

Underground Storage Structures

STRUCTURAL MAINTENANCE

What are underground storage structures?

Underground storage structures are underground pipes or vaults that are typically used to store stormwater. Underground structures and vaults are used for stormwater storage where there is not enough space for an aboveground facility. The water is then slowly released to local streams, which reduces downstream flooding and erosion. Underground storage structures are commonly located under parking lots at commercial sites or multi-family residential sites (condominium, apartments, etc.).

How do they work?

Underground storage structures are large pipes or vaults that store stormwater underground. The underground structure receives stormwater runoff from the surrounding area through stormwater inlets and slowly releases the stormwater through an outlet pipe to a stream or pond. Flow splitters are often used to send a certain quantity of untreated water, known as the “first flush,” to an underground storage structure. The stored water is released gradually to allow time for pollutants to settle out of the water. This slower release rate also helps prevent flooding and erosion downstream. Underground storage structures may have portions of perforated pipe to allow water to infiltrate back into the surrounding soil.

Why are underground storage structures important?

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

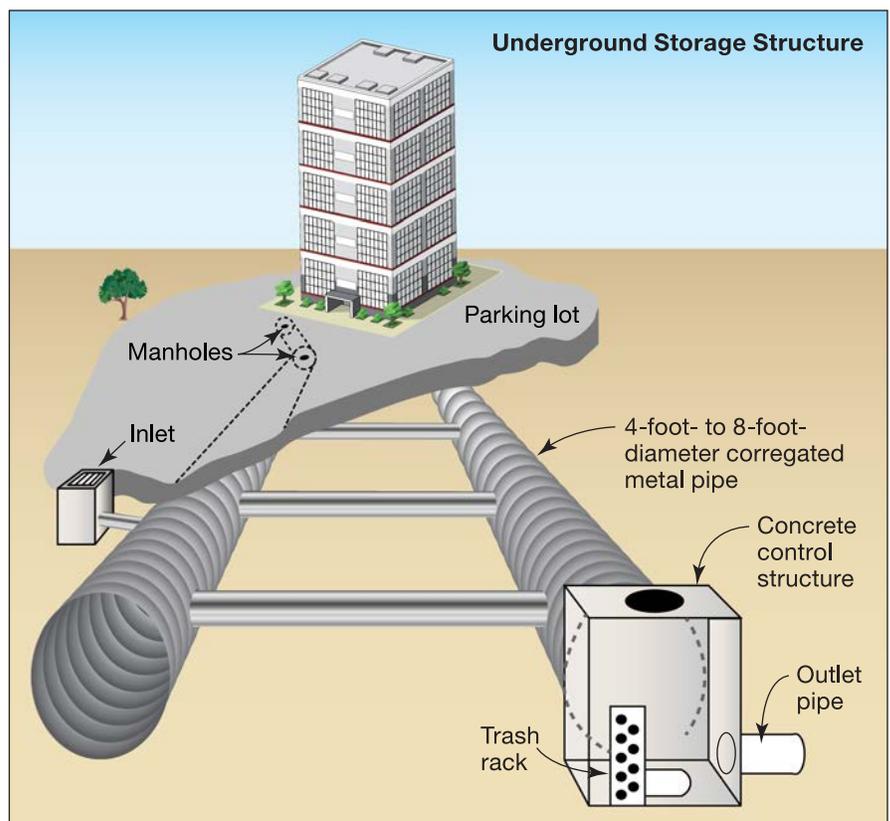
Why is it important to keep your underground storage structure maintained?

An unmaintained underground storage structure may:

- Not remove pollutants as intended, sending polluted water to streams and rivers
- Become filled with sediment and debris so water cannot be treated or stored, which may lead to downstream flooding and erosion
- Cost more to fix if problems are left unchecked



As rainwater flows over hard surfaces and lawns, it picks up pollutants such as sediment from eroded areas, trash, pesticides from lawns, nutrients from fertilizer or pet waste, and oil and grease from cars. Underground storage structures remove much of this pollution.



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 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).

Preventive maintenance

(Things you can do)

Frequently

- Pick up trash, debris, and leaves around your property and in front of the inlets to your underground storage structure

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 underground storage structure inlets to ensure snow plow operators do not damage the facility

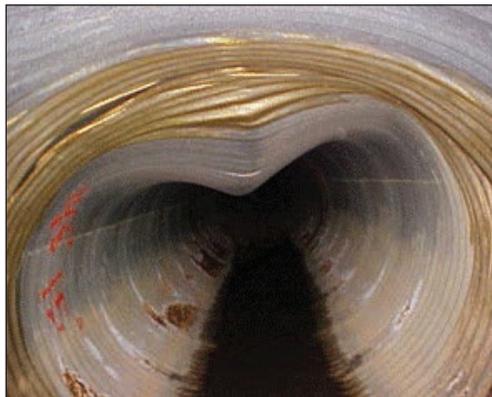
Structural maintenance

(Only by a contractor)

| Problem: | Possible Fix: |
|---|--|
| Missing or damaged manhole cover | Replace manhole cover |
| Trash, debris, oil and grease, or sediment accumulation | Pump-out, power wash, clean, and properly dispose of any debris |
| Missing steps/ladders | Repair or replace steps/ladders |
| Clogged pipes and trash racks | Remove and properly dispose of debris causing clogging |
| Corrosion on metal pipes | Repair or replace corroded metal parts |
| Damaged structural components (i.e., pipes, concrete, trash racks, pipe joints, proprietary unit, etc.) | 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 storage structure has been transferred to the DEP Stormwater Facility Maintenance Program. If you would like more information about transferring your facility into this program, please visit <http://www.montgomerycountymd.gov/stormwatertransfer>.



How will I know what maintenance is required?

DEP recommends owners use a certified contractor to pump-out, power wash, and clean their stormwater facility annually to ensure the facility is properly functioning and passes inspection. If DEP inspects the facility and finds maintenance issues, you will receive a notice of violation with a work order showing the list of required maintenance and repairs. You will have 45 days from the date of the notice to hire a certified contractor to complete the maintenance and repairs. A civil citation may be issued if you have not complied with the maintenance and repair requirements.

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 <http://www.montgomerycountymd.gov/stormwater> 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 underground storage structure. 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>.

