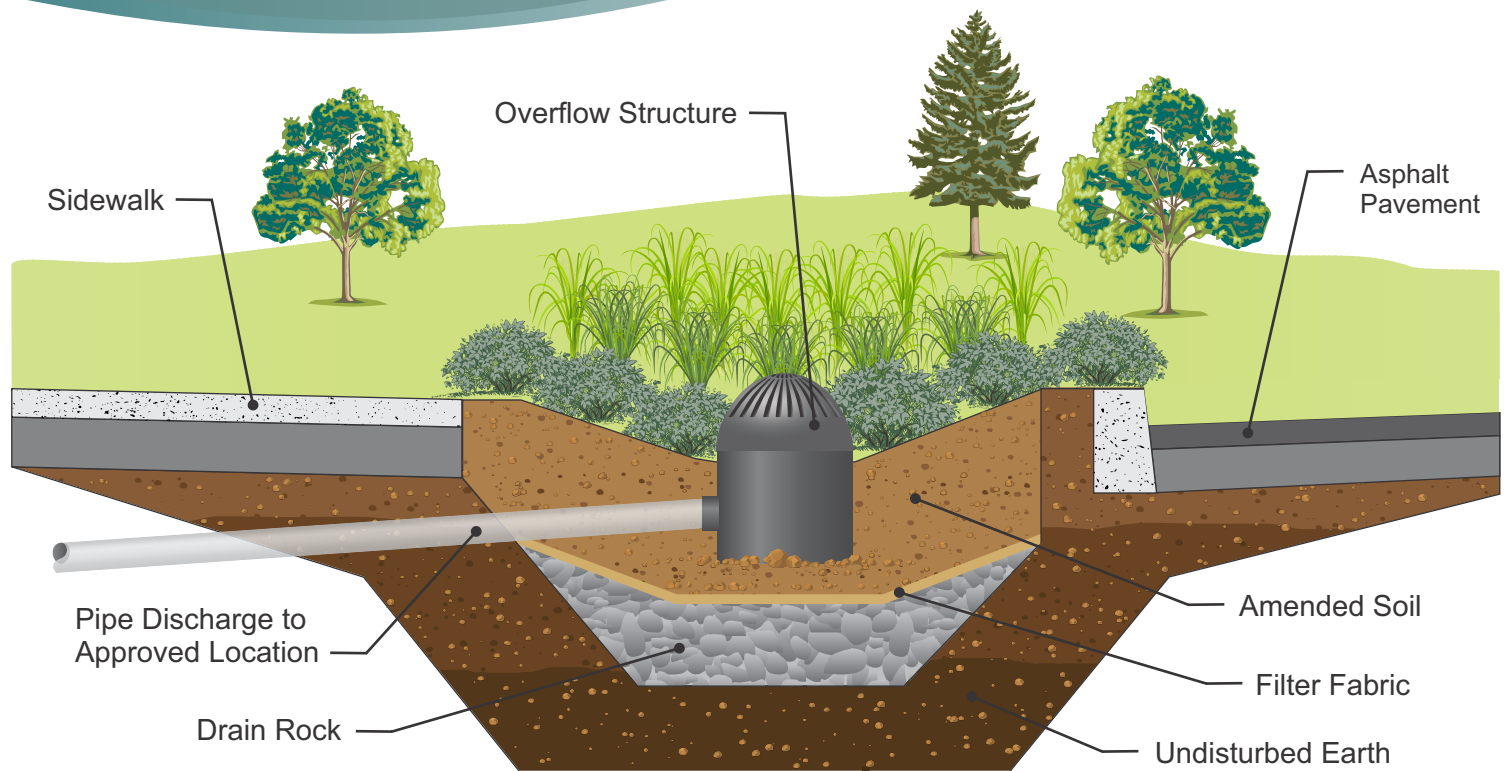


RAIN GARDEN / BIORETENTION Maintenance Guideline



UTILITY DEPARTMENT



What does your rain garden (bioretention facility) do; and why is it important?

The rain garden on your property makes a significant positive impact on water quality of nearby rivers and/or groundwater. By design, bioretention facilities capture and promote infiltration, allowing stormwater to sink into the soil like it would naturally. These facilities protect the environment by naturally removing pollutants such as phosphorus, nitrogen, and heavy metals. This process helps prevent pollutants from entering our beloved Deschutes River and underground drinking water supplies.

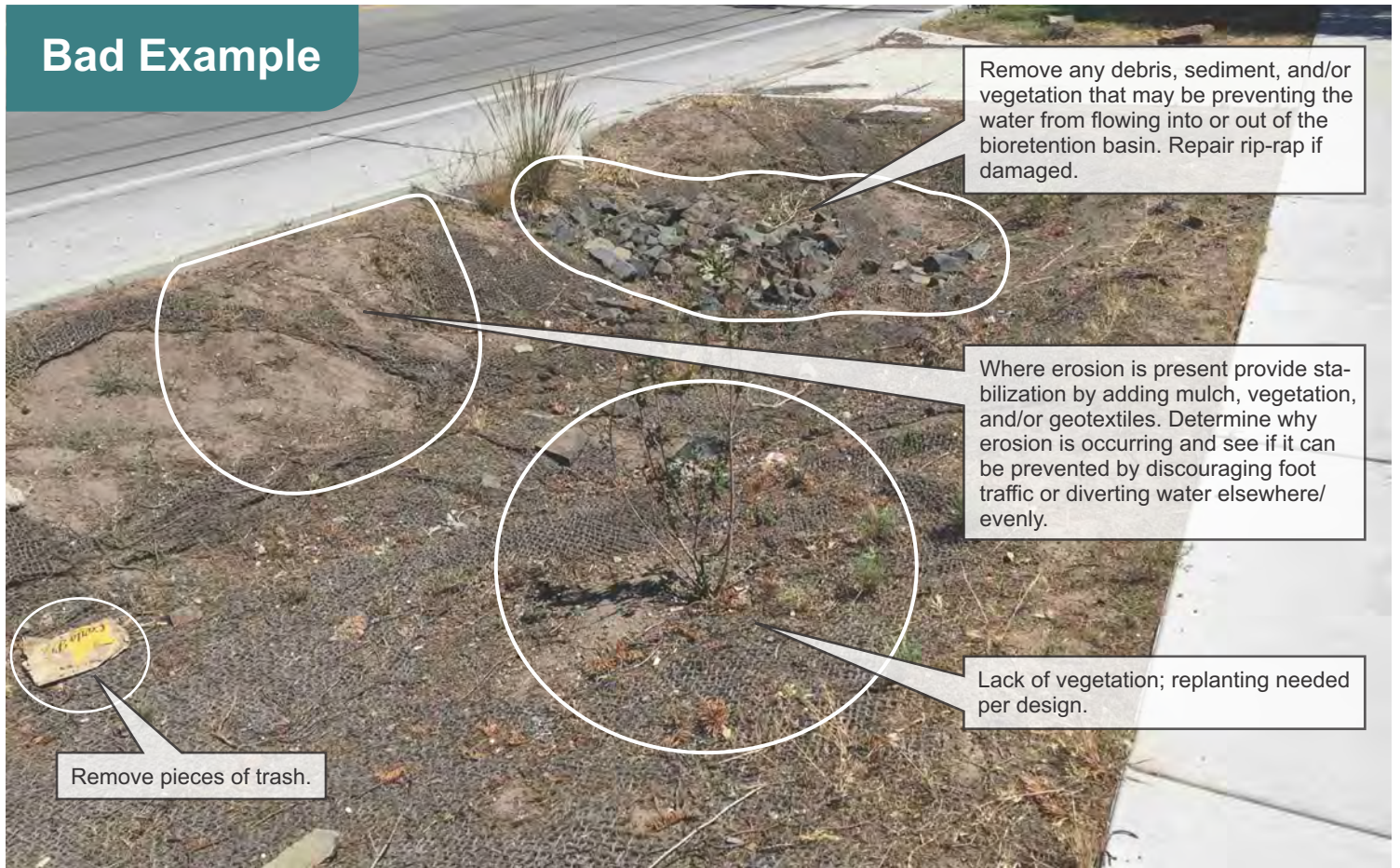
Why is it important to maintain your facility?

Without proper maintenance, bioretention facilities will be ineffective at removing pollutants and infiltrating stormwater. It is important to keep plants healthy, remove sediment, and pick up trash. In Bend, our stormwater facilities serve an important function and property owners are required to keep and maintain them per Bend Code Title 16. Just remember, a few things will go a long way in the effort to keep our waters clean and to prevent localized flooding.

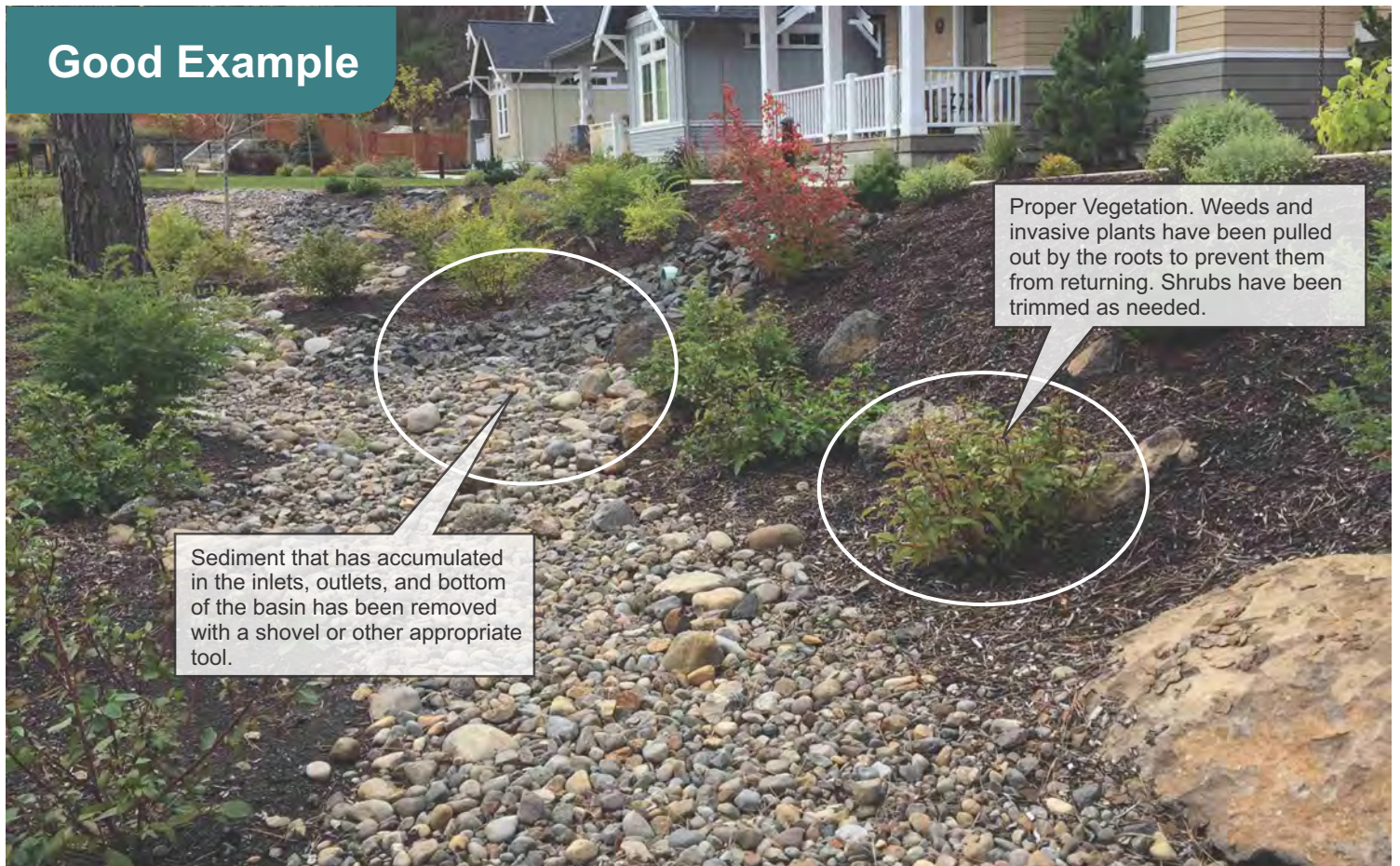
What tools do you need?

All you need is a sturdy pair of gardening gloves, a pair of shears, a shovel, the attached checklist, pen, and a little bit of time. It also helps to have a copy of your site plan to verify location and design. This is typically a maintenance agreement. If you do not have access to a copy of your site plan, please contact the City for assistance (see back).

Bad Example



Good Example











Rain Garden Inspection and Maintenance Checklist

Property Address _____ Property Owner _____

FacilityName/Designator _____ Date of Inspection _____

Type of Inspection: Pre-rainy Season Monthly Quarterly Annual Re-inspection¹

Inspector(s) _____

Defect	Conditions When Maintenance Is Needed	Maintenance Needed? Yes / No	Comments Describe maintenance completed; and if any needed maintenance was not conducted, note what is needed and when it will be done	Results Expected When Maintenance Is Performed
 Trash and Debris	<ul style="list-style-type: none"> • Trash and debris accumulated in basin • Visual evidence of dumping 			<ul style="list-style-type: none"> • Trash and debris cleared from site
 Contaminants and Pollution	<ul style="list-style-type: none"> • Any evidence of oil, gasoline, contaminants or other pollutants 			<ul style="list-style-type: none"> • Oil and contaminants removed and properly disposed; no contaminants or pollutants present
 Vegetation	<ul style="list-style-type: none"> • Planted vegetation becomes excessively tall • Presence of poisonous or nuisance vegetation or noxious weeds 			<ul style="list-style-type: none"> • Vegetation mowed per specifications or maintenance plan, so that flow is not impeded; vegetation should never be mowed lower than the design flow depth; remove clippings from the area and dispose appropriately • Management of poisonous or noxious vegetation
 Tree/Brush Growth and Hazard Trees	<ul style="list-style-type: none"> • Growth does not allow maintenance access or interferes with maintenance activity • Dead, diseased, or dying trees 			<ul style="list-style-type: none"> • Trees do not hinder maintenance activities • Remove hazard trees as approved by the City <i>(Use a certified Arborist to determine health of tree or removal requirements)</i>
 Erosion	<ul style="list-style-type: none"> • Eroded over 2 inch deep where cause of damage is still present or where there is potential for continued erosion 			<ul style="list-style-type: none"> • Cause of erosion is managed appropriately; areas mulched to fill in void areas
 Sediment	<ul style="list-style-type: none"> • Accumulated sediment affects inletting or outletting condition of the facility 			<ul style="list-style-type: none"> • Sediment removed and area reseeded if necessary to control erosion
 Damaged Pipes	<ul style="list-style-type: none"> • Any part of the piping that is crushed or deformed more than 20% or any other failure to the piping 			<ul style="list-style-type: none"> • Pipe repaired or replaced
 Mosquito Vector Breeding	<ul style="list-style-type: none"> • Suitable habitats exist for mosquito production (e.g., standing water for more than 72 hours in areas accessible to mosquitoes) 			<ul style="list-style-type: none"> • Water drainage rates are restored to design standards • Standing water no longer exists or is inaccessible to mosquitoes

¹ Re-inspection of a previously-noted maintenance issue.

Additional Resources

Central Oregon Stormwater Manual

Rain Garden Guide

OSU Waterwise Landscaping Guide

IDDE Manual

Available at the website below.



UTILITY DEPARTMENT

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Bend, Oregon, 97701

541-317-3000 option 2
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www.bendoregon.gov/cleanwaterworks



Accommodation Information for People with Disabilities.

To obtain this information in an alternate format such as Braille, large print, or electronic, please contact 541-317-3000 ext. 2 or email utilities@bendoregon.gov.