

Stormwater Management Permit

Proposed Industrial Outdoor Storage Yard

**1400 Hilledale Avenue
Haverhill, Massachusetts**

LONG - TERM POLLUTION PREVENTION PLAN

Prepared for:

**Singh Realty Group, LLC
6 Fondi Road
Haverhill, MA 01832**

Prepared by:

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Submitted To:

City of Haverhill ~ Conservation Commission

Proposed Industrial Outdoor Storage Yard
1400 Hilldale Avenue
Haverhill, Massachusetts
Long Term Pollution Prevention Plan

Site Description

Project Name: Proposed Industrial Outdoor Storage Yard

Project Location: 1400 Hilldale Avenue ~ Haverhill, MA 01832

Latitude & Longitude: 42.8117°, -71.1187°

Applicant Address: Singh Realty Group, LLC
6 Fondi Road
Haverhill, MA 01832

**Party Responsible for Implementation
of Long--Term Pollution Prevention Plan:** **Applicant/Owner**

Name of Receiving Water: Bordering Vegetated Wetlands located on site. Closest receiving water is Little River located to the east of the site.

Estimated Operation and Maintenance Budget: \$5,000/year

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Maintenance / Inspection Procedures

The following maintenance and inspection procedures shall be followed so as to ensure proper erosion and sediment control after construction is complete and the site has become completely stabilized:

1. Infiltration chambers should be inspected after every major storm event in the first few months after construction to ensure proper stabilization and function. Thereafter, the chambers shall be inspected once per year. This includes the inspection of all outlet pipes and rip rap splash pads.
2. Paved areas shall be monitored on a perpetual basis. Trash and any foreign debris shall be removed upon inspection.
3. Paved areas shall be swept at least twice per year, especially in late April or early May after the winter sanding season.
4. Any permanent dumpster(s) on site shall be fenced in, covered at all times, and shall be emptied regularly.
5. Any observed litter or debris should be removed from the stormwater management areas upon observation.
6. Vehicles stored on-site shall be maintained so as to ensure that no oils, greases, fuels, or any other foreign substance be allowed to enter any portion of the drainage systems.
7. Catch basins shall be inspected at least two times per year.
8. Sediment shall be removed from the catch basin on a minimum annual basis or when it has accumulated to within 2-feet of the outlet pipe elevation (sump at 50% capacity).
9. Contech Separator units shall be inspected and maintained in accordance with guidelines provided by Contech. At a minimum, the Contech units shall be inspected at least two times per year, and sediments should be removed on an annual basis, or when the depth of deposits are greater than, or equal to, half the sump depth.
10. Inspect all embankments for erosion. Any washed out areas must be repaired, then loamed, seeded and mulched, as necessary.
11. Inspection reports shall be prepared and compiled for reference.

Snow Storage

The Owner shall be responsible for maintaining adequate snow storage areas on site located within impervious areas only. The dumping of snow into existing wetland areas and/or buffer areas shall be prohibited.

Possible Snow Storage areas shown on the Site Plans shall be considered approximate. Alternatively, snow banks can be removed and transported via truck to a specified snow farm to be determined by the snow plowing contractor. The Owner shall be responsible for reviewing all requirements with the snow plowing contractor.

CDS® Inspection and Maintenance Guide



Maintenance

The CDS system should be inspected at regular intervals and maintained when necessary to ensure optimum performance. The rate at which the system collects pollutants will depend more heavily on site activities than the size of the unit. For example, unstable soils or heavy winter sanding will cause the grit chamber to fill more quickly but regular sweeping of paved surfaces will slow accumulation.

Inspection

Inspection is the key to effective maintenance and is easily performed. Pollutant transport and deposition may vary from year to year and regular inspections will help ensure that the system is cleaned out at the appropriate time. At a minimum, inspections should be performed twice per year (e.g. spring and fall) however more frequent inspections may be necessary in climates where winter sanding operations may lead to rapid accumulations, or in equipment washdown areas. Installations should also be inspected more frequently where excessive amounts of trash are expected.

The visual inspection should ascertain that the system components are in working order and that there are no blockages or obstructions in the inlet and separation screen. The inspection should also quantify the accumulation of hydrocarbons, trash, and sediment in the system. Measuring pollutant accumulation can be done with a calibrated dipstick, tape measure or other measuring instrument. If absorbent material is used for enhanced removal of hydrocarbons, the level of discoloration of the sorbent material should also be identified during inspection. It is useful and often required as part of an operating permit to keep a record of each inspection. A simple form for doing so is provided.

Access to the CDS unit is typically achieved through two manhole access covers. One opening allows for inspection and cleanout of the separation chamber (cylinder and screen) and isolated sump. The other allows for inspection and cleanout of sediment captured and retained outside the screen. For deep units, a single manhole access point would allow both sump cleanout and access outside the screen.

The CDS system should be cleaned when the level of sediment has reached 75% of capacity in the isolated sump or when an appreciable level of hydrocarbons and trash has accumulated. If absorbent material is used, it should be replaced when significant discoloration has occurred. Performance will not be impacted until 100% of the sump capacity is exceeded however it is recommended that the system be cleaned prior to that for easier removal of sediment. The level of sediment is easily determined by measuring from finished grade down to the top of the sediment pile. To avoid underestimating the level of sediment in the chamber, the measuring device must be lowered to the top of the sediment pile carefully. Particles at the top of the pile typically offer less resistance to the end of the rod than consolidated particles toward the bottom of the pile. Once this measurement is recorded, it should be compared to the as-built drawing for the unit to determine whether the height of the sediment pile off the bottom of the sump floor exceeds 75% of the total height of isolated sump.

Cleaning

Cleaning of a CDS system should be done during dry weather conditions when no flow is entering the system. The use of a vacuum truck is generally the most effective and convenient method of removing pollutants from the system. Simply remove the manhole covers and insert the vacuum hose into the sump. The system should be completely drained down and the sump fully evacuated of sediment. The area outside the screen should also be cleaned out if pollutant build-up exists in this area.

In installations where the risk of petroleum spills is small, liquid contaminants may not accumulate as quickly as sediment. However, the system should be cleaned out immediately in the event of an oil or gasoline spill should be cleaned out immediately. Motor oil and other hydrocarbons that accumulate on a more routine basis should be removed when an appreciable layer has been captured. To remove these pollutants, it may be preferable to use absorbent pads since they are usually less expensive to dispose than the oil/water emulsion that may be created by vacuuming the oily layer. Trash and debris can be netted out to separate it from the other pollutants. The screen should be power washed to ensure it is free of trash and debris.

Manhole covers should be securely seated following cleaning activities to prevent leakage of runoff into the system from above and also to ensure that proper safety precautions have been followed. Confined space entry procedures need to be followed if physical access is required. Disposal of all material removed from the CDS system should be done in accordance with local regulations. In many jurisdictions, disposal of the sediments may be handled in the same manner as the disposal of sediments removed from catch basins or deep sump manholes.



CDS Model	Diameter		Distance from Water Surface to Top of Sediment Pile		Sediment Storage Capacity	
	ft	m	ft	m	yd3	m3
CDS2015-4	4	1.2	3.0	0.9	0.9	0.7
CDS2015	5	1.5	3.0	0.9	1.3	1.0
CDS2020	5	1.5	3.5	1.1	1.3	1.0
CDS2025	5	1.5	4.0	1.2	1.3	1.0
CDS3020	6	1.8	4.0	1.2	2.1	1.6
CDS3030	6	1.8	4.6	1.4	2.1	1.6
CDS3035	6	1.8	5.0	1.5	2.1	1.6
CDS4030	8	2.4	4.6	1.4	5.6	4.3
CDS4040	8	2.4	5.7	1.7	5.6	4.3
CDS4045	8	2.4	6.2	1.9	5.6	4.3
CDS5640	10	3.0	6.3	1.9	8.7	6.7
CDS5653	10	3.0	7.7	2.3	8.7	6.7
CDS5668	10	3.0	9.3	2.8	8.7	6.7
CDS5678	10	3.0	10.3	3.1	8.7	6.7

Table 1: CDS Maintenance Indicators and Sediment Storage Capacities



Support

- Drawings and specifications are available at www.contechstormwater.com.
- Site-specific design support is available from our engineers.

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CDS Inspection & Maintenance Log

CDS Model: _____ Location: _____

[illegible]

1. The water depth to sediment is determined by taking two measurements with a stadia rod: one measurement from the manhole opening to the top of the sediment pile and the other from the manhole opening to the water surface. If the difference between these measurements is less than the values listed in table 1 the system should be cleaned out. **Note: to avoid underestimating the volume of sediment in the chamber, the measuring device must be carefully lowered to the top of the sediment pile.**
2. For optimum performance, the system should be cleaned out when the floating hydrocarbon layer accumulates to an appreciable thickness. In the event of an oil spill, the system should be cleaned immediately.