Remember when you plant your garden it will take a while to get established. Also, remember that your garden will need maintenance. If you aren't happy with how your garden looks or if your plants aren't doing well, don't be afraid to modify your plan by adding or subtracting plants or moving existing ones.

During the first year be prepared to water a rain garden if timely rainfall does not occur. Water at least once a week during establishment if it doesn't rain.

Types of maintenance measures:

- Inspections
- Weeding
- Pruning/Mowing
- Re-vegetating as necessary
- Sediment removal as necessary
- Proper water drainage

What Am I Inspecting For?

One of the most important things about rain garden maintenance is to keep it looking good. Studies have found that rain gardens, especially when native plants are used, are well accepted if they appear to be orderly and well kept. Select lower growing species that stay upright. Be sure to inspect your rain garden periodically during and/or immediately after rainfall events to be sure the rain garden is working as designed.

Invasive plants and plant health should also be noted and all invasives should be disposed of as soon as detected. Excessive sediment should also be noted because that is why the rain garden was originally designed.

Weeding

Perhaps the most important maintenance item is to keep the rain garden weeded, especially the first couple of years when natives are establishing. Remove by hand only those plants you are certain are weeds (hence the need for labeling in previous fact sheet). Try to get out all the roots of the weedy plants. In the third year and beyond, the native grasses, sedges, rushes and wildflowers will begin to mature and will out-compete the weeds. Weeding isolated patches might still be needed on occasion. Also remember that some weeds can be aggressively spreading underground by rhizomes.

Pruning/Mowing

Pruning directs growth of plants, improves health, and increases production of flowers and fruits.

Native plants spend much of their energy establishing deep root systems the first year or two. So expect a bit of an “ugly duckling” in year one. Usually in year two and certainly in year three, native plants will have developed into a “swan” and will put on a spectacular show of color and texture that attracts butterflies, birds and beneficial insects.

In rain gardens, dense shrub growth is encouraged rather than eliminated to provide increased filtering capacity. Keep plants pruned if they start to get “leggy” and floppy. Tattered and discolored plants should b e cut back after spring arrives and growth is 4-6” tall. Deadhead (cut off the old flower head) after a plant is done blooming.

Types of Pruning

THINNING: Basically thinning out. This type of pruning removes entire branches back to main trunk or major branches to the ground creating a large open shrub.

HEADING: Also known as heading back. This type of pruning removes only part of a branch creating a more dense shrub.

After each growing season, the stems and seed heads can be left for winter interest, wildlife cover and bird food. Once spring arrives and new growth is 4 to 6 inches tall, cut all tattered plants back. If the growth is really thick, hand-cut the largest plants and then use a string trimmer or lawn mower raised to cut at 6” to mow the planting back. Dead plant material can also be removed and composted or disposed of as appropriate.

Mowing should occur two times a year, in your rain garden. Initial mowing can be done after the first few weeks of growth – in early spring. The final mowing can be completed after ground nesting birds have hatched the next generation – usually mid May.

Re-vegetating

After the first season, it may be obvious what plants were successful in this niche and what plants do not work for your rain garden. Questions you need to ask yourself regarding your rain garden are:

- Over the growing season, was the weather drastically different than the conditions the basic was designed to retain?
- Did the topsoil limit the holding capacity of the basin or encourage absorption?
- Was flow too fast through the basin, damaging health?
- Is flow being incorrectly diverted from the rain garden?
- Is sediment covering vegetation?
- Were some species over-shadowing others?
- Did pests reduce the success of certain species?
- Is one area of the rain garden not growing at the same rate as another? Why?

These questions require some thought as to whether the rain garden is serving the purposes it was designed for:

- Trapping Pollutants
- Reducing Runoff and Promoting Infiltration
- Creating Habitat for Birds, Butterflies and Beneficial Insects
- Adding Beauty to Your Yard

Once you have decided what your rain garden needs improvement on, you can change whatever needs changing. For instance, you can plant more of the successful species in the rain garden as necessary, re-seed the berm (wall across the bottom and up the sides of the rain garden, necessary to keep the water in the garden) if there are areas of exposed soil, replace rocks that may be diverting flow out of the garden or alternately, build up areas where more protection is needed.

Sediment Removal

Since the rain garden serves the purpose of catchment, sediment will tend to accumulate within the garden. This is a sign of success – this soil would have been directed straight to the stream, without your efforts!

With a flat shovel, remove soil that has accumulated in the basin. Avoid the vegetation.

There is no exact schedule for when this should be done. Try to monitor sediment accumulation, especially after all heavy storm events.

Be sure that sediment is not churning up from exposed areas of the rain garden. Flow should be dissipated to avoid these situations, which are likely to occur in the early stages of stabilization. Please do not use heavy equipment for this task.

Proper Water Drainage

Check after a rain to see if standing water occurs longer than one or two days. Water standing too long may hurt or kill plants and is a sign the rain garden is not functioning properly. If this is a problem, one solution is to dig a small opening in the berm to allow drainage. Fill this opening with gravel to allow drainage through the berm, and leave it for a year or two to see if the problem disappears. If not, re-digging and re-leveling a portion of the garden may help. If you do this consider amending soil with compost in the wet area to improve filtration.

Common Mistakes

- Installing a rain garden on soils that lack adequate percolation rates.
- Poor maintenance – mostly insufficient weeding the first year after installation. Annual weeks that are not pulled will re-seed rapidly, creating an unkempt looking rain garden.
- Planting species that are too tall for the area. Carefully note the height ranges for the recommended species; if you have a small bed do not plant taller species.
- Use of fertilizer. Native species do not need fertilizing, and often will grow too tall and flop over if they encounter rich conditions.
- Improper plant placement – put drought tolerant species on the sides of the rain garden and more water tolerant plants in the wetter areas of the rain garden.
- Improper location of the rain garden; water does not naturally flow to the site, or outflows are directed toward the building foundation.

Final Considerations

Rain gardens are a great practice that can be installed in most residential settings. But they are not necessarily a “magic bullet.” Remember, there are some settings where limiting factors may affect rain garden design and performance and in some settings you may need to rely on the treatment train concept – a combination of practices working together to manage water sustainably. Rain gardens are usually used to manage water that falls on an urban lot. But when you look at most residential settings, what makes up the majority of impervious surfaces? It’s the streets, of course. Transportation surfaces constitute up to 70 percent of imperviousness. So, do everything possible to manage water that falls on roofs and driveways and yards – then take on the challenge of organizing a neighborhood project that manages road runoff.

The right of ways between curbs and sidewalks often have infrastructure that may make it a challenge to retrofit and add rain gardens. But in some settings, it may be possible to install rain gardens up slope from storm sewer intakes and make curb cuts that leg road runoff enter the rain garden rather than going directly into the storm sewers.

The installation of one rain garden by one homeowner may do little to impact the hydrologic instability and the water quality problems we have. But the cumulate affect of

individual actions will ultimately lead to tangible changes in improved water quality, more stable streams flows and reduced flooding potentials.