MS4 General Permit
Town of Brookfield 2017 Annual Report
Existing MS4 Permittee
Permit Number GSM 000006
January 1, 2023 – December 31, 2023

This report documents The Town of Brookfield's efforts to comply with the conditions of the MS4 General Permit to the maximum extent practicable from January 1, 2023 to December 31, 2023.

Part I: Summary of Minimum Control Measure Activities

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

1.1 BMP Summary

2017	Web Based Library of MS4 educational materials	UCONN Clear /WestCOG / Land Use
	Foster partnerships with existing organizations	WestCOG / DPW / Land Use
	Provide printed materials for municipal buildings	Land Use
	Targeted outreach	Land Use / Sanitarian / DPW / Zoning
	Develop/acquire education materials	UCONN / WestCOG / Land Use
2018	Update Website	DPW / IT
	Review Partnerships	WestCOG / DPW
	Targeted outreach	Land Use / Sanitarian / DPW / Zoning
	Review Education Materials	UCONN Clear /WestCOG / Land Use
2019	Update Website	DPW / IT
	Review Partnerships	WestCOG / DPW / Land Use
	Targeted outreach	Land Use / Sanitarian / DPW / Zoning
	Review Education Materials	UCONN Clear / WestCOG / Land Use
2020	Update Website	DPW / IT
	Review Partnerships	WestCOG / DPW / Land Use / HVA
	Targeted outreach	Land Use / Sanitarian / DPW / Zoning
	Review Education Materials	UCONN Clear / WestCOG / Land Use
2021	Update Website	DPW / IT
	Review Partnerships	WestCOG / DPW / Land Use
	Targeted outreach	Land Use / Sanitarian / DPW / Zoning
	Review Education Materials	UCONN Clear / WestCOG / Land Use

Ongoing	Update Website	DPW / IT
	Review Partnerships	WestCOG / DPW / Land Use
	Targeted outreach	Land Use / Sanitarian / DPW / Zoning
	Review Education Materials	UCONN Clear / WestCOG / Land Use

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

In 2023 the Town of Brookfield continued to maintain its web based library by adding new links and deleting content no longer available. We continued to our subscription to "Stormwater" magazine and maintain copies in the DPW office in the Town Hall that are available to both the general public and town employees. We also continued sand strengthened our partnership with the Housatonic Valley Association by including IDDE track down as related to the Still River as part of our 2023 partnership a program started in 2022 We continued to share common regional resources through WestCOG to strengthen our public presence.

2. Public Involvement/Participation (Section 6(a) (2) / page 21)

2.1 BMP Summary

	BMP	Responsible Person
2017	Send out public notice for MSP public comment	DPW
	Review public comments	DPW
2018	Send out public notice for annual report public comment	DPW
	Review public comments	DPW
2019	Send out public notice for annual report public comment	DPW
	Review public comments	DPW
2020	Send out public notice for annual report public comment	DPW
	Review public comments	DPW
2021	Send out public notice for annual report public comment	DPW
	Review public comments	DPW
Ongoing	Send out public notice for annual report public comment	DPW
	Review public comments	DPW

2.2 Describe the Public Notice Process

The Town of Brookfield's Stormwater Management Plan has been and will continue to be published on the Town of Brookfield website for public comment and review. An e-mail address, mailing address and phone number has been provided for public comment and suggestions. Public comments are welcome and encouraged.

The Town of Brookfield DRAFT annual report for 2023 was published on the town website by February 15, 2022 for review prior to submission to the CT DEEP on April 1, 2023.

3. Illicit Discharge Detection and Elimination (Section 6(*a*) (3) and Appendix B / page 22)

3.1 BMP Summary

	BMP	Responsible Person
2017	Develop a written IDDE program	UCONN Clear / DPW / Land Use / Zoning/HVA
	Review Existing legal authority	DPW / Land Use / Zoning
	Establish legal authority to eliminate illicit discharges	Zoning
	Develop mapping platform and database	DPW
	Establish citizen reporting program	DPW
	Track illicit abatement activities	DPW / Land Use / HVA
	Inventory existing mapped infrastructure data	DPW
2018	Map remaining infrastructure	DPW
	Track illicit abatement activities	DPW / Land Use /HVA
	Perform ongoing screening and tracking (if needed)	DPW / Land Use / HVA
2019	Perform ongoing screening and tracking (if needed)	DPW / Land Use / HVA
	Finalize MS4 web map	DPW
	Track illicit abatement activities	DPW / Land Use / HVA
	Update mapping database	DPW
2020	Perform ongoing screening and tracking (if needed)	DPW / Land Use / HVA
	Track illicit abatement activities	DPW / Land Use / HVA
	Update mapping database	DPW
2021	Perform ongoing screening and tracking (if needed)	DPW / Land Use / HVA
	Track illicit abatement activities	DPW / Land Use / HVA
	Update mapping database	DPW

Ongoing	Perform ongoing screening and tracking (if needed)	DPW / Land Use / HVA
	Track illicit abatement activities	DPW / Land Use / HVA
	Update mapping database	DPW

3.2 Update the Town's IDDE Program

The Town has a draft IDDE program. It used as its guide materials provided by WestCOG, UCONN Clear and CT DEEP. A copy is available upon request.

3.3 Legal Authority

Legal Authority is through the Town of Brookfield Zoning Commission enforced by a full time Zoning Enforcement Officer employed by the town. There are current regulations already approved that addresses Aquifer Protection performance and standards (Reg. 242-502G) Any development within the Aquifer Protection Area as per the Brookfield mapping, which includes most of Federal Road, needs a stormwater management plan. Any development within the CT DEEP designated Aquifer Protection Area also needs a stormwater management plan. Two other areas of development that need a stormwater management plan include the Watershed Protection District, which is the Candlewood Lake Drainage Basin, and the Still River Floodplain.

3.4 Mapping Platform

In 2023 the Town of Brookfield continued to maintain out MS4 maps through our consultant Tighe and Bond. We continue to refine and add to our maps. In 2022 we added a sanitary sewer layer. This layer was important in 2023 to allow us to identify system vulnerability locations where storm and sanitary sewers cross. We will try to enhance this feature in 2024

List of citizen reports of suspected illicit discharges received during this reporting period. And Historical Data

Date of Report	Location / suspected source	
	3 Greenridge Drive	The resident at 1 Greenridge Drive called to report a septic smell coming from a neighbors property at 3 Greenridge Dr.. The Health Department was notified and the Director Eran Ceylan responded along with the DPW Road Supervisor Mike Hicks. An investigation took place by walking the properties and checking the adjacent catch basins. There was no noticeable odor at the time of the inspection and nothing unusual was found. The resident was instructed to call again if the odor returned.

Provide a record of illicit discharges occurring during the reporting period and SSOs occurring through the end of reporting period using the following table.

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)
Town Brush Yard 100 Pocono Rd	12/15/23	No	<1 gallon	Hydraulic Fluid form broken excavator line	The machine was shut down. Mechanics were called to make a repair and clean the spill. Most fluid landed on the tracks of the machine and was cleaned with shop rags and speedy dry.	NA

3.6 Briefly describe the method used to track illicit discharge reports, responses to those reports,

and who was responsible for tracking this information.

Pollution Investigation:

The appropriate member of the Town staff will investigate all suspected illicit discharges and document field observations in case of enforcement action is taken. Standard field equipment will be used including but not limited to cameras, measuring tapes, gloves and sampling containers. Obvious discharges of hazardous materials such as gasoline, diesel, and unknown chemicals will be reported directly to the Town's 911 system. The investigation of unknown substances will be coordinated with the Hydro Technologies Inc. and the Connecticut DEEP. If needed water quality samples will be collected to identify illicit discharge contaminants and target potential waste streams. Sample results will be compared to reference waste stream "chemical fingerprints" if they have been previously compiled.

After the waste stream characteristics have been identified, the appropriate program managers will coordinate with the stormwater maintenance crews (primarily the towns Department of Public Works) to investigate potential illicit discharge sources. Standard investigative methods may be used such as cameras for infrastructure as well as dye, smoke testing, dams etc. Final determination of the illicit discharge will possibly require facility inspections. If an inspection of a facility is required, notification to the facility owner, manager and scheduling of the inspection will be required.

Illicit Discharge Elimination:

After an illicit discharge is detected and tracked to the source, the stormwater team will work with the responsible party to abate the discharge and initiate remediation activities. Acute or chronic discharges may be issued violations per the Town of Brookfield's code resulting in a fine, court appearance and clean / up costs. Responsible parties with direct discharges (illicit cross connections) to the storm sewer system will be required to have a licensed qualified contractor re-route the pipe to an appropriate discharge point and repair any damage to the storm water infrastructure that their cost. Responsible parties with indirect discharges such as illicit dumping will be required to cease the discharge activities and may receive a ticket and may be required to remediate any damages to the infrastructure and environment. Compliance and enforcement activities will be coordinated through the appropriate Town staff and departments as specified. If needed Police Department support will be utilized to address acute discharges, chronic offenders or enforcement activities when appropriate.

Ongoing Screening and Tracking:

Brookfield, upon completion of catchment investigation and illicit discharge removal and confirmation (if necessary) for the catchment outfall or interconnection, will schedule follow-up screening within five years, or sooner as determined by the catchment's illicit discharge priority. Follow-up screening shall consist of dry weather screening and sampling except where wet weather screening and sampling is required as detailed in Appendix B of the MS4 permit. We will share information with HVA along the Still River corridor through our partnership with them.

Track illicit abatement activities:

Brookfield will maintain a record of illicit discharge abatement activities including: location (identified with an address or latitude and longitude), description, dates of inspection, sampling data (if applicable), actions taken, date of removal or repair and responsible parties. This information shall be included in the permittee's Annual Report.

In 2018 the town installed a new Electronic Tracking System (Carmody System – SepticSearch.com) to monitor all systems in town and proactively warn residents of the need to pump out their systems on a regular 4 year cycle; except in highly susceptible areas where requirements will be more rigid.

3.7 Provide a summary of actions taken to address septic failures using the table below. (information provided by the town Sanitarian). Information is for the current reporting year.

Location and nature of structure with failing septic systems	***Completion Date***	***Actions taken to respond to and address the failures***	***Impacted waterbody or watershed, if known***	***Nature of septic failure***

34 Tower Road	2/3/2023	permit issued, system repaired	Housatonic River	bleed-out
31 Carmen Hill Road	5/4/2023	permit issued, system repaired	Candlewood Lake	bleed-out
57 Mist Hill Drive	4/28/2023	permit issued, system repaired	Candlewood Lake	bleed-out
3 Riverford Road	6/15/2023	permit issued, system repaired	Housatonic River	bleed-out
4 Candlewood Birches	6/27/2023	permit issued, system repaired	Candlewood Lake	bleed-out
30 Ox Drive	7/13/2023	permit issued, system repaired	Pond Brook	bleed-out
6 Old Turnpike	8/26/2023	permit issued, system repaired	Candlewood Lake	bleed-out
23 Dean Road	8/21/2023	permit issued, system repaired	Still River	bleed-out
16 Crestview Drive	11/2/2023	permit issued, system repaired	Housatonic River	bleed-out
28 Pleasant Rise	11/15/2023	permit issued, system repaired	Still River	bleed-out
125 Whisconier Road	12/5/2023	permit issued, system repaired	Housatonic River	bleed-out
13 Old Turnpike	12/7/2023	permit issued, repair underway	Candlewood Lake	bleed-out
41 Woodview Drive	12/12/2023	permit issued, system repaired	Candlewood Lake	bleed-out
20 Kellogg Street	1/18/2024	permit issued, system repaired	Candlewood Lake	bleed-out
15 Hanover Ridge Road	1/4/2024	permit issued, system repaired	Housatonic River	bleed-out
100 Whisconier Road	12/21/2023	permit issued, system repaired	Housatonic River	bleed-out
20 Ox Drive	1/4/2024	permit issued, system repaired	Pond Brook	bleed-out

Information has been provided by the Town Sanitarian. The town also maintains a list of septic repairs as its normal practice even if there was no evidence of a failure. That list is available upon request.

3.8 IDDE reporting metrics

Metrics	
Estimated or actual number of MS4 outfalls	350 +/-
Estimated or actual number of interconnections	None Identified
Outfall mapping complete	100%
Interconnection mapping complete	75%
System-wide mapping complete (detailed MS4 infrastructure)	90%
Outfall assessment and priority ranking	100%
Dry weather screening of all High and Low priority outfalls complete	100%
Catchment investigations complete	75%
Estimated percentage of MS4 catchment area investigated	75%

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

On November 1, 2023 the DPW conducted “in-house” training for our entire DPW crew. We focused on good house-keeping, construction site runoff, the use of pesticides and vehicle maintenance best management practices. Materials used to conduct training were taken directly from the CT NEMO Program. We also reviewed best management practices for ice and snow removal particularly reducing the amount of chlorides used in order to protect the environment and use the chlorides in the most efficient and effective way.

Land Use

In 2022 the Land Use Department started collecting data regarding businesses that use or store toxic chemicals in Brookfield. The process will continue in 2023 and beyond to determine potential hazard zones and vulnerable locations. Once the data collection is complete the information will be incorporated into our MS4 maps. The process continued in 2023.

Other Releases Reported to the CT DEEP by Others

Full documents can be obtained at the following link.

https://connecticut.hazconnect.com/listincidentpublic.aspx?t2nq=fYvUcAcmW/1XZK+gwwSKAXP12Hy9EJw/Z+/cmS0XDWY=

Incident Status	Incident Date	Incident Type	Incident Subtype	Incident Description	Source Type	Source Subtype	Street Address	City/Town	Chemicals
		All					Street	Brookfield	
Inactive	12/16/2023	Petroleum Incident	Leaking Motor Vehicle	Under 50 gallons of Hydraulic Fluid contained to soil at 100 Pocono Rd., Brookfield.	Transportation	Heavy Industrial	100 Pocono Rd.	Brookfield	Hydraulic Oil - 0
Inactive	01/04/2024	Dielectric Fluid Incident	PCBs >1ppm	pad mount, 3 gal less than 5ppm pcb oil to soil, Clean Harbors	Utility pole with transformer		18 Lyndenwood Drive	Brookfield	Transformer Oil - 3 Gals
Inactive	12/27/2023	Petroleum Incident	Above Ground Tank Failure	Less than a cup of #2 Fuel onto concrete garage floor of residence at 10 Cherokee Drive, Brookfield. Customer refusing pump-out for leaking 275 gallon AST. Cleaned.	Residential Petroleum Tank System		10 Cherokee Dr.	Brookfield	#2 Fuel Oil for heating - 0
Inactive	12/23/2023	Petroleum Incident	Fire	1 gallon of Gasoline and water to extinguish car fire into catch basin at 30 Short Oak Dr., Brookfield. Spill pads applied. Notification only.	Transportation	Road Transport Motor Vehicle	30 Short Oak Dr.	Brookfield	Gasoline as transportation fuel - 0
Inactive	12/29/2023	Petroleum Incident	Overfill by Delivery Company	motorcoxsia - overfill of 10k AST by 1000 gal motor oil inside building, contained with berm, oil dry, spill mats	Fixed Facility	Commercial	993 Federal Road	Brookfield	Motor Oil - 1000 Gals
Inactive	12/14/2023	Petroleum Incident	Leaking Motor Vehicle	rt 7 North before exit 12, Brookfield. small amount of diesel fuel leaking from a dump truck. Ptnr for FD on scene 203-460-4917.	Transportation	Heavy Industrial	rt 7 North before exit 12	Brookfield	Diesel as transportation fuel - 0
Inactive	12/13/2023	Petroleum Incident	Leaking Motor Vehicle	819 Federal Rd, Brookfield. 4g gasoline from an MVA. storm drain involved.	Transportation	Road Transport Motor Vehicle	819 Federal Rd	Brookfield	Gasoline as transportation fuel - 4 Gals
Inactive	10/04/2023	Chemical Incident	Other	acids/unknown chemicals found at residence by CT State Police, requesting DEEP ERU to assist.	Fixed Facility	Residential	31 Merwin Brook Road	Brookfield	unknown chemicals - 0
Inactive	09/30/2023	Petroleum Incident	Equipment Failure	200 gallons of motor oil onto ground surface only from overfill of tank at 993 Federal Rd., Brookfield. Moran on scene.	Fixed Facility	Commercial	993 Federal Rd.	Brookfield	Motor Oil - 200 Gals
Inactive	09/06/2023	Petroleum Incident	In Ground Tank Failure	Historic tank pull of 550 gallon #2 Fuel UST at residence at 101 Whisconier Rd., Brookfield. No free product.	Fixed Facility	Residential	101 Whisconier Rd.	Brookfield	#2 Fuel Oil for heating - 0
Inactive	09/01/2023	Petroleum Incident	Above Ground Tank Failure	15 Toby Lane Brookfield CT. #2 fuel oil dripping from tank in garage, Tank is 1/4 full. Speedy dry applied.	Fixed Facility	Residential	15 Toby Lane	Brookfield	#2 Fuel Oil for heating - 0
Inactive	08/04/2023	Petroleum Incident	Other	993 Federal rd. Brookfield CT. 50 Gallons of virgin motor has been contained in a concrete container. No waterways or drains affected.	Fixed Facility	Commercial	993 Federal rd.	Brookfield	Motor Oil - 50 Gals
Inactive	07/31/2023	Chemical Incident	Other	CONCERNED CITIZEN REPORTING A BLUE SHEEN IN SMALL STREAM	Nature		40 e north obtuse rd	Brookfield	#2 Fuel Oil for heating - 0
Inactive	07/24/2023	Petroleum Incident	In Ground Tank Failure	#2 fuel oil leaked into soil from underground tank at 42 North Lake Shore Drive, Brookfield. Was discovered when doing soil tests on property 2 and half tons of contaminated soil was removed properly.	Residential Petroleum Tank System		42 North Lake Shore Drive	Brookfield	#2 Fuel Oil for heating - 0
Inactive	07/22/2023	Petroleum Incident	Above Ground Tank Failure	Less than a gallon of #2 Fuel onto concrete basement floor at 34 Merwin Brook Rd., Brookfield. Contained. Cleaned. Contracting for pump-out.	Fixed Facility	Residential	34 Merwin Brook Rd.	Brookfield	#2 Fuel Oil for heating - 0
Inactive	07/19/2023	Petroleum Incident	Above Ground Tank Failure	275 AST in basement ongoing leak, speedy dry, refused pump out. Homeowner: Nancy Stevens 203-501-9429	Residential Petroleum Tank System		23 Pitten Hill Road	Brookfield	#2 Fuel Oil for heating - 0
Inactive	07/14/2023	Petroleum Incident	Hose Failure	hydraulic oil release affected catch basin 1 gal, speedy dry/spill pads	Transportation	Freight Road Transport Vehicle	470 Federal Road	Brookfield	Hydraulic Oil - 1 Gals
Inactive	06/29/2023	Petroleum Incident	Other	50 gallons of Diesel onto ground at 100 Candlewood Lake Rd., Brookfield. FD en route requesting response.	Fixed Facility	Commercial	100 Candlewood Lake Rd.	Brookfield	Diesel as transportation fuel - 0
Inactive	06/28/2023	Petroleum Incident	Above Ground Tank Failure	Less than 1 cup of #2 Fuel contained under AST in basement of 18 Richards Rd., Brookfield. Contracting for pump-out and tank replacement.	Fixed Facility	Residential	18 Richards Rd.	Brookfield	#2 Fuel Oil for heating - 0
Inactive	05/26/2023	Chemical Incident	Other	Unknown vinegar smell emanating from 1st Floor of Bldg. 23 at 15 Canterbury Court, Brookfield. Apartments/Condos have been evacuated. Brookfield FD Chief Fry 203-460-4917 on scene.	Fixed Facility	Residential	11 Canterbury Court, Building 23	Brookfield	UNKNOWN - 0
Inactive	04/19/2023	Petroleum Incident	Equipment Failure	Seal failure on a valve controller and 1 quart of hydraulic oil on the ground from a gas pipeline. Soil to be removed and disposed of. No waterways affected.	Fixed Facility	Commercial	107 Vail Road	Brookfield	Hydraulic Oil - 0 Gals
Inactive	03/07/2023	Dielectric Fluid Incident	PCBs >1ppm	Tree damage caused a pole break. 10 gallons of transformer oil, less than 2 pcb, to pavement and soil. Clean Harbors contracted.	Utility pole with transformer		15 Dorset Lane	Brookfield	Transformer Oil - 10 Gals
Inactive	03/02/2023	Chemical Incident	Vehicle Accident	MVA ANTIFREEZE SPILL 1 GALLON. IN TO CATCH BASIN INTO CANDLEWOOD LAKE. ADDRESS:CANDLEWOOD LAKE RD CANDLEWOOD SHORES RD BROOKFIELD CT	Transportation	Road Transport Motor Vehicle	CANDLEWOOD LAKE RD CANDLEWOOD SHORES RD	Brookfield	Antifreeze - 1 Gals
Inactive	02/15/2023	Petroleum Incident	In Ground Tank Failure	550UST removed. contact: Barbara Cooper 203-733-6223	Residential Petroleum Tank System		69 Obtuse Hill Road	Brookfield	#2 Fuel Oil for heating - 0
Inactive	02/05/2023	Petroleum Incident	Equipment Failure	large amount of machine oil spilled inside building. 426 federal rd Brookfield	Fixed Facility	Commercial	426 federal rd	Brookfield	machine oil - 0
Inactive	02/01/2023	Petroleum Incident	In Ground Tank Failure	550 UST removal, no remediation. Hubert Greene 914-261-6493	Residential Petroleum Tank System		62 Whisconier Road	Brookfield	#2 Fuel Oil for heating - 0
Inactive	01/07/2023	Petroleum Incident	Above Ground Tank Failure	30 gallons #2 Fuel from actively leaking 330 gallon AST in residential basement at 25 Silvermine Rd., Brookfield. Sump affected.	Fixed Facility	Residential	25 Silvermine Rd.	Brookfield	#2 Fuel Oil for heating - 30 Gals

4. Construction Site Runoff Control (Section 6(a) (4) / page 25)

4.1 BMP Summary

	BMP	Responsible Person
2017	Review existing language on construction site storm water management	Zoning / Land Use
	Develop interdepartmental coordination plan	Zoning / Land Use
	Implement interdepartmental coordination plan	Zoning / Land Use
	Implement site review and inspections program	Zoning / Land Use
	Implement public involvement component into development	Zoning / Land Use
	Implement process to notify developers of MS4 permit requirements	Zoning / Land Use
2018	Establish legal authority for construction site stormwater control	Zoning / Land Use
	Continue implementing previous practices	Zoning / Land Use
2019	Continue implementing previous practices	Zoning / Land Use
2020	Continue implementing previous practices	Zoning / Land Use
2021	Continue implementing previous practices	Zoning / Land Use

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

In 2023 the Town of Brookfield continued its enforcement of previously approved regulations. See below.

Brookfield has addressed all MS4 requirements within their new zoning regulations rewrite, a process the town is currently undergoing. Internal and interdepartmental inspection and coordination processes have been created. Developers and contractors will be aware of the Town's MS4 requirements as they are stated and enforced within our zoning regulations.

During the initial stages of the development process there were public workshops. There will be a public hearing of the complete rewrite of regulations before the Town adopts the new regulations. MS4 requirements will be incorporated in the zoning regulations. Each developer will be required to present plans that meet the requirements when developing or re-developing property in Brookfield

The ZEO has created an inspection spreadsheet and schedule for current and future developments. The ZEO will be responsible for overseeing the inspection and review process.
The Zoning Enforcement Officer shall have the legal authority to inspect erosion or sediment control measures for their effectiveness.

5. Post-construction Stormwater Management (Section 6(*a*) (5) / page 27)

5.1 BMP Summary

	BMP	Responsible Person
2017	Review existing legal authorities for post-construction storm water management	Zoning / Land Use
	Develop DCIA Mapping Methodology	WestCOG / DPW
2018	Require developers to incorporate "LID" measures	Zoning
	Develop maintenance plan for detention/retention ponds	Zoning
	Develop maintenance plan for stormwater treatment structures	Zoning
	Provide an update on DCIA Mapping	Zoning
2019	Establish legal authority for post-construction stormwater management	Zoning
	Complete DCIA Mapping	WestCOG / DPW
2020	Update DCIA Mapping	WestCOG / DPW
2021	Update DCIA Mapping	WestCOG / DPW

The Zoning Enforcement Officer shall have the legal authority to inspect erosion or sediment control measures for their effectiveness.

5.2 Post-Construction Stormwater Management reporting metrics

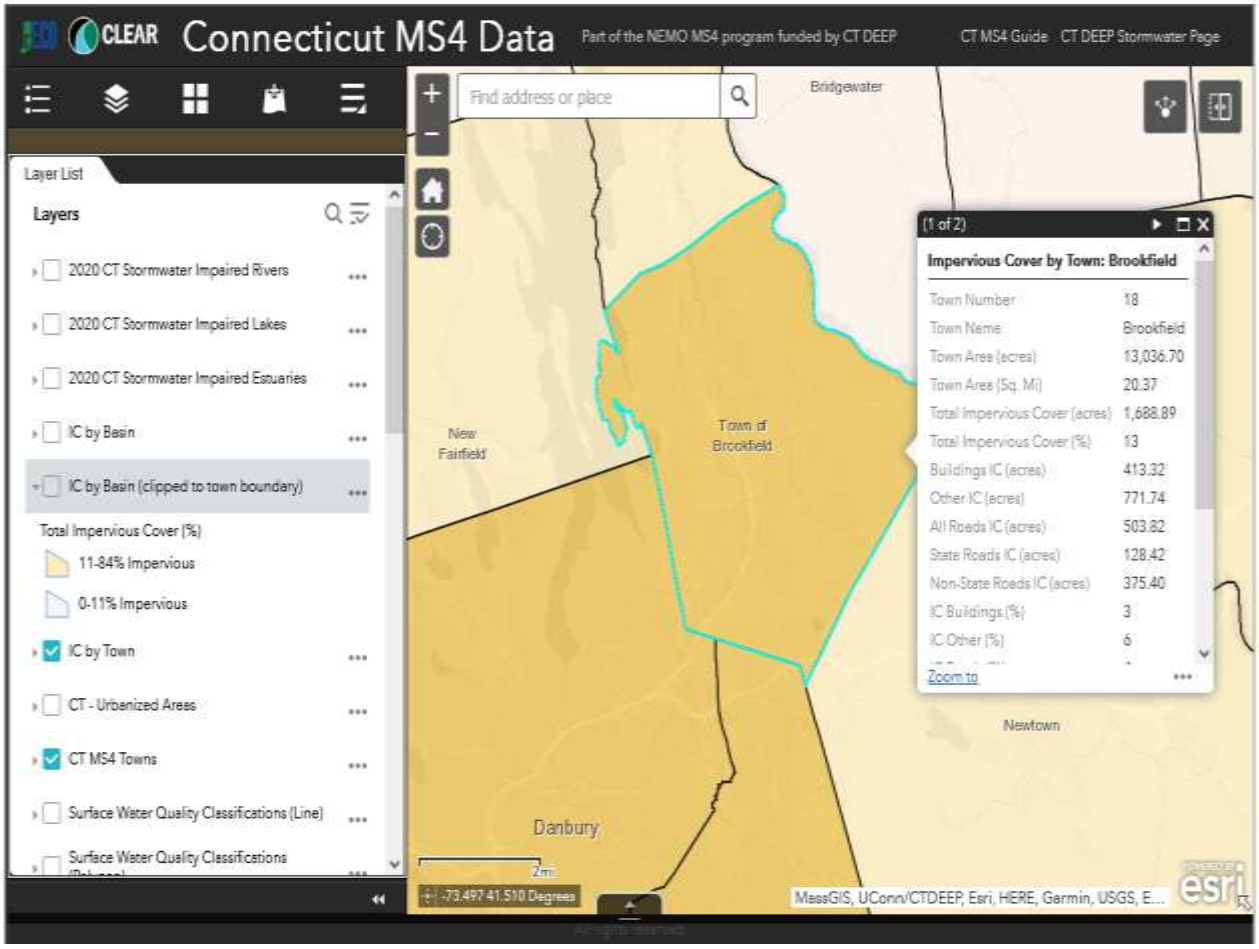
Metrics	
Baseline (2012) Directly Connected Impervious Area (DCIA)	acres
DCIA disconnected (redevelopment plus retrofits)	acres this year / acres total
Retrofits completed	#
DCIA disconnected	% this year / % total since 2012
Estimated cost of retrofits	$
Detention or retention ponds identified	# this year /# total

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

The town of Brookfield has chosen to use the CT NEMO impervious cover maps to determine its baseline impervious area as follows:

Assume Impervious Cover (IC) is 100% connected and is equal to DCIA. If you choose this method you'll likely overestimate the amount of DCIA but the advantage is this information is already available in the MS4 map viewer (use the 'IC by basin' layer).

Based on the map the DCIA as of 2023 is 13%.



In 2023 Brookfield continued to pursue a grant through the NFWF through the HVA to install a drainage retrofit at its town garage at 81 Grays Bridge Road adjacent to the Still River. The project is currently in the design phase.

Require developers to incorporate "LID" measures:

1. A Stormwater Management Plan ("SWM Plan") prepared in accordance with these Regulations is required to be include as part of the site plan for all applicable developments.
2. Guiding Principles: The SWM Plan shall be consistent with the purposes of Subsection 6.8(A) above, the principles and guidance set forth in the 2004 Connecticut Stormwater Quality Manual, and sound engineering and site planning practices, including known low impact development (LID) best management practices (BMPs). Bio retention techniques are preferred.

Develop maintenance plan for detention/retention ponds:

1. A Stormwater Management Plan ("SWM Plan") prepared in accordance with these Regulations is required to be include as part of the site plan for all applicable developments.

F. Required Stormwater Management Plan and Data

All new building construction, or an addition, alteration, or enlargement that results in an increase in the amount of impervious surface (paved drives, walks, patios, etc.) on a lot where the total impervious surface is ten percent or greater, shall require a Stormwater Management Plan. In addition to the data required elsewhere in these Regulations, the following data shall be required:

- A narrative report prepared by a licensed engineer indicating:
- Any risk or threat to Candlewood Lake or the water resources in its watershed from site development, site improvements, or on-site operations proposed in the application and measures
- Methods of assessment and best management practices to prevent and reduce any such risk or threat
- Supporting documentation, including calculations and engineering details, shall be provided to illustrate the existing and proposed development's compliance with these Regulations, which development shall be designed in accordance with the stormwater management design guidelines of the "Connecticut Stormwater Quality Manual" of 2004, as revised.
- A site plan indicating
- All relevant data required under Section 5.4(F)
- Location and area of all impervious surfaces on the site
- Location and area of turf cover (lawn areas)
- Location and area of all existing woodland areas
- Location and area of all existing and proposed vegetative buffer areas
- Location and description of all potential runoff and pollution sources including erosive soils and steep slopes
- Location and specification of all existing and proposed stormwater best management practices

G. Best Management Practices

The following practices and methods shall be incorporated into all Stormwater Management Plans where practicable:

- Vegetated swales, buffers, filter strips
- Level spreaders
- Grassed drainage swales, wet or dry
- Maintain or restore predevelopment vegetation
- Minimize creation of steep slopes
- Bio retention structures/residential rain gardens
- Rainwater harvesting/rain barrels
- Dry detention ponds
- Underground detention ponds
- Proper location and reduction of impervious surface area on site

- Disconnect flows from multiple impervious surfaces
- Permeable pavement choices
- Groundwater infiltration systems (curtain drains, drywells, galleries, etc.)

Develop maintenance plan for stormwater treatment structures:

A program for operation, monitoring, and maintenance of the stormwater management system, including scheduling of operation, monitoring, and maintenance activities, and observable physical signs of significant inadequate maintenance or function of the stormwater management system

Table 2: EPA Land Use Classes and Corresponding Sutherland Equations

EPA Code	Land Use	Watershed Selection Criteria	Sutherland Equation (where IA(%) >1)
1	Commercial	Average: Mostly storm sewered with curb & gutter, no dry wells or infiltration, residential rooftops not directly connected	DCIA%=0.1(IA%)^1.5
2	Industrial	Average: Mostly storm sewered with curb & gutter, no dry wells or infiltration, residential rooftops not directly connected	DCIA%=0.1(IA%)^1.5
3	Low Density Residential	Somewhat connected: 50% not storm sewered, but open section roads, grassy swales, residential rooftops not connected, some infiltration	DCIA%=0.04(IA%)^1.7
4	Medium Density Residential	Average: Mostly storm sewered with curb & gutter, no dry wells or infiltration, residential rooftops not directly connected	DCIA%=0.1(IA%)^1.5
5	High Density Residential	Highly connected: Same as above, but residential rooftops are connected	DCIA%=0.4(IA%)^1.2
6	Urban Public/ Institutional	Average: Mostly storm sewered with curb & gutter, no dry wells or infiltration, residential rooftops not directly connected	DCIA%=0.1(IA%)^1.5
7	Agriculture	Mostly disconnected: Small percentage of urban area is storm sewered, or 70% or more infiltrate/disconnected	DCIA%=0.01(IA%)^2

6. Pollution Prevention/Good Housekeeping (Section 6(*a*) (6) / page 31)

6.1 BMP Summary

	BMP	Responsible Person
2017	Continue implementing employee MS4 training	DPW / Land Use
	Develop catch basin cleaning plan	DPW
	Track disconnected DCIA Acreage	Land Use
	Establish and Implement Procedures for	Land Use / P&R / DPW
	parks and open space	
	pet waste	
	waterfowl	
	buildings and facilities	
	vehicles and equipment	
	leaves	
	street sweeping (including plan for outside priority area)	
	Street Sweeping plan for non-priority areas	
	Deicing Material	
	Snow and ice control	
	Begin MS4 Monitoring	DPW / Consultant
2018	Track disconnected DCIA Acreage	Land Use
	Develop Retrofit Project Plan	Land Use
	Continue MS4 Monitoring	DPW/ Consultant
2019	Track disconnected DCIA Acreage	Land Use
	Continue MS4 Monitoring	DPW / Consultant
2020	Track disconnected DCIA Acreage	Land Use
	Continue MS4 Monitoring	DPW / Consultant
2021	Have 2% DCIA disconnected. Every additional year 1% disconnection.	Land Use
	Track disconnected DCIA Acreage	Land Use
	Continue MS4 Monitoring	DPW / Consultant

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

In 2023, we continued our partnership with the HVA to monitor and test the outfalls along the Still River with the addition of illicit discharge detection and track down. The 2022 report is attached as an appendix to this report. The town also conducted testing of outfalls along Lake Lillinonah as well as several of the outfalls that the town considers vulnerable with the highest potential for IDDE. The testing data and HVA Still River report are attached as appendices.

All of our DPW employees were trained on good housekeeping, the use of pesticides, and chloride distribution for ice control and best management practices for fleet maintenance.

All town streets were swept at least once. All catch basins were inspected at least once and vacuumed when needed.

A new Vac Truck costing over $500k was purchased and received in late 2023 that will be put into use in the spring of 2024

The town also continued to operate its brush yard permitted by the CT DEEP where we collected over 300 tons of leaves from residential properties and our parks.

Land Use:

Nothing new to report in 2023

Parks and Recreation:

In 2023 under new leadership the Parks and Recreation department provided a more formal response to Pollution Prevention and Good Housekeeping.

Below, you'll find outlined procedures for managing parks and open spaces, pet waste, waterfowl, buildings and facilities, vehicles and equipment, leaves, street sweeping (with an emphasis on non-priority areas), and deicing materials.

Parks and Open Space

1. Maintenance Scheduling: Weekly maintenance schedules are in place for all parks and open spaces to include trash removal, landscaping, and repairs of amenities.

2. Community Involvement: Encourage community participation in park maintenance through volunteer cleanup days and adopt-a-park programs.
3. Sustainable Practices: Implement environmentally friendly landscaping practices, including the use of native plants, minimal use of pesticides, and efficient water use. Athletic Fields are non-irrigated or irrigated and monitored for daily water needs or for use.

Pet Waste

1. Installation of Pet Waste Stations: Parks and common areas with pet waste stations that include bags and disposal bins.
2. Public Education Campaign: Run a campaign to educate pet owners on the environmental and health impacts of not disposing of pet waste properly.
3. Enforcement: Currently in the process of creating a town ordinance that will allow Parks and Rec and the Police Department to enforce requiring pet owners to pick up after their pets.

Waterfowl

1. Feeding Restrictions: Discourage public feeding of waterfowl through signage and education since it can lead to overpopulation and health issues.
2. Habitat Management: Manage land around water bodies to create natural habitats that support healthy waterfowl populations.
3. Population Control: The Candlewood Lake Authority (CLA) implements humane population control measures when necessary, following expert wildlife management guidance. Each year, First Light obtains a federal permit that allows for the addling of Canada geese eggs. The CLA is responsible for this task and reports their work to the federal government, providing updates to First Light thereafter. (see attached photos for results from 2022 and 2023).

Buildings and Facilities

1. Energy Efficiency: Audit all buildings for energy efficiency and make necessary upgrades to insulation, windows, and HVAC systems.
2. Regular Maintenance: Establish a regular maintenance schedule for all facilities to ensure they are safe and well-maintained.
3. Sustainability Policies: Implement policies to reduce waste, encourage recycling, and utilize sustainable materials and technologies in facility operations.

Vehicles and Equipment

1. Maintenance and Upgrades: Ensure all vehicles and equipment are regularly serviced and upgrade to more efficient models as they become available.

1. Training: Provide training for all operators on the efficient and safe operation of vehicles and equipment.

Leaves

1. Public Education Leaf Composting: Collaborate with Housatonic Resources Recovery Authority, HRRA to offer composting classes that encourage composting of leaves by residents and establish community composting facilities. (https://hrra.org/recycled-beauty-2/year-round-compost/)
2. Public Education Leaf Mulching: Collaborate with the Conservation Commission to educate the community on the benefits of leaf mulching for lawn health and provide guidelines for proper mulching techniques.
3. Leaf Mulching: We currently practice less leaf removal during fall clean up and instead put them back into the turf wherever possible in parks and trails.

Street Sweeping (Including Plan for Outside Priority Area)

1. Regular Schedule: Establish a regular sweeping schedule for the Still River Greenway along with parking lot areas within municipal sites and school grounds, ensuring priority areas are addressed frequently, while also incorporating non-priority areas on a less frequent but regular basis.
2. Public Notification: Notify residents of sweeping schedules and enforce parking restrictions to ensure streets are clear for sweeping operations.
3. Waste Management: Properly dispose of or recycle sweepings in accordance with environmental regulations.

Street Sweeping Plan for Non-Priority Areas (parking lots etc.)

1. Assessment: Regularly assess non-priority areas to determine if the frequency of sweeping needs adjustment based on seasonal needs or community feedback.
2. Flexibility: Maintain flexibility in scheduling to address unexpected needs or emergencies in non-priority areas.
3. Efficiency: Use efficient and appropriate-sized sweeping equipment for non-priority areas to optimize cleaning while minimizing disruption.

Deicing Material

1. Material Selection: Choose deicing materials, such as brine and ProMelt Ultra 1000, that are effective but minimize environmental impact.
2. Application Guidelines: Establish guidelines for the appropriate amount and conditions for deicing material application to avoid overuse.
3. Storage and Handling: Ensure proper storage and handling of deicing materials to prevent runoff and contamination of waterways.
4. Training: All staff are trained under the state of CT Green Snow program and follow updates and practices that limit the amount of salt products going into the environment.

Each of these procedures should be implemented with an eye toward flexibility and responsiveness to the community's needs and environmental impact, engaging local stakeholders for feedback and improvement regularly.

Leaf collection at municipal and school properties are composted at the Town’s compost facility.

Implement pet waste management practices:

Garbage cans are provided and pet waste disposal requirements are posted at high use facilities.
There are no dog parks in Brookfield.
There are no known pet waste issues that pose a threat to wetlands or waterbodies.

Develop/Implement water fowl management practices:
Canada geese sometimes congregate at the Town Beach/Cadigan Park. We've employed deterrents including cut outs of dogs, temporary fencing, use of cat scat mats on docks, and addition of moving objects such as pinwheels. In 2019 we plan to begin using noise making devices to disperse geese. There is no known issue of residents feeding the geese.

6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics	
Employee training provided for key staff	Nov 1 2023
Snow and Ice Control (DPW)	Nov 1 2023
Street sweeping	
Curb miles swept	202
Volume (or mass) of material collected	500 tons +/- per year
Catch basin cleaning	
Total outfalls to Impaired Waters	24
Total catch basins in MS4	2000 +/-
Catch basins inspected	100%
Catch basins cleaned during reporting year	450
Volume (or mass) of material removed from all catch basins	unknown
Volume removed from catch basins to impaired waters (if known)	unknown
Snow management	
Type(s) of deicing material used	NaCl / Magic-o liquid (MgCl)
Total amount of each deicing material applied	3000 tons +/- (average)
Type(s) of deicing equipment used	Plow trucks and spreaders
Lane-miles treated	202
Snow disposal location	Recycle Yard as needed
Staff training provided on application methods & equipment	Initially in October 2018 and is ongoing
Municipal turf management program actions (for permittee properties in basins with N/P impairments)	Unknown P&R
Reduction in application of fertilizers (since start of permit)	20% (approx.)
Reduction in turf area (since start of permit)	142,000 sq. ft.
Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)	See above
Cost of mitigation actions/retrofits	$700k+ capital outlay from the permit start date plus $100k + annually for operating expenditures

6.4 Catch basin cleaning program

Briefly describe the method used to optimize your catch basin inspection and cleaning schedule. [Complete this section for the 2017 Annual Report only]

In 2023 all of our catch basins were inspected, cleaned as necessary and all of our roads were swept. We conducted cross training of our employees so we have multiple people capable of running the street sweeper and vac truck to make our department more flexible and efficient as it relates to MS4. A new Vac Truck was purchased and delivered in 2023. It will be activated in the spring of 2024. .

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. [Provide information if available in 2017 report. Section to be completed for the 2019 Annual Report.]

In 2023 the DPW continued to pursue a NFWF retrofit grant through the HVA to be used at our town garage. The project is in the design phase.

Describe plans for continuing the Retrofit program and how to achieve a goal of 1% DCIA disconnection in future years. [Provide information if available in 2017 report. Section to be completed for the 2019 Annual Report.]

Based on current budgets the Brookfield DPW paves approximately 3 to 5 miles of road per year. Since Brookfield has approximately 100 miles of road this accounts for approximately 3% to 5% of our road and drainage system. We plan to continue our strategy of eliminating curb when possible in order to encourage sheet flow runoff patterns an infiltration rather than direct delivery to steams and wetlands through drain pipes.

Land Use overhauled and adopted new Zoning Regulations in 2018. This item was taken into consideration for future re-development projects. Actual percentages of disconnect will most likely correlate with the development activity and is hard to project at this time. With that said for many years the Town of Brookfield has been ahead of the curve in this area. The town has not let any resident tie into storm drains. All commercial development goes through a LID or Cultec system.

Part II: Impaired waters investigation and monitoring [This section required beginning with 2018 Annual Report]

1. Impaired waters investigation and monitoring program

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 [X] Bacteria [X] Mercury [ ] Other Pollutant of Concern [X]

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.

In 2023 due to the changes at Hydro-Technologies the townformulated a new strategy to collect and test effluent form our designated outflows. Samples will now be collected by CCA Engineering and delivered to York Labs for testing and reporting. In 2023 due to unusual wetharte patterns there were few opportunitied to collect samples after events meeting the criteria for MS4. Samples were collected in 2024 after a rain event that was marginal. Sample data is included with this report.

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

See attached screening data for select outfalls.

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

Provide the following information for outfalls exceeding the pollutant threshold.

NA for 2023

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

Once outfall screening 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, 2020.

See the appendix for the outfall testing reports for 2023.

Part III: Additional IDDE Program Data [**This section required beginning with 2018 Annual Report**]

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).

The areas of Brookfield with the highest percentages of impermeable surface are along the Federal Corridor which coincides with the route of the Still River flowing north. Although the Still River is not considered impaired in Brookfield it is still an area of concern, our most vulnerable area and is considered a top priority catchment area. The majority of the storm water system along this corridor and especially the areas with the most impervious surface is owned and maintained by the state of Connecticut although there are several town roads such as Grays Bridge Road, Dean Road, Del Mar Drive and Pocono Road which run adjacent to the Still River. Grays Bridge Road runs along the west bank of the river (with Route 84 on the east) from the Danbury town line heading north to the Gray's Bridge and then several town roads run along the east bank to a point at which the Still River crosses under state Route 25 as it approaches New Milford. The outfalls along this corridor are being tested as part of the HVA study and annual report on the condition on the overall condition of the Still River. The latest report was prepared in 2022. We are awaiting the 2023 report. The 2022 repor is included as an attachment to Brookfield's annual report. We plan to continue this arrangement with the HVA in 2024.

In 2023 we continued or arrangement with Tighe and Bond to host and refine our MS4 maps. We also used UCONN NEMO maps as a source in order to determine basin ranking and estimated impervious cover in each basin

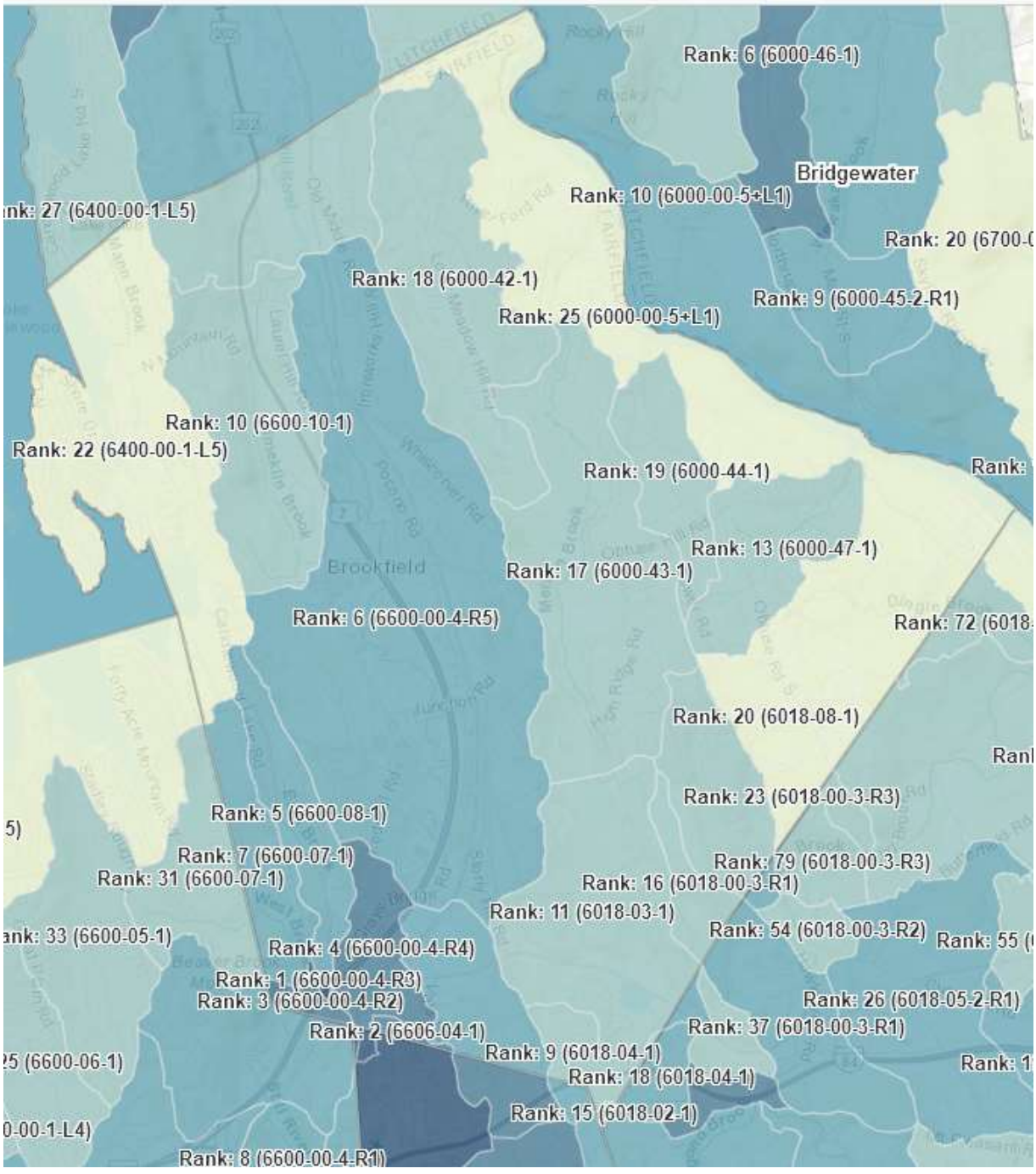
Watershed Data / Impervious Cover 2022

Basin #				Impervious %	Rank	sub-Region
6000	0	4	R4	20-29%	4	Housatonic River
6600	7	1		12-20%	5	Still River
6600	0	4	R5	12-20%	6	Still River
6600	7	1		12-20%	7	Still River
6600	9	1		12-20%	8	Still River
6018	4	1		8-12%	9	Pond Brook
6600	10	1		8-12%	10	Still River
6018	3	1		8-12%	11	Pond Brook
6000	47	1		8-12%	13	Housatonic River
6600	14	4	R6	8-12%	14	Still River
6018	0	3	R1	8-12%	16	Pond Brook
6000	43	1		8-12%	17	Housatonic River
6000	42	1		8-12%	18	Housatonic River
6000	44	1		8-12%	19	Housatonic River
6018	8	1		4-8%	20	Pond Brook
6018	9	1		4-8%	21	Pond Brook

6400	0	1	L5	4-8%	22	Lake Candlewood
6018	0	3	R3	8-12%	23	Pond Brook
6000	0	5	L1	4-8%	25	Housatonic River

We have partnered with the WestCOG in order to prioritize our catchment areas in 2019. The data is currently available at the following link provided by WestCOG. Our relationship continued through 2023 and is expected to continue indefinitely until reported otherwise.

http://www.arcgis.com/home/webmap/viewer.html?webmap=c02a359f13f2497b853c209a570093ac&extent=-73.9717,41.022,-72.3539,41.6623



4 to 8%
8 to 12%
12 to 20%
20 to 29%

The Town has hired Tighe and Bond to assist the Town in developing digital maps. We are currently in the process of identifying catchment areas and ranking the results. Data should be finalized for the 2019 report to include priority and ranking.

In addition in 2019 we added impervious cover and estimated impervious percentages to our town MS4 digital maps. We will continue to streamline this as we move forward.

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

Provide sample data for outfalls where flow is observed. Only include Pollutant of concern data for outfalls that discharge into stormwater impaired waterbodies.

In 2023 as part of our street sweeping program we inspected ALL of our catch basins, not only those that led directly to outfalls. Our street sweeping personnel have been trained and continued to receive training in 2019 and 2022 on how to identify an illicit discharge by noticing flows in extremely dry weather or by noticing an unusual color, texture or smell to the water flowing through each basin. When problems are identified the personnel on- site will inform their immediate supervisor who will start the investigation process. None were reported in 2o23. A log of catch basins cleaned is maintained in the DPW office.

2.2 Wet weather sample and inspection data

Provide sample data for outfalls and key junction manholes of any catchment area with at least one System Vulnerability Factor.

In 2023 through or collaborative effort with the WPCA and Tighe and Bond we were able to incorporate the WPCA sewer main maps into our MS4 maps. Once that was complete we identified SVF's by determining where the major sewer lines crossed our storm drain system. Our maps will be reviewed and updated each year as the WPCA system expands or as changes are made to the storm dr5ain system.

We plan to continue to update our SVF;s in 2024 by identifying large hazardous chemical users in Brookfield.

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

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
	NA for 2023	
	NA for 2022	
	NA for 2021	
	NA for 2020	
	NA for 2019	
	NA for 2018	
	NA for 2017	

SVF identification will be a priority for 2024.

Water Pollution Control Authority (WPCA) Response

In 2021 the town began to collaborate with the Brookfield Water Pollution Control Authority (WPCA) to determine the existence of SVF's as they relate to the sanitary sewer system. The collaboration continued through 2023.

To date we have obtained maps of the WPCA system to determine where there are significant crossings of sanitary and storm sewer with the potential for leaks and infiltration. These maps are included with our MS4 maps hosted by Tighe and Bond.

The WPCA also regularly monitors inflow and outflow to determine vulnerability and identify potential failures. Sanitary Manholes are inspected regularly and maintenance is performed as necessary.

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.- **None identified**

2. Sewer pump/lift stations, siphons, or known sanitary sewer restrictions where power/equipment failures or blockages could readily result in SSOs-

Facility Name/Type	Physical Address		GPS Coordinates
Silvermine Rd/Railroad	35A Silvermine Road	**73° 23' 49.697" W**	**41° 28' 9.672" N**
Del Mar Drive	56A Del Mar Drive	**73° 23' 51.895" W**	**41° 26' 58.391" N**
Commerce Road	115A Commerce Road	**73° 23' 39.954" W**	**41° 26' 52.708" N**
Brooks Quarry	126A Laurel Hill Road	**073° 24' 44.676" W**	**41° 29' 24.558" N**

3. Inadequate sanitary sewer level of service (LOS) resulting in regular surcharging, customer back-ups, or frequent customer complaints.- **None identified.**

4. Common or twin-invert manholes serving storm and sanitary sewer alignments.- **None**
5. Common trench construction serving both storm and sanitary sewer alignments.- **None**
6. Crossings of storm and sanitary sewer alignments.-

In 2023 the following town roads have been identified as having both sanitary and storm sewer. Actual crossings were identified using a unique icon on our MS4 digital maps in 2023.

Production Drive
Laurel Hill Rd Both ends
Station Rd
Old Rt 7
Elbow Hill Rd
Silvermine Rd
Pocono Rd
Commerce Rd
Old New Milford Rd
Greenknoll
Sandy Lane
Old State Rd
Old Grays Bridge Rd
Grays Bridge Rd
Vale Rd
West Whisconier Rd
Stony Hill Rd
Candlewood Lake Rd
Nabby Rd

7. *Sanitary sewer alignments known or suspected to have been constructed with an underdrain system****;- None identified.***
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.-* ***No significant defects detected.in 2021***
9. *Areas formerly served by combined sewer systems.-* ***None***
10. *Any sanitary sewer and storm drain infrastructure greater than 40 years old in medium and densely developed areas.-* ***The entire WPCA system is less than 40 years old.***
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****).- Not widespread***

As of December 31,2021

Brookfield has not experienced widespread "code required" upgrades but current codes are enforced when systems are replaced many of which did not exist when the original system was installed.

As far as property transfers are concerned, they do drive a substantial portion of repairs/replacements of existing septic systems as licensed septic installers nearly always perform inspections of systems for potential buyers in Brookfield. These inspections did not occur 10 to 15 years ago or certainly not to the quality and quantity of the inspections. Often, these inspections reveal concerns, not necessarily failure, that can interfere with the buyer's ability to get financing. Even though the septic systems are most often not in failure, there are concerns that either certain components (distribution boxes, tank baffles, pipes) should be replaced or the leaching fields are near the end of their useful life (flooded/holding too much water – either septage or groundwater or a combination). Often this happens when an elderly person or couple is selling their home who have a relatively low water usage and a young person or couple with family or planning a family are buying – hence the financer's concern.

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).

As of December 31, 2021

The town of Brookfield has not experienced widespread sewer failures although there are several areas in Brookfield that are of concern.

Orders to fix a failed septic system are issued on average approximately 2 to 6 times annually (that is, orders are to 2 to 6 homeowners per year). Relative to the number of households in Brookfield that is a low percentage.

It would be advantageous to the town to bring sanitary sewer to Pocono and Dean Roads due mostly to poor soils and drainage in a portion of the area (east) combined with very sandy soils in another area (west) very close to the Still River. The outfalls in this area are monitored and tested through our partnership with the HVA mentioned previously.

Other areas of concern where the town DOES NOT own and maintain a stormater system but are close to the Still River are as follows:

The area of 277 Whisconier Road and Tucks Road. Soils in this area are very sandy and very close to the Still River. Additionally, the 1 Tuck's Road system experiences back-ups (failure) and there is not enough room to fit a code-compliant septic system on the lot. Also, the 12 Tuck's Road system is in failure and cannot be repaired on site due to soil contamination from the industry there. The 3,000 gallon tank there is pumped frequently enough to prevent septage from leaving the tank. This is a stopgap measure and sanitary sewers are the only acceptable long-term answer.

The Candlewood Lake Shores peninsula is a private community with a privately owned and maintained stormwater system independent of the towns system. Septic issues are of particular concern due to the density of the lots, the fact that the original homes were built for summer use primarily (so less usage/less septage deposition/lower design flows) and many are now lived in year-round, the difficulty of fitting code-compliant repairs on the relatively small lots and the environmental sensitivity/probable negative impacts on the lake water quality.

3.2 Key junction manhole dry weather screening and sampling data

As of 2023 there are no known connections with other non- town owned and maintained drainage systems.

In 2024 Land Use will review its records to determine if this is still the case.

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
NA 2017							
NA 2018							
NA 2019							
NA 2020							
NA 2021							
NA 2022	see the	Appendix A	HVA IDDE report				
NA 2023							

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: Tara Carr / First Selectperson	Print Name :Ralph Tedesco / Director of PW
Signature / Date:	Signature / Date: