City of Portland

Underground Injection Controls (UICs)

working for clean rivers, healthy watersheds, and a livable, sustainable community

n underground injection control structure, also known as a UIC, collects stormwater runoff from streets and other hard surfaces, and discharges the water below ground. Sumps, drywells, and trench drains are common UICs.

UIC Stormwater Management Benefits

UICs help protect surface water, replenish groundwater supplies, support the city's green infrastructure strategies for stormwater management, and support the Willamette River Combined Sewer Overflow (CSO) Tunnel Program by reducing the amount of stormwater runoff that flows into the combined sewer system.

Disconnecting stormwater flow from sewers and directing runoff to UICs is a good alternative to the traditional piped approach for stormwater management. UICs support the city's emphasis on more natural, sustainable approaches to stormwater man-

agement. Green Streets, streetside infiltration planters and other sustainable stormwater manage-





ment facilities often overflow to UICs. That keeps stormwater runoff in the watershed, out of sewers, and reduces stormwater discharges to rivers and streams.

Because UICs discharge water below ground, they reduce streamflow peaks, and protect stream channels from erosion caused by direct stormwater discharges. UICs also provide cool groundwater to help reduce stream temperatures in summer months, and that's good for aquatic life.

ENVIRONMENTAL SERVICES
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Dan Saltzman, Commissioner Dean Marriott, Director

stormwater management green street facility

A History of UICs in Portland

Public and private landowners in the Portland area have used sumps to manage stormwater runoff for more than 60 years. UICs in Portland are more common east of the Willamette River, where soils are better suited for infiltration. In many parts of east Portland, UICs are the only way to discharge stormwater because there are no piped systems.

When the City of Portland annexed portions of mid Multnomah County between 1985 and 1989, the city acquired numerous sumps from the county in the annexed areas.

In 1994, the city began installing new sumps to take water out of the combined sewer system as part of its state-ordered program to control combined sewer overflows (CSOs).

In 2005, the Oregon Department of Environmental Quality (DEQ) issued the state's first UIC permit to the City of Portland. The permit establishes construction, operation and maintenance requirements for UICs to ensure that UICs in Portland protect groundwater as a drinking water resource, and comply with the federal Safe Drinking Water Act.

UICs Today

The city owns and operates about 9,000 UICs under permit that collect stormwater from public streets and discharge it below ground. Many UICs are also commonly used to discharge stormwater on private property. Private UICs generally drain stormwater from parking lots and rooftops.

The DEQ regulates UICs statewide. Owners and operators of public and private UICs (with the exception of single-family home roof and footing drains) must register and provide site specific data to DEQ. State regulations require proposed UICs to be registered before construction.

Full requirements and forms for UIC registration, authorization by rule, and closures are available at www.deq.state.or.us/wq/uic/uic.htm.

For More Information

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Environmental Services website: www.portlandoregon.gov/bes