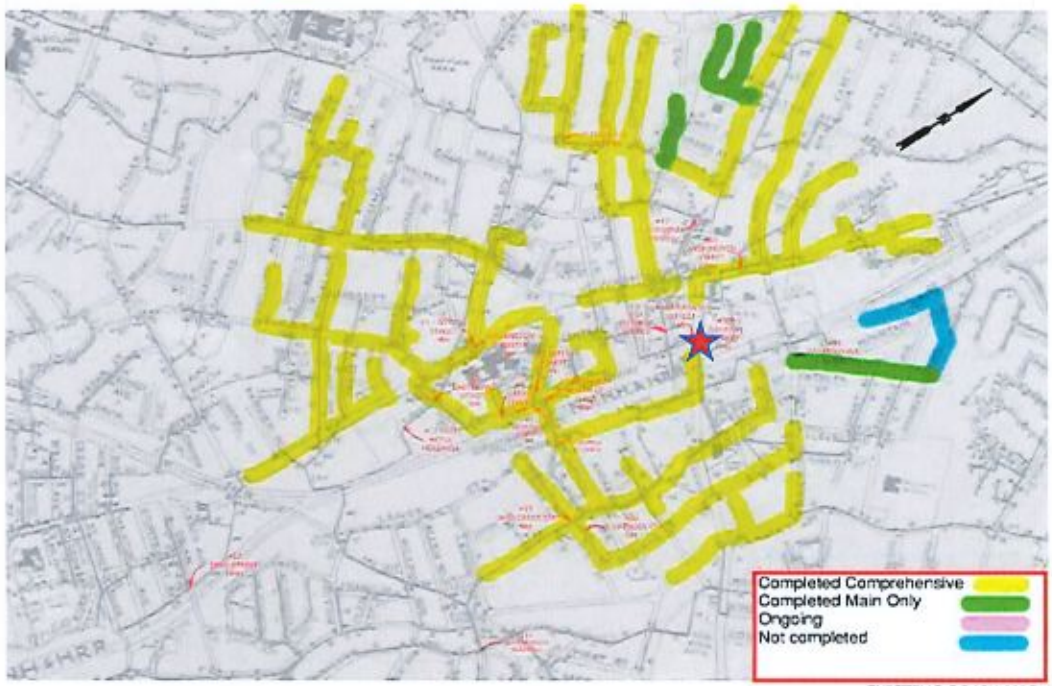


EXISTING DRAIN MAP

Site 15A: Nahatan Street Right (A)					
Sample Date	Ammonia	Surfactants	Chlorine	E. Coli	Notes
7/28/2011	9.00	0.75		82,000	
4/11/2012				42,000	
8/8/2012	4.00			46,000	
3/6/2013					
1/17/2014				21,000	
5/1/2014	0.60	0.25		25,000	
9/18/2014	1.00	0.25		82,000	
12/10/2014	0.20	0.50		41,000	
4/28/2015	0.30	0.25		5,200	
8/13/2015	2.00	0.50		50,000	
11/18/2015	0.80	0.25		16,000	
3/8/2016	0.40	0.50		8,300	
6/29/2016*	0.60	0.50	0.00	41,000	
10/18/2016	0.50	0.50	0.00	28,000	
4/11/2017		0.50	0.20	5,800	
9/25/2017	1.50	0.50	0.00	62,000	
5/9/2018				5,200	
10/16/2018	0.50	0.50		47,186	
4/23/2019	0.00	0.50		25,812	
9/11/2019	1.5	0.5	0	68,960	
5/27/2020	0.75	0.75	0.10	40	-
8/17/2020	0.50	0.50	0.09	78	
11/19/2020	0.75	0.50	0.08	5	
5/13/2021	0.25	0.44	0.23	2,420	
9/22/2021	0.00	0.50	0.00	5	Slight yellow tint
4/12/2022	0.25	1.00	0.00	9,075	
8/30/2022	1.00	0.25	0.00	9,326	
5/2/2023	0.75	0.75	0.00	328.15	

Notes:
Impacted by Cottage, Washington, Railroad areas
5/21 Further investigation needed.

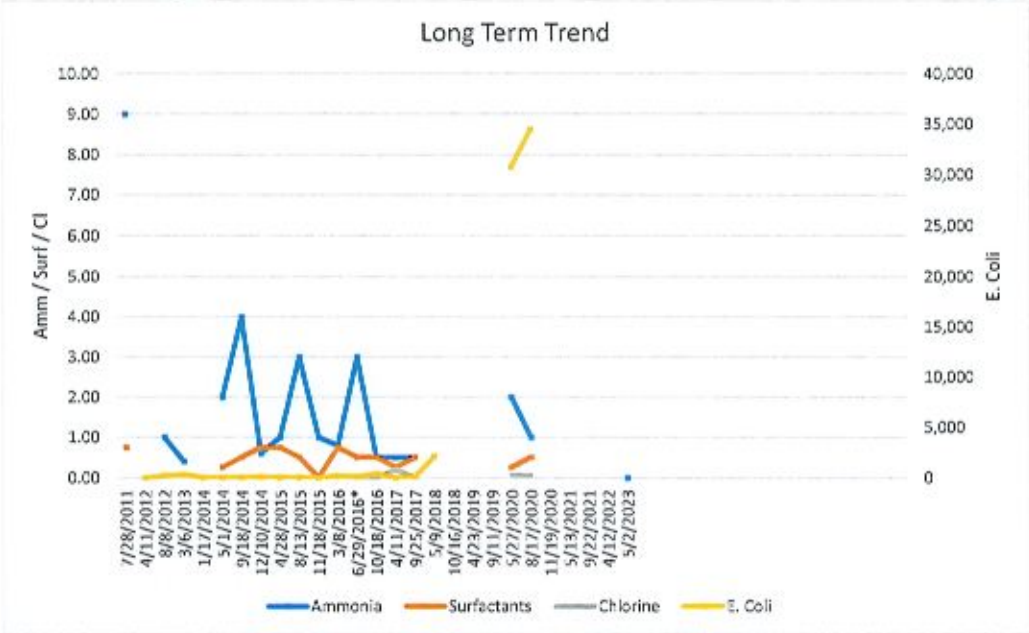


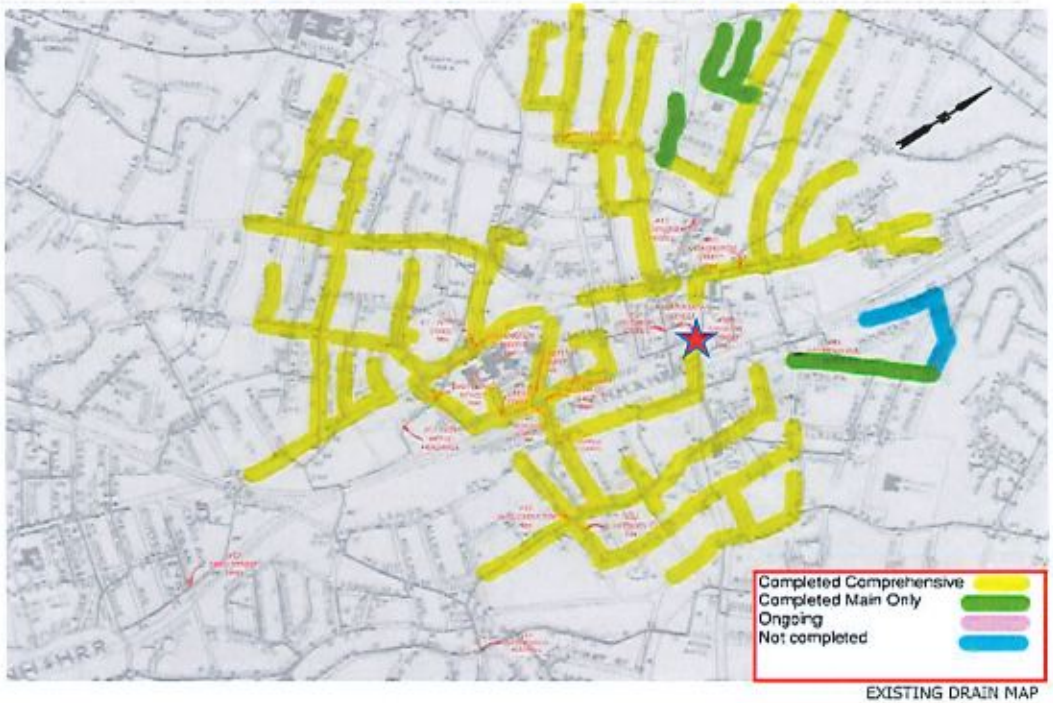


EXISTING DRAIN MAP

Site 15B: Nahatan Street Right (B)					
Sample Date	Ammonia	Surfactants	Chlorine	E. Coli	Notes
7/28/2011	9.00	0.75			
4/11/2012				<1	
8/8/2012	1.00			180	
3/6/2013	0.40			280	
1/17/2014				1	
5/1/2014	2.00	0.25		12	
9/18/2014	4.00	0.50		16	
12/10/2014	0.60	0.75		70	
4/28/2015	1.00	0.75		11	
8/13/2015	3.00	0.50		12	
11/18/2015	1.00	0.00		6	
3/8/2016	0.80	0.75		160	
6/29/2016*	3.00	0.50	0.00	100	
10/18/2016	0.50	0.50	0.00	340	
4/11/2017	0.50	0.25	0.20	7	
9/25/2017	0.50	0.50	0.00	79	
5/9/2018				2,100	
10/16/2018					
4/23/2019					
9/11/2019					
5/27/2020	2.00	0.25	0.06	30,772	-
8/17/2020	1.00	0.50	0.05	34,465	
11/19/2020					
5/13/2021					
9/22/2021					
4/12/2022					
5/2/2023	REMOVED FROM UNDERDRAIN SAMPLING PROGRAM				

Notes:

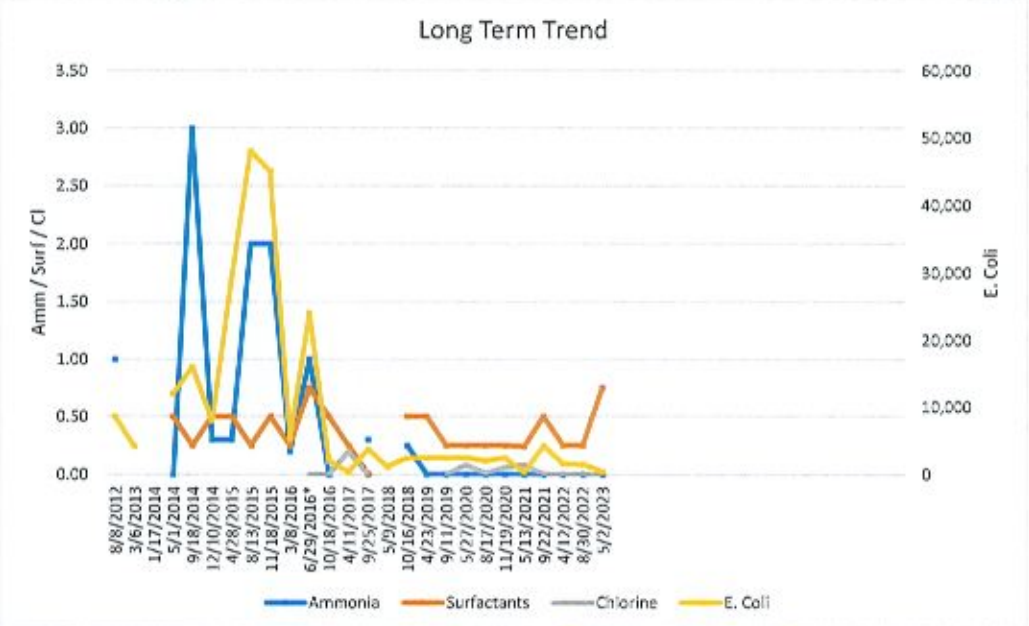


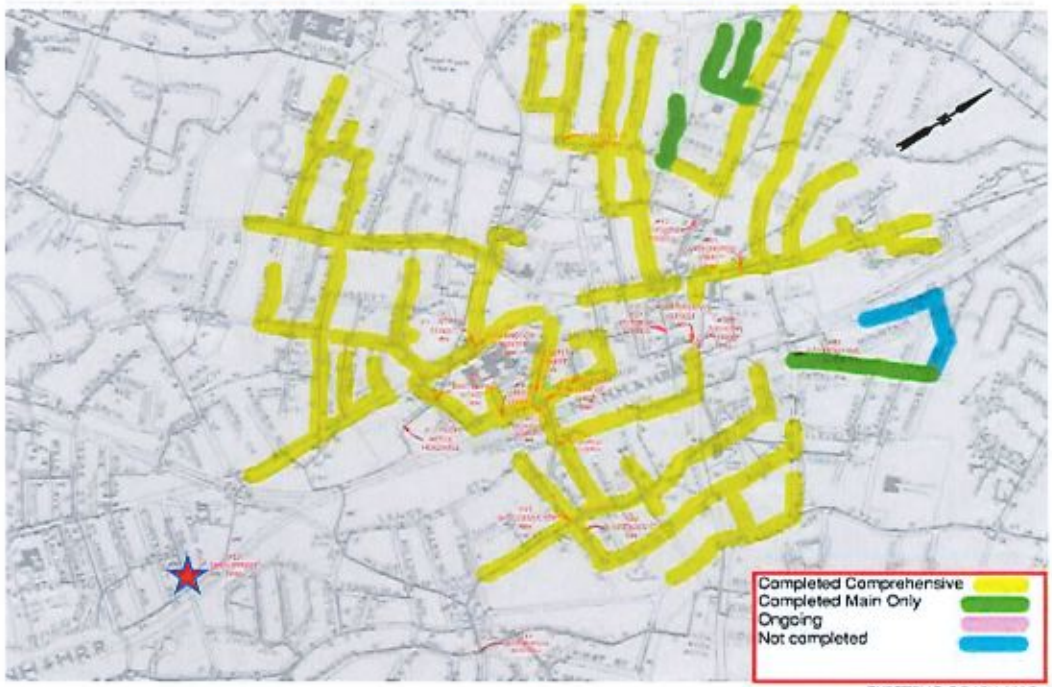


EXISTING DRAIN MAP

Site 17: Dean Street					
Sample Date	Ammonia	Surfactants	Chlorine	E. Coli	Notes
8/8/2012	1.00	0.50		8,600	
3/6/2013				4,200	
1/17/2014					
5/1/2014	T	0.50		12,000	
9/18/2014	3.00	0.25		16,000	
12/10/2014	0.30	0.50		7,900	
4/28/2015	0.30	0.50		29,000	
8/13/2015	2.00	0.25		48,000	
11/18/2015	2.00	0.50		45,000	
3/8/2016	0.20	0.25		5,200	
6/29/2016*	1.00	0.75	0.00	24,000	
10/18/2016	0.00	0.50	T	2,000	
4/11/2017		0.25	0.20	290	
9/25/2017	0.30	T	0.1 (T)	3,700	
5/9/2018				1,100	
10/16/2018	0.25	0.50		2,422	
4/23/2019	0.00	0.50		2,420	
9/11/2019	0	0.25	0	2,420	issue
5/27/2020	0.00	0.25	0.08	2,420	Stagnant
8/17/2020	0.00	0.25	0.01	1,986	
11/19/2020	0.00	0.25	0.06	2,422	
5/13/2021	0.00	0.24	0.08	276	
9/22/2021	0.00	0.50	0.00	4,195	
4/12/2022	0.00	0.25	0.00	1,553	
8/30/2022	0.00	0.25	0.00	1,449	
5/2/2023	0.00	0.75	0.00	387.3	

Notes:
Washington / Walnut area.
Monitor for additional investigation.

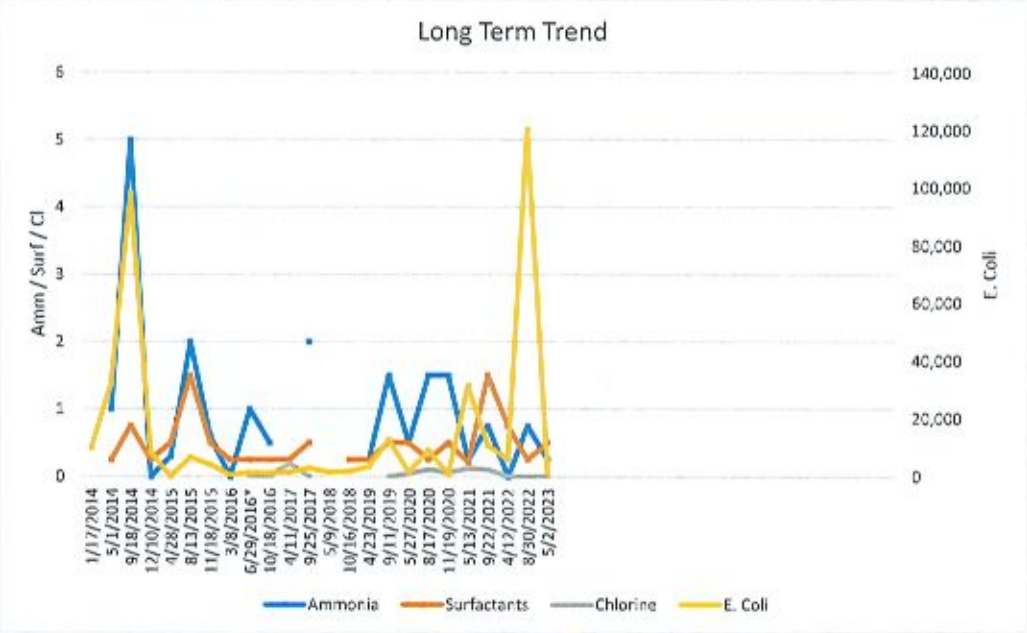


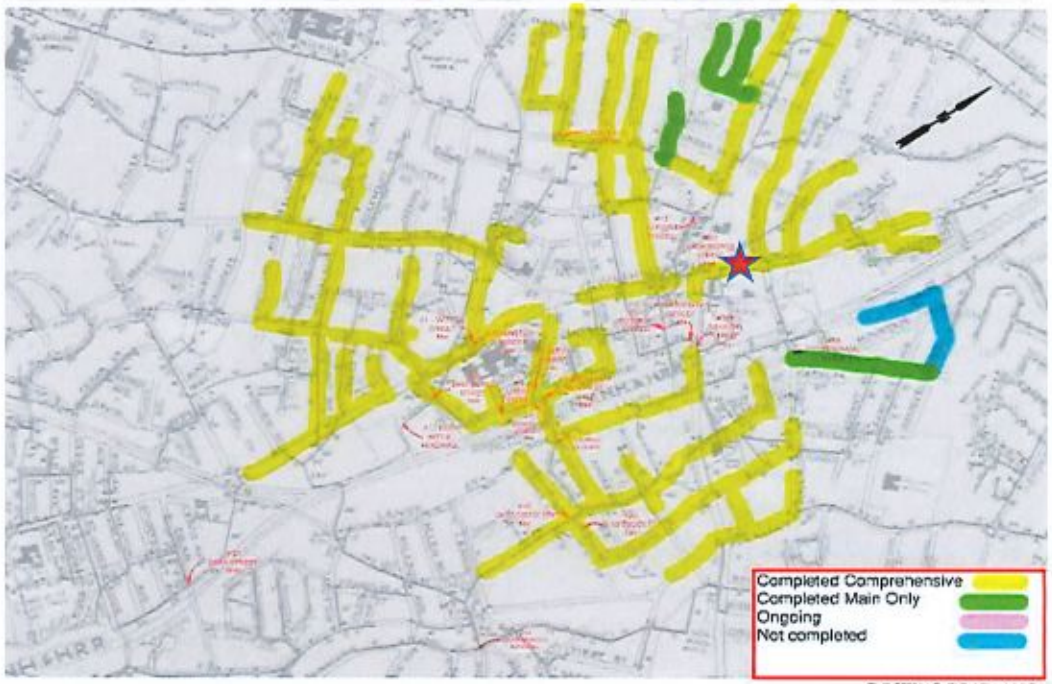


EXISTING DRAIN MAP

Site 18: Washington Street					
Sample Date	Ammonia	Surfactants	Chlorine	E. Coli	Notes
1/17/2014				10,000	
5/1/2014	1	0.25		32,000	
9/18/2014	5.00	0.75		98,000	
12/10/2014	T	0.25		8,300	
4/28/2015	0.30	0.50		60	
8/13/2015	2.00	1.50		6,600	
11/18/2015	0.60	0.50		4,000	
3/8/2016	T	0.25		630	
6/29/2016*	1.00	0.25	0.00	1,200	
10/18/2016	0.50	0.25	0.00	1,100	
4/11/2017		0.25	0.20	1,400	
9/25/2017	2.00	0.50	0.00	2,800	
5/9/2018				1,400	
10/16/2018	0.25	0.25		1,732	
4/23/2019	0.25	0.25		3,388	
9/11/2019	1.5	0.5	0	12,628	
5/27/2020	0.50	0.50	0.04	1,414	Flowing, clear
8/17/2020	1.50	0.25	0.10	8,958	
11/19/2020	1.50	0.50	0.06	613	
5/13/2021	0.25	0.21	0.12	31,296	
9/22/2021	0.75	1.50	0.10	10,807	Slightly cloudy
4/12/2022	0.00	0.75	0.00	5,908	
8/30/2022	0.75	0.25	0.00	120,333	
5/2/2023	0.25	0.50	0.00	980.39	

Notes:
Railroad / Wahsington St Area, Potential incomplete work
5/21 - Significant increase, Develop plan for additional investigation

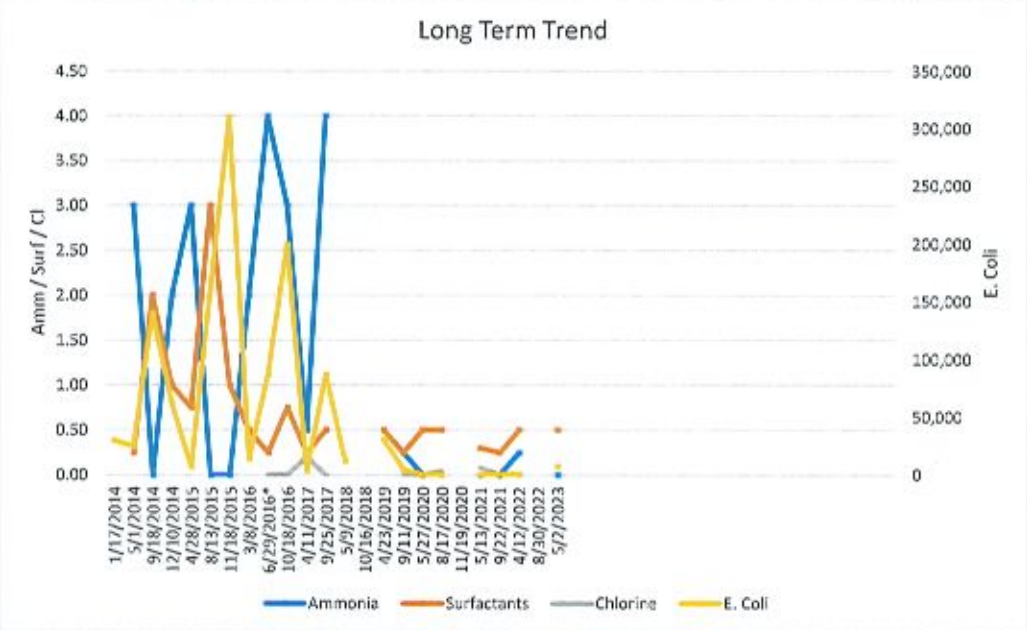


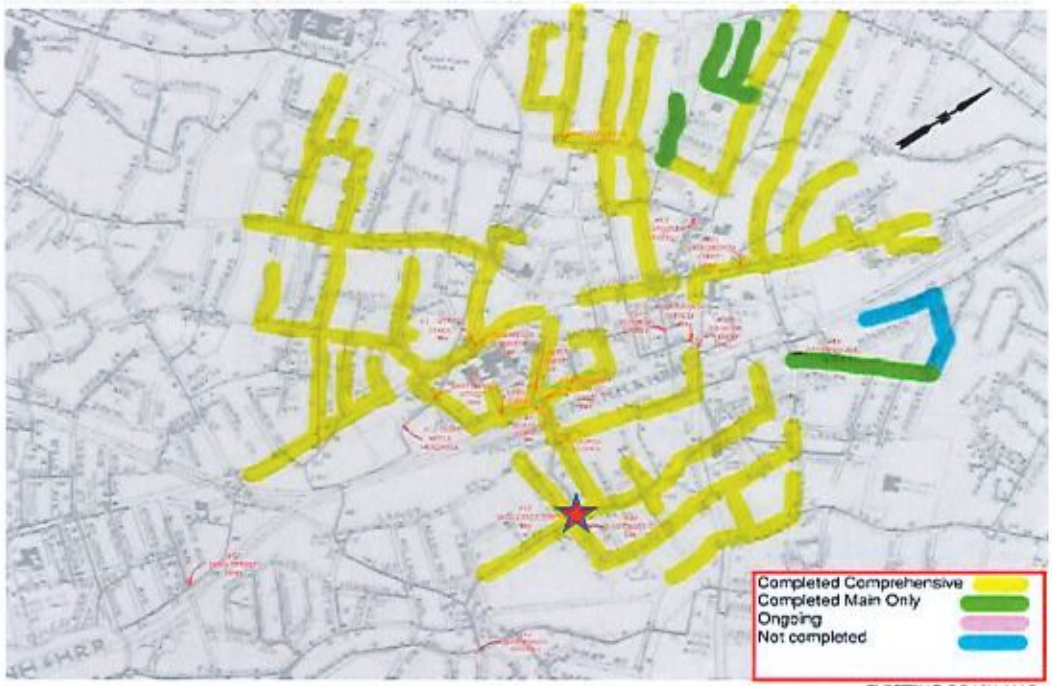


EXISTING DRAIN MAP

Site 19: Cross Street #52					
Sample Date	Ammonia	Surfactants	Chlorine	E. Coli	Notes
1/17/2014				30,000	
5/1/2014	3.00	0.25		25,000	
9/18/2014	>10	2.00		140,000	
12/10/2014	2.00	1.00		62,000	
4/28/2015	3.00	0.75		7,000	
8/13/2015	>10	3.00		160,000	
11/18/2015	>10	1.00		310,000	
3/8/2016	2.00	0.50		14,000	
6/29/2016*	4.00	0.25	0.00	87,000	
10/18/2016	3.00	0.75	0.00	200,000	
4/11/2017	0.50	0.25	0.20	3,500	
9/25/2017	4.00	0.50	0.00	87,000	
5/9/2018				12,000	
10/16/2018					
4/23/2019	0.50	0.50		31,050	
9/11/2019	0.25	0.25	0	4,668	
5/27/2020	0.00	0.50	0.00	276	Flowing, clear
8/17/2020	0.00	0.50	0.04	10	
11/19/2020					Surcharged
5/13/2021	0.00	0.30	0.08	120	
9/22/2021	0.00	0.25	0.00	345	
4/12/2022	0.25	0.50	0.00	579	
8/30/2022					Backed up, no sample
5/2/2023	0.00	0.50	0.10	7,083	

Notes:
Underdrain currently discharges to sewer
10/18 Area 5 Rehabiliation initiated.
5/21 - Continued good performance.

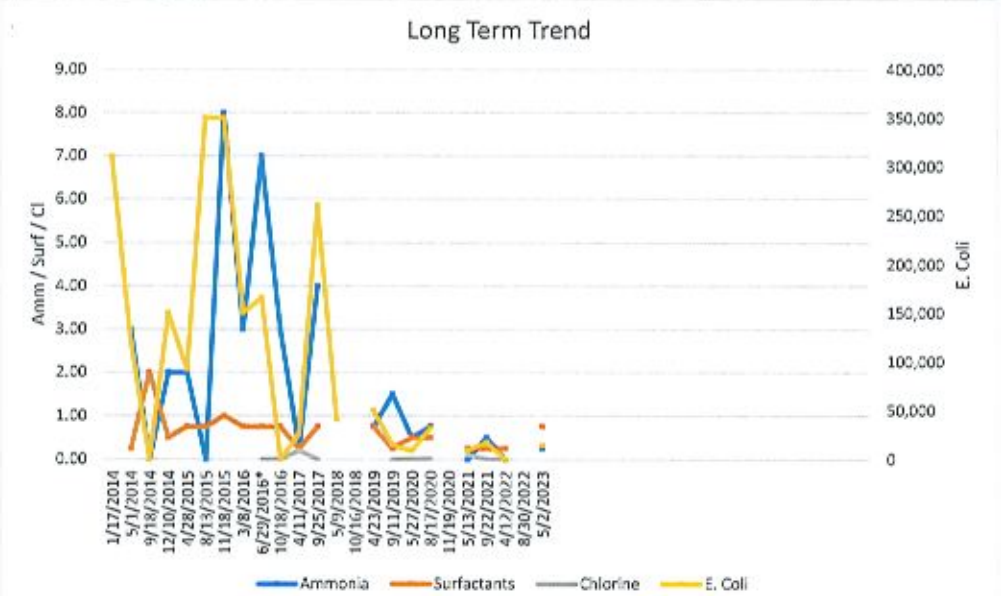


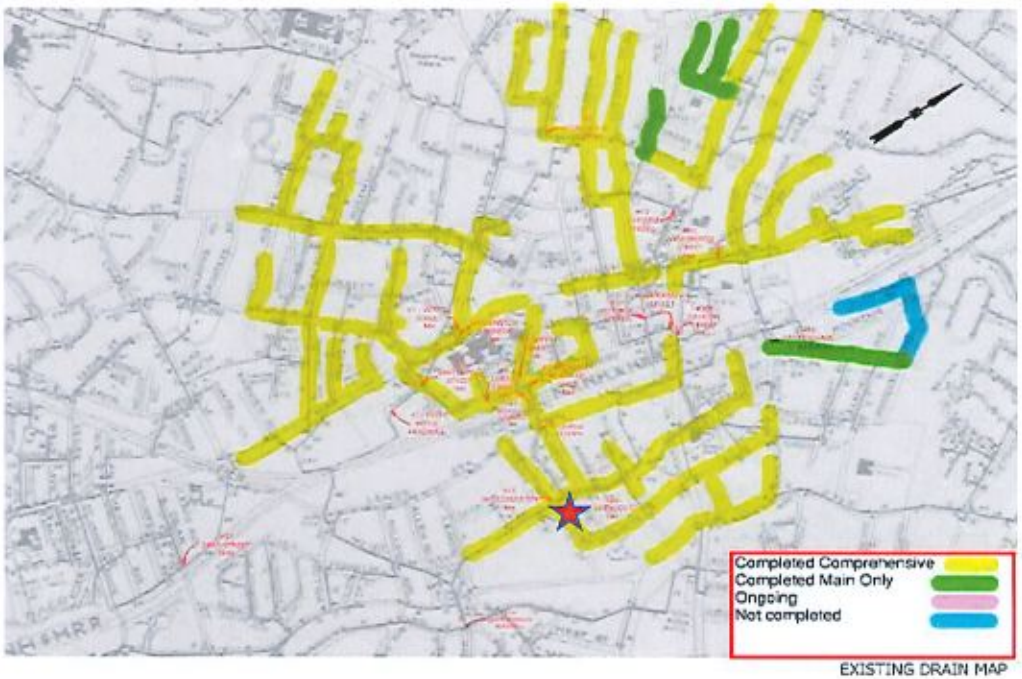


EXISTING DRAIN MAP

Site 20: Cross Street #48					
Sample Date	Ammonia	Surfactants	Chlorine	E. Coli	Notes
1/17/2014				310,000	
5/1/2014	3.00	0.25		120,000	
9/18/2014	>10	2.00		>480,000	
12/10/2014	2.00	0.50		150,000	
4/28/2015	2.00	0.75		92,000	
8/13/2015	>10	0.75		350,000	
11/18/2015	8.00	1.00		350,000	
3/8/2016	3.00	0.75		150,000	
6/29/2016*	7.00	0.75	T	166,000	
10/18/2016	3.00	0.75	0.00	> 484,000	
4/11/2017	0.25	0.25	0.20	26,000	
9/25/2017	4.00	0.75	0.1 (T)	260,000	
5/9/2018				41,000	
10/16/2018					
4/23/2019	0.75	0.75		49,780	
9/11/2019	1.5	0.25	0	14,656	
5/27/2020	0.50	0.50	0.01	9,000	Flowing, clear
8/17/2020	0.75	0.50	0.02	32,147	
11/19/2020					surcharged
5/13/2021	0.00	0.25	0.11	9,276	
9/22/2021	0.50	0.25	0.00	17,233	
4/12/2022	0.00	0.25	0.00	120	
8/30/2022					Backed up, no sample
5/2/2023	0.25	0.75	0.00	13,958	

Notes:
Underdrain currently discharges to Sewer
10/18 Area 5 Rehabiliation initiated.
5/21 - Evaluate completeness of comprehensive rehabilitation, consider dye testing of buildings



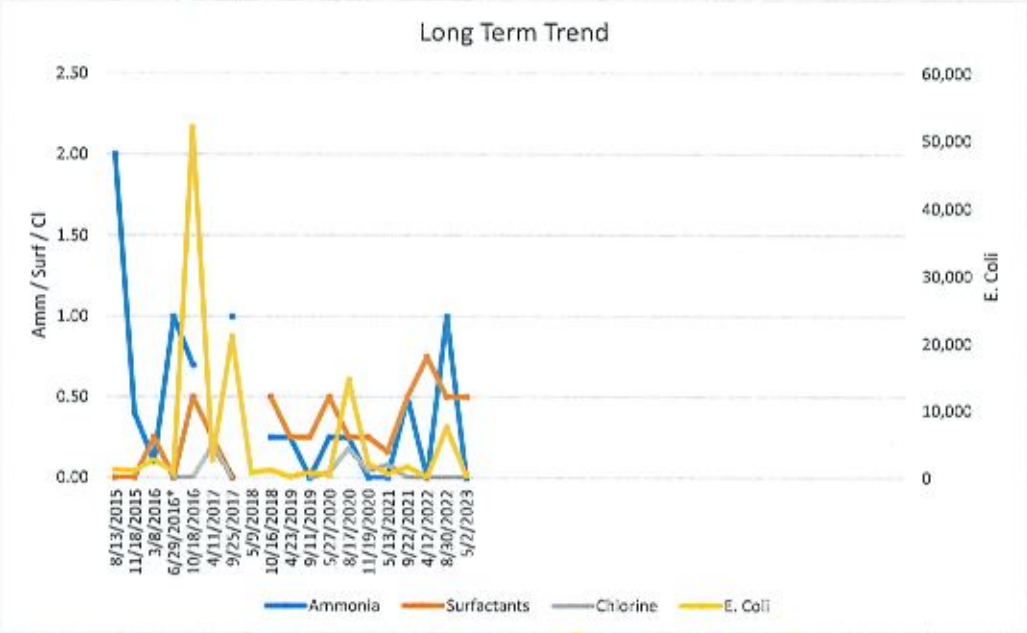


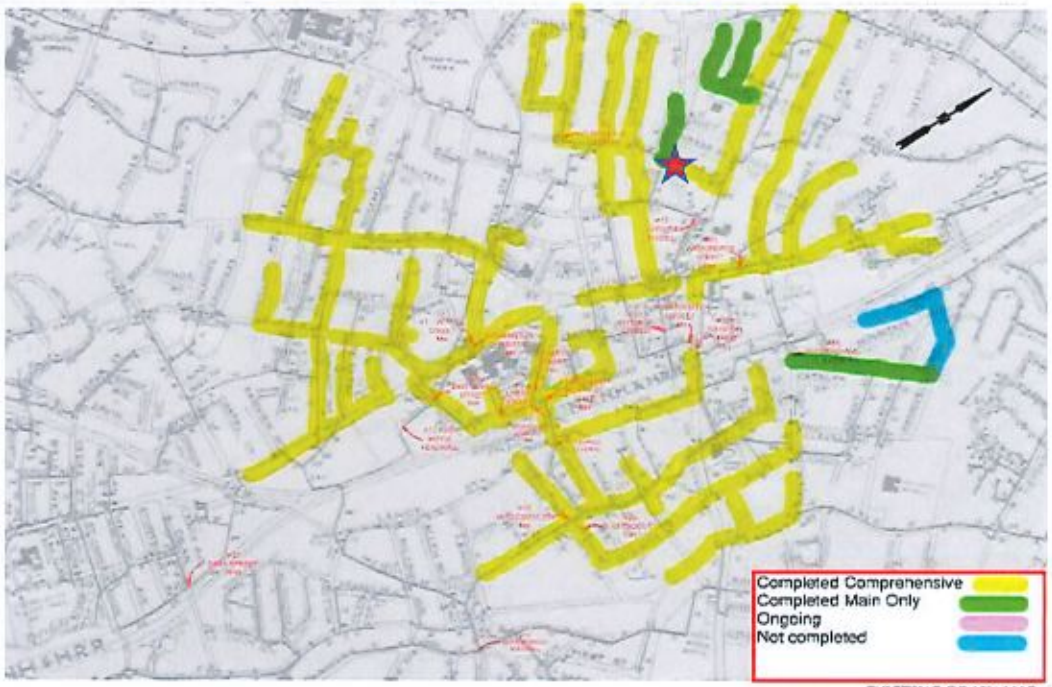
EXISTING DRAIN MAP

Site 21: Nichols / Prospect					
Sample Date	Ammonia	Surfactants	Chlorine	E. Coli	Notes
8/13/2015	2.00	T		1,100	
11/18/2015	0.40	T		920	
3/8/2016	0.10	0.25		2,600	
6/29/2016*	1.00	T	T	730	
10/18/2016	0.70	0.50	T	52,000	
4/11/2017		0.25	0.20	2,600	
9/25/2017	1.00	T	0.00	21,000	
5/9/2018				660	
10/16/2018	0.25	0.50		1,046	
4/23/2019	0.25	0.25		65	
9/11/2019	0	0.25	0	770	
5/27/2020	0.25	0.50	0.03	326	Flowing, clear
8/17/2020	0.25	0.25	0.18	14,546	
11/19/2020	0.00	0.25	0.04	1,986	
5/13/2021	0.00	0.16	0.08	548	
9/22/2021	0.50	0.50	0.00	1,553	
4/12/2022	0.00	0.75	0.00	72	
8/30/2022	1.00	0.50	0.00	7,491	
5/2/2023	0.00	0.50	0.00	248.9	

Notes:

Unlined services in 6-in mains not completed



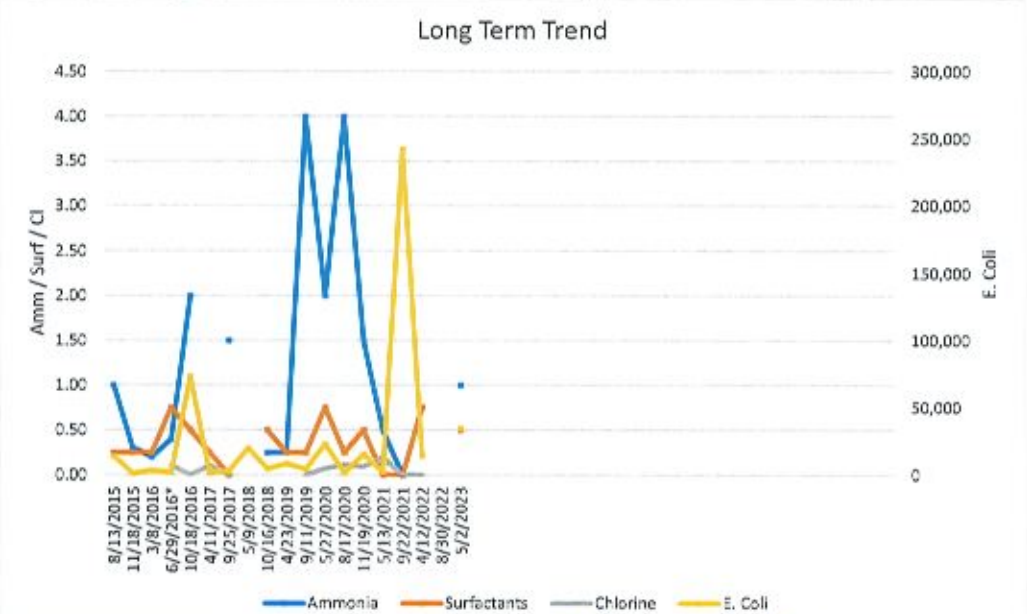


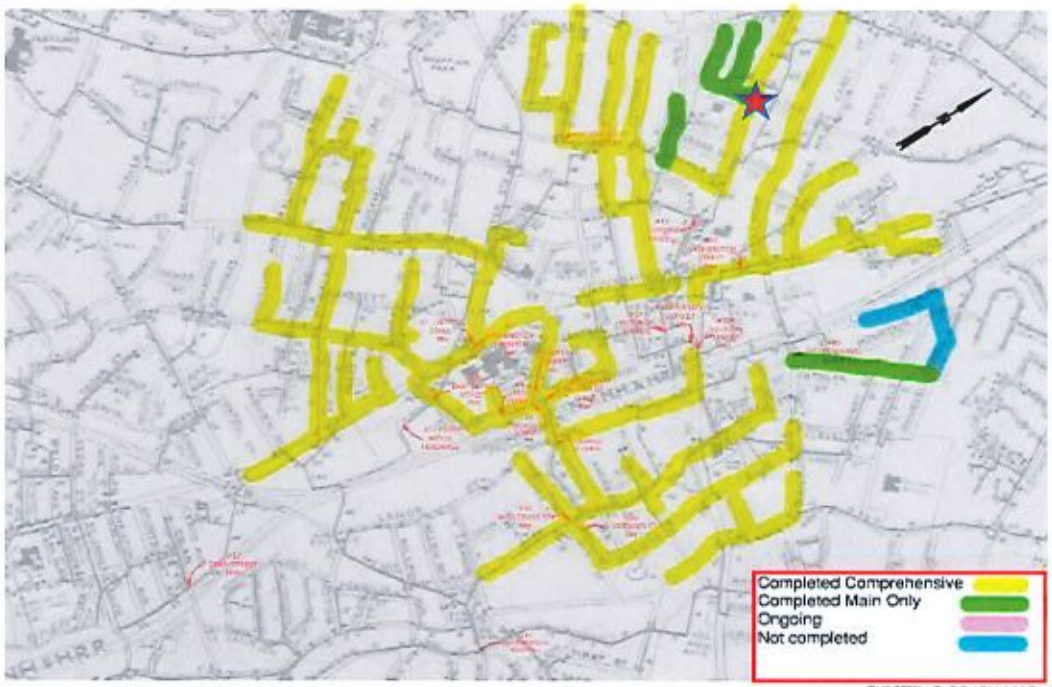
EXISTING DRAIN MAP

Site 22: Fulton @ Lydon					
Sample Date	Ammonia	Surfactants	Chlorine	E. Coli	Notes
8/13/2015	1.00	0.25		14,000	
11/18/2015	0.30	0.25		1,200	
3/8/2016	0.20	0.25		3,100	
6/29/2016*	0.40	0.75	0.10	2,000	
10/18/2016	2.00	0.50	T	73,000	
4/11/2017		0.25	0.10	1,400	
9/25/2017	1.50	T	T(T)	2,800	
5/9/2018				20,000	
10/16/2018	0.25	0.50		4,614	
4/23/2019	0.25	0.25		8,154	
9/11/2019	4	0.25	0	4,218	
5/27/2020	2.00	0.75	0.07	23,056	Trickle, clear
8/17/2020	4.00	0.25	0.11	1,413	
11/19/2020	1.50	0.50	0.09	15,356	
5/13/2021	0.50	-	0.19	1,986	
9/22/2021	>4	>3	0.00	241,960	
4/12/2022	0.75	0.75	0.00	14,387	
8/30/2022					Dry
5/2/2023	1.00	0.50	0.00	34,480	

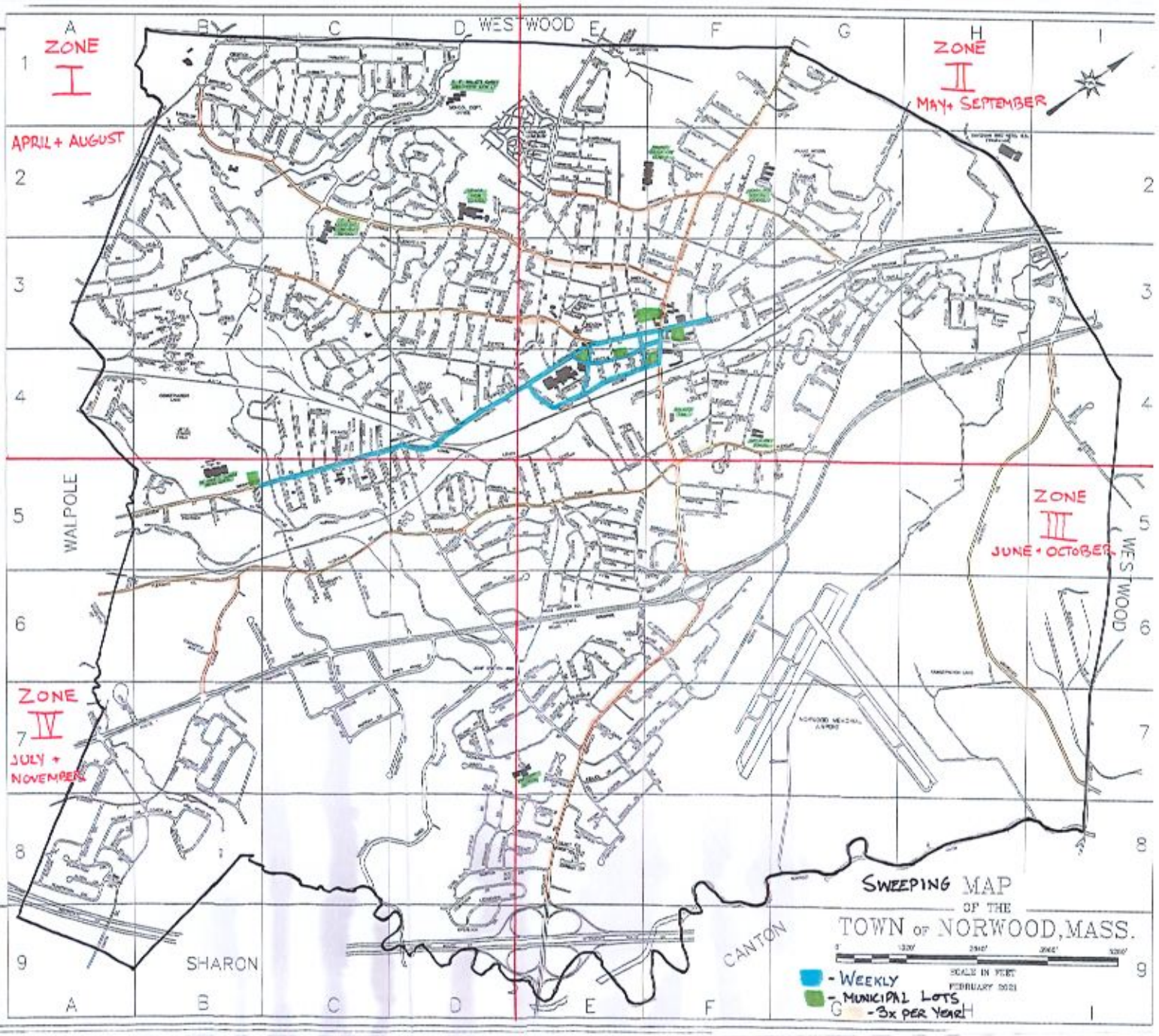
Notes:

Unlined services in 6-in mains not completed





EXISTING DRAIN MAP


ZONE I
APRIL + AUGUST
ZONE II
MAY + SEPTEMBER
ZONE III
JUNE + OCTOBER
ZONE IV
JULY + NOVEMBER
WESTWOOD
WALPOLE
SHARON
CANTON
SWEEPING MAP
OF THE
TOWN OF NORWOOD, MASS.
SCALE IN FEET
FEBRUARY 2021
- WEEKLY
- MUNICIPAL LOTS
- 3x PER YEAR

TOWN OF NORWOOD

ENGINEERING DEPARTMENT

One Lyman Place, Norwood, MA 02062
Phone 781-762-1413 Fax 781-762-9378
Email engineering@norwoodma.gov

STRUCTURAL BMP RETROFITS

Potential Sites and Schedule for Structural BMP Improvements:

Stearns and Elliot Park – CY 23

Morse Hill Park – CY 24

Savage Center– CY 25

Cleveland School– CY 25

Callahan School– CY 25

Prescott School – CY 25

Evergreen Circle – next planned resurfacing TBD

Lancelot Court – next planned resurfacing TBD

Illicit Discharge Detection & Elimination

(IDDE)

For MS4 Permitting

Date – 4/6/2023

Time – 9:00 AM – 11:00 AM

Location – Virtual Classroom

Attendees:

Brian Murphy	✔
Chris Ciriello	✔
Joe Neves	✔
Nicholas Flannery	✔
Patrick Kennedy	✔
Scott Calabro	✔

Image courtesy of Washington State Department of Ecology

You're not just fertilizing the lawn.

neponset stormwater partnership

Fertilizers—nitrogen and phosphorus—are good for plants but not for water quality. In ponds, streams and rivers, fertilizers are pollutants that harm fish and wildlife, can cause smelly algae blooms, and can even affect drinking water.

Be a Lawn Hero: Protect Your Local Waterways!

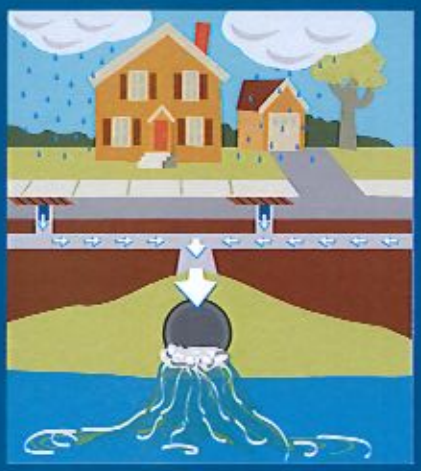
- Recycle grass clippings with a mulching mower. Clippings are a free, natural fertilizer—and all that most lawns need.
- Sweep or blow grass clippings and fertilizers off of pavement, and away from storm drains and wetlands.
- Never fertilize before a heavy rainstorm (light rain is ok).
- Don't apply fertilizer with phosphorous to an existing lawn. It's illegal in MA unless a soil test says you need it.
- Choose fertilizers with 75-100% "slow-release" or "water insoluble" nitrogen.

Learn More About Soil Testing

Of those who fertilize, a mere 10-20% get a soil test to understand their exact lawn needs. (CWP 1999).

Save hundreds on wasted fertilizer with an inexpensive soil test from the UMass Soil Test Lab. It gives you scientific fertilizer recommendations for your unique lawn.

For step-by-step instructions, visit **YourCleanWater.org/lawn**
Questions? Email stormwater@neponset.org or call 781-575-0354 x304.



Lawn fertilizers (and other pollutants such as pesticides, oil, gasoline, antifreeze and dog waste) mix with rain and irrigation runoff, wash into storm drains on the street, and empty into local waterways, with no filtration or treatment.

Properly Dispose of Yard Waste in Norwood

Curbside Pickup of Yard Waste

- Weekly from April 1st thru November 30th

Drop off Yard Waste

- Year-round at the Winter Street Recycling Center, 370 Winter Street.

Yard waste is not allowed in your curbside trash/ recycle carts.

Yard waste includes leaves, grass, dead flowers, plants, hedge clippings, wood chips, tree trimmings, twigs/branches, wreaths, pumpkins, etc.

Recycling Facility

- Open to Norwood residents every Saturday from 8 am – 1:30 pm
- NOTE: Residents must obtain a vehicle sticker to use the Recycling Facility. The sticker is free of charge and requires proof of residence and your vehicle registration.
- No commercial vehicles are allowed
- Stickers can be obtained at:

  Norwood DPW Yard
  John J. Carroll Administration Building
  1 Lyman Place, Norwood
  781-762-1413

Visit **norwoodma.gov/departments/trash_and_recycling** to learn more about the Winter Street Recycling Facility

Working Together to Prevent Stormwater Pollution

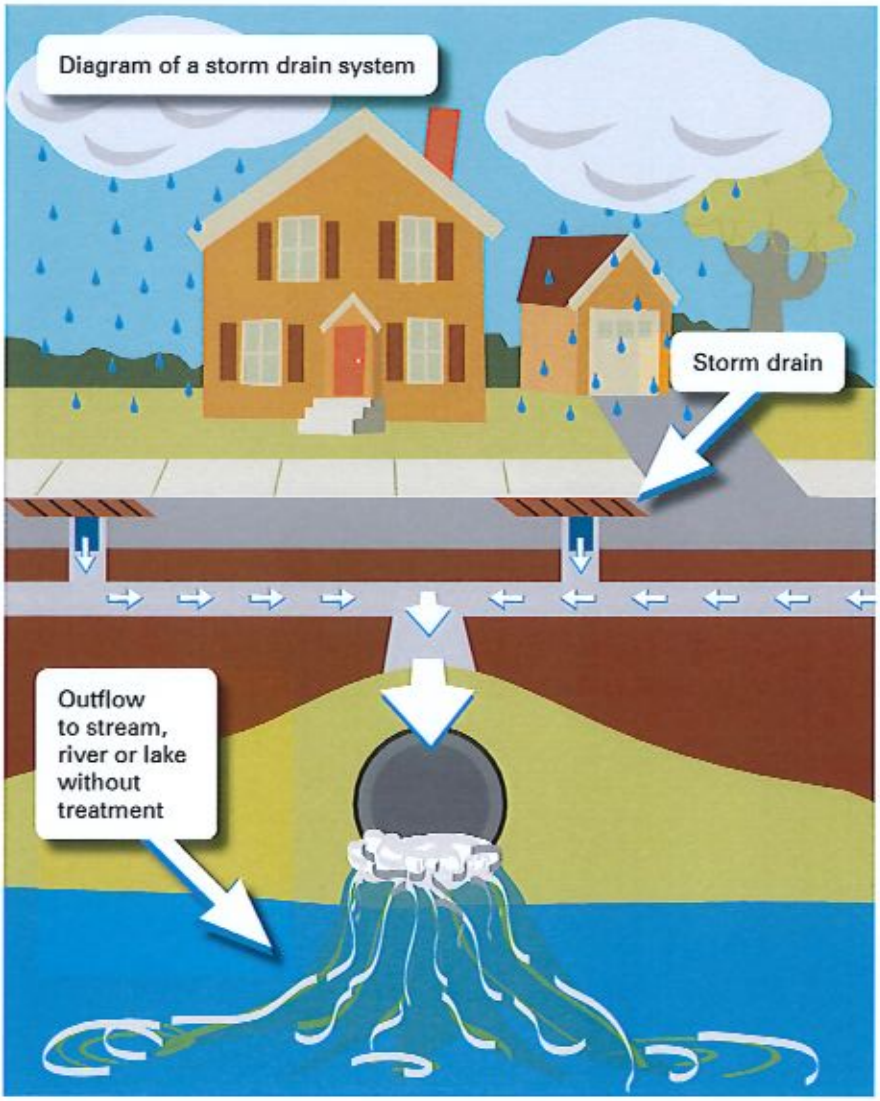
When rain hits pavement and concrete, it washes pollutants like pet waste, bacteria, oil, litter, fertilizer, and grass clippings into storm drains, which lead directly to local streams and ponds.

Water that flows into storm drains, or "stormwater," is NOT treated—and the pollutants affect drinking water supplies, recreation, and wildlife.

Norwood is working towards cleaner waterways by participating in the Neponset Stormwater Partnership (NSP), which offers resources to help eliminate water pollution that comes from paved surfaces.

Call the NSP Stormwater Hotline **781-575-0354 x300** or the Norwood DPW **781-762-1413** with stormwater questions, or to report dumping.

For more information on stormwater prevention, go to **YourCleanWater.org**



Help Keep Norwood's Water Clean This Fall

Leaves and grass clippings that are dumped or stored near waterways or paved areas add to water pollution.

Fallen leaves and grass clippings are loaded with phosphorus.

When streams, rivers, and ponds receive too much phosphorus, harmful algae and cyanobacteria blooms can occur. These blooms are unsightly and can be toxic to people, pets, and wildlife.

Keep our local waterways clean and healthy with a few simple steps.

- Place raked leaves or lawn clippings in paper bags to be collected by the town or dispose of them at the Winter Street Recycling Facility.
- Consider composting yard waste.
- Keep paved areas and stormdrains clear of leaves.
- Keep bagged, piled and mulched leaves on natural soil, a few feet back from paved areas.
- Ensure that your lawn service is properly disposing of yard waste.
- Reduce excessive lawn chemical use and always follow manufacturer's directions.

Learn more at www.YourCleanWater.org

neponset stormwater partnership

The Neponset Stormwater Partnership (NSP) is a program managed by the Neponset River Watershed Association on behalf of ten member communities. NSP aims to increase the effectiveness of municipal stormwater management programs through regional cooperation and resource sharing.

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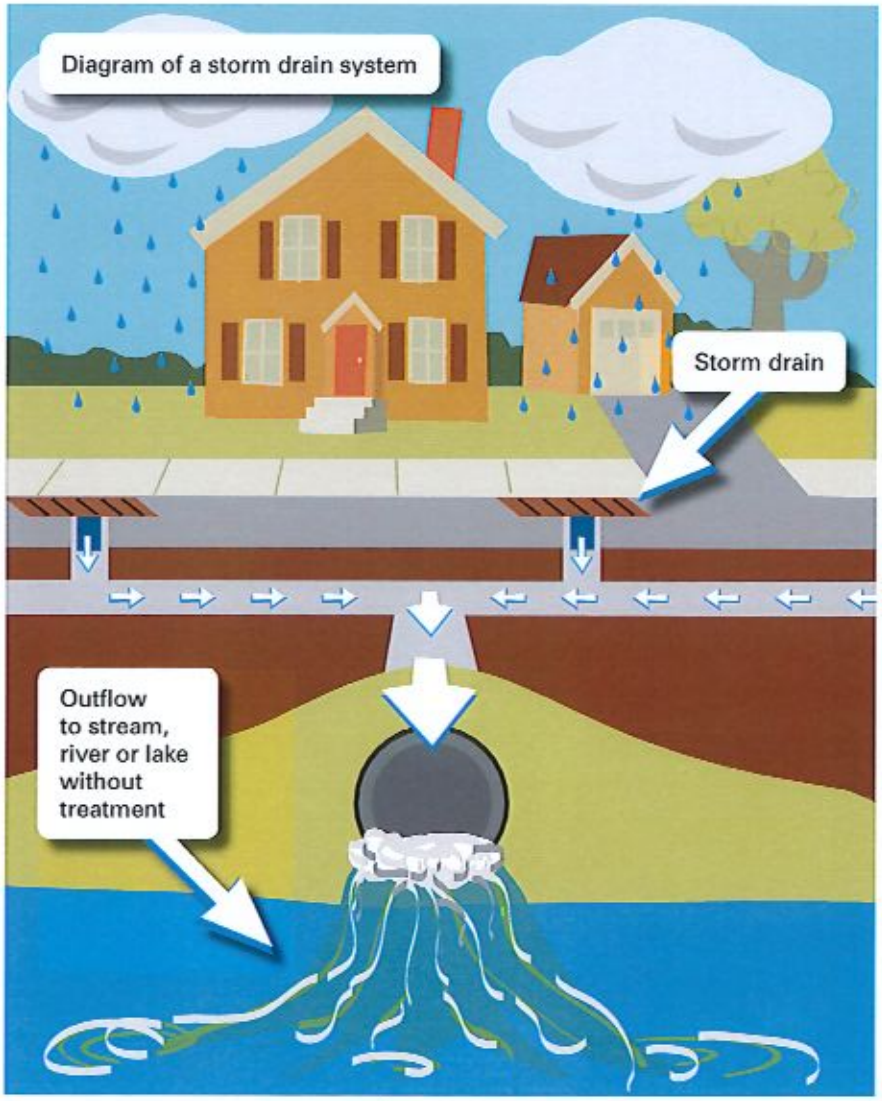

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What's the Problem with Dog Waste?

Dog waste left in our yards, forest areas and parks can have many adverse effects on the environment.

It's full of harmful bacteria and excess nutrients.

Besides being a neighborhood nuisance, dog waste can make people sick, especially children who are more likely to come into contact with it while playing.

Dog waste left on lawns can also kill or damage grass and other plants.

When dog waste is washed into lakes or streams, the waste decays, uses up oxygen in the water, and sometimes releases ammonia. This can kill fish!

Dog waste also contains nutrients that encourage weed and algae growth.

Too much of these nutrients turn water cloudy and green . . . imagine this in your backyard pond or stream!

Managing dog waste properly is something easy that everyone can do to make a difference in the quality of our surface waters.

Brought to you by your Norwood Public Works Department

DOG WASTE AND SURFACE WATER QUALITY

Did You Know?

There are over __ licensed dogs in our town.

Each of these dogs produces about ¾ pound of solid waste and over 7 billion bacteria daily!

What is Pollution Prevention?

A combination of activities that reduce or eliminate the amount of possible chemical contaminants at the business or residential property from entering the environment or waste system.

A successful plan will consider the usage of raw materials, water energy, and other resources more efficiently. In addition, substitute less harmful substances for more hazardous ones.

Importance of Pollution Prevention

The municipal storm water system was designed to carry runoff water efficiently away from roads and buildings. These systems deliver the runoff to ponds, lakes, and streams. Since our storm drain system does not have a built-in treatment, whatever gets into our storm drains, also gets into our environment, with potential to damage our local ponds and streams.

Benefits

Economic benefits include greater business efficiency. Increased competitiveness, and reduced costs for regulatory monitoring and compliance. Preventing the generation of waste, can reduce or eliminate the long term liabilities, clean-up, storage, and disposal costs.

Protects the local environments and everyone's water.

Low Impact Development (L.I.D.)

L.I.D. refers to systems and practices that use or mimic natural processes that result in the infiltration, filtering, storing, evaporating, and detaining of storm water in order to protect water quality and associated aquatic habitat more natural and efficient.

L.I.D. Methods

Preservation— Keep as much of the existing soil and vegetation as possible.

Pervious Paving— Alternative forms of asphalt and concrete paving allow rainwater to soak through paving, rather than flow across it to a storm water drain.

Vegetated Rooftop— Assist in filtering pollutants and slowing down roof water runoff.

Rainwater Catchment System—Installation of a rain barrel next to your home allows to collect rainwater; conserving it for future use in your yard and garden.

Rain Garden— A shallow depression constructed in your yard, which uses special soil mix and variety of plants. These gardens are designed to hold moisture.

Norwood
MASSACHUSETTS
02062

Fall and Winter Commercial and Residential Pollution Prevention Information

Residential Solutions

Pet waste, which contains harmful bacteria and excess nutrients, must be disposed of properly by picking it up with a bag and putting it into the trash can.

Recycle or properly dispose of household products that contain chemicals such as insecticides, pesticides, paint, solvents, and used motor oil and other auto fluids. Do not pour them onto the ground or into storm drains.

Reduce / Reuse / Recycle

- Use "green" products to eliminate toxic chemicals, while increasing energy efficiency.
- One company's waste may be another's raw material.
- Compost food scraps, such as egg shells, fruits, vegetables, tea and coffee grinds.

Fall Clean-up

Fallen leaves are loaded with natural fertilizer, which can cause water pollution that harms people and animal.

- Never dump leaves in wetlands or waterways.
- Keep pavement and storm drains clear of leaves.
- Landscapers should properly dispose of waste.
- Bag leaves in paper bags for disposal.
- Or compost your yard waste.

Commercial Pollution Prevention Solutions

Restaurant

- Properly maintain any grease traps in your establishment, in accordance with Norwood regulations.
- Do not dispose of cooking oil and grease into sinks, floor drains, catch basins, or onto the ground.
- Wash garbage cans, floor mats, and the kitchen equipment in designated wash areas that drain to the sewer system.
- Provide trash receptacles in highly visible locations .
- Sweep outdoor areas daily for trash and litter control.
- Keep the area surrounding a dumpster clean and the lid closed.

Storm Water Pollution Prevention Plan (S.W.P.P.P.)

S.W.P.P.P. is a plan created by contractors to show their plans for sediment and erosion control. Typically these plans are part of an overall design that details procedures to be followed during various phases of construction.

The Road Salt Problem

Improperly stored or excessive use of road salt can pollute public and private drinking water supplies.

Salt Storage Best Management

- Store salt on a flat site with adequate space.
- Store on a pad (impervious / paved surface).
- Storage must have a roof and runoff containment system.

Safer Salt Practices

- Coarse sand is a cheap more eco-friendly alternative to de-icing.
- A liquid salt brine spreads more evenly, immediately starts working, and is safer for the environment.
- Excess salt will not be effective in de-icing and wash into storm water drains.
- Do not spread salt in rainy weather.

Check out

WWW.MASS.GOV/GUIDES/GUIDELINES-ON-ROAD-SALT-STORAGE

To learn more about commercial salt storage.