

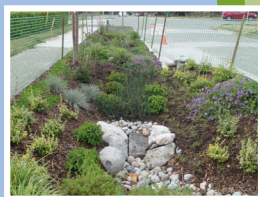
# Roadside Bioretention Cell Care Guide

Rain gardens and bioretention cells capture stormwater runoff and let water soak into the ground as plants and soil filter pollutants.

These facilities convert stormwater from a problem to a resource that replenishes groundwater and protects local waterways.

Built along the street, they also create attractive streetscapes and urban green spaces, provide natural habitat, and enhance pedestrian and bicycle safety.

Bioretention cells are more engineered than rain gardens, and the local government agency has primary operations and maintenance (O&M) responsibility for bioretention cells. This guide is for adjacent property owners or groups interested in understanding how bioretention cells are managed.



## Roadside Bioretention Cell Care Program

Thank you for your interest in bioretention cell stewardship. This guide describes the activities of your local agency and what you can do to support those activities.

### Maintenance Responsibilities

Seattle Public Utilities and King County Wastewater Treatment Division routinely monitor all roadside bioretention cells to determine the level of work needed to maintain healthy plants and ensure the facilities function properly. Identifying problems early and addressing them will ensure a long and healthy life for the system. Please notify us if you spot concerns (see back page for contact information).

### Why Bioretention Cells Matter

Bioretention cells are an innovative and effective way to restore the health of Seattle's urban watersheds. Over the last 150 years, we've covered our watersheds with streets, roofs, driveways and parking lots. In the process, we've increased stormwater runoff that causes pollution to flow into our creeks, lakes, the Duwamish River, and Elliott Bay. Bioretention cells help to protect and restore the Puget Sound and our local waterways.

### Anatomy of a Bioretention Cell

#### 1 Capture and Treatment Area

Special soils that allow the water to soak in.

#### 2 Overflow Drain

Not all bioretention cells have one. These allow stormwater from larger storm events to flow out if the bioretention cell is full.

#### 3 Curb Opening

Also called an inlet or outlet where stormwater can enter and exit.



## Plant Establishment Phase (first three years)

Young plants have tender roots and can be susceptible to damage without regular care. During this phase, the city or adjacent site developer contracts with professionals to care for the roadside bioretention cell.

### Professional crews will:

- Check for proper function
- Clear curb openings and top of overflow drain
- Remove trash and debris
- Remove weeds
- Water plants
- Prune, replace or remove trees or plants if necessary
- Care for trees
- Remove sediment from cells if needed

### You can help by:

- Removing trash and debris
- Clearing blocked curb openings of debris or accumulated sediment

### Important Safety Guidelines When Working Near a Street

- Do not stand in street when performing maintenance activities.
- Make yourself visible. Wear brightly colored clothing or a safety vest.
- Since bioretention cells are next to the street, take extra caution and be aware of passing bicycles and vehicles.
- Wear sturdy shoes and thick gloves and use a trash-grabber tool to help protect you from broken glass, sharp objects, pollutants, and other obvious or concealed hazards.
- Take care of the bioretention cell during daylight hours and avoid peak traffic times.
- Do not allow children younger than 10 years of age to work with you; older children must be accompanied by an adult volunteer. Keep in mind that adult supervision is critical when working within the street environment.
- Do not leave your tools unattended. Keep them out of the street and off the sidewalk so they don't pose a hazard.

**We don't want you to get hurt, so please be safe.**

## Long-Term Care Phase (after plants are established)

### Professional crews will:

- Check for proper function
- Remove sediment
- Clear curb openings and top of overflow drain
- Remove trash and debris
- Remove weeds
- Water plants and trees if necessary
- Care for all trees, including pruning and removal if necessary

### You can help by:

- Removing trash and debris
- Clearing curb openings
- Pushing aside or removing accumulated sediment where blocking curb cuts

The Bioretention Cell Care Chart at right ► summarizes simple volunteer bioretention cell care activities you can perform (see pages 6–7 for how-to tips).

### Please DO NOT:

- ❌ Prune or trim plants and trees
- ❌ Add or replace plants
- ❌ Use chemical herbicides, fertilizers, or insecticides
- ❌ Modify or alter the function or design
- ❌ Add or remove bioretention soil, compost, mulch, or fill
- ❌ Store tools, lumber or other items in the bioretention cell
- ❌ Remove dead or dying plants
- ❌ Remove sediment from cells
- ❌ Walk into the cells when soils are wet (to avoid damaging soils)

## Bioretention Cell Care Chart

After notifying us\* that you want to help care for your local roadside bioretention cell, use this chart to make sure you know what to do. See the how-to steps on the following pages.

| Bioretention Cell Care and Maintenance Activity     | Professional Crew Activity                           |                      | Volunteer Activity                                   |                      |
|---|--|----------------------|--|----------------------|
|   | Varies, 0-3 Year Establishment Phase                 | Long-Term Care Phase | Varies, 0-3 Year Establishment Phase                 | Long-Term Care Phase |
| Clear curb openings of leaves, trash, and debris    | YES  | YES                  | YES  | YES                  |
| Remove trash  | YES  | YES                  | YES  | YES                  |
| Clear top of street drain (do not lift the grate)   | YES  | YES                  | YES  | YES                  |
| Clear top of overflow drain (do not lift the grate) | YES  | YES                  | NO   | NO                   |
| Water   | YES  | YES                  | NO   | NO                   |
| Remove or replace trees and plants                  | YES  | YES                  | NO   | NO                   |
| Remove built-up sediment from curb inlets           | YES  | YES                  | YES  | YES                  |
| Remove built-up sediment from cells if needed       | YES  | YES                  | NO   | NO                   |
| Structural/ Repairs                                 | To report damage or other repair needs, contact us.* |                      | To report damage or other repair needs, contact us.* |                      |

### Please notify the SPU Operations Response Center\* or the King County Maintenance Hotline\* when:

- The bioretention cell has had standing water for more than 72 hours after it stopped raining
- The facility has been damaged or vandalized
- Something other than rain has spilled into the bioretention cell

### Please use the City of Seattle “Find It, Fix It” app\* when:

- Plants or trees are damaged or need trimming for clearance

\* Please see back page for contact information.



## Caring for the Bioretention Cell

The most important part of bioretention cell care is making sure the facility captures and filters stormwater. So check the bioretention cell regularly to ensure water flows into it. If you see a problem, let us know or follow the care steps below:

### Clear Curb Openings

Clear curb openings so water can flow into the bioretention cell. Rake and remove leaves, trash and debris. Push aside or remove sediment to create a clear path for stormwater flow. The best time to clear curb openings is before a rain storm.



### Clear Street Drains

Make sure that street drains aren't blocked. Remove leaves, debris and trash on top of grates. Do not lift grates. Do not attempt to clear if there are more than two inches of water ponded.



### What is Debris?

- Grass clippings
- Sticks
- Leaves
- Small branches
- Sediment at curb cut



Remove debris by hand or with a rake. Gather debris and put it in a yard-waste bin or other appropriate disposal container.

Rake leaves from around the curb cut, especially in the fall when leaves can quickly clog inlets.



### Remove Trash

Use a grabber-tool to pick up any trash you find and recycle, if appropriate, or throw into a trash can.

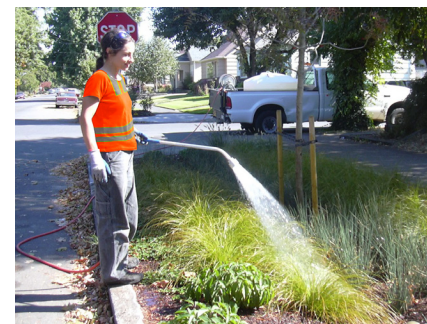


The most important times to remove debris and trash from the bioretention cell are before and after a storm. Heavy rains can cause trash and debris to collect around curb openings and overflow drains and block stormwater flow.

### Watering

Although bioretention cell plants can tolerate our dry summer climate, they can benefit from additional watering during extended dry periods or extreme heat.

All watering will be performed by professional crews.



## CONTACT INFORMATION:

### Seattle Public Utilities

Operations Response Center:  
206-386-1800

### King County

24-hour Maintenance Hotline:  
206-263-3801

### City of Seattle

"Find It, Fix It" is a smartphone app offering mobile users one more way to report selected issues to the City of Seattle.

[www.seattle.gov/customer-service-bureau/  
find-it-fix-it-mobile-app](http://www.seattle.gov/customer-service-bureau/find-it-fix-it-mobile-app)

Thanks to the Portland Bureau of Environmental Services for permission to base this guide on its publication, *City of Portland Green Street Stewards Guide*.

