



Rain Garden Maintenance
Plaster Creek Stewards



About Plaster Creek Stewards

Plaster Creek Stewards is an initiative of Calvin College faculty, staff, and students in cooperation with community partners working to restore health and beauty to the Plaster Creek watershed. PCS utilizes research, education and hands-on restoration projects to engage the local community.



Plaster Creek, the most polluted creek in West Michigan, is heavily impacted by pollutant-laden storm water that also brings heat and excess energy in its flashy flows to the creek. The runoff degrades Plaster Creek's ecosystem and its downstream communities by introducing toxins and harmful bacteria like *E. coli*, eroding stream banks, and causing conditions that put stress on animals living in or near the creek. Plaster Creek Stewards' projects help to slow and divert storm water runoff into areas where it can be absorbed by plants or soak into the ground instead of rushing into the creek and causing damage.

Getting to Know Your Rain Garden

Your new curb-cut rain garden is a great example of diverting and cleaning up storm water runoff. The storm water from your street carries pollutants, heat (seasonally) and energy, when it's moving quickly. The curb-cut creates a channel that directs runoff into your garden, rather than down a storm drain and directly into Plaster Creek.



Once in your garden, the water gives off its excess energy to rocks in the channel, and filters down through the sandy soil. Native plants and the soil below filter out pollutants before the water enters creek and rivers, or is stored as groundwater. Rain gardens have beauty with a purpose!

Native Plants

Most, or all, of your rain garden's plants are native to western Michigan (existed here before European settlements), and have been chosen to match the conditions in your garden. Plants in the rain garden's **basin** thrive in wet soils and can tolerate extreme fluctuations in soil moisture and oxygen level. Their extensive root systems also hold soils in place and prevent erosion. Plants along the **edge** of the garden or near trees might prefer drier conditions, sun, shade, or a combination of these. And because these plants are adapted to the western Michigan region, they require less watering, pesticides and other maintenance than non-native plants. They do need some care to be successful, since your rain garden was landscaped for a specific purpose. The following pages outline a suggested maintenance schedule for your growing garden.



Maintenance Schedule

Year 1: Summer of Installation

Homeowner Responsibilities

Weeding

Weedy grasses and sedges like Foxtail grass, barnyard grass, and nutsedge show up fairly quickly. In fact, they're weeds that come in with the mulch! Dandelions will pop up too; study the planting, your map, and the weeds guide at the back of this booklet to learn what was planted and what needs to go! Make sure to remove the weed's entire root, or the plant will likely grow back and be harder to remove. Use a trowel for larger plants, and weed when the soil is damp (in the morning, after watering, or after a rain) for easiest removal.



Watering

Like any young plants, the ones in your rain garden need extra care when they're first getting started. For the first two months, water them thoroughly every other day to encourage growth and establishment. Plants can be watered less if there's been a decent rain. After two months, they will only need watering if it's been a week without rain. The small plugs we use will look a little underwhelming at first, but they are perennials that will grow and mature!

Litter Removal

Trash and leaves may build up in the rock channel and sediment trap, especially after a storm. Periodically clean your rain garden of any trash, fallen leaves and sediment buildup to ensure that water can properly flow and drain into the ground. Scoop sediment into a paper bag and place in trash. Do not compost as it may contain toxins from road runoff.



Disturbances

Keep an eye open for clues or notices about upcoming disturbances to your parkway or garden. If street work or digging is or will be happening, see page 13 on ensuring the best outcome for your garden.



Year 2: Summer After Installation

Homeowner Responsibilities

Weeding and Watering

Initial weeding in spring and early summer is important in setting the stage for the rest of the year. As plants mature, they will leave less sunlight and root space for weeds. The need to weed will taper off and become necessary only as sporadic weeds pop up between mature plants. Watering may still be necessary, on occasion, during weeks when it's hot and dry. You shouldn't need to water every week, unless your garden was planted late the previous fall.

Additional Mulching and Fertilizing

Mulch shades the soil, reduces evaporation, buffers soil temperature, and suppresses weed germination and growth; these are all things that reduce stress on your native plants. As your plants grow and fill in the open spaces, it won't be necessary to re-mulch, though some prefer the appearance of fresh mulch. If additional applications of mulch are desired, they will be the responsibility of the homeowner. Because the plants are native to Michigan and the soil contains the necessary nutrients from compost, fertilizer is not necessary.

Pruning

If certain plants look overgrown or weedy, feel free to thin or prune them back! By late summer or fall, dead plant material can make a garden look messy. Cut back dead stalks with clippers or pruning shears (seedheads can be saved for future planting), or wait until new plant growth has appeared in the spring. Dry stems and seedheads can also be left intact since they provide good cover for wildlife and food for birds.

Clearing Litter and Debris

Remove any trash, dead plant material, and tree leaves that may build up in the rocked channel or sediment trap after a storm. Focus on debris that blocks the inlet to ensure good flow of storm water into curb-cut garden (do this as needed).



Plaster Creek Stewards Involvement

In the second summer, Plaster Creek Stewards will plan on making a visit to each site to perform maintenance and ensure adequate survivorship of plants. Should the need arise, PCS may also work with homeowners to organize a workshop/workday on weeding and maintenance duties. At the homeowner's request, Plaster Creek Stewards can also replant areas where die-off has occurred.

Year 3: 1-2 Full Seasons After Installation

Homeowner Responsibilities

Homeowners will take over all/most of the maintenance activities including weeding, pruning, seedhead removal after flowering, and clearing litter from the inlet and rock channel.

Clearing Sediment

It is important to regularly clean out the sediment trap as it fills or after rain events. Take a trowel and scoop sediment into a paper bag and dispose of it. Do not put sediment back in the street or compost it as it may contain toxins from street runoff. It may be necessary to remove some of the rocks in order to clear out sediment from the rock channel if the sediment is impeding the flow of storm water into the garden. Please contact Plaster Creek Stewards if you'd like assistance with this.

Plaster Creek Stewards Involvement

At the homeowner's request, Plaster Creek Stewards' Green Team is available for maintenance activities at a cost of \$50/hr. (for whole crew) plus materials costs, if mulch or other materials are desired. If time permits, PCS may make early summer visits to conduct some light weeding and maintenance activities, free of charge—we want these rain gardens to be successful!



Frequently Asked Questions

Q: It's later in the season-- my plants have finished flowering and are turning brown. Can I do anything to make my garden more attractive until next year?



A: Yes! Your plants will come back next year, so feel free to cut back any dead stalks to tidy up your garden. Pruning will also encourage your plants to be bushier and spread outwards instead of up. Plants that spread outwards will cover more ground and crowd out weeds. However, plant stalks and seed heads in your garden provide food and shelter for insects and birds throughout the winter. Letting native seeds remain on the stalks also ensures that the plants receive a necessary period of cold weather for spring germination. Leaving stalks can also provide natural aesthetics in our urban neighborhoods.

Q: Weeds...I like the native plants, but some of them are getting 'weedy' and spreading too much. How can I keep them in check?



A: First, are the 'weedy' plants multiplying through **rhizomes** (roots that spread laterally underground from the original plant and form new shoots aboveground) or through **seed dispersal**? If the plants are spreading through rhizomes, pull or dig up the new unwanted plants and discard properly. If the plants are reproducing through seed dispersal, cut and discard seedheads before the seeds are released.



Q: What should I do with leaves in the fall?



A: Use a rake or blower to remove leaves. The rock channel should be kept clear so that water can flow and percolate properly. The mulched areas should be kept clear enough so that plants are not being smothered under layers of wet, heavy leaves in winter and spring. Young plants need space and light to grow, and the leaves probably won't decay much over the winter months. In the end, remove enough leaves to protect young plants and maintain the functionality of your rain garden, but do not feel that it is necessary to remove every leaf—unless that's the aesthetic you enjoy!



Advocate for your Garden

In Case of Upcoming Disturbance

1. Watch for evidence or alerts that your street/parkway will be a work area for utilities like water, electric, gas, or curb repairs. These may affect your garden.
2. Before work begins, identify the entity planning the work. Identify contact information.
3. Find out when the work will be done at your home and when it will be repaired. (They should return it to former condition/shape.)
4. Contact Plaster Creek Stewards to notify us of upcoming construction.
plastercreekstewards@calvin.edu
5. If they are replacing the curb or road surface, put up sandbags or erosion fencing to prevent erosion from washing in and through your garden during big storms. If you are available, explain the garden to those doing the digging/work.
6. Consider rescuing plants (contact us for pots) and woodchips, sediment trap, and rocks before they begin work.
7. After work is finished, reshape the garden, place sediment trap and rocks, and replant the garden according to the map as best as possible. Contact us if you want new plants or talk to a neighbor with a CCRG and get transplants from them.



Weeds You're Likely to Encounter in Your Garden

Michigan / Great Lakes

Woody Plants



Buckthorn
Rhamnus cathartica



Autumn olive
Eleagnus umbellata



Grasses/ Sedges



Purple Nutsedge
Nutsedge
Cyperus spp.



Orchard grass
Dactylis glomerata



Kentucky bluegrass
Poa pratensis



Crabgrass
Digitaria sp.

Herbaceous Plants



Garlic mustard
Alliaria petiolata



Broadleaf plantain
Plantago major



Mullein/ Lamb's ear
Verbascum sp.



Poison ivy
Toxicodendron radicans



Dodder
Cuscuta sp.



Japanese knotweed
Fallopia japonica



Hoary alyssum
Berteroa incana



Wild carrot
Daucus carota



Field bindweed
Convolvulus arvensis



Daisy fleabane
Erigeron strigosus



White clover
Trifolium repens



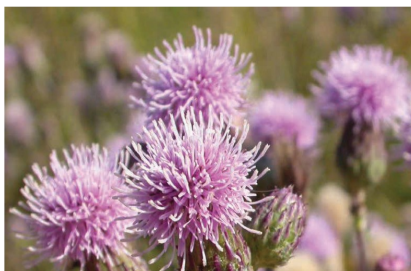
Evening primrose
Oenothera biennis



Hawkweed
Hieracium sp.



Canada goldenrod
Solidago canadensis



Canada thistle
Cirsium arvense



Purple loosestrife
Lythrum salicaria



Spotted knapweed
Centaurea maculosa



Bull thistle
Cirsium vulgare



Ragweed
Ambrosia artemisiifolia



Curly dock
Rumex crispus



Stinging nettle
Urtica dioica



Knotweed
Persicaria aviculare

Updates and Continued Support

For information and community support, join our
Facebook Group “Rain Garden Maintenance.”





Contact Us

plastercreekstewards@calvin.edu
www.calvin.edu/go/plastercreekstewards

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@PlasterCreekStewards

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