

# Guide for Treatment of Residential Impervious Surfaces

There are two design options for treatment of residential impervious surfaces which exceed the allowable limits.

## OPTION #1 – Rain Garden

You may hire a Professional Engineer (PE) or Landscape architect to design a rain garden following the DNR’s Guidelines: <https://dnr.wi.gov/topic/Stormwater/documents/RainGardenManualPrint.pdf>

NOTE: design must be stamped by a PE or Landscape Architect

The design will need to include all necessary assumptions/information related to the design outline and a planting plan. Also needed are:

- a. A maintenance agreement will need to be recorded at the Register of Deeds office prior to issuance of a permit for the rain garden, and
- b. Upon completion a Landscape Architect or PE stamped letter needs to be submitted to Winnebago County stating that the plan has been installed correctly and to the approved design.



## Residential Rain Garden Maintenance Schedule and Guidelines

### First Year Maintenance Guidelines

Successful establishment of rain garden areas requires that the following tasks be undertaken in the first year following installation:

- Initial inspections. For the first 6 months following construction, the rain garden area should be inspected at least twice after storm events that exceed 1/2 inch of rainfall.
- Spot reseeding. Inspect for bare or eroding areas in the contributing drainage area or around the rain garden area, and make sure they are immediately stabilized with grass cover.
- Watering. Watering is needed once a week during the first 2 months, and then as needed during first growing season (April-October), depending on rainfall.
- Remove and replace dead plants.

### Routine Maintenance Guidelines

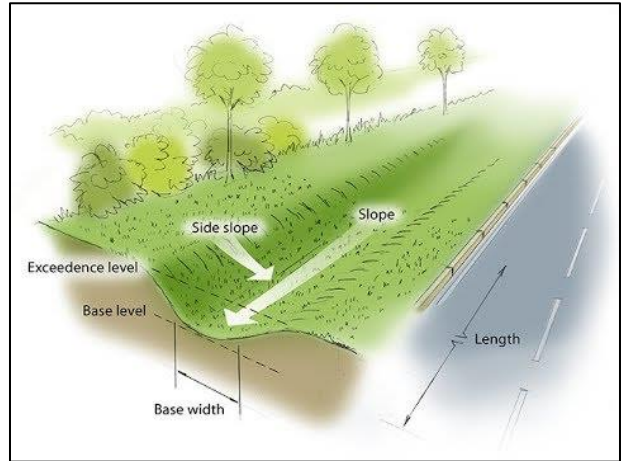
Rain garden areas must be inspected to ensure that they operate in good working condition and in accordance with the approved design and specifications. Items in need of repair must be immediately addressed.

Routine Maintenance Tasks	Frequency
Remove trash and debris	As needed
Check and repair eroded areas	Annually
Inspect for and remove excess sediment	Annually
Weed mulch	Twice during the growing season
Inspect plant composition for consistency with approved plans & correct any deficiencies	Annually
Re-mulch to maintain a 2-3 inch layer	Annually
Prune trees and shrubs	Annually
Inspect for clogging or ponding water in the filter bed	Annually
Remove invasive plants	As needed
Replace dead or damaged plant material	As needed
Repair broken pipes	As needed
Replace the mulch layer	Every 3 years

## OPTION #2 – Alternative to a Rain Garden

You can design an alternative treatment system that captures and treats all of the impervious runoff beyond your allowable limits however it must be PE stamped and would need to go through the stormwater permitting process.

The stormwater permitting process is require to be PE peer reviewed and treated to the standards outlined in the post-construction stormwater portion of the ordinance. This option is good for those looking for a design that doesn't require as much maintenance as a rain garden, something that fits the existing landscaping/vegetation, or to explore alternatives.



### The general stormwater permitting process:

1. Submit the following to Winnebago County Zoning Department:
  - a. Application (<https://www.co.winnebago.wi.us/zoning/stormwater-and-erosion-control>)
  - b. 2 copies of supporting plans and documents (must have a PE stamp)
  - c. a check for \$175 written to Winnebago County for the review fee
2. RA Smith (a 3rd Party PE Engineer) reviews the project and submits an escrow estimate to the owner/applicant and Winnebago County.
3. The owner/applicant pays the escrow fee to Winnebago County.
4. RA Smith performs an engineering review of the plans, coordinating with the contracted engineer/owner. Once a design is reached which meets Winnebago County's ordinance, RA Smith issues an approval letter to the owner/applicant and Winnebago County.
5. The owner records a maintenance agreement with the Register of Deeds.
  - a. [Rain Garden Maintenance Agreement](#)
6. A permit fee of \$250.00 is paid to Winnebago County and the permit is approved. Note: Permit fees are doubled for projects which have started prior to permit issuance.
7. The plan is installed.
8. Two copies of an "as-built" survey (must be PE stamped) are submitted to the County after RA Smith completes the final inspection of the property.
9. RA Smith reviews the "as-built" survey and if it meets Winnebago County design requirements an approval letter is issued.
10. After Winnebago County has received the RA Smith invoice for the final inspection, the remaining escrow is returned to the original payee and the permit closed out.