MS4 General Permit
Town of Plymouth 2024 Annual Report
Permit Number GSM 000022
January 1, 2024 – December 31, 2024
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This report documents Town of Plymouth efforts to comply with the conditions of the MS4 General Permit to the maximum extent practicable (MEP) from January 1, 2024 to December 31, 2024.

Part I: Summary of Minimum Control Measure Activities

1. Public Education and Outreach (Section 6 (a)(1) / page 19)

1.1 BMP Summary

BMP	**Activities in current reporting period**	**Sources Used** (if applicable)	**Method of Distribution**	**Audience (and number of people reached)**	**Measurable Goal**	**Department / Person Responsible**	**Additional details**
1-1 Implement public education and outreach	Ongoing	• Work on brochures for placement in Town Hall and distribution • Additional data placed on Town website	Physical & online	Town residents	Continue to update and add as information available	DPW	Continue to add annual reports, etc to site and social media

1-2 Address education/ outreach for pollutants of concern	*Ongoing*	*S*tormwater & e. coli information on Town website Information for dog owners	Physical & online	Town residents	Continue to update and add as information available	DPW, P&Z	
1-3							

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

Education on impervious area versus directly connected impervious, and its significance to permit and pollution. Publically post literature regarding any chemical vegetative maintenance and SDS information

2. Public Involvement/Participation (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	Ongoing	Post info on web page	Establish sector of Town webpage For Stormwater programs	DPW, P&Z	In progress	DPW web page Town Hall, social media	
2-2 Comply with public notice requirements for Annual Reports (annually by 2/15)	Ongoing	Post info on web page	Add reports annually	DPW	April 1, 2024	Town/DPW web page, social media	

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

None currently scheduled

3. Illicit Discharge Detection and Elimination (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 (Due 7/1/19)	In progress	Town is in process of completing written IDDE program using the CT IDDE program template	Develop written plan of IDDE program	DPW	Anticipate completing by December 2025	
3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas (Due 7/1/20)	Complete	Complete	Create GIS mapping	Publish Mapping	Public Works	
3-3 Implement citizen reporting program	In progress	Use existing electronic reporting form	Adapt form specific to IDDE	DPW/ web master	Auguat 2024	
3-4 Establish legal authority to prohibit illicit discharges	In progress	Atty to review current town regs and modify as needed to comply	TC approval of modified regulations	DPW/atty/TC	December 2024	
3-5 Develop record keeping system for IDDE tracking	Not started	Create system for record keeping	Tesrecording system for implementation	DPW	December 2024	
3-6 Address IDDE in areas with pollutants of concern	Started	Start addressing priority areas	Complete 50% of priority areas	DPW	December 2024	

3.2 Describe any IDDE activities planned for the next year, if applicable.

The written program will be posted to the Dept of Public Works webpage and a link listed in next year's Annual Report; will update the written IDDE program as needed throughout the permit term. Maintain master IDDE tracking spreadsheet and ensure all employees involved in IDDE program understand the logging process

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)
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**
Need to establish process				

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

N/A

3.6 IDDE reporting metrics

Metrics	
Estimated or actual number of MS4 outfalls	435
Estimated or actual number of interconnections	1
Outfall mapping complete	100%
Interconnection mapping complete	0%
System-wide mapping complete (detailed MS4 infrastructure)	10%
Outfall assessment and priority ranking	0%
Dry weather screening of all High and Low priority outfalls complete	12%
Catchment investigations complete	0
Estimated percentage of MS4 catchment area investigated	<10%

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).

Develop training rubrics for employees as well as penalties procedures and protocols

4. Construction Site Runoff Control (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 (Due 7/1/20)	In progress	Enforcement of current inspection process	Inspection of construction sites	Planning/DPW	ongoing	Active as needed
4-2 Develop/Implement plan for interdepartmental coordination in site plan review and approval (Ongoing)	started	DPW reviewing all siteplans etc.	Coordinate inspection with building department	DPW	ongoing	
4-3 Review site plans for stormwater quality concerns (Ongoing)	In progress	Review of plans for applications	Ensure compliance with regs	Planning/DPW	ongoing	Active as needed
4-4 Conduct site inspections (Ongoing)	Active	Inspections	Monitor ongoing construction activities	Planning Dept., Engineering	ongoing	Active as needed
4-5 Implement procedure to allow public comment on site development (Ongoing)	Active	Public comments on applications	Provide opportunity for review and comments	Planning Dept.	ongoing	
4-6 Implement procedure to notify developers about DEEP construction stormwater permit (Ongoing)	Active	Part of application process	Inform applicants when applicable	Planning Dept.	ongoing	

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

Ongoing review and inspections of activities

5. Post-construction Stormwater Management (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 (Due 7/1/22)	Not started	None	Develop and apply guidelines	P&Z/Atty./TC	December 2024 In progress	
5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects (Due 7/1/22)	Not started	None		P&Z/Atty./TC	July 2025	Need to designate staff for action
5-3 Identify retention and detention ponds in priority areas (Due 7/1/20)	Not started	None	Map ponds	DPW	December 2024 in progress	
5-4 Implement long-term maintenance plan for stormwater basins and treatment structures (Ongoing)	Not started		Develop inspection & maintenance procedures	DPW	September 2025	
5-5 DCIA mapping (Due 7/1/20)	Complete	none	Map watersheds >11% DCIA	Consultant	Complete	
5-6 Address post-construction issues in areas with pollutants of concern	Ongoing	Inspections of pollutant generating acivities	Address potential pollution causing issues	P&Z/DPW	In progress	

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

Continue monitoring activites

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)	357 acres
DCIA disconnected (redevelopment plus retrofits)	0/0 acres this year / acres total
Retrofit projects completed	0
DCIA disconnected	0 this year / 0 total since 2012
Estimated cost of retrofits	$0
Detention or retention ponds identified	0 this year /0 total

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

Use 2012 IC data and modified Sutherland equations to calculate DCIA %

6. Pollution Prevention/Good Housekeeping (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 (Ongoing)	In progress	training	Revise training as identifed	DPW/C. Johnson	In progress	
6-3 Implement coordination with interconnected MS4s	Not started	N/A				
6-4 Develop/implement program to control other sources of pollutants to the MS4	Not started					
6-5 Evaluate additional measures for discharges to impaired waters*	Not started					
6-6 Track projects that disconnect DCIA (Ongoing)	In progress	None – no opportunity	Identify opportunities during application process	P&Z/DPW	In progress	
6-7 Implement infrastructure repair/rehab program (Due 7/1/21)	In progress	Address repair/rehab as needed		DPW	In progress	

6-8 Develop/implement plan to identify/prioritize retrofit projects (Due 7/1/20)	Not started			TC/DPW		Requires methodology for prioritizing projects within available funding limits
6-9 Implement retrofit projects to disconnect 2% of DCIA (Due 7/1/22)	Not started	None	Identify opportunities and funding sources	TC/DPW		
6-10 Develop/implement street sweeping program (Ongoing)	In progress	All streets swept at least once per year, some twice	Remove pollutant sources from roadways	DPW	In progress	Town has long-standing street sweeping program
6-11 Develop/implement catch basin cleaning program (Ongoing)	In progress	±50% of CBs cleaned each year	Remove pollutant sources from catch basins	DPW	In progress	Town has long-standing CB cleaning program
6-12 Develop/implement snow management practices (Due 7/1/18)	In progress	None – not enough snowfall	Manage snow removal and storage as pollutant source	DPW	In progress	

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

Continue to reduce sand use for snow/ice management roadways

6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics	
Employee training provided for key staff	n
Street sweeping	
Curb miles swept	168 miles
Volume (or mass) of material collected	unknown
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	435
Catch basins inspected	121
Catch basins cleaned	±half
Volume (or mass) of material removed from all catch basins	?
Volume removed from catch basins to impaired waters (if known)	?
Snow management	
Type(s) of deicing material used	Cargill Ice B' Gone Sat/sand mix
Total amount of each deicing material applied	± 2,300 tons/ea
Type(s) of deicing equipment used	Trucks w spreaders
Lane-miles treated (A lane-mile is a mile of roadway in a single driving lane)	168 miles
Snow disposal location	Town fairground
Staff training provided on application methods & equipment	y - annually
Municipal turf management program actions (for permittee properties in basins with N/P impairments)	
Reduction in application of fertilizers (since start of permit)	None used
Reduction in turf area (since start of permit)	N/A
Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)	
Cost of mitigation actions/retrofits	$0

6.4 Catch basin cleaning program

Provide any updates or modifications to your catch basin cleaning program.
No changes

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)
No retrofit opportunities to date

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)
Inventory infrastructure to identify opportunities, prioritize, and seek funding

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.

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? ***

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** • **Total Coliform > 500 col/100ml**
Bacteria (salt waterbody)	• 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

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)

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
4315-00-2-L4	High	4
4315-00-2-L6	High	1
4315-00-2-R1	High	2
4315-02-1	High	3

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

This screening is the baseline IDDE dry weather screening. 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, during dry weather, of outfalls and interconnections categorized as high or low priority in priority areas. Do not include problem or excluded catchments. 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

2.2 Wet weather sample and inspection data

This sampling data is the baseline wet weather priority catchment investigation sampling. 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 baseline sample data for outfalls and key junction manholes of any catchment area (all high priority, low priority, and problem outfalls within the priority 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

3. 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

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 that 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 that poor owner maintenance).

3.2 Key junction manhole dry weather screening and sampling data

This screening is the dry weather priority catchment investigation screening. Provide sample data, both baseline and follow-up, for key junction manholes of any catchment area begin investigated for an illicit discharge and do not have any SVFs present. Follow-up investigations must take place within one year and again within five years. **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

3.3 Wet weather follow-up investigation outfall sampling data

This sampling is the follow-up investigations for the wet weather priority catchment investigation. Provide follow-up sample data for outfalls and key junction manholes of any catchment area with at least one System Vulnerability Factor. Follow-up investigations must take place within one year and again within five years. **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

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

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."	
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