Rain Gardens

Rain Gardens Have Many Benefits

What is a Rain Garden?

A rain garden, like this one at the MOT Senior Center, is a shallow depression vegetated with native grasses and plants that collects stormwater runoff from downspouts, driveways and roads. The rain garden holds the water on the landscape so that it can be taken in by plants and soak into the ground instead of flowing into a street and down a storm drain. The plants and soil trap, absorb and filter the pollutants found in stormwater runoff such as fertilizers, pesticides, oil, grease and metals. This allows clean water to slowly soak back into the ground recharging groundwater supplies.

Benefits of a Rain Garden

- Reduce the amount of polluted stormwater runoff reaching our rivers
- Filter pollutants such as oil, fertilizers, salt, pesticides, metals and bacteria out of stormwater runoff
- Promote infiltration of water back into the ground to recharge
- Reduce local flooding potential
- Prevent stream bank erosion
- Conserve water
- Create diverse habitat for birds and butterflies
- Reduce landscape maintenance (time, money)
- Increase property value

Depth

A typical rain garden is between 4-8 inches deep. This depth, proportionate to the surface area being drained, helps ensure that water soaks back into the ground instead of ponding.

Plant Choices

Choose native plants based on need for light and moisture. Native plants live longer and are more tolerant of local weather and soil conditions!

Soil

A good soil mix for a rain garden is 60% sand, 20% compost and 20% topsoil.

Size

A rain garden is typically 5-10% the size of the impervious surface *(ex. rooftop, driveway, walkway)* that generates stormwater runoff.

Location

Rain gardens are often located at the end of a roof gutter or drain spout as a buffer between the lawn and the street.

Our Polluted Waters

One of the most beautiful natural wonders of the Middletown, Odessa and Townsend area is the Appoquinimink River. The beautiful Appoquinimink is a winding and twisting system of marshes and streams which create a critical natural filtration system that cleans our water. In addition, the river provides essential habitat for wildlife and unique recreational opportunities for our community members like bird watching and fishing.

However, the Appoquinimink waterways are not as healthy as they once were and stormwater runoff is one of the culprits! Stormwater is water from rain or melting snow that does not quickly soak into the ground. Stormwater flows from rooftops, over paved areas and lawns collecting and transporting pollutants such as soil, pet waste, pesticides, fertilizers, oil and grease, leaves, litter and other potential pollutants into our waterways.

Even houses that are not beside a stream or lake can contribute to the problems. Storm drains found in most local neighborhoods are designed to move runoff from your neighborhood to the nearest body of water. Contrary to popular belief, storm drains do not carry stormwater to wastewater treatment plants but instead, flow UNTREATED directly into our rivers and streams.

Funding for this Project

The **National Fish and Wildlife Foundation** awarded the Appoquinimink River Association and the Town of Middletown a grant as part of their Delaware Estuary Grants Program!

Appoquinimink River Association

In order to help protect this natural resource, the Appoquinimink River Association, an environmental nonprofit organization, works to preserve, protect, and enhance the waters of the Appoquinimink Watershed, which includes Middletown, Odessa, Townsend and the surrounding areas of New Castle County. We take steps to make community members more aware of how their actions on land can help to ensure clean water in the Appoquinimink. For more information on ways that you can get involved with the Appoquinimink River Association's mission, visit www.AppoRiver.org.

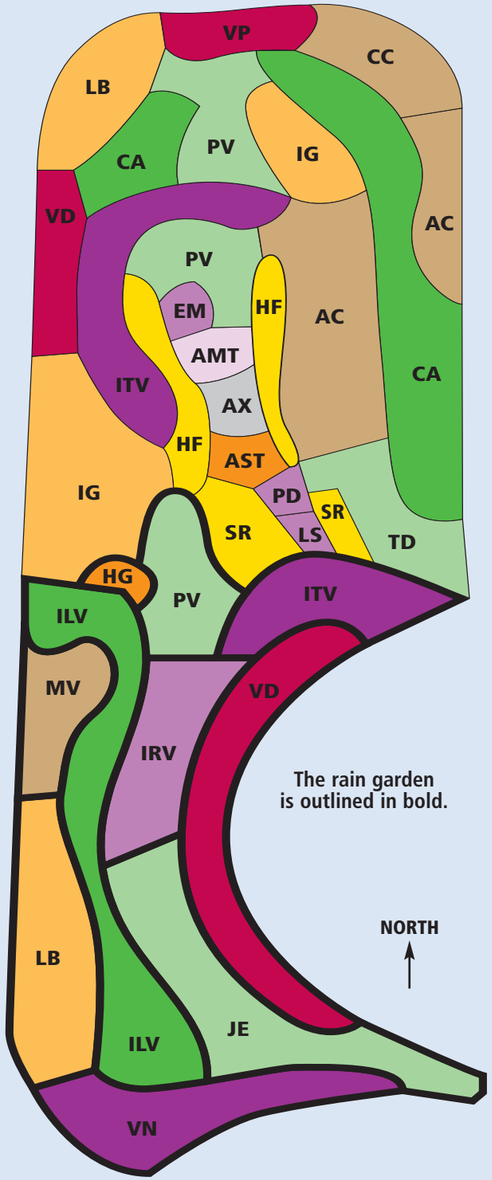
Town of Middletown

The Mayor and Council of Middletown are committed to maintaining the health and welfare of the Appoquinimink River watershed. Given this, the Town was proud to work in partnership with the Appoquinimink River Association in their effort to identify areas in need of rehabilitation. The MOT Senior Center rehabilitation project represents one step in an overall goal to improve the quality of the Appoquinimink River watershed.

Thank you to the many volunteers who helped make this project a success!

It is important to note that some of the plants located at this site can be used in a rain garden and others are simply used for beautification purposes. Any plant below that tolerates 'Wet to Moist' or 'Wet' soil is suitable for a rain garden. The plants used in the rain garden at this site are **bolded** in the map to the right and in the chart below. *(*Trees are not recommended for smaller homeowner rain gardens.)*

Native Plants Used in in MOT Senior Center Garden	Soil Moisture Tolerance	Code
Trees		
Shadbush Serviceberry *(Amelanchier canadensi)*	Dry to Moist	AC
Redbud *(Cercis canadensis)*	Dry to Moist	CC
Sweet Bay Magnolia *(Magnolia virginiana)**	Wet to Moist	**MV**
Shrubs		
Hummingbird Shrub or Sweetpepper Bush *(Clethra alnifolia)*	Wet to Moist	CA
Inkberry Holly *(Ilex glabra)*	Wet to Moist	IG
Winterberry Holly *(Ilex verticillata)*	Wet to Moist	**ILV**
Virgina Sweetspire *(Itea virginica)*	Wet to Moist	**ITV**
Spicebush *(Lindera benzoin)*	Wet to Moist	**LB**
Arrowwood *(Viburnum dentatum)*	Wet to Moist	**VD**
Possumhaw *(Viburnum nudum)*	Wet to Moist	**VN**
Blackhaw *(Viburnum prunifolium)*	Dry to Moist	VP
Grasses		
Gamma Grass *(Tripsacum dactyloides)*	Wet to Moist	TD
Softrush *(Juncus effusus)*	Wet	**JE**
Switchgrass *(Panicum virgatum)*	Wet to Moist	**PV**
Perrenials		
Giant Hyssop *(Agastache x 'Blue Fortune')*	Dry to Moist	AX
Narrow Leaf Bluestar *(Amsonia tabernaemontana)*	Dry to Moist	AMT
Butterfly Weed *(Asclepias tuberosa)*	Dry to Moist	AST
Swamp Sunflower *(Helianthus giganteus)*	Wet to Moist	**HG**
Blue flag Iris *(Iris versicolor)*	Wet	**IRV**
Gayfeather *(Liatris spicata)*	Dry to Moist	LS
Beardtongue *(Penstemon digitalis)*	Dry to Moist	PD
Goldenrod *(Solidago rugosa)*	Dry to Moist	SR
St. John's Wort *(Hypericum frondosum 'Sunburst')*	Dry to Moist	HF
Purple Coneflower *(Echinacea 'Magnus')*	Dry to Moist	EM



Parking Lot

MOT Senior Center Building