LONG TERM STORMWATER OPERATION AND MAINTENANCE PLAN AND SPILL PREVENTION MANUAL

Edgartown Stop & Shop Expansion
237-257 Upper Main Street
Edgartown, Massachusetts

PREPARED FOR
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PREPARED BY

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Maintenance Checklists

Device Location Map

Product Literature
Section A – Source Control

A.1 Source Control

A comprehensive source control program will be implemented, which includes the following components:

› Pavement sweeping in the parking areas and drive aisles.
› Catch basin and water quality unit cleaning.
› Clearing litter from the parking area, islands, and perimeter landscape areas.
› Enclosure and regular maintenance of all dumpsters.
› Spill Prevention training.
Section B – Spill Prevention

B.1 Spill Prevention

Spill prevention equipment and training will be provided by the property management company.

B.1.1 Initial Notification

In the event of a spill the facility and/or construction manager or supervisor will be notified immediately.

Facility Manager (name): ___________________________ Mary McEvoy

Facility Manager (phone): 508.627.9522

Construction Manager (name): To be determined

Construction Manager (phone): ___________________________

The supervisor will first contact the Fire Department and then notify the Police Department, the Public Health Commission and the Conservation Commission. The Fire Department is ultimately responsible for matters of public health and safety and should be notified immediately.
### B.1.2 Further Notification

Based on the assessment from the Fire Chief, additional notification to a cleanup contractor may be made. The State Department of Environmental Protection (DEP)/Department of Environmental Services (DES) and the EPA may be notified depending upon the nature and severity of the spill. The Fire Chief will be responsible for determining the level of cleanup and notification required. The attached list of emergency phone numbers shall be posted in the main construction/facility office and readily accessible to all employees. A hazardous waste spill report shall be completed as necessary using the attached form.

**Emergency Notification Phone Numbers**

| 1. FACILITY MANAGER | PHONE: _________________ |
| NAME: To be determined | BEEPER/CELL: _______________, _______________ |
| HOME PHONE: _________________ |

| ALTERNATE CONTACT: |
| NAME: _________________ |
| PHONE: _________________ |
| BEEPER/CELL: _______________, _______________ |
| HOME PHONE: _________________ |

| 2. FIRE & POLICE DEPARTMENT | EMERGENCY: **911** |
| PHONE: _________________ |

| 3. CLEANUP CONTRACTOR: |
| To be determined _________________ |
| ADDRESS: |
| _________________ |

| 4. STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP)/DEPARTMENT OF ENVIRONMENTAL SERVICES (DES) | EMERGENCY PHONE: (617) 556-1133 |
| PHONE: (617) 860-4300 |

| 5. NATIONAL RESPONSE CENTER | PHONE: (800) 424-8802 |
| ALTERNATE: U.S. ENVIRONMENTAL PROTECTION AGENCY | EMERGENCY: (617) 223-7265 |
| BUSINESS: (617) 860-4300 |

| 6. MUNICIPAL HEALTH DEPARTMENT | PHONE: 508-627-6120 |

| 7. MUNICIPAL CONSERVATION COMMISSION | PHONE: 508-627-6165 |
Hazardous Waste / Oil Spill Report

Date: ______ / ______ / ______  Time: ______ AM / PM

Exact location ________________________________________________________________

Type of equipment: ____________________________  Make: ______________  Size: __________

License or S/N: ________________________________  Weather Conditions: __________________________

On or near water  
- Yes  If yes, name of body of water: __________________________
- No

Type of chemical / oil spilled: ______________________________________________________

Amount of chemical / oil spilled: ____________________________________________________

Cause of spill: __________________________________________________________________

Measures taken to contain or clean up spill: _____________________________________________

________________________________________________________________________

Amount of chemical / oil recovered: ____________  Method: ______________

Material collected as a result of clean up

____________________ drums containing: _____________________________________________

____________________ drums containing: _____________________________________________

____________________ drums containing: _____________________________________________

Location and method of debris disposal: ______________________________________________

Name and address of any person, firm, or corporation suffering damages: ______________________

________________________________________________________________________

Procedures, method, and precautions instituted to prevent a similar occurrence from recurring: ______________________

________________________________________________________________________

Spill reported to General Office by: ______________________  Time: ______ AM / PM

Spill reported to DEP / National Response Center by: ______________________

DEP Date: ______ / ______ / ______  Time: ______ AM / PM  Inspector: ______________

NRC Date: ______ / ______ / ______  Time: ______ AM / PM  Inspector: ______________

Additional comments: ____________________________________________________________
B.1.3 **Assessment – Initial Containment**

The supervisor or manager will assess the incident and initiate containment control measures with the appropriate spill containment equipment included in the spill kit kept on-site. A list of recommended spill equipment to be kept on site is included on the following page.

**Fire / Police Department:** 911

Municipality Health Department 508-627-6120

Municipality Conservation Commission 508-627-6165

B.1.4 **Emergency Response Equipment**

The following equipment and materials shall be maintained at all times and stored in a secure area for long-term emergency response need.

<table>
<thead>
<tr>
<th>Supplies</th>
<th>Recommended suppliers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sorbent Pillows/&quot;Pigs&quot; 2</td>
<td><a href="http://www.newpig.com">http://www.newpig.com</a></td>
</tr>
<tr>
<td>Sorbent Boom/Sock 25 FEET</td>
<td>Item # KIT276 — mobile container with two pigs, 26 feet of sock, 50 pads, and five pounds of absorbent (or equivalent)</td>
</tr>
<tr>
<td>Sorbent Pads 50</td>
<td><a href="http://www.forestry-suppliers.com">http://www.forestry-suppliers.com</a></td>
</tr>
<tr>
<td>Lite-Dri® Absorbent 5 POUNDS</td>
<td>Item # 43210 — Manhole cover pick (or equivalent)</td>
</tr>
<tr>
<td>Shovel 1</td>
<td>Item # 33934 — Shovel (or equivalent)</td>
</tr>
<tr>
<td>Pry Bar 1</td>
<td>Item # 90926 — Gloves (or equivalent)</td>
</tr>
<tr>
<td>Goggles 1 PAIR</td>
<td>Item # 23334 — Goggles (or equivalent)</td>
</tr>
<tr>
<td>Gloves – Heavy 1 PAIR</td>
<td></td>
</tr>
</tbody>
</table>
Section C – Snow Management

C.1 Snow Management

Snow storage areas will be managed to prevent blockage of storm drain catch basins and landscape drains. Snow combined with sand and debris may block a storm drainage system, diminishing the infiltration capacity of the system and causing localized flooding.
Section D – Maintenance of Stormwater Management Systems

D.1 Owner/Operator Responsible for Operation and Maintenance

To be determined.

D.2 Maintenance of Stormwater Systems

The following maintenance program shall ensure the continued effectiveness of the structural water quantity and quality controls shown on the project Site Plans prepared by VHB. Refer to the Operation and Maintenance Location Plan.

D.2.1 Pavement Systems

Asphalt Pavement

› Sweep or vacuum standard asphalt pavement areas at least twice per year with a commercial cleaning unit and properly dispose of removed material.

› More frequent sweeping of paved surfaces will result in less accumulation in catchment areas, less cleaning of subsurface structures, and less disposal costs.
D.2.2 Structural Stormwater Management Devices

Deep Sump Hooded Catch Basins, Yard Drains, and Trench Drains

› Inspect the unit post construction, prior to being placed into service and ensure unit is clean and free of any structural damage.
› Inspect quarterly for the first year to determine the oil and sediment accumulation rate.
› Inspect and clean the catch basins at least 4 times per year or whenever the depth of sediment is greater than or equal to half the sump depth. Cleaning/inspection times must include at the end of fall foliage season and at the end of snow removal season.
› Inspect the units immediately after an oil, fuel or chemical spill.
› A licensed waste management company should remove oil and sediment and dispose per state and local regulations.

Roof Drain Leaders

› Perform routine roof inspections twice per year.
› Keep roofs clean and free of debris.
› Keep roof drainage systems clear.
› Keep roof access limited to authorized personnel.
› Clean inlets twice per year as necessary.

Water Quality Devices – Contech CDS

The stormwater drainage system has two Contech CDS water quality devices which remove sediment and hydrocarbons from stormwater runoff.

› Inspect devices monthly for the first three months after construction.
› After initial three-month period, all water quality units are to be inspected at least four times per year and cleaned a minimum of at least once per year (when sediment reaches 8” in depth) and disposed of at an approved offsite facility in accordance with all applicable regulations.
› Remove oil through 6” inspection/oil port.
› Remove sediment through 24” outlet riser pipe.
› Follow manufacturer instructions and contact manufacturer if system is malfunctioning.

Subsurface Infiltration Basin – Stormtech

The subsurface infiltration basin is used to detain and infiltrate asphalt and rooftop runoff.
The subsurface infiltration system will be inspected at least once each year by removing the manhole/access port covers and determining the thickness of sediment that has accumulated.

If sediment is more than six inches deep, it must be suspended via flushing with clean water and removed using a vactor truck.

System will be observed after rainfalls to see if it is properly draining.

**D.2.3 Vegetated Stormwater Management Devices**

**Vegetated Areas Maintenance**

Although not a structural component of the drainage system, the maintenance of vegetated areas may affect the functioning of stormwater management practices. This includes the health/density of vegetative cover and activities such as the application and disposal of lawn and garden care products, disposal of leaves and yard trimmings.

- Inspect planted areas on a semi-annual basis and remove any litter.
- Maintain planted areas adjacent to pavement to prevent soil washout.
- Immediately clean any soil deposited on pavement.
- Re-seed bare areas; install appropriate erosion control measures when native soil is exposed or erosion channels are forming.
- Plant alternative mixture of grass species in the event of unsuccessful establishment.
- The grass vegetation should be cut to a height between three and four inches.
- Pesticide/Herbicide Usage – No pesticides are to be used unless a single spot treatment is required for a specific control application.
- Fertilizer usage should be avoided. If deemed necessary, slow release fertilizer should be used. Fertilizer may be used to begin the establishment of vegetation in bare or damaged areas, but should not be applied on a regular basis unless necessary.

**Rain Garden**

*Initial Post-Construction Inspection*

- During the initial period of vegetation establishment pruning and weeding are required twice in first year by contractor.
- Any dead vegetation found after the first year must be replaced.
- Proper mulching is mandatory and regular watering may be required initially to ensure proper establishment of new vegetation.

*Long-Term Maintenance*
› Weeds and invasive plant species shall be removed by hand.
› Leaf litter and other detritus shall be removed twice per year.
› If needed to maintain aesthetic appearance, perennial plantings may be trimmed at the end of the growing season.
› Trees and shrubs should be inspected twice per year to evaluate health and attended to as necessary.
› Re-mulch rain gardens with well aged hardwood mulch to a depth of 3 inches each spring or whenever erosion is evident. The entire area may require mulch replacement once every two to three years. Mulch depth shall not exceed 3 inches and the depth of the depression shall not be compromised by the accumulation of vegetation or old mulch.
› Seeded ground cover or grass areas shall not receive mulching.
› Fertilizers should not be used in the rain garden as excessive nutrients in the rain garden may migrate to the underdrain and be discharged to adjacent surface waters.
› Test pH of the soils in the planting bed annually. If the pH is below 5.2, limestone should be applied to increase it. If the pH is above 8.0, iron sulfate plus sulfur should be added to reduce it.
› The rain garden and the tree filter may require watering during periods of extended drought.

**Inspections and Cleaning**

› The rain garden and the tree filter shall be inspected twice during for the first year and annually thereafter for sediment buildup, erosion, vegetative conditions, etc. If sediment build-up is found, sediment removal and core aeration or cultivating of un-vegetated areas may be required to ensure adequate filtration.
› The inflow location should be inspected annually for clogging. Sediment build up is a common problem where runoff leaves an impervious surface and enters a vegetative or earthen surface. Any built-up sediment should be removed to prevent runoff from bypassing the facility. Sources of sediment should be prevented.
› The overflow structure and underdrain standpipes should be inspected annually to ensure that they are functioning.
› Inspect the rain garden and the tree filter after a large storm event to ensure that proper drainage is occurring. Water that remains ponded on the after 48 hours of dry weather could indicate a problem with the subsurface drainage system or clogging of the underdrain. While the plants selected for the rain garden are tolerant of wet soils, they are not wetland species that can survive long periods of inundation. Immediate attention is required to prevent the loss of plant materials.
Stone Diaphragm

› The stone areas shall be inspected annually for missing or dislodged stones. Replace stone as necessary.
› Deposited sediments shall be removed manually at least once per year.
› Trash and debris shall be removed as necessary.
Section E – Operations and Maintenance Summary

E.1 Operations & Maintenance Plan Summary

This Operation and Maintenance Plan has been prepared in accordance with the Stormwater Management Policy developed by the DEP. It specifies operational practices and drainage system maintenance requirements for the Project. Requirements should be adjusted by the site manager as necessary to ensure successful functioning of system components.

E.1.1 Routine Maintenance Checklists

Routine required maintenance is described in Sections A – D. The following checklist is to be used by the property manager to implement and document the required maintenance and inspection tasks.

E.1.2 Reporting and Documentation

The site supervisor shall be responsible for ensuring that the scheduled tasks as described in this plan are appropriately completed and recorded in the Maintenance Log. Accurate records of all inspections, routine maintenance and repairs shall be documented and these records shall be available for inspection by the Town of Edgartown, upon request.
The Maintenance Log shall:

› Document the completion of required maintenance tasks.
› Identify the person responsible for the completion of tasks.
› Identify any outstanding problems, malfunctions or inconsistencies identified during the course of routine maintenance.
› Document specific repairs or replacements.

E.1.3 Maintenance Checklists and Device Location Maps

Maintenance checklists and a device location map is included in this report. The checklists and device location map are provided for the maintenance crew to photocopy and use when conducting inspections and cleaning activities to the stormwater management systems.
Maintenance Checklist
Asphalt Pavement Areas - Vacuum pavement twice per year with a commercial cleaning unit and properly dispose of removed material.

<table>
<thead>
<tr>
<th>Parking Area</th>
<th>Date Inspected</th>
<th>Cleaning needed (Y/N)</th>
<th>Date Cleaned</th>
<th>Comments (Trash, Oil, Pet waste, Lawn Debris, Damage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ /</td>
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</tbody>
</table>

Landscape Areas - Inspect twice per year. Remove any deposited sediment, leaf litter and debris. Reseed or replace any vegetation that has died. Keep mowed to about 4-inches. Fertilizer usage should be avoided. If needed, a slow release fertilizer should be used.

<table>
<thead>
<tr>
<th>Areas</th>
<th>Inspected (Y/N)</th>
<th>Sediment Depth (inches)</th>
<th>Cleaning needed (Y/N)</th>
<th>Date Cleaned</th>
<th>Comments (Trash, Oil, Pet waste, Lawn Debris, Damage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perimeter and interior island landscaping</td>
<td>/ /</td>
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</tr>
</tbody>
</table>

Catch Basins, Yard Drains, and Trench Drain – Inspect and clean the catch basins or trench drain at least 4 times per year or whenever the depth of sediment is greater than or equal to half the sump depth. Cleaning/inspection times must include at the end of fall foliage season and at the end of snow removal season.

<table>
<thead>
<tr>
<th>Catch Basin</th>
<th>Date Inspected</th>
<th>Sediment Depth (inches)</th>
<th>Cleaning needed (Y/N)</th>
<th>Date Cleaned</th>
<th>Comments (Trash, Oil, Pet waste, Lawn Debris, Damaged)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DCB-1</td>
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<td></td>
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<tr>
<td>CB-2</td>
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<tr>
<td>CB-3</td>
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<td>CB-4</td>
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<td>CB-5</td>
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<tr>
<td>CB-7</td>
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<td>CB-8</td>
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<tr>
<td>TD-1</td>
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<tr>
<td>YD-1</td>
<td>/ /</td>
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<tr>
<td>YD-2</td>
<td>/ /</td>
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</tr>
</tbody>
</table>
**Water Quality Units** – Inspect 4 times per year, clean at least once per year or when sediment reaches a depth of 8 inches.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Date Inspected</th>
<th>Sediment Depth (inches)</th>
<th>Cleaning needed (Y/N)</th>
<th>Date Cleaned</th>
<th>Comments (Trash, Oil, Pet waste, Lawn Debris, Damage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WQU-1</td>
<td>/ /</td>
<td>/ /</td>
<td>/ /</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WQU-2</td>
<td>/ /</td>
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</tr>
</tbody>
</table>

**Subsurface Infiltration Systems** – Inspect once per year to determine sediment depth. If sediment is more than six inches deep, it must be suspended via flushing with clean water and removed using a vactor truck.

<table>
<thead>
<tr>
<th>Basin</th>
<th>Date Inspected</th>
<th>Sediment Depth (inches)</th>
<th>Cleaning needed (Y/N)</th>
<th>Date Cleaned</th>
<th>Comments (Trash, Oil, Sediment, Damage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>INF-1</td>
<td>/ /</td>
<td>/ /</td>
<td>/ /</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Roof Runoff Downspouts** – Inspect Roof Drains twice per year, clean inlets twice per year.

<table>
<thead>
<tr>
<th>Building</th>
<th>Date Inspected</th>
<th>Sediment Depth (inches)</th>
<th>Cleaning needed (Y/N)</th>
<th>Date Cleaned</th>
<th>Comments (Trash, Oil, Pet waste, Lawn Debris, Damage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop &amp; Shop</td>
<td>/ /</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Bank</td>
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</tr>
</tbody>
</table>

**Rain Gardens** – Inspect twice during for the first year and annually thereafter for sediment buildup, erosion, vegetative conditions, etc. Replace dead vegetation. If sediment build-up is found, core aeration or cultivating of unvegetated areas may be required to ensure adequate filtration. Remove weeds, invasive plants, leaf litter, sediment and debris annually. The overflow structure should be inspected annually to ensure that it is functioning. Apply hardwood mulch annually to a depth of 3 inches. If water remains on the surface for more than 48 hours, the filter media shall be replaced. Remove the top 6 inches, core aereate and revegetate.

<table>
<thead>
<tr>
<th>Rain Garden</th>
<th>Inspected (Y/N)</th>
<th>Sediment Depth (inches)</th>
<th>Cleaning needed (Y/N)</th>
<th>Date Cleaned</th>
<th>Comments (Trash, Oil, Pet waste, Lawn Debris, Damage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RG-1</td>
<td>/ /</td>
<td>/ /</td>
<td>/ /</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RG-2</td>
<td>/ /</td>
<td>/ /</td>
<td>/ /</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Stone Diaphragms** – Inspect annually for missing or dislodged stones. Replace stone as necessary. Remove deposited sediments manually once per year.

<table>
<thead>
<tr>
<th>Locations</th>
<th>Inspected (Y/N)</th>
<th>Sediment Depth (inches)</th>
<th>Cleaning needed (Y/N)</th>
<th>Date Cleaned</th>
<th>Comments (Trash, Oil, Pet waste, Lawn Debris, Damage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RG-1</td>
<td></td>
<td></td>
<td>/ /</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RG-2</td>
<td></td>
<td></td>
<td>/ /</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Device Location Map
Product Literature
Water Quality Units
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 systems 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.
<table>
<thead>
<tr>
<th>CDS Model</th>
<th>Diameter</th>
<th>Distance from Water Surface to Top of Sediment Pile</th>
<th>Sediment Storage Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ft</td>
<td>ft</td>
<td>m</td>
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Table 1: CDS Maintenance Indicators and Sediment Storage Capacities
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.