STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION

STORMWATER MANAGEMENT PLAN

September 30, 2025

This plan is based on a template originally created by Western Connecticut Council of Governments staff

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Introduction

The mission of the Connecticut Department of Transportation (CTDOT) is to provide a safe and efficient intermodal transportation network that improves the quality of life and promotes economic vitality for the State and the region. This Stormwater Management Plan (SWMP) was developed by CTDOT to improve the quality of stormwater runoff collected from this network and ultimately reduce the discharge of pollutants to waterbodies Statewide. This SWMP addresses the requirements established by the CT Department of Energy and Environmental Protection's (CTDEEP) General Permit for the Discharge of Stormwater from Department of Transportation Separate Storm Sewer Systems (CTDOT MS4 General Permit) that became effective on July 1, 2025. This permit is the State enforcement mechanism of the U.S. Environmental Protection Agency's (EPA) National Pollutant Discharge Elimination System (NPDES) Stormwater Phase II Rule.

SWMP Structure

This plan outlines a program of best management practices (BMPs), measurable goals, responsible individuals or departments, and sets forth an implementation schedules for the following six minimum control measures specified in the permit:

(1) Public education and outreach
(2) Public involvement/participation
(3) Illicit discharge detection and elimination
(4) Construction site stormwater runoff control
(5) Post-construction stormwater management in new development and redevelopment
(6) Pollution prevention/good housekeeping

Additionally, the SWMP outlines CTDOT's plan to monitor and improve the quality of stormwater runoff from CTDOT's stormwater system to impaired surface water bodies.

Area Subject to the Plan

The measures identified in this SWMP will be implemented to the maximum extent practicable (MEP) throughout the boundaries of CTDOT's highways, roadways, railways and associated facilities. Implementation of these measures will be prioritized to focus on Urbanized Areas (UA) as indicated by the 2020 US Census as well as sub-watershed areas where the directly connected impervious area (DCIA) is greater than 11% and in areas where a CTDOT drainage system discharges to an impaired waterbody as listed in the current edition of CTDEEP's Integrated Water Quality Report. Per the EPA's December 2023 consent order, priority areas were expanded to include catchment area discharges directly to a water body that have not been assessed for impairments and the first downstream water body that has been assessed is identified as being impaired. It should be noted that the priority area maps for each of the districts below do not include unassessed potentially impaired waters that are immediately upstream of a documented impaired waterbody.

Stormwater discharges from some State-owned facilities such as maintenance garages, salt sheds and other miscellaneous facilities are regulated under the CTDEEP General Permit for the Discharge of Stormwater Associated with Industrial Activity ("Industrial Stormwater General Permit") and will continue to be regulated under the conditions of that permit. Additionally, large service plazas (greater than 5 acres in size) off of interstate highways are regulated under the General Permit for the Discharge of Stormwater Associated with Commercial Activity ("Commercial Stormwater Permit").

Description of Connecticut Department of Transportation

The Connecticut Department of Transportation is a state agency established and governed by the General Statutes of Connecticut responsible for all aspects of the planning, development, maintenance and improvement of transportation in the State. CTDOT is divided into five bureaus including Finance and Administration, Engineering and Construction, Highway Operations, Policy and Planning and Public Transportation. Within each bureau, CTDOT is further divided into separate offices as shown on the following organizational chart.

CTDOT Organizational Chart

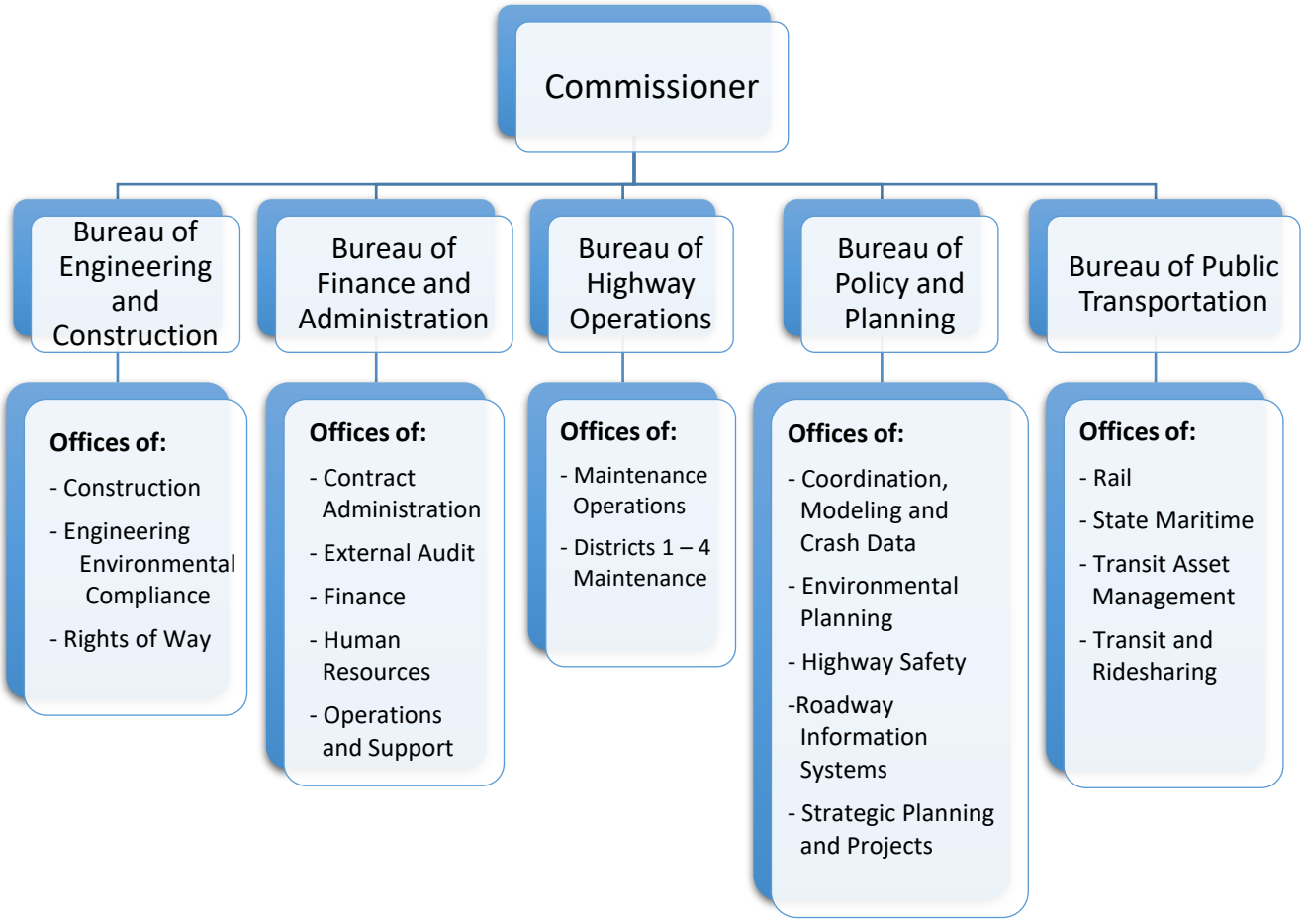

Figure 1: CTDOT Organizational Chart

As of July 2025, CTDOT's facilities within the State included the following:

- 3,716 centerline miles of pavement on State maintained highways and roads
- 4,002 bridges
- 320 miles of railroad right of way
- 5 office facilities (1 headquarters, 4 district offices)
- 5 rail facilities
- 74 maintenance facilities, e.g., garages, sign shops, repair facilities, etc. (Industrial Stormwater Permit)
- 93 salt storage facilities (Industrial Stormwater Permit)
- 23 Service Plazas
  - 15 plazas <5 acres (CTDOT MS4 Permit)
  - 8 plazas >/= 5 acres (Commercial Stormwater Permit)

When compared to the total mileage of all roads within the State, including those maintained by municipalities, the portion maintained by CTDOT represents approximately 19% of the total.

CTDOT does not possess statutory enforcement or taxing powers similar to those of the one hundred and sixty-nine municipalities within the State. Additionally, CTDOT does not have the authority to regulate land use, zoning, building/development permits beyond the State owned right of way associated with the highways and roadways owned and operated by the State. CTDOT relies upon the legislative and enforcement authority of other State agencies and municipalities to regulate stormwater quality and establish water policy throughout the State for any land outside of CTDOT's control. Specifically, the CTDEEP is relied upon to protect and/or restore the State's surface and ground waters.

For construction and maintenance purposes, CTDOT has divided the State of Connecticut into four districts. Each district is responsible for construction projects that occur within that region (under the Bureau of Engineering and Construction) and the maintenance activities that occur within that region (under the Bureau of Highway Operations).

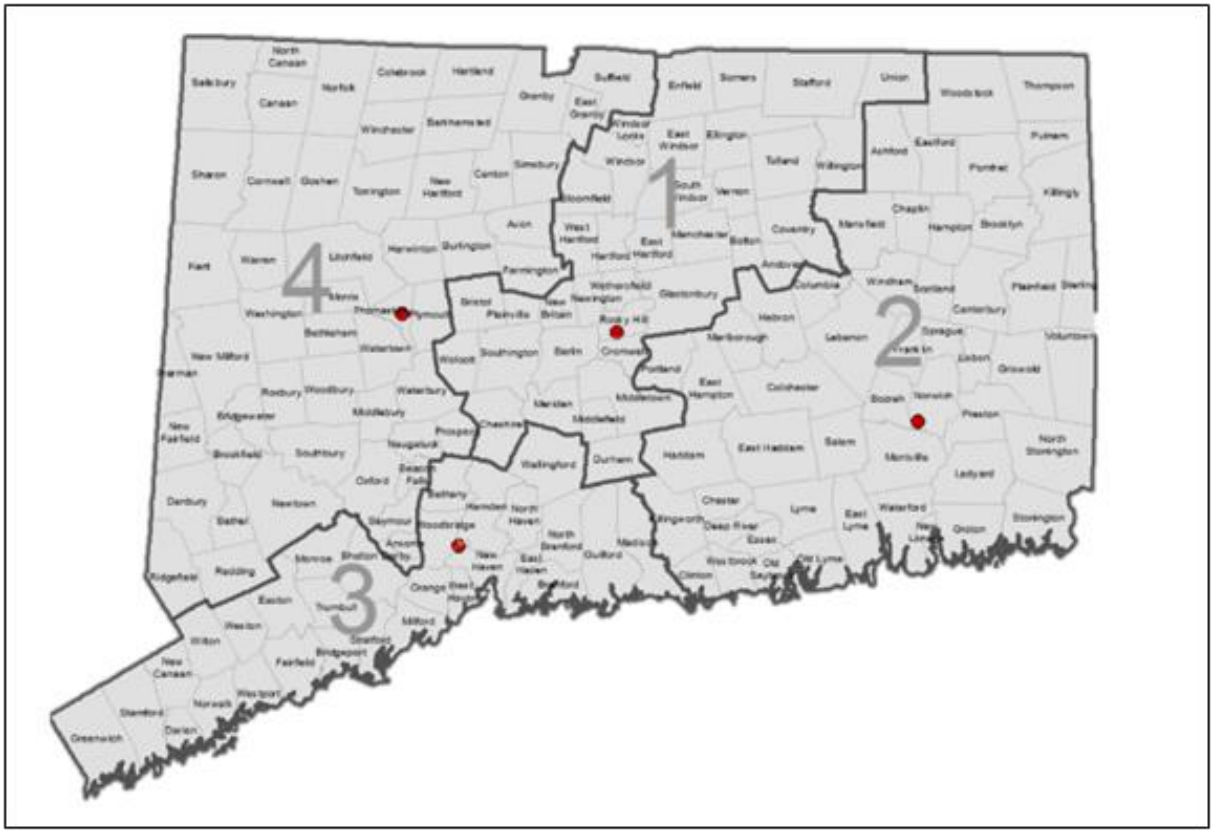

FIGURE 2: CTDOT DISTRICTS AS OF JULY 1, 2025. EACH DISTRICT HAS TARGETED PRIORITY AREAS AS OUTLINED IN *THE AREA SUBJECT TO THE PLAN* SECTION.

Per the EPA's December 2023 consent order, priority areas should include areas within the Urbanized Area (as defined by the Permit) of the MS4, or outside the Urbanized Area within the catchment areas of the CT DOT MS4 with either directly connected impervious area (DCIA) of greater than 11% or which discharge to impaired waters. A catchment area is considered to discharge to an impaired water if the catchment area discharges directly to an impaired water, or if the catchment area discharges directly to a water body that has not been assessed for impairments and the first downstream water body that has been assessed is identified as being impaired. It should be noted that the priority area maps for each of the districts below do not include unassessed potentially impaired waters that are immediately upstream of a documented impaired waterbody.

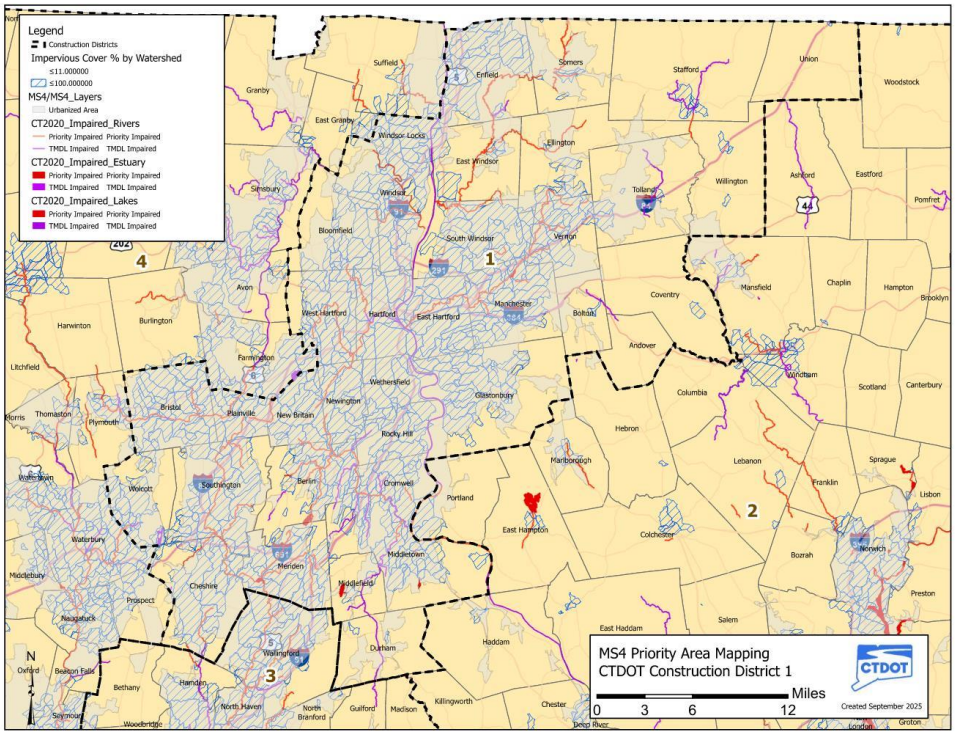

FIGURE 3: DISTRICT 1 PRIORITY AREA MAP

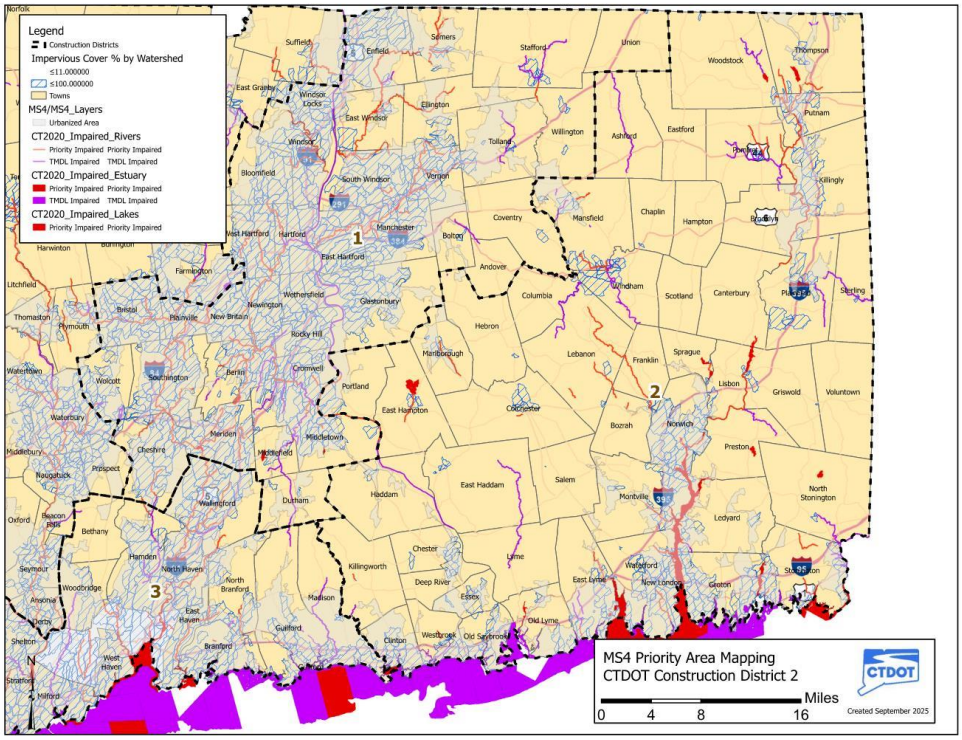

FIGURE 4: DISTRICT 2 PRIORITY AREA MAP

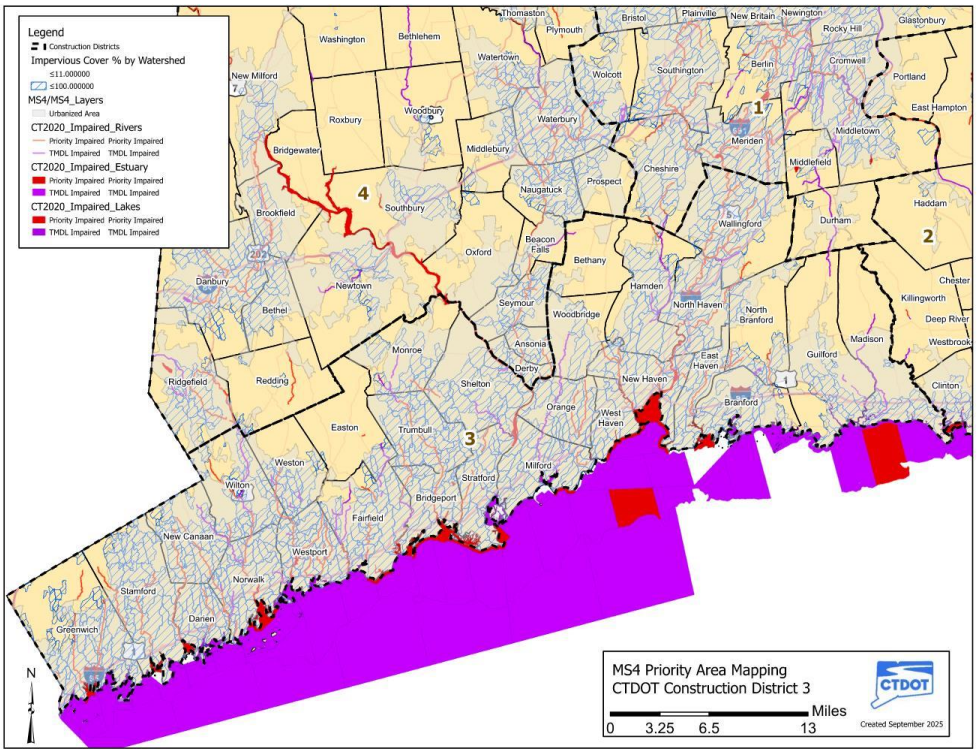

FIGURE 5: DISTRICT 3 PRIORITY AREA MAP

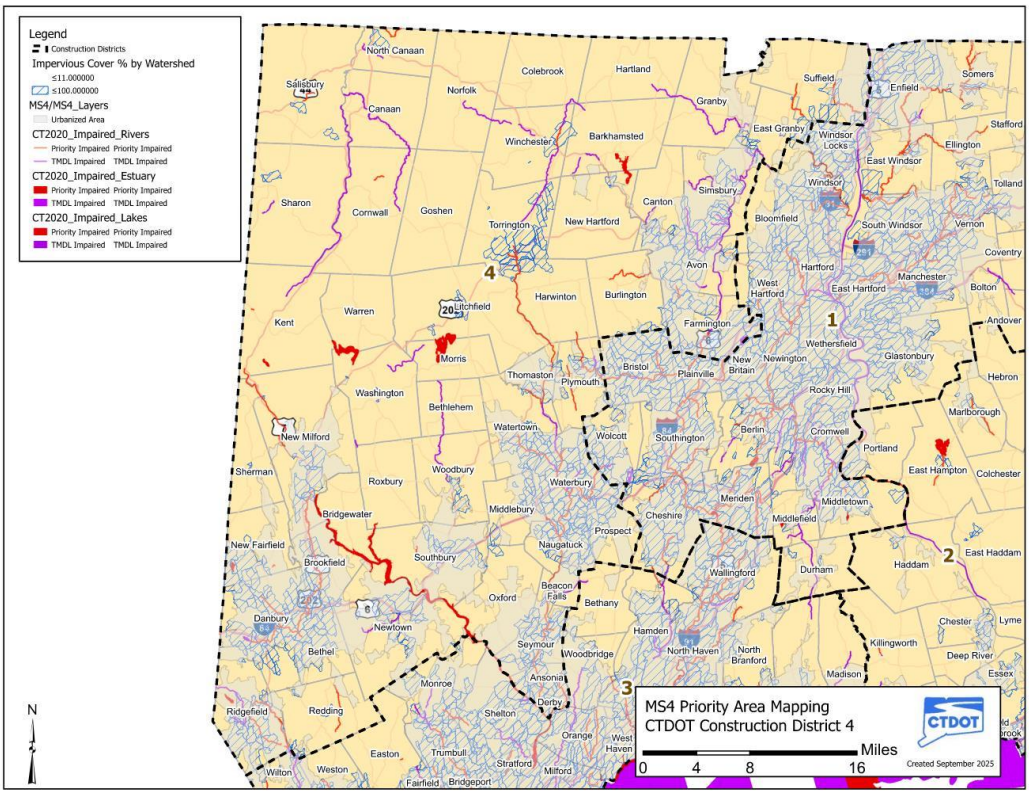

FIGURE 6: DISTRICT 4 PRIORITY AREA MAP

SWMP Development

The offices within CTDOT that have the primarily responsibility for the development of this SWMP and the overall implementation of CTDOT's MS4 program are the Office of Environmental Compliance within the Bureau of Engineering and Construction's Division of Facilities and Transit and the Environmental Resource Compliance Section within the Bureau of Policy and Planning's Office of Environmental Planning. The SWMP's implementation is tracked and documented in annual reports summarizing stormwater management activities carried out by CTDOT. These reports are submitted to CTDEEP on an annual basis no later than September 30th.

Impaired Waters

CTDOT's MS4 infrastructure discharges to many of the impaired waters of the State. The figure below highlights the impaired waterbodies in the State as listed in CTDEEP's 2020 Integrated Water Quality Report with the most current available GIS Layers in addition to showing all CTDOT maintained roadways. As the outfall mapping and inventory task under Minimum Control Measure 3 is completed, CTDOT will be able to identify within a GIS map all waterbodies to which CTDOT's storm system discharges on or before June 30, 2029. As of July 1, 2025, CTDOT estimates that it has mapped over 70% of its direct discharge locations to impaired waterbodies (over 800 locations). During this permit term, CTDOT will also work to identify unassessed but potentially impaired discharge locations. Per the December 2023 EPA consent order, discharges to a water body that has not been assessed for impairments by the CT DEEP in its most recent Integrated Water Quality Report but where the first downstream water body that has been assessed is identified as being impaired should be considered within the priority area as defined in the permit.

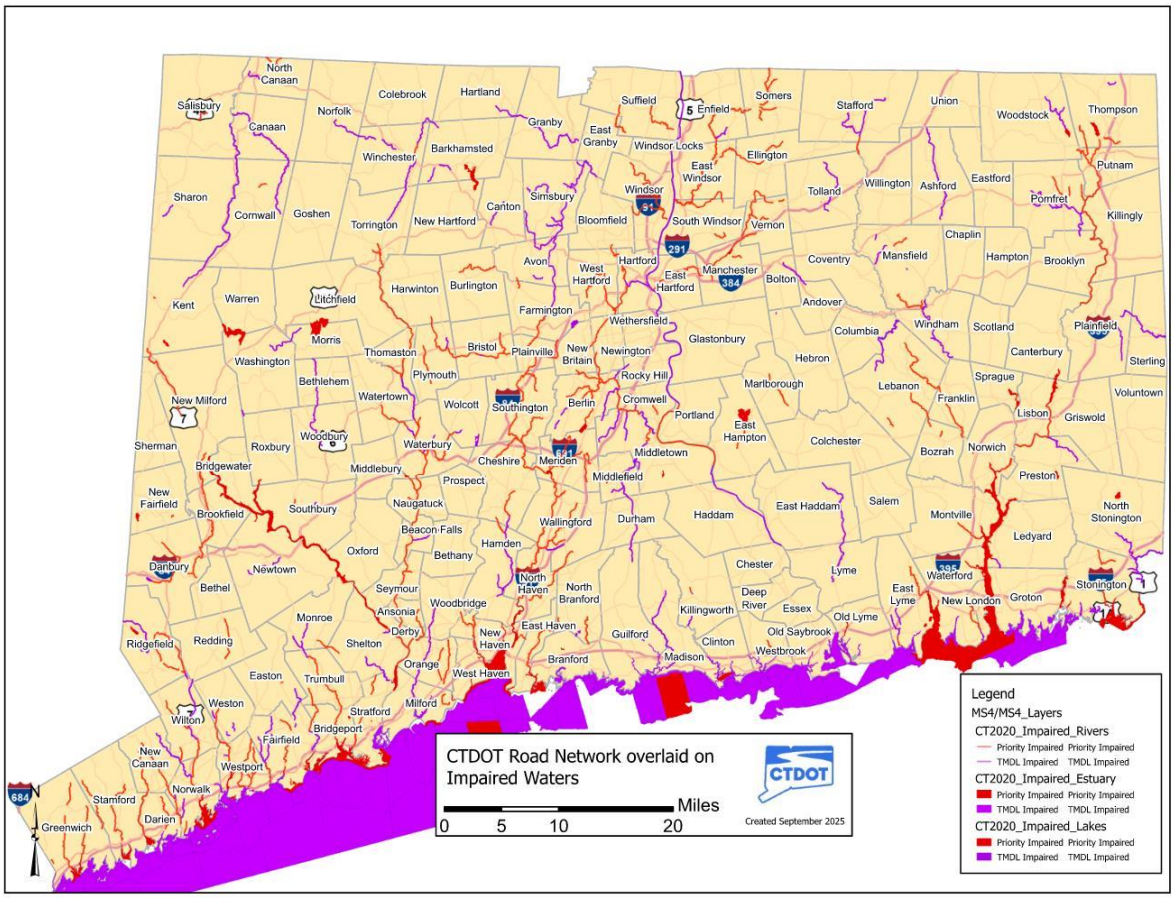

FIGURE 7: CTDOT ROAD NETWORK OVERLAID ON IMPAIRED WATERS

Surface Water Classifications

CTDOT's MS4 discharges to all surface water classifications as defined by Connecticut's Water Quality Standards. Each classification is summarized below with a brief listing of the designated uses and allowable discharges for each classification.

Inland Surface Water Classifications

Class AA

Designated uses: existing or proposed drinking water supply, fish and wildlife habitat, recreational use (may be restricted,) agricultural and industrial supply.

Class A

Designated uses: potential drinking water supply; fish and wildlife habitat; recreational use; agricultural and industrial supply, and navigation.

Class B

Designated uses: recreational use: fish and wildlife habitat; agricultural and industrial supply, and navigation.

Coastal and Marine Surface Waters

Class SA

Designated uses: marine fish, shellfish and wildlife habitat, shellfish harvesting for direct human consumption, recreation, and navigation.

Class SB

Designated uses: marine fish, shellfish and wildlife habitat, shellfish harvesting for transfer to approved areas for purification prior to human consumption, recreation, industrial supply, and navigation.

Activities Authorized by CTDOT's MS4 Permit

Coastal Management and Permitting

The Connecticut Coastal Management Act establishes regulatory jurisdiction over activities in tidal, coastal, and navigable waters and tidal wetlands. The Coastal Jurisdiction Line (CJL) defines this regulated area in Connecticut. CTDOT is authorized to discharge stormwater and allowable non-stormwater discharges from the CTDOT MS4 to within areas delineated by the CJL provided the activity does not cause adverse impacts to coastal resources as defined in State section 22a-93(15) of the Connecticut General Statutes (CGS). In addition, CTDOT shall address all applicable goals and policies in CGS section 22a-92.

Endangered and Threatened Species

The Connecticut Endangered and Threatened Species Act mandates prohibits state agencies and individuals from taking actions that threaten species or their critical habitats without a permit or exemption. CTDOT is authorized to discharge stormwater and allowable non-stormwater discharges from the CTDOT MS4 provided the discharge will not threaten the continued existence of any species listed as endangered or threatened pursuant to CGS Section 26-306 and shall not result in the destruction or adverse modification of habitat designated as essential to such species.

Aquifer Protection Areas

CTDOT is authorized to discharge stormwater and allowable non-stormwater discharges from the CTDOT MS4 to within an aquifer protection area as mapped under CGS Section 22a-354b if the discharge complies with regulations adopted pursuant to CGS Section 22a-354i.

Conservation and Preservation Restrictions

CTDOT is authorized to discharge of stormwater and allowable non-stormwater discharges from the CTDOT MS4 to within a conservation or preservation restriction area if the discharge complies with CGS Section 47-42d by providing the following to CTDEEP: proof of written notice to the holder of the restriction of the proposed activity's registration or a letter from the holder of the restriction verifying that the proposed activity is in compliance with the terms of the restriction.

Wild and Scenic Rivers Act

CTDOT is authorized to discharge of stormwater and allowable non-stormwater discharges to those river components and tributaries which have been designated as Wild and Scenic by the United States Congress is the discharge is consistent with the Wild and Scenic Rivers Act (16 U.S.C 1271-1287). Any such discharge must not have a direct and adverse effect on the values for which such river designation was established.

Discharges to Publicly Owned Treatment Works

The CTDOT MS4 General Permit does not authorize CTDOT to discharge stormwater to a publicly owned treatment works.

Discharges to Groundwater

The CTDOT MS4 General Permit does not authorize CTDOT to entirely discharge stormwater to groundwater.

Antidegradation

CTDOT is authorized to discharge of stormwater and allowable non-stormwater discharges if the discharge is consistent with the Antidegradation Standards of Section 22a-426 of the RCSA.

New or Increased Discharges to High Quality Waters

High Quality Waters, as identified by CTDEEP consistent with the Water Quality Standards, means surface waters where the water quality is better than necessary to meet the minimum criteria established in by the Water Quality Standards for the applicable classification and related designated uses. CTDOT presumes that all unassessed surface waters and assessed surface waters without impairment are considered to be High Quality Waters, unless the surface water had not been assessed and is a tributary to an impaired water, in which case the surface water is considered impaired.

CTDOT will document compliance with the Anti-degradation Implementation Policy in the Water Quality Standards on or before 30 days prior to the commencement of a new or increased discharge to a High Quality Water from CTDOT's MS4 system. At a minimum, CTDOT will evaluate and implement to the maximum extent practicable the practices outlined in this Plan to prevent the discharge of the Water Quality Volume to a surface water body or implement other practices necessary to protect and maintain designated uses and meet standards and criteria contained in the Water Quality Standards.

New or Increased Discharges to Impaired Waters

CTDOT will document in annual reports why any new or increased discharge to an impaired water is not expected to cause or contribute to an exceedance of the Water Quality Standard(s) that caused the impairment.

For discharges of pollutants which cause or contribute to the impairment of a water body segments without an established Total Maximum Daily Load (TMDL) CTDOT will document the control measures and screening/monitoring activities implemented in the annual report. This documentation is sufficient to demonstrate that the discharge of the pollutant identified as an indicator of the impairment will meet in-stream water quality standards.

For discharges to waterbody segments impaired for Aquatic Life Uses, CTDOT will document the control measures and screening / monitoring activities implemented in the annual report. These activities shall be sufficient to demonstrate that discharges from CTDOT's MS4 to not contain concentrations greater than the more restrictive of the chronic aquatic life criteria or applicable human health criteria identified in Table 3 of section 22a-426-9 of the Regulations of Connecticut State Agencies (RCSA). For discharges of pollutants which cause or contribute to the impairment of a water body segments with an established Total Maximum Daily Load (TMDL), CTDEEP must determine if there are sufficient allocations in the TMDL to allow the discharge.

Description of Minimum Control Measures

The following sections describe the Minimum Control Measures CTDOT will implement to the MEP to satisfy the conditions of the permit. The following information is identified for each measure:

- Best management practices (BMPs) to be implemented
- The position within CTDOT responsible for implementing the practice
- The date by which the practice has been/will be implemented
- The measurable goal by which each practice will be evaluated
- Include comments applicable to each measure

6.1.1 Public Education and Outreach

This minimum control measure is critical to the success of the stormwater management program as it helps to promote greater support for the program and improve the effectiveness of best management practices. Support for the program by the public results in a better understanding of the reasons why the program is necessary and how human activities affect water quality. CTDOT has created a dedicated MS4 website https://portal.ct.gov/DOT/PP_Envir/Water_Natural_Resources/CTDOT-MS4 with resources for the public to see including informational brochures and helpful design resources.

The target audience for CTDOT's Educational Program includes the traveling public, municipalities and CTDOT employees. Methods for reaching the public include providing educational material at public meetings for CTDOT projects and including a description of the water quality measures designed into projects at public meetings. CTDOT has participated and presented at numerous conferences over the years and will continue to do so to target specific audiences on various MS4 topics.

For CTDOT employees, annual trainings are given to staff whose activities have the potential to contribute pollution to stormwater runoff. In addition to meeting the training requirements of the control measures specified in the permit, general non-point source pollution and impaired waters educational material is also covered.

The following BMPs serve as CTDOT's MS4 Public Education and Outreach Program. CTDOT has an existing training and public outreach program that will be adjusted to incorporate the Public Outreach and Education requirements of the CTDOT's MS4 permit.

Goals of the Public Education and Outreach Minimum Control Measure:

- Raise public awareness that polluted stormwater runoff is the most significant source of water quality problems;
- To inform the permittee's community (i.e. general public, municipalities, business and commerce, staff, contractors, etc.) to use Best Management Practices (BMPs) to reduce polluted stormwater runoff; and
- Reduce polluted stormwater runoff in Connecticut because of increased awareness and utilization of BMPs.

6.1.1.1 & 6.1.1.2 Public Education Program and Educational Materials

CTDOT's public education program will utilize a variety of formats and outreach activities. Implementation of a public education program requires the distribution of educational materials to the public and appropriate outreach activities regarding the sources and impacts of stormwater discharges on waterbodies and the steps that the public can take to reduce pollutants in stormwater runoff.

Brochures/Fact Sheets

Brochures and fact sheets have been developed that address the effects of stormwater quality on the environment and measures that can be taken to improve stormwater quality. Brochures will be made available to the public at public information meetings and public hearings during CTDOT's project design process. Brochures will continue to be developed, and fact sheets will be updated to provide the public with easy-to-comprehend stormwater knowledge that, at a minimum, addresses the impacts of the following potential sources of pollution on water quality: pet waste, impervious cover, application of fertilizers, pesticides, and herbicides, and illicit discharges and improper disposal of wastes into the CTDOT's MS4.

CTDOT will also accept educational material provided by CTDEEP and other sources that identify common non-point source pollutants (such as pathogens/bacteria, nitrogen, phosphorus, sediments, metals, oils & greases) associated with stormwater discharges, the potential sources of the pollutants, the environmental impacts of these pollutants, and related pollution reduction practices. CTDOT will incorporate these educational materials into its outreach efforts.

CTDOT may coordinate with other MS4 permittees in the same area to develop and implement a public education program. Information shall be disseminated to an audience including, but not limited to, citizens utilizing CTDOT roadways and/or facilities (e.g. parking facilities, rest areas and service areas) with flyers, brochures, signage, billboards, storm drain labeling, television public service announcements, and/or web-based tools. Each Annual Report shall summarize the types, sources, number of, and methods by which materials disseminated.

FIGURE 8: CTDOT PUBLISHED BROCHURE FOR CONTROLLING STORMWATER RUNOFF

Alternative Information Sources – Website

A dedicated MS4 web page has been developed on CTDOT's website as a home for CTDOT MS4 Program information. The Public Education and Outreach section of the webpage addresses the effects of stormwater quality on the environment. The information will be a resource for the public and for CTDOT staff. The web site URL is: https://portal.ct.gov/DOT/PP_Envir/Water_Natural_Resources/CTDOT-MS4. The webpage will continue to be developed and updated throughout the permit term.

FIGURE 9: CTDOT MS4 WEBSITE HOMEPAGE

The benefits associated with this BMP include creating awareness and making information available to a very large, diverse audience. A wealth of information can be uploaded to the website and will act as a digital library.

Tributary Signage

Tributary signage was implemented in 2006. CTDOT Policy NO. P&P-6 states the policy for providing tributary signage over named watercourses. The Division of Traffic Engineering has guidelines and standards for the placement of various signs at a variety of waterbodies and watercourses throughout the State, including public water supply areas. The signs include bridge and river information and notice of public drinking water protection areas. A significant number of water resources have already been signed along CTDOT's highways and roadways. Maintenance and placement of additional signs will occur during construction and maintenance projects throughout the State.

The benefits associated with this BMP include public awareness of local water resources. These include public water supplies areas, rivers, streams and tributaries along CTDOT's roadways.

FIGURE 10: EXAMPLE OF TRIBUTARY SIGNAGE AT PAWCATUCK RIVER

Municipalities

To reach municipalities, CTDOT anticipates working with the Council of Governments and Municipal Non-governmental organizations (NGO's) to inform them of MS4 topics.

Employees

For CTDOT employees, annual trainings will be given to staff whose activities have the potential to contribute pollution to stormwater runoff. All employees whose activities may affect stormwater quality must attend annual training. CT CTDOT's Office of Environmental Compliance and Operations Training Unit provides annual training to all Highway Operation's General Supervisors and Crew Leaders. The Highway Operations General Supervisor is responsible for providing annual training to all their site personnel whose activities may affect stormwater quality. New hires must complete the training course within 90 days of employment.

In addition to meeting the training requirements of the control measures specified in the permit, general non-point source pollution and impaired waters educational material will also be covered. CTDOT will also continue to participate in regional New England CTDOT meetings to discuss issues common to implementing a transportation MS4 permit.

6.1.1.3 Additional Outreach and Materials for Discharges to Impaired Waters

Information is available on the CTDOT webpage on common sources of pollution such as phosphorus, nitrogen, bacteria, and mercury and how to prevent or reduce the amount reaching the CTDOT's MS4 and discharging into waterways.

The table below shows additional topics to be covered to address the phosphorus, nitrogen, bacteria, and mercury impairments that exist throughout Connecticut.

Table 1: Common Sources of Stormwater Pollutants of Concern

Phosphorus	Nitrogen	Bacteria	Mercury
Septic systems	Septic systems	Septic systems	Thermometers
Fertilizer use	Fertilizer use	Sanitary cross connections	Thermostats
Grass clippings and leaves management	Grass clippings and leaves management	Waterfowl	Fluorescent lights
Detergent use	Discharge of sediment (to which Nitrogen binds) from Construction sites	Pet waste	Button cell batteries
Discharge of sediment (to which Phosphorus binds) from Construction sites	Other erosive surfaces	Manure piles associated with livestock and horses	Other mercury-containing items

6.1.1.4 Suggested Strategies to Engage Communities

CTDOT will continue to develop educational materials to provide to students, farmers, contractors, urban populations and suburban populations. The CTDOT already currently emails MS4 List Serve with information regarding CTDOT MS4 and engages local council of governments for providing stormwater information to groups interested in stormwater quality. Making materials for non-English speaking communities will be done where appropriate.

Table 2: 6.1.1 Public Education & Outreach Minimum Control Measures

Task ID	Task Deadline	Activity	Responsible Position	Measurable Goal	Comments
1.1	Ongoing	Implement a Public Education Program that include information on pet waste, application of fertilizers, herbicides and pesticides; impervious cover; impacts of illicit discharges and improper disposal of water into the MS4	Bureau Chief of Policy & Planning	Educational Program Areas Implemented	Educational materials have been uploaded to website
1.2	Ongoing	Develop or acquire current educational material from CTDEEP and other sources that identifies the pollutants associated with stormwater discharges, sources of pollutants, environmental impacts, and related pollution reduction material	Bureau Chief of Policy & Planning	Develop or acquire the educational material	Ongoing - will continue to acquire new information as it is created.

Task ID	Task Deadline	Activity	Responsible Position	Measurable Goal	Comments
1.3	Ongoing	Waters with a stormwater pollutant of concern, educational materials should be specifically tailored and targeted to educate on the sources, impacts and available pollution reduction practices.	Bureau Chief of Policy & Planning	Depending on stormwater pollutant of concern, have the material developed/acquired beforehand.	Projects that fall within an impaired waterbody are identified and information pertinent to that pollutant is shared at public information for that given project.
1.4	Ongoing	Engage Communities that are targeted toward populations including students, farmers and contractors. Provide outreach to local organizations for the betterment of stormwater quality.	Bureau Chief of Policy & Planning Bureau Chief of Engineering & Construction	Provide specific educational materials and/or reach to local organizations for stormwater education	CTDOT will continue to work with local organizations interested in stormwater BMP's including the engineering community and local council of governments.

6.1.2 Public Involvement /Participation

This minimum control measure is a key component to the stormwater management program as it helps to ensure broader public support and shorter implementation schedules, as well as provide a broader base of knowledge. Persons who are personally involved with the decision-making process become more invested in the program and can be a valuable resource that will be beneficial to the development, implementation and enforcement of the program.

Goals:

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

6.1.2.1 Public Notice of the Stormwater Management Plan and Annual Reports

CTDOT will publish a public notice on its MS4 webpage to inform the public of the SWMP and the annual reports. The notice will provide a contact name, phone number, address, and the DOT.MS4@CT.gov email to whom the public can send comments. Additionally, this plan and the annual reports will be publicly accessible on the website. The public notice will allow for a 30-day comment period, at a minimum. A link to the CTDOT MS4 webpage is provided here: https://portal.ct.gov/DOT/PP_Envir/Water_Natural_Resources/CTDOT-MS4

The following BMPs were utilized in the implementation of the program to address the minimum control measure for Public Participation and Involvement.

6.1.2.2 Public Participation Events

CTDOT will host, conduct, or otherwise provide support for one public event per year and enact one public education program tailored to meet the needs of the state of Connecticut. Details of these programs will be determined during the permit period and will be reported within the annual report.

6.1.2.3 Coordination with Municipal Partners

CTDOT will at least annually, host a meeting with municipal partners to coordinate implementation of MS4 permit requirements. CTDOT plans to utilize its regularly scheduled meetings with the Connecticut Councils of Government ("COGs"), Metropolitan Planning Organizations ("MPOs"), and existing municipal and municipal partner meetings as the venue for MS4 coordination with municipal partners. Meeting agendas specifying MS4 as a discussion topic will be distributed to the representatives of the COGs/MPOs and municipal contacts. During permit year 2025-2026 CTDOT will present an overview of its MS4 program, provide time for questions, and solicit feedback from the attendees for topics of focus at subsequent meetings. If the COG/MPO meeting approach does not reach the intended municipal partners responsible for MS4, CTDOT will make reasonable efforts to host a separate meeting or meetings, for example, with each COG, on a date and at a time that is convenient for the partners to ensure maximum participation.

Table 3: 6.1.2 Public Involvement & Participation Minimum Control Measures

Task ID	Task Deadline	Activity	Responsible Position	Measurable Goal	Comments
2.1	Annual	Provide Public Notice of Annual Reports	Bureau Chief of Engineering & Construction	Document Public Notices of Reports	Ongoing
2.2	Annual	Public Participation Events	Bureau Chief of Policy & Planning Bureau Chief of Engineering & Construction	Host, conduct, or provide support for one public event and enact one public program	CTDOT will evaluate the best avenue to accomplish this task and will report the details in the annual report
2.3	Annual	Coordination with Municipal Partners	Bureau Chief of Policy & Planning Bureau Chief of Engineering & Construction	Host a meeting with municipal partners to implementation of MS4 permit requirements.	CTDOT is looking to leverage existing Council of Government meetings to assist in meeting this task

6.1.3 Illicit Discharge Detection and Elimination (IDDE)

The permit requires CTDOT to develop, implement and enforce a program to detect and eliminate illicit discharges in CTDOT's MS4 system. An illicit discharge is any discharge to the MS4 system that is not composed entirely of stormwater unless the discharge is specifically exempted as listed in the permit. Pollutant levels from illicit discharges have been shown to be high enough to significantly degrade receiving water quality and threaten aquatic life, wildlife, and human health.

To prohibit, detect, track and eliminate illicit discharges, CTDOT has developed and is implementing distinct IDDE program elements in accordance with CTDOT's MS4 permit issued in 2018. That program has since been updated to meet the intent and requirements of the CTDOT re-issued MS4 permit that became effective on July 1, 2025.

CTDOT completed a written IDDE Plan in June 2020 that will be updated to reflect the requirements in this permit. At a minimum, CTDOT will implement these elements within priority areas. Priority areas are defined as urban areas, sub-watersheds with greater than 11% directly connected impervious area and areas that discharge to impaired waters.

CTDOT's IDDE program consists of the following elements:

- Implementation of an outfall screening and illicit discharge detection protocol
- Procedure to eliminate illicit discharges into the CTDOT MS4
- Record keeping on illicit discharge abatement activities
- A procedure for citizens and municipal partners to report illicit discharges
- A legal process to prohibit illicit discharges into the CTDOT MS4
- A map and inventory of CTDOT's stormwater system
- Annual IDDE training to staff and consultants

Additional detail on these elements is provided below.

Goal:

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

Outfall Screening and Illicit Discharge Detection

As of July 1, 2025, CTDOT has mapped over 17,000 outfalls and outgoing interconnection points. The inventory of outfalls and interconnection points will continue to increase as CTDOT works to complete mapping of the entire drainage system by July 1, 2029.

CTDOT has developed the following Illicit Discharge Detection and Elimination Protocol to prioritize the locations to be dry weather screened during this permit term.

- Rescreen outfalls previously screened from July 2019 through June 2025 during the first permit term that were identified as having potential illicit inputs where the completed catchment investigation did not identify a potential source. As of July 1, 2025, CTDOT has an inventory of 1,146 of these high priority locations. At a minimum, CTDOT will screen 20% of these locations prioritized based on previous inspections results, likelihood of the presence of an illicit discharge, impaired waters status of the receiving waterbody and the designated use (current or future) of the receiving waterbody.

- Screen prioritized outfalls that are added to the inventory due to the on-going mapping of the CTDOT MS4 system. As required by the permit, CTDOT is scheduled to complete mapping of the MS4 system within the Priority Areas of the State by June 30, 2029. As of July 1, 2025, CTDOT estimates having completed 77% of statewide priority area mapping. Due to the fact that CTDOT has approximately 23% remaining with an existing inventory of over 17,000 outfalls, it is anticipated that at least another 3,000 to 4,000 outfalls will be added by June of 2029. At a minimum, CTDOT will screen 20% of these locations prioritized based on the likelihood of the presence of an illicit discharge, the impaired waters status of the receiving waterbody and the designated use (current or future) of the receiving waterbody.

CTDOT plans to coordinate the rescreening of high priority locations with adjacent locations recently mapped that also require screening based on the priority criteria identified above.

Eliminating Illicit Discharges into the CTDOT System

CTDOT will continue to work with local agencies and municipalities to eliminate illicit discharges identified in the CTDOT MS4 system. This procedure typically requires CTDOT MS4 staff to coordinate with the local Health Department, DPW director and/or Public Sewer Authority. If the appropriate agency cannot compel the responsible party to mitigate the illicit discharge based on a violation of the agencies' local ordinance or regulation, CTDOT will send an IDDE violation letter requiring mitigation of the illicit discharge detailing the State Statute that is being violated and indicating that further delay will result in a referral of the matter to the State's Attorney General's Office.

Record of Illicit Discharge Abatement Activities

CTDOT will continue to maintain a record of illicit discharge activities that will be included in the annual reports. The record shall include the following:

a. Location (address or latitude and longitude)
b. Description
c. Date of Inspection
d. Sampling Date
e. Actions Taken
f. Date of Removal or Repair
g. Responsible Parties

Citizen Reporting System CTDOT has established a system for citizen reporting of suspected illicit discharges into the stormwater system. To report an illicit discharge, CTDOT can be notified via email DOT.MS4@CT.gov or call the CTDOT customer care number at 860-594-2560. These reports will be sent to the CTDOT Environmental Compliance unit, which will investigate the report directly, direct a consultant to investigate and/or direct the local district drainage engineer to investigate. Should there prove to be an illicit discharge of stormwater, CTDOT will proceed according to the procedures laid out in the written IDDE program.

CTDOT requests that any emails from the public regarding a potential illicit discharge should include the date and approximate time the suspected illicit discharge was observed from the storm drain (either manhole, catch basin or outfall), the weather conditions at the time, a description of the location (town name, street name or intersection, cardinal directions), and other notable nearby landmarks such as businesses and residences. A description of why the discharge is presumed illicit is also requested, as well as a description the color of the discharge, odor, visible foam, oil sheen or sludge seen in the outfall or manhole. Photos are encouraged. Citizen reports are included in the CTDOT's annual MS4 report.

IDDE Legal Authority (6.1.3.2)

Unlike a traditional municipality, CTDOT does not have the ability to pass ordinances or to regulate land use to prohibit illicit discharges. However, existing Connecticut General Statutes are already in place to prohibit illicit discharges from entering the storm drainage system. CGS Section 22a-430 states that "No person or municipality shall initiate, create, originate or maintain any discharge of water, substance or material into waters of the State without a permit for such discharge issued by [CTDEEP]."

CTDOT is committed to maintaining and implementing an IDDE program designed to: a) confirm the presence of illicit discharges to its MS4 through screening and sampling, b) identify the responsible parties for any sources of illicit discharges through investigation, c) notify the responsible parties of their obligation to remove the illicit

discharges, and d) confirm that the responsible parties have removed their illicit discharges. Any responsible party that does not take steps to remove its illicit discharge(s) after having been so notified by the CTDOT shall be referred to CTDEEP and the State's Attorney General's Office for prosecution under CGS section 22a-430.

In addition to existing statutes, the CTDOT will rely on its storm sewer connection agreements to provide a mechanism for illicit discharge prohibitions. For connections into CTDOT's MS4 system from a parcel development or redevelopment project, the CTDOT requires a Discharge Connection Concurrence (DCC) to, among other things, declare that any discharge to CTDOT's MS4 system must consist of only uncontaminated stormwater. CTDOT may execute certain remedies in the event the DCC is breached. The CTDOT does not prioritize DCC's for municipal MS4 interconnections with the CTDOT's system. Rather, the CTDOT will rely on the respective General Permits' requirements imposed on CTDOT and the municipalities to address illicit discharges and a programmatic approach to communicating the findings of screenings, samplings, and investigations.

System Mapping (6.1.3.3)

A GIS map of the statewide stormwater drainage system that is owned and maintained by CTDOT is on schedule to be completed on or before July 1, 2029, as required by the permit. As of July 1, 2025, mapping of the CTDOT MS4 system is approximately 77% complete. The information for the map initially comes from digitizing construction plans supported by identifying assets in the field. The map includes:

a. Outfalls and receiving water information;
b. Pipes; open channel conveyances; catch basins; manholes;
c. Interconnections with other MS4s and other storm sewer systems;
d. CTDOT-owned and privately owned stormwater treatment structures that connect to the CTDOT system (e.g. detention and retention ponds, infiltration systems, bioretention areas, water quality swales, gross particle separators, oil/water separators, or other systems);
e. Inspection data on infrastructure (such as outfalls and interconnections) and any indicators of potential non-stormwater discharges;
f. Municipal sanitary sewer system (if available);
g. Municipal combined sewer system (if applicable and available).

Beyond the infrastructure and inspection components listed above, CTDOT will continue to use GIS data such as CT Environmental Conditions Online (CTECO) created by CTDEEP and other public agencies to reference additional information critical to the CTDOT's MS4 program. This information includes:

a. Impaired water bodies identified by name and the use impairment as defined by the most recent integrated water quality report;
b. The name, water body ID and surface water quality classification of the immediate surface waterbody or wetland to which the stormwater runoff discharges;
c. If the outfall does not discharge directly to a named waterbody, the name and water body ID of the nearest named waterbody to which the outfall eventually discharges; and
d. The name of the watershed, including the sub-regional drainage basin number which the discharge is located.

Progress on the mapping requirement will be provided in every annual report. A link to CTDOT's current drainage mapping is located here CTDOT Drainage Network Interactive Map | CTDOT Open Data.

Employee Training

CTDOT will continue to provide annual training to CTDOT staff and Environmental Compliance consultants involved in the IDDE program. The training will explain the program and include how to recognize illicit discharges and SSOs.

Table 4: 6.1.3 Illicit Discharge, Detection and Elimination Minimum Control Measures

Task ID	Task Deadline	Activity	Responsible Position(s)	Measurable Goal	Comments
3.1	On-going	Develop Legal Authority to Prohibit Illicit Discharges	Bureau of Engineering & Construction's Office of Environmental Compliance (BE&C's OEC) Commissioner's Office of Legal and Regulatory Affairs	Legal Authority Developed	Legal authority has been developed to the MEP
3.2	On-going	Develop Written IDDE Program	BE&C's OEC	Update IDDE Program Plan as Needed	Existing IDDE Written Plan to be updated on or before July 1, 2026
3.3	On-going	Develop program for citizen reporting of Illicit Discharges / Include citizen reports in annual report	BE&C's OEC	Illicit Discharge Program Developed and Reports Documented	The public can call a dedicated customer care phone number or send an email to report an Illicit Discharges
3.4	On-going	Develop tracking system for Illicit Discharge Investigation and Abatement Activities	BE&C's OEC	Illicit Discharge Tracking System Developed	System is in place and will continue to be implemented
3.5	July 1, 2029	Identify and map 100% of CTDOT's MS4 System in Priority Areas and Water Resources	Bureau Chief(s) – Engineering and Construction, Policy and Planning, Maintenance, Public Transit	100% of Mapping Completed	Mapping is currently estimated at 77% complete
3.6	June 30, 2030	Screen outfalls and key interconnection points.	BE&C's OEC	Screen a minimum of 20% of highest priority outfalls.	Screening activities will be documented reported in future annual reports
3.7	Annually	Provide Annual IDDE Training to Employees and Consultants	Bureau Chief(s) – Engineering and Construction, Policy and Planning, Maintenance, Public Transit	Annual Bureau Trainings Completed	Trainings are provided annually to CTDOT Employees and Consultants

6.1.4 Construction Site Stormwater Runoff Control

This minimum control measure outlines procedures for minimizing polluted stormwater runoff from activities that disturb one or more acres of land. CTDOT makes this determination on a project by project basis.

Goal:

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

6.1.4.1 Construction Site Legal Authority

CTDOT has established a legal process to control discharges from the CTDOT's MS4 during construction projects with one (1) or more acres of soil disturbance by requiring:

a. Developers, construction site operators, or contractors to maintain consistency with the 2024 Guidelines for Soil Erosion and Sedimentation Control, as amended, the Connecticut Stormwater Quality Manual, and all stormwater discharge permits issued by the DEEP within the municipal or institutional boundary pursuant to CGS 22a-430 and 22a-430b;
b. The implementation of additional measures to protect/improve water quality (in addition to the above requirements) as deemed necessary by the CTDOT;
c. CTDOT and consultant personnel consisting of construction and environmental staff will inspect all construction projects to ensure compliance with applicable permits;
d. An inventory of privately-owned detention and retention ponds and other stormwater basins that discharge to or receive drainage from the CTDOT's MS4 will be mapped with the CTDOT Drainage Network GIS Program
e. Any development seeking to discharge stormwater into the CTDOT's stormwater infrastructure will need to comply with the municipality's MS4 stormwater regulations before an encroachment permit and Drainage Connection Concurrence (DCC) is issued.
f. The CTDOT will control, through interagency or inter-jurisdictional agreements, the contribution of pollutants between the CTDOT's MS4 and MS4s owned or operated by others.

Any CTDOT construction project with a total disturbance of one or more acres of land area on a site (regardless of phasing) is registered under DEEP's *General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities* (Construction Stormwater General Permit). The CTDOT's Office of Environmental Planning ensures that all qualifying projects are registered under the Construction Stormwater General Permit prior to the start of construction activities. All construction project regardless of acreage are field reviewed for complicate of all Erosion and Sedimentation controls as required by the CTDOT Construction Manual.

All non-CTDOT projects seeking to connect to the CTDOT's stormwater system must also apply for and receive approval for a CTDOT Encroachment Permit. For any non-CTDOT project also subject to the Construction Stormwater General Permit, the Encroachment Permit applicant will be required to certify to CTDOT that the project has met the Construction Stormwater General Permit's local-approval or DEEP-registration requirement, as applicable, prior to CTDOT issuing the Encroachment Permit. If a drainage connection is needed for private connections into CTDOT's system, CTDOT also requires the execution of a Drainage Connection Concurrence (DCC) to reinforce that only clean, uncontaminated stormwater is permitted to enter the drainage system.

The Office of Construction under the Bureau of Engineering and Construction has construction inspectors who inspect all CTDOT construction projects to verify that the contractor is adhering to the project's plans and specifications, including those for erosion and sedimentation control, and any stormwater permit conditions. CTDOT district maintenance personnel will also inspect non-CTDOT construction projects subject to an Encroachment Permit to verify that the conditions of the Encroachment Permit are being adhered to, including stormwater-related conditions. Additionally, staff from the Office of Environmental Planning also conduct periodic site inspections of CTDOT construction projects to verify appropriate erosion and sedimentation measures are being followed. These inspections will continue to ensure compliance with the CTDOT's MS4 permit and Construction Stormwater General Permit requirements. The inspectors will identify to the maximum extent practical privately owned stormwater management facilities when performing site inspections and will create an inventory of any identified drainage features.

6.1.4.2 Consistency with CTDEEP Requirements

CTDOT will update its manuals to remain consistent with the construction measures in the 2024 Guidelines for Soil Erosion and Sedimentation Control, as amended, the Connecticut Stormwater Quality Manual and the Construction Stormwater General Permit. These manuals shall include, but are not limited to, the following CTDOT manuals (as amended) and all supplements thereto: CTDOT Construction Manual, CTDOT Highway Design Manual, CTDOT Consultant Design Manual, CTDOT Bridge Design Manual, CTDOT Drainage Manual and CTDOT Standard Specifications for Roads, Bridges, Facilities and Incidental Construction (Form 819).

6.1.4.3 Interdepartmental Coordination

The CTDOT will continue to coordinate the functions of all internal departments with jurisdiction over the review, permitting, or approval of land disturbance and development projects within the CTDOT MS4.

6.1.4.4 Site Review and Inspection

CTDOT, through the design review process, will ensure stormwater controls or management practices to prevent and minimize impacts to water quality are considered by designers. Comments will be provided to designers by the Office of Environmental Planning, Office of Environmental Compliance, and Hydraulics & Drainage to ensure permit compliance. Construction site inspections to ensure permit compliance are currently a CTDOT standard and will continue to be performed by the Office of Construction and the Office of Environmental Planning.

6.1.4.5 State Permit Notification

The Office of Environmental Planning and the CTDOT Construction Districts will continue to implement the existing procedure that registers all projects that have a total disturbance of one or more acres of land area on a site (regardless of phasing) under the Construction Stormwater General Permit. This applies to all developers or contractors conducting projects that will connect to the CTDOT MS4s, and any consultants or contractors working under contract to CTDOT. The notification will include a provision informing the developer/contractor of their obligation to provide a copy of the project's Storm Water Pollution Control Plan (required by the Construction Stormwater General Permit) upon request.

Table 5: 6.1.4 Construction Site Stormwater Runoff Control Minimum Control Measures

Task ID	Task Deadline	Activity	Responsible Position(s)	Measurable Goal	Comments
4.1	On-going	Establish bylaw, regulation, standard conditions of approval, construction requirements or other legal authority that meet the requirements of the permit	Office of the State Traffic Administration (OSTA) Commissioner's Office of Legal and Regulatory Affairs Bureau Chief – Engineering and Construction	Legal Authority Developed	Legal authority has been developed to the MEP
4.2	On-Going	Ensure all CTDOT manuals are consistent with the construction measures in CTDEEP's E&S Manual, Stormwater Quality Manual and Construction Stormwater General Permit requirements	Bureau Chief - Engineering & Construction Bureau Chief – Policy & Planning	CTDOT Manuals are Consistent with E&S Manual, Stormwater Quality Manual and Construction Permit Requirements	
4.3	On-going	Develop and implement a plan outlining how all internal 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.	Bureau Chief - Engineering & Construction Bureau Chief – Policy & Planning	Internal Coordination Plan Developed	Coordination actively on-going between all involved parties within CTDOT
4.4	On-going	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 storm water controls or management practices to prevent or minimize impacts to water quality where considered.	Bureau Chief - Engineering & Construction Bureau Chief – Policy & Planning	Standard Practice in Place to Verify Appropriate Site Review was Completed	CTDOT actively reviews site plans for stormwater management and to minimize impact
4.5	On-going	Implement a procedure for notifying developers conducting projects that will connect to the CTDOT of their obligation to comply with the requirements of CTDEEP's Construction Stormwater General Permit.	Bureau Chief – Highway Operations Bureau Chief - Engineering & Construction	Standard Practice in Place to Verify Developers and/or Contractors are properly notified	CTDOT actively informs developers that connect to CTDOT that they must comply with the requirements of their stormwater pollution plan

6.1.5 Post-Construction Stormwater Management in New Development or Redevelopment

This minimum control measure outlines CTDOT's program to reduce the discharge of stormwater pollutants to CTDOT's MS4 system from new or redevelopment projects.

Goal:

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

6.1.5.1 Post Construction Legal Authority

The permit requires CTDOT to establish the Legal Authority to require developers or contractors seeking to discharge to the CTDOT MS4 to consider using LID and runoff reduction site planning and development practices prior to the consideration of other practices. Unlike a traditional municipality, CTDOT does not have the ability to pass ordinances or to regulate land use to meet these requirements. For non-CTDOT projects (municipal, private, etc.) that connect to CTDOT's storm system, CTDOT has implemented a review process to verify that the proposed project has met (to the MEP) the municipalities' (or other applicable regulatory authority) MS4 requirements. All non-CTDOT projects seeking to connect to the CTDOT's stormwater system must also apply for and receive approval for a CTDOT Encroachment Permit. For any non-CTDOT project also subject to the Construction Stormwater General Permit, the Encroachment Permit applicant will be required to certify to CTDOT that the project has met the Construction Stormwater General Permit's local-approval or CTDEEP-registration requirement, as applicable, prior to CTDOT issuing the Encroachment Permit. If a drainage connection is needed for private connections into CTDOT's system, CTDOT also requires the execution of a Drainage Connection Concurrence (DCC) to reinforce that only clean, uncontaminated stormwater is permitted to enter the drainage system.

The permit also requires CTDOT, for construction projects that affect drainage, to consider the use of LID and runoff reduction site planning and development practices prior to the consideration of other practices. CTDOT relies on internal design and project review procedures to ensure that LID and runoff reduction practices are incorporated to the maximum extent practicable (MEP). CTDOT has developed an MS4 Project Design Maximum Extent Practicable (MEP) Worksheet (and accompanying instructions) for all CTDOT projects that modify impervious area, drainage or drainage patterns pre to post construction to complete at each milestone design phase. The worksheet documents the designer's efforts to meet the appropriate post construction requirements including:

- Efforts to retain the appropriate portion of the WQV
- Site Constraints that limited the project's ability to retain or treat the required WQV
- The alternative retention or treatment practices that were implemented

In addition to the specific retention and/or treatment requirements in Section 6.1.5.1 of the permit, the CTDOT will also strive to implement the following watershed protection elements wherever possible to manage the impacts of stormwater on receiving waters:

a. Minimize the amount of Directly Connected Impervious Area (DCIA) such as roads, parking lots, roofs, etc., by minimizing the creation, extension, and widening of parking lots, roads, and associated development and encouraging the use of Low Impact Development or green infrastructure practices.
b. Preserve, protect, create and restore ecologically sensitive areas that provide water quality benefits and serve critical watershed functions. These areas may include, but are not limited to, riparian corridors, headwaters, floodplains and wetlands.

c. Implement stormwater management practices that prevent or reduce thermal impacts to streams, including requiring vegetated buffers along waterways and disconnecting discharges to surface waters from impervious surfaces such as parking lots.
d. Seek to avoid or prevent hydromodification of streams and other water bodies caused by development, including roads, highways, and bridges.
e. Implement standards to protect trees and other vegetation with evapotranspirative qualities.
f. Implement policies to protect native soils, prevent topsoil stripping, and prevent compaction of soils.

6.1.5.2 Consistency with CTDEEP Requirements

CTDOT manuals will remain consistent with the construction measures in the 2024 Guidelines for Soil Erosion and Sedimentation Control, as amended, the 2024 Connecticut Stormwater Quality Manual, as amended, and the 2022 Construction Stormwater general permit, as amended. These manuals shall include, but are not limited to, the following CTDOT manuals (as amended) and all supplements thereto: CTDOT Construction Manual, CTDOT Highway Design Manual, CTDOT Consultant Engineers Manual, CTDOT Bridge Design Manual, CTDOT Drainage Manual and CTDOT Form 819.

6.1.5.3 Runoff Reduction/Low Impact Development (LID) Measures

For non-CTDOT development and redevelopment projects of one (1) acre or more within the CTDOT MS4, the permit requires CTDOT to document the municipal authority has confirmed that such project has met the requirements of the Construction General Permit and, if applicable, the requirements of the Small MS4 General Permit. All non-CTDOT projects seeking to connect to the CTDOT's stormwater system must apply for and receive approval for a CTDOT Encroachment Permit. For any non-CTDOT project also subject to the Construction Stormwater General Permit, the Encroachment Permit applicant will be required to certify to CTDOT that the project has met the Construction Stormwater General Permit's local-approval or CTDEEP-registration requirement, as applicable, prior to CTDOT issuing the Encroachment Permit. If a drainage connection is needed for private connections into CTDOT's system, CTDOT also requires the execution of a Drainage Connection Concurrence (DCC) to reinforce that only clean, uncontaminated stormwater is permitted to enter the drainage system.

For all municipal transportation projects receiving state or federal funding administered by CTDOT, CTDOT staff reviews the project, provides comments on construction and post construction MS4 requirements where appropriate and directs the project to comply with the requirements of the Construction Stormwater General Permit and the Municipalities' MS4 Program.

For CTDOT development and redevelopment projects of one (1) acre or more within the CTDOT MS4, post construction stormwater management practices will continue to be implemented to the MEP to reduce post-development runoff volume delivered to receiving waters for development and redevelopment projects within CTDOT's MS4 area. The requirements of CTDEEP's Construction Stormwater General Permit and the applicable runoff reduction and alternative requirements must be met to the MEP. The runoff reduction requirement is based on the existing DCIA of the site as given below:

- For redevelopment of sites that are currently developed with Directly Connected Impervious Area (DCIA) of forty percent or more, the project must retain on-site half the water quality volume for the site.
- For new development and redevelopment of sites with less than forty percent DCIA, the full water quality volume for the site shall be retained.

All CTDOT capital projects that change the amount of DCIA from pre to post construction are required to complete a CTDOT MS4 Project Design MEP Worksheet to track the changes. If the respective standard cannot be met for a

given project, the CTDOT must meet the retention and/or treatment requirements to the maximum extent practicable. For projects adding DCIA where site constraints limit or eliminate the implementation of structural water quality BMPs, CTDOT's DCIA reduction program (see section 6.1.5.5 below) is intended to offset the increases as mitigation. For linear redevelopment projects that do not increase the DCIA, the applicable retention requirement is not required to be met provided treatment for the removal of sediment, floatables and nutrients is provided. All projects must document the stormwater management practices implemented and the site and/or project constraints that impacted the design.

6.1.5.4 Directly Connected Impervious Area

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 CTDOT's DCIA. It is anticipated that as mapping becomes more complete the DCIA value will be adjusted.

Total Impervious Area

CTDOT roadway	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**		

6.1.5.5 DCIA Reduction Program

CTDOT has developed a DCIA Reduction Program to comply with the relevant conditions of the permit and the 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. These conditions include the requirement to disconnect 40 acres of DCIA by June 30th, 2027, and an additional 40 acres by June 30th, 2027. CTDOT's DCIA Reduction Program encompasses the tracking of DCIA changes from redevelopment plans (aka, capital projects) and the planning, design, construction and tracking of stand-alone stormwater quality retrofit projects.

DCIA Reduction Tracking

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.

In addition to tracking DCIA changes associated with redevelopment projects, CTDOT also tracks DCIA reductions associated with stand-alone stormwater quality retrofit projects that are being implemented to meet the 2027 and 2030 DCIA reduction targets. A summary of the DCIA reductions (or increases) recorded on each redevelopment project's MS4 worksheet, as well as the predicted reductions associated with the stand-alone retrofit projects, is aggregated and tracked in a spreadsheet. This spreadsheet summarizes the annual and overall changes in the amount of DCIA that has been constructed and the changes that are projected from projects still within the design phase. A copy of the most current version of this spreadsheet will be included as an appendix in CTDOT Annual Reports for the duration of this permit term.

DCIA Reduction Planning

CTDOT's DCIA reduction plan to reduce directly connected impervious area (DCIA) consists of two main components:

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

Based on the annual DCIA changes from each of these components and as required by the permit, CTDOT will submit an updated DCIA Reduction Plan with each annual report submitted to CTDEEP within this permit term. This plan will include a list and description of redevelopment and stand-alone retrofit projects sufficient to ensure that 40 acres of DCIA reductions are achieved by June 30, 2027, and another 40 acres of DCIA reductions are achieved by June 30, 2030.

As of June 30, 2025, CTDOT is on pace to meet and exceed the goal of reducing DCIA reduction by 40 acres on or before June 30, 2027 with a combination of stand-alone retrofit projects and DCIA reductions that have been achieved through redevelopment projects since tracking started in 2019. CTDOT will continue to evaluate additional stand-alone retrofit projects as needed to supplement redevelopment projects to disconnect 80 acres total by June 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. 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.

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.

An additional tool that will be used to help determine potential retrofit project locations to meet the 2030 goal is a stormwater modeling program (SELDM). 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.

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 annual reports.

Table 6 6.1.5 Post Construction Stormwater Management Minimum Control Measures

Task ID	Task Deadline	Activity	Responsible Position(s)	Measurable Goal	Comments
5.1	June 30, 2022	Establish updated standard procedures, forms and conditions of approval that meet the LID / Runoff Reduction Legal Authority requirements of the permit	OSTA & Bureau Chief – Engineering & Construction Commissioner's Office of Legal and Regulatory Affairs	Legal Authority Developed	Legal authority has been developed to the MEP
5.2	On-Going	Ensure all CTDOT manuals are consistent with the construction measures in CTDEEP's E&SC Guidelines, Stormwater Quality Manual, and Construction Stormwater General Permit requirements	Bureau Chief - Engineering & Construction Bureau Chief – Policy & Planning	CTDOT Manuals are Consistent with E&S Manual, Stormwater Quality Manual and Construction Permit Requirements	
5.3	On-going	Implement runoff reduction / LID measures for development and redevelopment projects within CTDOT's MS4 area	Bureau Chief - Engineering & Construction Bureau Chief – Policy & Planning	Document runoff reduction / LID implementation efforts for projects	MS4 worksheets are completed for all projects
5.4	On-going	Calculate DCIA for 50% of CTDOT's MS4 Catchment Areas (Local Watershed Basins)	Bureau Chief - Engineering & Construction	Determine the Percentage of DCIA for CTDOT's Mapped Catchment or Local Watershed Areas	The calculation will be updated as more drainage systems are mapped
5.5	On-going	Implement a plan to ensure long term maintenance of stormwater management facilities	Bureau Chief – Highway Operations Bureau Chief - Engineering & Construction	Develop and Implement a Plan to Ensure Long Term Maintenance of Stormwater Management Facilities	CTDOT is actively maintaining maintenance facilities and repairing any damage to drainage structures

6.1.6 Pollution Prevention / Good Housekeeping

This minimum control measure outlines a program to mitigate the impact of CTDOT operations and maintenance activities on CTDOT owned and/or operated properties, the CTDOT's MS4 system and ultimately surface waters.

Goal:

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

6.1.6.1 Employee Training

CTDOT has a MS4 training program for CTDOT employees to increase awareness of water quality issues. Training includes:

- Non-point source pollution and CTDOT MS4 permit basics
- Standard operating procedures consistent with the CTDOT MS4 general permit;
- General goals and objectives of this Stormwater Management Plan;
- Identification and reporting of illicit discharges and improper disposal;
- Spill response protocols and responsibilities; and
- Proper training for deicing applications (including private contractors).

Employee training will continue to occur at a variety of locations including CTDOT headquarters in Newington, the four District offices and individual maintenance garages among other facilities. Highway Operations general supervisors, crew leaders and district trainers will continue to receive annual stormwater training that includes pollution prevention and proper debris management during storm preparations. In addition, bi-annual (or more frequent as needed) meetings will continue to be held with District Drainage Engineers, District Special Service Managers, Environmental Compliance, Environmental Planning, Asset Management and the Project Development Unit to discuss a variety of stormwater topics including but not limited to GIS mapping, field inspections using GIS, IDDE issues and flooding. On-demand training for designers and design consultants on CTDOT's post construction and DCIA reduction requirements will also continue to be available.

6.1.6.2 Stormwater Infrastructure Repair and Maintenance Program

CTDOT will continue to implement a stormwater infrastructure repair and maintenance program as detailed below.

Stormwater Infrastructure Repair Program

As CTDOT completes the mapping and inspection requirements under the IDDE minimum control measure or as otherwise identified by field staff, the condition of outfalls and other stormwater infrastructure will be recorded. Repair of infrastructure will be prioritized based on the condition of the asset, any future redevelopment projects in the area, and available financial resources. For assets other than structural water quality BMPs, repair or rehabilitation will generally be completed by Highway Operations unless the scope of the work is large enough that it necessitates that the Project Development Unit develop a capital project.

Long Term Maintenance

CTDOT previously completed a Stormwater Best Management Practice (BMP) Inspection and Maintenance Plan as required by the EPA consent order signed in December of 2023. 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. A copy

of this plan is available in the appendix of CTDOT's Year 5 Annual Report which is available on CTDOTs MS4 webpage (CTDOT MS4).

As of July 1, 2025, CTDOT has completed inspections of all mapped, state-owned or maintained stormwater treatment structures, excluding catch basins. The inspections focused on assessing the condition of each asset to determine any adverse effects on water quality and/or a need for maintenance. CTDOT will continue to conduct annual inspections of all mapped BMPs and will maintain a database containing all previous inspections.

Any stormwater BMPs that are newly mapped during an inspection cycle will be scheduled for inspection within one year of the inspection. These inspections will document the condition of each asset and determine if maintenance is needed, ensuring that all newly identified structures are incorporated into the ongoing asset management and compliance program.

As of July 1, 2025, CTDOT has completed maintenance on 84 of the 109 stormwater quality BMPs that were identified as requiring maintenance prior to December 31, 2023. CTDOT will continue to perform maintenance on the remaining short- term and medium –term structural BMPs with a target completion date on or before November 1st, 2027 as required by the permit. Short and medium term structural BMPs are any BMP other than a large wet basin with a permanent pool of water of two feet or greater. CTDOT is scheduled to complete maintenance on large wet basins inspected prior to December 31, 2023, by July 1st, 2029 as required by the permit.

For any new BMPs added to the inventory from additional mapping efforts or from constructed capital projects, CTDOT will schedule maintenance if needed, on or before three years from the inspection date. CTDOT will document progress on BMP maintenance in each annual report.

6.1.6.3 CTDOT MS4 Property and Operations Maintenance

CTDOT owned or -operated properties, parks, and other facilities that are owned, operated, or are otherwise the legal responsibility of CTDOT will be maintained to minimize the discharge of pollutants to its MS4. Such maintenance will include, but not be limited to:

Parks and open space

CTDOT will optimize the application of fertilizers by staff or private contractors on lands and easements for which it is responsible for maintenance.

Pet waste management

CTDOT will continue to provide educational signage, pet waste baggies and disposal receptacles in places such as rest areas and service areas where dog walking is allowed.

Waterfowl management

CTDOT will seek to identify areas where waterfowl congregate. However, any habitat under the jurisdiction of CTDOT that would be attractive to waterfowl, such as large, vegetated medians and shoulders to limited access highways, are not accessible to the public and feeding by the public could not occur. Through the course of the IDDE investigations and impaired water, any areas suspected as contributing to a bacterial impairment will be evaluated for waterfowls as a contributing factor, and control measures shall be developed accordingly.

Buildings, parking facilities, rest areas, service areas and other facilities

Many CTDOT facilities and buildings are regulated under CTDEEPs Industrial Stormwater General Permit (maintenance garages, salt sheds) and CTDEEP's Commercial Stormwater General Permit (service plazas with 5 acres or more of impervious area). The remaining CTDOT facilities including commuter lots, non-maintenance buildings and service plazas and rest areas less than 5 acres in size discharge stormwater under CTDOT's MS4 permit. For those facilities, CT CTDOT shall address the following requirements, as applicable:

- ensure that Spill Prevention Plans are in place, if applicable, and coordinate with the fire department as necessary;
- develop management procedures for dumpsters and other waste management equipment.
- sweep/clean parking lots and keep areas surrounding the facilities clean to minimize runoff of pollutants;
- ensure that all interior building floor drains are not connected to the CTDOT's MS4 and are appropriately permitted.

Vehicles and Equipment

CTDOT facilities with the primary purpose of repairing or washing vehicles and CTDOT-owned fueling stations discharge stormwater under the authorization of CTDEEP's Industrial Stormwater General Permit. Other facilities and equipment regulated under the CTDOT's MS4 permit will:

- establish procedures for the storage of CTDOT-owned or -operated vehicles;
- require vehicles with fluid leaks to be stored indoors or in contained areas until repaired;
- evaluate fueling areas owned by CTDOT and used by CTDOT-owned or -operated vehicles and, if possible, place fueling areas under cover in order to minimize exposure;
- establish procedures to ensure that vehicle wash waters are not discharged to the municipal storm sewer system or to surface waters;
- ensure any interior floor drains are appropriately permitted.

Leaf Management

CTDOT does not have a leaf collection program. CTDOT will work with municipalities to address areas where leaf litter is negatively impacting the state road and drainage system.

6.1.6.4 Street, Parking & CTDOT MS4 Infrastructure Maintenance Program

CTDOT will continue to maintain a program to provide for regular inspection and maintenance of CTDOT owned or operated streets, parking facilities, rest areas, services areas and other CTDOT MS4 infrastructure.

Street Sweeping

CTDOT has an existing sweeping program where State-owned or operated streets and parking lots are typically swept, where needed, a minimum of once a year to the maximum extent practicable. As of July 1, 2025, CTDOT is transitioning from using an older Maintenance Management System (MMS) to document sweeping activities to a proprietary truck mounted GPS and data logging system. 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 working with the vendor 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.

The annual sweepings typically start in the spring following the cessation of winter maintenance activities. As location data from the GPS systems is collected and able to be visualized effectively, areas requiring more (or less) sweeping will be prioritized accordingly. CTDOT will submit the number of miles swept and work towards providing an estimate of the volume of material collected annually in the annual report.

Catch Basin Cleaning

CTDOT's MS4 permit sets a 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 annual catch basin cleaning effort, 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 Operations 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 with no bids received for District 3. Statewide CTDOT maintenance areas are divided into four districts as shown in the Figures 2-5 of this plan.

In Spring of 2025, CTDOT began implementation of a GIS based catch basin cleaning application to capture inspection and cleaning data. The application allows CTDOT to document where individual catch basins have been inspected and cleaned. This application will be used by CTDOT staff where available when inspecting / cleaning catch basins and when overseeing DAS contractors tasked with catch basin cleaning assignments. However, the hardware and data plans needed for CTDOT Highway Operations staff to capture all catch basin inspection and cleaning activities within the GIS application is not yet available. It is anticipated that although the amount of catch basin inspection and cleaning activity captured by the GIS application will increase over this permit term, the use of the older Maintenance Management System (MMS) will continue.

However, as more data from the GIS application is collected and able to be visualized effectively, catch basins and/or areas requiring more (or less) cleaning will be prioritized accordingly. CTDOT will continue to submit the number of catch basins inspected and cleaned annually in the annual report submitted to CTDEEP.

Bridge Rinsing Operations

All bridge rinsing conducted by CTDOT will minimize the discharge of pollutants to the CTDOT's MS4 and receiving waterbody to the MEP and shall be in accordance with the "Department of Transportation Bureau of Highway Operations Bridge Cleaning Program", dated March 2013, as amended. The number of structures rinsed each year will be reported within the Annual Report.

6.1.6.5 Snow Management Practices

Deicing Material Management

The CTDOT facilities that handle and store deicing material are all regulated under CTDEEP's Industrial Permit. CTDOT will continue to look at ways of refining existing standard operating practices for the handling, storage and disposal of deicing materials while also investigating methods to optimize the application of deicing products.

Snow and Ice Control Practices

CTDOT will continue to refine standard operating practices regarding its snow and ice control to minimize the discharge of sand, anti-icing or de-icing chemicals and other pollutants (while maintaining public safety) to the MEP. The work will be performed in accordance with CTDOT's Snow and Ice Guidelines. In the annual report CTDOT will document the following aspects of its snow management program:

- The type of staff training conducted on application methods and equipment
- Type(s) of deicing material used
- Total amount of each deicing material used
- Type(s) of deicing equipment used
- Lane-miles treated
- Any changes in deicing practices
- Snow disposal methods

Snow Melting Operations

Snow melting operations will only be used by CTDOT for the disposal of snow accumulations in the event winter storm accumulations exceed the snow storage capacity available both on-site and in the nearby right of way. The discharge from the snow melting unit must be clear and not contain any floating or solid materials. If any floatables, gross solids and/or oily runoff is observed from the snow melting units then CTDOT shall use best management practices (BMPs) to treat the runoff. These BMPs include but are not limited to:

- Filter bags
- Silt sacks for catch basins
- Settling ponds
- Absorbent pads and booms

CTDOT will make every effort to ensure that the runoff temperature from melting snow does not exceed 48F.

6.1.6.6 Interconnected MS4s

As mapping the CTDOT storm sewer system progresses, CTDOT will coordinate with MS4s that are interconnected regarding the contribution of potential pollutants form the storm sewer systems, contributing land use areas and stormwater control measures. This same coordination will be conducted regarding operation and maintenance procedures utilized in the respective systems.

6.1.6.7 & 6.1.6.8 Sources Contributing Pollutants to the MS4 and Additional measures for discharges to impaired waters (with or without a TMDL)

For waters for which Nitrogen or Phosphorus is a Stormwater Pollutant of Concern

On CTDOT-owned or -operated lands, CTDOT will evaluate alternative turf management practices and procedures during development and redevelopment which include, but is not limited to, the planting of native plant materials to lessen the amount of turf area requiring mowing. Each Annual Report will discuss the actions taken to implement this policy with an estimate of fertilizer and turf reduction.

For waters for which Bacteria is a Stormwater Pollutant of Concern

On CTDOT-owned or -operated lands with a high potential to contribute bacteria (such as service plazas with dog areas and sites with failing septic systems), CTDOT will evaluate potential retrofits or source management programs to mitigate any problems identified. Any retrofits or programs will be prioritized and implemented based on the severity of the problems identified, the cost to implement and the resources available. Each Annual Report will identify problem areas for which a retrofit or source management program were developed, the location of the closest outfall monitored in accordance with Section 6(*i*), the cost of such retrofit or program, and the anticipated pollutant reduction.

Table 7 6.1.6 Pollution Prevention & Good Housekeeping Minimum Control Measures

Task ID	Task Deadline	Activity	Responsible Position	Measurable Goal	Comments
6.1	On-going	Develop & implement formal employee training program	All Bureaus	Conduct Annual Trainings for Bureaus	CTDOT will continue to develop trainings with updated information as it becomes available
6.2	On-going	Implement infrastructure repair/rehabilitation program	Bureau Chief - Engineering & Construction	Develop and Implement a repair/rehabilitation program	Inspections are ongoing for evaluating drainage infrastructure conditions. As infrastructure is identified for needing repair and replacement projects will continue to be developed.
6.3	July 1, 2019	Implement CTDOT MS4 Property and Operations Maintenance	Bureau Chief Highway Operations and Maintenance	Document and Report on Maintenance Activities Implemented	Maintenance efforts will continue to be documented in annual reports
6.4	On-going	Develop and implement sweeping program	Bureau Chief Highway Operations and Maintenance	Document and Report on Sweeping Activities	CTDOT is actively working on a spatial mapping system to collect all sweeping information
6.5	On-going	Develop plan to optimize catch basin cleaning	Bureau Chief Highway Operations and Maintenance	Map, Inspect and Prioritize Catch Basins	
6.6	June 30, 2042	Inspect and clean (where necessary) catch basins	Bureau Chief Highway Operations and Maintenance	Map, Inspect and Prioritize Catch Basins	Will continue to progress as mapping is completed
6.7	Ongoing	Develop, implement and optimize standard operating procedures for snow management practices	Bureau Chief Highway Operations and Maintenance	Optimize, Document and Report on Snow Management Practices	Will update the standard procedures as needed
6.8	On-going	Track and report types of deicing materials used, lane miles treated and total amount of deicing material used	Bureau Chief Highway Operations and Maintenance	Document and Report on Deicing Material Usage	Will continue to report usage in annual report

Task ID	Task Deadline	Activity	Responsible Position	Measurable Goal	Comments
6.9	On-going	Coordinate with interconnected MS4s	Bureau Chief Highway Operations and Maintenance	Ongoing coordination when issues arise	CTDOT will work collaboratively with other MS4s as issues arise
6.10	On-going	Implement a program to control the contribution of pollutants into the MS4	Bureau Chief - Engineering & Construction	This is accomplished through the CTDOT IDDE program	See CTDOT IDDE program
6.11	Ongoing	Implement additional measures for discharges to impaired waters from sites with high potential to contribute to the impairment	Bureau Chief - Engineering & Construction	Identify, Develop and Implement Measures to Mitigate Discharges with High Potential to Contribute to Impaired Waters	IDDE Written Plan addresses these discharges along with the use of SELDM

6.2 Impaired Waters Monitoring Program

In consideration of the thousands of outfalls connected to the state drainage systems, an automatic outfall sampling option was incorporated into the previous CTDOT MS4 permit (dated July 1, 2019) to address impaired waters sampling requirements.

In the previous permit term the USGS, on behalf of CTDOT completed a rigorous auto sampling program that consisted of continuously monitoring a total of nine outfalls from a variety of CTDOT highway outfalls for a period of approximately two years each. 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:

Table 8: Automatic Monitoring Outfall Locations

YEAR 1 & 2	YEAR 3 & 4
1. I-91 Hartford	6. I-95 Milford
2. Route 2 Glastonbury	7. Route 15 Orange
3. Route 3 Glastonbury	8. Route 8 Trumbull
4. Route 74 Vernon	9. Route 110 Stratford
5. Route 8 Torrington	

Parameters that were continuously monitored at each site included water temperature, specific conductance, precipitation, snow depth and air temperature. In addition, samples were collected 18 times from each location and analyzed for over 40 constituents. The auto sampling work was completed by USGS in the spring of 2024. The list of constituents measured in the composite samples is given in the table below.

Table 9: List of Constituents for Composite Samples at Automatic Monitoring Outfall Locations

Analyte	Reporting level	Unit	Analyte	Reporting level	Unit
Alkalinity	4.6	mg/L	specific conductance	5	uS/cm
Aluminum (whole water)	3.8	ug/L	Sulfate (dissolved)	0.02	mg/L
Arsenic (whole water)	0.2	ug/L	Zinc (whole water)	2	ug/L
Barium (whole water)	0.3	ug/L	Suspended sediment	1	mg/L
Cadmium (whole water)	0.03	ug/L	Total suspended solids	15	mg/L
Calcium (dissolved)	0.022	mg/L	Acenaphthylene	0.3	ug/L
Dissolved organic carbon	0.23	mg/L	Acenaphthene	0.28	ug/L
Chloride (dissolved)	0.02	mg/L	Anthracene	0.38	ug/L
Potassium (dissolved)	0.03	mg/L	Benzo[b]fluoranthene	0.3	ug/L
Sodium (dissolved)	0.06	mg/L	Benzo[k]fluoranthene	0.3	ug/L
Chromium (whole water)	0.4	ug/L	Benzo[a]pyrene	0.32	ug/L
Copper (whole water)	0.8	ug/L	Chrysene	0.32	ug/L
Iron (whole water)	4.6	ug/L	Fluoranthene	0.3	ug/L
Lead (whole water)	0.04	ug/L	Fluorene	0.34	ug/L
Magnesium (dissolved)	0.011	mg/L	Indeno[1,2,3-cd]pyrene	0.38	ug/L
Manganese (whole water)	0.4	ug/L	Nitrobenzene	0.26	ug/L
Nickel (whole water)	0.2	ug/L	Phenanthrene	0.32	ug/L
Dissolved total nitrogen	0.05	mg/L	Pyrene	0.36	ug/L
Particulate nitrogen	0.03	mg/L	Benzo[ghi]perylene	0.38	ug/L
Mercury (whole water)	0.005	ug/L	Benzo[a]anthracene	0.26	ug/L
Phosphorus (whole water)	0.004	mg/L	Dibenz[a,h]anthracene	0.42	ug/L
pH	0.1	pH	Naphthalene	0.22	ug/L

6.2.1 Outfall Sampling Protocol

Now that the sampling data has been collected, the data will be added to the Federal Highway Runoff Database where it can be used by an existing highway runoff model tailored to Connecticut-specific conditions to assess a) the potential effects of runoff from the highway system on receiving water quality and b) the potential benefit of providing stormwater best management practices (BMPs).

The highway runoff model, which was developed by the USGS in collaboration with the Federal Highway Administration, is known as the **S**tochastic **E**mpirical **L**oading **D**ilution **M**odel (SELDM). SELDM is a planning level tool that can be used to evaluate whether highway runoff contributes to waterbody impairments or may cause an exceedance of water quality standards. SELDM has been tested and/or reviewed by USGS, USEPA, US Fish and Wildlife Service and 16 agencies including the MassDOT and the Massachusetts Department of Environmental Protection.

6.2.1.1 Utilization of Data

Within this permit term, CTDOT will assess each of its mapped outfalls directly discharging to an impaired waters in MS4-regulated municipalities using the SELDM model to determine whether highway runoff may be contributing to the impairment in question and whether stormwater runoff from the outfall has a reasonable potential to cause an exceedance of Water Quality Standards.

The determination of whether a potential link is supported between the impairment and the outfall discharge will be based on SELDM results that indicate an increase in the concentration of the constituent(s) associated with the impairment in downstream water quality compared to upstream water quality. For each receiving water for which SELDM indicates a potential link between the impairment and the CTDOT MS4 discharge, CTDOT will conduct follow up investigations in an attempt to identify the causes of the impairment and potential mitigation.

Follow up investigations will be prioritized based on the following:

- At a minimum, follow up investigations will be performed on locations where SELDM indicates the outfall discharge is likely to increase the concentrations of the constituent(s) associated with the impairment in downstream water quality for 10% or more of modeled precipitation events.

- Once follow up investigations on the locations above are completed, CTDOT will also create a priority ranking for outfalls that SELDM predicted downstream water quality impacts for less than 10% of modeled precipitation events. CTDOT will then perform follow up investigations based on this priority ranking.

6.2.1.2 Follow-up Investigations

CTDOT will perform follow up investigations in accordance with the prioritization schedule identified in section 6.2.1.1 above. Investigations will include factors such as land use, amount of DCIA and other activities occurring outside CTDOT property that could potentially be contributing to the related impairment. CTDOT will document the justification in the annual report if the follow up investigation does not support the SELDM modeling results. If the follow up investigation does identified factors potentially associated with the cause of the impairment, CTDOT will prioritize those outfalls for control measure implementation.

Potential control measure implementation strategies will include an evaluation of all the minimum control measures (structural and non-structural) that could be implemented to mitigate the discharge of pollutants. Structural practices include the use of structural water quality best management practices (BMPs) within the CTDOT right-of-way to retain and/or treat runoff discharged from the CTDOT MS4. SELDM will also be used to assess the effectiveness of BMPs to predict the change in flow, concentrations, and loading. These simulations will be used to develop a procedure to assist in identifying prospective BMP sites with the greatest potential for improving the quality of the receiving water bodies. CTDOT will use this procedure to plan and prioritize stormwater BMPs along CTDOT roadways statewide as part of the required retrofit program to disconnect DCIA.

6.2.2 Monitoring Schedule and Reporting

CTDOT will complete the inventory and mapping of CTDOT MS4 discharges to impaired waters by June 30, 2029. Progress on impaired waters investigations and control measure implementation will be provided in each annual report in this permit term.

Plan Amendments

CTDOT will amend the SWMP whenever there is a substantial change in the best management practices specified in the plan. The SWMP will also be updated if; (1) there is a change in operations that has the potential to cause pollution of the waters of the State; (2) the actions required by the plan fail to prevent pollution of the waters of the State or fail to otherwise comply with any other provision of the general permit; or (3) The Commissioner of CTDEEP requests a modification to the plan.

Plan Certifications

Stormwater Management Plan Signature

"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."

9/26/2025

Jason Coite, P.E
Transportation Principal Engineer
Bureau of Engineering and Construction

Date

Stormwater Management Plan Engineering Certification

"I hereby certify that I am a qualified professional engineer, as defined in the General Permit for the Discharge of Stormwater from the Department of Transportation Separate Storm Sewer Systems. I am making this certification in connection with a registration under such general permit, submitted to the Commissioner by the Connecticut Department of Transportation for an activity located at or within the State of Connecticut. I have personally examined and am familiar with the information that provides the basis for this certification, including but not limited to all information described in Section 3.2.14.1 of such general permit, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I certify, based on my review of all information described in Section 3.2.14.1 of such general permit and on the standard of care for such projects, that I have made an affirmative determination in accordance with Section 3.2.14.2 of this general permit. I understand that this certification is part of a registration submitted in accordance with Section 22a-430b of Connecticut General Statutes and is subject to the requirements and responsibilities for a qualified professional in such statute. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under Section 53a-157b of the Connecticut General Statutes and any other applicable law."

9/26/2025

Jason Coite, P.E
Transportation Principal Engineer
Bureau of Engineering and Construction

Date

Appendix

Summary of Best Management Practices by Minimum Control Measure

6.1.1 Public Education & Outreach Minimum Control Measures

Task ID	Task Deadline	Activity	Responsible Position	Measurable Goal	Comments
1.1	Ongoing	Implement a Public Education Program that include information on pet waste, application of fertilizers, herbicides and pesticides; impervious cover; impacts of illicit discharges and improper disposal of water into the MS4	Bureau Chief of Policy & Planning	Educational Program Areas Implemented	Educational materials have been uploaded to website
1.2	Ongoing	Develop or acquire current educational material from CTDEEP and other sources that identifies the pollutants associated with stormwater discharges, sources of pollutants, environmental impacts, and related pollution reduction material	Bureau Chief of Policy & Planning	Develop or acquire the educational material	Ongoing - will continue to acquire new information as it is created.
1.3	Ongoing	Waters with a stormwater pollutant of concern, educational materials should be specifically tailored and targeted to educate on the sources, impacts and available pollution reduction practices.	Bureau Chief of Policy & Planning	Depending on stormwater pollutant of concern, have the material developed/acquired beforehand.	Projects that fall within an impaired waterbody are identified and information pertinent to that pollutant is shared at public information for that given project.
1.4	Ongoing	Engage Communities that are targeted toward populations including students, farmers and contractors. Provide outreach to local organizations for the betterment of stormwater quality.	Bureau Chief of Policy & Planning Bureau Chief of Engineering & Construction	Provide specific educational materials and/or reach to local organizations for stormwater education	CTDOT will continue to work with local organizations interested in stormwater BMP's including the engineering community and local council of governments.

6.1.2 Public Involvement & Participation Minimum Control Measures

Task ID	Task Deadline	Activity	Responsible Position	Measurable Goal	Comments
2.1	Annual	Provide Public Notice of Annual Reports	Bureau Chief of Engineering & Construction	Document Public Notices of Reports	Ongoing
2.2	Annual	Public Participation Events	Bureau Chief of Policy & Planning Bureau Chief of Engineering & Construction	Host, conduct, or provide support for one public event and enact one public program	CTDOT will evaluate the best avenue to accomplish this task and will report the details in the annual report
2.3	Annual	Coordination with Municipal Partners	Bureau Chief of Policy & Planning Bureau Chief of Engineering & Construction	Host a meeting with municipal partners to implementation of MS4 permit requirements.	CTDOT is looking to leverage existing Council of Government meetings to assist in meeting this task

6.1.3 Illicit Discharge, Detection and Elimination Minimum Control Measures

Task ID	Task Deadline	Activity	Responsible Position(s)	Measurable Goal	Comments
3.1	On-going	Develop Legal Authority to Prohibit Illicit Discharges	Bureau of Engineering & Construction's Office of Environmental Compliance (BE&C's OEC) Commissioner's Office of Legal and Regulatory Affairs	Legal Authority Developed	Legal authority has been developed to the MEP
3.2	On-going	Develop Written IDDE Program	BE&C's OEC	Update IDDE Program Plan as Needed	Existing IDDE Written Plan to be updated on or before July 1, 2026
3.3	On-going	Develop program for citizen reporting of Illicit Discharges / Include citizen reports in annual report	BE&C's OEC	Illicit Discharge Program Developed and Reports Documented	The public can call a dedicated customer care phone number or send an email to report an Illicit Discharges
3.4	On-going	Develop tracking system for Illicit Discharge Investigation and Abatement Activities	BE&C's OEC	Illicit Discharge Tracking System Developed	System is in place and will continue to be implemented

Task ID	Task Deadline	Activity	Responsible Position(s)	Measurable Goal	Comments
3.5	July 1, 2029	Identify and map 100% of CTDOT's MS4 System in Priority Areas and Water Resources	Bureau Chief(s) – Engineering and Construction, Policy and Planning, Maintenance, Public Transit	100% of Mapping Completed	Mapping is currently estimated at 77% complete
3.6	June 30, 2030	Screen outfalls and key interconnection points.	BE&C's OEC	Screen a minimum of 20% of highest priority outfalls.	Screening activities will be documented reported in future annual reports
3.7	Annually	Provide Annual IDDE Training to Employees and Consultants	Bureau Chief(s) – Engineering and Construction, Policy and Planning, Maintenance, Public Transit	Annual Bureau Trainings Completed	Trainings are provided annually to CTDOT Employees and Consultants

6.1.4 Construction Site Stormwater Runoff Control Minimum Control Measures

Task ID	Task Deadline	Activity	Responsible Position(s)	Measurable Goal	Comments
4.1	On-going	Establish bylaw, regulation, standard conditions of approval, construction requirements or other legal authority that meet the requirements of the permit	Office of the State Traffic Administration (OSTA) Commissioner's Office of Legal and Regulatory Affairs Bureau Chief – Engineering and Construction	Legal Authority Developed	Legal authority has been developed to the MEP
4.2	On-Going	Ensure all CTDOT manuals are consistent with the construction measures in CTDEEP's E&S Manual, Stormwater Quality Manual and Construction Stormwater General Permit requirements	Bureau Chief - Engineering & Construction Bureau Chief – Policy & Planning	CTDOT Manuals are Consistent with E&S Manual, Stormwater Quality Manual and Construction Permit Requirements	

Task ID	Task Deadline	Activity	Responsible Position(s)	Measurable Goal	Comments
4.3	On-going	Develop and implement a plan outlining how all internal 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.	Bureau Chief - Engineering & Construction Bureau Chief – Policy & Planning	Internal Coordination Plan Developed	Coordination actively on-going between all involved parties within CTDOT
4.4	On-going	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 storm water controls or management practices to prevent or minimize impacts to water quality where considered.	Bureau Chief - Engineering & Construction Bureau Chief – Policy & Planning	Standard Practice in Place to Verify Appropriate Site Review was Completed	CTDOT actively reviews site plans for stormwater management and to minimize impact
4.5	On-going	Implement a procedure for notifying developers conducting projects that will connect to the CTDOT of their obligation to comply with the requirements of CTDEEP's Construction Stormwater General Permit.	Bureau Chief – Highway Operations Bureau Chief - Engineering & Construction	Standard Practice in Place to Verify Developers and/or Contractors are properly notified	CTDOT actively informs developers that connect to CTDOT that they must comply with the requirements of their stormwater pollution plan

6.1.5 Post Construction Stormwater Management Minimum Control Measures

Task ID	Task Deadline	Activity	Responsible Position(s)	Measurable Goal	Comments
5.1	June 30, 2022	Establish updated standard procedures, forms and conditions of approval that meet the LID / Runoff Reduction Legal Authority requirements of the permit	OSTA & Bureau Chief – Engineering & Construction Commissioner's Office of Legal and Regulatory Affairs	Legal Authority Developed	Legal authority has been developed to the MEP
5.2	On-Going	Ensure all CTDOT manuals are consistent with the construction measures in CTDEEP's E&SC Guidelines, Stormwater Quality Manual, and	Bureau Chief - Engineering & Construction Bureau Chief – Policy & Planning	CTDOT Manuals are Consistent with E&S Manual, Stormwater Quality Manual and Construction	

		Construction Stormwater General Permit requirements		Permit Requirements	
5.3	On-going	Implement runoff reduction / LID measures for development and redevelopment projects within CTDOT's MS4 area	Bureau Chief - Engineering & Construction Bureau Chief – Policy & Planning	Document runoff reduction / LID implementation efforts for projects	MS4 worksheets are completed for all projects
5.4	On-going	Calculate DCIA for 50% of CTDOT's MS4 Catchment Areas (Local Watershed Basins)	Bureau Chief - Engineering & Construction	Determine the Percentage of DCIA for CTDOT's Mapped Catchment or Local Watershed Areas	The calculation will be updated as more drainage systems are mapped
5.5	On-going	Implement a plan to ensure long term maintenance of stormwater management facilities	Bureau Chief – Highway Operations Bureau Chief - Engineering & Construction	Develop and Implement a Plan to Ensure Long Term Maintenance of Stormwater Management Facilities	CTDOT is actively maintaining maintenance facilities and repairing any damage to drainage structures

6.1.6 Pollution Prevention & Good Housekeeping Minimum Control Measures

Task ID	Task Deadline	Activity	Responsible Position	Measurable Goal	Comments
6.1	On-going	Develop & implement formal employee training program	All Bureaus	Conduct Annual Trainings for Bureaus	CTDOT will continue to develop trainings with updated information as it becomes available
6.2	On-going	Implement infrastructure repair/rehabilitation program	Bureau Chief - Engineering & Construction	Develop and Implement a repair/rehabilitation program	Inspections are ongoing for evaluating drainage infrastructure conditions. As infrastructure is identified for needing repair and replacement projects will continue to be developed.
6.3	July 1, 2019	Implement CTDOT MS4 Property and Operations Maintenance	Bureau Chief Highway Operations and Maintenance	Document and Report on Maintenance Activities Implemented	Maintenance efforts will continue to be documented in annual reports
6.4	On-going	Develop and implement sweeping program	Bureau Chief Highway Operations and Maintenance	Document and Report on Sweeping Activities	CTDOT is actively working on a spatial mapping system to collect all sweeping information

Task ID	Task Deadline	Activity	Responsible Position	Measurable Goal	Comments
6.5	On-going	Develop plan to optimize catch basin cleaning	Bureau Chief Highway Operations and Maintenance	Map, Inspect and Prioritize Catch Basins	
6.6	June 30, 2042	Inspect and clean (where necessary) catch basins	Bureau Chief Highway Operations and Maintenance	Map, Inspect and Prioritize Catch Basins	Will continue to progress as mapping is completed
6.7	Ongoing	Develop, implement and optimize standard operating procedures for snow management practices	Bureau Chief Highway Operations and Maintenance	Optimize, Document and Report on Snow Management Practices	Will update the standard procedures as needed
6.8	On-going	Track and report types of deicing materials used, lane miles treated and total amount of deicing material used	Bureau Chief Highway Operations and Maintenance	Document and Report on Deicing Material Usage	Will continue to report usage in annual report
6.9	On-going	Coordinate with interconnected MS4s	Bureau Chief Highway Operations and Maintenance	Ongoing coordination when issues arise	CTDOT will work collaboratively with other MS4s as issues arise
6.10	On-going	Implement a program to control the contribution of pollutants into the MS4	Bureau Chief - Engineering & Construction	This is accomplished through the CTDOT IDDE program	See CTDOT IDDE program
6.11	Ongoing	Implement additional measures for discharges to impaired waters from sites with high potential to contribute to the impairment	Bureau Chief - Engineering & Construction	Identify, Develop and Implement Measures to Mitigate Discharges with High Potential to Contribute to Impaired Waters	IDDE Written Plan addresses these discharges along with the use of SELDM