

**SEDIMENT FILTERS AND CHAMBERS****DEFINITION AND PURPOSE:**

Sediment filters are sediment-trapping devices typically used to remove pollutants from stormwater runoff. Sediment filters have four components: inflow regulation, pretreatment, filter bed, and outflow mechanism. Sediment chambers are one component of the sediment filter system. Sediment filter systems can be confined or unconfined, on-line or off-line, and aboveground or belowground. Confined sediment filters are constructed with the filter medium contained in a structure, often a concrete vault. Unconfined sediment filters are made without a confining structure. Sand might be placed on the banks of a permanent wet pond detention system to create an unconfined filter. On-line systems retain stormwater in its original stream channel or storm drain system. Off-line systems divert stormwater.

APPROPRIATE APPLICATIONS:

Sediment filters might be a good alternative for small construction sites where a wet pond is being considered as a sediment-trapping device. They are widely applicable, and they can be used in urban areas with large amounts of highly impervious area. Confined sand filters are man-made systems, so they can be applied to most development sites and have few constraining factors.

CONDITIONS FOR EFFECTIVE USE:

Type of Flow: Sheet flow and concentrated flow.

Contributing Area: Maximum of 10 acres.

WHEN BMP IS TO BE INSTALLED:

Prior to disturbance of natural vegetation.

STANDARDS AND SPECIFICATIONS:

The available space is likely to be the most important siting and design consideration. Another important consideration when deciding to install sediment-filtering systems is the amount of available head. The depth of filter media will vary depending on media type.

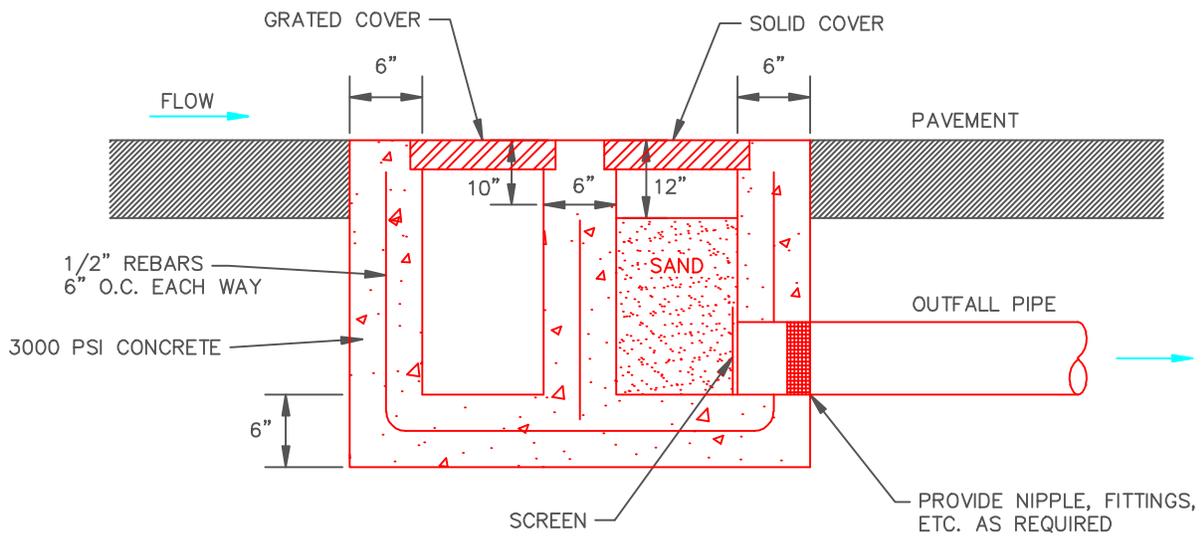
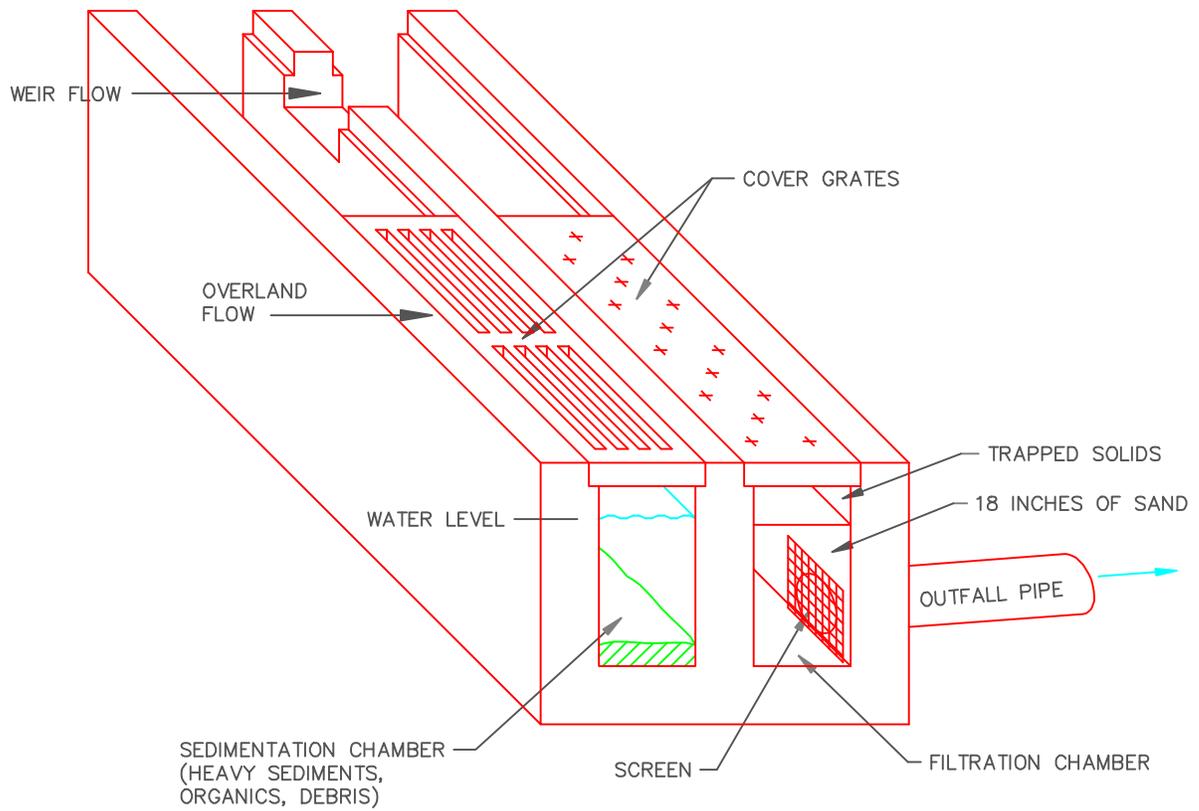
OPERATION AND MAINTENANCE PROCEDURES:

To make sure they are filtering properly, inspect sediment filters of all media types at least once per seven calendar days, or within a reasonable time period (not to exceed 48 hours) of a rainfall event which causes stormwater runoff to occur on-site. Remove trash and debris. Remove sediment from the filter inlets/sediment chambers when 75 percent of the storage volume has been filled. Replace medium when necessary.

SITE CONDITIONS FOR REMOVAL:

Typically left in place, if temporary-remove after upstream areas are stabilized.

TYPICAL DETAILS: SC-7



Modified from EPA 1992 Menu of Best Management Practices

NTS

City of Springfield, Missouri



Department of Public Works
Storm Water Services Division

SAND FILTER

Figure: SC-7
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