

Underground Stormwater Management Structures

Underground stormwater management structures are specially designed to filter stormwater and reduce the amount of pollution entering city pipes and reaching the Columbia Slough. For this project, Environmental Services is proposing to install a two-tier stormwater management system: a sedimentation manhole to combat larger pollutants, followed by either an underground injection control structure or manufactured stormwater treatment system.

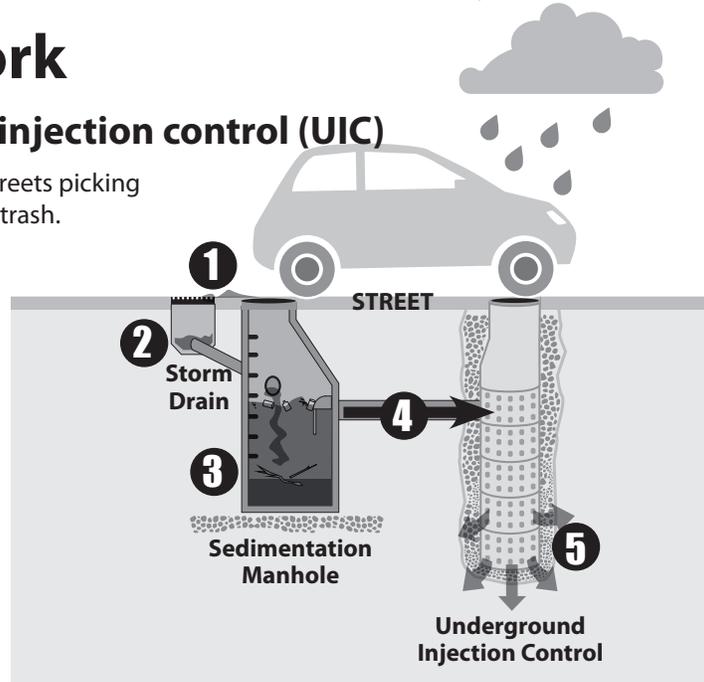
How they work

Using underground injection control (UIC)

1. When it rains, water runs off streets picking up pollutants like oil, dirt, and trash.

2. The stormwater from the street flows into the storm drain.

3. From the storm drain, the stormwater flows into a sedimentation manhole where larger, heavier debris settles to the bottom. Lighter items float to the top. A hood above the outflow pipe keeps oil and floating debris from leaving the sedimentation manhole.



4. Next, the treated water flows to the UIC.

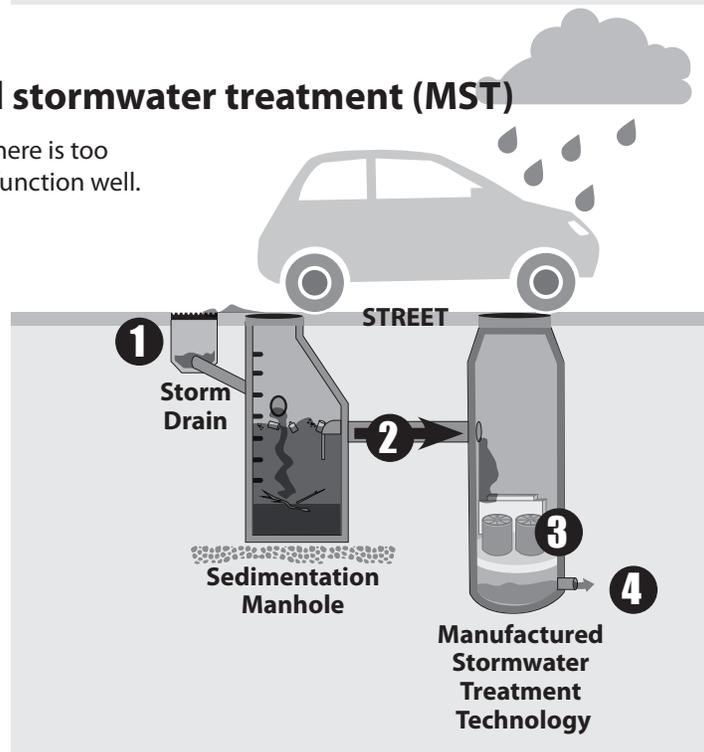
5. The water slowly flows out of the UIC through a layer of gravel. It will continue to be filtered by the soil before it replenishes the groundwater.

Using manufactured stormwater treatment (MST)

MSTs are useful in areas where there is too much groundwater for a UIC to function well.

1. The process begins the same with stormwater flowing into storm drains connected to sedimentation manholes.

2. Next, the treated water flows to the manufactured stormwater treatment technology.



3. An MST then uses cartridges to filter and clean the water.

4. Cleaned water flows next into a stormwater pipe that flows directly to the Columbia Slough.

The Bureau of Environmental Services is committed to providing meaningful access. For accommodations, modifications, translation, interpretation or other services, please contact Stefanus Gunawan at 503-823-5759, or use City TTY 503-823-6868, or Oregon Relay Service 711

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