Protecting and Managing Stormwater at PCC

Frequently Asked Questions

What is stormwater?

Stormwater refers to the runoff of precipitation such as rain, melted snow, hail, and ice. This water flows over land surfaces instead of soaking into the ground.

Where does stormwater go?

In a natural setting, stormwater flows downhill increasing in both volume and velocity as it travels to nearby waterways. In urban areas, the volume and velocity of stormwater can be destructive and needs to be controlled to prevent erosion and property damage. A common method of controlling stormwater is to collect runoff in catch basins and storm drains diverting the water into large dedicated underground stormwater pipes that convey the runoff to local creeks, streams, rivers, lakes and ultimately the ocean.

Are there pollutants in stormwater?

As runoff flows it accumulates debris and pollutants which can be harmful to human health, the environment, or property. Examples of this include: sediment and soil, nutrients such as fertilizers and animal wastes, chemicals such as pesticides and herbicides, toxic metals, road salt, trash & debris, and pathogens. These pollutants can ultimately impact human health, recreation, and the natural environment.

How is stormwater managed at PCC?

The Sylvania campus utilizes a combination of catch basins and rain gardens to capture runoff and limit its velocity. Rain gardens allow stormwater to accumulate and percolate naturally into surrounding soils. Overflow from these rain gardens, as well as the water diverted into the catch basins, eventually leaves the Sylvania campus through a number of outfalls which flow south toward Lake Oswego or west to a connection with the City of Portland's storm water system.

The Rock Creek campus also relies on catch basins but the collected water flows into either a natural wetland just east of NW 185th Avenue or to a series of detention ponds along the main entry road at NW Springville Road.

Both the Cascade and Southwest campuses also rely on catch basins and rain gardens however, water from the catch basins and/or overflow from the raingardens flows into underground injection controls or UICs. Runoff that accumulates in these UICs percolates into the surrounding soil and eventually into the groundwater.

Each of PCC's centers utilizes one or more of the previously mentioned methods for managing stormwater.

What is an underground injection control or UIC?

A UIC is a perforated underground structure that has a depth that is greater than its diameter. Water that flows into UICs slowly percolates into the ground through its numerous perforations. As the water flows through the surrounding soils, many of the chemicals and pathogens are naturally removed. Downstream of the catch basins and raingardens, the stormwater may flow through either a particulate filter or into a sedimentation vault, where suspended solids are removed prior to the stormwater entering the UIC. PCC's UICs can be found at the Cascade and Southeast campuses, OC42 and OMIC.

What is a raingarden?
A raingarden is a depressed area in a landscape that collects rain water from a roof, street, or parking lot and allows it to soak into the ground. Rain gardens are often planted with grasses and flowering perennials and serve to reduce runoff and filter pollutants out of rainwater. Additionally, raingardens provide food and shelter for butterflies, songbirds and other forms of wildlife.

What agencies are responsible for stormwater protection?
There are several local and state agencies that have jurisdiction over stormwater at PCC. All of PCC's UICs are regulated by the Oregon Department of Environmental Quality (DEQ) and PCC holds a permit issued by DEQ. Additionally, PCC has campuses and centers that are governed by various governmental entities such as the City of Portland's Bureau of Environmental Services or Clean Water Services. Finally, certain designated management agencies have oversight over stormwater management at PCC's rural centers, such as Newberg and OMIC.

How does PCC protect stormwater?
Several departments work together to actively and collaboratively manage stormwater at PCC. Parking & Transportation Services maintains all of the parking lot and roadway catch basins and storm drains, while the FMS Grounds department maintain the raingardens and natural areas. Environmental Health & Safety (EH&S) manages PCC's Stormwater Program and UIC permit. EH&S also develops written procedures and training for employees to learn how to respond to spills and releases of chemicals and protect PCC's stormwater facilities. Each of these departments performs maintenance and/or inspection activities on an established schedule. Examples of these activities include sweeping roads and parking lots, removing invasive species from rain gardens, or changing sediment filters that support UICs.

What PCC activities can impact stormwater quality?
There are numerous activities and operations at PCC that can impact stormwater quality. Construction activities remove surface vegetation allowing dirt and other erodible materials to enter catch basins and rain gardens. Activities involving the use or storage of chemicals or product outdoors should always be done safety using secondary containment pallets to prevent spills and leaks from entering stormwater. PCC's fleet of vehicles needs to be maintained properly to prevent fuel and automotive fluids from leaking onto roadways. Finally, equipment is often cleaned and maintained outdoors. When such activities involve pressure washing, efforts must be made to prevent runoff from entering the stormwater systems or prevented from leaving the property.

Are there any PCC activities that should not be conducted?
Activities that involve washing equipment and/or vehicles with hot water, soap, detergents, or other chemicals pose a hazard to stormwater and should only be conducted when specific controls are implemented. Washing activities involving equipment, engine compartments, and vehicles have the potential to discharge pollutants (solvents, oil, grease, automotive fluids, and other chemicals) to the stormwater system which can jeopardize public health and the environment. Water used in such operations at CA, OC42, OMIC, and SE must not flow into stormwater catch basins or UICs. Instead, the water must be contained, collected and treated at an appropriate facility. Additionally, washing operations at RC are governed by Clean Water Services, which requires that either waste water be collected as described above or discharged to the sanitary sewer system. Such activity requires a permit from Clean Water Services.

Where can I learn more about local stormwater rules, requirements, and regulations?
Interested parties can view Portland's Pollution Prevention Best Management Practices at City of Portland P2 BMPs . Clean Water Services has a wealth of information about stormwater protections on their website: Clean Water Services . Finally, information regarding DEQ's Underground Injection Control can be found on DEQ's webpage: DEQ UICs.

Who can I contact at PCC if I have questions about stormwater?
Interested persons should direct their stormwater-related questions to EH&S at ehs@pcc.edu. EH&S will ensure questions are directed to right department.