CONNECTICUT DEPARTMENT OF TRANSPORTATION

Annual Report for MS4 Permit Year 6

July 1, 2024 – June 30, 2025

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MS4 General Permit
Connecticut Department of Transportation Municipal Separate Storm Sewer (MS4) Annual Report
New MS4 Permittee
Permit Number GSM DEEP-WPED-GP-22
[July 1, 2024– June 30, 2025]

This report documents the Connecticut Department of Transportation's (CTDOT) efforts to comply with the conditions of the General Permit for the Discharge of Stormwater from Department of Transportation Separate Storm Sewer Systems (CTDOT MS4 General Permit or permit) issued on May 24, 2018 to the maximum extent practicable (MEP) from July 1, 2024 to June 30, 2025.

Part I: Summary of Minimum Control Measure Activities

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

Now in Year 6 since the permit has been issued, the focus of this reporting year was again to keep the CTDOT website updated with the most current information and educate internal personnel on MS4 requirements. The CTDOT's primary means of providing knowledge of CTDOT's MS4 and stormwater information remain the dedicated CTDOT MS4 website. Public outreach and educational material on CTDOT's MS4 Program can be found on the CTDOT MS4 website: https://portal.ct.gov/dot/pp_envir/water_natural_resources/ctdot-ms4?language=en_US.

CTDOT maintains a dedicated email address, DOT.MS4@ct.gov, for the general public to submit questions or concerns regarding the CTDOT MS4 program including, but not limited, observed drainage problems, suspected illicit discharges, and CTDOT stormwater infrastructure.

One of the most common questions received by CTDOT is the status of mapping within a certain location. A public facing ESRI Web Map was created for individuals to see what CTDOT has mapped to date. This map has proven to be a useful tool for interested parties. Included in this mapping are highlighted interconnection points (where CTDOT's drainage is interconnected to that of other municipalities or private entities) that allow users to easily identify where drainage system ownership changes. Mapping these interconnection locations is a requirement for all MS4 Permit holders. Before being decommissioned, CTDOT's former public facing digital drainage map had more than 6,304 views. The new CTDOT Web Map, has 600 views as of July 1, 2025.

The new CTDOT Web Map and can be found via this link:
https://experience.arcgis.com/experience/aa89327e12de4e92a2bba3ac94d06d62.

The GIS technology that CTDOT uses to create and share its stormwater mapping continues to evolve, increasing the functionality of the web maps and improving the user interface experience. CTDOT has made the latest mapping of the CTDOT Drainage Infrastructure available both as a Web Map (https://experience.arcgis.com/experience/aa89327e12de4e92a2bba3ac94d06d62) and for the public to download on CT Open Data (https://connecticut-ctdot.opendata.arcgis.com/maps/f041d1a6e36643208d67f2452de558a9/about).

1.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	CTDOT Department(s) / Person(s) Responsible	Due	Date completed or projected completion date	Additional details
1.1 Implement public education program	Complete	Provided education on CTDOT's MS4 program to staff and consultants. Public educational material on CTDOT's MS4 program available on CTDOT MS4 webpage. Participated in ad-hoc committee on the update to CTDEEP's Stormwater Quality Manual	Educate the Public on Stormwater	Bureau of Policy and Planning's Office of Environmental Planning	June 30, 2020	Apr 9, 2019	These resources are published on CTDOT MS4 Website https://portal.ct.gov/DOT/PP_Envir/Water_Natural_Resources/CTDOT-MS4
1.2 Track CTDOT public meetings where non-point source educational material was distributed	Ongoing	Distribute resources to Designers for Public Project Scoping Meetings throughout Municipalities statewide. 102 Project scoping meetings with MS4 informational materials were held during the permit year.	Get informational resources to designers for distribution at public events	Bureau of Engineering & Construction Bureau of Policy and Planning's Office of Environmental Planning	June 30, 2020	Ongoing	Project specific stormwater issues are provided for incorporation into designer PowerPoint presentations
1.3 Develop Dedicated MS4 Webpage on CTDOT Website	Complete	Maintain a CTDOT MS4 dedicated Website	Create MS4 dedicated Website	Bureau of Policy and Planning's Office of Environmental Planning Bureau of Engineering & Construction's Office of Environmental Compliance	June 30, 2020	Mar 1, 2019	https://portal.ct.gov/DOT/PP_Envir/Water_Natural_Resources/CTDOT-MS4

BMP	Status	Activities in current reporting period	Measurable goal	CTDOT Department(s) / Person(s) Responsible	Due	Date completed or projected completion date	Additional details
1.4 Collaborate with MS4 stakeholder groups outside of CTDOT	Ongoing	Coordinated with MS4's and public health organizations for correspondence regarding Illicit Discharges. On [DATES], CTDOT MS4 staff participated in a meeting with the Southeast Council of Governments to educate and collaborate with member municipalities.	Work with other MS4 entities cooperatively	Bureau of Policy & Planning's Office of Environmental Planning Bureau of Engineering & Construction's Office of Environmental Compliance	June 30, 2020	Ongoing	A website displaying CTDOT mapped MS4 infrastructure is publicly available: https://experience.arcgis.com/experience/aa89327e12de4e92a2bba3ac94d06d62
1.5 Educate CTDOT Employees on the MS4 Program	Ongoing	Provided MS4 training for design engineers to review MS4 design standards and changes to the SWQM. Incorporated MS4 guidance for CTDOT construction personnel trainings	Provide workshops for employees Department wide to inform them of MS4 requirements	Bureau of Policy & Planning's Office of Environmental Planning Bureau of Engineering & Construction's Office of Environmental Compliance	June 30, 2020	Ongoing	Refer to Section 6.3 for additional trainings regarding the IDDE program for CTDOT Employees
1.6 River and Stream Signs	Complete	All construction projects that involve crossing a named watercourse receive signage	CTDOT Standard Policy created prior to permit issuance	Bureau of Engineering & Construction Bureau of Policy & Planning's Office of Environmental Planning	Jul 1, 2020	Completed Prior to Permit issuance	Refer to CTDOT Sign Catalog for sign specifications https://portal.ct.gov/dot/traffic-engineering/catalog-of-signs?language=en_US

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

CTDOT staff will continue to be educated regarding the MS4 permit by attending trainings provided by CTDOT's Training Center, District Environmental Trainers, Office of Environmental Planning and/or the Office of Environmental Compliance.

Continuous improvement of the public facing ESRI Web Map is also expected with the goals of:

- Adding more areas of the state as the amount of mapped infrastructure is increased,
- Creating hyperlinks to respective on-line municipal GIS mapping (where available) at points where the CTDOT system interconnects with other systems,
- Improving overall usability, and
- And allowing users to be able to download data.

CTDOT plans to utilize its Bureau of Policy & Planning's regularly scheduled meetings with the Council of Governments and Regional Planning Offices as a means of coordinating with regional and municipal officials on ways to improve water quality through the respective MS4 programs. As of June 30, 2025, CTDOT has MS4 presentations with Metro COG, the Connecticut Society of Civil Engineers, and the State Emergency Response Commission scheduled for Permit Year 7. CTDOT will look to host, conduct, or otherwise provide support for one (1) public event, such as a third party clean up event, and enact one (1) public education program, such as a public service announcement or webinar.

1.3 Details of activities implemented to educate the community on stormwater

Trainings this permit year (July 2024 – June 2025) included attending two Southeast Council of Government meetings focused on MS4 topics. CTDOT staff attended the first SECOG meeting in person on March 27, 2025 to highlight CTDOT experience with MS4 permit compliance as the group discussed the Draft Small MS4 permit that was out for public comment at that time. CTDOT staff also virtually attended a second SECOG meeting on June 26, 2025. In addition to these meetings, trainings were also held this year for internal CTDOT personnel and consultants working for CTDOT. The dates for all of the trainings held in this permit year can be viewed in section 6.3 of this report.

Primarily due to the updated CTDEEP Stormwater Quality Manual (SWQM), the CTDOT Office of Environmental Compliance provided training updates and engineering resources to CTDOT design staff and supervisors on how to use retrofit curves for disconnection credit for various Best Management Practices (BMPs), how to fill out the new MS4 Designer's worksheet using updated instructions, and the new requirement to meet pollutant reduction targets if the project does not retain and/or treat the entire Water Quality Volume(WQV).

CTDOT construction engineers will receive fundamental awareness training on recognizing illicit discharges when encountered during excavations and utility work. This training will be enhanced in the next permit year. Highway Operations general supervisors, crew leaders, and district trainers receive annual stormwater training that includes pollution prevention and proper debris management during storm preparations.

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

2.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
2.1 Public notice for the Stormwater Management Plan	Complete	N/A	Notify Public	Bureau of Policy & Planning's Office of Environmental Planning Bureau of Engineering & Construction's Office of Environmental Compliance	Jun 1, 2019	June 1, 2019	Posted on CTDOT MS4 Website https://portal.ct.gov/DOT/PP_Envir/Water_Natural_Resources/CTDOT-MS4
2.2 Public notices for Annual Reports	Complete	Notified Public of Annual Report	Notify Public	Bureau of Policy & Planning's Office of Environmental Planning Bureau of Engineering & Construction's Office of Environmental Compliance	Sep 1, 2024	Draft Report published on August 15, 2025. Final Report published on September 30, 2025	Posted on CTDOT MS4 Website https://portal.ct.gov/DOT/PP_Envir/Water_Natural_Resources/CTDOT-MS4 and announcement post to CTMS4-L@LISTSERV@UCONN.EDU

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

CTDOT is solely responsible for permit compliance. CTDOT openly solicits feedback on its Stormwater Management Plan (SWMP) and annual reports during the respective comment periods when the drafts are published. All concerns the Public has regarding its Annual Report and SWMP will be considered. Public feedback on CTDOT's MS4 program, SWMP or Annual Reports can be sent to DOT.MS4@ct.gov. To date, no concerns have necessitated any changes to the SWMP or annual reports.

2.3 Public Involvement/Participation reporting metrics

Metrics	Implemented	Date	Posted
Availability of the Stormwater Management Plan announced to public	Yes	April 3, 2019	CTDOT Website, Email sent to MS4 Listserv
Availability of Annual Report announced to public	Yes	Draft Report published on Aug. 15, 2025 Final Report published on September 30, 2025	MS4 CTDOT Website and Email sent to MS4 Listserv

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

3.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
3.1 Develop legal authority to prohibit illicit discharges	Completed	Legal authority previously established through existing State statutes and regulations	Legal authority developed	Bureau of Engineering & Construction's Office of Environmental Compliance	June 30, 2021	June 30, 2022	Unpermitted non-stormwater discharges are prohibited under CGS 22a-430. Discovery of such discharges to the CTDOT MS4 that cannot be otherwise remedied are referred to CT DEEP, which possesses the State's enforcement authority in these cases.
3.2 Develop written IDDE program	Completed	N/A	Written IDDE plan completed	Environmental Compliance	June 30, 2021	June 5, 2020	Updates to catchment priority definitions and investigation procedures were updated as a result. See additional IDDE program details in Part III of this report.
3.3 Develop program for citizen reporting of illicit discharges /Include citizen reports in annual report	Completed	Citizen IDDE reporting program previously established	Illicit Discharge Program developed and reports documented	Environmental Compliance	June 30, 2021	July 1, 2019	Call 860-594-2560 or email DOT.MS4@ct.gov
3.4 Develop tracking system for illicit discharge Investigation and Abatement activities	Completed	IDDE tracking system previously established	Illicit Discharge tracking system developed	Environmental Compliance	July 1, 2019	July 1, 2019	Investigations are tracked both within the GIS database and manually outside the database

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
3.5 Identify all known locations of SSO's into CTDOT's MS4 over previous 5 years	Completed	Previously identified	SSO's within previous 5 years identified	Environmental Compliance	November 1, 2019	November 1, 2019	No historic SSO's identified that require CTDOT follow up actions. Locations identified are in the appendix of the IDDE written report which is available on the CTDOT MS4 webpage
3.6 Identify and Map 50% of CTDOT's MS4 in Priority Areas	Completed	This year CTDOT completed mapping stormwater assets in 16 additional MS4 municipalities	50% of mapping of CTDOT assets within the 120 MS4 municipalities completed by Permit Year 5.	Environmental Planning, Environmental Compliance, Maintenance, Public Transit	June 30, 2024	June 30, 2024	See Section 3.7
3.7 Screen and Sample all mapped outfalls and key interconnection points	In progress	See Section 3.7	Mapped outfalls and interconnections screened and/or sampled	Environmental Compliance	June 30, 2024	June 30, 2024	See Section 3.7
3.8 Provide Annual IDDE Training to Employees	In progress	Refer to Section 6	Annual Bureau trainings completed	Bureau Chief(s)-Engineering and Construction, Policy and Planning, Highway Operations, Public Transit	June 30, 2021 & Annually	Annual	Training provided to District Construction Personnel and District Maintenance Personnel

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

CTDOT's IDDE program activities that will continue next year include the mapping of CTDOT stormwater assets in MS4 municipalities, dry weather screening and sampling of non-excluded discharge locations in areas where the mapping has been finalized, and catchment investigations.

Catchment investigations for all discharge points with suspect illicit inputs will be prioritized primarily based on screening and sampling activities first followed by catchment investigations in other catchment areas categorized as high priority.

IDDE information in relevant CTDOT trainings will also be provided throughout the year.

3.3 List of citizen reports of suspected illicit discharges received during this reporting period.

Location / suspected source	Response taken
No suspected illicit discharges were reported to CTDOT during Permit Year 6	

3.4 Record of illicit discharges occurring during the reporting period and SSOs occurring from July 2024 through end of reporting period.

Location / suspected source	Response taken
270 Main Street, Monroe – Septic System	Septic leachate infiltrating into Route 25 drainage system. Flow was observed in a nearby catch basin and a septic odor was identified at the time of inspection. CTDOT coordinated with the Town of Monroe to research the septic system serving the adjacent property. Based on information collected to date, the septic system may be operating properly and changes to the drainage system may be required. A new drainage design concept has been developed to inform a CTDOT stormwater retrofit project that would eliminate the issue. The retrofit project will be included in Phase 2 of stand-alone retrofit projects currently in conceptual design that will assist in meeting CTDOT DCIA reduction targets.
14/16 Putnam Park Road, Bethel – Septic System	A CTDOT maintenance crew was investigating an icing problem on the road and noticed a septic/sewage smell coming from a catch basin in the vicinity of the properties. CTDOT reached out to the Bethel Health Department who is investigating. Health Department staff notified CTDOT on 5/5/2025 that a site visit will be conducted with the property owners. CTDOT inquired as to the status on 6/20/2025 but an update has not yet been received.
525 Boston Post Road, Milford – Potential Septic System	A CTDOT consultant was screening a key junction manhole and recorded visual/olfactory evidence of an illicit discharge coming into the CTDOT drainage system from an interconnected municipal pipe. CTDOT reached out to the Milford Town Engineer who is investigating. The first round of dye testing did not yield results, and the Town Engineer confirmed a secondary test is underway. CTDOT inquired as to the status on 6/20/25 but an update has not yet been provided.
1620 Post Rd E, Westport – Construction Site Runoff	Officials from the Westport Conservation Department collected stormwater discharge from a CTDOT drainage outfall where an illicit discharge was suspected due to a plume of discolored water with high turbidity. CTDOT conducted a follow-up investigation which confirmed high turbidity present in the discharge. It was also documented that a construction site further up the drainage catchment lacked proper E&S measures, resulting in large amounts of sediment entering the CTDOT system. In coordination with the Town, verification that the E&S measures were properly installed was done. Once construction was completed the storm system was cleaned. Confirmatory sampling verified that the turbidity of the stormwater discharge returned to in-stream levels.

Location / suspected source	Response taken
Mystic Steamboat Wharf – Sedimentation	On November 5, 2024, CTDOT conducted a limited catchment investigation of the drainage system along Route 1 (West Main Street) and State Route 215 (Water Street) in Mystic in response to a series of correspondences forwarded by DEEP on October 18, 2024. These correspondences expressed concerns regarding polluted sediment potentially being discharged to Steamboat Wharf from a CTDOT drainage outfall. The IDDE investigation conducted by CTDOT did not find any evidence of a source of the pollution found in the wharf. An email was sent to DEEP on 1/8/2025 detailing the situation and its history.

Note, that potential illicit discharges based solely on analytical results (no olfactory or visual evidence) are not included below but are included in IDDE metrics at the end of this MCM 3 IDDE section.

3.5 Briefly describe the method used to track illicit discharge reports, responses to those reports, and who was responsible for tracking this information.

The CTDOT receives information regarding illicit discharges from multiple sources:

- The public may notify the CTDOT regarding potential illicit discharge by sending an email to DOT.MS4@ct.gov
- The public can report any transportation issues including potential illicit discharges by calling the CTDOT Customer Care Center at 860-594-2560 or using the CTDOT Customer Care Center's Webform.
- Illicit discharges are also reported to the CTDOT MS4 Team from other Department personnel and from consultants who are performing screening and sampling activities on behalf of the CTDOT.

Once an illicit discharge is reported, the CTDOT MS4 Team records the issue in the database and reaches out to the local municipality, local health department and/or other stakeholders to coordinate research and a response. Activities and communications, including corrective actions taken to eliminate illicit discharges are documented both within and outside the database.

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

Location and nature of structure with failing septic systems	Actions taken to respond to and address the failures	Impacted waterbody or watershed, if known
No septic failures were identified this permit term	N/A	N/A

3.7 IDDE reporting metrics

See Figure 1 below titled "CTDOT MS4 Mapping Status as of July 1st, 2025". All total infrastructure numbers are estimates based upon mapping completed to date. The symbology of Figure 1 is as follows:

- Blue - Municipality has been mapped 100% complete.
- Red - 75% of the municipality is mapped- required field work to be completed.
- Purple - Municipalities in which current mapping has commenced and is considered at least 5% complete.
- Yellow - No mapping has been performed yet.

By June 30, 2024, CTDOT fulfilled the permit required to have mapped half of its drainage infrastructure within the 120 MS4 municipalities. At a minimum, complete CTDOT system mapping within all designated MS4 municipalities will be complete by 2029. CTDOT expects to have its entire drainage system mapped, that within non-MS4 municipalities, also complete by 2029.

Figure 2 illustrates CTDOT mapped municipalities overlaid with the MS4 priority areas which include urbanized areas, local watershed impervious cover of > 11% and impaired waterbodies.

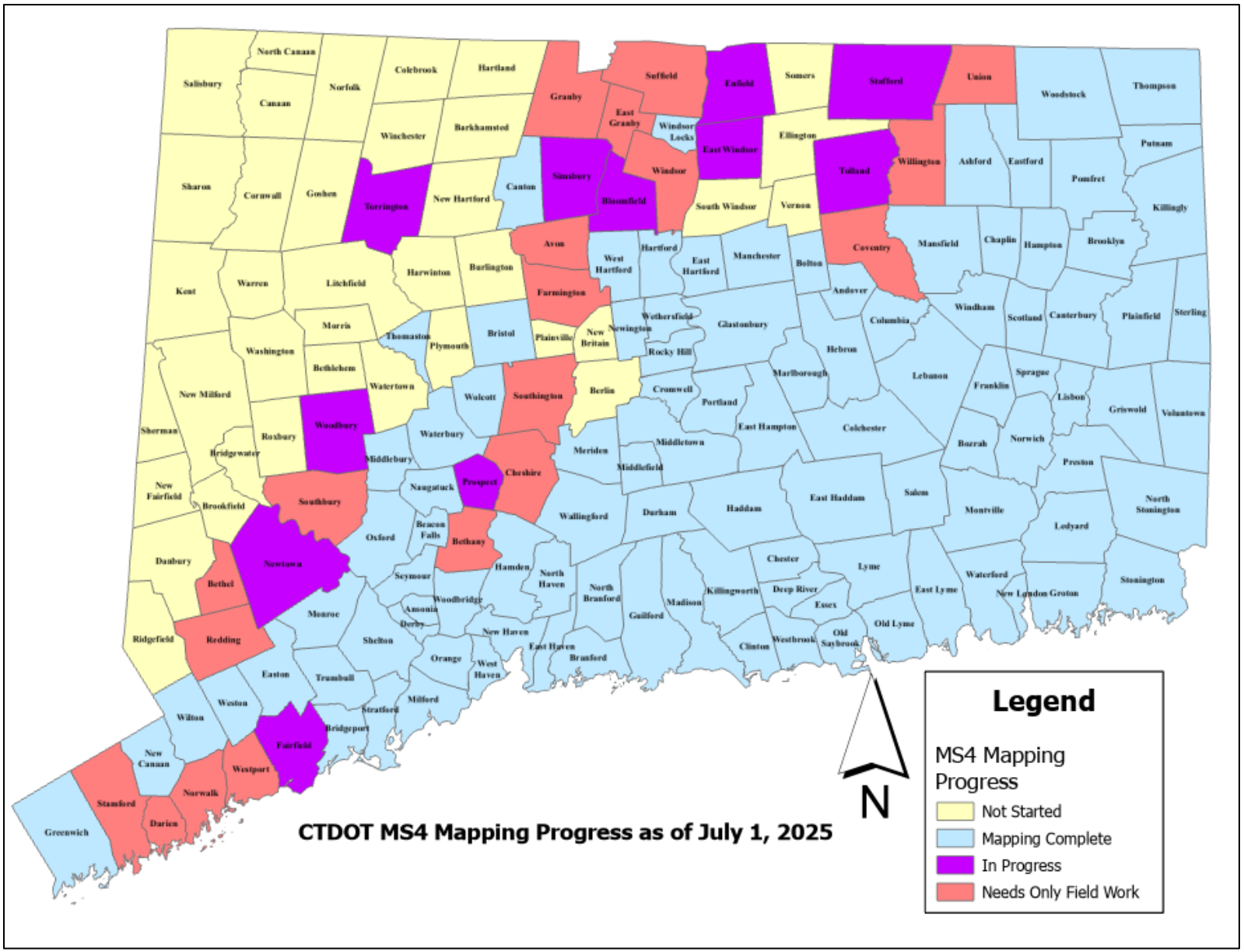


Figure 1: CTDOT MS4 Mapping Status as of July 1st, 2025

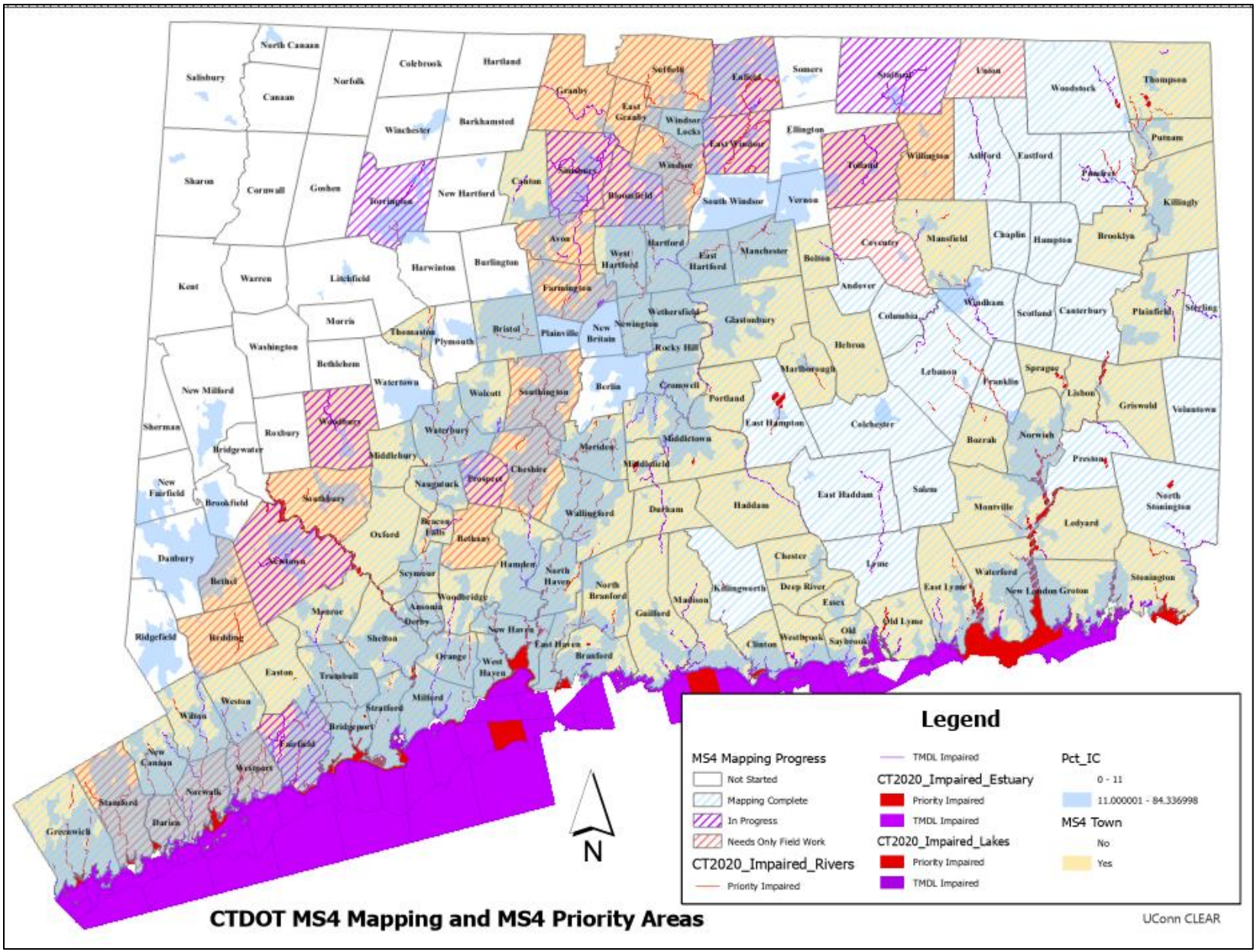


Figure 2: 2025 CTDOT MS4 Mapping and MS4 Priority Areas

IDDE Reporting Metrics	
Number of discharge locations from the CTDOT Stormwater Drainage System (outfalls + outgoing interconnection points): mapped to date total	 17,307 TBD by 2029
MS4 outfalls (not including interconnections, including directly connected and disconnected) mapped to date total # of MS4 outfalls estimated completion %	 15,979 TBD by 2029 (est. 21,000) 77%
Outgoing MS4 Interconnection Points (e.g., DOT MS4 drains into other non-DOT MS4): mapped to date estimated total estimated completion %	 1328 TBD by 2029 Unknown
System-wide mapping complete (detailed MS4 infrastructure)	16 MS4 municipalities mapped in Permit Year 6 79 MS4 municipalities mapped completely Portions of 26 other MS4 municipalities mapped 77% of 120 MS4 municipalities 69% of 169 statewide municipalities
Number of mapped discharge points that are "Excluded" as of 6/30/2025	10,951
Dry weather screening and sampling of High or Low Priority Outfalls this permit year total to date	 447 3,428
Number of catchment area investigations completed	1481 (Total to date)
Estimated Percentage of Mapped, Non-Excluded MS4 catchment areas investigated in Completed Towns	31% (1481out of 4749) (Mapped as of year 6)

3.8 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).

A training and "lessons learned" meeting hosted by CTDOT Environmental Compliance office was held with each of the three consulting firms that perform the IDDE screening and sampling work on behalf of CTDOT. Refer to section 6.3 that documents when the meetings were held. Additionally, CTDOT maintenance staff receive refresher training on illicit discharge basics annually from District Environmental Trainers as part of a broader training.

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

4.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
4.1 Establish bylaw, regulation, standard conditions of approval, construction requirements or other legal authority that meet the requirements of the CTDOT MS4 permit	Completed	Major Traffic Generators must comply with Office of the State Traffic Administration's approval terms.	Standard Language Updated	Office of the State Traffic Administration Environmental Planning Office of Construction, Districts	June 30, 2022	June 30, 2022	CTDOT administers all its own projects. Construction site run-off control is a condition of CTDOT's standard specifications.
4.2 Ensure all CTDOT manuals are consistent with the construction measures in DEEP's E&S Manual, Stormwater Quality Manual and the Construction Stormwater General Permit requirements	Completed	N/A	Publish Engineering Directive	Bureau Chief – Engineering & Construction	June 30, 2020	Completed on June 26, 2019.	
4.3 Develop and implement a plan outlining how all internal CTDOT departments with jurisdiction over the review, permitting or approval of land disturbance and development projects within the CTDOT MS4 will coordinate their functions with one another	Process in Place	N/A	Process in Place and it is working	Environmental Compliance Environmental Planning	July 1, 2019	July 1, 2019	A coordination plan between internal Bureau's was previously documented in an Engineering Directive
4.4 Conduct a site plan review or confirm that a site plan review was completed by the appropriate authority. The review should verify that consideration of stormwater controls or management practices were considered	Process in Place	All development and redevelopment projects are reviewed by MS4 Team. Designers use CTDOT MS4 Designer Worksheet to document stormwater quality considerations	All projects reviewed for water quality impacts	Environmental Compliance Environmental Planning	July 1, 2019	July 1, 2019	The MS4 Designer Worksheet can be viewed on the CTDOT MS4 Webpage.

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
4.5 Conduct or confirm that a site inspection(s) and enforcement was completed to assess the adequacy of the installation, maintenance, operation and repair of construction and post construction control measures	Program in Place	Oversight of construction projects for erosion control measures were conducted.	Ensure all projects have environmental oversight	Environmental Planning District Maintenance	July 1, 2019	In Place Prior to Permit Issuance	Beginning in 2022, CTDOT OEP and DEEP LWRD annually review and document all corrective actions completed by DOT Environmental Resource Compliance Team for projects that were in construction.
4.6 Implement procedure to notify developers conducting projects that will connect to the CTDOT MS4 system of the obligation to comply with the requirements of DEEP's Construction Stormwater General Permit	Process in Place	Project Managers are made aware of the Construction Stormwater General Permit requirement at the beginning of a project by OEP via the Permit Need Determination Form (PNDF)	Ensure all Projects that require a Construction Stormwater General Permit are identified within the 30, 60, 90% design reviews	Environmental Planning	July 1, 2019	July 1, 2019	OSTA Application Forms were updated to require projects to certify that development conforms to local MS4 authority requirements
4.7 Include tracking information as part of each annual report	Completed	Plans reviewed and inspections completed have been tracked	Number of plans tracked and inspected	Environmental Compliance Environmental Planning	June 30, 2020	July 1, 2019	

Construction Site Runoff Control Metrics During Permit Year	
Number of DOT Project E&SC Plans Reviewed	70
Number of DOT Project Site Inspections Completed	490

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

CTDOT will continue to review all projects for construction stormwater compliance and adherence to the SWQM. All project's erosion and sedimentation control plans are reviewed by CTDOT's District Environmental Coordinators. Third party Qualified Professional Engineers are hired to review all construction stormwater pollution prevention plans prepared by state forces.

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

5.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
5.1 Establish updated standard procedures, forms and conditions of approval that meet the LID / Runoff Reduction Legal Authority requirements of the Permit	Completed	Per a CTDOT Engineering Directive, all CTDOT projects that impact drainage or drainage patterns are reviewed by staff to implement water quality BMPs to the maximum extent practicable.	Standard procedure adopted	OSTA Bureau Chief-Engineering & Construction	June 30, 2022	June 24, 2019	Unlike a traditional Municipality, CTDOT does not have the ability to pass ordinances or regulate land use
5.2 Ensure all CTDOT manuals are consistent with the construction measures in DEEP's E&S Guidelines, Stormwater Quality Manual and Construction General Permit Requirements	In Progress	Transportation redevelopment projects are designed to the prevailing DEEP manuals. Revised CTDOT MS4 Worksheet and Instructions to be consistent with the updated CTDEEP Stormwater Quality Manual and the updated CTDEEP E&S Manual	CTDOT Manuals are consistent with E&S Manual, Stormwater Quality Manual and Construction Permit Requirements.	Bureau Chief-Engineering & Construction	June 30, 2022	July 1, 2019	CTDOT is following the updated guidance in the 2024 versions of the CT DEEP E&S Manual and the SWQ Manual.
5.3 Implement runoff reduction / LID measures for new development and redevelopment projects within CTDOT's MS4 area	In Progress	Design engineers incorporate redevelopment BMPs into transportation capital projects. The CTDOT MS4 Team reviews all redevelopment plans to ensure runoff reduction and LID measures are implemented to the maximum extent practicable. Water quality impacts and site constraints are tracked on the CTDOT MS4 Designer Worksheet. BMP examples and calculations were also developed to provide consistency between all state and consultant forces	Document runoff reduction / LID implementation efforts for the project	Bureau Chiefs - Policy & Planning and Engineering & Construction	June 30, 2022	July 1, 2019	The MS4 Designer Worksheet can be viewed on the CTDOT MS4 webpage. Other design guidance for implementing LID / BMPs is also provided

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
5.4 Calculate DCIA for 50% of the CTDOT's MS4 Catchment Areas (or Local Watershed Basins)	In Progress	An initial GIS spatial analysis was previously completed to provide an estimate of the DCIA that CTDOT is responsible for statewide	Determine the percentage of DCIA for CTDOT's Mapped Catchment or Local Watershed Areas	Bureau Chief-Engineering & Construction	June 30, 2024	June 30, 2024	It was determined that using an automated process to determine DCIA on a catchment basis is not feasible. See section 5.4 below.
5.5 Implement a plan to ensure long term maintenance of stormwater management facilities	In Progress	On-going focus has been on inventory and maintenance tracking of CTDOT-owned stormwater management facilities. Privately owned stormwater management facilities that discharge to CTDOT's MS4 system are added to database when identified.	Develop and Implement a Plan to Ensure Long Term Maintenance of Stormwater Management Facilities	Bureau Chief(s) – Highway Operations and Engineering & Construction	June 30, 2022	June 30, 2022	See Section 5.3 below for BMPs inspected and cleaned this permit year.

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

Plan reviews for all redevelopment projects for stormwater quality improvements will continue. CTDOT MS4 staff will continue to be a resource for design engineers to increase awareness of opportunities for stormwater best management practices as part of transportation project designs. All CTDOT projects that affect drainage must have their designs include completion of the MEP Worksheet at each design milestone. The MEP Worksheet documents the project's appropriate WQV, what portion of the WQV is retained, or treated if not retained. The amount of new Directly Connected Impervious Area (DCIA) that is not retained or treated is added to the statewide tracking of DCIA. All projects that disturb more than one acre are registered for the CT DEEP Construction Stormwater and Dewatering Discharge General Permit and must have Stormwater Pollution Prevention Plans. All projects, regardless of disturbance area, have erosion and sedimentation controls plan sheets that are reviewed by compliance staff.

5.3 Post-Construction Stormwater Management reporting metrics

Metrics	
Baseline Directly Connected Impervious Area (DCIA)	Estimated 9,165 Acres – See estimated calculation in Section 5.4.
Net DCIA Constructed	
Net DCIA Acreage Disconnected (Construction Complete)	-0.87 acres of DCIA reduced this year (2.2% of 2040 40 Acre Goal) -15.48 acres of DCIA reduced since 2019 (38.7 % of 2040 40 Acre Goal)
New structural stormwater quality BMPs constructed this Permit Year	5 this permit term / 42 total since 2019
Net DCIA Designed	
Net DCIA Acreage Designed Disconnections (Projected Per DOT Final Design Plans)	- 6.19 acres of disconnections designed this year
Total number of DOT Project plan sets[1] reviewed by the DOT MS4 Team	133 this permit term
CTDOT MS4 Worksheets submitted by DOT project designers	90 this permit term
DOT projects with no impacts[2] to the MS4 System	43 this permit term
DOT Projects with Final Design Plans with Impacts to MS4 System	9 this permit term / 47 total to date
New structural stormwater quality BMPs included in Final Design Plans	4 this permit term / 27 total since 2019
Constructed/Active CTDOT Stormwater BMPs (retention basins, detention basins, HDS's, dry wells)	477 in DOT's mapping/database to date 268 Maintained within MS4 Program
Privately- or Municipally owned Stormwater Quality BMPs Connected to DOT's MS4 System	31 in DOT's mapping/database to date

[1] Every individual project will typically have at least two milestone plan set reviews during the full course of design
[2] Projects that do not alter drainage patterns, reconstruct drainage infrastructure, or change the amount of DCIA (i.e., typical bridge rehabilitation projects are considered to have no impact to the MS4 system

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

To determine the baseline amount of DCIA, a GIS spatial analysis was performed using the following sources: UConn Roadway Impervious Cover, UConn Other Impervious Cover, CTDOT Right of Way, CTDOT Centerline of Road Data, and CTDOT Curb Data. These calculations serve as the baseline and is a conservative estimate of DOT's DCIA. It is anticipated that as mapping becomes more complete the DCIA value will be adjusted.

Total Impervious Area

CTDOT roadway[3]	24,356 acres
Other CTDOT Impervious Cover[4] (commuter lots, maintenance garages, etc.)	2,600 acres
Total Impervious Cover	**26,956 acres**

Outfalls

Total # of mapped outfalls	13,507 outfalls
Outfalls confirmed or suspected to be directly connected (e.g., discharge to a water of the state)	4,632 outfalls
Outfalls presumed to be disconnected (e.g., upland, no conveyance, and > 100' from nearest mapped waterbody)	8,875 outfalls
Percent Outfalls that are "Directly Connected"	**34%**

Directly Connected Impervious Area

Directly Connected Impervious Area	=	Total Impervious Cover	x	Percent Outfalls that are "Directly Connected"
CTDOT DCIA	=	26,956 acres	x	34%
CTDOT DCIA	**=**	**9,165 acres**		

[3] Source: Spatial Analysis using UConn Data

[4] Source: state-wide extrapolation based on CTDOT non-roadway impervious cover identified in fifty (50) municipalities using CTDOT Data

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

CTDOT continues to implement MS4 program with a specific focus on four particular items covered under the pollution prevention and good housekeeping section of the DOT MS4 General Permit. These areas of focus include:

- Catch basin inspections and cleaning,
- Street sweeping,
- Structural stormwater controls and BMP inspection and maintenance, and
- Implementation of a retrofit program to disconnect impervious areas.

6.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
6.1 Develop and implement formal employee training program	Program in place	In person and on-demand trainings for design, construction, and maintenance staff	Conduct Annual Training for Bureaus.	All Bureaus	June 30, 2021	July 1, 2019	See MS4 trainings held below
6.2 Implement infrastructure repair and rehabilitation program	Program in place	Inspection and documentation of mapped stormwater infrastructure is on-going. Inspection results are used to inform the CTDOT stormwater asset rehabilitation program.	Develop and implement a repair / rehabilitation program.	Bureau of Engineering & Construction's Office of Environmental Compliance Bureau Chief-Engineering & Construction Bureau Chief Highway Operations	June 30, 2022	Program developed prior to permit issuance. Implementation is on-going.	The 12/12/23 EPA/CTDOT Consent Order adjusted this requirement of CTDOT's MS4 Permit issued 5/24/18
6.3 Track DCIA that is disconnected during redevelopment and retrofit projects	Completed	Tracking DCIA changes from capital and retrofit projects is on-going	Develop and Implement a Procedure to Track DCIA for projects.	Bureau of Engineering & Construction's Office of Environmental Compliance	July 1, 2019	July 1, 2019	The 12/12/23 EPA/CTDOT Consent Order adjusted this requirement of CTDOT's MS4 Permit issued 5/24/18

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
6.4 Develop and implement a plan to disconnect 2% of calculated DCIA	Completed	Initiated design of first standalone retrofit project. Identified and created an inventory of potential retrofit locations across the State. Coordinated with other offices within CTDOT to evaluate disconnection opportunities on capital projects and resiliency projects.	Develop and Implement a Plan to Disconnect 2% of DCIA	Bureau of Engineering & Construction's Office of Environmental Compliance Bureau Chief-Engineering & Construction	June 30, 2022	July 1, 2019	The 12/12/23 EPA/CTDOT Consent Order adjusted this requirement of CTDOT's MS4 Permit issued 5/24/18
6.5 Implement CTDOT MS4 Property and Operations Maintenance	Ongoing	Standard Property and Maintenance Operations were completed throughout the year	Document and Report on Maintenance Activities Implemented	Bureau Chief Highway Operations Bureau Chief, Finance & Administration, Property & Facilities	July 1, 2019	On-Going	
6.6 Develop and implement sweeping program	Completed	Implemented a new sweeping tracking procedure that will provide location data for where sweeping occurred. With CT DAS, solicited bids and executed contract for services to supplement statewide street sweeping.	Document and Report on Sweeping Activities	Bureau Chief Highway Operations	July 1, 2019	June 30, 2020	The 12/12/23 EPA/CTDOT Consent Order adjusted this requirement of CTDOT's MS4 Permit issued 5/24/18
6.7 Develop plan to optimize catch basin cleaning	Completed	A street sweeping and catch basin cleaning optimization plan was previously completed	Collect additional data on catch basin cleaning to optimize cleaning operations.	Bureau Chief Highway Operations	July 1, 2019	June 30, 2020	The 12/12/23 EPA/CTDOT Consent Order adjusted this requirement of CTDOT's MS4 Permit issued 5/24/18

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
6.8 Inspect and clean (where necessary) catch basins.	In Progress	Implemented a new catch basin cleaning tracking procedure that will provide some location data to indicate where catch basins were inspected and cleaned (if needed). Also prepared an RFP to support Maintenance operations with private contractors for additional catch basin inspections/cleaning and street sweeping activities.	Map, Inspect and Prioritize Catch Basins.	Bureau Chief Highway Operations	July 1, 2019	Ongoing	The 12/12/23 EPA/CTDOT Consent Order adjusted this requirement of CTDOT's MS4 Permit issued 5/24/18
6.9 Development, implement and optimize standard operating procedures for snow management practices	Complete	CTDOT has an existing Winter Maintenance Program that continues to be implemented	Optimize, Document and Report on Snow Management Practices.	Bureau Chief Highway Operations	July 1, 2019	Completed Prior to Permit Issuance	CTDOT created the Snow and Ice Guidelines for internal BMPs for handling Snow and Ice Operations
6.10 Track and report types of deicing materials used, lane miles treated, and total amount of deicing material used	Complete	Track Snow and Ice Maintenance Metrics	Report on amount of material, type of material and equipment used during winter maintenance	Bureau Chief Highway Operations	June 30, 2020	June 30, 2020	See Section 6.3 for reporting totals

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
6.11 Implement additional measures for discharges to impaired waters from sites with high potential to contribute to impairment	In Progress	Capital projects that discharge to impaired waterbodies are identified early in the preliminary design phase to allow for consideration and implementation of stormwater quality management to reduce and/or eliminate pollutants of concern to the maximum extent practicable.	Prioritize outfalls discharging to impaired waters for monitoring	Bureau of Policy & Planning's Office of Environmental Planning Bureau of Engineering & Construction's Office of Environmental Compliance	July 1, 2019	Ongoing	CTDOT coordinated with USGS to implement a stormwater monitoring program that was completed this permit year. The final report documenting the results will be published in Permit Year 7. See Part II of this report titled Impaired Waters Monitoring and Investigations. The results collected from this study in conjunction with MS4 stormwater system mapping will enable modeling of catchment areas to support and prioritize DOT's retrofit projects.

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

CTDOT will continue to complete Pollution Prevention / Good Housekeeping activities to meet the pollution reduction intent of the permit requirements. CTDOT has refined its DCIA reduction plan with forecasts based on the DOT capital project (redevelopment) program and identifying stand-alone retrofit opportunities across the State.

In addition, CTDOT continues to work with CT OPM and CT DAS to procure contractor services to supplement existing maintenance operations with catch basin cleaning and street sweeping. Inspections of stormwater quality BMPs will continue to be performed. Maintenance on BMPs identified as needing it will continue to be implemented.

CTDOT will continue to implement a Maintenance Decision Support System that provides GPS and weather-related information to control deicing material application rates. The system can access current road and weather conditions, forecast weather that will affect transportation routes, predict how road conditions will change in response to candidate maintenance treatments and evaluate the effectiveness of maintenance treatments that are applied.

6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Highway Operations general supervisors, crew leaders, and district trainers receive annual stormwater training that includes pollution prevention and proper debris management during storm preparations.

Meetings are held with District Drainage Engineers, District Special Services Managers, Environmental Compliance staff, and Environmental Planning staff to discuss known locations of repeated drainage issues and action items. Maintenance of specific structural stormwater measures are decided as either activities that can be completed by state maintenance forces or those that must be coordinated with a DAS vendor.

Employee training provided for key staff	
OEP MS4 Mapping Training	Web Videos for Internal Use
OEP MS4 Catch Basin Cleaning Application Training	10/27/2024, 12/19/2024
GIS Training for District Maintenance on Catch Basin Inspections	2/19/2024
Participate in SECOG Meeting Overview of MS4 Requirements	3/27/2025, 6/26/2025
On-Demand MS4 Video Training Series for Design Engineers & Consultants	Published 6/13/2024
IDDE, GIS & BMP Inspection Training for CTDOT Environmental Compliance Consultants	6/2/2025, 6/10/2025, 6/11/2025
Meetings with District Drainage Engineers (typically 10 – 15 people)	6/4/2025, 3/6/2025
District 2 Construction Winter Training (est. 55 people)	2/19/2025
District 3 Construction Winter Training (est. 80 people)	2/19/2025

Summary of Catch Basin Inspection and Cleaning Activities

The EPA and CTDOT executed a Consent Order that was signed on December 12, 2023. The order sets a revised target for CTDOT to inspect and clean (where needed) all catch basins within priority areas by August 1st, 2031. Based on mapping completed to date CTDOT estimates that there are approximately 120,000 catch basins within priority areas. Based on previous catch basin cleaning efforts in Permit Years 1-5, CTDOT estimates that inspection (and cleaning where needed) of approximately 12,000 catch basins annually is required to meet the 2031 requirement. To achieve this, CTDOT will need to support existing / on-going Highway efforts with private contractors via a new Department of Administrative Services (DAS) Contract. As such, CTDOT prepared a public Request for Proposal that was put out to bid in the spring of 2024 and was awarded in October of 2024. The bid was structured so that each of CTDOT's maintenance districts were bid separately. The bid resulted in only three of the four maintenance districts being awarded. No bids were received in District 3. Statewide CTDOT maintenance areas are divided into four districts as shown in the figure below:

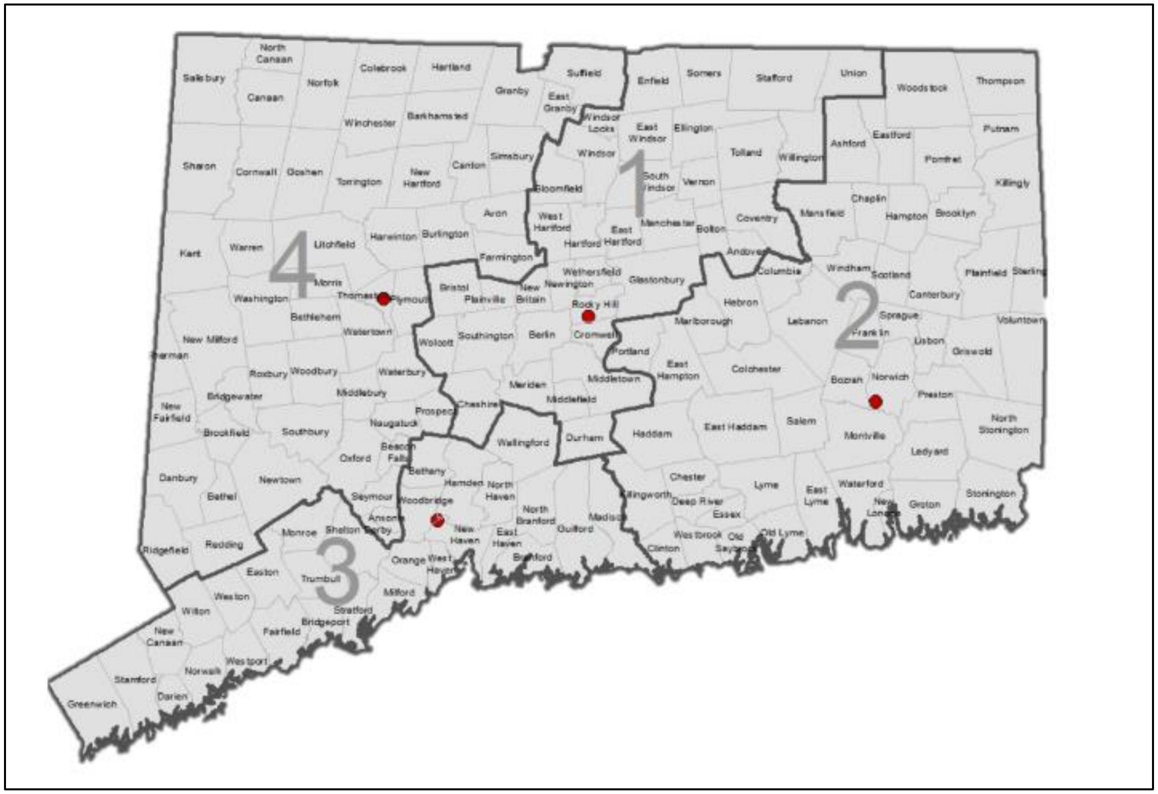


Figure 3: CTDOT Maintenance Districts

During this permit year, CTDOT began implementation of a catch basin cleaning GIS application to capture inspection and cleaning data. This application allows CTDOT to document exactly where catch basins have been inspected and cleaned. After the award of the DAS contract for each of the three districts, training sessions with CTDOT Maintenance staff were held in October and February to demonstrate the GIS application that will be used to record inspection and maintenance activities. A screen shot of some of the inspection data collected with the application is shown below. A red circle indicates that a catch basin has not been inspected or that it requires cleaning. A green circle indicates that a catch has been inspected and was either cleaned or did not require cleaning.

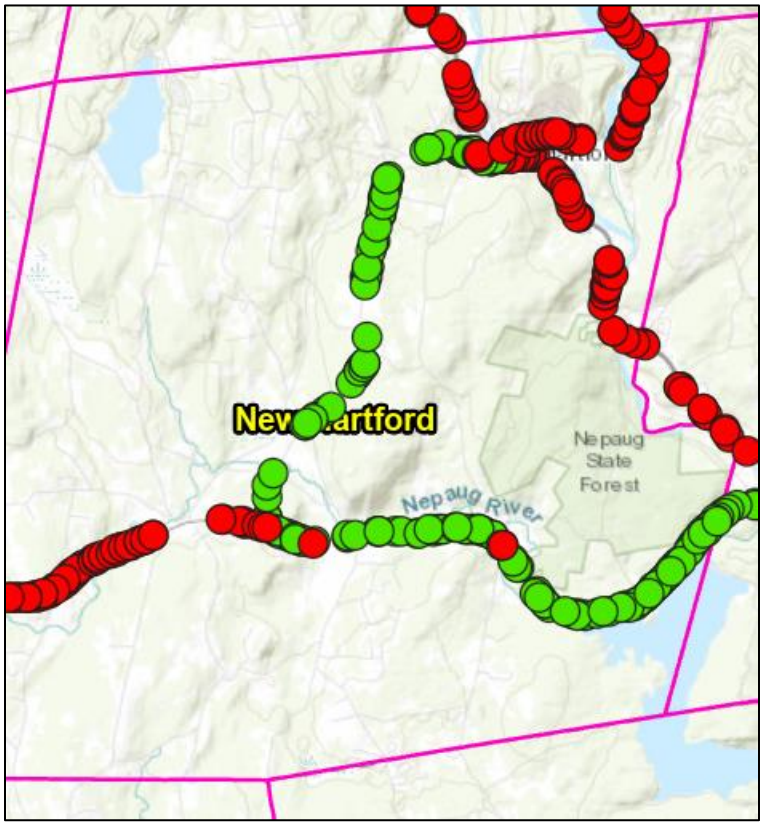


Figure 4: Example of Spatial Catch Basin Cleaning Data in GIS

Using this GIS application, CTDOT Maintenance staff will record all inspection and maintenance activities performed by the DAS contractors. Simultaneously, inspection and maintenance of catch basin cleaning activities performed by CTDOT staff will also continue. However, the use of GIS by CTDOT staff to record catch basin inspection and cleaning activities is currently limited and activities are often tracked using the older Maintenance Management System (MMS). MMS does not have the ability to track location information. Due to that limitation, CTDOT previously implemented an additional tracking protocol that has CTDOT Maintenance Staff provide a written description of where work was performed. As CTDOT's catch basin inspection and cleaning program evolves, the use of the GIS application will become more common. In the interim, CTDOT maintenance staff without the resources to use the GIS application, will continue to use MMS supplemented with a written description of the location of work.

With the DAS contract awarded in October 2024, work under the contract began in the spring of 2025. Work completed under the DAS contract in Permit Year 6 was 1,307 inspections recorded and 1,262 catch basins documented as being cleaned. Despite the limited availability of the DAS contract during this permit term, CTDOT was able to increase the total catch basins inspected from 9,759 last year to 10,585 this year. While there was an increase in the total number of catch basins inspected, the number of catch basins cleaned during this permit year dropped from 9,356 last year to 8,843 this year.

Summary of Street Sweeping Activities

Although the schedule for street sweeping is unchanged from the CTDOT MS4 language contained in the May 18, 2018 permit, the requirement to inspect and sweep (where needed) all streets and parking lots within priority areas was also included in the Consent Order issued by EPA in December 2023. CTDOT maintains approximately 19,000 curb miles. In Permit Year 6, CTDOT swept 14,605 curb miles with the remaining mileage found to not require sweeping. CTDOT also procured two additional sweepers in the summer of 2024 and a third in the winter of 2025, bringing the total number of street sweepers in CTDOT's active inventory to nineteen.

Similar to the procedure for documenting catch basin cleaning, CTDOT is currently transitioning from using the older Maintenance Management System (MMS) to document sweeping activities to a proprietary truck mounted GPS and data logging system from Samsara. Currently, activities are tracked in both systems, but the total swept mileage reported for Permit Year 6 came (only) from the MMS system. The Samsara GPS systems were originally installed on a portion of the fleet in the spring of 2024 with the entire fleet outfitted by August of 2024. Although the system is collecting spatial data on each sweeper daily, summarizing sweeping activities for an entire 12-month period for all sweepers has proven difficult. CTDOT is currently working with Samsara to provide a 12-month summary that could be added to future annual reports. The current tracking system can report total mileage driven by all the sweepers. An example of the spatial data collected by the GPS and data logging system is provided below.

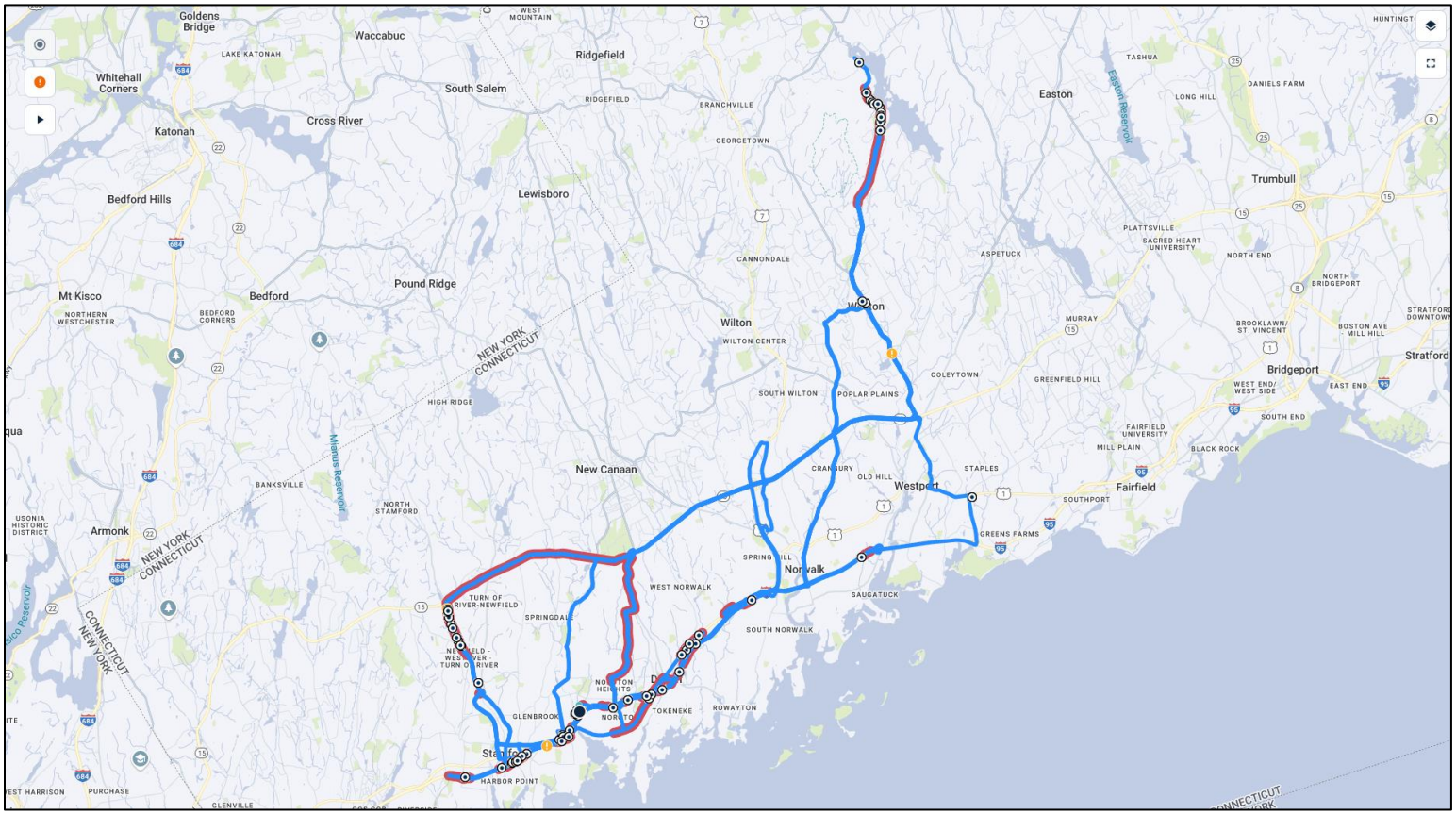


Figure 5: Example of Spatial Street Sweeping Data in Samsara Dashboard

Street sweeping	
Miles swept this year	14,605 miles
Volume (or mass) of material collected	Unknown
Catch Basin Inspection and Cleaning	
Total number of CTDOT owned or maintained catch basins	88,112 mapped to date / total
Total number of catch basins inspected this year	10,585 catch basins inspected
Total number of catch basins cleaned this year	8,843 catch basins cleaned
Total number of catch basins inspected but cleaning not needed	1,742 catch basins inspected; cleaning not needed
Total number of catch basins cleaned in MS4 priority areas	Undeterminable at this time*
Volume (or mass) of material removed from all catch basins	Estimated at 4,631 CY
*CTDOT's GIS mapping of catch basin cleaning has not yet been integrated with layers that can reflect priority area characteristics – impaired waters' watersheds, urban areas, and areas with DCIA >11%.	

As required by the EPA consent order signed in December of 2023, CTDOT completed a Stormwater Best Management Practice (BMP) Inspection and Maintenance Plan. The plan was completed in January of 2024 and provides information about the structural BMPs in CTDOT's inventory, the schedule by which inspection and maintenance of these BMPs will be completed and general guidance on how to inspect and maintain them. CTDOT's Stormwater BMP Inspection and Maintenance Plan is reviewable as an appendix to the Permit Year 5 Annual Report posted on the CTDOT MS4 webpage.

The inspection of the structural BMPs in CTDOT's inventory is completed by Environmental Compliance's on-call consultants using inspection forms within GIS. BMPs identified as needing maintenance are assigned to either CTDOT Highway Operations or DAS contractors based on the level of maintenance required.

CTDOT Stormwater Management Facilities / BMPs Inspected	195 this permit year 3 Underground Detention & Infiltration Systems 3 Filtering BMP 62 Stormwater Basins 2 Water Quality Swales 75 Hydrodynamic Separators (HDS) & Oil Particle Separators (OPS) 50 Dry Well / Leaching Catch Basin
CTDOT Stormwater Management Facilities / BMPs Cleaned	21 this permit year 12 Hydrodynamic Separators (HDS) & Oil Particle Separator (OPS) 1 Dry swale 8 Stormwater Basins
Structure (Bridge) Rinsing Operations Total number of structures rinsed	39 Bridges

The CTDOT MS4 structural BMP inventory continues to be updated as mapping and inspections of stormwater assets statewide is completed. Currently the inventory consists of 268 BMPs under CTDOT's MS4 permit. This inventory no longer includes 28 BMPs that were removed from active inventory during in Permit Year 6. It was determined that these 28 BMPs had been designed as temporary sedimentation basins for use during construction, not as permanent post-construction BMPs intended for the long-term protection and improvement of water quality. Highway drainage to these features would now be considered as directly connected if routed to a receiving water. These locations will be reconsidered as suitable locations for bona fide stormwater control features based on other factors including whether the basins are not part of active watercourses, their current naturalized conditions, the potential for localized infiltration, and the depth and footprint needed create a basin that met current design standards.

Out of the current inventory of 264 BMPs, 195 BMP inspections were completed in Permit Year 6, of which 20 BMPs were identified as being in need of maintenance. The remaining 69 BMPs fall into one of two categories – those that were inspected in previous years and the need for maintenance had already been identified, or those that were not yet mapped in the CTDOT digital system until some point during Permit Year 6. The latter will be inspected during Permit Year 7.

As documented in Permit Year 5's annual report, there were 71 BMPs identified as needing maintenance as of July 1, 2024. Maintenance efforts in Permit Year 6 resulted in 21 BMPs being cleaned / rehabilitated. This leaves 50 BMPs that remain from the 71 BMPs identified during Permit Year 5. Adding in the 20 BMPs that were identified during Permit Year 6 inspections, the total number requiring maintenance is 69 BMPs. However, 16 BMPs were added to the database in Permit Year 6 and 12 of them were immediately flagged for needing maintenance. This brings the new total to 81 BMPs needing maintenance at the end of Permit Year 6. It should be noted that although dry detention basin BP-106 in Stratford has been identified as needing maintenance, it will be re-constructed as an infiltration basin as part of the 2027 retrofit projects discussed in section 6.5 below and will not be maintained in interim. CTDOT anticipates maintaining more than seventy BMPs in Permit Year 7. As required by the Consent Order with U.S. EPA, all BMPs that require maintenance that were identified by December 30, 2023 must be maintained by June 30, 2027 with two additional years beyond that to complete maintenance on large wet basins. In February of 2024, 109 BMPs had been identified as needing maintenance. To date, CTDOT has cleaned/restored 84 BMPs, including the 21 BMPs maintained in Permit Year 6. Of the remaining 25 BMPS from the original 109 BMPs identified by December of 2023, only 12 BMPs remain to be maintained by June 2027; the other 13 BMPs were part of the larger group of 28 BMPs re-assessed and removed from the list of active stormwater control features.

Included in the 21 BMPs maintained during Permit Year 6 was the cleaning and restoration of three wet basins and five dry basins. A DAS environmental services contractor removed woody debris and sediment to restore the basins to their original retention capacity. Overall, the eight basins were maintained within the following seven municipalities: Madison, Wilton, Woodbridge, Orange, Wallingford, Greenwich (2 basins) and New Canaan. The pictures below show the basins "before" and "after" the clean-up and restoration process.

Madison Dry Detention Basin Maintenance (GIS ID# 170-BP-411)	
Before Pictures	**After Pictures**
	

Wilton Dry Detention Basin Maintenance (GIS ID# 170-BP--445)	
Before Pictures	**After Pictures**
	

Woodbridge Dry Detention Basin Maintenance (GIS ID# 170-BP-267)	
Before Pictures	**After Pictures**
	

Orange Dry Detention Basin Maintenance (GIS ID# 170-BP-109)	
Before Pictures	**After Pictures**
	

Wallingford Dry Detention Basin Maintenance (GIS ID# 170-BP-431)	
Before Pictures	**After Pictures**
	

Greenwich Wet Detention Basin Maintenance (GIS ID# 170-BP-93)	
Before Pictures	**After Pictures**
	

Greenwich Wet Detention Basin Maintenance (GIS ID# 170-BP-94)	
Before Pictures	**After Pictures**
	

New Canaan Wet Detention Basin Maintenance (GIS ID# 170-BP-97)	
Before Pictures	**After Pictures**
	

Snow management Number of Winter Weather Events	11 Statewide Events / 9 Partial Events
Type(s) of deicing material used	Sodium Chloride, Sodium Chloride to make Salt Brine, and Liquid Magnesium Chloride
Total amount of each deicing material applied	119,265 tons of Sodium Chloride, 64 tons Sodium Chloride to make 48,656 gallons of salt brine 673,627 gallons of Magnesium Chloride
Type(s) of deicing equipment used	Calibrated Spreaders and Sprayers for Sodium and Magnesium Chloride, salt slurry tanks to spray salt brine liquid
Lane-miles treated	10,800 miles
Snow disposal location	None this year
Staff training provided on application methods & equipment	CTDOT Snow and Ice Committee meetings are routinely held throughout the year to provide efficient snow and ice management.
Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)	No locations identified this permit term

Briefly describe the method used to optimize your catch basin inspection and cleaning schedule.

During this permit year, CTDOT began using a GIS application to track catch basin activities. Although the application is primarily used by CTDOT staff overseeing DAS contractors tasked with cleaning catch basins, its use will expand in the future as additional hardware and software is available for more CTDOT staff. This application allows CTDOT to document where catch basins have been inspected and cleaned. The application provides a visual indication on the status of every CTDOT catch basin statewide. The data collected over time will be used to identify areas that may require an alternative cleaning schedule.

6.5 Retrofit program

Redevelopment projects *constructed* in Permit Year 6 (July 1, 2024 – June 30, 2025) resulted in a net DCIA decrease of 0.88 acres. Overall, redevelopment projects *constructed* since July 1, 2019, have resulted in a net DCIA decrease of 15.48 acres.

Note that despite disconnecting 0.87 acres in Permit Year 6, the overall decrease in DCIA reported since July 1, 2019 went from 15.75 last year to 15.48 this year. This is due to an error in last year's reporting as the decrease of 1.14 acres associated with project 0102-0368 was counted twice.

The multi-year forecasted change in DCIA associated with all redevelopment projects designed, but not constructed, in Permit Year 6 is projected as a net 11.33-acre DCIA reduction. There are eleven stand-alone retrofit projects currently in the engineering design phase that are expected to disconnect 37.0 acres by 2027. There are ten additional stand alone retrofit projects currently in the planning phase that are projected to disconnect 21.0 acres by 2030.

The order requires CTDOT to submit a DCIA retrofit plan annually as part of the overall MS4 annual report. The current DCIA Retrofit Plan is attached to this report as Appendix A.

Part II: Impaired waters monitoring and investigations

1. Impaired waters investigation and monitoring program

1.1 Identify which stormwater pollutant(s) of concern occur(s) in your municipality or institution.

As of July 1, 2025, CTDOT has 1,081 mapped discharge locations that are directly connected to impaired waterbodies. These waterbodies are impaired for various stormwater pollutants of concern including common impairments such as bacteria, phosphorus, nitrogen among many others.

1.2 Describe program status

In consideration of the thousands of outfalls connected to the state drainage systems, an automatic outfall sampling option was incorporated into the CTDOT MS4 permit to address impaired waters sampling requirements. In order to meet the permit's monitoring requirements, the USGS, on behalf of CTDOT, completed a rigorous auto sampling program that consisted of continuously monitoring a total of nine outfalls from highways for a period of approximately two years each. Each sampling event consisted of over 40 analytes. The nine sites were selected based upon land use type, impervious area and the average daily traffic that passes through the drainage area for the outfall. The nine locations were:

Automatic Monitoring Outfall Locations

YEAR 1 & 2

1. I-91 Hartford
2. Route 2 Glastonbury
3. Route 3 Glastonbury
4. Route 74 Vernon
5. Route 8 Torrington

YEAR 3 & 4

6. I-95 Milford
7. Route 15 Orange
8. Route 15 Milford
9. Route 139 Branford

Status of Phase 1 Locations

The sampling at each of the Phase I locations is complete.

Highway and location	Proposed number of composite samples	Number of composite samples collected as of 6/30/2021
State Route 2, Glastonbury, CT.	15-18	18 - Complete
State Route 3, Glastonbury, CT.	15-18	18 - Complete
State Route 8, Torrington, CT.	15-18	18 - Complete
State Route 74, Vernon, CT.	15-18	18 - Complete
Interstate 91, Hartford, CT.	15-18	18 – Complete

Status of Phase 2 Locations

Sampling of the phase 2 monitoring locations is also complete. The sampling at the Orange, Branford and Route 15 Milford locations were completed in the spring of 2023. The sampling at the I-95 station in Milford was delayed due to some initial equipment issues and then further delayed in 2023 by a paving project along I-95. Sampling was completed at the I-95 Milford location in the spring of 2024. The sampling data from these locations is now available publicly on the NWIS linked here: https://maps.waterdata.usgs.gov/mapper/index.html.

USGS is scheduled to complete the report on the data, which will include a description of the findings, by the winter of 2025.

Highway and location	Proposed number of composite samples	Number of composite samples collected as of 6/30/2024
I-95, Milford, CT.	15-18	18 – Complete
Route 15, Orange, CT.	15-18	18 – Complete
Route 15, Milford, CT.	15-18	18 – Complete
Route 139, Branford, CT.	15-18	18 – Complete

Water Quality Modeling of CTDOT Discharges to Impaired Waters

Now that the sampling data for both phases has been collected, the data will be uploaded by U.S. Geological Survey to the national highway runoff database.

The national highway runoff database, with the Connecticut data, is one set of inputs used in the Stochastic Empirical Loading and Dilution Model (SELDM) for evaluation of water quality associated with highway discharges and receiving waters SELDM.

Introduction and Background on SELDM

SELDM was developed by the U.S. Geological Survey (USGS) to assist in providing meaningful information about the risk of adverse effects of runoff on receiving waters, the potential need for mitigation measures, and the potential effectiveness of such management measures for reducing these risks.

USGS developed SELDM in cooperation with the Federal Highway Administration to help develop planning-level estimates of event mean concentrations, flows, and loads in stormwater from a site of interest and from an upstream basin. SELDM uses Monte Carlo methods to generate a stochastic population of the concentrations, flows, and loads needed to implement a mass-balance model for a receiving waterbody. For more information about SELDM visit the USGS SELDM webpage which can be found at this link: SELDM: Stochastic Empirical Loading and Dilution Model - Software page | U.S. Geological Survey (usgs.gov)

Status of Developing an Inventory of Outfalls Potentially Contributing to Impairments

The Monitoring Requirements section of CTDOT's MS4 permit includes a provision that CTDOT must develop an inventory of any mapped DOT MS4 outfall drainage areas that are potentially contributing to an impairment. In this permit term, CTDOT worked on gathering highway and upstream basin data for all 804 mapped (as of 7/1/2024) discharge points to impaired waters.

CTDOT anticipates completing an analysis of approximately 20% of these locations annually and developing an inventory and prioritization list from this work. Prioritized locations identified as likely having impacts to impairments and/or downstream water quality will be considered for stand-alone retrofit and DCIA reduction projects. Updates on this work will be provided in subsequent annual reports. In addition to collecting data on mapped discharge locations to impaired waters, CTDOT also used SELDM to evaluate stand alone retrofit projects currently in the design phase. These projects have been prioritized based on the need to construct stand alone retrofit projects in order to meet the 40 acres of DCIA disconnection by 2027 target set by the EPA consent order.

These evaluations were done prior to the inclusion of the water quality data collected at the nine representative CT highway locations. Based on the results of the initial evaluation, CTDOT can include the CT specific data in future model runs for locations that have potential to be contributing to an impairment. SELDM evaluations produce a "risk factor" in terms of the percent of SELDM simulated rain events expected to negatively impact downstream water quality due to the contribution of CTDOT drainage to the surface waterbody.

CTDOT has adopted a risk factor of 10% as the limit above which a location will be considered a high priority and identified for further evaluation. An exceedance of 10% means the downstream water quality is negatively impacted for 10% or more of all the SELDM simulated rain events based on the contribution of the CTDOT drainage to the surface waterbody. A lower risk factor may be adopted in the future in coordination with CTDEEP based on the results of using 10% as the risk factor for the analysis.

During Permit Year 6, CTDOT completed an analysis to determine CTDOT's contribution to downstream water quality at the 13 stand alone retrofit locations, two of which (PB-149 in Bridgeport and PB-162 in Meriden) have since been removed from the retrofit program based on the results of a feasibility study. These stormwater BMP Retrofit opportunities had been identified based on factors such as drainage area, available right of way, topography and land use. The results of the modeling showed that the adopted risk factor of ten percent or higher was identified on three locations that are described further below.

Three additional locations were identified as having risk factors between four and seven percent. The volume and pollutant load reductions associated with retrofitting all eleven remaining locations with stormwater quality BMPs would still be achieved.

A summary of each BMP retrofit location where the risk factor exceeded 10% is provided below:

- 170-BP-106 is an existing dry detention basin that receives stormwater drainage from Route 15 in Milford. The basin discharges south of a section of the Housatonic River which is impaired for nutrients and dissolved oxygen. The site currently has a risk factor of 11.4%, which will decrease to 2.93% upon reconstruction. This stormwater BMP will be retrofitted by deepening the basin, thereby increasing the WQV capacity for retention and treatment.

- 170-PB-48 is a proposed BMP located in the infield of Russell Road (RT-424) and the Berlin Turnpike (RT-5) in Newington. The basin will receive drainage from both Russell Road and Wells Rd (RT-175). The basin then discharges into the Wells Road drainage system which ultimately flows into an unnamed stream. The current risk factor at this site is 29.4%, which will decrease to 11.6% following construction.

- 170-PB-148 is a proposed BMP located in the infield of the Exit 32 I-95 NB onramp in Stratford. The site constraints are such that the BMP can be sized to receive only a small portion (4.83 acres) of the total area of I-95 (28.29 acres) that drains to this location. However, the upstream basin for this discharge point consists almost entirely of CTDOT impervious area, which is the cause for the 98.82% risk factor. Constructing the proposed BMP in this location will reduce the risk factor to 93.76%. The receiving water is a small unnamed tributary to the Housatonic River. The reduction in risk factor could have a measurable effect on the small tributary's quality. However, improvements to the Housatonic River water quality as a result of this BMP are expected to be negligible.

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

2.1 Screening data collected

Beyond the sampling at designated locations by USGS described above, the CTDOT also collected samples of a waterbody's impairment if illicit discharge detection and elimination sampling was done at an outfall. A total of twenty-seven outfall locations were sampled for the waterbody impairment(s) to which the outfall discharged.

- Bacteria
    - 3 bacteria samples were taken
    - 3 were below the applicable thresholds in the MS4 Permit
    - None were above the recreation e. coli / enterococci thresholds
    - None were above the designated swimming enterococcus threshold of 104 cols/100mls
- Nitrogen - No Nitrogen samples were collected because there was no flow present during dry weather sampling. For locations with dry weather flow, the only pollutant of concern identified was bacteria.
- Phosphorus - No Phosphorus samples were collected because there was no flow present during dry weather sampling. For locations with dry weather flow, the only pollutant of concern identified was bacteria.
- Turbidity (Other Pollutant of Concern)
    - 1 sample was taken, which exceeded the 5 NTU-difference from upstream turbidity level

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

For impaired waters sampling results from an IDDE investigation that are above the thresholds listed in the permit, the CTDOT shares the results with the municipality, local sewer authority and/or the local health department in an effort to identify any known issues within the catchment areas to coordinate any catchment investigations or mitigation efforts. Unless other activities occur as a result of sharing data with local stakeholders, CTDOT will investigate catchments where exceedances of the permit's impaired waterbody triggers occurred. The catchment investigation results for this permit year are discussed in detail in the Catchment Investigation Data section in Part III of this report below. Data from catchment investigations are available upon request by emailing CTDOT at DOT.MS4@ct.gov.

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

CTDOT is following a town-by-town outfall monitoring approach during its first permit term in which any non-excluded outfall will attempt to be screened / sampled once the CTDOT stormwater assets in the Town are mapped. Generally, all non-excluded outfalls are dry weather screened / sampled regardless of their prioritization category. Any outfall identified as having a suspect illicit discharge is identified for an investigation.

The CTDOT has developed a script within its GIS database to help automatically identify high priority outfalls using land use or other available GIS data including data that potentially includes some of the System Vulnerability Factors such as culverted streams, storm and sanitary sewer crossings, area density and/or land use.

Part III: Additional IDDE Program Data

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

Due to the thousands of outfalls owned and maintained by CTDOT, it is not feasible to list catchments individually below. The table below lists the number of catchments in each of the four prioritization categories based on mapping that was completed through Permit Year 6.

To be categorized as a Problem catchment, a known or suspected illicit discharge into the catchment area had to have been identified before the effective date of the permit. (During permit years 1 and 2, any catchment found via screening and sampling activities to contain suspected illicit discharges into CTDOT's MS4 system were incorrectly classified as problem catchments.) All previously identified "Problem" catchments have now been reclassified as high priority catchments. CTDOT did not have catchments identified with suspect illicit discharges prior to the permit term. As such CTDOT has no problem catchments. Catchments areas with known or suspected illicit discharges will be considered as problem catchments during the next permit term.

As such, the number of Problem catchments indicated in this annual report has been revised compared to previous years.

Number of Catchments within Each Category Based on Mapping Completed in Permit Year 6				
Catchment Category	Excluded	Low Priority	High Priority	Problem
Number of Outfalls/Catchments in Each Category	10,491	4,696	1,146	0

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

CTDOT conducted dry weather sampling at 121 outfalls that had dry weather flow. Of these, three locations discharged to an impaired waterbody. CTDOT sampled the three locations for the pollutant(s) of concern identified which was primarily bacteria. Overall, outfalls were dry weather screened within the following 18 municipalities: Brooklyn, Chester, Essex, Groton, Haddam, Hebron, Manchester, Mansfield, Marlborough, New Canaan, Old Lyme, Portland, Preston, Putnam, Thompson, Westbrook, Westport and Wilton.

2.2 Wet weather sample and inspection data

CTDOT did not conduct wet weather sampling this permit year. During the first four permit years, wet weather sampling at 857 locations was completed by CTDOT, none of which resulted in the identification of any illicit discharge sources. All potential illicit discharges identified by CTDOT have resulted from discoveries during construction projects and dry weather screening and sampling. CTDOT will include IDDE awareness in its training to construction staff, encourages members of the public to report suspected illicit discharges to DOTMS4.com, and has reallocated the resources previously used to conduct wet weather to instead conduct additional dry weather screenings and associated catchment investigations needed.

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

3.1 System Vulnerability Factor (SVF) Summary

CTDOT has thousands of catchment areas statewide and no sanitary sewer or septic system mapping for many of these areas. MS4 staff review each catchment for likely SVF's at the time when the drainage features are added to CTDOT's digital mapping. For areas other than limited access highways, one or both of the following SVF's are frequently assumed to be present; 1) crossings of storm and sanitary alignments and/or 2) storm and sanitary infrastructure greater than 40 years old in medium and densely developed areas. Other SVF's may also be present. As such, CTDOT generally assumes that all non-excluded catchments have at least one SVF present. This is a conservative but time saving approach that has resulted in 4,370 catchments, which are currently mapped, that are presumed to have at least one of the twelve SVFs listed in the permit.

3.2 Summary of Catchment Investigations

CTDOT's MS4 permit requires catchment investigations be completed in three of the four catchment categories: problem, high and low.

The permit requires investigation of 40% of all non-excluded mapped catchment areas by June 30, 2024, and 100% of non-excluded catchment investigations should be completed by June 30, 2029. Investigating the suspect sanitary sewer inputs documented in any existing problem catchments is the highest priority, followed by high priority catchments and finally low priority catchments. As CTDOT had no existing Problem catchments at the start of this permit term, CTDOT is prioritizing High Priority

catchments with suspect illicit inputs from screening and sampling activities first. Catchments categorized as excluded do not need to be investigated.

Per CTDOT's MS4 permit, there are two ways in which a catchment investigation can be considered complete: 1) A catchment with screening and sampling results below permit triggers, no junction manholes and no SVFs or 2) A field investigation of the catchment area including screening and sampling of key junction manholes. Each of these two methods are each discussed below. See section 3.7 in Part I of this report for a summary of the total number of catchment investigations completed.

3.2.1 Catchments that Do Not Require Field Investigations

CTDOT considers a catchment investigation complete even when a field investigation has not necessarily occurred provided certain criteria are met. The underlined portions of the text below are CTDOT's additions to the permit's criteria for completing an investigation (Appendix B Section 8(d)), and CTDEEP has concurred with this modified approach.

- Catchment does not contain junction manholes, or the only junction manhole present in the catchment area is immediately up gradient of an outfall that was screened and sampled and;
- Dry weather screening reveals no dry weather flow, or dry weather flow was present, but the flow was sampled and did not exceed the permit's triggers for ammonia, surfactants and chlorine or ammonia, surfactants and bacteria (indicative of the presence of flow from a permissible discharge such as from foundation drains) and;
- No evidence of illicit discharge was noted via screening/sampling results, visual or olfactory means and;
- No wet weather System Vulnerability factors (SVFs) were identified, or wet weather SVF's were identified, or likely present but wet weather sampling was completed and the results did not exceed the permit's triggers for ammonia, surfactants and chlorine or ammonia, surfactants and bacteria

3.2.2 Catchments Requiring Field Investigations

All non-excluded catchments that do not meet the criteria above require additional field investigation of the catchment area. For the time frame between 7/1/2024 and 6/30/2025, CTDOT or other stakeholder groups in coordination with CTDOT completed 452 catchment investigations across the state.

These investigations are divided as follows: 405 investigations completed on catchments with no key junction manholes and with no source found / no evidence of illicit inputs and 47 investigations completed on all key junction manholes within a catchment area, and with no source to identify and no evidence of illicit inputs.

CTDOT will continue to prioritize catchment investigations in catchments with evidence of possible illicit inputs based on dry and/or wet weather inspection results. Catchment investigations beyond these will be prioritized according to their catchment categorization with high priority catchments completed first followed by low priority catchments.

Based on data evaluated as of 6/30/25, there are four locations with exceedances of permit triggers that require field catchment investigations. The inspection results and analytical data for these four points are shown below. See section 3.7 in Part 1 of this report for information on the progress made towards the 40% catchment investigation goal.

Screening Sampling ID	Drainage Asset Type	Screening Sampling Date	Town	Highway #	Visual/Olfactory Evidence of Illicit Discharge	Ammonia (mg/L)	E. coli (cols/100 ml)	Screening Sampling Phase
170-SS-9114	Outfall	4/16/2025	Tylerville	602	Yes	–	–	Need to Investigate – Potential Source to Identify
170-SS-14746	Outfall	12/6/2024	New Canaan	15	Yes	-	5170	Need to Investigate – Potential Source to Identify
170-SS-16846	Outfall	10/24/2024	East Harford	502	No	1	10000	Need to Investigate – Potential Source to Identify
170-SS-16892	Outfall	1/9/2025	Farmington	84	Yes	0.2	7700	Need to Investigate – Potential Source to Identify

3.3 Key junction manhole dry weather screening and sampling data

CTDOT conducted 47 dry weather illicit discharge catchment investigations during this permit year within the following 11 municipalities: Brooklyn, Chester, Essex, Hebron, Manchester, Mansfield, Middlefield, New Canaan, Portland, Westport, Wilton. No flow was present within the key junction locations for the catchments investigated. No source was identified as part of the investigation.

3.4 Wet weather investigation outfall sampling data

CTDOT did not conduct wet weather sampling this permit year. During the first four permit years, CTDOT completed 857 wet weather sampling events, none of which resulted in the identification of any illicit discharge sources. All potential illicit discharges identified by CTDOT have resulted from discoveries during construction projects and dry weather screening and sampling. CTDOT will include IDDE awareness in its training to construction staff, encourages members of the public to report suspected illicit discharges to DOTMS4.com, and has reallocated the resources previously used to conduct wet weather to instead conduct additional dry weather screenings and associated catchment investigations needed.

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

CTDOT did not identify any sources during catchment investigations this permit year.

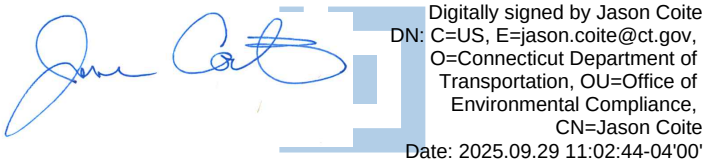
Part IV: Certification

"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 (or delegated authority)

Print name: **Jason Coite, P.E**.
Principal Engineer, Offices of Environmental Compliance & Engineering Project Coordination
Connecticut Department of Transportation

Signature / Date:



Appendix A – CTDOT DCIA Retrofit Plan

CONNECTICUT DEPARTMENT OF TRANSPORTATION

Directly Connected Impervious Area Retrofit Plan

August 1, 2025

CONNECTICUT DEPARTMENT OF TRANSPORTATION

Directly Connected Impervious Area Retrofit Plan

Table of Contents

I. Introduction

This plan documents the Connecticut Department of Transportation's (CTDOT) efforts to comply with the relevant conditions of the General Permit for the Discharge of Stormwater from Department of Transportation Separate Storm Sewer Systems (CTDOT MS4 General Permit or permit) and stipulations of the Administrative Order on Consent issued by the U.S. Environmental Protection Agency (EPA) signed by CTDOT and EPA on December 12, 2023.

Planning for and implementation of reductions in directly connected impervious area (DCIA) as part of CTDOT's Retrofit Program consists of two main components:

- Opportunities incorporated into redevelopment projects, and
- Stand-alone water quality retrofit projects.

Stand-alone retrofit projects had not been anticipated to be achievable during the initial 5-year term of CTDOT's MS4 permit. The retrofit plan that the permit required by the end of Permit Year 3 was incorporated as part of CTDOT's Permit Year 3 annual report. The retrofit plan had consisted of working with the United States Geological Service (USGS) to utilize a stormwater modeling program known as SELDM to identify and prioritize locations where the CTDOT MS4 system expected to have a meaningful contribution to downstream water quality concerns. In addition to using the SELDM modeling program to identify retrofit project locations, the CTDOT was also pursuing smaller scale retrofit projects targeting Department-owned park-and-ride lots, evaluating existing dry and wet detention basins for retrofit projects, as well as other collaborative disconnection projects with municipalities.

The requirement to achieve 40 acres of DCIA disconnected by 2027 and a total amount of 80 acres by 2030 was included in a Consent Order issued by EPA to CTDOT in December 2023. CTDOT is committed to complying, if not exceeding, the Order's stipulations and has developed this DCIA Retrofit Plan to update the approach in general along with specific projects that will contribute to the required 2027 DCIA reductions. CTDOT is on schedule to meet the DCIA reduction targets specified in the order as described herein.

II. DCIA Reductions Associated with CTDOT Redevelopment Projects

Since the July 1, 2019 effective date of its first MS4 permit, CTDOT has disconnected 15.48 acres of DCIA via constructed redevelopment projects. CTDOT is also currently at the 30% engineering design phase for 11 stand-alone retrofit projects that are estimated to disconnect 37 acres. These stand-alone retrofit projects are scheduled to be constructed by 2027. In addition, a second round of stand alone retrofit projects are being assessed for their feasibility and water quality improvement potential. Ten locations have been preliminarily identified as feasible. These ten project locations are preliminarily estimated to disconnect 21 acres. Additional locations are actively being sought.

A summary of the DCIA reductions (or increases) associated with each CTDOT redevelopment project, as well as the predicted reductions associated with the stand-alone retrofit projects, is documented in CTDOT's DCIA Tracking Spreadsheet (Appendix I).

Additional reductions in DCIA are projected based on tracking of all the redevelopment projects currently in the design phase. However, the design for redevelopment projects may change prior to final design and the date by which many of these projects will be constructed is uncertain. The 2030 reduction goal is anticipated to be met with a combination of redevelopment projects and stand-alone retrofit projects. Due to the difficulty in finding suitable locations for retrofit projects, their locations are prioritized based largely on factors such as available right of way, amount of potential disconnection, topography, available soil information and available land use information. Locations will also be evaluated based on modeling each location using the impaired waters model described in the annual report. As CTDOT completes the modeling on all impaired waters discharge locations as required in the next permit term, locations indicating an impact to the waterbody will be prioritized and evaluated for the feasibility of implementing a retrofit project.

All CTDOT capital improvement projects that have any drainage components are reviewed by CTDOT Environmental Compliance MS4 Staff to evaluate any potential stormwater quality improvement opportunities and any DCIA changes. Any proposed decreases or increases in a project area's DCIA, pre- to post-construction, are recorded on a project's "CTDOT MS4 Project Design Maximum Extent Practicable (MEP) Worksheet" (MEP Worksheet) at each design milestone. The worksheets contain project specific details documenting the opportunities and constraints that existed at each project location.

CTDOT's internal process for developing and reviewing redevelopment plans consist of multiple milestone reviews by appropriate CTDOT engineering units as the design matures. This process typically consists of plan review requests at 30% design, 60% design, 90% design and 100% Design (Final Development Plan [FDP]). Except for very large, multi-phased projects, most

projects that have reached their FDP typically start construction within the next 6-12 months and complete construction within the next 24 months. Larger projects are likely to have longer timeframes and can often have construction schedules that span more than one year.

Since the effective date of CTDOT's MS4 permit (7/1/2019), CTDOT has tracked the total DCIA changes associated with constructed redevelopment projects for both the current permit year and total to date.

Redevelopment projects *constructed* in Permit Year 6 (July 1, 2024 – June 30, 2025) resulted in a net DCIA decrease of 0.87 acres. As noted on the DCIA Tracking spreadsheet in Appendix I, the DCIA decrease in Permit Year 6 consisted of eight projects of relatively small size. The largest impact was from project 0102-0296 which disconnected 1.03 acres by replacing piping with a grass channel and removing curbing to allow for natural dispersion. Project 0017-0187 was able to reduce DCIA by 0.26 acres by directing stormwater to an infiltration trench. The other 6 projects had limited project scopes with very small increases in DCIA that could not be mitigated due to site constraints and/or a significant increase in the project scope.

Overall, redevelopment projects *constructed* since July 1, 2019 have resulted in a net DCIA decrease of 15.48 acres. Note that despite disconnecting 0.87 acres in Permit Year 6, the overall decrease in DCIA reported since July 1, 2019 went from 15.75 last year to 15.48 this year. This is due to an error in last year's reporting as the decrease of 1.14 acres associated with project 0102-0368 was inadvertently counted twice. Appendix II contains CTDOT MEP Worksheets for all redevelopment projects constructed in Permit Year 6.

In addition to tracking DCIA changes associated with redevelopment projects that have been constructed, CTDOT also tracks projected changes to DCIA from redevelopment projects still in the design phase.

- Taken in aggregate, **the multi-year forecasted change in DCIA associated with all redevelopment projects designed, but not constructed, in Permit Year 6 is projected as a net 11.33 acre DCIA reduction.**
- Isolating the nine (9) projects that reached their final design plan milestone during Permit Year 6 (which are generally anticipated to be constructed within 24 months) results in a projection of a net 6.19 acres of DCIA reduction anticipated in the near term.
- Appendix III contains CTDOT MEP Worksheets for the nine Permit Year 6 FDP plans. The worksheets contain project specific details documenting the opportunities and constraints that existed at each project location.

III. Stand-Alone Retrofit Projects

Within CTDOT's initial permit term (July 1, 2019 – June 30, 2024), CTDOT's DCIA reduction plan had been developed based on that which could be achieved to the maximum extent practicable as part of its redevelopment projects. Supplemental "stand-alone" retrofit projects were contemplated as the next phase of DCIA reductions to begin after the dedicated staff resources were allocated to select, plan, design, manage and oversee the construction of retrofit projects and after CTDOT's collaboration with the U.S. Geologic Survey (USGS) was complete. CTDOT and USGS had been collecting run-off data from Connecticut highways in order to tailor USGS's SELDM model for the purpose of being able to perform large scale analyses of many CTDOT discharge points to identify retrofit locations that would have the most benefit to downstream water quality. CTDOT now has the staffing and funding resources to select, plan, design, and manage 10 to 15 stand-alone retrofit projects by 2027. However, USGS's SEDLM has not yet fully incorporated the Connecticut-specific highway runoff data. Therefore, the need to identify retrofit locations without the USGS model being complete required CTDOT to select thirteen (13) retrofit locations based on other, less quantitative criteria.

To identify specific locations with retrofit potential, CTDOT developed a GIS layer using publicly available land use data plus the mapping of the CTDOT drainage system completed to date to generate an inventory of candidate locations across the State. Protected resources such as wetlands, conservation areas, and underlying aquifers that support public drinking water supplies are avoided as retrofit sites. Shallow bedrock and shallow groundwater limit the opportunities to maximize disconnections via infiltration. Each of the thirteen retrofit projects prioritizes retaining / infiltrating the water quality volume from the contributing drainage area. Locations where retention / infiltration does not seem likely based on known site constraints have not been considered good candidates but may be considered as a location for stormwater treatment going forward. Based on a feasibility study that was completed in Permit Year 6 on the initial thirteen locations, two of the original thirteen sites were not selected to move from the feasibility phase into the engineering design phase. Hence, eleven locations are currently in the 30% design phase. The eleven locations are estimated to disconnect 37 acres. The total acreage disconnected may vary based on the final design based on factors such as amount of the WQV captured, final sizing and potential extra credit for retaining more than the WQV. Appendix IV contains the CTDOT Maximum Extent Practicable MS4 designer worksheets for the 11 locations that are currently in engineering design. Appendix V contains the two locations that were removed due to site constraints identified during the feasibility study.

Proposed Stand-Alone Retrofit Projects In Engineering Design (as of 6/30/2025)

	CTDOT GIS ID #	Estimated Disconnection Credit (Acres)	Town	Comments/Description
1	170-PB-35	5.3	Norwich	Infiltration Basin at I-395 & Route 642
2	170-PB-48	5.97	Newington	Infiltration Basin at Cloverleaf at Rt 15 &175
3	170-PB-93	2.62	Naugatuck	Infiltration Basin at Rt 8 South near Route 847 On-Ramp
4	170-PB-102	2.0	Trumbull	Water Quality Swale & Leaching Basin in Route 8 Median East of Route 127
5	170-BP-106	4.38	Stratford	Retrofit existing detention basin south of Route 15 East of Route 110
6	170-PB-128	1.21	Killingly	Water Quality Swale & Leaching Basins in I-395 Median near Dog Hill Road
7	170-PB-138	2.4	Bristol	New Infiltration Basin Behind/North of Park and Ride Lot at Sunnydale Ave.
8	170-PB-141	3.94	Manchester	Infiltration Basin at I-384 Exit to Route 534
9	170-PB-143	3.58	Manchester	New Infiltration Trench, Leaching Basins, Water Quality Swale in I-384 Median West of Gardner Street
10	170-PB-148	2.7	Stratford	Infiltration Trench at I-95 & West Broad Street
~~11~~	~~170-PB-162~~	~~6.5~~	~~Meriden~~	Removed based on findings in the Feasibility Study Completed in Permit Year 6. Shallow bedrock made infiltration practices infeasible. ~~Water Quality Swale & Leaching Basins in 1.2 Mile Stretch of I-691 Median~~
12	170-PB-186	2.86	Ansonia	Infiltration Trench West of Route 8 at Route 334
13	~~170-PB-149~~	~~1.5~~	~~Bridgeport~~	Removed based on findings in the Feasibility Study Completed in Permit Year 6. This location had contaminated fill that requires special handling. ~~Infiltration Basin at I-95 & Route 113~~
	Est. TOTAL	**37.0 Acres**	**All Projects Scheduled to be Complete by 6/30/2027**	

CTDOT has also identified another ten locations initially indicated by the GIS analysis as having good retrofit potential. Additional locations beyond these ten are actively being sought. These locations will be further evaluated in Permit Year 7 as they progress towards a formal feasibility study. Appendix VI contains the CTDOT Maximum Extent Practicable MS4 designer worksheets for the current 10 locations.

Phase 2 Proposed Stand-Alone Retrofit Projects In Preliminary Design Phase

(as of 6/30/2025)

	CTDOT GIS ID #	Estimated Disconnection Credit (Acres)	Town	Comments /Description
1	170-PB-214 & 286	4.0	Fairfield	Infiltration Trenches, I-95 Northbound Mile Point 23.24
2	170-PB-275	2.0	Westport	Infiltration Trench, I-95 Northbound Mile Point 18.58
3	170-PB-283	2.0	Fairfield	Infiltration Trench, I-95 Northbound Mile Point 27.24
4	170-PB-274	2.0	Fairfield	Infiltration Trench, I-95 Northbound Mile Point 23.73
5	170-PB-281	2.0	Fairfield	Infiltration Trench, I-95 Southbound Mile Point 26.72
6	170-PB-316	2.0	Westport	Infiltration Trench, I-95 Southbound Mile Point 19.28
7	170-PB-317	2.0	Windsor	Infiltration Trench, I-91 Northbound Mile Point 46.27
8	170-PB-318	2.0	Norwalk	Infiltration Trench, I-95 Northbound Mile Point 15.27
9	170-PB-319	2.0	Norwalk	Infiltration Trench, I-95 Southbound Mile Point 15.47
10	170-PB-320	1.0	Norwalk	Infiltration Trench, I-95 Southbound Mile Point 15.47
	Est. TOTAL	**21.0**	**All projects are capable of being completed by 6/30/2030**	

Identifying Future Stand-Alone Retrofit Projects

The amount of highway drainage area that CTDOT can practicably disconnect by a single retrofit will generally be limited to a maximum of four acres based on a several factors. Topography limits the size of a given area that will drain by gravity to a point at which the retrofit can infiltrate (or treat) the runoff. The size of the retrofit should be dictated by the volume of drainage directed toward it, but the actual size achievable is limited by several constraints. Soil conditions in the highway right of way are often made up of dense fill that limit the infiltration capacity (i.e., the denser the soils, the slower the infiltration, the more volume the retrofit must have). To be efficient with its resources, CTDOT is committed to constructing retrofits within areas it already possesses and will not be acquiring additional property at this time. In addition, where existing drainage infrastructure already exists that directs DCIA runoff to a point at which it can be infiltrated (or treated), CTDOT will be opportunistic to make the best use of its publicly funded resources rather than install new collection systems.

A tool that will be used to help determine potential retrofit project locations to meet the 2030 goal is the SELDM model discussed in Part II of the CTDOT Permit Year 5 Annual Report. To use the model, CTDOT is gathering highway and upstream watershed data on all currently mapped discharge locations to impaired waterbodies. As of June 30, 2024, CTDOT has mapped over 800 outfalls that discharge to an impaired waterbody. The data being collected for each of these locations will be used to run a SELDM analysis to develop an inventory and prioritization list of locations potentially contributing to an impairment.

Per CTDOT's new MS4 Permit that became effective on July 1, 2025, CTDOT will use SELDM to evaluate all mapped discharges to an impaired waterbody statewide before the end of Permit Year eleven (June 30, 2031). CTDOT anticipates completing an analysis of at least 20% of these locations each permit year and developing an inventory and prioritization list from this work. Prioritized locations identified as likely having impacts to impairments and/or downstream water quality will be considered for stand-alone retrofit and DCIA reduction projects. Updates on this work will be provided in subsequent annual reports.

IV. Overall Retrofit Program Summary

Disconnections via retrofits as part of transportation redevelopment projects will continue and the annual progress going forward may exceed that which has been accomplished to date. However, for planning purposes, CTDOT is assuming that "stand alone" retrofit projects unaffiliated with other transportation redevelopment projects will be CTDOT's Maximum Extent Practicable. As documented previously, the eleven stand alone retrofit projects currently in engineering design (Phase I) are projected to disconnect 37 acres of DCIA. Construction of these eleven sites is scheduled to be completed in 2027. Due to fact that all redevelopment projects constructed since 2019 have already disconnected 15.48 acres and that projected DCIA totals for all redevelopment projects currently in any design phase are estimated to decrease DCIA by 7.38 acres, CTDOT is currently on schedule to exceed the 2027 DCIA reduction target of 40 acres.

CTDOT will continue to evaluate additional Phase II stand alone retrofit projects if needed to supplement redevelopment projects in order to disconnect 80 acres total by 2030. Ten additional Phase II retrofit locations have been preliminarily identified. These ten locations are estimated to disconnect 21 acres. Adding this disconnection acreage to the disconnection totals above would provide a total of 80.9 acres of disconnection and satisfy the 2030 requirement.

Many of the redevelopment projects that CTDOT will construct between 2027 and 2030 are still in their early phases of design. However, due to the uncertainty with DCIA reduction totals for any project that has not yet finished design, CTDOT will continue to seek additional redevelopment opportunities and retrofit candidates.

Each subsequent Permit Year's annual report will document the progress of all retrofits constructed. Each annual report will document the amount of DCIA reductions (or increases) associated with each of its transportation redevelopment projects. Each annual report will include updated projections for the amount of DCIA expected to be affected by redevelopment projects that were planned or reviewed during the annual report's Permit Year.

The annual reports will include the annual and cumulative amount of DCIA disconnected and will include updated versions of the DCIA Tracking Spreadsheet. For those projects that are in their planning or design phase, CTDOT will also look to enhance the DCIA Tracking Spreadsheet to include a way to inform on the year in which the project is expected to be constructed. Each annual report will include the final MEP Worksheets for those redevelopment projects constructed during the annual report's Permit Year. Each annual report will include best available MEP Worksheets for all retrofit projects planned, designed, or constructed during the annual report's Permit Year.

Appendix I – CTDOT DCIA Tracking Spreadsheet

	Year 1-3 (7/1/2019-6/30/2022)				Permit Year 4 = SFY24 (7/1/2022-6/30/2023)							
	Designed		Designed & Constructed		Planning		90		FDP		Constructed	
Order												
	Proj.	Ac.	Proj.	Ac.			Proj.	Ac.	Proj.	Ac.	Proj.	Ac.
Redevelopment Projects	0060-0162	0.15	0151-0273	###			~~0095-0256~~	~~FDP~~	0060-0160	0.27	No. Stonington Commuter Lot	-1.17
	~~0138-0245~~	~~CON~~	0171-0412	0.8			0047-0121	0.1	0124-0172	-0.092	0042-0317	-0.49
	~~0042-0317~~	~~CON~~					0056-0305	0.03	~~0142-0152~~	Constructed yr 6	0040-0144	0.128
	~~0059-0164~~	~~CON~~					0158-0215	0.55	~~0051-0273~~	~~CON~~	0095-0255	-0.05
	~~0151-0321~~	~~CON~~					0082-0322	-0.07	0130-0173	-1.29	0096-0201	-1.93
	~~0096-0201~~	~~CON~~					~~0142-0152~~	~~FDP~~	0095-0256	0.59	0151-0321	-1.13
	~~0102-0295~~	~~CON~~					~~0124-0165~~	~~FDP~~	0037-0103	0	0059-0164	0.11
	0015-0382	0.063							~~0120-0094_120-1~~	Constructed Yr 6	0102-0295	-11.8
	~~0040-0144~~	~~CON~~					~~0120-0094~~	~~FDP~~	~~0120-0094_120-2~~	Constructed Yr 6	EV Charging Fairfield Plaza NB & SB	0.03
	~~0096-0204~~	~~CON~~							~~N Britain Commuter Lot (488 Hartford Rd)~~	~~CON~~	EV Charging New Canaan Pllaza SB	0.015
	~~0171-0412~~	~~CON~~									EV Charging Madison Plaza NB & SB	0.03
	~~0102-0368~~	~~CON~~									0102-0368	-1.14
	0015-0371	0.06										
	0083-0263	0.04										
	~~No. Stonington Commuter Lot~~	~~CON~~										
	0044-0156	7.12										
	EV Charging	Constructed Multi Years										
	Walk Bridge	1.85										
	~~0138-0245~~	~~con~~										
	0102-0296	Constructed yr 6 – ~~1.03~~										
	0060-0162	0.15										
	0059-0168	Constructed Yr 6 ~~0.2~~										
	~~0301-0047~~	~~CON~~										
	~~Rt 15 SB No. Haven Service Plaza~~	~~CON~~										
	95-366	###										
	~~0017-0187~~	Constructed Yr 6										
	subtotal	7.583	subtotal	0.8	subtotal	0	subtotal	0.61	subtotal	-0.522	subtotal	-17.397
Retrofit Projects												
	subtotal	0	subtotal	0	subtotal	0	subtotal	0	subtotal	0	subtotal	0
total redevelopment + retrofit	7.58		0.8		0		0.088				-17.397	
Cumulative Net actually constructed			0.8								-16.597	
Cumulative Net planned, designed, and constructed			8.38								-8.926	

	Year 5 (7/1/2023-6/30/2024)											
	Planning		30		60		90		FDP		Constructed	
			Proj.	Ac.	Proj.	Ac.	Proj.	Ac.	Proj.	Ac.	Proj.	Ac.
Redevelopment Projects			0128-0158	TBD	0085-0146	TBD	0135-0346	0.85	0034-0354	-0.009	0301-0047	0.2
			0088-0202	TBD	0077-0244	0	0170-3704	TBD	0052-0092	0.45	0096-0204	2.7
	~~0173-0540~~	~~TBD~~	0302-0017	TBD	~~0156-0181~~	~~-0.5 ninety percent~~	0302-0029	-0.17	0079-0245 / 0079-0244	-1.446	N Britain Commuter Lot (488 Hartford Rd)	-1.3
			0096-0208	TBD	~~0079-0240~~	~~ninety percent~~	~~0088-0201~~	~~FDP~~	0079-0246	-0.13	Rt 15 SB Plaza N Haven	0.008
			0304-0029	TBD	0047-0123	0.46	0061-0154	TBD	0058-0338	0.007	0138-0245	-0.19
			0100-0182	TBD	0103-0277	0	0158-0223	TBD	0088-0201	0.33	0051-0273	0.57
			0094-0267	TBD	0158-0203	TBD			0022-0106	-0.95		
			0083-0270	TBD	0310-0058	0.04						
			0102-0358	TBD	0170-3637	another 60% in year 6 ~~-1.43~~						
			0053-0189	~~-1.99~~ ~~Ninety~~	~~0034-0324~~	~~TBD~~						
			0154-0127	Sixty ~~0.06~~	0474-0095	TBD						
			0094-0235	TBD	0067-0123	TBD						
			0168-0163	0.58	0053-0196	-3.73						
			0083-0272	TBD								
	subtotal	0	subtotal	0.58	subtotal	-3.23	subtotal	0.681	subtotal	-1.748	subtotal	1.988
Retrofit Projects	Manchester (170-PB-141)	-3.94										
	Meriden (170-PB-162)	0										
	Newington (170-PB-48)	-5.97										
	Killingly (170-PB-128)	-1.21										
	Norwich (170-PB-35)	-5.3										
	Naugatuck (170-PB-93)	-2.62										
	Trumbull (170-PB-102)	-2										
	Stratford (170-PB-106)	-4.38										
	Bristol (170-PB-138)	-2.4										
	Manchester (170-PB-143)	-3.581										
	Stratford (170-PB-148)	-2.7										
	Bridgeport (170-PB-149)	0										
	Ansonia (170-PB-186)	-2.86										
					...	...	...	...	...	...	...	...
	subtotal	-36.961	subtotal	0	subtotal	0	subtotal	0	subtotal	0	subtotal	0
total redevelopment + retrofit	-36.961		-3.717								1.988	
Cumulative Net actually constructed											-14.609	
Cumulative Net planned, designed, and constructed											-47.616	

	Year 6 (7/1/2024-6/30/2025)											
	Planning		30		60		90		FDP		Constructed	
			Proj.	Ac.	Proj.	Ac.	Proj.	Ac.	Proj.	Ac.	Proj.	Ac.
Redevelopment Projects	Route 25 Trumbull Lane Removal	-2.82	0150-0137	TBD	0118-0171	-2.52	~~0004-0134~~	~~TBD~~	0124-0165	-0.092	0102-0296	-1.03
			0017-0196	TBD	0040-0148	~~0.06 Ninety Percent~~	0047-0122	0.23	0304-0029	-0.176	0142-0152	0.0116
			0301-0146	TBD. Wo	0106-0108	2.71	~~0156-0181~~	~~FDP~~	0156-0181	-4.12	0120-0094	0.1
			0054-0087	0.24	~~0145-0106~~	~~ninety percent~~			0053-0189	-0.62	0017-0187	-0.26
			0118-0191	-1.83	~~0151-0340~~	~~0~~	0094-0264	-0.08	0088-0202	0.3	Plainville SB Service Plaza EV Station	0.015
			0083-0277	0.06	0130-0188	0.11	0474-0095	TBD	0067-0123	0.17	Greenwich NB Service Plaza EV Station	0.015
			0093-0251	0.19	0154-0127	0.09	0053-0189	FDP - ~~1.64~~	0004-0134	-1.92	L051-0004	0.08
			0151-0341	0.07	0172-0544	TBD, ~-0.2	0094-0261	-2.53	0110-0136	0.19	0059-0168	0.2
			004-0136	TBD. Worst case adding < 0.5 acre	0141-0158	-0.03	0304-0022	-0.192	0163-0206	0.08		
			0028-0207	TBD	0144-0199	TBD, ~ +0.3	0034-0324	-0.16				
			0025-0151	-0.079	0077-0245	0.47	79-240	3.17				
			0154-0128	-0.24	0170-3637	-1.86	053-0189	~~-1.64 FDP~~				
			0142-0155	0.07			0040-0148	0.06				
							0145-0106	0.01				
							0170-3440	-2				
							0028-0208	TBD				
							0109-0176	0.01				
							0151-0340	-1.773				
							0096-0208	0.66				
							0106-0108	2.71				
	subtotal	-2.82	subtotal	-1.519	subtotal	-1.03	subtotal	0.115	subtotal	-6.188	subtotal	-0.8684
Retrofit Projects												
	subtotal	0	subtotal	0	subtotal	0	subtotal	0	subtotal	0	subtotal	0
total redevelopment + retrofit	-2.82		-8.622								-0.8684	
Cumulative Net actually constructed											-15.4774	
Cumulative Net planned, designed, and constructed											-59.9264	

	Year 7 (2025-2026)											
	Planning		30		60		90		FDP		Constructed	
			Proj.	Ac.	Proj.	Ac.	Proj.	Ac.	Proj.	Ac.	Proj.	Ac.
Redevelopment Projects			0072-0084	0	0130-0189	0.16	0130-0190	-0.08				
			0152-0162	1			0115-0122	0				
	subtotal	0	subtotal	1	subtotal	0.16	subtotal	-0.08	subtotal	0	subtotal	0
Retrofit Projects			Manchester (170-PB-141)				Manchester (170-PB-141)					
			Meriden (170-PB-162)				Meriden (170-PB-162)					
			Newington (170-PB-48)				Newington (170-PB-48)					
			Killingly (170-PB-128)				Killingly (170-PB-128)					
			Norwich (170-PB-35)				Norwich (170-PB-35)					
			Naugatuck (170-PB-93)				Naugatuck (170-PB-93)					
			Trumbull (170-PB-102)				Trumbull (170-PB-102)					
			Stratford (170-PB-106)				Stratford (170-PB-106)					
			Bristol (170-PB-138)				Bristol (170-PB-138)					
			Manchester (170-PB-143)				Manchester (170-PB-143)					
			Stratford (170-PB-148)				Stratford (170-PB-148)					
			Bridgeport (170-PB-149)				Bridgeport (170-PB-149)					
			Ansonia (170-PB-186)				Ansonia (170-PB-186)					
					...	...	...	...	...	...	...	...
	subtotal	0	subtotal	0	subtotal	0	subtotal	0	subtotal	0	subtotal	0
total redevelopment + retrofit	0		1.08								0	
Cumulative Net actually constructed											-15.4774	
Cumulative Net planned, designed, and constructed											-58.8464	

	Year 8 (2026-2027)											
	Planning		30		60		90		FDP		Constructed	
Order												40
			Proj.	Ac.	Proj.	Ac.	Proj.	Ac.	Proj.	Ac.	Proj.	Ac.
Redevelopment Projects	subtotal	0	subtotal	0	subtotal	0	subtotal	0	subtotal	0	subtotal	0
Retrofit Projects											Manchester (170-PB-141)	
											Meriden (170-PB-162)	
											Newington (170-PB-48)	
											Killingly (170-PB-128)	
											Norwich (170-PB-35)	
											Naugatuck (170-PB-93)	
											Trumbull (170-PB-102)	
											Stratford (170-PB-106)	
											Bristol (170-PB-138)	
											Manchester (170-PB-143)	
											Stratford (170-PB-148)	
											Bridgeport (170-PB-149)	
											Ansonia (170-PB-186)	
					...	...	...	...	...	...	...	...
	subtotal	0	subtotal	0	subtotal	0	subtotal	0	subtotal	0	subtotal	0
total redevelopment + retrofit	0		0								0	
Cumulative Net actually constructed											-15.4774	
Cumulative Net planned, designed, and constructed											-58.8464	

	Year 1-3 (7/1/2019-6/30/2022)				Permit Year 4 = SFY24 (7/1/2022-6/30/2023)							
	Designed		Designed & Constructed		Planning		90		FDP		Constructed	
Order												
	Proj.	Ac.	Proj.	Ac.			Proj.	Ac.	Proj.	Ac.	Proj.	Ac.
Redevelopment Projects	0060-0162	0.15	0151-0273	###			~~0095-0256~~	~~FDP~~	0060-0160	0.27	No. Stonington Commuter Lot	-1.17
	~~0138-0245~~	~~CON~~	0171-0412	0.8			0047-0121	0.1	0124-0172	-0.092	0042-0317	-0.49
	~~0042-0317~~	~~CON~~					0056-0305	0.03	~~0142-0152~~	Constructed yr 6	0040-0144	0.128
	~~0059-0164~~	~~CON~~					0158-0215	0.55	~~0051-0273~~	~~CON~~	0095-0255	-0.05
	~~0151-0321~~	~~CON~~					0082-0322	-0.07	0130-0173	-1.29	0096-0201	-1.93
	~~0096-0201~~	~~CON~~					~~0142-0152~~	~~FDP~~	0095-0256	0.59	0151-0321	-1.13
	~~0102-0295~~	~~CON~~					~~0124-0165~~	~~FDP~~	0037-0103	0	0059-0164	0.11
	0015-0382	0.063							~~0120-0094_1201~~	Constructed Yr 6	0102-0295	-11.8
	~~0040-0144~~	~~CON~~					~~0120-0094~~	~~FDP~~	~~0120-0094_1202~~	Constructed Yr 6	EV Charging Fairfield Plaza NB & SB	0.03
	~~0096-0204~~	~~CON~~							~~N Britain Commuter Lot (488 Hartford Rd)~~	~~CON~~	EV Charging New Canaan Plaza SB	0.015
	~~0171-0412~~	~~CON~~									EV Charging Madison Plaza NB & SB	0.03
	~~0102-0368~~	~~CON~~									0102-0368	-1.14
	0015-0371	0.06										
	0083-0263	0.04										
	~~No. Stonington Commuter Lot~~	~~CON~~										
	0044-0156	7.12										
	EV Charging	Constructed Multi Years										
	Walk Bridge	1.85										
	~~0138-0245~~	~~con~~										
	0102-0296	Constructed yr 6 - ~~1.03~~										
	0060-0162	0.15										
	0059-0168	Constructed Yr 6 ~~0.2~~										
	~~0301-0047~~	~~CON~~										
	~~Rt 15 SB No. Haven Service Plaza~~	~~CON~~										
	95-366	###										
	~~9017-0187~~	Constructed Yr 6										
	subtotal	**7.583**	**subtotal**	**0.8**	**subtotal**	**0**	**subtotal**	**0.61**	**subtotal**	**-0.522**	**subtotal**	**-17.397**
Retrofit Projects												
	subtotal	**0**	**subtotal**	**0**	**subtotal**	**0**	**subtotal**	**0**	**subtotal**	**0**	**subtotal**	**0**
total redevelopment + retrofit	7.58		0.8		0		0.088				-17.397	
Cumulative Net actually constructed			0.8								-16.597	
Cumulative Net planned, designed, and constructed			8.38								-8.926	

	Year 5 (7/1/2023-6/30/2024)											
	Planning		30		60		90		FDP		Constructed	
Order												
			Proj.	Ac.	Proj.	Ac.	Proj.	Ac.	Proj.	Ac.	Proj.	Ac.
Redevelopment Projects			0128-0158	TBD	0085-0146	TBD	0135-0346	0.85	0034-0354	-0.009	0301-0047	0.2
			0088-0202	TBD	0077-0244	0	0170-3704	TBD	0052-0092	0.45	0096-0204	2.7
	0173-0540	TBD	0302-0017	TBD	~~0156-0181~~	~~0.5 ninety percent~~	0302-0029	-0.17	0079-0245 / 0079-0244	-1.446	N Britain Commuter Lot (488 Hartford Rd)	-1.3
			0096-0208	TBD	~~0079-0240~~	~~ninety percent~~	~~0088-0201~~	~~FDP~~	0079-0246	-0.13	Rt 15 SB Plaza N Haven	0.008
			0304-0029	TBD	0047-0123	0.46	0061-0154	TBD	0058-0338	0.007	0138-0245	-0.19
			0100-0182	TBD	0103-0277	0	0158-0223	TBD	0088-0201	0.33	0051-0273	0.57
			0094-0267	TBD	0158-0203	TBD			0022-0106	-0.95		
			0083-0270	TBD	0310-0058	0.04						
			0102-0358	TBD	0170-3637	another 60% in year 6 ~~1.43~~						
			0053-0189	~~1.99~~ Ninety	~~0034-0324~~	~~TBD~~						
			0154-0127	Sixty ~~0.05~~	0474-0095	TBD						
			0094-0235	TBD	0067-0123	TBD						
			0168-0163	0.58	0053-0196	-3.73						
			0083-0272	TBD								
	subtotal	**0**	**subtotal**	**0.58**	**subtotal**	**-3.23**	**subtotal**	**0.681**	**subtotal**	**-1.748**	**subtotal**	**1.988**
Retrofit Projects	Manchester (170-PB-141)	-3.94										
	Meriden (170-PB-162)	0										
	Newington (170-PB-48)	-5.97										
	Killingly (170-PB-128)	-1.21										
	Norwich (170-PB-35)	-5.3										
	Naugatuck (170-PB-93)	-2.62										
	Trumbull (170-PB-102)	-2										
	Stratford (170-PB-106)	-4.38										
	Bristol (170-PB-138)	-2.4										
	Manchester (170-PB-143)	-3.581										
	Stratford (170-PB-148)	-2.7										
	Bridgeport (170-PB-149)	0										
	Ansonia (170-PB-186)	-2.86										
					...	...	...	...	...	...	...	...
	subtotal	**-36.961**	**subtotal**	**0**	**subtotal**	**0**	**subtotal**	**0**	**subtotal**	**0**	**subtotal**	**0**
total redevelopment + retrofit	-36.961		-3.717								1.988	
Cumulative Net actually constructed											-14.609	
Cumulative Net planned, designed, and constructed											-47.616	

	Year 6 (7/1/2024-6/30/2025)											
	Planning		30		60		90		FDP		Constructed	
Order												
			Proj.	Ac.	Proj.	Ac.	Proj.	Ac.	Proj.	Ac.	Proj.	Ac.
Redevelopment Projects	Route 25 Trumbull Lane Removal	-2.82	0150-0137	TBD	0118-0171	-2.52	~~0004-0134~~	~~TBD~~	0124-0165	-0.092	0102-0296	-1.03
			0017-0196	TBD	0040-0148	~~0.06 Ninety Percent~~	0047-0122	0.23	0304-0029	-0.176	0142-0152	0.0116
			0301-0146	TBD. Wo	0106-0108	2.71	~~0156-0181~~	~~FDP~~	0156-0181	-4.12	0120-0094	0.1
			0054-0087	0.24	~~0145-0106~~	~~ninety percent~~			0053-0189	-0.62	0017-0187	-0.26
			0118-0191	-1.83	~~0151-0340~~	~~0~~	0094-0264	-0.08	0088-0202	0.3	Plainville SB Service Plaza EV Station	0.015
			0083-0277	0.06	0130-0188	0.11	0474-0095	TBD	0067-0123	0.17	Greenwich NB Service Plaza EV Station	0.015
			0093-0251	0.19	0154-0127	0.09	0053-0189	FDP - ~~1.64~~	0004-0134	-1.92	L051-0004	0.08
			0151-0341	0.07	0172-0544	TBD, ~-0.2	0094-0261	-2.53	0110-0136	0.19	0059-0168	0.2
			004-0136	TBD. Worst case adding < 0.5 acre	0141-0158	-0.03	0304-0022	-0.192	0163-0206	0.08		
			0028-0207	TBD	0144-0199	TBD, ~ +0.3	0034-0324	-0.16				
			0025-0151	-0.079	0077-0245	0.47	79-240	3.17				
			0154-0128	-0.24	0170-3637	-1.86	053-0189	~~1.64 FDP~~				
			0142-0155	0.07			0040-0148	0.06				
							0145-0106	0.01				
							0170-3440	-2				
							0028-0208	TBD				
							0109-0176	0.01				
							0151-0340	-1.773				
							0096-0208	0.66				
							0106-0108	2.71				
	subtotal	**-2.82**	**subtotal**	**-1.519**	**subtotal**	**-1.03**	**subtotal**	**0.115**	**subtotal**	**-6.188**	**subtotal**	**-0.8684**
Retrofit Projects												
	subtotal	**0**	**subtotal**	**0**	**subtotal**	**0**	**subtotal**	**0**	**subtotal**	**0**	**subtotal**	**0**
total redevelopment + retrofit	-2.82		-8.622								-0.8684	
Cumulative Net actually constructed											-15.4774	
Cumulative Net planned, designed, and constructed											-59.9264	

	Year 7 (2025-2026)												Year 8 (2026-2027)											
	Planning		30		60		90		FDP		Constructed		Planning		30		60		90		FDP		Constructed	
Order																								40
			Prop.	Ac.	Prop.	Ac.	Prop.	Ac.	Prop.	Ac.	Prop.	Ac.			Prop.	Ac.	Prop.	Ac.	Prop.	Ac.	Prop.	Ac.	Prop.	Ac.
Redevelopment Projects			0072-0084	0	0130-0189	0.16	0130-0190	-0.08																
			0152-0162	1			0115-0122	0																
	subtotal	0	subtotal	1	subtotal	0.16	subtotal	-0.08	subtotal	0	subtotal	0	subtotal	0	subtotal	0	subtotal	0	subtotal	0	subtotal	0	subtotal	0
Retrofit Projects			Manchester (170-PB-141)				Manchester (170-PB-141)																Manchester (170-PB-141)	
			Meriden (170-PB-162)				Meriden (170-PB-162)																Meriden (170-PB-162)	
			Newington (170-PB-48)				Newington (170-PB-48)																Newington (170-PB-48)	
			Killingly (170-PB-128)				Killingly (170-PB-128)																Killingly (170-PB-128)	
			Norwich (170-PB-35)				Norwich (170-PB-35)																Norwich (170-PB-35)	
			Naugatuck (170-PB-93)				Naugatuck (170-PB-93)																Naugatuck (170-PB-93)	
			Trumbull (170-PB-102)				Trumbull (170-PB-102)																Trumbull (170-PB-102)	
			Stratford (170-PB-106)				Stratford (170-PB-106)																Stratford (170-PB-106)	
			Bristol (170-PB-138)				Bristol (170-PB-138)																Bristol (170-PB-138)	
			Manchester (170-PB-143)				Manchester (170-PB-143)																Manchester (170-PB-143)	
			Stratford (170-PB-148)				Stratford (170-PB-148)																Stratford (170-PB-148)	
			Bridgeport (170-PB-149)				Bridgeport (170-PB-149)																Bridgeport (170-PB-149)	
			Ansonia (170-PB-186)				Ansonia (170-PB-186)																Ansonia (170-PB-186)	
			..		..	..	..	..	..	..	..	..			..	..	..	..	..	..	..	..	..	..
	subtotal	0	subtotal	0	subtotal	0	subtotal	0	subtotal	0	subtotal	0	subtotal	0	subtotal	0	subtotal	0	subtotal	0	subtotal	0	subtotal	0
total redevelopment + retrofit	0				1.08						0		0				0						0	
Cumulative Net actually constructed											-15.4774												-15.4774	
Cumulative Net planned, designed, and constructed											-58.8464												-58.8464	

Appendix II – CTDOT MS4 Worksheets for Constructed Redevelopment Projects

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information	**Project #:**	0102-0296
	Title:	Route 15 Safety Improvements, Enhancements, Resurfacing, and Bridge Impr
	Location:	Town of New Canaan & City of Norwalk

Section 2: Existing Conditions

EC1	Total Project Area			71.61 acres		
EC2	Pre-construction Directly Connected Impervious Area (DCIA):			12.43 acres	17.36 %	
EC3	Soil Infiltration Potential	Data Source: ☐Existing Report / Soils Map ☑Field Verified		☐Good/Fair	☐Poor	☑Mixed
EC4	Depth to Maximum Groundwater		☐TBD	1 to 15.5 ft below grade		
EC5	Depth to Bedrock		☐TBD	2 to 32.5 ft below grade		
EC6	Aquifer Protection Area? (from PNDF)			☐Yes	☑No	
EC7	MS4 Priority Area? (from PNDF)			☑Yes (See Below)	☐No	
	Check All That Apply	☑Urbanized Area	☑DCIA >11%	☑Impaired Waterbody (See Below)		
	Select All Impairments That Apply	Phosphorus (Total)	Bacteria	Choose an Item		
EC8	Contamination known or suspected to be present? (From Environmental Compliance)			☐Yes	☑No	
EC9	Adjoining DOT ROW beyond project limits available for stormwater quality management			43.66 acres		

Section 3: Designed Conditions

	Water Quality Calculations		30% Design		60% Design	90% Design	FDP
DC1	WQV retention design goal	☑ Full ☐ 1/2"-WQV	ac-ft	☐ TBD	ac-ft	ac-ft	2.594 ac-ft
DC2	WQV goal ***retained*** (refer to page 2)		ac-ft		ac-ft	ac-ft	.06 ac-ft
DC3	WQV goal ***treated*** (refer to page 2)		ac-ft		ac-ft	ac-ft	.063 ac-ft
DC4	Total WQV *retained and treated*		0 **ac-ft**		0 **ac-ft**	0 **ac-ft**	0.123 **ac-ft**
DC5	Post-construction DCIA(acres)		ac.	☐ TBD	ac.	ac.	11.40 ac.
DC6	Pre-construction DCIA (refer to EC2 above)		ac.		ac.	ac.	12.43 ac.
DC7	Change in DCIA from pre- to post-construction *Can be positive (DCIA gained) or negative (DCIA lost)*		0 **ac.**	☐ **TBD**	0 **ac.**	0 **ac.**	-1.03 **ac.**
	Date completed						9/30/2021
	Completed by (initials)						JSK
	Reviewed by (initials)						

Notes:

Worksheet users should refer to the *CT DOT MS4 Project Design MEP Worksheet Instructions*

Section 4: Stormwater BMP Selection Summary						
Design Phase ☐30% ☐60% ☐90% ☑FDP	**WQV Retained (ac-ft)**	**WQV Treated (ac-ft)**	**DCIA Captured (Acres)**	**DCIA Disconnection Credit (%)**	**DCIA Disconnection Credit (acres)**	**Site Constraints**
Disconnection (Dispersion)						
Natural dispersion (SEE NOTES	.06	.06	1.37	100	1.37	Insufficient Right-of-Way
						Choose an Item.
						Choose an Item.
Conveyance (Swales / Channels)						
Grass Channels (SEE NOTES)	0	0.0034	.26	15	0.039	Natural Slope > 15%
						Choose an Item.
						Choose an Item.
Infiltration / Retention						
Infiltration trench	0	0	0	0	0	other - describe in comment sec
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
Treatment						
						Choose an Item.
						Choose an Item.
						Choose an Item.
TOTAL	0.06	0.0634	1.63	115	1.409	

Notes:

SEE PAGE 3 FOR NOTES

Worksheet users should refer to the *CT DOT MS4 Project Design MEP Worksheet Instructions.* Refer to the 2004 CT Stormwater Quality Manual for more information on BMP criteria and limitations.

SECTION 4 NOTES

NATURAL DISPERSION: CURBING WILL BE REMOVED FROM THE OUTSIDE SHOULDERS ALONG THE ENTIRE PROJECT CORRIDOR. SLOPES BEYOND THE SHOULDER WILL BE GRADED AT 12:1 WITH TOPSOIL AND LOW-GROW SEED MIX TO INCREASE INFILTRATION. LENGTHS ALONG FILL SECTIONS CONSTRUCTED AS SUCH WITH AT LEAST 50' DISPERSION WIDTH WERE INCLUDED IN THIS CALCULATION. ALL PROPOSED CUT SECTIONS DO NOT HAVE ADEQUATE DISPERSION WIDTH. SITE CONSTRAINTS INCLUDE INSUFFICIENT RIGHT-OF-WAY, WETLANDS PRESENT, AND THE HISTORIC NATURE OF THE PARKWAY. LANDSCAPE CHANGES AND REMOVAL OF EXISTING TREES/SHRUBBERY ARE HEVILY REGULATED, SO FLATTENING OF MANY FILL SLOPES TO MEET REQUIRMENTS ON THE ONE-PAGER IS IMPRACTICAL.

GRASS CHANNELS: SWALES ARE PROPOSED THROUGHOUT THE PROJECT IN ALL CUT SECTIONS. ONLY ONE OF 18 SWALES MET THE CRITERIA OF THE ONE-PAGER FOR GRASS CHANNELS, MOSTLY DUE TO 2:1 SIDE SLOPES PRESENT OR LONGITUDINAL GRADES AND VELOCITIES IN EXCESS OF ALLOWABLE CRITERIA. SITE CONSTRAINTS INCLUDE INSUFFICIENT RIGHT-OF-WAY, HIGH NATURAL SLOPES PRESENT, AND LIMITATIONS DUE TO THE HISTORIC NATURE OF THE PARKWAY.

INFILTRATION TRENCH: UNDERDRAIN SYSTEMS ARE PROPOSED AT ALL CUT SECTIONS ALONG THE CORRIDOR. DUE TO THE HISTORIC NATURE OF THE PARKWAY, PAVEMENT WIDTH IS LIMITED AND THUS THE DESIGN INCORPORATES A SECTION OF REINFORCED GRASS SHOULDER WHICH INCLUDES UNDERDRAINS AT THE CUT SECTIONS. UNDERDRAIN SYSTEMS CONSIST OF A PERPHORATED PIPE LAYED IN A CRUSHED STONE TRENCH DIRECTLY BENEATH THE GRASS SHOULDER AND ADJACENT TO THE PAVED SECTION OF SHOULDER. THIS DESIGN MEETS CT DOT'S HIGHWAY DESIGN MANUAL CRITERIA AND IS INTENDED TO COLLECT RUNOFF AND WATER TRAPPED UNDERNEATH THE ROADWAY STRUCTURE AND ALLOW IT TO DRAIN AWAY FROM THE ROADWAY/SHOULDER. THIS DESIGN DOES NOT MEET THE CRITERIA OF THE ONE-PAGER, BUT WILL SERVE TO RECEIVE, FILTER, AND CONVEY STORMWATER TO EITHER THE SOIL BELOW THE UNDERDRAIN OR BE CARRIED TO OUTLETS.

PROPOSED IMPERVIOUS AREA WILL BE INCREASED VIA MEDIAN SHOULDER WIDEDNING AND LENGTHENING OF INADEQUATE EXIT/ENTRY RAMPS ALONG THE CORRIDOR. DUE TO MEDIAN CURBING AND INADEQUATE EXISTING CONDITIONS TO MEET BMP STANDARDS IN THE MEDIAN, WIDENING WILL ADD 0.6 ACRES OF DCIA TO THE PROJECT. THIS IS OFFSET BY THE APPLICABLE BMPs IMPLEMENTED ABOVE, MAKING THE OVERALL POST CONSTRUCTION DCIA A NET DECREASE OF 1.03 ACRES. IMPROVEMENTS WERE MADE LIMITED BY THE HISTORIC NATURE OF THE PARKWAY, WHICH MAKES THE IMPLEMENTATION OF MANY BMPs IMPRACTICABLE. THE PROPOSED OUTSIDE SHOULDER SHEETFLOW, SWALES, AND UNDERDRAINS HAVE BEEN IMPLEMENTED ON MOST MERRITT PARKWAY PROJECTS PRECEDING AND HAVE SHOWN TO PERFORM UP TO OR ABOVE EXPECTATIONS AND STANDARDS.

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information	**Project #:**	0142-0152
	Title:	Replacement of Bridge No. 01120 Route 74 Over Skungamaug River
	Location:	Tolland

Section 2: Existing Conditions

EC1	Total Project Area		2.66 acres		
EC2	Pre-construction Directly Connected Impervious Area (DCIA):		1.19 acres	68.39 %	
EC3	Soil Infiltration Potential	Data Source: ☑Existing Report / Soils Map ☐Field Verified	☐Good/Fair	☐Poor	☑Mixed
EC4	Depth to Maximum Groundwater	☐TBD	10 to 10 ft below grade		
EC5	Depth to Bedrock	☐TBD	16.5 to 19.5 ft below grade		
EC6	Aquifer Protection Area? (from PNDF)		☐Yes	☑No	
EC7	MS4 Priority Area? (from PNDF)		☐Yes (See Below)	☐No	
	Check All That Apply	☑Urbanized Area ☐DCIA >11% ☐Impaired Waterbody (See Below)			
	Select All Impairments That Apply	Choose an Item Choose an Item Choose an Item			
EC8	Contamination known or suspected to be present? (From Environmental Compliance)		☐Yes	☐No	
EC9	Adjoining DOT ROW beyond project limits available for stormwater quality management		0 acres		

Section 3: Designed Conditions

	Water Quality Calculations		**30% Design**		**60% Design**	**90% Design**	**FDP**
DC1	WQV retention design goal	☐ Full ☐ 1/2"-WQV	0 ac-ft	☐ TBD	0 ac-ft	0 ac-ft	0 ac-ft
DC2	WQV goal ***retained*** (refer to page 2)		0 ac-ft		0 ac-ft	0 ac-ft	0 ac-ft
DC3	WQV goal ***treated*** (refer to page 2)		0 ac-ft		0 ac-ft	0 ac-ft	0 ac-ft
DC4	Total WQV *retained and treated*		0 **ac-ft**		0 **ac-ft**	0 **ac-ft**	0 **ac-ft**
DC5	Post-construction DCIA(acres)		1.18 ac.	☐ TBD	1.307 ac.	1.307 ac.	1.307 ac.
DC6	Pre-construction DCIA (refer to EC2 above)		1.06 ac.		1.192 ac.	1.192 ac.	1.192 ac.
DC7	Change in DCIA from pre- to post-construction *Can be positive (DCIA gained) or negative (DCIA lost)*		0.12 **ac.**	☐ **TBD**	0.116 **ac.**	0.116 **ac.**	0.116 **ac.**
	Date completed		8/6/2021		6/8/2022	1/17/2023	3/9/2023
	Completed by (initials)		JT		KM	KM	KM
	Reviewed by (initials)		SS		JT	JT	JT

Notes:

Worksheet users should refer to the *CT DOT MS4 Project Design MEP Worksheet Instructions*

Section 4: Stormwater BMP Selection Summary						
Design Phase ☐30% ☐60% ☐90% ☑FDP	**WQV Retained (ac-ft)**	**WQV Treated (ac-ft)**	**DCIA Captured (Acres)**	**DCIA Disconnection Credit (%)**	**DCIA Disconnection Credit (acres)**	**Site Constraints**
Disconnection (Dispersion)						
						not applicable
						Choose an Item.
						Choose an Item.
Conveyance (Swales / Channels)						
						Choose an Item.
						Choose an Item.
						Choose an Item.
Infiltration / Retention						
						not applicable
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
Treatment						
						not applicable
						Choose an Item.
						Choose an Item.
TOTAL	0	0	0	0	0	

Notes:

Stormwater will be collected within the gutter of the bridge structure, where it will sheet flow off Route 74 and discharge to the Skungamaug Riv

Worksheet users should refer to the *CT DOT MS4 Project Design MEP Worksheet Instructions.* Refer to the 2004 CT Stormwater Quality Manual for more information on BMP criteria and limitations.

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information	**Project #:**	0083-0263
	Title:	Replacement of Bridge No. 06755, Route 162 Over Turtle Creek
	Location:	Milford

Section 2: Existing Conditions

EC1	Total Project Area			1.11 acres	
EC2	Pre-construction Directly Connected Impervious Area (DCIA):			0.48 acres	43.24 %
EC3	Soil Infiltration Potential	Data Source: ☑Existing Report / Soils Map ☐Field Verified		☐Good/Fair	☑Poor ☐Mixed
EC4	Depth to Maximum Groundwater		☐TBD	3.9 to 5.5	ft below grade
EC5	Depth to Bedrock		☐TBD	0 to 0	ft below grade
EC6	Aquifer Protection Area? (from PNDF)			☐Yes	☑No
EC7	MS4 Priority Area? (from PNDF)			☐Yes (See Below)	☑No
	Check All That Apply	☑Urbanized Area	☐DCIA >11%	☐Impaired Waterbody (See Below)	
	Select All Impairments That Apply	Choose an Item	Choose an Item	Choose an Item	
EC8	Contamination known or suspected to be present? (From Environmental Compliance)			☑Yes	☐No
EC9	Adjoining DOT ROW beyond project limits available for stormwater quality management			0 acres	

Section 3: Designed Conditions

	Water Quality Calculations		**30% Design**		**60% Design**	**90% Design**	**FDP**
DC1	WQV retention design goal	☐ Full ☑ 1/2"-WQV	ac-ft	☐ TBD	ac-ft	.002 ac-ft	.002 ac-ft
DC2	WQV goal ***retained*** (refer to page 2)		ac-ft		ac-ft	0 ac-ft	0 ac-ft
DC3	WQV goal ***treated*** (refer to page 2)		ac-ft		ac-ft	0 ac-ft	0 ac-ft
DC4	Total WQV *retained and treated*		0 **ac-ft**		0 **ac-ft**	0 **ac-ft**	0 **ac-ft**
DC5	Post-construction DCIA(acres)		ac.	☐ TBD	ac.	0.52 ac.	0.52 ac.
DC6	Pre-construction DCIA (refer to EC2 above)		ac.		ac.	0.48 ac.	0.48 ac.
DC7	Change in DCIA from pre- to post-construction *Can be positive (DCIA gained) or negative (DCIA lost)*		0 **ac.**	☐ **TBD**	0 **ac.**	0.04 **ac.**	0.04 **ac.**
	Date completed		7/19/2020			7/19/2020	7/29/2020
	Completed by (initials)		DRB			DRB	DRB
	Reviewed by (initials)		KOE			KOE	KOE

Notes:

Worksheet users should refer to the *CT DOT MS4 Project Design MEP Worksheet Instructions*

Section 4: Stormwater BMP Selection Summary						
Design Phase ☐30% ☐60% ☐90% ☑FDP	**WQV Retained (ac-ft)**	**WQV Treated (ac-ft)**	**DCIA Captured (Acres)**	**DCIA Disconnection Credit (%)**	**DCIA Disconnection Credit (acres)**	**Site Constraints**
Disconnection (Dispersion)						
						Insufficient Right-of-Way
						Insufficient Right-of-Way
						Insufficient Right-of-Way
Conveyance (Swales / Channels)						
Curbed Roadway Matching Exis						Insufficient Right-of-Way
						Insufficient Right-of-Way
						Insufficient Right-of-Way
Infiltration / Retention						
						Insufficient Right-of-Way
						Insufficient Right-of-Way
						Insufficient Right-of-Way
						Insufficient Right-of-Way
						Insufficient Right-of-Way
						Insufficient Right-of-Way
						Insufficient Right-of-Way
Treatment						
						Insufficient Right-of-Way
						Insufficient Right-of-Way
						Insufficient Right-of-Way
TOTAL	0	0	0	0	0	

Notes:

Given the site constraints, insufficient Right-of-Way, Utilities and project scope BMP were not included on this project

Worksheet users should refer to the *CT DOT MS4 Project Design MEP Worksheet Instructions.* Refer to the 2004 CT Stormwater Quality Manual for more information on BMP criteria and limitations.

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information	**Project #:**	0017-0187
	Title:	Major Intersection Improvements on Route 72 at Route 69
	Location:	City of Bristol

Section 2: Existing Conditions

EC1	Total Project Area			4.77 acres		
EC2	Pre-construction Directly Connected Impervious Area (DCIA):			3.92 acres	82.18 %	
EC3	Soil Infiltration Potential	Data Source: ☑Existing Report / Soils Map ☐Field Verified		☑Good/Fair	☐Poor	☐Mixed
EC4	Depth to Maximum Groundwater		☐TBD	4.2 to 12.7 ft below grade		
EC5	Depth to Bedrock		☐TBD	10 to 14 ft below grade		
EC6	Aquifer Protection Area? (from PNDF)			☐Yes	☑No	
EC7	MS4 Priority Area? (from PNDF)			☑Yes (See Below)	☐No	
	Check All That Apply	☑Urbanized Area	☑DCIA >11%	☑Impaired Waterbody (See Below)		
	Select All Impairments That Apply	Cause Unknown	Phosphorus (Total)	Zinc		
EC8	Contamination known or suspected to be present? (From Environmental Compliance)			☑Yes	☐No	
EC9	Adjoining DOT ROW beyond project limits available for stormwater quality management			0 acres		

Section 3: Designed Conditions

	Water Quality Calculations		**30% Design**		**60% Design**	**90% Design**	**FDP**
DC1	WQV retention design goal	☐ Full ☑ 1/2"-WQV	ac-ft	☐ TBD	ac-ft	0.14 ac-ft	0.15 ac-ft
DC2	WQV goal ***retained*** (refer to page 2)		ac-ft		ac-ft	0.007 ac-ft	0.008 ac-ft
DC3	WQV goal ***treated*** (refer to page 2)		ac-ft		ac-ft	0.001 ac-ft	0.003 ac-ft
DC4	Total WQV *retained and treated*		0 **ac-ft**		0 **ac-ft**	0.008 **ac-ft**	0.011 **ac-ft**
DC5	Post-construction DCIA(acres)		ac.	☐ TBD	ac.	3.60 ac.	3.66 ac.
DC6	Pre-construction DCIA (refer to EC2 above)		ac.		ac.	3.84 ac.	3.92 ac.
DC7	Change in DCIA from pre- to post-construction *Can be positive (DCIA gained) or negative (DCIA lost)*		0 **ac.**	☐ **TBD**	0 **ac.**	-0.24 **ac.**	-0.26 **ac.**
	Date completed					11/12/2021	04/13/2022
	Completed by (initials)					JWH	TG
	Reviewed by (initials)					ATE	ATE

Notes:

Worksheet users should refer to the *CT DOT MS4 Project Design MEP Worksheet Instructions*

Section 4: Stormwater BMP Selection Summary						
Design Phase ☐30% ☐60% ☐90% ☑FDP	**WQV Retained (ac-ft)**	**WQV Treated (ac-ft)**	**DCIA Captured (Acres)**	**DCIA Disconnection Credit (%)**	**DCIA Disconnection Credit (acres)**	**Site Constraints**
Disconnection (Dispersion)						
Parking Lot Dispersion	0.0025	0.0025	0.07	100	0.07	not applicable
Pervious Paving Area	0.00045	0.00045	0.21	100%	0.21	not applicable
						Choose an Item.
Conveyance (Swales / Channels)						
						Choose an Item.
						Choose an Item.
						Choose an Item.
Infiltration / Retention						
Infiltration Trench	0.0052	0	0.13	100	0.13	not applicable
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
Treatment						
						Choose an Item.
						Choose an Item.
						Choose an Item.
TOTAL	0.00815	0.00295	0.41	300	0.41	

Notes: This project is located in the West End District of Bristol. This is an urban area with limited right-of-way within the project limits and directly outside the project limits. Highway Design met with environmental compliance on 09/20/19 and 09/20/21 to discuss BMP's. Based on these meetings, it was determined that it would be feasible to install an infiltration trench. The infiltration trench is limited in the amount of water that can be captured since it is in the beginning of a drainage system and utility constraints limit what pipes could re-route drainage to this trench. The use of natural dispersion will be used for a large proposed parking lot within the project limits.

Worksheet users should refer to the *CT DOT MS4 Project Design MEP Worksheet Instructions.* Refer to the 2004 CT Stormwater Quality Manual for more information on BMP criteria and limitations.

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information	**Project #:**	0120-0094
	Title:	Route 85 Improvements North of Route 82: Site 120-2
	Location:	Salem, CT

Section 2: Existing Conditions

EC1	Total Project Area			0.36 acres		
EC2	Pre-construction Directly Connected Impervious Area (DCIA):			0.00 acres	0.00 %	
EC3	Soil Infiltration Potential	Data Source: ☐Existing Report / Soils Map ☑Field Verified		☐Good/Fair	☑Poor	☐Mixed
EC4	Depth to Maximum Groundwater		☑TBD	to		ft below grade
EC5	Depth to Bedrock		☐TBD	5 to 6		ft below grade
EC6	Aquifer Protection Area? (from PNDF)			☐Yes	☑No	
EC7	MS4 Priority Area? (from PNDF)			☐Yes (See Below)	☑No	
	Check All That Apply	☐Urbanized Area	☐DCIA >11%	☐Impaired Waterbody (See Below)		
	Select All Impairments That Apply	Choose an Item	Choose an Item	Choose an Item		
EC8	Contamination known or suspected to be present? (From Environmental Compliance)			☐Yes	☑No	
EC9	Adjoining DOT ROW beyond project limits available for stormwater quality management			0.00 acres		

Section 3: Designed Conditions

	Water Quality Calculations		**30% Design**		**60% Design**	**90% Design**	**FDP**
DC1	WQV retention design goal	☑ Full ☐ 1/2"-WQV	ac-ft	☐ TBD	ac-ft	.026 ac-ft	0.026 ac-ft
DC2	WQV goal ***retained*** (refer to page 2)		ac-ft		ac-ft	0 ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 2)		ac-ft		ac-ft	0.014 ac-ft	0.014 ac-ft
DC4	Total WQV *retained and treated*		0 **ac-ft**		0 **ac-ft**	0.014 **ac-ft**	0.014 **ac-ft**
DC5	Post-construction DCIA(acres)		ac.	☐ TBD	ac.	0.193 ac.	0.193 ac.
DC6	Pre-construction DCIA (refer to EC2 above)		ac.		ac.	0.195 ac.	0.195 ac.
DC7	Change in DCIA from pre- to post-construction *Can be positive (DCIA gained) or negative (DCIA lost)*		0 **ac.**	☐ **TBD**	0 **ac.**	-0.002 **ac.**	-0.002 **ac.**
	Date completed					3/13/23	5/17/23
	Completed by (initials)					JAK	JAK
	Reviewed by (initials)					RA	

Notes: Grass drainage swale provided on east edge of Route 85 for limits of project.

Worksheet users should refer to the *CT DOT MS4 Project Design MEP Worksheet Instructions*

Section 4: Stormwater BMP Selection Summary						
Design Phase ☐30% ☐60% ☐90% ☑FDP	**WQV Retained (ac-ft)**	**WQV Treated (ac-ft)**	**DCIA Captured (Acres)**	**DCIA Disconnection Credit (%)**	**DCIA Disconnection Credit (acres)**	**Site Constraints**
Disconnection (Dispersion)						
						Insufficient Right-of-Way
						Choose an Item.
						Choose an Item.
Conveyance (Swales / Channels)						
Grass Swale on east curb	0	0.014	0.104			Choose an Item.
						Choose an Item.
						Choose an Item.
Infiltration / Retention						
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
Treatment						
						Choose an Item.
						Choose an Item.
						Choose an Item.
TOTAL	0	0.014	0.104	0	0	

Notes:

Worksheet users should refer to the *CT DOT MS4 Project Design MEP Worksheet Instructions.* Refer to the 2004 CT Stormwater Quality Manual for more information on BMP criteria and limitations.

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information	**Project #:**	#L051-004 (SLR #13571-42)
	Title:	Proposed Roundabout - Farmington, CT
	Location:	Intersection of South Road at Colt Highway and Two-Mile Road

Section 2: Existing Conditions

EC1	Total Project Area		1.40 acres		
EC2	Pre-construction Directly Connected Impervious Area (DCIA):		0.97 acres	69.20 %	
EC3	Soil Infiltration Potential	Data Source: ☑Existing Report / Soils Map ☐Field Verified	☑Good/Fair	☐Poor	☐Mixed
EC4	Depth to Maximum Groundwater	☐TBD	N/A to	ft below grade	
EC5	Depth to Bedrock	☐TBD	N/A to	ft below grade	
EC6	Aquifer Protection Area? (from PNDF)		☐Yes	☑No	
EC7	MS4 Priority Area? (from PNDF)		☑Yes (See Below)	☐No	
	Check All That Apply	☑Urbanized Area	☑DCIA >11%	☐Impaired Waterbody (See Below)	
	Select All Impairments That Apply		Choose an Item	Choose an Item	
EC8	Contamination known or suspected to be present? (From Environmental Compliance)		☐Yes	☑No	
EC9	Adjoining DOT ROW beyond project limits available for stormwater quality management		0.53 acres		

Section 3: Designed Conditions

	Water Quality Calculations		30% Design	60% Design	90% Design	FDP
DC1	WQV retention design goal	☐ Full ☑ 1/2"-WQV	ac-ft ☐ TBD	ac-ft	0.04 ac-ft	0.04 ac-ft
DC2	WQV goal ***retained*** (refer to page 2)		ac-ft	ac-ft	0.00 ac-ft	0.00 ac-ft
DC3	WQV goal ***treated*** (refer to page 2)		ac-ft	ac-ft	0.00 ac-ft	0.00 ac-ft
DC4	Total WQV *retained and treated*		**ac-ft**	**ac-ft**	0.00 **ac-ft**	0.00 **ac-ft**
DC5	Post-construction DCIA(acres)		ac. ☐ TBD	ac.	1.05 ac.	1.05 ac.
DC6	Pre-construction DCIA (refer to EC2 above)		ac.	ac.	0.97 ac.	0.97 ac.
DC7	Change in DCIA from pre- to post-construction *Can be positive (DCIA gained) or negative (DCIA lost)*		**ac.** ☐ **TBD**	**ac.**	+0.08 **ac.**	+0.08 **ac.**
	Date completed				7/8/2021	10/8/2021
	Completed by (initials)				JDM	MSM
	Reviewed by (initials)					

Notes:

No BMP's - Results in an increase of DCIA pre to post construction. See page 2 for site constraints.

Worksheet users should refer to the *CT DOT MS4 Project Design MEP Worksheet Instructions*

MS4 program has no comments on the FDP.

Section 4: Stormwater BMP Selection Summary						
Design Phase ☐30% ☐60% ☐90% ☑FDP	**WQV Retained (ac-ft)**	**WQV Treated (ac-ft)**	**DCIA Captured (Acres)**	**DCIA Disconnection Credit (%)**	**DCIA Disconnection Credit (acres)**	**Site Constraints**
Disconnection (Dispersion)						
No curb / Natural dispersion						other - describe in comment sec
Vegetative filter strip						other - describe in comment sectic
						Choose an Item.
Conveyance (Swales / Channels)						
Grass drainage channel						other - describe in comment secti
Water quality swale (dry)						other - describe in comment secti
						Choose an Item.
Infiltration / Retention						
Infiltration basin						other - describe in comment sec
Infiltration trench						other - describe in comment sec
Underground infiltration system						other - describe in comment sec
Dry well						other - describe in comment sec
						Choose an Item.
						Choose an Item.
						Choose an Item.
Treatment						
Wet basin / wetland system						other - describe in comment sec
Expanded dry detention basin						other - describe in comment sectic
						Choose an Item.
TOTAL						

Notes:

Available right-of-way and poor soils are the primary site constraints associated with implementation of the listed BMP's.

Worksheet users should refer to the *CT DOT MS4 Project Design MEP Worksheet Instructions.* Refer to the 2004 CT Stormwater Quality Manual for more information on BMP criteria and limitations.

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information	**Project #:**	NA
	Title:	Electrical Vehicle Charging Station
	Location:	RT15 Greenwich Northbound Service Plaza

Section 2: Existing Conditions

EC1	Total Project Area		0.02 acres		
EC2	Pre-construction Directly Connected Impervious Area (DCIA):		0.02 acres	100.00 %	
EC3	Soil Infiltration Potential	Data Source: ☐Existing Report / Soils Map ☐Field Verified	☐Good/Fair	☐Poor	☐Mixed
EC4	Depth to Maximum Groundwater	☐TBD	to	ft below grade	
EC5	Depth to Bedrock	☐TBD	to	ft below grade	
EC6	Aquifer Protection Area? (from PNDF)		☐Yes	☐No	
EC7	MS4 Priority Area? (from PNDF)		☐Yes (See Below)	☐No	
	Check All That Apply ☐Urbanized Area ☐DCIA >11% ☐Impaired Waterbody (See Below)				
	Select All Impairments That Apply Choose an Item Choose an Item Choose an Item				
EC8	Contamination known or suspected to be present? (From Environmental Compliance)		☐Yes	☐No	
EC9	Adjoining DOT ROW beyond project limits available for stormwater quality management		acres		

Section 3: Designed Conditions

	Water Quality Calculations		**30% Design**		**60% Design**	**90% Design**	**FDP**
DC1	WQV retention design goal	☐ Full ☐ 1/2"-WQV	ac-ft	☐ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal ***retained*** (refer to page 2)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 2)		ac-ft		ac-ft	ac-ft	ac-ft
DC4	Total WQV *retained and treated*		0 **ac-ft**		0 **ac-ft**	0 **ac-ft**	0 **ac-ft**
DC5	Post-construction DCIA(acres)		ac.	☐ TBD	ac.	ac.	0.0150 ac.
DC6	Pre-construction DCIA (refer to EC2 above)		ac.		ac.	ac.	0.00 ac.
DC7	Change in DCIA from pre- to post-construction *Can be positive (DCIA gained) or negative (DCIA lost)*		0 **ac.**	☐ **TBD**	0 **ac.**	0 **ac.**	0.0150 **ac.**
	Date completed						
	Completed by (initials)						
	Reviewed by (initials)						

Notes: DC7- 0.0150367

Worksheet users should refer to the *CT DOT MS4 Project Design MEP Worksheet Instructions*

Section 4: Stormwater BMP Selection Summary						
Design Phase ☐30% ☐60% ☐90% ☐FDP	**WQV Retained (ac-ft)**	**WQV Treated (ac-ft)**	**DCIA Captured (Acres)**	**DCIA Disconnection Credit (%)**	**DCIA Disconnection Credit (acres)**	**Site Constraints**
Disconnection (Dispersion)						
						Choose an Item.
						Choose an Item.
						Choose an Item.
Conveyance (Swales / Channels)						
						Choose an Item.
						Choose an Item.
						Choose an Item.
Infiltration / Retention						
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
Treatment						
						Choose an Item.
						Choose an Item.
						Choose an Item.
TOTAL	0	0	0	0	0	

Notes:

Worksheet users should refer to the *CT DOT MS4 Project Design MEP Worksheet Instructions.* Refer to the 2004 CT Stormwater Quality Manual for more information on BMP criteria and limitations.

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information	**Project #:**	NA
	Title:	Electrical Vehicle Charging Station
	Location:	I-395 Plainfield Southbound Service Plaza

Section 2: Existing Conditions

EC1	Total Project Area		0.02 acres		
EC2	Pre-construction Directly Connected Impervious Area (DCIA):		0.02 acres	100.00 %	
EC3	Soil Infiltration Potential	Data Source: ☐Existing Report / Soils Map ☐Field Verified	☐Good/Fair	☐Poor	☐Mixed
EC4	Depth to Maximum Groundwater	☐TBD	to	ft below grade	
EC5	Depth to Bedrock	☐TBD	to	ft below grade	
EC6	Aquifer Protection Area? (from PNDF)		☐Yes	☐No	
EC7	MS4 Priority Area? (from PNDF)		☐Yes (See Below)	☐No	
	Check All That Apply	☐Urbanized Area	☐DCIA >11%	☐Impaired Waterbody (See Below)	
	Select All Impairments That Apply	Choose an Item	Choose an Item	Choose an Item	
EC8	Contamination known or suspected to be present? (From Environmental Compliance)		☐Yes	☐No	
EC9	Adjoining DOT ROW beyond project limits available for stormwater quality management		acres		

Section 3: Designed Conditions

	Water Quality Calculations		**30% Design**		**60% Design**	**90% Design**	**FDP**
DC1	WQV retention design goal	☐ Full ☐ 1/2"-WQV	ac-ft	☐ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal ***retained*** (refer to page 2)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 2)		ac-ft		ac-ft	ac-ft	ac-ft
DC4	Total WQV *retained and treated*		0 **ac-ft**		0 **ac-ft**	0 **ac-ft**	0 **ac-ft**
DC5	Post-construction DCIA(acres)		ac.	☐ TBD	ac.	ac.	0.0150 ac.
DC6	Pre-construction DCIA (refer to EC2 above)		ac.		ac.	ac.	ac.
DC7	Change in DCIA from pre- to post-construction *Can be positive (DCIA gained) or negative (DCIA lost)*		0 **ac.**	☐ **TBD**	0 **ac.**	0 **ac.**	0.0150367 **ac.**
	Date completed						
	Completed by (initials)						
	Reviewed by (initials)						

Notes:

Worksheet users should refer to the *CT DOT MS4 Project Design MEP Worksheet Instructions*

Section 4: Stormwater BMP Selection Summary						
Design Phase ☐30% ☐60% ☐90% ☐FDP	**WQV Retained (ac-ft)**	**WQV Treated (ac-ft)**	**DCIA Captured (Acres)**	**DCIA Disconnection Credit (%)**	**DCIA Disconnection Credit (acres)**	**Site Constraints**
Disconnection (Dispersion)						
						Choose an Item.
						Choose an Item.
						Choose an Item.
Conveyance (Swales / Channels)						
						Choose an Item.
						Choose an Item.
						Choose an Item.
Infiltration / Retention						
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
Treatment						
						Choose an Item.
						Choose an Item.
						Choose an Item.
TOTAL	0	0	0	0	0	

Notes:

Worksheet users should refer to the *CT DOT MS4 Project Design MEP Worksheet Instructions.* Refer to the 2004 CT Stormwater Quality Manual for more information on BMP criteria and limitations.

Appendix III – CTDOT MS4 Worksheets for Redevelopment Projects that Completed Final Design in Permit Year 6

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: 0110-0136

Title/Description: Major Intersection Improvements on Route 6 at N. Main St. and Agney Ave.

Location: Plymouth

Section 2: Existing Conditions

EC1	Total Project Area			5.90 acres		
EC2	Pre-construction Total Impervious Area			4.24 acres		
EC3	Pre-Construction Disconnected Impervious Area			0.40 acres		
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			3.84 acres	65.1 % (EC4/EC1)	
EC5	Soil Infiltration Potential	Data Source: ☒ Existing Report / Soils Map ☐ Field Verified		☒ Good/Fair	☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater		☐ TBD	2.5 to 8.7 ft below grade		
EC7	Depth to Bedrock		☒ TBD	_____ to _____ ft below grade		
EC8	Aquifer Protection Area? (from PNDF)			☒ Yes	☐ No	
EC9	MS4 Priority Area? (from PNDF)			☒ Yes (See Below)	☐ No	

Check All That Apply ☒ Urbanized Area ☒ DCIA >11% ☒ Impaired Waterbody (See Below)

Select All Impairments That Apply *Cause Unknown*

EC10	Contamination known or suspected to be present? (From Environmental Compliance)	☒ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management	0.00 acres	

NOTES:

EC7: Soil borings were drilled to a maximum of 16ft below surface elevations and did not encounter bedrock.

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP	
DC1	WQV design goal	☐Full ☒½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☐ TBD	ac-ft	ac-ft	0.24	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	0	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	0.007	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☒No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP	
DC4	Post-construction Total Impervious Area	ac.	☐ TBD	ac.	ac.	4.51	ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☐ TBD	ac.	ac.	4.10	ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☐ TBD	ac.	ac.	0.068	ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☐ TBD	ac.	ac.	4.03	ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.	3.84	ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	ac.	☐ TBD	ac.	ac.	0.19	ac.
	Date completed					4/8/25	
	Completed by (initials)					JSK /JLD	
	Reviewed by (initials)					JWH	

NOTES:

Is the overall total increase in DCA (0.19 ac) within the DOT's ROW? If not, please clarify what percentage of the DCIA is associated with Route 6.

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary

Design Phase ☐30% ☐60% ☐90% ☒FDP	BMP Type	WQV Retained* (ac-ft)	WQV Treated* (ac-ft)	DCIA Captured by BMP (ac)	Runoff Depth from DCIA Captured by BMP (in)	HSG Soil Type	DCIA Disconnection Credit (%)**	DCIA Disconnection Credit (ac)	(TP) reduction %**	(TSS) reduction %**	(TN) reduction %*
BMP Category											
Infiltration	Pervious Paving A	0	0.007	0.068	1.3	B	100	0.068	99	100	100
TOTAL		0	0.007					0.068			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

This project is located in the downtown Terryville area of Plymouth, which is an urban area with limited right-of-way within the project limits and no adjoining DOT ROW available for development beyond the project limits. A grass channel has been proposed in the area between Old N. Main and N. Main Streets, however due to site conditions the longitudinal grade of this channel is greater than 6% and is not compliant with requirements for MS4 credits.

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: 0053-0189

Title/Description: REMOVAL OF BR. NOS. 00388 & 00389, DECK REPLACEMENT ON BR. NO. 00870, A

Location: Glastonbury, CT

Section 2: Existing Conditions

EC1	Total Project Area			16.33 acres	
EC2	Pre-construction Total Impervious Area			10.62 acres	
EC3	Pre-Construction Disconnected Impervious Area			6.93 acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			3.69 acres	22.60 % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☒ Existing Report / Soils Map ☐ Field Verified		☐ Good/Fair ☐ Poor	☒ Mixed
EC6	Depth to Maximum Groundwater		☐ TBD	0 to 4 ft below grade	
EC7	Depth to Bedrock		☐ TBD	57 to 60 ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☒ No
EC9	MS4 Priority Area? (from PNDF)			☒ Yes (See Below)	☐ No

Check All That Apply ☒ Urbanized Area ☒ DCIA >11% ☐ Impaired Waterbody (See Below)

Select All Impairments That Apply

EC10	Contamination known or suspected to be present? (From Environmental Compliance)	☐ Yes	☒ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management	0 acres	

NOTES:

The ownership of the .19 acres parcel adjacent to the upstream end of the existing 42" trunk line is unidentified in the survey base mapping, Glastonbury town GIS, and CTDOT parcels GIS. It was assumed that this is not CTDOT property.

There is known high groundwater in the area to the northeast of the intersection of New London Turnpike and the Rt 17 SB Off-Ramp 005. There is also known high groundwater northeast of the catch basin at 20+31.86 LT.

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☒ TBD	ac-ft	0 ac-ft	0 ac-ft
DC2	WQV goal **retained** (refer to page 3)		0 ac-ft		ac-ft	0 ac-ft	0 ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		0 ac-ft		ac-ft	0 ac-ft	0 ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☒No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP
DC4	Post-construction Total Impervious Area	ac.	☒ TBD	ac.	5.78 ac.	9.03 ac.
DC5	Post-construction DCIA before **new** BMPs	3.14 ac.	☐ TBD	ac.	5.78 ac.	4.12 ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	0 ac.	☐ TBD	ac.	0 ac.	0 ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	3.14 ac.	☐ TBD	ac.	5.78 ac.	4.12 ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	5.13 ac.		ac.	7.42 ac.	3.69 ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	-1.99 ac.	☐ TBD	ac.	-1.64 ac.	0.43 ac.
	Date completed	5/11/2022			10/8/2024	1/22/2025
	Completed by (initials)	KLM			EAR	EAR
	Reviewed by (initials)	-			CC	KLM

NOTES:

No design or inclusion of stormwater management/stormwater quality measures are foreseen and therefore are not included in the scope of the project.

New swales are proposed northeast of the Route 17 SB On-Ramp 003 and southeast of Route 17 SB Off-Ramp 005 to help direct the flow within the respective catchment areas, reduce DCIA, and enhance storm water quality.

The DCIA increases .43 acres from the existing condition due to connected drainage added west of System 2 in support of the addition of the roundabout and its ramp approaches.

D Imig 3.7.25 - Review of Pre DCIA catchments revealed it was under reported. Approximately 3 acres of impervious area originally counted as disconnected should be counted as directly connected. Emailing designer for concurrence.

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☒FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
TOTAL		0	0					0			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Constrained site limited by Route 17 to the west, wetlands to the northwest, and right of way constraints to the southwest of the proposed roundabout.

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: 0156-0181

Title/Description: Replacement of Bridges 00161 & 00162 Over First Ave. & Metro North

Location: West Haven, CT (CTDOT Region 3)

Section 2: Existing Conditions

EC1	Total Project Area		24.84 acres		
EC2	Pre-construction Total Impervious Area		10.93 acres		
EC3	Pre-Construction Disconnected Impervious Area		0.24 acres		
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*		10.69 acres	43.04 % (EC4/EC1)	
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☒ Field Verified	☐ Good/Fair	☒ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater	☐ TBD	0 to 5.5 ft below grade		
EC7	Depth to Bedrock	☐ TBD	135+ to _____ ft below grade		
EC8	Aquifer Protection Area? (from PNDF)		☐ Yes	☒ No	
EC9	MS4 Priority Area? (from PNDF)		☒ Yes (See Below)	☐ No	

Check All That Apply ☒ Urbanized Area ☒ DCIA >11% ☐ Impaired Waterbody (See Below)

Select All Impairments That Apply

EC10	Contamination known or suspected to be present? (From Environmental Compliance)	☐ Yes	☒ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management	0 acres	

NOTES:

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☒½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☐ TBD	.531 ac-ft	.531 ac-ft	.540 ac-ft
DC2	WQV goal **retained** (refer to page 3)			ac-ft	.216 ac-ft	.216 ac-ft	.216 ac-ft
DC3	WQV goal ***treated*** (refer to page 3)			ac-ft	.586 ac-ft	.584 ac-ft	.584 ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☒Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP
DC4	Post-construction Total Impervious Area	ac.	☐ TBD	13.01 ac.	13.01 ac.	13.01 ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☐ TBD	12.77 ac.	12.77 ac.	12.77 ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☐ TBD	6.62 ac.	6.26 ac.	~~6.26~~ 6.20 ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☐ TBD	6.15 ac.	6.51 ac.	~~6.51~~ 6.57 ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)		ac.	10.69 ac.	10.69 ac.	10.69 ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	ac.	☐ TBD	-4.54 ac.	-4.18 ac.	~~-4.18~~ -4.12 ac.
	Date completed			3/29/24	07/12/24	09/13/24
	Completed by (initials)			NPC	JS	JS
	Reviewed by (initials)			CAJ	KH	CAJ

NOTES:

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary

Design Phase ☐30% ☐60% ☒90% ☐FDP	BMP Type	WQV Retained* (ac-ft)	WQV Treated* (ac-ft)	DCIA Captured by BMP (ac)	Runoff Depth from DCIA Captured by BMP (in)	HSG Soil Type	DCIA Disconnection Credit (%)**	DCIA Disconnection Credit (ac)	(TP) reduction %**	(TSS) reduction %**	(TN) reduction %*
BMP Category											
Treatment	WQ1		0.272	3.31	0.55	C	48.0	~~1.62~~ 1.59	67	83	88
Treatment	WQ2		0.302	3.28	0.66	C	49.0	~~1.64~~ 1.61	72	86	90
Infiltration	WQ3	0.216		4.55	0.43	C	66.0	3.00	84	100	100
TOTAL		0.216	0.574					~~6.26~~ 6.20			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

WQ Areas 1 & 2 utilize liners which prevent infiltration and only provide treatment - they are considered bio-filtration basins and DCIA calculations are computed as such.

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

Please use version 4 of the worksheet which can be found here: ms4_worksheet-final.pdf (ct.gov)
A review of the Design Report indicates that several CB/MH would be installed by the project. Also, Rt 67 and Rt 313 will be widened. The proposed changes would very likely result in an increase in DCIA. However, section 3 of the MS4 worksheet indicates a decrease in DCIA. Could you please verify the post-construction DCIA number and provide a brief narrative on the worksheet explaining how you are decreasing DCIA.

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information		
	Project #:	124-165
	Title:	Spot Improvements on Bank Street (Route 67) and River Street (Route 313)
	Location:	Seymour, CT (East of the bridge over the Naugatuck River)

Section 2: Existing Conditions

EC1	Total Project Area			4.59 acres		
EC2	Pre-construction Directly Connected Impervious Area (DCIA):			4.19 acres	91.29 %	
EC3	Soil Infiltration Potential	Data Source: ☑Existing Report / Soils Map ☐Field Verified		☑Good/Fair	☐Poor	☐Mixed
EC4	Depth to Maximum Groundwater		☐TBD	9 to 19	ft below grade	
EC5	Depth to Bedrock		☐TBD	4 to 24	ft below grade	
EC6	Aquifer Protection Area? (from PNDF)			☐Yes	☑No	
EC7	MS4 Priority Area? (from PNDF)			☑Yes (See Below)	☐No	
	Check All That Apply	☑Urbanized Area	☐DCIA >11%	☐Impaired Waterbody (See Below)		
	Select All Impairments That Apply	Choose an Item	Choose an Item	Choose an Item		
EC8	Contamination known or suspected to be present? (From Environmental Compliance)			☐Yes	☑No	
EC9	Adjoining DOT ROW beyond project limits available for stormwater quality management			0.0 acres		

Section 3: Designed Conditions

	Water Quality Calculations		30% Design		60% Design	90% Design	FDP
DC1	WQV retention design goal	☐ Full ☑ 1/2"-WQV	ac-ft	☐ TBD	ac-ft	0.16 ac-ft	0.16 ac-ft
DC2	WQV goal ***retained*** (refer to page 2)		ac-ft		ac-ft	0.00 ac-ft	0.00 ac-ft
DC3	WQV goal ***treated*** (refer to page 2)		ac-ft		ac-ft	0.00 ac-ft	0.00 ac-ft
DC4	Total WQV *retained and treated*		0	**ac-ft**	0 **ac-ft**	0 **ac-ft**	0 **ac-ft**
DC5	Post-construction DCIA(acres)		ac.	☐ TBD	ac.	4.103 ac.	4.103 ac.
DC6	Pre-construction DCIA (refer to EC2 above)			ac.	ac.	4.195 ac.	4.195 ac.
DC7	Change in DCIA from pre- to post-construction *Can be positive (DCIA gained) or negative (DCIA lost)*		0 **ac.**	☐ **TBD**	0 **ac.**	-0.09 ac.	-0.09 ac.
	Date completed					4/12/2023	6/16/2023
	Completed by (initials)					GRN	GRN
	Reviewed by (initials)						

Notes: This is a spot improvement project within the downtown portion of the town of Seymour. Contact with Town of Seymour DPW Staff and District Engineer indicate no known drainage issues. No significant drainage modifications are proposed. 4' deep sumps added to "end-of-

Worksheet users should refer to the *CT DOT MS4 Project Design MEP Worksheet Instructions*

Contact MS4 staff at DOT.MS4@ct.gov with any questions or assistance in completing the worksheet.

Section 4: Stormwater BMP Selection Summary						
Design Phase ☐30% ☐60% ☐90% ☑FDP	**WQV Retained (ac-ft)**	**WQV Treated (ac-ft)**	**DCIA Captured (Acres)**	**DCIA Disconnection Credit (%)**	**DCIA Disconnection Credit (acres)**	**Site Constraints**
Disconnection (Dispersion)						
No curb, natural dispersion	0.0	0.0				Insufficient Right-of-Way
Vegetative filter strip	0.0	0.0				Insufficient Right-of-Way
						Choose an Item.
Conveyance (Swales / Channels)						
Grass Channel	0.0	0.0				Insufficient Right-of-Way
Water quality swale (dry)	0.0	0.0				Insufficient Right-of-Way
						Choose an Item.
Infiltration / Retention						
Infiltration basin	0.0	0.0				Insufficient Right-of-Way
Infiltration Trench	0.0	0.0				Insufficient Right-of-Way
Underground Infiltration system	0.0	0.0				Insufficient Right-of-Way
Dry well	0.0	0.0				Insufficient Right-of-Way
						Choose an Item.
						Choose an Item.
						Choose an Item.
Treatment						
Wet Basin/wetland system		0.0				Insufficient Right-of-Way
Hydrodymamic -oil grit sys						Utility Conflict
Bioretention with underdrain						Insufficient Right-of-Way
TOTAL	0	0	0	0	0	

Notes:
Hydrodynamic separators - Both insufficient ROW to get units out of the travelway and potential utility conflicts.
"End-of-line" Deep Sump catch basins specified at appropriate locations.

Worksheet users should refer to the *CT DOT MS4 Project Design MEP Worksheet Instructions.* Refer to the 2004 CT Stormwater Quality Manual for more information on BMP criteria and limitations.

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: 0304-0029

Title/Description: Naugatuck Station Design

Location: Naugatuck, CT

Section 2: Existing Conditions

EC1	Total Project Area			1.860 acres	
EC2	Pre-construction Total Impervious Area			1.023 acres	
EC3	Pre-Construction Disconnected Impervious Area			0 acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			1.023 acres	55% % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☒ Field Verified		☐ Good/Fair ☐ Poor	☒ Mixed
EC6	Depth to Maximum Groundwater		☐ TBD	8 to 10 ft below grade	
EC7	Depth to Bedrock		☐ TBD	60 to 100 ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☒ No
EC9	MS4 Priority Area? (from PNDF)			☒ Yes (See Below)	☐ No

Check All That Apply ☒ Urbanized Area ☒ DCIA >11% ☐ Impaired Waterbody (See Below)

Select All Impairments That Apply

EC10	Contamination known or suspected to be present? (From Environmental Compliance)	☒ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management	0 acres	

NOTES:

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP	
DC1	WQV design goal	☐Full ☒½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☐ TBD	ac-ft	ac-ft	0.055	ac-ft
DC2	WQV goal **retained** (refer to page 3)			ac-ft	ac-ft	ac-ft	0.058	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)			ac-ft	ac-ft	ac-ft	0.058	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☒Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP	
DC4	Post-construction Total Impervious Area	ac.	☐ TBD	ac.	ac.	1.337	ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☐ TBD	ac.	ac.	1.337	ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☐ TBD	ac.	ac.	0.490	ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☐ TBD	ac.	ac.	0.847	ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)		ac.	ac.	ac.	1.023	ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	ac.	☐ TBD	ac.	ac.	-0.176	ac.
	Date completed					8/12/24	
	Completed by (initials)					EJM	
	Reviewed by (initials)						

NOTES:

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☒90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
Infiltration	Infiltration Trench	0.010	0.010	0.10	1.3	D	81%	0.081	89%	94%	97%
Infiltration	Infiltration Basin	0.048	0.048	0.47	1.3	D	89%	0.409	95%	98%	98%
Treatment	HDS	0	0	0.11	1.3	D	0%	0%	0%	0%	0%
Treatment	HDS	0	0	0.36	1.3	D	0%	0%	0%	0%	0%
TOTAL		0.058	0.058					0.49			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Area adjacent to the site consists of local roadways, rail embankment, Naugatuck River, and development to be constructed by others.

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: 088-202

Title/Description: Construction of Beeline Trail - Phase 3

Location: New Britain, Connecticut

Section 2: Existing Conditions

EC1	Total Project Area			1.56 acres	
EC2	Pre-construction Total Impervious Area			0.43 acres	
EC3	Pre-Construction Disconnected Impervious Area			0.00 acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			0.43 acres	28 % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified		☐ Good/Fair	☐ Poor ☐ Mixed
EC6	Depth to Maximum Groundwater		☒ TBD	_____ to _____ ft below grade	
EC7	Depth to Bedrock		☒ TBD	_____ to _____ ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☒ No
EC9	MS4 Priority Area? (from PNDF)			☒ Yes (See Below)	☐ No

Check All That Apply ☒ Urbanized Area ☒ DCIA >11% ☐ Impaired Waterbody (See Below)

Select All Impairments That Apply

EC10	Contamination known or suspected to be present? (From Environmental Compliance)	☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management	0.00 acres	

NOTES:

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☒Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☐ TBD	0.142 ac-ft	ac-ft	0.05 ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		0.00 ac-ft	ac-ft	0.00 ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		0.00 ac-ft	ac-ft	0.00 ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☒No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP
DC4	Post-construction Total Impervious Area	ac.	☐ TBD	2.00 ac.	ac.	0.63 ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☐ TBD	1.85 ac.	ac.	0.56 ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☐ TBD	0.00 ac.	ac.	0.00 ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☐ TBD	1.85 ac.	ac.	0.56 ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)		ac.	1.27 ac.	ac.	0.43 ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	ac.	☐ TBD	0.58 ac.	ac.	0.13 ac.
	Date completed			05/14/2024		5/22/2025
	Completed by (initials)			BKM		BKM
	Reviewed by (initials)			SKB		SKB

NOTES:

The difference between the WQV and DCIA Documentation values at 60% and FDP is because the Total Project Area obtained at 60% assumed the entire project limits, including areas in both State and City ROW. The Total Project Area obtained at FDP was revised to only include project areas that fall within the State ROW. This revision was based on feedback received from CTDOT H&D following the 90% Design Submission.

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☒FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
TOTAL		0	0					0			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Project area within State ROW is relatively small and has no space for BMPs.

Other Notes:

Significant efforts have been made to grade the trail away, where possible, from the edge of roadway and the closed drainage system.

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: 067-123

Title/Description: Kent Village Center Streetscape Improvements - Phase II

Location: RT-341 and RT-7, Town of Kent, CT

Section 2: Existing Conditions

EC1	Total Project Area			1.6 acres	
EC2	Pre-construction Total Impervious Area			0.90 acres	
EC3	Pre-Construction Disconnected Impervious Area			0.62 acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			0.28 acres	17.5 % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☒ Existing Report / Soils Map ☐ Field Verified		☒ Good/Fair	☐ Poor ☐ Mixed
EC6	Depth to Maximum Groundwater		☒ TBD	_____ to _____ ft below grade	
EC7	Depth to Bedrock		☒ TBD	_____ to _____ ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☒ No
EC9	MS4 Priority Area? (from PNDF)			☐ Yes (See Below)	☒ No

Check All That Apply ☒ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)

Select All Impairments That Apply

EC10	Contamination known or suspected to be present? (From Environmental Compliance)	☐ Yes	☒ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management	_____ acres	

NOTES:

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP	
DC1	WQV design goal	☒Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☒ TBD	ac-ft	ac-ft	0	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	0	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	0	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☒No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP	
DC4	Post-construction Total Impervious Area	ac.	☒ TBD	ac.	ac.	0.94	ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☒ TBD	ac.	ac.	1.07	ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☒ TBD	ac.	ac.	0.62	ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☒ TBD	ac.	ac.	0.45	ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.	0.28	ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	ac.	☒ TBD	ac.	ac.	0.17	ac.
	Date completed	2/21/2023				09/27/2024	
	Completed by (initials)	FV				FV	
	Reviewed by (initials)	REC				REC	

NOTES:

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☒FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
TOTAL		0	0					0			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: 0163-0206

Title/Description: Permanant access road off Route 6

Location: Windham

Section 2: Existing Conditions

EC1	Total Project Area			_____ acres	
EC2	Pre-construction Total Impervious Area			_____ acres	
EC3	Pre-Construction Disconnected Impervious Area			_____ acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			_____ acres	_____ % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified		☐ Good/Fair ☐ Poor ☐ Mixed	
EC6	Depth to Maximum Groundwater		☐ TBD	_____ to _____ ft below grade	
EC7	Depth to Bedrock		☐ TBD	_____ to _____ ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☐ No
EC9	MS4 Priority Area? (from PNDF)			☐ Yes (See Below)	☒ No

Check All That Apply ☐ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)

Select All Impairments That Apply

EC10	Contamination known or suspected to be present? (From Environmental Compliance)	☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management	_____ acres	

NOTES:
Permanant access road added due to construction for bridge rehabilitation of bridge 06729.

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☐ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP	
DC4	Post-construction Total Impervious Area	ac.	☐ TBD	ac.	ac.	0.08	ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☐ TBD	ac.	ac.	0.08	ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☐ TBD	ac.	ac.	0	ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☐ TBD	ac.	ac.	0.08	ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.	0	ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	ac.	☐ TBD	ac.	ac.	0.08	ac.
	Date completed						
	Completed by (initials)						
	Reviewed by (initials)						

NOTES:
Permanant access road added due to construction for bridge rehabilitation of bridge 06729.

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
TOTAL		0	0					0			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: 0004-0134

Title/Description: MAINTENANCE FACILITY

Location: AVON

Section 2: Existing Conditions

EC1	Total Project Area		5.51 acres		
EC2	Pre-construction Total Impervious Area		3.20 acres		
EC3	Pre-Construction Disconnected Impervious Area		0 acres		
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*		3.20 acres	58 % (EC4/EC1)	
EC5	Soil Infiltration Potential	Data Source: ☒ Existing Report / Soils Map ☐ Field Verified	☒ Good/Fair	☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater	☐ TBD	_____ to _____ ft below grade		
EC7	Depth to Bedrock	☐ TBD	_____ to >42 ft below grade		
EC8	Aquifer Protection Area? (from PNDF)		☐ Yes	☒ No	
EC9	MS4 Priority Area? (from PNDF)		☒ Yes (See Below)	☐ No	

Check All That Apply ☒ Urbanized Area ☒ DCIA >11% ☐ Impaired Waterbody (See Below)

Select All Impairments That Apply

EC10	Contamination known or suspected to be present? (From Environmental Compliance)	☒ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management	N/A acres	

NOTES:

Borings to maximum depth of 42' showed no groundwater and no bedrock.

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP	
DC1	WQV design goal	☐Full ☒½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☐ TBD	ac-ft	ac-ft	0.15	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	0.15	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	0.15	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☒Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP	
DC4	Post-construction Total Impervious Area	ac.	☐ TBD	ac.	ac.	4.12	ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☐ TBD	ac.	ac.	4.12	ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☐ TBD	ac.	ac.	2.84	ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☐ TBD	ac.	ac.	1.28	ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.	3.20	ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	ac.	☐ TBD	ac.	ac.	-1.92	ac.
	Date completed					06/27/2025	
	Completed by (initials)					ME	
	Reviewed by (initials)					ME	

NOTES:

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
Treatment	Detention Basin	.297	.297	2.84	1.3						
Infiltration	Natural Infiltration			2.84	1.3		100	2.84	100	100	100
TOTAL		0.297	0.297					2.84			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Other Notes:

No HSG provided with soil report. The 2.84 acres of captured DCIA will flow to a natural infiltration area to the back of site.

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

Appendix IV - MS4 Worksheets for Phase I Stand Alone Retrofit Projects in Engineering Design

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: 0170-3744, GIS ID 170-PB-102

Title/Description: Multiple BMPs: 2300 LF of Water Quality Swale, (1) Leaching Basin

Location: Trumbull, Route 8, Mile Marker Range 4.15 - 4.6

Section 2: Existing Conditions

EC1	Total Project Area			TBD acres	
EC2	Pre-construction Total Impervious Area			TBD acres	
EC3	Pre-Construction Disconnected Impervious Area			TBD acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			_____ acres	TBD % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified		☐ Good/Fair ☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater		☒ TBD	_____ to _____ ft below grade	
EC7	Depth to Bedrock		☒ TBD	_____ to _____ ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☐ No
EC9	MS4 Priority Area? (from PNDF)			☐ Yes (See Below)	☐ No
	Check All That Apply ☐ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)				
	Select All Impairments That Apply				
EC10	Contamination known or suspected to be present? (From Environmental Compliance)			☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management			_____ acres	

NOTES:

TBD - To Be Determined.

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☒ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP	
DC4	Post-construction Total Impervious Area	ac.	☒ TBD	ac.	ac.		ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☒ TBD	ac.	ac.		ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☒ TBD	ac.	ac.		ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☒ TBD	ac.	ac.		ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.		ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	-2.0 ac.	☐ TBD	ac.	ac.		ac.
	Date completed						
	Completed by (initials)						
	Reviewed by (initials)						

NOTES:

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
Infiltration	Leaching Basin							0.5			
Infiltration	Swale							1.5	TBD	TBD	TBD
TOTAL		0	0					2			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: 0170-3744 (GIS ID# 170-PB-35)

Title/Description: Infiltration Basin

Location: Norwich, I-395 & Route 642

Section 2: Existing Conditions

EC1	Total Project Area			TBD acres	
EC2	Pre-construction Total Impervious Area			TBD acres	
EC3	Pre-Construction Disconnected Impervious Area			TBD acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			_____ acres	TBD % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified		☐ Good/Fair ☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater		☒ TBD	_____ to _____ ft below grade	
EC7	Depth to Bedrock		☒ TBD	_____ to _____ ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☐ No
EC9	MS4 Priority Area? (from PNDF)			☐ Yes (See Below)	☐ No
	Check All That Apply ☐ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)				
	Select All Impairments That Apply				
EC10	Contamination known or suspected to be present? (From Environmental Compliance)			☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management			_____ acres	

NOTES:

TBD - To Be Determined.

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☒ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP
DC4	Post-construction Total Impervious Area	ac.	☒ TBD	ac.	ac.	ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☒ TBD	ac.	ac.	ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☒ TBD	ac.	ac.	ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☒ TBD	ac.	ac.	ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.	ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	-5.3 ac.	☐ TBD	ac.	ac.	ac.
	Date completed					
	Completed by (initials)					
	Reviewed by (initials)					

NOTES:

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
Infiltration	Basin							1.8	TBD	TBD	TBD
TOTAL		0	0					2			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: 0170-3744 (GIS ID# 170-PB-138)

Title/Description: Infiltration Basin

Location: Bristol, Park & Ride Lot / Route 229 & Sunnydale

Section 2: Existing Conditions

EC1	Total Project Area			TBD acres	
EC2	Pre-construction Total Impervious Area			TBD acres	
EC3	Pre-Construction Disconnected Impervious Area			TBD acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			_____ acres	TBD % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified		☐ Good/Fair ☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater		☒ TBD	_____ to _____ ft below grade	
EC7	Depth to Bedrock		☒ TBD	_____ to _____ ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☐ No
EC9	MS4 Priority Area? (from PNDF)			☐ Yes (See Below)	☐ No
	Check All That Apply ☐ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)				
	Select All Impairments That Apply				
EC10	Contamination known or suspected to be present? (From Environmental Compliance)			☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management			_____ acres	

NOTES:
TBD - To Be Determined.

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☒ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP	
DC4	Post-construction Total Impervious Area	ac.	☒ TBD	ac.	ac.		ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☒ TBD	ac.	ac.		ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☒ TBD	ac.	ac.		ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☒ TBD	ac.	ac.		ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.		ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	-2.4 ac.	☐ TBD	ac.	ac.		ac.
	Date completed						
	Completed by (initials)						
	Reviewed by (initials)						

NOTES:

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
Infiltration	Basin							2.4	TBD	TBD	TBD
TOTAL		0	0					2			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: 0170-3744 (GIS ID# 170-PB-128)

Title/Description: Multiple BMPs: 1200 LF WQ Swale, (3) Leaching Basins

Location: Killingly, I-395 Mile Marker Range 40.40 - 40.70

Section 2: Existing Conditions

EC1	Total Project Area			TBD acres	
EC2	Pre-construction Total Impervious Area			TBD acres	
EC3	Pre-Construction Disconnected Impervious Area			TBD acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			_____ acres	TBD % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified		☐ Good/Fair ☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater		☒ TBD	_____ to _____ ft below grade	
EC7	Depth to Bedrock		☒ TBD	_____ to _____ ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☐ No
EC9	MS4 Priority Area? (from PNDF)			☐ Yes (See Below)	☐ No

Check All That Apply ☐ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)

Select All Impairments That Apply

EC10	Contamination known or suspected to be present? (From Environmental Compliance)	☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management	_____ acres	

NOTES:
TBD - To Be Determined.

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☒ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP	
DC4	Post-construction Total Impervious Area	ac.	☒ TBD	ac.	ac.		ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☒ TBD	ac.	ac.		ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☒ TBD	ac.	ac.		ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☒ TBD	ac.	ac.		ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.		ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	-1.2 ac.	☐ TBD	ac.	ac.		ac.
	Date completed						
	Completed by (initials)						
	Reviewed by (initials)						

NOTES:

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
Infiltration	Swale							1.0	TBD	TBD	TBD
Infiltration	Leaching Basins							0.5			
TOTAL		0	0					2			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: 0170-3744 (GIS ID# 170-PB-93)

Title/Description: Infiltration Basin

Location: Naugatuck, Route 8 & Route 847

Section 2: Existing Conditions

EC1	Total Project Area			TBD acres	
EC2	Pre-construction Total Impervious Area			TBD acres	
EC3	Pre-Construction Disconnected Impervious Area			TBD acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			_____ acres	TBD % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified		☐ Good/Fair ☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater		☒ TBD	_____ to _____ ft below grade	
EC7	Depth to Bedrock		☒ TBD	_____ to _____ ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☐ No
EC9	MS4 Priority Area? (from PNDF)			☐ Yes (See Below)	☐ No

Check All That Apply ☐ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)

Select All Impairments That Apply

EC10	Contamination known or suspected to be present? (From Environmental Compliance)	☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management	_____ acres	

NOTES:
TBD - To Be Determined.

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☒ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP
DC4	Post-construction Total Impervious Area	ac.	☒ TBD	ac.	ac.	ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☒ TBD	ac.	ac.	ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☒ TBD	ac.	ac.	ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☒ TBD	ac.	ac.	ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	-2.62 ac.		ac.	ac.	ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	ac.	☐ TBD	ac.	ac.	ac.
	Date completed					
	Completed by (initials)					
	Reviewed by (initials)					

NOTES:

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
Infiltration	Basin							5.0	TBD	TBD	TBD
TOTAL		0	0					2			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: 0170-3744 (GIS ID# 170-PB-143)

Title/Description: Multiple BMPs:(1) Infiltration Trench, (3) Sections of Water Quality Swales, (2) L Basins

Location: Manchester, I-384 at Gardner Street

Section 2: Existing Conditions

EC1	Total Project Area			TBD acres	
EC2	Pre-construction Total Impervious Area			TBD acres	
EC3	Pre-Construction Disconnected Impervious Area			TBD acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			_____ acres	TBD % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified		☐ Good/Fair ☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater		☒ TBD	_____ to _____ ft below grade	
EC7	Depth to Bedrock		☒ TBD	_____ to _____ ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☐ No
EC9	MS4 Priority Area? (from PNDF)			☐ Yes (See Below)	☐ No

Check All That Apply ☐ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)

Select All Impairments That Apply

EC10	Contamination known or suspected to be present? (From Environmental Compliance)	☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management	_____ acres	

NOTES:
TBD - To Be Determined.

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☒ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP
DC4	Post-construction Total Impervious Area	ac.	☒ TBD	ac.	ac.	ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☒ TBD	ac.	ac.	ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☒ TBD	ac.	ac.	ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☒ TBD	ac.	ac.	ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.	ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	-3.6 ac.	☐ TBD	ac.	ac.	ac.
	Date completed					
	Completed by (initials)					
	Reviewed by (initials)					

NOTES:

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
Infiltration	Swale							2.4	TBD	TBD	TBD
Infiltration	Leaching Basins							0.6			
TOTAL		0	0					2			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: 0170-3744 (GIS ID# 170-PB-186)

Title/Description: Infiltration Trench

Location: Ansonia, Route 8 Mile Marker 15.83, South of Bridge # 02999

Section 2: Existing Conditions

EC1	Total Project Area			TBD acres	
EC2	Pre-construction Total Impervious Area			TBD acres	
EC3	Pre-Construction Disconnected Impervious Area			TBD acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			_____ acres	TBD % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified		☐ Good/Fair ☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater		☒ TBD	_____ to _____ ft below grade	
EC7	Depth to Bedrock		☒ TBD	_____ to _____ ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☐ No
EC9	MS4 Priority Area? (from PNDF)			☐ Yes (See Below)	☐ No

Check All That Apply ☐ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)

Select All Impairments That Apply

EC10	Contamination known or suspected to be present? (From Environmental Compliance)	☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management	_____ acres	

NOTES:
TBD - To Be Determined.

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☒ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP
DC4	Post-construction Total Impervious Area	ac.	☒ TBD	ac.	ac.	ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☒ TBD	ac.	ac.	ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☒ TBD	ac.	ac.	ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☒ TBD	ac.	ac.	ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.	ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	-2.9 ac.	☐ TBD	ac.	ac.	ac.
	Date completed					
	Completed by (initials)					
	Reviewed by (initials)					

NOTES:

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
Infiltration	Trench							2.0	TBD	TBD	TBD
TOTAL		0	0					2			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: 0170-3744 (GIS ID# 170-PB-148)

Title/Description: Infiltration Trench

Location: Stratford, I - 95 Mile Marker 32.84,Southwest of Bridge # 00129 Over West Broad Street

Section 2: Existing Conditions

EC1	Total Project Area		TBD acres		
EC2	Pre-construction Total Impervious Area		TBD acres		
EC3	Pre-Construction Disconnected Impervious Area		TBD acres		
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*		_____ acres	TBD % (EC4/EC1)	
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified	☐ Good/Fair	☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater	☐ TBD	_____ to _____ ft below grade		
EC7	Depth to Bedrock	☐ TBD	_____ to _____ ft below grade		
EC8	Aquifer Protection Area? (from PNDF)		☐ Yes	☐ No	
EC9	MS4 Priority Area? (from PNDF)		☐ Yes (See Below)	☐ No	

Check All That Apply ☐ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)

Select All Impairments That Apply

EC10	Contamination known or suspected to be present? (From Environmental Compliance)	☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management	_____ acres	

NOTES:
TBD - To Be Determined.

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☐ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP	
DC4	Post-construction Total Impervious Area	ac.	☐ TBD	ac.	ac.		ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☐ TBD	ac.	ac.		ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☐ TBD	ac.	ac.		ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☐ TBD	ac.	ac.		ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.		ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	-2.7 ac.	☐ TBD	ac.	ac.		ac.
	Date completed						
	Completed by (initials)						
	Reviewed by (initials)						

NOTES:

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
Infiltration	Trench							2.0	TBD	TBD	TBD
TOTAL		0	0					2			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: 0170-3744 (GIS ID# 170-PB-141)

Title/Description: Infiltration Basin

Location: Manchester, I-384W, Apprx. Mile Marker Range 5.62 - 5.52

Section 2: Existing Conditions

EC1	Total Project Area		TBD acres		
EC2	Pre-construction Total Impervious Area		TBD acres		
EC3	Pre-Construction Disconnected Impervious Area		TBD acres		
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*		_____ acres	TBD % (EC4/EC1)	
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified	☐ Good/Fair	☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater	☐ TBD	_____ to _____ ft below grade		
EC7	Depth to Bedrock	☐ TBD	_____ to _____ ft below grade		
EC8	Aquifer Protection Area? (from PNDF)		☐ Yes	☐ No	
EC9	MS4 Priority Area? (from PNDF)		☐ Yes (See Below)	☐ No	

Check All That Apply ☐ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)

Select All Impairments That Apply

EC10	Contamination known or suspected to be present? (From Environmental Compliance)	☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management	_____ acres	

NOTES:

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☐ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP
DC4	Post-construction Total Impervious Area	ac.	☐ TBD	ac.	ac.	ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☐ TBD	ac.	ac.	ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☐ TBD	ac.	ac.	ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☐ TBD	ac.	ac.	ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.	ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	-3.9 ac.	☐ TBD	ac.	ac.	ac.
	Date completed					
	Completed by (initials)					
	Reviewed by (initials)					

NOTES:
TBD - To Be Determined.

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
Infiltration	Basin							4.8	TBD	TBD	TBD
TOTAL		0	0					2			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: 0170-3744 (GIS ID# 170-PB- 48)

Title/Description: Infiltration Basin

Location: Newington, Cloverleaf at the Intersection of Routes 15 & 175

Section 2: Existing Conditions

EC1	Total Project Area		TBD acres		
EC2	Pre-construction Total Impervious Area		TBD acres		
EC3	Pre-Construction Disconnected Impervious Area		TBD acres		
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*		_____ acres	TBD % (EC4/EC1)	
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified	☐ Good/Fair	☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater	☐ TBD	_____ to _____ ft below grade		
EC7	Depth to Bedrock	☐ TBD	_____ to _____ ft below grade		
EC8	Aquifer Protection Area? (from PNDF)		☐ Yes	☐ No	
EC9	MS4 Priority Area? (from PNDF)		☐ Yes (See Below)	☐ No	

Check All That Apply ☐ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)

Select All Impairments That Apply

EC10	Contamination known or suspected to be present? (From Environmental Compliance)	☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management	_____ acres	

NOTES:

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☐ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP	
DC4	Post-construction Total Impervious Area	ac.	☐ TBD	ac.	ac.		ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☐ TBD	ac.	ac.		ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☐ TBD	ac.	ac.		ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☐ TBD	ac.	ac.		ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.		ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	-6.0 ac.	☐ TBD	ac.	ac.		ac.
	Date completed						
	Completed by (initials)						
	Reviewed by (initials)						

NOTES:
TBD - To Be Determined.

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
Infiltration	Basin							3.5	TBD	TBD	TBD
TOTAL		0	0					2			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: 0170-3744(GIS ID#170-PB-106

Title/Description: Infiltration Basin

Location: Stratford, Retrofit Existing Dry Detention Basin South of Route 15 East of Route 110

Section 2: Existing Conditions

EC1	Total Project Area			TBD acres	
EC2	Pre-construction Total Impervious Area			TBD acres	
EC3	Pre-Construction Disconnected Impervious Area			TBD acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			_____ acres	TBD % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified		☐ Good/Fair ☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater		☐ TBD	_____ to _____ ft below grade	
EC7	Depth to Bedrock		☐ TBD	_____ to _____ ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☐ No
EC9	MS4 Priority Area? (from PNDF)			☐ Yes (See Below)	☐ No
	Check All That Apply ☐ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)				
	Select All Impairments That Apply				
EC10	Contamination known or suspected to be present? (From Environmental Compliance)			☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management			_____ acres	

NOTES:
TBD - To Be Determined.

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☐ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP	
DC4	Post-construction Total Impervious Area	ac.	☐ TBD	ac.	ac.		ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☐ TBD	ac.	ac.		ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☐ TBD	ac.	ac.		ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☐ TBD	ac.	ac.		ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.		ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	-4.4 ac.	☐ TBD	ac.	ac.		ac.
	Date completed						
	Completed by (initials)						
	Reviewed by (initials)						

NOTES:

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
Infiltration	Basin							4.3	TBD	TBD	TBD
TOTAL		0	0					2			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

Appendix V – Eliminated Phase I Retrofit Projects MS4 Worksheets

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: 0170-3744(GIS ID# 170-PB-149)

Title/Description: Infiltration Basin

Location: Bridgeport, I-95 Mile Marker 31.07, Southwest of Bridge 00122 over Route 113

Section 2: Existing Conditions

EC1	Total Project Area			TBD acres	
EC2	Pre-construction Total Impervious Area			TBD acres	
EC3	Pre-Construction Disconnected Impervious Area			TBD acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			_____ acres	TBD % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified		☐ Good/Fair ☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater		☒ TBD	_____ to _____ ft below grade	
EC7	Depth to Bedrock		☒ TBD	_____ to _____ ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☐ No
EC9	MS4 Priority Area? (from PNDF)			☐ Yes (See Below)	☐ No

Check All That Apply ☐ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)

Select All Impairments That Apply

EC10	Contamination known or suspected to be present? (From Environmental Compliance)	☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management	_____ acres	

NOTES:
TBD - To Be Determined.

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☒ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP	
DC4	Post-construction Total Impervious Area	ac.	☒ TBD	ac.	ac.		ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☒ TBD	ac.	ac.		ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☒ TBD	ac.	ac.		ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☒ TBD	ac.	ac.		ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.		ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	-1.5 ac.	☐ TBD	ac.	ac.		ac.
	Date completed						
	Completed by (initials)						
	Reviewed by (initials)						

NOTES:

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
Infiltration	Basin							1.5	TBD	TBD	TBD
TOTAL		0	0					2			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

The location is in a floodplain.

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: 0170-3744 (GIS ID# 170-PB-162)

Title/Description: Multiple BMPs: 4800 LF of Water Quality Swale, 4 Leaching Basins

Location: Meriden, I - 691 Apprx. Mile Marker Range 3.6 - 2.4

Section 2: Existing Conditions

EC1	Total Project Area			TBD acres	
EC2	Pre-construction Total Impervious Area			TBD acres	
EC3	Pre-Construction Disconnected Impervious Area			TBD acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			_____ acres	_____ % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified		☐ Good/Fair ☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater		☒ TBD	_____ to _____ ft below grade	
EC7	Depth to Bedrock		☒ TBD	_____ to _____ ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☐ No
EC9	MS4 Priority Area? (from PNDF)			☐ Yes (See Below)	☐ No

Check All That Apply ☐ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)

Select All Impairments That Apply

EC10	Contamination known or suspected to be present? (From Environmental Compliance)	☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management	_____ acres	

NOTES:
TBD - To Be Determined.

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☒ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP
DC4	Post-construction Total Impervious Area	ac.	☒ TBD	ac.	ac.	ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☒ TBD	ac.	ac.	ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☒ TBD	ac.	ac.	ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☒ TBD	ac.	ac.	ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.	ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	-6.8 ac.	☐ TBD	ac.	ac.	ac.
	Date completed					
	Completed by (initials)					
	Reviewed by (initials)					

NOTES:

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary

Design Phase ☐30% ☐60% ☐90% ☐FDP	BMP Type	WQV Retained* (ac-ft)	WQV Treated* (ac-ft)	DCIA Captured by BMP (ac)	Runoff Depth from DCIA Captured by BMP (in)	HSG Soil Type	DCIA Disconnection Credit (%)**	DCIA Disconnection Credit (ac)	(TP) reduction %**	(TSS) reduction %**	(TN) reduction %*
BMP Category											
Infiltration	Swale							4.5	TBD	TBD	TBD
Infiltration	Leaching Basins							2.0			
TOTAL		0	0					2			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

The shallow bedrock layer encountered at this location may have a limiting effect on the infiltration rate during periods with significant rainfall and snow melt.

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

Appendix VI – MS4 Worksheets for Phase II Stand Alone Retrofit Projects in Preliminary Design

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: GIS ID# 170-PB-214

Title/Description: Infiltration Trench

Location: Fairfield, I-95 Northbound Mile point 23.24

Section 2: Existing Conditions

EC1	Total Project Area			TBD acres	
EC2	Pre-construction Total Impervious Area			TBD acres	
EC3	Pre-Construction Disconnected Impervious Area			TBD acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			_____ acres	TBD % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified		☐ Good/Fair ☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater		☒ TBD	_____ to _____ ft below grade	
EC7	Depth to Bedrock		☒ TBD	_____ to _____ ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☐ No
EC9	MS4 Priority Area? (from PNDF)			☐ Yes (See Below)	☐ No
	Check All That Apply ☐ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)				
	Select All Impairments That Apply				
EC10	Contamination known or suspected to be present? (From Environmental Compliance)			☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management			_____ acres	

NOTES:
TBD- To Be Determined.

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☒ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP	
DC4	Post-construction Total Impervious Area	ac.	☒ TBD	ac.	ac.		ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☒ TBD	ac.	ac.		ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☒ TBD	ac.	ac.		ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☒ TBD	ac.	ac.		ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.		ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	-2.0 ac.	☐ TBD	ac.	ac.		ac.
	Date completed						
	Completed by (initials)						
	Reviewed by (initials)						

NOTES:
TBD- To Be Determined.

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
Infiltration	Trench							2.0	TBD	TBD	TBD
TOTAL		0	0					2			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: GIS ID# 170-PB-274

Title/Description: Infiltration Trench

Location: Fairfield, I-95 Northbound, Mile Point 23.73

Section 2: Existing Conditions

EC1	Total Project Area			TBD acres	
EC2	Pre-construction Total Impervious Area			TBD acres	
EC3	Pre-Construction Disconnected Impervious Area			TBD acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			_____ acres	TBD % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified		☐ Good/Fair ☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater		☒ TBD	_____ to _____ ft below grade	
EC7	Depth to Bedrock		☒ TBD	_____ to _____ ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☐ No
EC9	MS4 Priority Area? (from PNDF)			☐ Yes (See Below)	☐ No
	Check All That Apply ☐ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)				
	Select All Impairments That Apply				
EC10	Contamination known or suspected to be present? (From Environmental Compliance)			☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management			_____ acres	

NOTES:
TBD - To Be Determined

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☒ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP	
DC4	Post-construction Total Impervious Area	ac.	☒ TBD	ac.	ac.		ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☒ TBD	ac.	ac.		ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☒ TBD	ac.	ac.		ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☒ TBD	ac.	ac.		ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.		ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	-2.0 ac.	☐ TBD	ac.	ac.		ac.
	Date completed						
	Completed by (initials)						
	Reviewed by (initials)						

NOTES:
TBD - To Be Determined

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
Infiltration	Trench							2.0	TBD	TBD	TBD
TOTAL		0	0					2			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: GIS ID# 170-PB-275

Title/Description: Infiltration Trench

Location: Westport, I-95 Northbound, Mile Point 18.58

Section 2: Existing Conditions

EC1	Total Project Area			TBD acres	
EC2	Pre-construction Total Impervious Area			TBD acres	
EC3	Pre-Construction Disconnected Impervious Area			TBD acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			_____ acres	TBD % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified		☐ Good/Fair ☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater		☒ TBD	_____ to _____ ft below grade	
EC7	Depth to Bedrock		☒ TBD	_____ to _____ ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☐ No
EC9	MS4 Priority Area? (from PNDF)			☐ Yes (See Below)	☐ No
	Check All That Apply ☐ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)				
	Select All Impairments That Apply				
EC10	Contamination known or suspected to be present? (From Environmental Compliance)			☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management			_____ acres	

NOTES:
TBD - To Be Determined

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☒ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP	
DC4	Post-construction Total Impervious Area	ac.	☒ TBD	ac.	ac.		ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☒ TBD	ac.	ac.		ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☒ TBD	ac.	ac.		ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☒ TBD	ac.	ac.		ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.		ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	-2.0 ac.	☐ TBD	ac.	ac.		ac.
	Date completed						
	Completed by (initials)						
	Reviewed by (initials)						

NOTES:
TBD - To Be Determined

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
Infiltration	Trench							2.0	TBD	TBD	TBD
TOTAL		0	0					2			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: GIS ID# 170-PB-281

Title/Description: Infiltration Trench

Location: Fairfield, I-95 Southbound, Mile Point 26.72

Section 2: Existing Conditions

EC1	Total Project Area			TBD acres	
EC2	Pre-construction Total Impervious Area			TBD acres	
EC3	Pre-Construction Disconnected Impervious Area			TBD acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			_____ acres	TBD % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified		☐ Good/Fair ☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater		☒ TBD	_____ to _____ ft below grade	
EC7	Depth to Bedrock		☒ TBD	_____ to _____ ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☐ No
EC9	MS4 Priority Area? (from PNDF)			☐ Yes (See Below)	☐ No
	Check All That Apply ☐ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)				
	Select All Impairments That Apply				
EC10	Contamination known or suspected to be present? (From Environmental Compliance)			☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management			_____ acres	

NOTES:
TBD - To Be Determined

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☒ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP	
DC4	Post-construction Total Impervious Area	ac.	☒ TBD	ac.	ac.		ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☒ TBD	ac.	ac.		ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☒ TBD	ac.	ac.		ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☒ TBD	ac.	ac.		ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.		ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	-2.0 ac.	☐ TBD	ac.	ac.		ac.
	Date completed						
	Completed by (initials)						
	Reviewed by (initials)						

NOTES:
TBD - To Be Determined

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
Infiltration	Trench							2.0	TBD	TBD	TBD
TOTAL		0	0					2			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: GIS ID# 170-PB-283

Title/Description: Infiltration Trench

Location: Fairfield, I-95 Northbound, Mile Point 27.24

Section 2: Existing Conditions

EC1	Total Project Area			TBD acres	
EC2	Pre-construction Total Impervious Area			TBD acres	
EC3	Pre-Construction Disconnected Impervious Area			TBD acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			_____ acres	TBD % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified		☐ Good/Fair ☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater		☒ TBD	_____ to _____ ft below grade	
EC7	Depth to Bedrock		☒ TBD	_____ to _____ ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☐ No
EC9	MS4 Priority Area? (from PNDF)			☐ Yes (See Below)	☐ No

Check All That Apply ☐ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)

Select All Impairments That Apply

EC10	Contamination known or suspected to be present? (From Environmental Compliance)	☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management	_____ acres	

NOTES:
TBD - To Be Determined

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☒ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP	
DC4	Post-construction Total Impervious Area	ac.	☒ TBD	ac.	ac.		ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☒ TBD	ac.	ac.		ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☒ TBD	ac.	ac.		ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☒ TBD	ac.	ac.		ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.		ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	-2.0 ac.	☐ TBD	ac.	ac.		ac.
	Date completed						
	Completed by (initials)						
	Reviewed by (initials)						

NOTES:
TBD - To Be Determined

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
Infiltration	Trench							2.0	TBD	TBD	TBD
TOTAL		0	0					2			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: GIS ID# 170-PB-286

Title/Description: Infiltration Trench BMP

Location: Fairfield, I-95 Northbound, Mile Point 23.24

Section 2: Existing Conditions

EC1	Total Project Area			TBD acres	
EC2	Pre-construction Total Impervious Area			TBD acres	
EC3	Pre-Construction Disconnected Impervious Area			TBD acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			_____ acres	TBD % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified		☐ Good/Fair ☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater		☒ TBD	_____ to _____ ft below grade	
EC7	Depth to Bedrock		☒ TBD	_____ to _____ ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☐ No
EC9	MS4 Priority Area? (from PNDF)			☐ Yes (See Below)	☐ No

Check All That Apply ☐ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)

Select All Impairments That Apply

EC10	Contamination known or suspected to be present? (From Environmental Compliance)	☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management	_____ acres	

NOTES:
TBD- To Be Determined.

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☒ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP	
DC4	Post-construction Total Impervious Area	ac.	☒ TBD	ac.	ac.		ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☒ TBD	ac.	ac.		ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☒ TBD	ac.	ac.		ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☒ TBD	ac.	ac.		ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.		ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	-2.0 ac.	☐ TBD	ac.	ac.		ac.
	Date completed						
	Completed by (initials)						
	Reviewed by (initials)						

NOTES:
TBD- To Be Determined.

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
Infiltration	Trench							2.0	TBD	TBD	TBD
TOTAL		0	0					2			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: GIS ID: 170-BP-316

Title/Description: Infiltration trench

Location: I-95 Southbound Mile Point 19.28

Section 2: Existing Conditions

EC1	Total Project Area			TBD acres	
EC2	Pre-construction Total Impervious Area			TBD acres	
EC3	Pre-Construction Disconnected Impervious Area			TBD acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			_____ acres	TBD % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified		☐ Good/Fair ☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater		☒ TBD	_____ to _____ ft below grade	
EC7	Depth to Bedrock		☒ TBD	_____ to _____ ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☐ No
EC9	MS4 Priority Area? (from PNDF)			☐ Yes (See Below)	☐ No
	Check All That Apply ☐ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)				
	Select All Impairments That Apply				
EC10	Contamination known or suspected to be present? (From Environmental Compliance)			☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management			_____ acres	

NOTES:
TBD- To Be Determined

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☒ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP	
DC4	Post-construction Total Impervious Area	ac.	☒ TBD	ac.	ac.		ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☒ TBD	ac.	ac.		ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☒ TBD	ac.	ac.		ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☒ TBD	ac.	ac.		ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.		ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	-2 ac.	☐ TBD	ac.	ac.		ac.
	Date completed						
	Completed by (initials)						
	Reviewed by (initials)						

NOTES:
TBD- To Be Determined

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
Infiltration	trench							2	TBD	TBD	TBD
TOTAL		0	0					2			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: GIS ID # 170-PB-317

Title/Description: Infiltration Trench

Location: I-91 Northbound Mile Point 46.27

Section 2: Existing Conditions

EC1	Total Project Area			TBD acres	
EC2	Pre-construction Total Impervious Area			TBD acres	
EC3	Pre-Construction Disconnected Impervious Area			TBD acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			_____ acres	TBD % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified		☐ Good/Fair ☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater		☒ TBD	_____ to _____ ft below grade	
EC7	Depth to Bedrock		☒ TBD	_____ to _____ ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☐ No
EC9	MS4 Priority Area? (from PNDF)			☐ Yes (See Below)	☐ No
	Check All That Apply ☐ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)				
	Select All Impairments That Apply				
EC10	Contamination known or suspected to be present? (From Environmental Compliance)			☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management			_____ acres	

NOTES:
TBD- To Be Determined

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☒ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP	
DC4	Post-construction Total Impervious Area	ac.	☒ TBD	ac.	ac.		ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☒ TBD	ac.	ac.		ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☒ TBD	ac.	ac.		ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☒ TBD	ac.	ac.		ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.		ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	-2 ac.	☐ TBD	ac.	ac.		ac.
	Date completed						
	Completed by (initials)						
	Reviewed by (initials)						

NOTES:
TBD- To Be Determined

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
Infiltration	trench							2	TBD	TBD	TBD
TOTAL		0	0					2			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: GIS ID # 170-PB-318

Title/Description: Infiltration Trench

Location: I-95 Northbound Mile Point 15.27

Section 2: Existing Conditions

EC1	Total Project Area			TBD acres	
EC2	Pre-construction Total Impervious Area			TBD acres	
EC3	Pre-Construction Disconnected Impervious Area			TBD acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			_____ acres	TBD % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified		☐ Good/Fair ☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater		☒ TBD	_____ to _____ ft below grade	
EC7	Depth to Bedrock		☒ TBD	_____ to _____ ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☐ No
EC9	MS4 Priority Area? (from PNDF)			☐ Yes (See Below)	☐ No
	Check All That Apply ☐ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)				
	Select All Impairments That Apply				
EC10	Contamination known or suspected to be present? (From Environmental Compliance)			☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management			_____ acres	

NOTES:
TBD- To Be Determined

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☒ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP	
DC4	Post-construction Total Impervious Area	ac.	☒ TBD	ac.	ac.		ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☒ TBD	ac.	ac.		ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☒ TBD	ac.	ac.		ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☒ TBD	ac.	ac.		ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.		ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	-2 ac.	☐ TBD	ac.	ac.		ac.
	Date completed						
	Completed by (initials)						
	Reviewed by (initials)						

NOTES:
TBD- To Be Determined

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
Infiltration	trench							2	TBD	TBD	TBD
TOTAL		0	0					2			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: GIS ID # 170-PB-319

Title/Description: Infiltration Trench

Location: I-95 Southbound Mile Point 15.47

Section 2: Existing Conditions

EC1	Total Project Area			TBD acres	
EC2	Pre-construction Total Impervious Area			TBD acres	
EC3	Pre-Construction Disconnected Impervious Area			TBD acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			_____ acres	TBD % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified		☐ Good/Fair ☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater		☒ TBD	_____ to _____ ft below grade	
EC7	Depth to Bedrock		☒ TBD	_____ to _____ ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☐ No
EC9	MS4 Priority Area? (from PNDF)			☐ Yes (See Below)	☐ No
	Check All That Apply ☐ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)				
	Select All Impairments That Apply				
EC10	Contamination known or suspected to be present? (From Environmental Compliance)			☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management			_____ acres	

NOTES:
TBD- To Be Determined

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☒ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP	
DC4	Post-construction Total Impervious Area	ac.	☒ TBD	ac.	ac.		ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☒ TBD	ac.	ac.		ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☒ TBD	ac.	ac.		ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☒ TBD	ac.	ac.		ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.		ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	-2 ac.	☐ TBD	ac.	ac.		ac.
	Date completed						
	Completed by (initials)						
	Reviewed by (initials)						

NOTES:
TBD- To Be Determined

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
Infiltration	trench							2	TBD	TBD	TBD
TOTAL		0	0					2			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information

Project Number: GIS ID # 170-PB-320

Title/Description: Infiltration Trench

Location: I-95 Southbound Mile Point 15.47

Section 2: Existing Conditions

EC1	Total Project Area			TBD acres	
EC2	Pre-construction Total Impervious Area			TBD acres	
EC3	Pre-Construction Disconnected Impervious Area			TBD acres	
EC4	Pre-construction DCIA for the Project *(EC2 minus EC3)*			_____ acres	TBD % (EC4/EC1)
EC5	Soil Infiltration Potential	Data Source: ☐ Existing Report / Soils Map ☐ Field Verified		☐ Good/Fair ☐ Poor	☐ Mixed
EC6	Depth to Maximum Groundwater		☒ TBD	_____ to _____ ft below grade	
EC7	Depth to Bedrock		☒ TBD	_____ to _____ ft below grade	
EC8	Aquifer Protection Area? (from PNDF)			☐ Yes	☐ No
EC9	MS4 Priority Area? (from PNDF)			☐ Yes (See Below)	☐ No
	Check All That Apply ☐ Urbanized Area ☐ DCIA >11% ☐ Impaired Waterbody (See Below)				
	Select All Impairments That Apply				
EC10	Contamination known or suspected to be present? (From Environmental Compliance)			☐ Yes	☐ No
EC11	Adjoining DOT ROW beyond project limits available for stormwater quality management			_____ acres	

NOTES:
TBD- To Be Determined

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 3: Designed Conditions

Section 3A: Document Water Quality Volume (WQV) Retained and/or Treated (ac-ft)

	Water Quality Volume Documentation		30% Design		60% Design	90% Design	FDP
DC1	WQV design goal	☐Full ☐½-WQV *(Full = EC4 % ≤ 40%)*	ac-ft	☒ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal **retained** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 3)		ac-ft		ac-ft	ac-ft	ac-ft

Did the Project Retain and/or Treat the Entire WQV Goal? ☐Yes ☐No

Section 3B: Document Changes in Directly Connected Impervious Area (DCIA) Pre to Post Construction (acres)

	DCIA Documentation	30% Design		60% Design	90% Design	FDP	
DC4	Post-construction Total Impervious Area	ac.	☒ TBD	ac.	ac.		ac.
DC5	Post-construction DCIA before **new** BMPs	ac.	☒ TBD	ac.	ac.		ac.
DC6	DCIA Disconnected by new BMPs (from Pg 3)	ac.	☒ TBD	ac.	ac.		ac.
DC7	Final Post-construction DCIA *(DC5 minus DC6)*	ac.	☒ TBD	ac.	ac.		ac.
DC8	Pre-construction DCIA (refer to EC4 from Pg 1)	ac.		ac.	ac.		ac.
DC9	Change in DCIA from pre- to post-construction *(DC7 minus DC8) Can be positive (DCIA gained) or negative (DCIA lost)*	-1 ac.	☐ TBD	ac.	ac.		ac.
	Date completed						
	Completed by (initials)						
	Reviewed by (initials)						

NOTES:
TBD- To Be Determined

Worksheet users should refer to the current *CT DOT MS4 Project Design MEP Worksheet V4 Instructions*

Reference the CT DEEP Stormwater Quality Manual (SWQM) for design and the New England Stormwater Retrofit Manual for Crediting

Section 4: Stormwater BMP Selection Summary											
Design Phase ☐30% ☐60% ☐90% ☐FDP	**BMP Type**	**WQV Retained* (ac-ft)**	**WQV Treated* (ac-ft)**	**DCIA Captured by BMP (ac)**	**Runoff Depth from DCIA Captured by BMP (in)**	**HSG Soil Type**	**DCIA Disconnection Credit (%)****	**DCIA Disconnection Credit (ac)**	**(TP) reduction %****	**(TSS) reduction %****	**(TN) reduction %***
BMP Category											
Infiltration	trench							1	TBD	TBD	TBD
TOTAL		0	0					1			
		To Row DC2	***To Row DC3***					***To Row DC6***			

Describe Site Constraints Limiting BMP Implementation if applicable:

Other Notes:

* List the amount of the WQV the BMP is designed to retain or treat.

** Refer to the CT DEEP Stormwater Quality Manual (SWQM) Stormwater Manual (ct.gov) and New England Stormwater Retrofit Manual Stormwater Retrofit Manual (snepnetwork.org) to determine disconnection and pollutant removal percentages. BMPs should be designed to meet specific TP, TN and TSS pollutant reductions to the maximum extent practicable when the entire WQV cannot be retained. Pollutant Reduction Targets are: New Development TP 60%, TN 40%, TSS 90%. Redevelopment TP 50%, TN, 30% TSS 80%. (Page 48 of the SWQM)