

MS4 - Municipal Separate Storm Sewer System

- MS4 Basics
- MS4 Permit Overview
- Stormwater Management Plan
- Bristol MS4 Highlights/Discussion



Board of Public Works
July 16, 2020

MS4 Overview

Regulatory History

NPDES - National Pollutant Discharge Elimination System

- Permits issued by EPA or authorized states

MS4 - Municipal Separate Storm Sewer System

- A publicly owned stormwater runoff conveyance system
- Discharges to the waters of the U.S.

1972

- Clean Water Act
- NPDES developed to address point source pollution
- Sewage Treatment Plants and Industrial Wastewater

1990

- EPA regulates MS4 Phase I
- NPDES expanded to address non-point source pollution
- Towns/Cities with populations >100,000

1999

- MS4 Phase II
- Towns/Cities with populations <100,000 (Small MS4's)
- Non-Traditional MS4s (state and federal institutions)

2004

- CT DEEP issued Small MS4 General Permit
- 113 Towns/Cities

2017

- CT DEEP re-issued Small MS4 General Permit, added 8 towns and all institutions



Image from Bristol GIS, 2019 aerial, 75 Battisto Road (Bristol WPC)

MS4 Basics



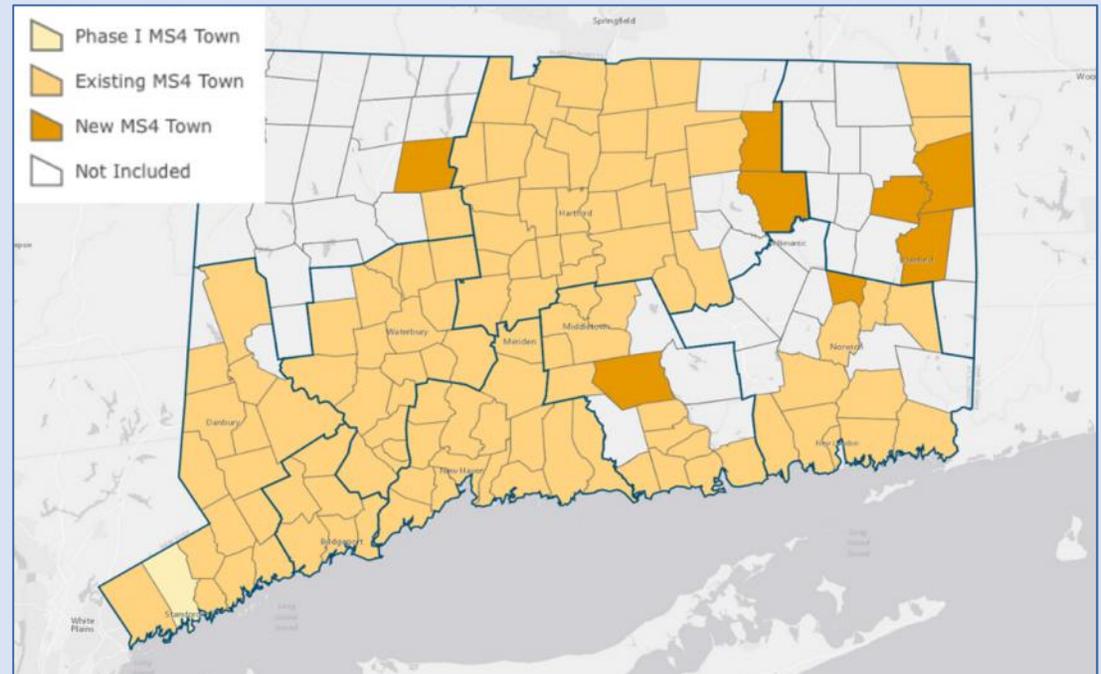
Examples of Non-Point Source Pollution

- Septic Systems
- Fertilizers
- Erosion
- Grass / Leaves
- Pet Waste
- Motor Oil
- Trash
- Detergents



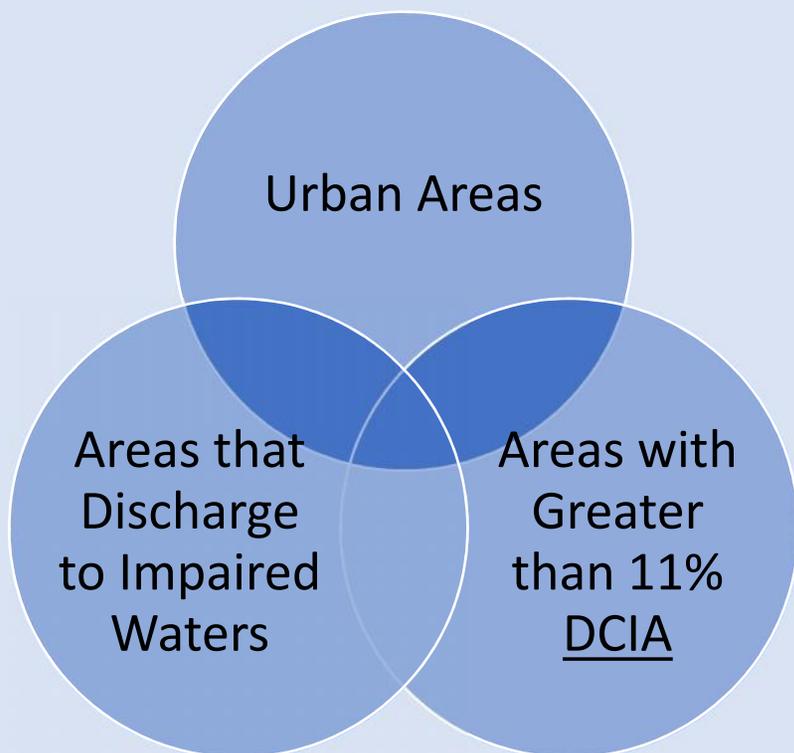
MS4 Permit Overview in CT

- 121 municipalities are regulated under the Small MS4 General Permit
- 113 municipalities since 2004
- A general permit is issued by CT DEEP under the authority of Section 22a-430b of the CT General Statutes.
https://portal.ct.gov/-/media/DEEP/Permits_and_Licenses/Water_Discharge_General_Permits/MS4gpdf.pdf?la=en
- Operators of regulated MS4s are required to reduce the discharge of pollutants to the “maximum extent practicable” (MEP), protect water quality and satisfy the requirements of the Clean Water Act
- Registration and Stormwater Management Plan certifications are required for general permit authorization of MS4 discharges. Annual reports are required using the measurable goals for each minimum control measure as benchmarks for evaluating program effectiveness



CT MS4 Municipalities. University of Connecticut Center for Land Use Education and Research and CT Nonpoint Education for Municipal Officials. Retrieved from <https://nemo.uconn.edu/ms4/basics/towns-institutions.htm>

MS4 Priority Areas



Directly Conected Impervious Area (DCIA)



Retrieved from UCONN NEMO "What Type of Impervious Cover do you Have?"
<https://nemo.uconn.edu/ic-guide/step2-type.htm>

Non-Directly Connected Impervious Area (nDCIA)



Retrieved from UCONN NEMO "What Type of Impervious Cover do you Have?"
<https://nemo.uconn.edu/ic-guide/step2-type.htm>

Priority areas: means areas in the Urbanized Area **and** in catchments with more than 11% DCIA **or** catchments that discharge to an impaired waterbody. If any one of these conditions exists, it's part of the priority area.

MS4 Assistance Program

NEMO-Nonpoint Education for Municipal Officials

Connecticut MS4 Guide

Home Basics Tasks Tools About MS4 News NEMO CLEAR



Public Education & Outreach



Public Involvement



Illicit Discharge Detection & Elimination



Construction Site Stormwater Runoff Control



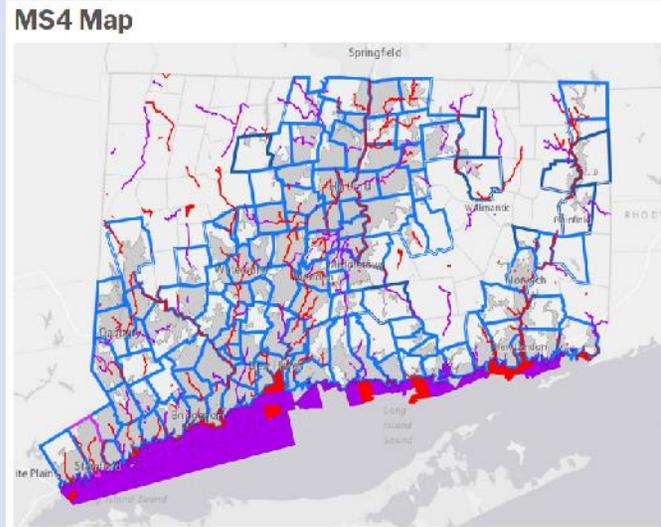
Post-construction Stormwater Management



Pollution Prevention & Good Housekeeping

This guide was developed by NEMO program staff within the UConn Center for Land Use Education and Research with funding from the Connecticut Department of Energy and Environmental Protection (DEEP). It is part of a broad outreach effort to provide guidance, training, tools and other support to help Connecticut MS4 communities and institutions comply with the revised MS4 general permit. This website is frequently updated and materials will be added throughout the 5-year project period (Fall 2016 – Fall 2021) based on deadlines for various requirements and community needs or requests.

Monitoring
Mapping
Legal Authorities



Stormwater System Mapping Template

Posted on September 4, 2019 by David Dickson

A new tool is available to make it easier for communities to create or enhance a map of their stormwater system. The CT GIS Network's Standards Committee has collaborated with the <https://www.ct.gov/deep/cdm/sectors/land-use-and-construction/> to develop a Stormwater System Mapping Template. The template provides a framework for mapping everything from your catch basins to your stormwater outfalls and everything in between. It is geared toward meeting the requirements for system mapping found in the MS4 general permit, but is useful for any community looking to get a better handle on its stormwater drainage network.

The template is available in three different formats on the [mapping](#) page of UConn CLUEA's Online MS4 Guide:

1. a [screensheet](#) (if you don't speak GIS and want to look at the template in Excel to see what categories there are),
2. a [geodatabase](#) (if you want to create a new Esri geodatabase in your GIS), or
3. a [XML Schema](#) (if you want to import just the schema into an existing or new Esri geodatabase).

UConn is using this schema to map their entire statewide drainage network over the next 10 years. It is hoped that by working toward a standardized format for this information, the sharing of this valuable information between the state system and local and institutional systems will be easier. This even if you have already started mapping your system, it would be useful to review the new template to see how UConn is collecting and will soon be sharing their data.

If you have any questions about the new template, contact gary.chadwick@uconn.edu or david.dickson@uconn.edu.



Monitoring requirement for bacteria impaired waters

Posted on February 26, 2020 by Amanda Ryan

First, a very quick summary of the impaired waters monitoring program:

One [MS4 monitoring requirement](#) is that MS4s conduct wet weather monitoring of all outfalls that discharge directly to stormwater impaired waterbodies which can be impaired by bacteria, nitrogen, phosphorus, or other pollutant of concern. Impaired waterbodies can be seen on the MS4 map viewer: <https://nemo.uconn.edu/ms4/tools/ms4map.html>.

The clarification: Total coliform only needs to be measured when the outfall discharges to an AA waterbody – which indicates is a potential source of drinking water.



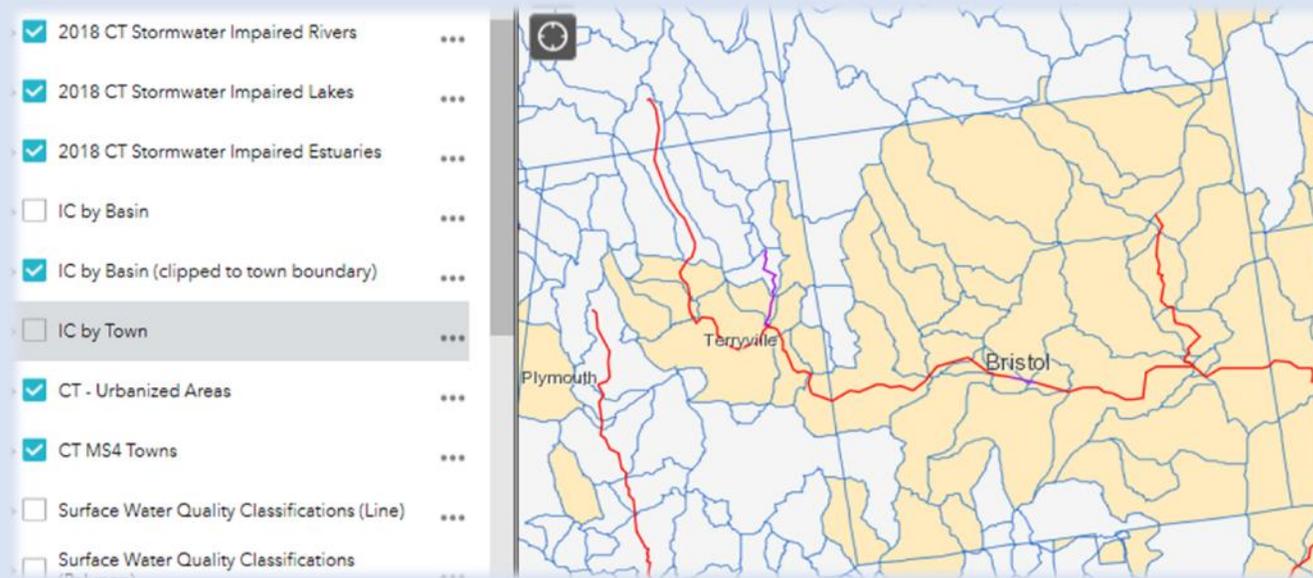
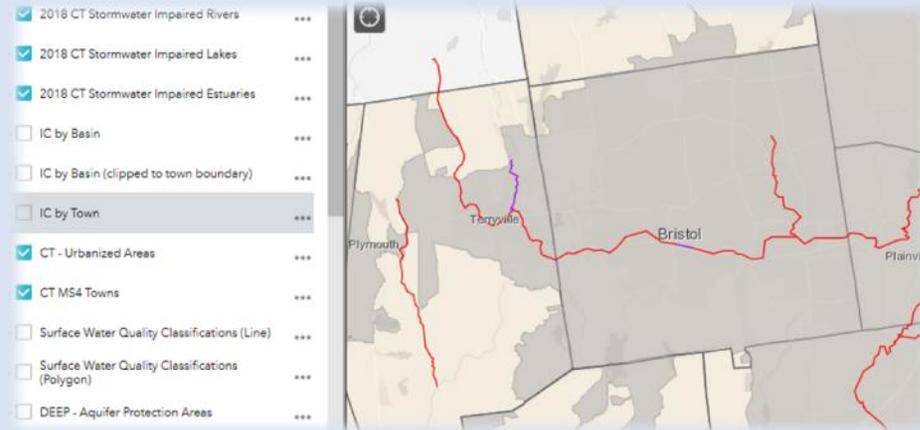
Rain Garden App

A Mobile App for designing, installing, and maintaining a Rain Garden

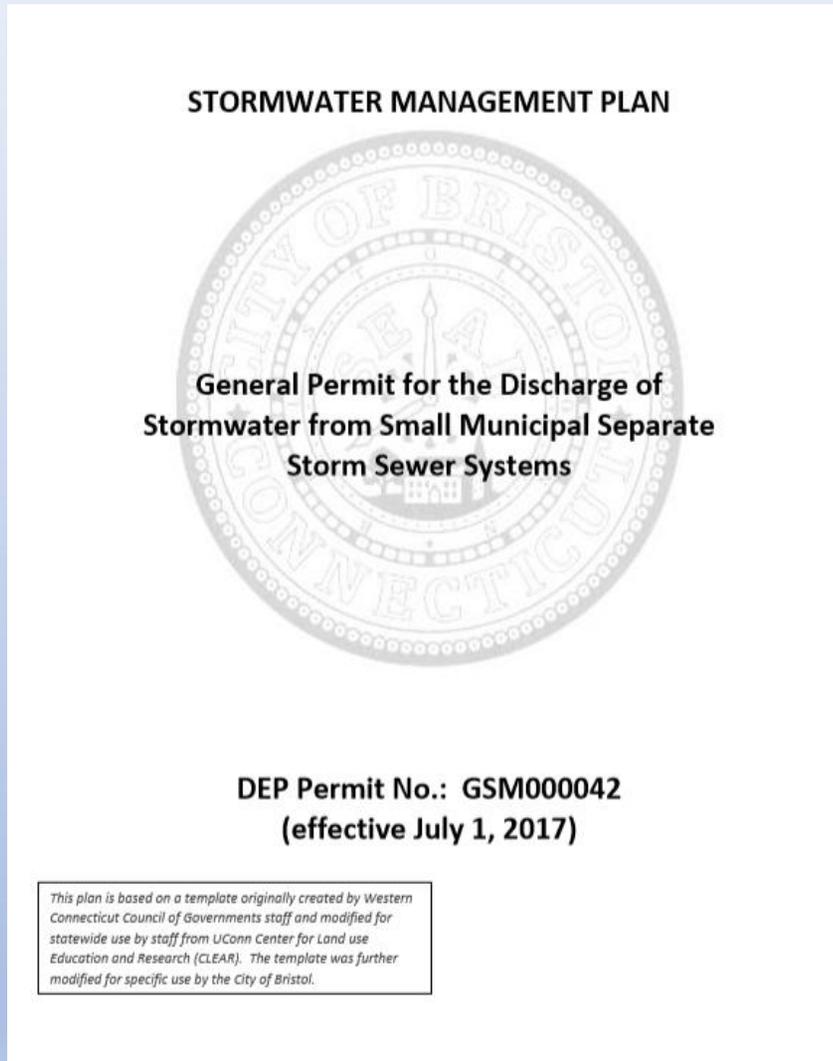
MS4 Permit Overview

Bristol on the MS4 Map

Impervious Cover by Town: Bristol	
Town Number	17
Town Name	Bristol
Town Area (acres)	17,168.40
Town Area (Sq. Mi)	26.83
Total Impervious Cover (acres)	3,830.39
Total Impervious Cover (%)	22
Buildings IC (acres)	1,119.86
Other IC (acres)	1,726.45
All Roads IC (acres)	984.08
State Roads IC (acres)	105.97
Non-State Roads IC (acres)	878.11
IC Buildings (%)	7
IC Other (%)	10



Bristol's Stormwater Management Plan (SMP)



- Bristol's plan on implementing its MS4 Program
- Plan can be found here:
<http://www.bristolct.gov/226/Informational-Links>

Six Minimum Control Measures (MCMs)

- MCM 1 -Public Outreach & Education
 - MCM 2 - Public Involvement / Participation
 - MCM 3 - Illicit Discharge Detection & Elimination
 - MCM 4 - Construction Site Stormwater Runoff Control
 - MCM 5 - Post Construction Stormwater Management
 - MCM 6 - Pollution Prevention / Good Housekeeping
- Plus, outfall monitoring

MCM 2 – Public Involvement & Participation

This minimum control measure identifies the process for public involvement and participation in the town's stormwater management efforts.

Goals:

- Involve the community in planning and implementing the town's stormwater management activities.
- Provide a minimum 30 day notice to the public for this plan and annual reports.

Volunteers Needed! Rain Garden Planting Page Park, Bristol, CT: May 8, 9 & 10, 2019

We are thrilled to continue with more installations this year thanks to grant funding and support from the City of Bristol. But we need **volunteers** to help complete the final step of the rain garden process!

Please call FRWA at 860-658-4442 or email Aimee at apetras@frwa.org to register.



BMP	Lead department / individual	Month / year of implementation	Measurable goal
BMP 2-1 Comply with public notice requirements for the SMP and Annual Reports	DPW-Eng/Env Eng	July 1, 2017 and continue until permit expires	Publish a public notice on City's Public Works website with contact information for public input and information on SMP and annual reports.
BMP 2-2 Public Information/Participation	DPW-Eng/Env Eng	June 2018 and continue until permit expires	Cross agency postings
BMP 2-3 Participation for Pequabuck River Watershed Plan	DPW-Eng/Env Eng	June 2018 and continuing for plan implementation	Stakeholders meeting(s) participation

Thursday & Friday May 30 & 31 2 PM- 7 PM

Bristol Eastern High School (west side of parking area)

Arrive when you can; Join in during any of the days and hours listed. Bring your own gloves, if you've got 'em, but we'll have 'em, too.

More information, Mary Rydingsward pequabuckriverct@gmail.com 860.670.4761

What is a Rain Garden?

A rain garden is a depression (about 6 inches deep) that collects stormwater runoff from a roof, driveway or yard and allows it to infiltrate into the ground. Rain gardens are typically planted with shrubs and perennials (natives are ideal), and can be colorful, landscaped areas in your yard.

Why a Rain Garden?

Every time it rains, water runs off impervious surfaces such as roofs, driveways, roads and parking lots, collecting pollutants along the way. This runoff has been cited by the United States Environmental Protection Agency as a major source of pollution to our nation's waterways. By building a rain garden at your home, you can reduce the amount of pollutants that leave your yard and enter nearby lakes, streams and ponds.



Bristol Green Team

Permit tasks for MCM 2:

Post draft Annual Report

Submit final Annual Report to DEEP

Pequabuck River Watershed Association

Meet between 8 - 8:15 AM in Nuchie's Parking lot, Forestville Center or contact Jolene Dutkiewicz at jdutk@yahoo.com for the Terryville location. You'll see the PRWA signs!




**Saturday
April 27**

8:00 AM-12:30 PM

RIVER CLEANUP

Best Management Practices Tour of the Pequabuck River Watershed



Join us as we tour locations throughout the watershed and discuss with experts the value of installations designed to improve the health of our river and our drinking water. This tour is designed to inform land use officials and others interested in environmental solutions aimed at creating a healthy watershed. Subject-matter experts on our tour include: Laura A.S. Wildman, P.E., Director, New England Regional Office Princeton Hydro, Water Resources and Fisheries Engineer; Ray Rogozinski, P.E., Director of Public Works, City of Bristol; Scott Heth, Executive Director, Environmental Learning Centers of CT; Aimee Petras, Farmington River Watershed Association; Carl Swanson, Trout-in-the-Classroom Chair, Farmington Valley Trout Unlimited.

**Saturday, October 5
10:00 AM-12:30 PM**



MCM 3 – IDDE (Illicit Discharge Detection & Elimination)

Goal:

Find the source of any illicit discharges; eliminate those illicit discharges; and ensure ongoing screening and tracking to prevent and eliminate future illicit discharges.

BMP	Lead department / individual	Month / year of implementation	Measurable goal
BMP 3-1 Develop written IDDE program	DPW-Eng/Env Erg	June 2018	Formalize existing program plan
BMP 3-2 Develop list and maps of all MS4 stormwater outfall in priority areas	DPW-Eng/Env Erg	June 2019	Complete GIS Database (See also BMP 5-4)
BMP 3-3 Develop citizen reporting program	DPW-Eng/Env Erg	June 2018	Update existing citizen reporting options to include website
BMP 3-4 Establish legal authority to prohibit illicit discharges	DPW-Eng/Env Erg	June 2018	Update legal authority and formalize with statement of assignment of program responsibilities
BMP 3-5 Develop record keeping system for IDDE tracking	DPW-Eng/Env Erg	June 2017	Formalize record keeping protocol for incorporation into written IDDE plan
BMP 3-6 Address IDDE in areas with pollutants of concern	DPW-Eng/Env Erg	June 2019	Complete initial illicit discharge assessment and initial priority ranking (See also BMP 3-7)
BMP 3-7 Incorporate written procedure for screening and sampling of outfalls & MS4 interconnections/catchment investigation procedure	DPW-Eng/Env Erg	June 2018	Formalize written catchment investigation/manhole inspection/outfall screening procedure for IDDE program (use BMP 5-4 for implementation)
BMP 3-8 Sanitary Sewer Overflow (SSO) Inventory	DPW-Eng/Environmental Protection Technician (EPT)	October 2017	Incorporate all known SSOs to the MS4 for past 5 years into the GIS database
BMP 3-9 Develop Illicit Discharge Prevention procedures	DPW-Eng/Env Erg	June 2018	Incorporate into IDDE plan (BMP 3-1) and public education program (BMP 1-2)
BMP 3-10 Perform IDDE staff training	DPW-Eng/Env Erg	Every June	Staff training on initial program and at least annual refresher for program updates



Re: Notice of Violation – Debris along the edge of the tributary – Avenue

An inspection of the above mentioned property was conducted on Janu indicate that you own both sides of the brook. It appears that th bank/within the river.

You are required to take the following actions and repairs.

- Immediately remove all trash/debris along the sides of the river fallen into the river.
- Keep all dumpsters closed and all trash contained within a dump

Permit tasks for MCM 3:

Citizen reporting program
Record illicit discharge abatement activities
Maintain Inventory of known SSOs (5 year look back)
Develop written IDDE program
Establish IDDE legal authority
Map all MS4 outfalls
Complete dry weather outfall sampling (for high & low priority catchments)
Detailed MS4 mapping

MCM 4 – Construction Runoff Controls

This minimum control measure outlines procedures for minimizing polluted stormwater runoff from construction activities.

Goal:
Minimize polluted stormwater runoff from construction sites and prevent it from carrying sediment into waterways via MS4 infrastructure.



BMP	Lead department / individual	Month / year of implementation	Measurable goal
BMP 4-1 Implement, upgrade (as necessary), and enforce land use regs (or other legal authority) to meeting MS4 permit requirements	DPW-Eng/Env Eng & City Eng	June 2019	Upgrade and consolidate construction site runoff control program and stormwater system long-term maintenance requirements
BMP 4-2 Develop/implement plan for interdepartmental coordination in site plan review and approval	DPW-Eng/Env Eng and City Planner	June 2017	Upgrade and consolidate interdepartmental responsibility plan
BMP 4-3 Review site plans for stormwater quality concerns	DPW-Eng/Env Eng & City Eng	June 2017	Document site plan review procedures for stormwater management controls and management practices
BMP 4-4 Conduct site inspections	DPW-Eng/EPT and other DPW Inspectors	June 2017	Continue site inspection program, including coordination with EMP 3-10 and BMP G-4
BMP 4-5 Implement procedure to allow public comment on site development	DPW-Eng/Env Eng	June 2017	Document procedure for the receipt and consideration of public comment in site plan review related to stormwater management
BMP 4-6 Implement procedure to notify developers about DEEP construction stormwater permit	DPW-Eng/Env Eng	June 2017	Document procedure for developer/contractor notification of Construction General Permit (CGP)

Stormwater Permit Information for Developers and Contractors

If your project disturbs more than one acre of land, regardless of phasing, you are responsible for the requirements of the Connecticut Department of Energy & Environmental Protection (DEEP) *General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities* ("Construction Stormwater General Permit").

If your project is greater than 5 acres, you are required to submit a registration for the Construction Stormwater General Permit at least 60 days prior to the planned commencement of the construction activity. A copy of your Stormwater Pollution Control Plan shall be provided to the City upon request.

If your project is between one and five acres, you must adhere to the erosion and sediment control land use regulations of the City of Bristol which can be found in the Code of Ordinances, Zoning Regulations and Inland Wetland and Watercourses Regulations, as well as the Connecticut Guidelines for Soil Erosion and Sediment Control and the Connecticut Stormwater Quality Manual. No registration or plan review and certification is required for such construction activity provided a City of Bristol land-use commission (i.e. Planning, Zoning, or Inland Wetland) reviews and issues a written approval of the proposed erosion and sediment control measures, pursuant to the requirements of section 22a-329 of the Connecticut General Statutes.



Permit tasks for MCM 4:

- Interdepartmental Coordination plan
- Site plan review for stormwater practices
- Site inspections for stormwater practices
- Receive public input to development projects
- Notify developers of DEEP construction general permit

Stormwater Management Plan

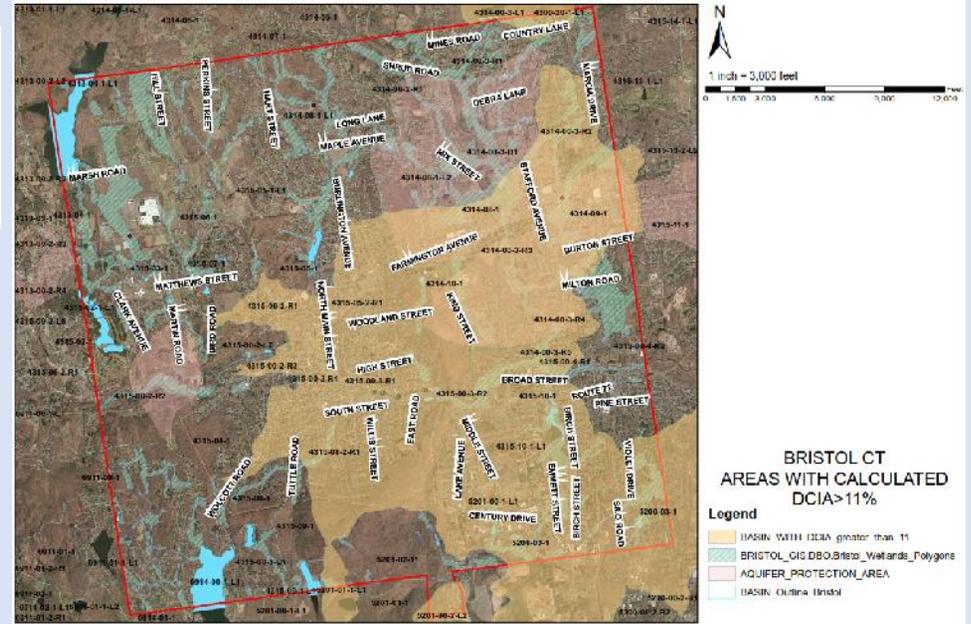
MCM 5 – Post-Construction Stormwater

This minimum control measure outlines Bristol's program to address stormwater runoff from new or re-development projects.

Goal:

Mitigate the long-term impacts of new and re-development projects on water quality through proper use of low impact development and runoff reduction practices.

BMP	Lead department / individual	Month / year of implementation	Measurable goal
BMP 5-1 Establish / update legal authority and guidelines regarding LID and runoff reduction in site development planning	DPW-Eng and Land Use/Env Eng and City Planner	June 2021	Update LID and runoff reduction site planning and development standards
BMP 5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects	DPW-Eng and Land Use/Env Eng and City Planner	June 2019	Update stormwater management standards
BMP 5-3 Implement long-term maintenance plan for stormwater basins and treatment structures	DPW-Eng /Env Eng and City Eng	June 2019	Establish GIS database for pond and structures. Establish and implement a plan for ongoing inspection and maintenance.
BMP 5-4 Complete DCIA mapping	DPW-Eng /Env Eng, EPT and GIS	June 2019 and June 2020	Establish GIS database of outfalls by June 2019 and by June 2020 complete DCIA for each MS4 outfall (See also BMP 3-2)
BMP 5-5 Address post-construction issues in areas with pollutants of concern	DPW-Eng /Env Eng and City Eng	June 2020	Establish and implement retrofit plan (See BMP 6-8)



Stormwater Management Plan



A public hearing will be held by the Bristol Zoning Commission in Bristol City Hall, 111 North Main St., on Wednesday, July 10, 2019, at 7:00 P.M. to hear and consider the following applications:

- Application #2019-01 – Change of Zone from R-10 (Single-Family Residential) to B64 (General Business) at 17 Barbara Rd.; Assessor's Map 03, Lot 34; Jacek Associates, LLC, applicant.
- Application #2021-01 – Special Permit for a personal service establishment (licensed massage and skin care business) at 94 West Street, Assessor's Map 29, Lot 125-A; R-10-111 (Single-Family Residential/Downtown/Neighborhood Transition Overlay) zone; Shira Cobbe, applicant.
- Application #AZR19-02 – Proposed amendments to the Zoning Regulations, initiated by the Bristol Zoning Commission: (1) Section IX.A.2 (Erosion and Sediment Control) – add reference to new Section IX.G. (Stormwater Management); (2) Section IX.A.3 (Erosion and Sediment Control) – update reference to Connecticut Guidelines for Soil Erosion and Sediment Control (2002) as amended; add reference to Connecticut Stormwater Quality Manual (2004) as amended; (3) Add new Section IX.G. (Stormwater Management) inclusive of new Sections X.G.1, through X.G.4; (4) Section XI.B.2.h. (Landscaping Requirements) – delete "myrtle and pachysandra" and add "all landscaping shall be done with species that are non-invasive."



Permit tasks for MCM 5:

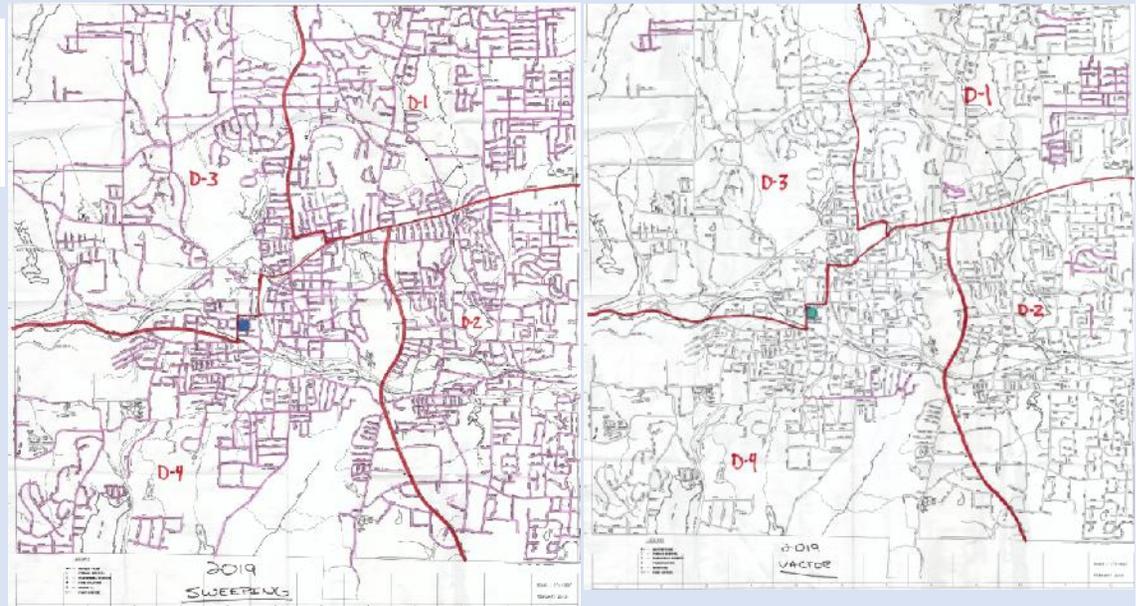
- Maintenance plan for SW ponds & treatment structures
- Determine baseline DCIA
- Review regulations for LID barriers
- Legal authority for SW retention standards

MCM 6 – Good Housekeeping / Pollution Prevention

This minimum control measure outlines a program to mitigate the impact of town operations and maintenance on town owned and/or operated properties and the MS4 itself to water quality.

Goal:

Prevent or reduce pollutant runoff as a result of municipal operations.



BMP	Lead department / individual	Month / year of implementation	Measurable goal
BMP 6-1 Develop/implement formal employee training program	DPW-Eng / Env Eng	Every June	For interrelated divisions identified in BMP 4-2 and other City departments, provide documentation of program through website and outreach.
BMP 6-2 Implement MS4 property and operations (mail tentacle)	DPW-Eng / Env Eng and Facilities Maintenance	July 2017 update annually	Coordinate initial BMP guidance and tracking documents for annual report (See BMPs 6-9, 5-10, and 6-11)
BMP 6-3 Implement coordination with interconnected MS4s	DPW-Eng / Env Eng	June 2017	Establish interconnection locations and appropriate contacts. Coordinate MS4 strategies in communications.
BMP 6-4 Develop/implement program to control other sources of pollutants to MS4	DPW-Eng / Env Eng	June 2017	Coordinate BMPs and initiate outreach to Public Works Divisions (fertilizers and pesticides applications and use, Material storage, pet waste, waterfowl management, mowing, clipping disposal, alternative landscaping, pollution prevention, leaf and trash management)
BMP 6-5 Evaluate additional measures for discharges to impaired waters	DPW-Eng / Env Eng and watershed groups	Every June	Using BMP 3-2 progress, coordinate BMPs with BMP 1-2, b-1, b-2, b-4, b-7 through b-11
BMP 6-6 Track projects that disconnect DCIA	DPW-Eng and Planning / Env Eng	June 2019	Using database for BMP 5-4, establish procedure to document DCIA removal projects and assign tracking responsibilities
BMP 6-7 Develop/implement infrastructure repair/renovation program	DPW-Eng and Maintenance / Env Eng	June 2020	Coordinating with BMP 5-8 database and plan, prioritize and track MS4 infrastructure maintenance
BMP 6-8 Develop/implement plan to identify/prioritize retrofit projects	DPW-Eng / Env Eng and City Eng	June 2020	Using BMPs 3-2, 5-4, 5-5, monitoring and/or other resources, identify retrofit projects. Develop initial priority implementation framework with the goal of 1% DCIA removal in each of 4 th and 5 th years (2021 and 2022)
BMP 6-9 Develop/implement street sweeping program	DPW-Eng / Env Eng and Maintenance	March 2018	Compile BMP and annual tracking documents. Consider future updates after completion of BMP 5-4 document
BMP 6-10 Develop/implement catch basin cleaning program	DPW-Eng / Env Eng and Maintenance	March 2018	Coordinate BMPs, procedure and annual tracking documents
BMP 6-11 Develop/implement snow management practices	DPW-Eng / Env Eng and Maintenance	Oct 2017	Compile BMP and annual tracking document

DATE: September 9, 2019
 TO: Nancy Levesque, P.E., City Engineer
 Ray Rogozinski, P.E., Director of Public Works
 FROM: Carol Noble, P.E., Environmental Engineer
 RE: Trust Pond Inventory Report

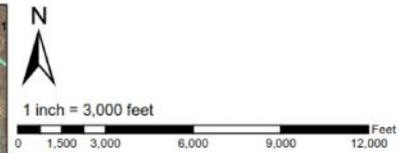
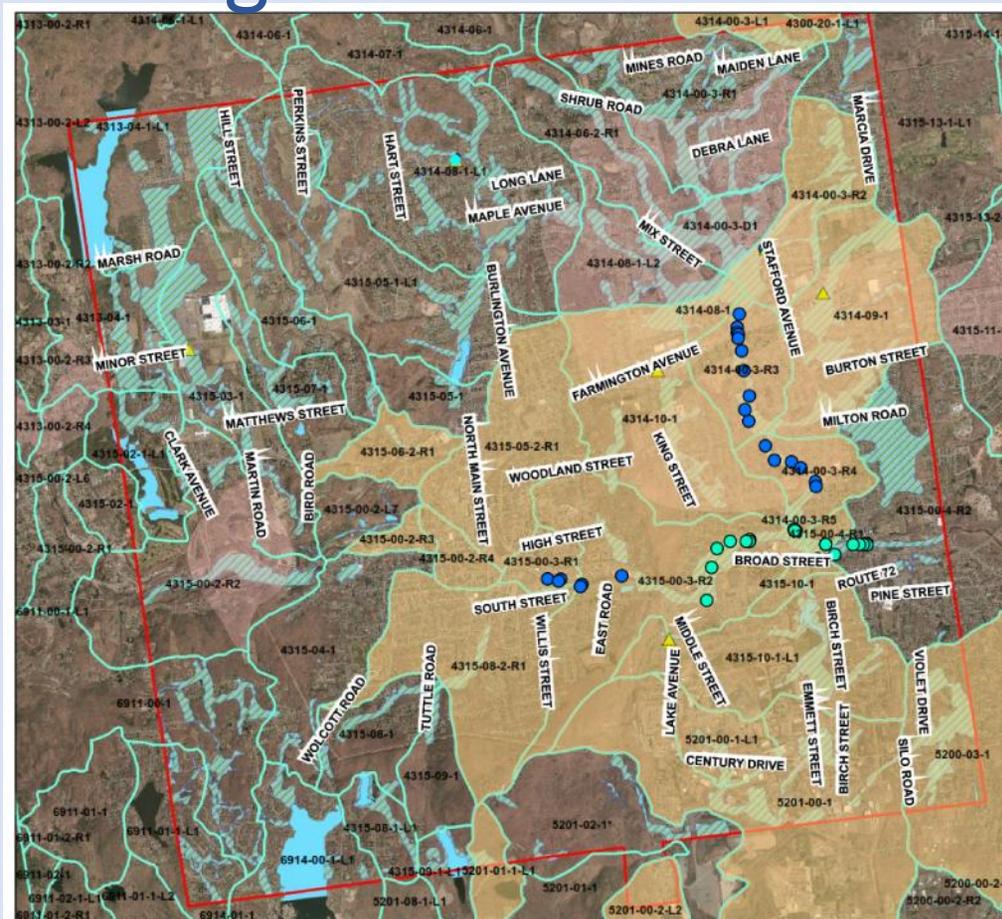
PURPOSE: The Trust pond inventory report identifies an inspection/maintenance status table for each pond. For the site vegetation maintenance status, the Vegetation column of the inspection table refers to a legend identifying a "V" (Vegetation control to be scheduled) and "AV" (Aquatic vegetation control to be scheduled). The following summary is prepared to clarify those tasks. These maintenance descriptions are adapted and summarized from "Stormwater Wet Pond and Wetland Management Guidebook", EPA 833-B-09-001, February 2009 (portions attached)

DATE: August 31, 2017
 TO: All Parents, Guardians, and Staff Members
 FROM: Peter Fusco
 Director of Facilities
 RE: INTEGRATED PEST MANAGEMENT POLICY

Permit tasks for MCM 6:

- Employee stormwater management training program
- Track DCIA (additions and subtractions)
- Sweep streets in Priority Areas at least 1x per year
- MS4 Property O&M
- Log catch basin inspections & cleanings (including volume of material removed)
- Develop/implement deicing material SOP
- Implement snow/ice SOP to minimize stormwater pollution
- Establish catch basin inspection and cleaning schedule
- Develop alternate plan for sweeping streets outside Priority Area (if not sweeping < 1x per year)
- Develop retrofit plan
- Inspect all catch basins in Priority Areas
- Implement projects from retrofit plan
- Inspect all catch basins outside Priority Areas
- 2% impervious disconnection goal

Outfall Monitoring



BRISTOL CT
SAMPLING LOCATIONS &
AREAS WITH CALCULATED
DCIA > 11%

Legend

- ▲ Sample locations - 2004 Permit
- DryScreen 20180725
- DryScreen 20181204
- DryScreen 20181205
- DryScreen 20190627
- DryScreen 20190717
- BASIN_WITH_DCIA_greater_than_11
- BASIN_Outline_Bristol
- AQUIFER_PROTECTION_AREA
- Bristol Wetlands

Two parts of permit:

1. All outfalls to impaired waters (wet weather) for listed pollutants of concern (nitrogen, phosphorus, bacteria, other (turbidity))
2. IDDE – categorize and rank outfalls, dry weather sampling for high or low priority outfalls, catchment investigations for problem outfalls and screened outfalls exhibiting illicit discharge/SSOs, with follow-up to isolate source of illicit discharge

Permit tasks for Monitoring:

- Monitor 6 'worst' outfalls to impaired waters annually
- Screen all outfalls to impaired waters

SMP – Bristol Watershed Characteristics

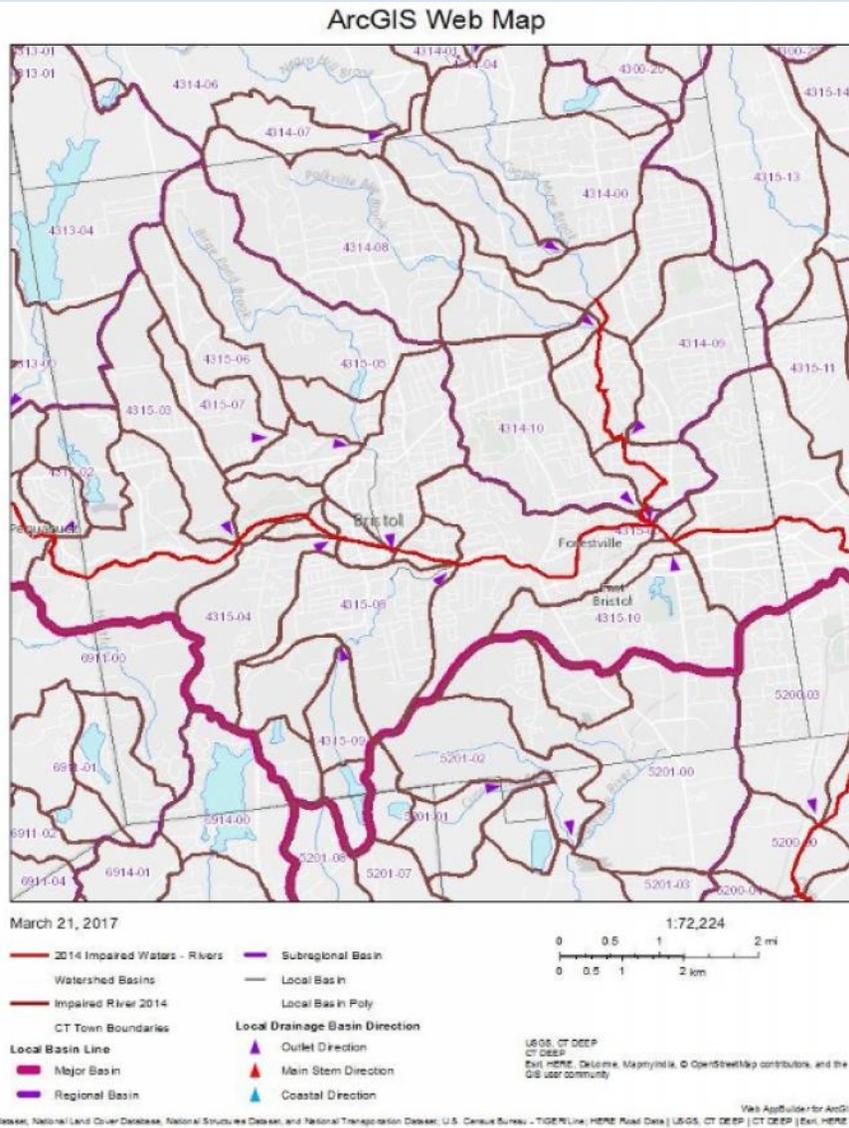


Figure 1 City of Bristol Local Watershed Map

TABLE 1
Water Quality Surface Classifications
Bristol, CT

Drainage Basin Number	% Bristol Land Area in Basin	Name	Surface Water Quality	Impaired per Water Quality Standards
4315	49.9	Pequabuck River	B	Yes
4314	29.8	Coppermine Brook	A	Yes
5201	8.7	Eight Mile River	B	-
4313	4.5	Poland River	A	-
6911	3.5	Hancock Brook	A	-
6914	1.8	Mad River	A	-
5200	1.7	Quinnipiac River	B	Yes

TABLE 2
Bristol Impaired Waterbody

Waterbody ID	Water Segment Description	L (mi)	Impaired Use	Pollutant	Cause/Potential Source
Pequabuck River – Surface Water Quality Classification – B					
Pequabuck River-CT 4315-00_02 4315-00_03 4315-00_04 4315-00_05	From railroad crossing (US south) of Route 72 crossing, Plainville to Plymouth POTW (just DS of Canal St (Rte 72) crossing), Plymouth	7.63	Aquatic Life, Recreation	Escherichia coli (E. coli), Phosphorus	Urban Runoff/Stormwater runoff, illicit discharge, permit source, failing septic system, nuisance wildlife/pets, other
Coppermine Brook – Surface Water Quality Classification – A					
Coppermine Brook 4314-00_01	From mouth of Pequabuck River, US to New Britain drinking watershed boundary and water diversion (just us of confluence with Polkville Brook), Bristol.	2.43	Aquatic Life, Recreation	Escherichia coli (E. coli)	Urban Runoff/Stormwater runoff, illicit discharge, permit source, failing septic system, nuisance wildlife/pets, other

Quinnipiac River (located outside of City of Bristol), not detailed in Table B, is impaired for Escherichia coli (E. coli).

Class A

Surface water is known or presumed to meet Water Quality Criteria which support designated uses, which may include potential drinking water supply; fish and wildlife habitat; recreational use; agricultural, industrial supply and other legitimate uses, including navigation.

Class B

Designated uses: recreational use: fish and wildlife habitat; agricultural and industrial supply and other legitimate uses including navigation.



QUESTIONS?