



# New Jersey Water Supply Authority Watershed Protection Programs Fact Sheet #21

## Van Derveer Elementary School Rain Gardens River-Friendly Schools Program

### River-Friendly Schools Program

Van Derveer Elementary School is a public elementary school that serves kindergarten through fifth grade students from the Borough of Somerville, Somerset County and is located within the Peters Brook Watershed. With an energetic staff, eager students, and a “typical” campus setting, Van Derveer provides the perfect pilot for River-Friendly Schools. A set of actions to achieve certification have been developed for Van Derveer, which focused heavily on the education and outreach component of the River-Friendly model. Actions, such as installing and monitoring bird boxes, performing soil tests, and **building a rain garden**, provide real-life learning opportunities. All of these projects, for the students and staff, can be incorporated into the school’s curriculum through environmental education programs like Project WET (Water Education for Teachers).

Since 2003, the New Jersey Water Supply Authority (NJWSA), as part of our on-going source water protection efforts, has reached out to residents, businesses, golf courses, and farms to encourage “River Friendly” practices. The “River Friendly” program, pioneered by the Stony Brook Millstone Watershed Association, focuses on working with landowners to make an incremental improvement in water quality by implementing actions in four categories: water quality management, water conservation, wildlife and habitat enhancement, and education and outreach. In 2009, the NJWSA in partnership with the Van Derveer Elementary School agreed to adapt the River-Friendly Business Program model and pilot a program that would be appropriate for school campuses. Schools provide unique opportunities for education and outreach; however, they also provide challenges such as landscaping limitations and strict budgets.

### What is a Rain Garden?

A rain garden is a planted, shallow depression that is designed to capture rainwater runoff (also called stormwater) from impervious surfaces like driveways, rooftops, walkways, and compacted lawn areas. This runoff can carry salt, pet waste, pesticides, fertilizers, leaves and grass clippings, oil, litter, and many other pollutants into nearby waterways. Once in the garden, the water is taken up by the plants, infiltrates into the ground or evaporates as water vapor back to the atmosphere. Through these processes, the volume of stormwater reaching storm drains and surface waterways is reduced and is less polluted.



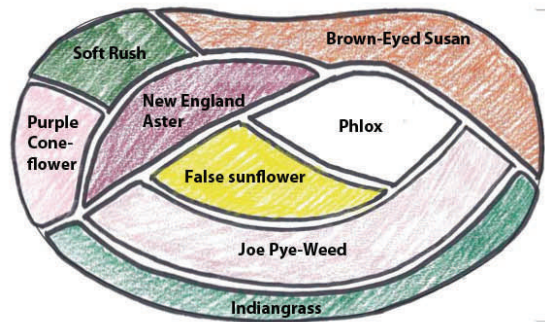
Typical rain garden adjacent to parking lot

The size and depth of the garden is determined by the volume of runoff that will reach the garden, soil characteristics and other constraints of the site. Rain garden plants should be native hardy perennial species that can survive in both wet and dry conditions. Some rain garden maintenance is required, including weeding, pruning, and removing sediment that accumulates.

For more information on rain gardens visit the New Jersey Water Supply Authority’s Watershed Protection Programs website at [raritanbasin.org/rain\\_garden.html](http://raritanbasin.org/rain_garden.html).

## Van Derveer Rain Gardens

In addition to being a “certification action” through the River-Friendly Schools Program, the installation of rain gardens at Van Derveer will provide water quality benefits for the Peters Brook. The Peters Brook, which is on the State’s list of impaired waterbodies, enters the Raritan River just upstream of New Jersey American Water’s treatment plant that provides potable water to local residents. Suburban residential neighborhoods, corporate and commercial properties, golf courses, and the major highway network, that characterize the watershed result in a significant increase in the volume of stormwater that reaches the stream.



Schematic of Van Derveer Rain Garden #2

The rain gardens at Van Derveer are designed to provide an example for homeowners and other land owners of a low-cost, low-maintenance method that can improve the health of our waterways. Each garden is approximately 500 square feet and treat runoff from the roof of the school. The roof leaders have been retrofitted with attachments that direct the stormwater into the rain gardens. The rain garden plants include Purple Coneflower, Joe Pye-Weed, Indiangrass, New England Aster, False Sunflower, Brown-Eyed Susan, Beebalm, and Sweet Pepperbush.

Students at Van Derveer are responsible for maintaining the rain gardens. Two rain barrels have been installed for watering the plants during establishment and drought periods. The rain gardens have been designed as an educational tool for the school, and provide an example of a best management practice to improve water quality and reduce stormwater quantity during average rain events.

### For more information

Van Derveer Elementary School  
[http://www.somervillenjk12.org/van\\_derveer/home.cfm](http://www.somervillenjk12.org/van_derveer/home.cfm)

New Jersey Water Supply Authority  
[http://www.raritanbasin.org/rain\\_garden.html](http://www.raritanbasin.org/rain_garden.html)

Rutgers University Water Resources Program  
<http://water.rutgers.edu/>

Somerset County Park Commission  
<http://www.somersetcountyparks.org/>

Native Plant Society of New Jersey (Rain Garden Manual, Native Plant List)  
<http://www.npsnj.org/>

### Project partners:

