

Surface Sand Filters

STRUCTURAL MAINTENANCE

What is a sand filter?

A sand filter is a type of stormwater management facility designed to filter rainwater through sand to remove pollutants. Filters are typically a depression in the ground filled with sand that helps to manage polluted or excess rainwater. To the untrained eye, it may look like a sand box or volleyball court. You can find sand filters in residential neighborhoods and around commercial businesses.

How does it work?

During a storm, rainwater collects pollutants as it flows across hard surfaces, such as rooftops, sidewalks, and roads. Flow splitters are often used to send a certain quantity of untreated water, known as the "first flush," to a surface sand filter. The sand filter captures the rain water, directs it through layers of sand and gravel that filter and remove the pollutants, and returns the clean water back to the local stream or into the storm drain system.

Why are sand filters important?

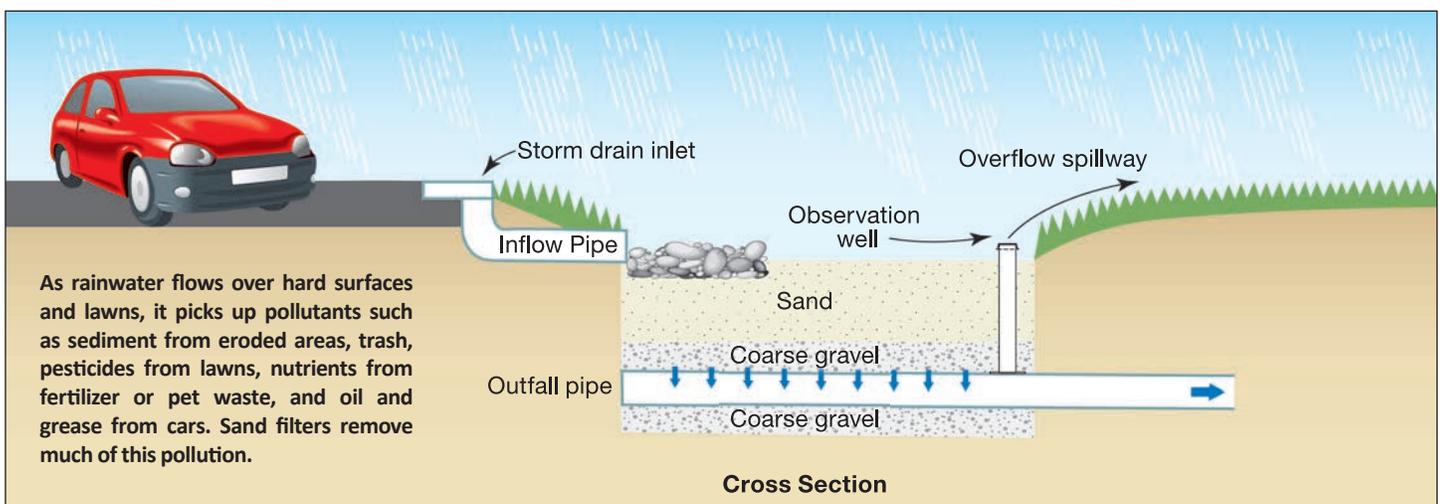
- Remove pollutants
- Improve health of streams and rivers
- Help to make our waters fishable and swimmable
- Improve the quality of the Chesapeake Bay



Why is it important to keep your sand filter maintained?

An unmaintained sand filter may

- Become an aesthetic eyesore for your community
- Over time, allow unwanted algae and vegetation to grow over it, reducing its effectiveness
- Become clogged and allow water to pool long enough for mosquitoes to breed (longer than 3 days)
- Cost more to fix problems if left unchecked
- Not remove pollutants as intended, sending polluted water to streams and rivers



Maintenance 101

Performing Maintenance

Performing **preventive maintenance** regularly will prevent long-term damage and help avoid potential violations. These actions will keep your facility looking good and working correctly, which will save you money in the long term. The preventive maintenance actions listed below can be thought of as similar to preventive car maintenance (like changing the oil in your car every 3 months).

Structural maintenance is work done on the components of the filter that allow it to control rainwater and remove pollutants. Structural maintenance problems listed below are things you should be looking out for. When they happen, call the Department of Environmental Protection (DEP) for help (like calling your mechanic when the engine light comes on).

Preventive Maintenance

Frequently

Remove trash and debris (see the Non-Structural Maintenance Fact Sheet for Sand Filters for additional guidance)

Yearly

- Rake the sand in the filter

As needed

- Know the pollutant sources on your property and try to eliminate them at the source
- Keep kids and adults from playing in the sand
- Inform contractors working on property of the location of the sand filter to prevent accidental damage
- Inspect the filter after every major storm event and contact DEP if you are concerned

Structural Maintenance

Problem:

Possible Fix:

Water standing in filter for more than 3 days

Filter media and other components may need to be replaced

Erosion along flow paths

Erosion should be corrected and flow paths possibly re-graded

Vegetation absent or not growing around the filter, which could cause erosion

Re-establish the vegetation on side slopes and adjacent areas

Damage to structural components (i.e., pipes, swales and ditches, and overflow structures)

Specific maintenance for these components to be determined by DEP

Animals burrows

Fill burrow and establish vegetation

Vegetation in filter

Manual removal of vegetation and raking of media at least annually

Who is responsible for the maintenance?

As the property owner, **YOU** are responsible for all maintenance unless your sand filter has been transferred to the DEP Stormwater Facility Maintenance Program. If you would like more information about transferring your sand filter into this program, please visit: <http://www.montgomerycountymd.gov/stormwatertransfer>.

How will I know what maintenance is required?

The DEP performs inspections of all sand filters in Montgomery County every 3 years. If DEP finds maintenance issues during its inspection, you will receive a notice of violation with a work order showing a list of items that need to be performed to restore your facility to proper working condition. You will have 60 days from the date of the notice to make the noted repairs. A civil citation may be issued if you have not complied with the maintenance requirements. DEP will work with you if you have questions about how to maintain your sand filter. You are not expected to identify all the structural repairs that may be needed on your facility. However, if you notice any of the issues or failures listed above, please contact DEP for guidance.



Before Maintenance: Sand Filter that has not been raked and may need sand replaced



After Maintenance: Vegetation removed from sand

A DEP-approved contractor must perform structural maintenance. Please visit <http://www.montgomerycountymd.gov/stormwater> for a list of approved contractors.

What if I need help or have questions?

DEP can answer your questions and provide additional guidance about maintaining your surface sand filter. Please e-mail us at Askdep@montgomerycountymd.gov, call the Montgomery County Customer Service Center at 3-1-1, or visit our website: <http://www.montgomerycountymd.gov/stormwater>.

