

THE NATIVE PLANT RAIN GARDENS OF PORT JEFFERSON

What are native plant rain gardens?

Rain gardens are depressions in the land located in areas that capture water flowing across pavements. Instead of untreated water flowing over the ground into Long Island Sound, untreated water flows into the rain gardens first. The most effective rain gardens use native plants that remove pollutants from the water. Native plant rain gardens can be built anywhere you have water runoff!





Why did the Long Island Explorium install rain gardens in the Village of Port Jefferson?

The Explorium is committed to increasing public knowledge and stewardship of the ecological health of the Long Island Sound watershed. Seventy percent of Long Islanders state that protecting the environment is critical, but more than 70% also report that they do not know what activities protect it. Planting native plants protects it. Planting native plants in rain gardens protects it even further.

Over 50% of treated drinking water from Long Island's aquifers is used on landscaping. Substituting native plants for lawns reduces that percentage while also restoring biodiversity by reestablishing the habitats and food sources for native wildlife.

Fertilizers to keep lawns green and weed free use large amounts of nutrients. These excess nutrients cause algal blooms that are increasing annually with devastating impacts on Long Island marine life and water quality. Native plant rain gardens reduce those blooms by reducing the excess nutrients that flow into the Long Island Sound. Changing landscaping practices helps to restore balance in our ecosystem. Three rain gardens were installed as models of natural landscaping. Teaching signs in the two largest gardens describe how rain gardens improve the water quality and biodiversity of the Long Island Sound watershed.

Visit <u>http://pjraingarden.org/</u> for lists of plants and photos of the installations.









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How did the Long Island Explorium fund and install the rain gardens?

The Long Island Sound Futures Fund awarded a grant to the Explorium -- *Rain Gardens at Port Jefferson Harbor: Linking Water, Wildlife and Waterways.* With these grant funds and in-kind contributions from the Village of Port Jefferson, Suffolk County Master Gardeners, and Suffolk County Soil & Water Conservation District, the Long Island Explorium installed three demonstration gardens with the expertise of Nelson, Pope & Voorhis Environmental Planning Firm.



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How do rain gardens work?

Rain gardens are designed to capture and treat stormwater runoff by providing drainage while removing pollutants. The Village Center rain garden cleans stormwater from the paved area near the garden, and the Village Hall and Public Works rain gardens clean stormwater from their active driveways.

The stormwater filters slowly into the ground rather than running off to drains that discharge to surface water (such as the Port Jefferson Harbor that supports so much wildlife) or to groundwater (which we eventually drink).

During this slow filtration, the long roots of the native plants treat or remove the nitrogen, phosphorus, bacteria and pollutants carried by the stormwater. The roots and soil absorb the harmful particles within the stormwater and water drains out of the rain garden cleaner than when it entered.

Visit <u>pjraingarden.org</u> and click through the 11 blue raindrop signs to learn more.



What are native plants?

The plants in the Port Jefferson rain gardens are native to the area. Native means that the plants are indigenous. They grow on Long Island by natural processes, not brought here from someplace else intentionally or unintentionally by human beings. They are already acclimated to local weather and soil conditions. They thrive without much maintenance. They require few inputs – only watering after the first planting.

Native plants have deeper root systems than non-natives, especially the turf grasses so commonly planted. Native plants attract native bees, butterflies, birds, and many other native insects because they provide food and habitat for them.











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Can I plant native plants without digging a rain garden?

Yes, yes, yes. Native plants can be planted anywhere.

Some native plants thrive most productively in certain types of soil and under certain sun or shade or moisture conditions. But natives are known as drought-to-drench plants that survive in their native habitat without much human intervention. All of the plants in the Port Jefferson rain gardens are native and they all thrive on Long Island. Visit <u>pjraingarden.org</u> for lists of plants.

Take a look at the Sensory Garden on Long Island Explorium webpage. Or stop by when you are in the village. The garden is 70% native. It is designed as an outdoor environment with flower aromas and plant colors, textures, and movement that encourage sensory play, learning, and reflective experience. Native plants growing anywhere serve the same biodiversity and water quality restoration functions as do native plants in rain gardens.





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What are key lessons learned from the Explorium's rain garden project?

The project team and the project's many volunteers and visitors learned from each other.

- (1) Collaborators worked "outside their lanes" in overcoming COVID-related business closings and transportation stoppages and negotiated with village, town, and county officials in finding a new garden site in order to complete the installations.
- (2) Outdoor public education venues maximize accessibility and sustain public support, particularly in challenging circumstances that close indoor spaces.
- (3) High visibility "show me" sites and signage in friendly language draw interest in restoration efforts.
- (4) The public appreciates beauty. The sensory aspects of the rain garden, particularly the beauty of the plants themselves, the landscaped arrangements of different plants complementing each other, and the length and diversity of blooming times capture people's interest. People see the demonstration gardens as restoration features that they want where they live. They want to know more about native plants, appreciate how rain gardens clean water and support wildlife and pledge to do more in their own localities to restore environmental health.

The most important "takeaway" in terms of public engagement centers on lesson #4. Changing conceptions of beauty leads to greater appreciation; greater appreciation leads to learning more; learning more leads to increased support; and at the support level, participants offer "environmental benefit" as the reason for their support.

Native plant rain gardens are landscapes that make our communities sustainable and resilient.

Visit http://pjraingarden.org/

Happy Planting.





Port Jefferson Rain Garden

Rain Gardens at Port Jefferson Harbor: Linking Water, Wildlife and Waterways is a grant to the Long Island Explorium from the Long Island Sound Futures Fund in collaboration with the Environmental Protection Agency and the National Fish and Wildlife Foundation, Grant # 61471.

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