

MS4 General Permit
Town of Branford 2022 Annual Report
Permit Number GSM 000068
January 1, 2022 – December 31, 2022
Primary MS4 Contact: John M. Hoefflerle, PE – Town Engineer
203-315-0606 engineering@branford-ct.gov

This report documents the Town of Branford’s efforts to comply with the conditions of the MS4 General Permit to the maximum extent practicable (MEP) from January 1, 2022 to December 31, 2022.

I.1 INTRODUCTION

The Annual Report describes the status of compliance with the 2017 CTDEEP General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4s). The Town has the Permit Number GSM 000068. The report includes an assessment of the identified best management practices (BMPs) in the Stormwater Management Plan (SWMP) and the progress towards achieving the implementation dates and measureable goals for each of the Minimum Control Measures. The report also includes stormwater monitoring data results for samples collected in 2022.

The six minimum control measures included:

1. Public Education and Outreach
2. Public Involvement / Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Stormwater Runoff Control
5. Post-Construction Stormwater Management
6. Pollution Prevention / Good Housekeeping

This report documents the Town’s efforts to comply with the 2017 General Permit to the maximum extent practicable (MEP) for the period between January 1, 2022 to December 31, 2022 with updates on tasks to be completed in fiscal year 2022 ending in June 2022.

I.2 TOWN INFORMATION

The Town of Branford covers an area of approximately 28.0 square miles and is home to approximately 28,026 residents according to the 2010 Census. Approximately 20 square miles of the Town is classified as Urbanized Area (UA) according to the 2010 Census. Approximately 6.0 square miles of the Town is comprised of waterbodies and watercourses. An outfall map that included urbanized area is included in Appendix A.

Sub regional drainage basins and major watercourses include Branford River, Farm River and South Central Shoreline. Additionally, there are several significant lakes and ponds within the town including the Branford Supply Ponds and Linsley Pond.

The Town of Branford has Representative Town Meeting form of government, which is led by the First Selectman. The Department of Public Works is responsible for roads and parking lots. The General Government Buildings is responsible for buildings. Parks and Recreation is responsible for parks. The Board of Education is responsible for their facilities. Several commissions within the Town have jurisdiction over development and include the following:

- Inland Wetlands and Natural Resources Department
- Planning & Zoning Department

I.3 STORMWATER MONITORING

The 2017 General Permit requires towns to conduct wet weather screening of outfalls that discharge to impaired waters, beginning July 1, 2018. At least fifty percent (50%) of these outfalls shall be screened by July 1, 2020, and one hundred percent (100%) of the outfalls shall be screened by July 1, 2022. Outfalls will require follow-up investigation if the results are greater than the parameters listed in the General Permit.

The Town sampled six outfalls that discharge to impaired waters in 2022. See Part II Monitoring Results for more information.

1.4 ANNUAL REPORT DEVELOPMENT TEAM

As part of the development of the Annual Report, a project team as established with representatives of the Town and the Town’s consultant assigned to sampling, Weston & Sampson. A list of the project team is provided below.

Name	Organization & Title
James B. Cosgrove	Town of Branford, First Selectman
John Hoefflerle, P.E.	Town of Branford, Town Engineer
Jennifer Acquino	Town of Branford, Assitant Town Engineer
Kevin Ortiz, E.I.T	Town of Branford, Civil Design Engineer
Gary Zielinski	Town of Branford, Interim Public Work Director
Harry Smith	Town of Branford, Town Planner
Jaymie Frederick	Town of Branford, Director of Inland Wetlands
Tyler Bowne	Sustainability and Compliance Manager
Raju Vasamsetti, P.E.	Weston & Sampson, Project Manager
Kori Mullen	Weston & Sampson, Project Engineer

Part I: Summary of Minimum Control Measure Activities

1. Public Education and Outreach

Under the General Permit Section 6(a)(1), the Town is required to “implement a public education program to distribute educational materials to the permittee’s community or conduct equivalent outreach activities about the sources and impacts of stormwater discharges on waterbodies and the steps that the public can take to reduce pollutants in stormwater runoff.” The following BMPs were selected by the Town to address the Public Education and Outreach minimum control measure of the General Permit (Section 6(a)(1)/page 19):

1.1 BMP Summary

BMP	Activities in current reporting period	Status	Method of Distribution	Audience (and number of people reached)	Measurable Goal	Department / Person Responsible	Additional details
1-1 Implement public education and outreach	<ul style="list-style-type: none"> •Continue to display handouts in Town Hall. •Display and distribute stormwater info at annual Branford Festival and Arbor Day. •The SWMP and links to stormwater websites/fact sheets are posted on the Town website. •Pet waste flier handed out with dog licenses. 	Complete	Information available through Brochure/Fact Sheets at Town Hall and Website.	General Public (approx. 400)	Information available through Brochure/Fact Sheets at Town Hall and Website.	Sustainability and Compliance Manager, Town Engineer	The Town will continue to display brochures/fact sheets at the Town Hall and at the annual Branford Festival.
1-2 Address education/ outreach for pollutants of concern	Ongoing education and outreach targeting pollutants of concern.	Complete	Information available through Brochure/Fact Sheets at Town Hall and Website.	General Public (approx. 400)	Provide residents with educational events and information about water quality and stormwater pollutants.	Solid Waste Manager, Town Engineer	
1-3 Septic System Maintenance	The Town runs a low cost pump out service for non-sewered areas of town and also provides information to the health district if inspections of systems show problems. Regional solar powered pump out boat services by ESDHD.	Complete	Information available through Brochure/Fact Sheets at Town Hall and Website.	General Public (approx. 400)	Pump septic tanks as needed.	East Shore District Health Department	The pump out program is ongoing. The health department is working on a system to track all septic system pump outs including private vendors.

1.2 Describe any Public Education and Outreach activities planned for the next year, if applicable.

The Town will continue to display brochures/fact sheets at the Town Hall and at the annual Branford Festival.

The links to stormwater information online will be updated as new materials becomes available.

The information in the printed and online fact sheets will be updated when new information becomes available.

Dog waste receptacles are located in public parks. Possible partnership with condo associations to provide dog waste receptacles and 1-year supply of bags to reduce roadside polluting.

The Town will update brochures/fact sheets in 2023 with new material.

Outreach to educate the public on the effects of bacteria in waterways through Annual Litter Day/Earth Day Event hosted by the Branford Land Trust and Branford River Project.

Annual mandatory dog licenses are sent with pet waste brochures.

2. Public Involvement/Participation

Under the General Permit Section 6(a)(2), the Town is required to “provide opportunities to engage their community to participate in the review and implementation of the permittee’s Plan.” Public participation benefits the program by increasing public support, including additional expertise and involving community groups/organizations. The following BMPs were selected by the Town to address the Public Involvement / Participation minimum control measure of the General Permit (Section 6(a)(2)/page 21):

2.1 BMP Summary

BMP	Status (Complete, Ongoing, In Progress, or Not started)	Activities in current reporting period	Measurable Goal	Department / Person Responsible	Date completed or projected completion date (include the start date for anything that is ‘in progress’)	Location Posted	Additional details
2-1 Final Stormwater Management Plan publicly available	Complete	Posted Stormwater Management Report online.	Post Stormwater Management Report online.	Town Engineer	Ongoing	Stormwater Management Plan	
2-2 Comply with public notice requirements for Annual Reports (annually by 2/15)	Ongoing	Post Annual Report online.	Post Annual Report online.	Town Engineer	Report will be posted 2/15/2023	Annual Reports	
2-3 Brochures/factsheets at Town Hall.	Complete	Updated brochures/factsheets. Continue to display in Town Hall.	Place Brochure/ Fact Sheets at Town Hall.	Town Engineer Inland Wetlands	Ongoing Beginning 7/1/2018	Brochures and Factsheets	Town will update brochures in 2023

2.2 Describe any Public Involvement/Participation activities planned for the next year, if applicable.

Brochures/ Factsheets will remain posted at the Town Hall.
 Brochures/ Factsheets will be updated with new material in 2023.
 Next year’s annual report will continue to be posted online.
 Town holds quarterly Stormwater stakeholder meetings to review SMP implementation progress.

3. Illicit Discharge Detection and Elimination

Under the General Permit Section 6(a)(3), the Town is required to develop a written Illicit Discharge Detection and Elimination (IDDE) program. The IDDE program is designed to “provide the legal authority to prohibit and eliminate illicit discharges to the MS4; find the source of any illicit discharges; eliminate those illicit discharges; and ensure ongoing screening and tracking to prevent and/or eliminate future illicit discharges.”

The following BMPs were selected by the Town to address the Illicit Discharge Detection and Elimination minimum control measure of the General Permit (Section 6(a)(3) and Appendix B/page 22):

3.1 BMP Summary

BMP	Status (Complete, Ongoing, In Progress, or Not started)	Activities in current reporting period	Measurable Goal	Department / Person Responsible	Date completed or projected completion date (include the start date for anything that is 'in progress')	Additional details
3-1 Develop written IDDE program	Complete	The Town developed an IDDE program based on the IDDE program template from UCONN's CT NEMO. The IDDE program was completed in 2019. The report is complete except for the ordinance that is still under review.	Develop written plan of IDDE program.	Town Engineer, Inland Wetlands, DPW	Completed 4/25/2019	
3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas	Completed	Mapping forms setup to add unmapped outfalls.	Map and list all outfalls, collect attributes on newly discovered outfalls.	Town Engineer DPW	Completed 7/1/2019	In the Spring of 2019, dry weather screening of outfalls in priority areas was conducted. New outfalls were not found.
3-3 Implement citizen reporting program	Complete	The Town receives complaints via online reporting to DPW. Calls are logged into this system.	Post point of contact phone number and Contact Us Form listed on the Town website.	Town Engineer DPW	Completed 7/1/2017	"Report an Issue" on Town Homepage
3-4 Establish legal authority to prohibit illicit discharges (Due 7/1/19)	In Progress	The Town wrote a Town Ordinance regarding non-stormwater discharges based on the template produced by UCONN's CT NEMO Program.	Write and implement a Town Ordinance.	Town Engineer DPW	Projected 7/1/2023	
3-5 Develop record keeping system for IDDE tracking	Complete	The Town receives complaints via online reporting to DPW and Fire Department. Calls are logged into this system.	Document IDDE findings in Annual Reports.	Town Engineer DPW	Completed 7/1/2018	

3-6 Address IDDE in areas with pollutants of concern	Ongoing/ In progress	IDDE program prioritizes areas with pollutants of concern. Work with East Shore District Health Department (ESDHD) to assess septic areas.	IDDE program will address priority areas with high levels of Bacteria.	Town Engineer ESDHD	Ongoing	The Town of Branford provides low-cost septic pump out program.
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3.2 Describe any IDDE activities planned for the next year, if applicable.

The IDDE program was finalized in 2019 except for the ordinance, which is still under review. The writtern IDDE program will be updated as needed throughout the permit term. Updates will be included in the Annual Report.
 IDDE program powerpoint presentation will be developed for annual training to key personnel in 2023.
 Maintain master IDDE tracking spreadsheet and ensure all employees involved in IDDE program understand the logging process.
 The Town continues to collaborate with East Shore District Health Department to identify sewerred areas within the Short Beach neighborhood.
 East Shore District Health Department is developing a septic pump-out program for the islands surrounding the Town.

3.3 Provide a record of all citizen reports of suspected illicit discharges and other illicit discharges occurring during the reporting period and SSOs occurring July 2017 through end of reporting period using the following table. Illicit discharges are any unpermitted discharge to waters of the state that do not consist entirely of stormwater or uncontaminated groundwater except those discharges identified in Section 3(a)(2) of the MS4 general permit when such non-stormwater discharges are not significant contributors of pollution to a discharge from an identified MS4.

Location (Lat long/ street crossing /address and receiving water)	Date and duration of occurrence	Discharge to MS4 or surface water	Estimated volume discharged	Known or suspected cause / Responsible party	Corrective measures planned and completed (include dates)	Sampling data (if applicable)
44 Maltby Street	9/5/2020	No	51-100 gallons	Mechanical equipment failure	Pumped	N/A
75 Block Island Rd	10/28/2020	No	501-1000 gallons	Approved bypass	Pumped	N/A
102 Jerimoth Rd	12/13/2020	No	No overflow	Mechanical equipment failure	Pumped	N/A
81 Mountain Top Lane	9/18/2020	No	No overflow	Leaching out to lawn	Pumped	N/A
Seventh Avenue @ Seaview Avenue	10/16/2020	No	No overflow	Fluid spill from privately owned truck.	Placed oil absorbent sock and speedy dry.	N/A

Lanphier Road	12/7/2020	No	No overflow	Auto repair facility allowing oil to flow to catch basin.	Fire Chief/Marshal, DEEP, ZEO notified.	N/A
5 Heritage Hill Road	12/28/2022	No	No overflow	Illicit discharge from property	ZEO notified	N/A

3.4 Provide a summary of actions taken to address septic failures using the table below.

Method used to track illicit discharge reports	Location and nature of structure with failing septic systems	Actions taken to respond to and address the failures	Impacted waterbody or watershed, if known	Dept. / Person responsible
ESDHD receives illicit discharge reports	Location: 21 Garden Street Issue: Tank Flooded	ESDHD notified homeowner	Inner Branford Harbor	Health Department
ESDHD receives illicit discharge reports	Location: 225 Stony Creek Road Issue: Tank Leaking	ESDHD notified homeowner	Stony Creek (West)	Health Department
ESDHD receives illicit discharge reports	Location: 17 Woodlawn Avenue Issue: Tank Cracked	ESDHD notified homeowner	N/A	Health Department

3.5 Briefly describe the method and effectiveness of said method used to track illicit discharge reports.

The DPW is responsible for tracking and responding to illicit discharge reports. The ESDHD is responsible for tracking septic records for the Town. The Town Engineering Department is responsible for tracking sanitary sewer records.

3.6 IDDE reporting metrics

Metrics	
Estimated or actual number of MS4 outfalls	252
Estimated or actual number of interconnections	Unknown
Outfall mapping complete	100%
Interconnection mapping complete	0% Ongoing- Mapping will be updated as information comes in.
System-wide mapping complete (detailed MS4 infrastructure)	85%

Outfall assessment and priority ranking	0%
Dry weather screening of all High and Low priority outfalls complete	100%
Catchment investigations complete	100% Outfalls with reported issues have been investigated
Estimated percentage of MS4 catchment area investigated	100%

3.7 Briefly describe the IDDE training for employees involved in carrying out IDDE tasks including what type of training is provided and how often it is given (minimum once per year).

The Town has developed a powerpoint presentation that will train key employees on identifying and reporting illicit discharges, latest permit update, tasks completed and best management practices. The training will be conducted by the Town’s Engineering Department at least once per year.

4. Construction Site Runoff Control

The Town shall “implement and enforce a program to control stormwater discharges (to its MS4) associated with land disturbance or development (including re-development) activities from sites with one acre or more of soil disturbance, whether considered individually or collectively as part of a larger plan.” The program will be consistent with “the 2002 Guidelines for Soil Erosion and Sedimentation Control, as amended, the Connecticut Stormwater Quality Manual, and stormwater discharge permits issued by DEEP within the municipal or institutional boundary pursuant to CGS 22a-430 and 22a-430b.” The permittee will conduct site plan reviews, site inspections, and include procedures for public involvement. The Town has local regulations (shown in Table 4.1) that require construction runoff control measures.

Table 4.1 Stormwater Regulations				
Regulations	Date	Erosion & Sediment Controls	Site Plan Review	Site Inspection and Enforcement
Zoning Regulations	2015	Section 6.10 Soil Erosion and Sediment Control	Section 9.5.E Formal Review	Section 6.10 Implementation Section 10.2 Enforcement
Subdivision Regulations	2013	Section 3.06 Erosion and Sedimentation Control	Section 5 Application Procedures	Section 5.01C Application Procedures Authorization
Inland Wetlands and Watercourse Regulations	2023	Section 7.6 Application Requirements	Section 7.8 Application Requirements	Section 14 Enforcement

The following BMPs were selected by the Town to address the Construction Site Stormwater Runoff Control minimum control measure of the General Permit (Section 6(a)(4)/page 25):

4.1 BMP Summary

BMP	Status (Complete, Ongoing, In Progress, or Not started)	Activities in current reporting period	Measurable Goal	Department / Person Responsible	Date completed or projected completion date (include the start date for anything that is ‘in progress’)	Additional details
4-1 Implement, upgrade, and enforce land use regulations or other legal authority to meet requirements of MS4 general permit	Complete	Reviewed current town land use regulations to verify reference to specific documents for design of sedimentation and erosion control BMPs.	Upgrade and enforce land use regulations.	Town Planner, Inland Wetlands Enforcement Officer (IWEO), Zoning Enforcement Officer (ZEO)	Completed 7/1/2019	See regulations listed in Table 4.1
4-2 Develop/Implement plan for interdepartmental coordination in site plan review and approval	Complete	Multidepartmental site plan review meetings occur monthly.	Continue site plan review with peers.	Town Planner	Ongoing	See regulations listed in Table 4.1

4-3 Review site plans for stormwater quality concerns (Ongoing)	Complete	Conducted site plan reviews.	Continue site plan review according to regulations.	Town Planner IWEO	Ongoing	See regulations listed in Table 4.1
4-4 Conduct site inspections (Ongoing)	Complete	Zoning Enforcement Officer (ZEO) and Inland Wetlands Enforcement Officer (IWEO) conduct regular site inspections.	ZEO and IWEO conduct site inspections.	ZEO and IWEO	Ongoing	See regulations listed in Table 4.1
4-5 Implement procedure to allow public comment on site development (Ongoing)	Complete	The Town utilizes their government structure for processing information submitted by the public for receipt and consideration. Special Excepetions have public hearing requirements.	Public comments are forwarded to the appropriate Department.	ZEO, IWEO and DPW	Ongoing	
4-6 Implement procedure to notify developers about DEEP construction stormwater permit (Ongoing)	Complete	Continue notifying construction site developers and operators of requirements for registration.	Communicate to developers about DEEP construction stormwater permit through permitting process.	Town Planner	Ongoing	Stormwater Pollution Control Plans (SPCP) as required by CTDEEP.

4.2 Describe any Construction Site Runoff Control activities planned for the next year, if applicable.

The Zoning Commission and Town Engineer will continue to review site plans in accordance with the various town regulations. Interdepartmental coordination will be continued.

The ZEO and IWEO will continue to conduct site inspections.

The Town Departments will continue to communicate to developers about DEEP construction stormwater permit through permitting process. Develop handout for procedures for permitting requirements.

Handout for DEEP permitting requirements has been developed and will be included in IW and PZ permits and/or applications.

5. Post-construction Stormwater Management

The Town shall require developers to “consider the use of low impact development (LID) and runoff reduction site planning and development practices prior to the consideration of other practices in the permittee’s land use regulations, guidance or construction project requirements to meet or exceed those LID and runoff reduction practices identified in the Stormwater Quality Manual.”

The Town currently has the following procedures for the enforcement of the stormwater regulations:

Zoning Regulations

February 1, 2015

Section 6.9 Drainage and Stormwater Control

Subdivision Regulations

February 1, 2013

Section 4.06 Storm Drainage

Inland Wetland and Watercourse Regulations

January 10, 2023

Section 14 Enforcement

The following BMPs were selected by the town to address the Post-Construction Stormwater Management minimum control measure of the General Permit (Section 6(a)(5)/page 27):

5.1 BMP Summary

BMP	Status (Complete, Ongoing, In Progress, or Not started)	Activities in current reporting period	Measurable Goal	Department / Person Responsible	Date completed or projected completion date (include the start date for anything that is 'in progress')	Additional details
5-1 Establish and/or update legal authority and guidelines regarding LID and runoff reduction in site development planning	In Progress	Continue procedures for addressing post-construction BMPs including projects with 1 to 5 acres in disturbance.	Update regulations	Town Planner, IWEO	Projected 7/1/2023	Update Subdivision Regulations, Zoning Regulations, and Inland Wetlands and Watercourse Regulations to include LID.

5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects	In Progress	Enforce LID/ runoff reduction regulations through site plan review.	Development and redevelopment projects will include LID/ runoff reduction measures.	Town Planner, IWEO	Projected 7/1/2023	
5-3 Identify retention and detention ponds in priority areas	Complete	Identify retention and detention ponds in priority areas.	Identify retention and detention ponds in priority areas.	Planning & Zoning, IWEO, ZEO and DPW	Completed 1/1/2021	
5-4 Implement long-term maintenance plan for stormwater basins and treatment structures	Complete	Implementing long-term maintenance of stormwater basins and treatment structures through scheduled maintenance.	Inspect and maintain basins and structures in accordance with long-term plan.	Planning & Zoning, IWEO, ZEO and DPW	Completed 7/1/2021	Only ponds owned by the Town are maintained by the DPW
5-5 DCIA mapping	Complete	A Baseline DCIA map was developed. The map will be used to develop Retrofit Program.	Update DCIA mapping.	Town Engineer	Completed 7/1/2019	
5-6 Address post-construction issues in areas with pollutants of concern	Ongoing	Inspect areas with pollutants of concern.	Enforce construction BMPs.	ZEO, IWEO DPW	Ongoing	

5.2 Describe any Post-Construction Stormwater Management activities planned for the next year, if applicable.

Development and redevelopment projects will include LID/ runoff reduction measures. Inland Wetlands, Planning & Zoning, Engineering Dept. and Public Works Dept. to identify priority areas and develop maintenance program. The DPW or property owners will maintain highest priority retention ponds.

5.3 Post-Construction Stormwater Management reporting metrics

For details on this requirement, visit <https://nemo.uconn.edu/ms4/tasks/post-construction.htm>. Scroll down to the DCIA section.

Metrics	
Baseline (2012) Directly Connected Impervious Area (DCIA)	625.32 acres
DCIA disconnected (redevelopment plus retrofits)	12.35 acres (ongoing)
Retrofit projects completed	9
DCIA disconnected (2022)	8.5 acres
Estimated cost of retrofits	Unknown
Detention or retention ponds identified	9

5.4 Briefly describe the method to be used to determine baseline DCIA.

The Town utilized method 2 as developed by CT NEMO: Method 2 involves using the equations on UConn NEMO's website to estimate DCIA based on the development density in each basin.

6. Pollution Prevention/Good Housekeeping

Under the General Permit Section 6(a)(6), the Town shall “implement an operations and maintenance program for permittee-owned or-operated MS4s that has a goal of preventing or reducing pollutant runoff and protecting water quality from all permittee-owned or- operated MS4s.” The following BMPs were selected by the town to address the Pollution Prevention/ Good Housekeeping minimum control measure of the General Permit (Section 6(a)(6)/ page 31):

6.1 BMP Summary

BMP	Status (Complete, Ongoing, In Progress, or Not started)	Activities in current reporting period	Measurable Goal	Department / Person Responsible	Date completed or projected completion date (include the start date for anything that is ‘in progress’)	Additional details
6-1 Develop/implement formal employee training program	Complete	Powerpoint Presentation developed for training conducted by the Town’s Engineering Department.	Implement annual training meetings.	Town Engineer	Ongoing	Training will be conducted in 2023.
6-2 Implement MS4 property and operations maintenance	Ongoing	Review current operation and maintenance procedures. Town parks have optimal fertilizer application, pet waste programs and scheduled trash collection. DPW has procedures for vehicle maintenance.	Update and implement MS4 operation and maintenance procedures.	Parks and Rec DPW	Ongoing	Employees are trained in spill response and kits are available where products are stored. Plastic bags are provided at parks for pet waste.
6-3 Implement coordination with interconnected MS4s	In Progress	Meet with operators of interconnected MS4s. Coordinate operations and maintenance procedures.	Coordinate with interconnected MS4s.	Town Engineer DPW	Projected 7/1/2024	The Town is awaiting information from DOT.
6-4 Develop/implement program to control other sources of pollutants to the MS4	In Progress	Develop program to control other sources of pollutants. This has not been started yet.	Develop and implement program to control other sources of pollutants.	Town Engineer DPW	Projected 7/1/2024	
6-5 Evaluate additional measures for discharges to impaired waters*	Ongoing	Conduct preventative maintenance and fund retrofits to reduce pollutants to impaired water bodies.	Evaluate additional measures for discharges to impaired waters.	Town Engineer DPW	Ongoing	The Town considers pavement reduction in their pavement and parking lot management programs.

6-6 Track projects that disconnect DCIA	Ongoing	Research past projects for DCIA disconnections. Track projects that disconnect DCIA.	Report projects that disconnect DCIA in annual reports.	Planning & Zoning, Inland Wetlands, Town Engineer	Ongoing	
6-7 Implement infrastructure repair/rehab program	Ongoing	Program for repairing and rehabilitating the MS4 infrastructure in a timely manner is ongoing.	Implement infrastructure repair/ rehab program	DPW	Ongoing	Structures are repaired or replaced during roadway rehab or on an as-needed basis.
6-8 Develop/implement plan to identify/prioritize retrofit projects	Complete	Develop plan to identify/ prioritize retrofit projects is complete.	Report of identified/ prioritized retrofit projects.	Town Engineer DPW	Completed 7/1/2022	Town projects consider retrofits/BMPs; recent collaboration with UCONN Stormwater Corps identified retrofit opportunities.
6-9 Implement retrofit projects to disconnect 2% of DCIA (Due 7/1/22)	Complete	Track projects that disconnect DCIA, and include in annual report has not been started.	Implement retrofit projects.	Town Engineer DPW	Completed 7/1/2022	The Town has disconnected 2% of DCIA and will continue to identify project where appropriate and funding is available.
6-10 Develop/implement street sweeping program	Complete/ Ongoing	Street sweeping included over 42 miles of streets municipal parking lots.	Street sweeps are conducted annually.	DPW	Ongoing	
6-11 Develop/implement catch basin cleaning program	Complete/ Ongoing	Continue Catch Basin Maintenance Program.	Catch basins are cleaned in accordance with the Program.	DPW	Ongoing	Catch Basins are cleaned annually.
6-12 Develop/implement snow management practices	Complete	Developed and implemented standard operating practices (SOP) for snow management policy.	Implement standard snow management SOP policy	DPW	Completed 7/1/2019	Created Snow Removal and De-Icing Program on 11/14/2018.

6.2 Describe any Pollution Prevention/Good Housekeeping activities planned for the next year, if applicable.

Continue to conduct Street Sweeping Program, Catch Basin Cleaning Program and standard operating practices for snow management.

Continue to develop list of projects and funding opportunities to reduce DCIA.

Continue to use retrofit plan to identify potential DCIA disconnection projects.

Continue following operation and maintenance procedures.

6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics	
Employee training provided for key staff	Yes
Street sweeping	
Curb miles swept	45.14 miles
Volume (or mass) of material collected	281,500 lbs
Catch basin cleaning	
Total catch basins in priority areas (value will be less than or equal to total catch basins town or institution-wide)	Unknown
Total catch basins town- (or institution-) wide	3,000
Catch basins inspected	131
Catch basins cleaned	1,348
Volume (or mass) of material removed from all catch basins	76,509 lbs
Volume removed from catch basins to impaired waters (if known)	Unknown
Snow management	
Type(s) of deicing material used	Coarse sand, Coarse salt, and Treated salt
Total amount of each deicing material applied	885.5 tons straight salt
Type(s) of deicing equipment used	Dump Truck – 4 season body, Salt Spreaders, Plows
Lane-miles treated (A lane-mile is a mile of roadway in a single driving lane)	3,440 miles
Snow disposal location	N/A
Staff training provided on application methods & equipment	11/2021
Municipal turf management program actions (for permittee properties in basins with N/P impairments)	
Reduction in application of fertilizers (since start of permit)	Unknown
Reduction in turf area (since start of permit)	Unknown
Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)	Undetermined
Cost of mitigation actions/retrofits	N/A

6.4 Catch basin cleaning program

Provide any updates or modifications to your catch basin cleaning program.

This will consist of inspecting and of cleaning catch basins on a regularly scheduled basis. The Town will use the following criteria for inspecting and cleaning their catch basins:

- The Town, at minimum, will annually evaluate, and if necessary, clean catch basins and other stormwater structures that accumulate sediment. Typically, one quarter of the catch basins in Town are cleaned each year to prevent having to clean subsurface storm sewer pipe segments between structures. The Town staggers the catch basin cleaning, so that all the catch basins are cleaned every four years.
- Priority areas will be established to maximize the effectiveness of the Town's available resources for the routing inspections. These priority areas will be developed using the town's knowledge of problem areas, where sediment/debris has been known to accumulate in higher quantities. Geographical location, climate, traffic patterns and vertical sag locations may also be factors in determining priority areas.

The Town will evaluate roads in the immediate vicinity of watercourse and waterbodies, and the Town will implement additional catch basins cleanings as needed.

6.5 Retrofit program

Briefly describe the Retrofit Program identification and prioritization process, the projects selected for implementation, the rationale for the selection of those projects and the total DCIA to be disconnected upon completion of each project. (Due 7/1/20)

The Retrofit Plan has been finalized. The plan focuses on low impact development projects that can be implemented in different types of areas: low to medium density residential, high density industrial, commercial and residential, and roadways. Potential projects on Town owned land will be prioritized over commercial and residential projects because the Town has the power to make changes to their own property. Transfer Station is prioritized for retrofit projects to reduce nutrient loads. Vets Park has been identified as a potential disconnection that will implement porous pavement sections to treat parking lot runoff. The total DCIA to be disconnected upon completion of each project is included in this report.

Describe plans for continuing the Retrofit program and how to achieve a goal of 1% DCIA disconnection annually in future years. (Due 7/1/22)

The program will continue to identify and prioritize projects to achieve a goal of 1% DCIA disconnection in future years.

Part II: Impaired waters investigation and monitoring

1. Impaired waters investigation and monitoring program

For details on this requirement, visit <https://nemo.uconn.edu/ms4/tasks/monitoring.htm>. Refer to the yellow column of the Monitoring comparison chart and the Impaired waters monitoring flowchart.

1.1 Indicate which stormwater pollutant(s) of concern occur(s) in your municipality or institution. This data is available on the MS4 map viewer: <http://s.uconn.edu/ctms4map>.

Nitrogen/ Phosphorus

Bacteria

Mercury

Other Pollutant of Concern

1.2 Describe program status

Discuss 1) the status of monitoring work completed, 2) a summary of the results and any notable findings, and 3) any changes to the Stormwater Management Plan based on monitoring results.

MS4s that discharge to impaired streams shall be monitored. Screening of outfalls that discharge to impaired waters shall begin in 2022. The Town plans to sample 6 outfalls in 2022. The outfalls were monitored during this period.

According to the 2016 Intergrated Water Quality Report, there are two impaired ponds and four impaired estuaries. Linsley Pond has a total maxium daily load (TMDL) for Phosphorus. The Branford Supply Pond does not have a TMDL. Stormwater outfalls do not discharge to the ponds; therefore, stormwater monitoring is not required for the impaired ponds.

The four estuaries listed in Table 7.1 below have TMDLs for Bacteria. The impairments to these estuaries are described in “Estuary 8: Branford/East Haven” Report. The outfalls directly discharging to these estuaries will be monitored.

The Town of Branford began screening the outfalls that discharge to impaired waters in 2022. The outfalls that discharge directly to the impaired estuaries will be screened starting with the Inner Branford Harbor. See Figure 2 in Appendix A for a map of the outfall locations screened as per the schedule below. The Intergrated Water Quality Report is published every two years. The monitoring schedule will be updated if impaired waters change.

Wet and dry weather sampling is complete and attached to this report.

Table 7.1 Impaired Waters			
Waterbody	Waterbody ID	Impaired Designated Use	Pollutant of Concern
Linsley Pond	CT5111-09-1-L2_01	Habitat for Fish, Other Aquatic Life and Wildlife, Recreation	Nitrogen and Phosphorus
Branford Supply Pond	CT5111-09-2-L3_01	Habitat for Fish, Other Aquatic Life and Wildlife	Other Pollutant of Concern (Monitor Turbidity)
Inner Branford Harbor	CT-C1_009-SB	Shellfish Harvest	Bacteria
Stony Creek (East)	CT-C2_011	Shellfish Harvest	Bacteria
Stony Creek (West)	CT-C2_012	Shellfish Harvest	Bacteria
Indian Neck	CT-C2_013	Shellfish Harvest	Bacteria

Target Date	Measureable Goal/ Activity
Completed 6/13/2019	Screening Outfalls: 140, 141, 143, 15, 18, 14, 17 & 169
April 1, 2020	Screening Outfalls: 19, 21, 22, 29, 40, 46, 47 & 48 Follow up Investigation on outfalls with high pollutant concentrations.
July 1, 2020	Screening Outfalls: 49, 50, 51, 52, 126, 248 & 249 Follow up Investigation on outfalls with high pollutant concentrations.
July 1, 2021 July 1, 2022	Annually monitor the six priority outfalls.

2. Screening data for outfalls to impaired waterbodies (Section 6(i)(1) / page 41)

2.1 Screening data

Complete the table below to report data for any wet weather sampling completed for MS4 outfalls that discharge directly to a stormwater impaired waterbody during the reporting period. For details on this requirement, visit www.nemo.uconn.edu/ms4/tasks/monitoring.htm. Refer to the yellow column of the Monitoring comparison chart and the Impaired waters monitoring flowchart.

Each Annual Report will add on to the previous year’s data showing a cumulative list of sampling data. **You may also attach an excel spreadsheet with the same data rather than copying it into this table.** If you do attach a spreadsheet, please write “See Attachment” below.

Outfall ID	Latitude / Longitude	Sample date	Parameter (Nitrogen, Phosphorus, Bacteria, or Other pollutant of concern)	Results	Name of Laboratory (if used)	Follow-up required? *
				See Attachment		

Follow-up investigation required (last column) if the following pollutant thresholds are exceeded:

Pollutant of concern	Pollutant threshold
Nitrogen	Total N > 2.5 mg/l
Phosphorus	Total P > 0.3 mg/l
Bacteria (fresh waterbody)	• E. coli > 235 col/100ml for swimming areas or 410 col/100ml for all others

	<ul style="list-style-type: none"> Total Coliform > 500 col/100ml
Bacteria (salt waterbody)	<ul style="list-style-type: none"> Fecal Coliform > 31 col/100ml for Class SA and > 260 col/100ml for Class SB Enterococci > 104 col/100ml for swimming areas or 500 col/100 for all others
Other pollutants of concern	Sample turbidity is 5 NTU > in-stream sample

The six outfalls sampled in 2020 had concentrations of Enterococci and Fecal Coliform greater than the allowable limits stated in the 2007 General Permit and shown in Table 7.4. Follow-up investigations will be conducted on the watersheds contributing to these outfalls.

Table 7.4 Stormwater Monitoring Requirements	
Pollutant of concern	Pollutant threshold
Nitrogen	Total N > 2.5 mg/l
Phosphorus	Total P > 0.3 mg/l
Bacteria (fresh waterbody)	E. coli > 235 col/100ml for swimming areas or 410 col/100ml for all others Total Coliform > 500 col/100ml
Bacteria (salt waterbody)	<ul style="list-style-type: none"> Fecal Coliform > 31 col/100ml for Class SA and > 260 col/100ml for Class SB Enterococci > 104 col/100ml for swimming areas or 500 col/100 for all others
Other pollutants of concern	Sample turbidity is 5 NTU > in-stream sample

3. Follow-up investigations (Section 6(i)(1)(D) / page 43)

Provide the following information for outfalls exceeding the pollutant threshold.

Outfall ID	Status of drainage area investigation	Control measure to address impairment
DRN 014	The Town conducted investigate for any potential industrial uses affecting this outfall. Further sampling will be conducted. Field investigations will be conducted to identify any immediate issues.	Town will continue to monitor this outfall annually. Implement waste pickup measures to prevent suspended solids from human activity in a residential area.
DRN015	The Town conducted investigate for any potential industrial uses affecting this outfall. Further sampling will be conducted. Field investigations will be conducted to identify any immediate issues.	Town will continue to monitor this outfall annually. Implement waste pickup measures to prevent suspended solids from human activity in a residential area.
DRN047	The Town conducted investigate for any potential industrial uses affecting this outfall. Further sampling will be conducted. Field investigations will be conducted to identify any immediate issues.	Town will continue to monitor this outfall annually. Implement waste pickup measures to prevent suspended solids from human activity in a residential area.
DRN040	The Town conducted investigate for any potential industrial uses affecting this outfall. Further sampling will be conducted. Field investigations will be conducted to identify any immediate issues.	Town will continue to monitor this outfall annually. Implement waste pickup measures to prevent suspended solids from human activity in a residential area.
DRN018	The Town conducted investigate for any potential industrial uses affecting this outfall. Further sampling will be conducted. Field investigations will be conducted to identify any immediate issues.	Town will continue to monitor this outfall annually. Implement waste pickup measures to prevent suspended solids from human activity in a residential area.

DRN143	The Town conducted investigate for any potential industrial uses affecting this outfall. Further sampling will be conducted. Field investigations will be conducted to identify any immediate issues.	Town will continue to monitor this outfall annually. Further investigation will be conducted to verify if boat yard is polluting
--------	---	--

4. Prioritized outfall monitoring (Section 6(i)(1)(D) / page 43)

Once outfall sampling has been completed for at least 50% of outfalls to impaired waters, identify 6 of the highest contributors of any pollutants of concern. Begin monitoring these outfalls on an annual basis by July 1, 2021. **You may also attach an excel spreadsheet with the same data rather than copying it to this table.** If you do attach a spreadsheet, please write "See Attachment" below.

Outfall	Latitude / Longitude	Sample Date	Parameter(s)	Results	Name of Laboratory (if used)
				See Attachment	

Part III: Additional IDDE Program Data

1. Assessment and Priority Ranking of Catchments data (Appendix B (A)(7)(c) / page 5)

Provide a list of all catchments with ranking results (DEEP basins may be used instead of manual catchment delineations).

1. Catchment ID (DEEP Basin ID)	2. Category	3. Rank
N/A	N/A	N/A

2. Outfall and Interconnection Screening and Sampling data (Appendix B (A)(7)(d) / page 7)

2.1 Dry weather screening and sampling data from outfalls and interconnections

For details on this requirement, visit <https://nemo.uconn.edu/ms4/tasks/monitoring.htm>. Refer to the blue column of the Monitoring comparison chart and the IDDE baseline monitoring flowchart.

Provide sample data for outfalls where flow is observed. Only include Pollutant of concern data for outfalls that discharge into stormwater impaired waterbodies. **You may also attach an excel spreadsheet with the same data rather than copying it to this table.** If you do attach a spreadsheet, please write "See Attachment" below.

Outfall / Interconnection ID	Latitude / Longitude	Screening / sample date	Ammonia	Chlorine	Conductivity	Salinity	E. coli or enterococcus	Surfactants	Water Temp	Pollutant of concern	If required, follow-up actions taken
<i>In Progress</i>											

2.2 Wet weather sample and inspection data

For details on this requirement, visit <https://nemo.uconn.edu/ms4/tasks/monitoring.htm>. Refer to the green column of the Monitoring comparison chart and the IDDE catchment investigation flowchart.

Provide sample data for outfalls and key junction manholes of any catchment area with at least one System Vulnerability Factor. **You may also attach an excel spreadsheet with the same data rather than copying it to this table.** If you do attach a spreadsheet, please write “See Attachment” below.

Outfall / Interconnection ID	Latitude / Longitude	Sample date	Ammonia	Chlorine	Conductivity	Salinity	E. coli or Enterococcus	Surfactants	Water Temp	Pollutant of concern
<i>In Progress</i>										

1. Catchment Investigation data (Appendix B (A)(7)(e) / page 9)

For details on this requirement, visit www.nemo.uconn.edu/ms4/tasks/monitoring.htm. Refer to the green column of the Monitoring comparison chart and the IDDE catchment investigation flowchart.

3.1 System Vulnerability Factor Summary

For those catchments being investigated for illicit discharges (i.e. categorized as high priority, low priority, or problem) document the presence or absence of System Vulnerability Factors (SVF). If present, report which SVF’s were identified. An example is provided below.

Outfall ID	Receiving Water	System Vulnerability Factors
N/A	N/A	N/A

Where SVFs are:

1. History of SSOs, including, but not limited to, those resulting from wet weather, high water table, or fat/oil/grease blockages.
2. Sewer pump/lift stations, siphons, or known sanitary sewer restrictions where power/equipment failures or blockages could readily result in SSOs.
3. Inadequate sanitary sewer level of service (LOS) resulting in regular surcharging, customer back-ups, or frequent customer complaints.
4. Common or twin-invert manholes serving storm and sanitary sewer alignments.
5. Common trench construction serving both storm and sanitary sewer alignments.
6. Crossings of storm and sanitary sewer alignments.
7. Sanitary sewer alignments known or suspected to have been constructed with an underdrain system;
8. Sanitary sewer infrastructure defects such as leaking service laterals, cracked, broken, or offset sanitary infrastructure, directly piped connections between storm drain and sanitary sewer infrastructure, or other vulnerability factors identified through Inflow/Infiltration Analyses, Sanitary Sewer Evaluation Surveys, or other infrastructure investigations.
9. Areas formerly served by combined sewer systems.
10. Any sanitary sewer and storm drain infrastructure greater than 40 years old in medium and densely developed areas.
11. Widespread code-required septic system upgrades required at property transfers (indicative of inadequate soils, water table separation, or other physical constraints of the area rather than poor owner maintenance).
12. History of multiple local health department or sanitarian actions addressing widespread septic system failures (indicative of inadequate soils, water table separation, or other physical constraints of the area rather than poor owner maintenance).

3.2 Key junction manhole dry weather screening and sampling data

You may also attach an excel spreadsheet with the same data rather than copying it to this table. If you do attach a spreadsheet, please write “See Attachment” below.

Key Junction Manhole ID	Latitude / Longitude	Screening / Sample date	Visual/ olfactory evidence of illicit discharge	Ammonia	Chlorine	Surfactants
N/A	N/A	N/A	N/A	N/A	N/A	N/A

3.3 Wet weather investigation outfall sampling data

You may also attach an excel spreadsheet with the same data rather than copying it to this table. If you do attach a spreadsheet, please write “See Attachment” below.

Outfall ID	Latitude / Longitude	Sample date	Ammonia	Chlorine	Surfactants
N/A	N/A	N/A	N/A	N/A	N/A

3.4 Data for each illicit discharge source confirmed through the catchment investigation procedure

Discharge location	Source location	Discharge description	Method of discovery	Date of discovery	Date of elimination	Mitigation or enforcement action	Estimated volume of flow removed
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Part IV: Certification

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the Connecticut General Statutes, pursuant to Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute."

Chief Elected Official or Principal Executive Officer	Document Prepared by
Print name: James B. Cosgrove, First Selectman	Print name: John M. Hoefflerle, PE, CFM, Town Engineer
Signature / Date:	Signature / Date:
Email: jcosgrove@branford-ct.gov	Email: jhoefflerle@branford-ct.gov

MEMORANDUM

TO: Town of Branford
FROM: Weston & Sampson
DATE: January 9, 2023
SUBJECT: 2022 MS4 Wet Weather Results

Wet Weather Sampling

The Town of Branford contracted Weston & Sampson Engineers, Inc. to perform outfall screening and sampling required by the MS4 (Municipal Separate Storm Sewer System) Permit. On December 16, 2022, six outfalls discharging to impaired waters in Branford, CT were sampled. The six outfalls were selected based on previous years sampling results. The outfalls were sampled during a qualifying rain event. Analysis reports for the sampling date are attached

The six outfalls were sampled for Enterococci Bacteria and Fecal Coliforms because the pollutant of concern in the receiving waterbodies is bacteria. The samples from the six outfalls all contained levels of bacteria that were above the maximum allowable level (see Table 1); therefore, the six outfalls require follow-up investigation. Follow-up investigation includes reviewing drainage areas and identifying potential BMPs (best management practices) to reduce bacteria.

Table 1. Stormwater Outfall Monitoring Data

Outfall ID	Sample Date	Parameter (Nitrogen, Phosphorus, Bacteria, or Other pollutant of concern)	Enterococci Bacteria (MPN/100 mls) Limit 500*	Fecal Coliforms (MPN/100 mls) Limit 260*	Name of Laboratory (if used)	Follow-up required?
14	12/16/2022	Bacteria	5510	31100**	Phoenix	Yes
15	12/16/2022	Bacteria	5230	>48400**	Phoenix	Yes
47	12/16/2022	Bacteria	2880	26000	Phoenix	Yes
40	12/16/2022	Bacteria	13000	14500	Phoenix	Yes
18	12/16/2022	Bacteria	978	26000	Phoenix	Yes
143	12/16/2022	Bacteria	366	7310	Phoenix	Yes

*The 2017 General Permit states the maximum allowed levels of pollutants of concern and requires follow-up investigations when parameters are over the maximum allowed.

** Outfall sampling will be re-conducted at these locations to verify limits.

Conclusion

The six outfalls sampled during wet weather all had levels of either Enterococci Bacteria and Fecal Coliforms or both above the allowable maximum and should continue to be sampled. One outfall ID:143 was below the allowable maximum limit for Enterococci only. Follow-up investigations should be performed and the watersheds for all the outfalls should be investigated to determine the source of the bacteria. It is likely that these six outfalls will need to be sampled on an annual basis as required by the 2017 MS4 General Permit.

Attachments

Analysis Report – December 16, 2022



Monday, December 19, 2022

Attn: Raju Vasamsetti
Weston & Sampson
712 Brook Street Suite 103
Rocky Hill, CT 06067

Project ID: BRANFORD MS4
SDG ID: GCN06932
Sample ID#s: CN06932 - CN06937

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink that reads "Phyllis Shiller". The signature is written in a cursive style.

Phyllis Shiller

Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

December 19, 2022

SDG I.D.: GCN06932

Project ID: BRANFORD MS4

Client Id	Lab Id	Matrix
14	CN06932	STORM WATER
15	CN06933	STORM WATER
47	CN06934	STORM WATER
40	CN06935	STORM WATER
18	CN06936	STORM WATER
143	CN06937	STORM WATER



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report
 December 19, 2022

FOR: Attn: Raju Vasamsetti
 Weston & Sampson
 712 Brook Street Suite 103
 Rocky Hill, CT 06067

Sample Information

Matrix: STORM WATER
 Location Code: WESTSAMP
 Rush Request: Standard
 P.O.#:

Custody Information

Collected by:
 Received by: SW
 Analyzed by: see "By" below

Date

12/16/22
 12/16/22

Time

9:55
 15:30

Laboratory Data

SDG ID: GCN06932
 Phoenix ID: CN06932

Project ID: BRANFORD MS4
 Client ID: 14

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Enterococci Bacteria	5510	20	MPN/100 mls	20	12/16/22 16:25	RR/DT	9230DEnterolert-13
Fecal Coliforms MPN	31100	20	MPN/100 mls	20	12/16/22 16:25	RR/DT	Colilert-18

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

December 19, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report
 December 19, 2022

FOR: Attn: Raju Vasamsetti
 Weston & Sampson
 712 Brook Street Suite 103
 Rocky Hill, CT 06067

Sample Information

Matrix: STORM WATER
 Location Code: WESTSAMP
 Rush Request: Standard
 P.O.#:

Custody Information

Collected by:
 Received by: SW
 Analyzed by: see "By" below

Date

12/16/22
 12/16/22

Time

10:00
 15:30

Laboratory Data

SDG ID: GCN06932
 Phoenix ID: CN06933

Project ID: BRANFORD MS4
 Client ID: 15

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Enterococci Bacteria	5230	20	MPN/100 mls	20	12/16/22 16:25	RR/DT	9230DEnterolert-13
Fecal Coliforms MPN	>48400	20	MPN/100 mls	20	12/16/22 16:25	RR/DT	Colilert-18

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

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Phyllis Shiller, Laboratory Director

December 19, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report
 December 19, 2022

FOR: Attn: Raju Vasamsetti
 Weston & Sampson
 712 Brook Street Suite 103
 Rocky Hill, CT 06067

Sample Information

Matrix: STORM WATER
 Location Code: WESTSAMP
 Rush Request: Standard
 P.O.#:

Custody Information

Collected by:
 Received by: SW
 Analyzed by: see "By" below

Date

12/16/22
 12/16/22

Time

10:15
 15:30

Laboratory Data

SDG ID: GCN06932
 Phoenix ID: CN06934

Project ID: BRANFORD MS4
 Client ID: 47

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Enterococci Bacteria	2880	20	MPN/100 mls	20	12/16/22 16:25	RR/DT	9230DEnterolert-13
Fecal Coliforms MPN	26000	20	MPN/100 mls	20	12/16/22 16:25	RR/DT	Colilert-18

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

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Phyllis Shiller, Laboratory Director

December 19, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



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 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report
 December 19, 2022

FOR: Attn: Raju Vasamsetti
 Weston & Sampson
 712 Brook Street Suite 103
 Rocky Hill, CT 06067

Sample Information

Matrix: STORM WATER
 Location Code: WESTSAMP
 Rush Request: Standard
 P.O.#:

Custody Information

Collected by:
 Received by: SW
 Analyzed by: see "By" below

Date

12/16/22
 12/16/22

Time

10:25
 15:30

Laboratory Data

SDG ID: GCN06932
 Phoenix ID: CN06935

Project ID: BRANFORD MS4
 Client ID: 40

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Enterococci Bacteria	13000	20	MPN/100 mls	20	12/16/22 16:25	RR/DT	9230DEnterolert-13
Fecal Coliforms MPN	14500	20	MPN/100 mls	20	12/16/22 16:25	RR/DT	Colilert-18

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

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Phyllis Shiller, Laboratory Director

December 19, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report
 December 19, 2022

FOR: Attn: Raju Vasamsetti
 Weston & Sampson
 712 Brook Street Suite 103
 Rocky Hill, CT 06067

Sample Information

Matrix: STORM WATER
 Location Code: WESTSAMP
 Rush Request: Standard
 P.O.#:

Custody Information

Collected by:
 Received by: SW
 Analyzed by: see "By" below

Date

12/16/22
 12/16/22

Time

10:30
 15:30

Laboratory Data

SDG ID: GCN06932
 Phoenix ID: CN06936

Project ID: BRANFORD MS4
 Client ID: 18

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Enterococci Bacteria	978	20	MPN/100 mls	20	12/16/22 16:25	RR/DT	9230DEnterolert-13
Fecal Coliforms MPN	26000	20	MPN/100 mls	20	12/16/22 16:25	RR/DT	Colilert-18

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

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Phyllis Shiller, Laboratory Director

December 19, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



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Analysis Report
 December 19, 2022

FOR: Attn: Raju Vasamsetti
 Weston & Sampson
 712 Brook Street Suite 103
 Rocky Hill, CT 06067

Sample Information

Matrix: STORM WATER
 Location Code: WESTSAMP
 Rush Request: Standard
 P.O.#:

Custody Information

Collected by:
 Received by: SW
 Analyzed by: see "By" below

Date

12/16/22
 12/16/22

Time

10:35
 15:30

Laboratory Data

SDG ID: GCN06932
 Phoenix ID: CN06937

Project ID: BRANFORD MS4
 Client ID: 143

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Enterococci Bacteria	366	20	MPN/100 mls	20	12/16/22 16:25	RR/DT	9230DEnterolert-13
Fecal Coliforms MPN	7310	20	MPN/100 mls	20	12/16/22 16:25	RR/DT	Colilert-18

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

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Phyllis Shiller, Laboratory Director

December 19, 2022

Reviewed and Released by: Rashmi Makol, Project Manager

Monday, December 19, 2022

Criteria: CT: SWP

State: CT

Sample Criteria Exceedances Report

GCN06932 - WESTSAMP

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
--------	-------	-----------------	----------	--------	----	----------	----------------	-------------------

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Comments

December 19, 2022

SDG I.D.: GCN06932

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report: None.

Cooler: Yes No
 Coolant: IPK ICE
 Temp 1.0 °C Pg of

CHAIN OF CUSTODY RECORD

Data Delivery/Contact Options:
 Fax:
 Phone:
 Email: vsamsetti@phoenixlabs.com

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
 Email Makrina Nolan: makrina@phoenixlabs.com Fax (860) 645-0823
 Client Services (860) 645-1102



Customer: Weston & Simpson
 Address: 710 Brook Street
Suite 103
Rocky Hill, CT
 Project: Gratford USA
 Report to: _____
 Invoice to: Ray Vasamsetti
 QUOTE # _____

This section **MUST** be completed with **Bottle Quantities.**

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Analysis Request
06932	14	SW	12/14/09	9:55	X
06933	15			10:00	X
06934	47			10:15	X
06935	40			10:25	X
06936	18			10:30	X
06937	143			10:35	X

Client Sample - Information - Identification
 Sampler's Signature: Makrina Nolan Date: 12/14/09
 Matrix Code: SW
 GW=Ground Water SW=Surface Water WW=Waste Water
 DW=Drinking Water RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe Oil=Oil
 B=Bulk L=Liquid X=(Other)

MA
 MCP Certification
 GW-1 MWRA eSMART
 GW-2 S-1 10% CALC
 GW-3
 S-1 GW-1 S-1 GW-2 S-1 GW-3
 S-2 GW-1 S-2 GW-2 S-2 GW-3
 S-3 GW-1 S-3 GW-2 S-3 GW-3
 SW Protection
 Other

Relinquished by: Makrina Nolan Accepted by: [Signature] Date: 12/16/09 Time: 15:20

Comments, Special Requirements or Regulations:

Turnaround Time:
 1 Day*
 2 Days*
 3 Days*
 Standard

RI (Residential) Direct Exposure
 (Comm/Industrial) Direct Exposure
 GA Leachability
 GB Leachability
 GA-GW Objectives
 GB-GW Objectives

CI RCP Cert GW Protection SW Protection GA Mobility GB Mobility Residential DEC I/C DEC Other

MA MCP Certification GW-1 MWRA eSMART GW-2 S-1 10% CALC GW-3 S-1 GW-1 S-1 GW-2 S-1 GW-3 S-2 GW-1 S-2 GW-2 S-2 GW-3 S-3 GW-1 S-3 GW-2 S-3 GW-3 SW Protection Other

Data Format: Excel PDF GIS/Key EQUIS Other

Data Package: Tier II Checklist Full Data Package* Phoenix Std Report Other

*MS/MSD are considered site samples and will be billed as such in accordance with the prices quoted.

* SURCHARGE APPLIES

State where samples were collected: CT

* SURCHARGE APPLIES



12/17/2022 6:03:27 PM

CLIENT NOTIFICATION Positive Coliform Report

Sample Delivery Group: GCN06932

Location Code: WESTSAMP

Project: BRANFORD MS4

Phoenix ID	Client Id	Matrix	Rush	T-COLI			E-COLI			F-COLI			ENTERO		
				Result	Units	Date	Result	Units	Date	Result	Units	Date	Result	Units	Date
CN06932	14	SW		n.a.			n.a.			31100	mpn/100mls	12/16/22	5510	mpn/100mls	12/16/22
CN06933	15	SW		n.a.			n.a.			>48400	mpn/100mls	12/16/22	5230	mpn/100mls	12/16/22
CN06934	47	SW		n.a.			n.a.			26000	mpn/100mls	12/16/22	2880	mpn/100mls	12/16/22
CN06935	40	SW		n.a.			n.a.			14500	mpn/100mls	12/16/22	13000	mpn/100mls	12/16/22
CN06936	18	SW		n.a.			n.a.			26000	mpn/100mls	12/16/22	978	mpn/100mls	12/16/22
CN06937	143	SW		n.a.			n.a.			7310	mpn/100mls	12/16/22	366	mpn/100mls	12/16/22

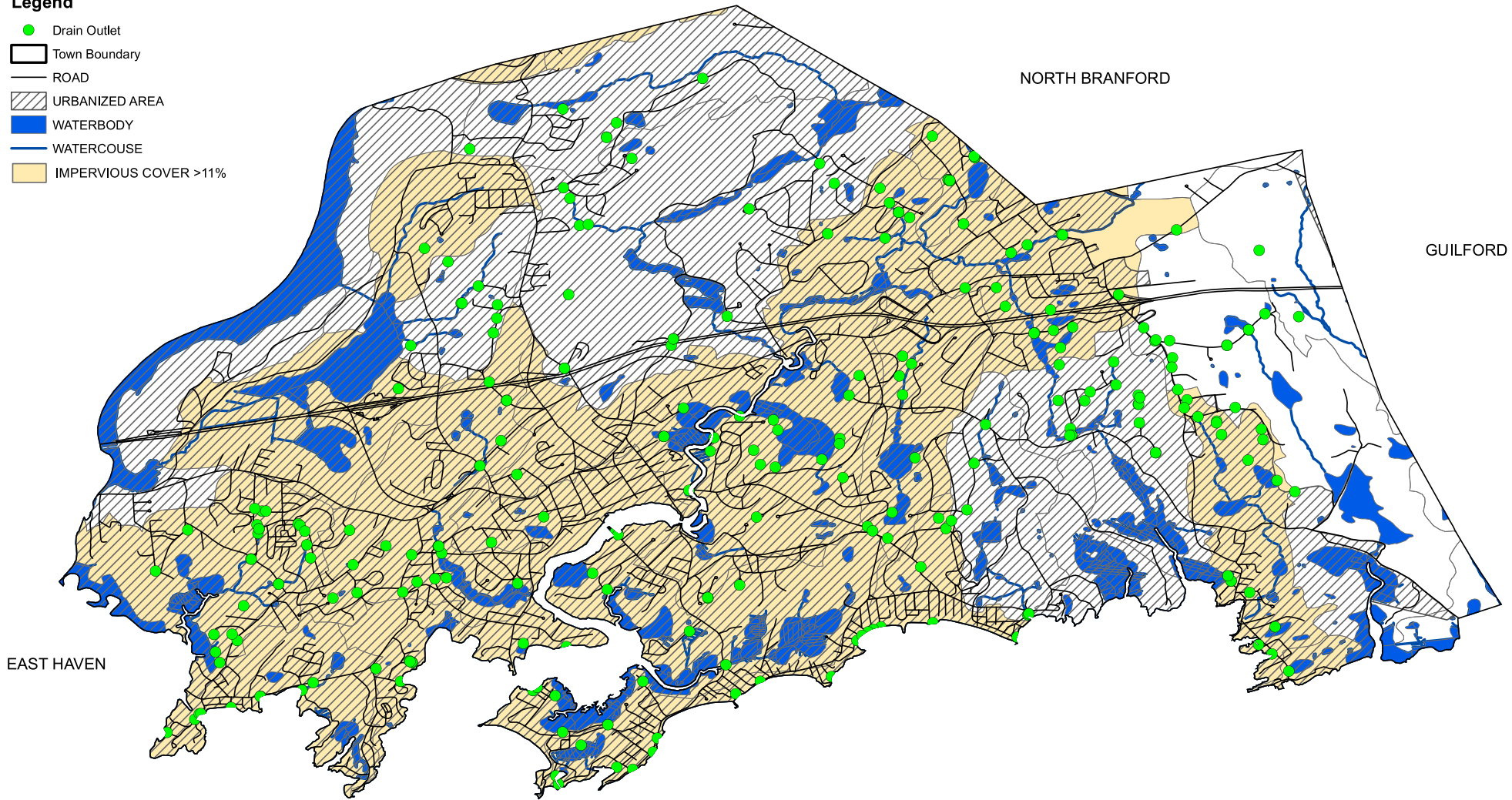
Contact: AutoNotify

Date: 12/17/2022 6:03:26 PM

Comments: Client Auto Notified via email: vasamsettir@wseinc.com

Legend

- Drain Outlet
- Town Boundary
- ROAD
- URBANIZED AREA
- WATERBODY
- WATERCOUSE
- IMPERVIOUS COVER >11%



0 1,250 2,500 5,000 7,500 10,000
Feet

FIGURE 1
URBANIZED AREA AND IMPERVIOUS AREAS

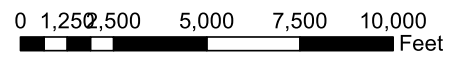
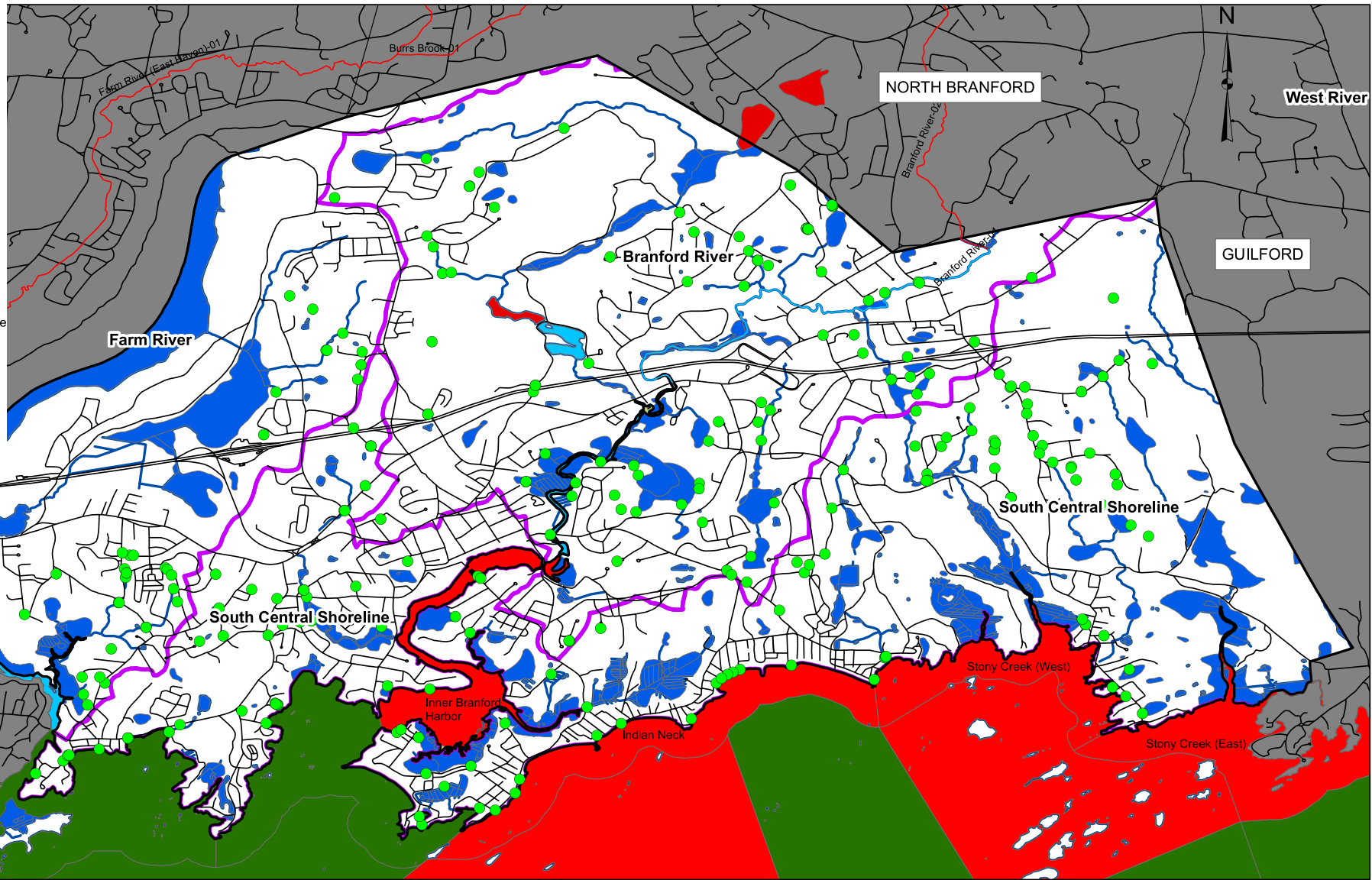
IDDE REPORT
TOWN OF BRANFORD

Weston & Sampson

SOURCE: CTDEEP GIS DATA 2014

Legend

- Drain Outlet
- RIVER- AQUATIC LIFE**
 - Fully Supporting
 - Insufficient Information
 - Not Supporting
 - Unassessed
- ▭ Town Boundary
- LAKE- AQUATIC LIFE**
 - Fully Supporting
 - Not Supporting
 - Unassessed
- ESTUARY- SHELLFISH**
 - Fully Supporting
 - Natural Conditions Not Viable
 - Not Supporting
 - Unassessed
- ROAD
- ▭ SUBREGIONAL BASIN
- WATERBODY
- WATERCOURSE



SOURCE: CTDEEP GIS DATA 2014

FIGURE 2
WATER QUALITY AND OUTFALLS

IDDE REPORT
TOWN OF BRANFORD

