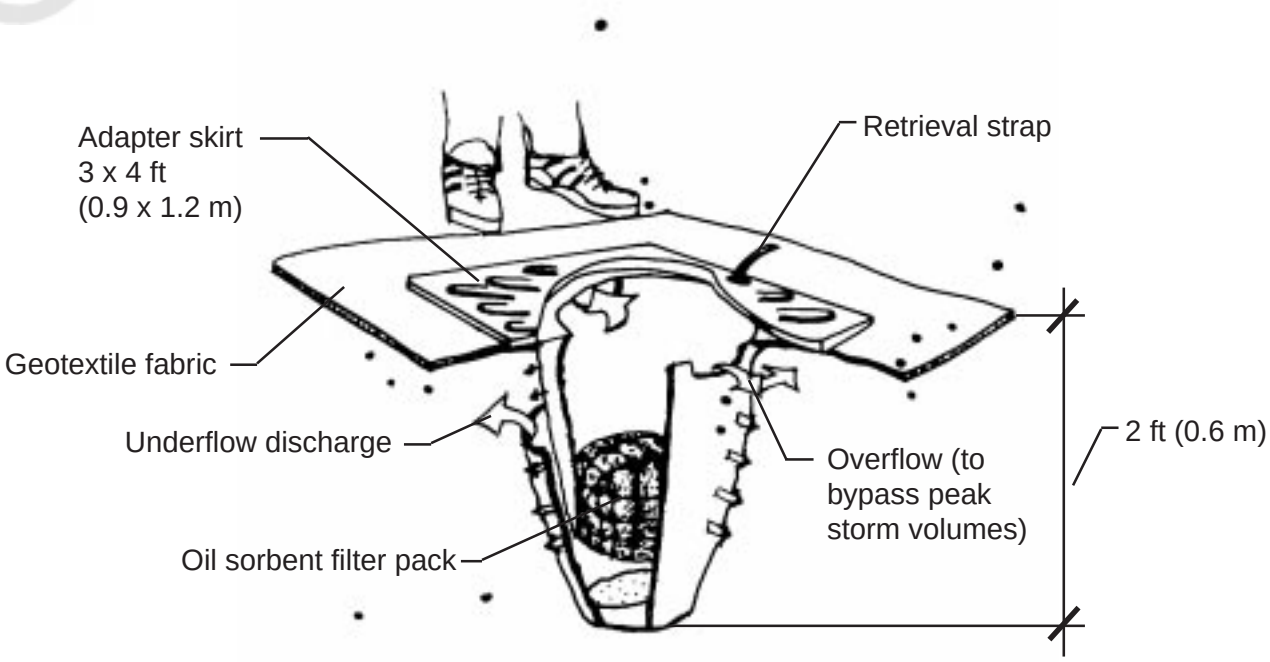
PRIMARY USE: Removal of dissolved and adsorbed pollutants in stormwater runoff.
ADDITIONAL USES: Removal of sediment in stormwater runoff.

STORMWATER CATCH BASIN INSERT

What is it? A catch basin insert is any device that can be inserted into an existing catch basin to provide some level of runoff contaminant removal.

Purpose

The most frequent application for catch basin inserts is for reduction of sediment, oil, and grease in stormwater runoff.



Stormwater Catch Basin Insert
Perspective View

Limitations

The most serious potential drawback to the use of some catch basin inserts is their tendency to become clogged with sediment. Most devices depend on some type of bed-filtration for treatment, and sediment quickly clogs the filter, rendering the unit ineffective. The variable nature of stormwater runoff quantity and quality makes it difficult to determine just how well the inserts work. For example, many inserts can capture up to 90 percent of the sediment and oil present in stormwater at a flow rate of 3 gpm (11 liters/minute), but at higher flow rates they may be ineffective or may even release captured contaminants.

Materials

Metal, plastic, fabric. Usually some sort of filter media (e.g., activated carbon).

Installation

Catch basin inserts are most useful where the runoff flow rates average less than 10 gpm (38 liters per minute) per catch basin; when the type of insert used has been designed to capture contaminants found at the site (for example, if the goal is to remove oil, the insert should employ a proven and accepted means for oil removal); when the catch basin lacks a sump and/or oil trap (such as a submerged outlet that prevents the release of floating oil); at maintenance facilities where contaminant levels may be considerably higher than normal.

Source: A Review of Current Storm Water Treatment Technologies for Port Facilities, Foss Environmental & Infrastructure.