RAIN GARDEN CARE

A GUIDE FOR RESIDENTS AND COMMUNITY ORGANIZATIONS

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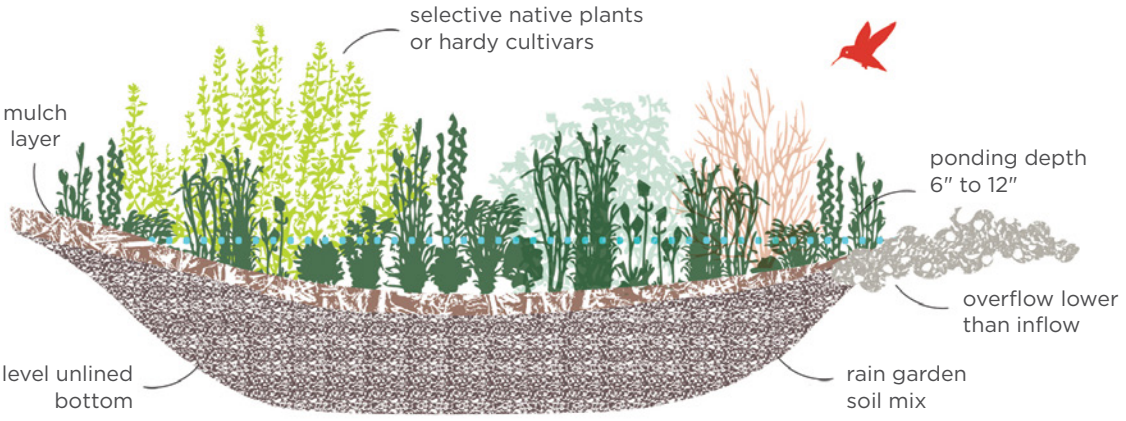
CONGRATULATIONS ON YOUR NEW RAIN GARDEN!

You have a beautiful and functional landscape where the soil, plants, and mulch partner to absorb and filter urban runoff, and keep it from harming our local waters.

Your hard-working landscape will need some care throughout the year, but your time commitment will still be less than what you spent on lawn care during the spring and summer months. This guide will show you the simple steps needed to keep your rain garden looking great and working well.

Your original rain garden design determines the ongoing rain garden care. A few mantras for design include, “right plant — right place,” and “an ounce of prevention is worth a pound of cure.” For a rain garden that means choosing plants that complement each other and your yard. Keep in mind that your original rain garden design can be changed over time, as you see how the plants grow.



Your rain garden is part of a growing network of “green infrastructure” that beautifies our communities and keeps polluted runoff out of our waterways. By building a rain garden you have created an alternative to costly expansions to sewer and stormwater pipe “gray infrastructure” systems.

HOW TO USE THIS GUIDE

This guide offers you timesaving tips, a “care calendar,” and guidance on how to get answers to your maintenance questions. It is organized around a few simple icons that organize tasks by the times they need to be done each year. The guide also contains a “Quick Start Guide” to help you get started.

WINTER

SPRING

SUMMER

FALL

OBSERVE

WEEDING

WATERING

MULCH

WATER FLOW

CARE CALENDAR

The care calendar is found in the Quick Start Guide, and shows tasks that should be done on a monthly, quarterly or semi-annual basis. Homeowners can work by themselves or organize neighborhood work parties to help each other care for several rain gardens as a group. You will find tips and techniques for rain garden care, as well as important information such as how to get wood chip mulch or refreshments donated for your project work parties.

DON'T BE AFRAID TO ASK FOR HELP

Within each community, city, or county, there are several ways you can reach out for assistance if you run into questions or concerns about your rain garden. Look in the Resources section at the end of this handbook to find the Gardening Hotline, the Washington State University Extension Master Gardeners, and Stewardship Partners' 12,000 Rain Gardens resources page. Retail stores, local nurseries, and organizations such as Stewardship Partners and your county's Conservation District offer free classes and assistance to people who want to learn more about rain garden care. Over time, our combined efforts will help make rain gardens as common as recycling, refillable beverage containers, or reusable shopping bags. Please give us feedback as you use this guide, and let us know what additional information you need or how we can improve this guide. Please contact: info@stewardshippartners.org

ORGANIZE YOUR RAIN GARDEN CARE

Tools you'll need:

- Shovel
- Clippers
- Weeding tool
- Wheelbarrow or rolling trash can
- Tarps

Some neighborhoods and communities are organizing local tool libraries, where residents join and can "check out" centrally stored tools for use. Several Seattle neighborhoods have very successful programs.

BEFORE AND AFTER PHOTOS

It's a great idea to take photos of your rain garden through the different seasons to see how it grows and changes over time. Imagine what a sense of accomplishment you'll feel after seeing a photo before you begin a weeding effort, and then another photo from the same angle once you are done. You'll be amazed what a big difference a little bit of time can make. Take a group photo if you had help — people love to celebrate their hard work!

MAKE IT A PARTY!

If you are part of a rain garden "cluster," talk with your neighbors and organize a date together a couple times each year to tackle these rain garden care tasks as a group. Make a simple flyer and send out an email invitation. With two or more people you can each take on a specific task or each work in a different area of the rain garden. These strategies will make the work go much faster! If you want to go after grant funding for neighborhood-scale

projects, keep track of how many volunteers worked and for how long they worked for future reference.

If you are organizing a group of volunteers, it's nice to offer some refreshments to say "thank you" for their service. At the minimum, provide some water, but things like coffee, tea, doughnuts, fruit, or granola bars are crowd-pleasers. Rather than buying wasteful bottled water, use a pitcher and reusable cups. If you plan to offer adult refreshments, we would recommend keeping those in the fridge until garden work is coming to an end for the sake of productivity and safety.

HOW TO ASK FOR DONATIONS

Ask at your local grocery store if they can donate pastries, fruit or snack bars to your rain garden project volunteer work party. Most store managers are able to donate to community projects if they know volunteers are working for a cause. If they donate, be sure to send them a thank you note and include a photo of volunteers working — this will help build a relationship if you want to ask them for donations in the future.

Coffee is a big crowd-pleaser. Ask at your local coffee shop whether they can donate to your event in exchange for thanking them during the event or acknowledging them on event materials.

If you are organizing a big event and need gloves, tools or other materials, it's worth asking the manager of your local hardware store. Keep track of your donors so you can announce your supporters at the work party.

WHO TO ASK FOR MORE HELP

The References section of this guide is a list of organizations that can provide assistance if you have questions about identifying weeds, how to care for native plants, or about pests or plant disease. If you feel overwhelmed because you are not physically able to do the work of caring for your rain garden, reach out to local churches, service organizations, schools, Boy and Girl Scout troops or other neighborhood groups who might want to volunteer and learn about rain gardens in the process.

GRANT WRITING FOR LARGER PROJECTS

You may have bigger ideas and want to raise funds to build larger rain garden clusters in your neighborhood, improve drainage at a local park or school, or get other residential streets to "go green." There are many grant opportunities out there. Contact your local City, County, Conservation Districts, or other jurisdiction about grants available to community organizations.

WEEDING

Many weeds thrive wherever they grow and can even be pretty. Some weeds invade through underground roots or runners, and others by seeds spread by wind, water, birds and other animals. Invasive weeds overrun our parks, trails, lakes and waterways.

Rain gardens will still work even if they have weeds growing in them, but your rain garden plants will not grow as well because weeds will compete with or overshadow them. Rain gardens are also much more attractive without weeds.

In Western Washington, you will most likely see Dandelions, Himalayan Blackberry, Morning Glory (also known as Bindweed), grass from lawns, and Buttercup in your rain garden.

From left: Grass from lawns, Himalayan Blackberry, Dandelion, Morning Glory (Bindweed) and Buttercup

REMOVAL TECHNIQUES

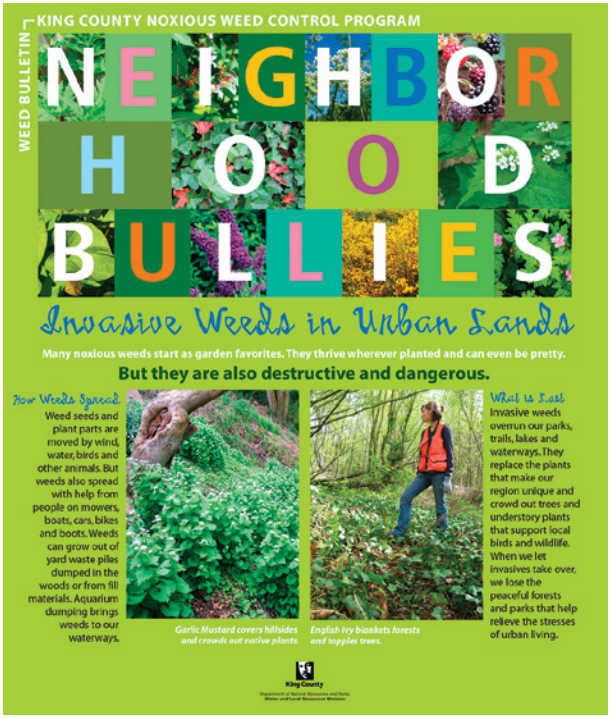
Weeds are easiest to dig out in the spring when the soil is moist and the weeds are small — though weeding is important throughout the year. Use a small shovel or trowel to dig around the roots. Make sure you get all the roots out, or else the weed can grow back. Try to remove the weed before it goes to seed. Work in one area at a time and move systematically around your rain garden. Once you have removed weeds in one area, go back through and "fluff" up the mulch, loosening and spreading it around to cover up any bare spots.

WHAT TO AVOID

Chemical fertilizers or pesticides: The soil in a rain garden provides the nutrients your plants need to thrive. Adding mulch every year will provide a barrier to keep weed seeds from reaching the soil and is a natural way to slow down weeds from taking root. Your rain garden will not need any fertilizer, moss killer, or pesticides such as Roundup™ or Sluggo™ or any other additives beyond the mulch layer applied once a year for the first few years. Chemicals end up in our waterways and cause harm to fish, wildlife and human health, defeating one of the greatest purposes of a rain garden.

Weed whackers/string trimmers: it's far too easy to hurt your hard-working rain garden plants if you use a weed whacker. Weeding by hand is easier, quicker, and less likely to result in unhappy plants.

Compacting the soil: packing down the soil in your rain garden can make drainage more difficult, so tread lightly and rarely, especially in the bottom area!



Go to kingcounty.gov/weeds for photos and this guide

WEED	TOOL	REMOVAL TECHNIQUE
Grass from lawns	• Fork • Shovel	Dig around and under the grass to loosen soil and get all the roots out
Himalayan Blackberry	• Pointed shovel • Clippers • Heavy gloves	Clip off the long branches but leave enough stem to hold on to. Dig around and under the stem to get at the root system so you get the whole plant; blackberry can regrow from a tiny piece of root or stem.
Dandelion	• Dandelion Weeder • Hori Hori • Old flathead screwdriver • Kitchen knife	Dandelions have a long taproot at the center. They will regrow from any taproot that is left behind. Find the center of the weed (the location where the flowers come from) insert the tool in the soil, parallel to the taproot. Wiggle the tool to loosen the taproot. Remove the dandelion by gathering the weed in one hand and lightly pulling while prying up the taproot with your tool in the other. If the taproot is not yielding, continuing working around the taproot with your tool.
Morning Glory aka Bindweed	• Dandelion Weeder • Hori Hori • Old flathead screwdriver • Kitchen knife	Bindweed grows on long runners both above and below ground. Above ground manually remove as much as you can without causing damage to your other plants. If the bindweed has wound itself so heavily and tightly in your plants that you can't remove it all, remove as much as you can with at least the bottom 12 inches from the base of the plant. The remaining above ground bindweed will die on the plant within a few days and will be easier to remove at that time. **Underground runners** Bindweed removal is more successful in moist soils. Grab the above ground runner, follow the stem to the ground and lightly pull the underground runner out with your hand or tool as needed. Bindweed will regrow from any part of a runner left behind.
Buttercup	• Sharp trowel • Fork type tool • Dandelion Weeder • Hori Hori	Dig out with your tool, removing all of the runners, and roots.

WATERING

During the first two years of your rain garden's life the plants are just getting established and will need water during dry periods. Once the roots have spread out and down (after two years) you won't need to water them as much or at all.

WATERING SCHEDULE

You want the top 6-12 inches of soil to be moist; you can check this by digging a small hole or poking your finger into the soil to the side of your plant. Ensuring that your mulch layer is at least 2-3 inches thick will also reduce the amount of watering needed as this helps keep the underlying soil cool and moist. If you use a regular hose or sprinkler, water about 1 inch every 3-4 days, or a week if the weather is cool. You can easily measure your watering by placing a small can or jar under your sprinkler, and checking it until it is 1 inch full.

If you prefer to use a regular schedule rather than checking the soils and watching the plants for signs of stress, then for the first two years, give the plants a thorough soaking twice a week from June through September.

Overwatering and light/infrequent watering should both be avoided because plants will

Watering the roots

not develop the healthy and deep root structure needed for drought resistance. If some of your plants seem to be constantly stressed and require too much watering, consider moving them to a shadier spot in the garden and replacing them with more sun/drought tolerant species.

Watering should be done in the early morning or later evening when there is no direct sunlight on the plants and when temperatures are cool to limit the amount of water lost to evaporation. Water the base of the plants, where the root systems are, rather than spraying water all over the plants' leaves.

WATERING TECHNIQUES

A soaker hose setup (or drip irrigation system) is a time, money and water-saving method that slowly trickles water to the rain garden — cover it with mulch to save even more water. It can be connected to an automatic timer so you won't forget. You can also use a shower type wand attachment for your garden hose to get water on the base of the plants gently, without bending over.

Some homeowners install a rain barrel or cistern to collect roof water from their home or garage, and then use this water for their rain gardens. For information about installing a soaker hose, or drip irrigation system, please go to the "Success with Soaker Hoses" fact sheet at savingwater.org.

COSTS OF WATERING

In Seattle, for example, our drinking water costs about two cents a gallon during the summer (think about that the next time you buy single-use bottled water!). If you water your rain garden 1-2 times each week, you might see a slight rise in your water bill, but there are ways to reduce your water bill to offset this usage.

You get the biggest water savings in your home by installing efficient appliances (like newer toilets) and fixing leaks. Another way to save water and money is to reuse water from your home. For example, fill up a bucket in the tub while you wait for your shower to turn hot, or drain the children's pool into your rain garden once they are done playing. For many more money-saving tips on reducing water use at home, please visit; savingwater.org.

Soaker hoses

PLANT CARE

Natural plant care consists of planting the right plant in the right place, building and maintaining healthy soil, and using smart watering practices. If you hired a rain garden designer, ask them for your plant list and layout design, which will help you identify what's in your rain garden.

Some rain garden plants lose their leaves and go dormant in the fall. If this appears unattractive to you, it is fine to cut plant stems and flower heads off at the base from smaller perennials. Alternatively, you may wish to leave some stalks and seed heads to provide food for birds and winter interest. Stalks left standing in the fall can be cut down in the early spring as the new green growth emerges.

Keep in mind that your original rain garden design can be changed over time, as you see how the plants grow.

A well-maintained rain garden will reflect your style and taste

PRUNING SHRUBS AND TREES

After the first two years, your rain garden plants might need annual pruning or branch cutting to keep vigorous vegetation in control and away from roads and walkways. Pruning should be done in the early fall, so that plants have time to recover before freezing weather. If you don't want to prune regularly, consider plant choices that are smaller and more compact (ask your local nursery for suggestions). If a particular plant becomes too aggressive in your rain garden, it is perfectly fine to replace it or remove it.

Selective pruning will help keep your plant looking tidy and less bulky. Some people find that pruning has a meditative, Zen-like quality to it; they enjoy coming home from work and getting out their clippers and gloves!

Take a step back and stare at your shrub. Remove all the dead branches at their base. Take out any branches that cross, rub over each other, or that grow the "wrong way." Step back, stare again and see if it looks right to you and then go back in as needed to further shape it, and repeat.

GRASSES

As the grasses and rushes in the wet part of your rain garden grow, they will eventually fill the entire bottom area. This is a sign of a healthy rain garden. If you have a more natural gardening style, you can leave the dead vegetation in place to be used by wildlife (e.g. nesting material for birds). The dead leaves create a natural mulch layer that protects plants from cold temperatures and draughts. Other gardeners may choose to cut back their grasses and remove all dead vegetation in the fall to create a cleaner look. Both approaches are good and depend only on the gardener's own tastes.

KEEP THE WATER FLOWING

Inspect your garden regularly, and remove any built up soil, sand or gravel that is blocking the inlets or outlets, or mounds that prevent water flow through the rain gardens. A small spade works well. Dispose of sediments in your trashcan. Leaves and other debris can also block the inlets, which could cause backups or flooding. Cut back or remove any vegetation or grass that is growing into your inlets.

EROSION

Look for any exposed soil or erosion caused by fast or high volume water flows. To keep erosion to a minimum, add decorative rock (more than 2 inches in diameter) to protect the ground where water flows into the rain garden.

DEBRIS

Rain gardens should be regularly cleared of garbage or other debris that collect in them.

Remove leaves and other debris from rain garden inlets and outlets

SOILS AND MULCH

Bioretention soil is a mix of sand and compost that forms the basis of most rain gardens. Most likely you will never need to replace the bioretention soil. After 2-3 years, you can add a small amount of compost during the late spring or summer to the areas around the plants for extra nourishment.

MULCHING WITH WOOD CHIPS

Mulch is an important part of rain garden care. Wood chip mulch (not "beauty bark") keeps the soil moist, allowing for easy infiltration of rainwater. Mulching also protects plants and reduces weed growth. Mulch also prevents soil from developing into a hardpan soil, a condition where the soil becomes cemented together and does not drain well.

When you mulch, you'll spend less time weeding, less money and time watering, and grow a healthier, more attractive landscape. Don't be afraid to install a thick layer of mulch initially — as much as 4 inches of wood chips. Be careful to sweep mulch away from tree trunks and plant stems — burying plants in mulch will cause them to rot.

Mulch your rain garden once a year for the first year or two. After a couple of years, it is a good idea to check the mulch layer annually to make sure it is still providing good coverage over the whole garden. Fall, after a big weeding and when rain has thoroughly moistened the soil, is the best time to mulch. Mulching provides benefits all year-round, so don't leave it out!

- **During the rainy season,** mulch protects the soil from erosion and losing nutrients that the rain can wash away. Mulch also helps to suppress the germination of annual weed seeds, including many that crop up during early spring.
- **The first flush of warm spring weather** gives a jump start to weeds; you'll be glad your mulch is already in place! Mulch will also retain soil moisture and delay the need for supplemental watering. When you do begin watering, mulch will help reduce how

Mulch prevents weed growth and keeps soils moist

often you need to water. Mulch will keep plants' roots cooler as the weather heats up, benefitting plant health.

- **When plants are actively growing,** the gradual decomposition of mulch supplies the soil with organic matter and beneficial microbes that enable plants to use soil nutrients.
- **Year-round beauty.** Mulch can help visually tie your garden together by providing a consistent texture to your beds.

WHAT ABOUT "BEAUTY BARK?"

Bark products are readily available and extensively used. Comprised of the bark from trees used in the wood products industry, there are several drawbacks to its use in rain gardens.

- Bark has water-repelling qualities. The finer the bark, the more it will repel water. Coarse bark mulch is a better choice if you decide to use this product.
- Bark is low in nutrients, unlike wood chips, which also incorporate leaf matter and other beneficial natural material.
- Bark uses up nitrogen in the same way that other wood products do, but offers little additional nutrient benefit to soil.
- Some bark products have dye added to them. In addition to raising concerns about how dye may affect the environment as it leaches, as it ages bark turns gray and ugly.

HOW TO GET MULCH DONATED

Many tree service companies or arborists offer to deliver wood chips to homeowners when they are done with a job. You are often put on a list and receive your pile when it comes available. The truck drivers will need an address and some guidance on where to exactly drop the pile on your property. Please be sure to keep the pile off of your street or sidewalk. You may end up with more than you need, but wood chips work great even after they've "seasoned," and some will even begin to develop healthy mushroom growth. One 10-cubic yard pile will last you more than a year, and can be shared with neighbors.

Volunteer party

TROUBLESHOOTING

Check to see if vegetation or debris is blocking the inlet. Often leaves collect in the inlets and form a barrier. Use a rake or flat shovel to remove material. Over time you may have to remove sediments that build up just inside the inlet areas; dispose of these sediments in your trashcan.

IF YOUR RAIN GARDEN IS NOT DRAINING WITHIN 48 HOURS

- Check for depressions or high points in the bottom of the garden. Rake back the mulch and then smooth out the rain garden bottom surface and then replace the top layer of mulch. Don't remove the plantings, but work around them.
- Soil and mulch may be compacted, so use a garden fork to loosen up lightly and be sure to be careful of the plants' roots.
- If ponding persists, divert water away from the inlet to the rain garden so it stops re-filling, and seek professional advice about how to improve the drainage.

IF SHRUBS BLOCK VISIBILITY NEAR DRIVEWAYS OR AT INTERSECTIONS

Prune vegetation to maintain visibility for safety. Keep shrubs below 2 feet near roadways and driveways.

Some rain gardens will pond like this during rain events, others will drain as fast as they fill

RESOURCES

Many of the tips and strategies outlined in this guide came from our partners and colleagues who have produced the following resources.

GENERAL INFORMATION ABOUT RAIN GARDENS

12,000 Rain Gardens for Puget Sound: 12000raingardens.org

The Rainwise rebate program: rainwise.seattle.gov

WSU Rain Garden Handbook for Western Washington: raingarden.wsu.edu

PLANT CARE

Refer to the **Rain Garden Handbook for Western Washington Homeowners** guide for several plant list ideas for species that work well in rain gardens. raingarden.wsu.edu

The King Conservation District offers native plant sales and many other resources: kingcd.org or (425) 282-1900

Call the **Garden Hotline** at (206) 633-0224 or email a question from their website, gardenhotline.org

The **WSU Extension Master Gardeners** offers local plant clinics, or you can email your gardening questions. mastergardener.wsu.edu/program/county

Natural Yard Care: kingcounty.gov/naturalyardcare

If you have a concern about tree pruning in the planting strip, particularly if you think there may be a public safety hazard, please call the **City of Seattle Arborist:** (206) 684-TREE (8733)

PRUNING

PlantAmnesty offers a wonderful pruning guide that shows how to prune different types of plants, such as cane growers (like Nootka rose or red twig Dogwood), mounds (like spireas or snowberry), or tree-likes (viburnum): plantamnesty.org

MULCH

Contact the **Pacific Northwest Chapter of the International Society of Arboriculture** to find a company to donate wood chips: pnwisa.org

Asplundh Tree Experts trims trees for Seattle City Light and Puget Sound Energy, and will add you to a wait-list for wood chips as they are available: (425) 483-9339

NATIVE PLANT AND WEED IDENTIFICATION

Center for Urban Horticulture: depts.washington.edu/uwbg/visit/cuh.php

Plant Answer Line: (206) UW-PLANT (897-5268) or email hortlib@uw.edu and attach a photo of a plant you want identified.

Washington Native Plant Society: wnps.org

NOXIOUS WEEDS

The **WSU Extension Master Gardener Program** offers assistance on noxious weed control: kingcountymg.org or (206) 685-5104

King County Noxious Weeds program: kingcounty.gov/weeds

Washington State Noxious Weed Control Board: nwcb.wa.gov

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King Conservation District

12,000 RAIN GARDENS in Puget Sound