

Proprietary Underground Filtering Facilities

STRUCTURAL MAINTENANCE

What are proprietary underground filtering facilities?

Proprietary underground filtering facilities remove pollutants from stormwater runoff by allowing it to flow through a filtration system. These systems are made by various manufacturers and have special filter cartridges to remove pollutants. These facilities are located underground and include devices such as Aqua-Filter™, Bay-Filter™, and Storm-Filter™, among others. You can visit the manufacturers' websites for more information on your device.

How do they work?

Underground filtering facilities collect and filter stormwater runoff from your site. Flow splitters are often used to send a certain quantity of untreated water, known as the "first flush," to an underground filtering facility. Stormwater flows into the facility through an underground inlet pipe and passes through filtration cartridges that remove pollutants. The filtered stormwater is then discharged downstream through an outlet pipe. This process removes pollutants and returns clean water back to the local stream or into the storm drain system.

Why are underground filtering facilities 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 underground filtering facilities maintained?

An unmaintained underground filtering facility may:

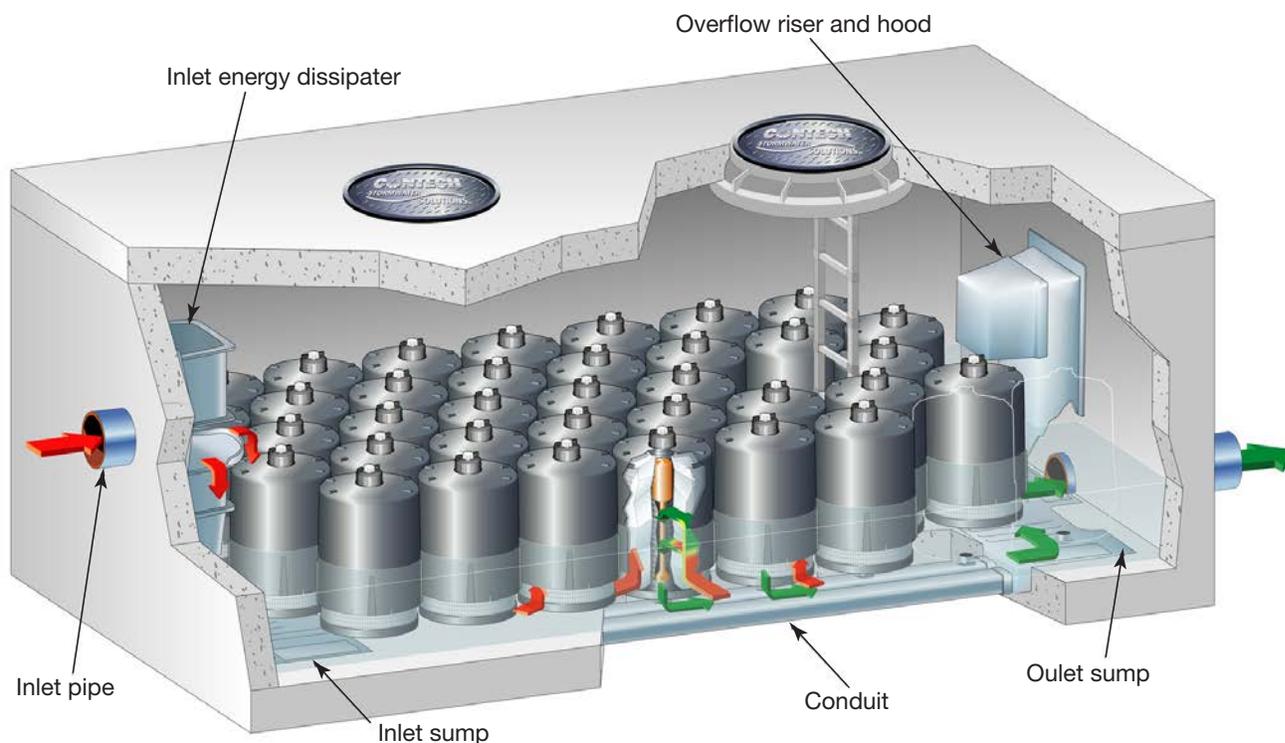
- Become clogged with sediment and debris, so water cannot be treated, allowing sediment and pollutants to enter our local streams
- Not function properly because filters have become worn out

You can prolong the life of the filter media and save money on maintenance costs by keeping your site clean and regularly maintaining the filter to ensure it is functioning properly.



Source: Imbrium Systems

Jellyfish Filter™



Storm Filter™

Source: Contech Construction Products, Inc.

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).

Preventive maintenance

Frequently

- Pick up trash, debris, and leaves around your property and in front of inlets to your proprietary underground filtering facility

As Needed

- Know the pollutant sources on your property and try to eliminate the pollutants at the source
- Sweep paved areas on your property to remove pollutants, such as sediment and sand
- Store chemicals, used oil, and pesticides in covered areas so these potential pollutants are not exposed to rainfall
- Do not stockpile sand or salt on your property unless they are in covered containment areas
- Do not wash your vehicles or mechanical equipment on paved areas and prevent wash water from entering the storm drain system
- Mark your proprietary underground filtering facility inlets to ensure snow plow operators do not damage the facility

Structural maintenance is work done on the components of the filter that allow it to control rainwater and remove pollutants. Structural maintenance problems in the table 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).

Structural maintenance

Problem:

Pump out, power wash, and clean the proprietary underground filtering facility

Missing or damaged manhole cover

Trash, debris, oil and grease, or sediment accumulation within proprietary underground filtering facility

Missing steps/ladders

Clogged pipes and trash racks

Clogged filter and standing water for more than 3 days after rain event

Corrosion on metal pipes

Damaged structural components (i.e., pipes, concrete, trash racks, pipe joints, proprietary units, and cartridges, etc.)

Possible Fix:

Perform annually, unless otherwise determined by DEP

Replace manhole cover

Remove and properly dispose of the trash, debris, or sediment

Repair or replace steps/ladders

Remove and properly dispose of debris causing clogging

Replace filter media and/or cartridges

Repair or replace corroded metal parts

Repair and/or replacement for these components to be determined by DEP

Who is responsible for the maintenance?

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

How will I know what maintenance is required?

DEP performs annual inspections of all underground filtering facilities in Montgomery County. If DEP finds maintenance issues during its inspection, you will receive a notice of violation with a work order showing a list of required measures to restore your facility to proper working condition. You will have 60 days from the date of the notice to make the repairs. A civil citation may be issued if you have not complied with the maintenance requirements.



Aqua-Filter™ Manhole Cover

Maintenance of underground storage structures must be performed by DEP-approved contractors with confined space certification. No one should enter the structure without proper training, certification, and permits for confined space entry. Entering underground storage structures without meeting these requirements is a violation of State law and could be dangerous or deadly. Please visit our website for a list of approved and certified contractors.

What if I need help or have questions?

DEP can answer your questions and provide additional guidance about maintaining your proprietary underground filtering facility. 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>.