



Essex County Environmental Center
Roseland, Essex County, NJ
Photograph courtesy of Essex County Environmental Center

CONCLUSION

Key Points:

- Not only does a rain garden provide an aesthetic addition to the landscape, but it also creates a functioning system that improves water quality.
- Once you have installed a rain garden at your house, you can move on to other sustainable elements such as a rain barrel, pervious pavement, or a green roof. The sky is the limit!

CHAPTER 5

Taking it a Step Further Enjoy Your Rain Garden!

Congratulations on installing your rain garden! You did it! Pat yourself on the back (and maybe get a back massage, too).

Not only did you add a beautiful landscaping feature to your yard, but you also created an area that will be fully functional at filtering nonpoint source pollution from stormwater runoff, the largest source of pollution in New Jersey waters (NJDEP, Bureau of Nonpoint Pollution Control, Division of Water Quality brochure). Another source of pollution in New Jersey's waters is sediment, which can make New Jersey's waters turbid, or cloudy, and can clog the gills of fish and aquatic invertebrates. Surprisingly, temperature can also be considered a pollutant in New Jersey's waters. You might not think of it, but runoff that goes over hot, impervious surfaces, like rooftops and roads, is dumped into New Jersey's waterways and, in turn, raises the temperature. A rain garden can help solve all of these sources of pollution!

Additionally, the rain garden will accent your landscape, attract beneficial wildlife, promote biodiversity, and, most importantly, be used as a tool to educate others about the importance of managing stormwater runoff and controlling nonpoint source pollution. As an added bonus, the rain garden will not only filter out nonpoint source pollution, but also recharge groundwater. Replenishing groundwater is essential, since approximately 50% of New Jersey's drinking water comes from aquifers that store groundwater. Unfortunately, New Jersey's aquifers are drying up due to human use, so replenishment of groundwater is crucial. And a rain garden does just that – it filters and infiltrates runoff into groundwater that then returns





as cool water to New Jersey's waterways and aquifers. Cool water in the waterways not only benefits wildlife, particularly fish, but also keeps the waterways' base-flow higher and peak-flow lower, meaning better habitat for wildlife and less flooding.

It is essential for people to realize that what we do on the land affects the waterways, and that all of the little actions you take to prevent nonpoint source pollution on the land can help our water – that includes installing rain gardens! The installation of your rain garden should give you the confidence to go out and try other things to improve our environment. How about trying rain barrels, cisterns, tree planting, water conservation fixtures (faucets, toilets, showerheads, etc.), low maintenance grasses, integrated pest management (IPM), community gardening, and/or solar panels? If you install a rain barrel, for example, you use less tap water for your garden, reducing your water bill. All of these environmental practices will save you money, while protecting New Jersey's environment at the same time.

IT ALL ADDS UP!

In New Jersey, 90% of rainfall events are less than 1.25 inches, with approximately 44 total inches of rain per year. Therefore, your rain garden will treat and recharge 3.3 feet of water per year!

$0.9 \times 44 \text{ inches} = 40 \text{ inches/year (or 3.3 feet)}$

If the rain garden receives runoff from 1,000 square feet, the total volume treated and recharged is 25,000 gallons of water per year.

$1,000 \text{ square feet} \times 3.3 \text{ feet} = 3,300 \text{ cubic feet/year (or 25,000 gallons)}$

So, if you build 40 rain gardens in your community, you will treat and recharge 1,000,000 gallons of water per year!

*Let's change New Jersey from **The Garden State** to **The Rain Garden State!***