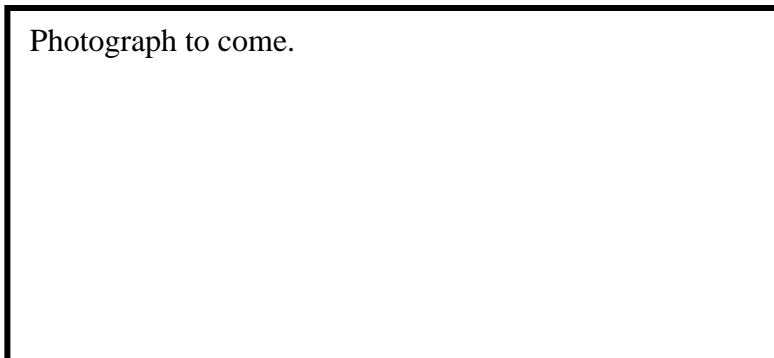


**PC-13 POCKET SAND FILTER**

Reference: Maryland Stormwater Design Manual.



BMP Objectives	
<input type="checkbox"/>	Perimeter Control
<input type="checkbox"/>	Slope Protection
<input type="checkbox"/>	Borrow and Stockpiles
<input checked="" type="checkbox"/>	Drainage Areas
<input checked="" type="checkbox"/>	Sediment Trapping
<input checked="" type="checkbox"/>	Stream Protection
<input type="checkbox"/>	Temporary Stabilizing
<input type="checkbox"/>	Permanent Stabilizing

**Definition and Purpose**

Pocket sand filters are used to capture and treat a volume of stormwater runoff. This BMP is similar to a Surface Sand Filter. The filter consists of a small excavated basin with a runoff storage zone underlain by a sand filter bed. For this BMP, the lower portion of the sand bed has a pea gravel “window” on the surface that allows runoff into the filter if the surface becomes clogged.

**Appropriate Applications**

- The underdrain dewateres the sand bed and discharges runoff to a nearby swale or storm sewer.
- Upstream grass channels or grass filter strips can be used to help protect the integrity of the basin.
- Pocket sand filters:
  - Can be used to enhance stormwater quality.
  - Is subject to clogging if moderate to high levels of silts and clays flow into facility and should not be used while construction is occurring in the upstream catchment. Pre-treatment basin can be used to filter out finer materials and prevent the sand filter bed from clogging.
  - Is generally suited to small sites (5 acres or less) where sediment loads are expected to be moderate to low and where there is no base flow.
  - Should be located in a flat or only slightly depressed area.
  - Is useful in watersheds where groundwater quality is a concern or where low permeability soils prevent infiltration.
  - Should not be located close to building foundations or in areas where expansive soils are a concern.

**Design Parameters**

- Generally, basins are designed to infiltrate retained runoff within a 40-hour period.
- A dense vegetative cover needs to be established over all contributing pervious areas before runoff can be conveyed to the filter.
- Screens/grated inlets should be considered in design to keep debris out of filter chambers.
- Filter bed typically has a depth of approximately 1.5 feet, with 3 inches of topsoil.

**Maintenance and Inspection**

- Conduct inspections as required by the NPDES permit or contract specifications during construction.
- Periodic inspection and maintenance will be required based on post-construction site conditions.
- Make any repairs necessary to ensure the measure is operating properly.
- Regular maintenance is necessary to remove surface sediment, trash, debris, and leaf litter.
- In certain cases, layers of sand will need to be replaced every 3 to 5 years.