STORMWATER POLLUTION CONTROL PLAN TEMPLATE

Project name
Town, CT

State Project No.: XXX-XXX

Connecticut Department of Transportation

date

This Stormwater Pollution Control Plan (SPCP) is prepared to comply with the requirements for the General Permit for Stormwater Discharges (GPSD) from Construction Activities. Also to be considered part of the SPCP are the proposed construction plans, special provisions, and the Connecticut Department of Transportation's "Standard Specifications for Roads, Bridges and Incidental Construction" (Form 816) including supplements thereto and the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control

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1. Site Description

Site Description

This project consists of the construction of *insert project description, include is the project within a rural, residential, urban area. Are there any discharges to impaired waters, coastal waters? Is the project within an APA, public water supply watershed, etc? (list factors that may affect your ability to infiltrate or dictate your retention goals)*

The purpose of this project is to *insert purpose & need*

Site work includes *insert nature of construction activity*

Estimated Disturbed Area

The total area for this project site is *insert total area of site* acres. Of this area, *insert acres disturbed* acres will be disturbed by construction activities.

Estimated Runoff Coefficient

Provide runoff coefficient for post construction - sample provided below. Note these areas are depicted on the plans provided as well.

The runoff coefficient assumed for pavement is 0.9 and 1.0 for the building's roof. For the pervious areas, a coefficient of 0.3 was assumed.

Pre Construction

$$\frac{(0.94 \text{ ac.} \times 0.3)+(2.86 \text{ ac.} \times 0.9)+(0.18 \text{ ac.} \times 1.0)}{0.94 \text{ ac.} + 2.86 \text{ ac.} + 0.18 \text{ ac.}} = 0.76$$

Post-Construction

$$\frac{(2.16 \text{ ac.} \times 0.3)+(1.74 \text{ ac.} \times 0.9)+(0.15 \text{ ac.} \times 1.0)}{2.16 \text{ ac.} + 1.74 \text{ ac.} + 0.15 \text{ ac.}} = 0.58$$

The estimated runoff coefficients, with the corresponding contributing areas, are shown on Figures X and X.

Receiving Waters

The name of the receiving water is *insert receiving waterbody*; which drains to *insert ultimate receiving waterbody*.

It could be in certain cases that the immediate receiving water body is "wetlands associated with ABC Brook", which ultimately drains to ABC Brook

Extent of Wetlands on Site

Insert wetland acreage present on the site, discuss extent of Regulated floodplain areas on site. Stormwatercontrols should not be placed in wetlands or floodways.

2. Construction Sequencing

The contractor will be given approximately *insert overall construction timeframe* for the construction of all phases of the project.

The suggested sequence of construction is as follows:

1. Conduct a preconstruction meeting.
2. Install erosion controls at the effected inlets and at limits of disturbed slopes.
3. Perform clearing and grubbing activities.
4. *List major construction activities in sequence*
5. *List corresponding controls*
6. *Include a timetable for those major activities*
7. *Note the site must be phased to avoid disturbance of over 5 acres at one time*
8. *Note that for each phase you list, a plan sheet must be included that depicts those limits of disturbance*
9. *If providing a basin, it would be important to note information such as it being constructed and utilized during construction, and then re-graded / finalized for post construction use.*
10. *Information listed above and below in black is a general sample / suggestion and may require modification.*
11. Grade grass slopes and immediately stabilize. Establish turf, per plan, on all remaining disturbed areas. Install landscaping.
12. Remove erosion controls when it is determined that disturbed areas have been stabilized. (This determination will be made by the Engineer).
13. All post-construction stormwater structures shall be cleaned of construction sediment and any remaining silt fence shall be removed prior to the filing of the

"Notice of Termination Form".

14. Perform project cleanup.

If the construction sequencing activities create an area of disturbance between two (2) acres and five (5) acres per discharge point, the Contractor must submit to the Engineer a revised SWPCP for review and approval. The SWPCP must include locations of the temporary sedimentation trap per discharge point with a capacity to contain 134 cubic yards per acre of material in accordance with eth 2002 Guidelines. The Contractor shall provide an inspection and maintenance plan for the temporary sedimentation trap as part of the amended SWPCP.

3. Control Measures

(Note - locations must be shown on plans)

This section should be a narrative description (which matches the plans) of the control measures that will be used on site. They must be in conformance with the 2002 E & S manual, the 2004 SWQ manual or the DOT Qualified Products List.

Note that a reverse slope bench is required for any slope steeper than 3:1 that exceeds 15 feet vertically, unless engineered slope stabilization structures or measures are included, or a detailed soil mechanics analysis has been conducted (calculations must be provided). These areas must also be depicted on the plans.

Erosion and Sedimentation Controls

CT DOT will have construction inspection personnel assigned to the project in order to oversee the Contractor's operations to ensure compliance with the provisions of the Standard Specifications. Further CT DOT oversight is provided by the District # Environmental Coordinator and the Office of Environmental Planning.

The following timelines will be followed for the proposed construction activities:

- If construction activities are complete or have been temporarily halted for more than seven (7) days, stabilization activities will be implemented within three (3) days. *(See chapter 5 of the 2002 E & S Guidelines)*

- Areas that remain disturbed but inactive for at least 30 days shall receive temporary seeding or soil protection within seven (7) days.

- Disturbed areas that do not establish a vegetative cover within 30 days of seeding shall have erosion control blankets installed. Prior to the erosion control blanket installation, the soil would be prepared with the application of lime, fertilizer, and seed.

- Areas that will be disturbed past the planting season will be covered with a long-term, non-vegetative stabilization method that will provide protection through the winter.

- Stabilization practices will be implemented as quickly as possible in accordance with the Guidelines.

- The Contractor shall stabilize disturbed areas with temporary or permanent measures as quickly as possible after the land is disturbed. Requirements for soil stabilization are detailed in Form 816 Section 1.10.03, Best Management Practices.

Soil Stabilization and Protection

This section needs to discuss temporary and permanent soil stabilization practices for managing disturbed areas, and soil stockpiles, including a schedule. Vegetation should be preserved to the extent possible and disturbance should be minimized.

Temporary Stabilization Practices

(Note - locations must be shown on plans) samples provided below.

- Erosion Control Matting: On slopes steeper than 2:1 erosion control matting shall be used to stabilize the topsoil.

- Silt Fence: Silt fence shall be placed at the base of embankment

- Anti-Tracking Pads: Construction entrances (gravel anti-tracking pads) shall be constructed at truck access points to off –road route.

- Dust Control: Routine sweeping and application of dust suppression agents, including water and calcium chloride, over exposed subbase shall be completed for dust control.

Stabilization practices shall be implemented no more than three days after completion, as final grades are reached, or if work has been suspended for more than seven days.

Temporary seeding shall be spread over any disturbed areas which will remain inactive for at least 30 days. Areas to remain disturbed through winter shall be protected with non-vegetative stabilization measures. The Contractor must provide an Erosion and Sedimentation Control plan for each winter season during construction operations.

The Contractor may use other controls in the project as necessary if they conform to the 2002 Connecticut Erosion and Sedimentation Guidelines and are approved by the Engineer. The contractor will be required to provide the necessary details for any erosion controls not specifically called for on the project plans.

During construction, all areas disturbed by the construction activity that have not been stabilized, structural control measures, and locations where vehicles enter or exit the site shall be inspected at least once every seven calendar days. These areas shall also be inspected within 24 hours following any storm in which 0.5 inches or greater of rain occurs.

Permanent Stabilization Practices

Be sure to cover in this section a discussion of reverse slope benching if necessary

All new embankments disturbed by construction and unpaved areas that are graded or disturbed by construction will receive erosion control matting, topsoil and/or turf establishment. The Contractor may use other permanent stabilization practices approved by the Engineer and conforming to Connecticut's Erosion and Sedimentation Control Guidelines (2002).

Here you can provide a narrative (that matches the plans) of any landscaping (landscaping plans should be included in submission) , preservation of existing trees or vegetation.

Structural Measures

(Note - locations must be shown on plans)

Provide a narrative (that matches the plans) of any structural measures to divert flows away from exposed soils, store flows, or otherwise limit runoff and discharge of pollutants. Structural measures cannot be located within wetlands or floodways and should not be located within regulated floodplains.

For points of discharge from disturbed sites with a drainage area of 2 to 5 acres, a temporary sediment trap must be provided and maintained until final stabilization of the contributing area.

For points of discharge from disturbed sites with a drainage area of greater than 5 acres, a temporary sediment basin must be provided and maintained until final stabilization of the contributing area.

Off-site flows should be diverted around construction areas (keep clean water clean).

Maintenance

All construction activities and related activities shall conform to the requirements of Section 1.10 "Environmental Compliance" of ConnDOT's Standard Specifications, Form 816. In general, all construction activities shall proceed in such a manner so as not to pollute any wetlands, watercourses, water body, and conduit carrying stormwater. The Contractor shall limit, in so far as possible, the surface area of earthen materials exposed by construction activity and immediately provide temporary and permanent pollution control to prevent soil erosion and contamination on the site. Water pollution control provisions and best management practices per

Section 1.10.03 of the Standard Specifications shall be administered during construction. Control measures shall be inspected and maintained in accordance with the 2002 Guidelines and as directed by the Engineer.

4 Dewatering Wastewaters

Dewatering Guidelines

Discuss any planned dewatering and depict locations on plans. Dewatering devices cannot be located within wetlands or floodways unless previously permitted via DEEP IWRD. This narrative should discuss any activities that are expected to require dewatering and a brief description of what controls will be utilized (temporary dewatering basin, temporary outfall protection, ect). If dewatering is not anticipated, the paragraph below can be used as a guide.

If encountered, dewatering wastewaters will be infiltrated into the ground unless otherwise directed by the Engineer. When dewatering is necessary, pumps used shall not be allowed to discharge directly into a wetland or watercourse. Prior to any dewatering, the Contractor must submit to the Engineer a written proposal for specific methods and devices to be used, and must obtain the Engineer's written approval of such methods and devices, including, but not limited to, the pumping of water into a temporary sedimentation basin, providing surge protection at the inlet or outlet of pumps, floating the intake of a pump, or any other method for minimizing and retaining the suspended solids. If the Engineer determines that a pumping operation is causing turbidity problems, the Contractor shall halt said operation until a means of controlling the turbidity is submitted by the Contractor in writing to the Engineer, approved in writing by the Engineer and implemented by the Contractor. No discharge of dewatering wastewater shall contain or cause a visible oil sheen, floating solids or foaming in the receiving water. If required, all activities are to be performed in compliance with ConnDOT Form 816.

5. Post-Construction Stormwater Management

(all controls in this section must be in conformance with the 2004 SWQ Manual. Be sure to use the same call outs for structures as in the manual)

Post-construction Guidelines

(Note - locations must be shown on plans)

This section should be a narrative of measures that will stay in place following construction and how they will be maintained. Structural measures cannot be located in wetlands or floodways and

should not be located within floodplains unless previously permitted by DEEP IWRD. A sample is provided below.

After the project is complete, the Department will perform the following maintenance and restorative measures:

- Litter/debris will be removed from the site regularly.
- Mowing and maintenance of the turf areas and vegetated areas will occur as needed.
- Riprap outlet protection will be inspected and repaired annually or as needed.
- The stormwater basin will be inspected and repaired annually or as needed. Sediment will be removed when it interferes with the detention capacity of the basin. Outlets will be checked for excessive scour and repaired as needed.

Post Construction Performance Standards

Redevelopment

(sites that are already developed or have more than 40% impervious cover)

Insert equation for effective impervious cover
Insert equation for water quality volume
Insert equation for water quality flow

Explain how site has been designed to meet runoff volume requirements. ***For sites that are already developed where there is more than 40% effective impervious cover,*** *site must be designed to retain on-site half the water quality volume for the site and provide additional stormwater treatment without retention for discharges up to the full water quality volume for sediment, floatables and nutrients to the maximum extent achievable using measures that are technologically available and economically practicable and achievable in light of best industry practice.*

If this retention and treatment cannot be achieved, describe:

- *The measures taken to maximize runoff reduction on site;*
- *The reasons those are the maximum extent achievable;*
- *The alternative retention volume you are providing; and*
- *A description of the measures used to provide additional treatment above the alternative volume.*

For Roadway and other linear projects:

For the developed portion of the ROW:

If the full retention standard cannot be met; describe the alternative retention provided and the treatment measures provided.

If the effective impervious cover will not be increased *within a given watershed, stormwater*

*treatment measures must be provided, but retention of half the water quality volume is **NOT** required.*

Other development

(sites that are undeveloped or have less than 40% impervious cover)

*Explain how site has been designed to meet runoff volume requirements. **For sites that are undeveloped or where there is less than 40% effective impervious cover,** site must be designed to retain on-site **the full water quality volume for the site**. If there are site restrictions preventing such treatment, these reasons must be described along with all runoff reduction and treatment practices that are provided, similar to information listed above.*

Post Construction Performance Standards

Runoff Reduction and LID Practices

Describe how site incorporates runoff reduction, LID and other measures to meet the performance standards, promote groundwater recharge and minimize post construction impacts to water quality. LID practices likely most suitable for DOT projects include;
Sheet flow to conservation areas, bioretention areas, landscape infiltration, grass swales, bio-swales, wet swales, stormwater ponds, stormwater wetlands, stormwater filtering systems, stormwater infiltration & permeable pavement. Discussion of long term maintenance should be included.

*If LID is not possible, the following info is needed to demonstrate such: (in narrative **and on the plan**):*

- *The location of all areas with soils suitable for infiltration and areas best suited for infiltration*
- *The location of all areas unsuitable or least suitable for infiltration (high water table, bedrock)*
- *AOEC's that would make infiltration inappropriate*

Suspended Solids and Floatables Removal

Describe post construction stormwater management measures. A goal of 80% removal of the annual sediment load from the stormwater discharge shall be used in designing stormwater measures. Third party verification can be used for HDS. The capability of such measures can be demonstrated by providing the WQV and / or WQF calculations for structures.

Velocity Dissipation

Describe velocity dissipation devices (splash pads) at outfall locations and provide supporting calculations. (proper sizing of riprap)

6. Other Controls

Waste Disposal

Construction site waste shall be properly managed and disposed of during the entire construction period. Additionally,

- A waste collection area will be designated. The selected area will minimize truck travel through the site and will not drain directly to the adjacent wetlands.
- Waste collection shall be scheduled regularly to prevent the containers from overfilling.
- Spills shall be cleaned up immediately.
- Defective containers that may cause leaks or spills will be identified through regular inspection. Any found to be defective will be repaired or replaced immediately.
- Any stockpiling of materials should be confined to the designated area as defined by the engineer.

Washout Areas

Washout of applicators, containers, vehicles and equipment for concrete shall be conducted in a designated washout area. No surface discharge of washout wastewaters from the area will be allowed. All concrete washwater will be directed into a container or pit such that no overflows can occur. Washout shall be conducted in an entirely self-contained system and will be clearly designed and flagged or signed where necessary. The washout area shall be located outside of any buffers and at least 50 feet from any stream, wetland or other sensitive water or natural resources as determined or designated by CTDOT Office of Environmental Planning.

The designated area shall be designed and maintained such that no overflows can occur during rainfall or after snowmelt. Containers or pits shall be inspected at least once a week to ensure structural integrity, adequate holding capacity and will be repaired prior to future use if leaks are present. The contractor shall remove hardened concrete waste when it accumulates to a height of ½ of the container or pit or as necessary to avoid overflows. All concrete waste shall be disposed of in a manner consistent will all applicable laws, regulations and guidelines.

Anti-tracking Pads and Dust Control

Off –site vehicle tracking of sediments and the generation of dust shall be minimized.
Temporary anti-tracking pads from the active work site to the existing pavement will be installed and maintained at the locations shown on the plans. The contractor shall:

- Maintain the entrance in a condition which will prevent tracking and washing of sediment onto paved surfaces.

- Provide periodic top dressing with additional stone or additional length as conditions demand.
- Repair any measures used to trap sediment as needed.
- Immediately remove all sediment spilled, dropped, washed or tracked onto paved surfaces.
- Ensure roads adjacent to a construction site are left clean at the end of each day.

If the construction entrance is being properly maintained and the action of a vehicle traveling over the stone pad is not sufficient to remove the majority of the sediment, then the contractor shall either:

- Increase the length of the construction entrance,
- Modify the construction access road surface, or
- Install washing racks and associated settling area or similar devices before the vehicle enters a paved surface.

For construction activities which cause airborne particulates, wet dust suppression shall be utilized. Construction site dust will be controlled by sprinkling the ground surface with water until it is moist on an as-needed basis. The volume of water sprayed shall be such that it suppresses dust yet also prevents the runoff of water.

Post-Construction

Upon completion of construction activities and stabilization of the site, all post-construction stormwater structures, including *insert a brief description of any structural measures*, shall be cleaned of construction sediment and any remaining silt fence shall be removed prior to acceptance of the project by CTDOT. Sediment shall be properly disposed of in accordance with all applicable laws, regulations and guidelines.

Maintaining and Storing Vehicles and Equipment

The contractor shall take measures to prevent any contamination to wetlands and watercourses while maintaining and storing construction equipment on the site. All chemical and petroleum containers stored on site shall be provided with impermeable containment which will hold at least 110% of the volume of the largest container, or 10% of the total volume of all containers in the area, whichever is larger, without overflow from the containment area. All chemicals and their containers shall be stored under a roofed area except for those stored in containers of 100 gallon capacity or more, in which case double-walled tanks will suffice.

7. Inspections

Inspection Guidelines

All construction activities shall be inspected initially for Plan implementation and then weekly for Routine Inspections.

During construction, all areas disturbed by the construction activity that have not been stabilized, all erosion and sedimentation control measures, all structural control measures, soil stockpile areas, washout areas and locations where vehicles enter or exit the site shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and impacts to receiving waters at least once every seven calendar days and within 24 hours of the end of a storm that generates a discharge.

For storms that end on a weekend, holiday or other time in which working hours will not commence within 24 hours, an inspection is required within 24 hours only for storms that equal or exceed 0.5 inches. For lesser storms, inspection shall occur immediately upon the start of subsequent normal working hours.

Where sites have been temporarily or finally stabilized, such inspection shall be conducted at least once every month for three months.

Qualified personnel provided by the DOT *District #* Office shall conduct Inspections.

Items to be inspected: the following items shall be inspected as described below:

Item	Procedure
List E & S and structural measures and describe inspection parameters per 2002 E & S Manual	
Silt Fence	Silt fence shall be inspected to ensure that the fence line is intact with no breaks or tears. The fence shall be firmly anchored to the ground. Areas where the fence is excessively sagging or where support posts are broken or uprooted shall be noted. Depth of sediment behind the fence shall be noted.
Catch Basin Protection	Protective measures shall be inspected to ensure that sediment is not entering the catch basins. Catch basin sumps shall be monitored for sediment deposition. Hay bales shall be inspected to ensure they have not clogged.
Vehicle Entrances / Exits	Locations where vehicles enter or exit the site shall be inspected for evidence of off-site tracking.
General	Construction areas and the perimeter of the site shall be inspected for any evidence of debris that may blow or wash off site or that has blown or washed off site. Construction

areas shall be inspected for any spills or unsafe storage of materials that could pollute off site waters.

8. Keeping Plans Current

Revisions to Stormwater Pollution Control Plans:

CTDOT shall amend the Plan if the actions required by the Plan fail to prevent pollution or otherwise comply with provisions of the General Permit. The Plan shall also be amended whenever there is a change in contractors or sub-contractors at the site. If the results of the inspections require modifications to the Stormwater Pollution Control Plan, the plans shall be revised as soon as practicable after the inspection. Such modifications shall provide for a timely implementation of any changes to non-engineered controls on the site within 24 hours and implementation of any changes to the plan within 3 (three) calendar days following the inspection. For Engineered measures, corrective actions shall be implemented on site within 7 (seven) days and incorporated into a revised Plan within 10 (ten) days of the date of inspection

In no event shall the requirements to keep the Plan current or update a Plan, relieve the permittee and their contactor(s) of the responsibility to properly implement any actions required to protect the waters of the State and to comply with all conditions of the permit.

9. Monitoring Requirements

A written report summarizing the scope of the inspection, the name(s) and qualifications of inspection personnel, the date and time of the inspection, major observations relative to the implementation of the Pollution Control Plan, and actions taken shall be completed within 24 hours of the inspection. This report shall be retained as part of the Stormwater Pollution Control Plan for at least five years after the date of the inspection.

Sampling is required of all point source discharges of Stormwater from disturbed areas except for linear projects, 10 substantially identical outfalls may be identified for one representative discharge (discharge points in this case shall have similar soil type, type of stormwater control used, and slope). All sampling points must be identified on the Plan.

Turbidity monitoring shall be conducted at the ## locations depicted on the Plan utilizing a procedure consistent with 40 CFR Part 136 (http://www.epa.gov/region9/qa/pdfs/40cfr136_03.pdf) and may be taken manually or by an in-situ turbidity probe or other automatic sampling device equipped to take individual turbidity readings. The first sample shall be taken within the first hour

of stormwater discharge from the site and at least three grab samples shall be taken during a storm event and shall be representative of the flow and characteristics of the discharge. Sampling shall be conducted at least monthly when there is a discharge of stormwater from the site while construction activity is ongoing, until final stabilization of the drainage area associated with each outfall is achieved.

Samples shall be taken during normal working hours, which for this project shall be defined as *Enter Business hours – i.e. Monday through Friday, 8 am to 6 pm.* If a storm continues past working hours, sampling shall resume the following morning or the morning of the next working day following a weekend or Holiday, as long as the discharge continues. Sampling may be temporarily suspended when conditions exist that may reasonably pose a threat to the safety of the person taking the sample.

Within 30 days following the end of each month, the stormwater sampling results shall be submitted on the Stormwater Monitoring Report (SMR) and submit in accordance with Net DMR. If there is no stormwater discharge during a month, sampling is not required, however, SMR's indicating "no discharge" shall still be submitted as required.

10. Contractors

General

This section shall identify all Contractors and Subcontractors who will perform on site actions which may reasonably be expected to cause or have the potential to cause pollution of the waters of the State.

Certification Statement

All contractors and subcontractors must sign the attached statement. All certification will be included in the Stormwater Pollution Control Plan.

State Project No. XXX-XXX

Project description
Town, CT

"I certify under penalty of law that I have read and understand the terms and conditions of the general permit for the discharge of stormwater associated with construction activity. I understand that as Contractor on the project, I am covered by this general permit, and must comply with the terms and conditions of this permit, including, but not limited to, the requirements of the Stormwater Pollution Control Plan prepared for this project."

GENERAL CONTRACTOR

Signed:_____ Date:_____

Title:_____

Firm:_____ Telephone:_____

Address:_____

_____

_____

SUBCONTRACTOR

Signed:_____ Date:_____

Title:_____

Firm:_____ Telephone:_____

Address:_____

_____

_____

General:

This Stormwater Pollution Control Plan (SPCP) is prepared to comply with the requirements for the General Permit for Stormwater Discharges (GPSD) from Construction Activities. Also to be considered part of the SPCP are the proposed construction plans, special provisions, and the Connecticut Department of Transportation's "Standard Specifications for Roads, Bridges and Incidental Construction" (Form 816) including supplements thereto and the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control and 2004 Stormwater Quality Manual.

List of applicable Figures / Plans:

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10 Yr. Basin Routing	Figure 8

Appendix C – Plan Sheets

Sedimentation and Erosion Control	C-003
Site Plan-	C-004
Drainage and Utility Plan-	C-005
Grading Plan-	C-006
Civil Details -	C-008
Civil Details -	C-009
Landscape Design Plan-	LDS-02

Appendix D – Stormwater Monitoring Report Form

Provide copy of Form
http://www.ct.gov/deep/lib/deep/permits_and_licenses/water_discharge_general_permits/storm_const_SMR.pdf

Appendix E – Notice of Termination Form

Provide copy of Form

http://www.ct.gov/deep/lib/deep/permits_and_licenses/water_discharge_general_permits/storm_const_termination.pdf