



Contech[®] CMP Detention & Infiltration Maintenance Guide



Contech® CMP Detention

Underground stormwater detention/infiltration and retention systems must be properly inspected and maintained at regular intervals for purposes of performance and longevity.

Inspection

Inspection is the key to effective maintenance and is easily performed. Contech recommends ongoing quarterly inspections. The rate at which the system collects pollutants will depend more heavily on site specific activities rather than the size or configuration of the system. Inspections should be performed more often in equipment washdown areas, in climates where sanding and/or salting operations take place, and in various other instances in which higher accumulations of sediment or abrasive / corrosive conditions may exist. Inspection and maintenance records should be maintained for the life of the system.

Maintenance

Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice. Accumulated sediment and trash can typically be evacuated through the manhole over the outlet orifice. If maintenance is not performed as recommended, sediment and trash may accumulate in front of the outlet orifice. Manhole covers should be securely seated following cleaning activities. Contech suggests that all systems be designed with an access/inspection manhole situated at or near the inlet and the outlet orifice. Should it be necessary to get inside the system to perform maintenance activities, all appropriate precautions regarding confined space entry and OSHA regulations should be followed.

If inspectors observe any salt or other corrosive substance concentrations or accumulations in the system, or if salt or other corrosive substance is used or prevalent near the system, it is recommended to rinse the system above the spring line annually between late spring and early summer as part of the maintenance program. This maintenance is required for infiltration systems. Excessive salting should be avoided and pavement should be sealed to reduce salt infiltration from the surface.

Maintaining an underground detention or retention system is easiest when there is no flow entering the system. For this reason, it is a good idea to schedule the cleanout during dry weather.

The foregoing inspection and maintenance efforts help ensure underground pipe systems used for stormwater storage continue to function as intended by identifying recommended regular inspection and maintenance practices. Inspection and maintenance related to the structural integrity of the pipe or the soundness of pipe joint connections is beyond the scope of this guide.

Inspection & Maintenance Log Sample Template

_____ " Diameter System			Location: Anywhere, USA		
Date	Depth of Sediment	Accumulated Trash	Maintenance Performed	Maintenance Personnel	Comments
12/01/10	2"	None	Removed Sediment	B. Johnson	Installed
03/01/11	1"	Some	Removed Sediment and Trash	B. Johnson	Swept parking lot
06/01/11	0"	None	None		
09/01/11	0"	Heavy	Removed Trash	S. Riley	
12/01/11	1"	None	Removed Sediment	S. Riley	
04/01/12	0"	None	None	S. Riley	
04/15/01	2	Some	Removed Sediment and Trash	ACE Environmental Services	



Support

Drawings and specifications are available at www.ContechES.com.

Site-specific support is available from our engineers.

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Contech® CMP Detention & Infiltration Maintenance Guide

Underground stormwater detention/infiltration systems should be inspected and maintained at regular intervals for continued performance and longevity.

Inspection

Inspection is the key to effective maintenance and is easily performed. Contech recommends minimum annual inspections. The rate at which the system collects pollutants will depend more heavily on site specific activities rather than the size or configuration of the system. Inspections should be performed more often for site areas where higher accumulation rates of sediment, trash/debris, or leaves are present. Inspection and maintenance records should be logged until a site's required maintenance frequency is established. System cleanout is indicated when inspection reveals that sufficient accumulation of sediment/debris has occurred such that system volume or drawdown could be affected.

Containment Rows

Typically, inspection/maintenance accesses are located at connection points to the drainage system as these locations are where sediment/debris accumulation begins. These locations are also where containment rows may be engineered into the design.

Containment rows are non-perforated rows of pipe that serve as settling basins for incoming sediment/debris. These rows are hydraulically confined with weir and drawdown orifices to capture the "first flush" from a drainage basin.

Once the "first flush" volume is captured, the remaining storm volume overflows the weir directly to the infiltration pipe rows. The drawdown orifices allow for slow discharge of the first flush volume within the containment row while fine suspended solids settle to the bottom for later cleanout. The drawdown orifice design incorporates trash racks to guard against blockage from trash/debris.

Containment rows limit maintenance activities to single rows of pipe at drainage system connection points. Containment rows allow for jetvac cleanouts without the possibility of fabric damage or bedding stone disturbance or removal.



A typical containment row. Note the non-perforated row with full diameter cleanout access.

Maintenance

Maintaining an underground detention/infiltration system is easiest when there is no flow entering the system. For this reason maintenance is best scheduled during dry weather.

Accumulated sediment and trash is typically evacuated via vacuum truck services through maintenance accesses provided in the design. Jetvac nozzles use water pressure to move down the containment row while pushing accumulated sediments backward to the Jetvac's entry point where the vacuum hose removes them.

Manhole covers should be securely seated following cleaning activities. Should it become necessary to enter the system to perform maintenance activities, all appropriate precautions regarding confined space entry and OSHA regulations should be followed.



Inspection and maintenance logs help identify the regular inspection and maintenance internals required for a particular system. An example of a typical inspection log is below:

Inspection & Maintenance Log Sample Template

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Date	Depth of Sediment	Accumulated Trash	Maintenance Performed	Maintenance Personnel	Comments
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03/01/11	1"	Some	Removed Sediment and Trash	B. Johnson	Swept parking lot
06/01/11	0"	None	None		
09/01/11	0"	Heavy	Removed Trash	S. Riley	
12/01/11	1"	None	Removed Sediment	S. Riley	

Support

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

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