When it

When it rains, water runs off impervious surfaces-rooftops, roads, driveways, and parking lots-collecting pollutants and sediments along the way. This flows into catch basins and pipes that drain directly into local streams and ponds, reducing the quality of our local waters for swimming and boating, tourism and fishing, and drinking water.

Forests, wetlands, fields, and other open spaces act as natural filters, soaking up pollutants, reducing sediment, recharging groundwater, and keeping our waterways healthy. As more land gets developed, this natural "green infrastructure" is reduced, lessening a community's ability to manage this type of pollution. This is especially an issue in highly developed urban environments such as Worcester. About 75% of the phosphorus in the Blackstone River and significant amounts of nitrogen flowing into the Narragansett Bay are from stormwater runoff.

The Blackstone River watershed, which spans 545 square miles and encompasses thousands of acres of rivers, ponds, lakes, and reservoirs, begins here at the headwaters of Broad Meadow Brook. With that in mind, we redeveloped our parking lot and Education Center using low impact development to reduce impervious surfaces and provide areas for stormwater to be collected and filtered before entering local waterways. The redirected stormwater is now filtered through our rain gardens, significantly improving onsite water quality here. These types of improvements can protect Broad Meadow Brook as well as the rest of the Blackstone River Watershed.

A Garden for a Rainy Day

3-8" Ponding depth

Existing grade — RUNOFF from parking lot and rooftops

surface

EVAPOTRANSPIRATION

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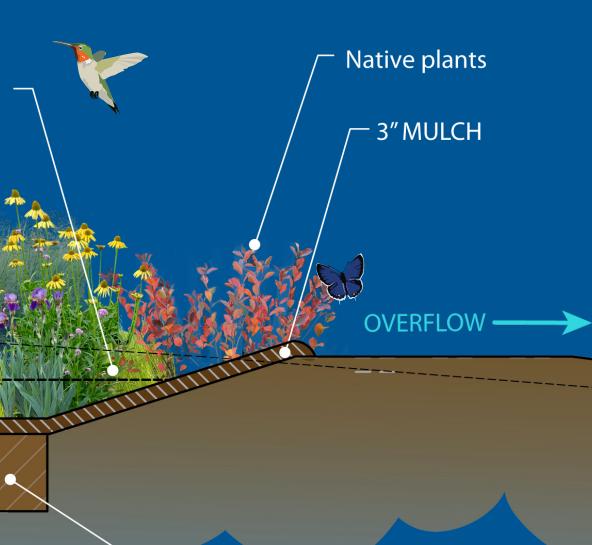
INFILTRATION

A rain garden is designed to capture, hold, and then release stormwater. These specialized plants can tolerate both flood and drought conditions, and they help filter the stormwater runoff before it slowly infiltrates into the ground.

Diagram from Horsley Witten Group

well-draining soil

Perforated pipe collects excess water and connects to storm drains



Five Ways to Manage Stormwater













Permeable Pavers

for birds, bees, and butterflies.

Rain Gardens

These pavers have permeable material such as gravel between and below them to allow water to filter through and into the ground without running off. This also reduces ice buildup in winter, reducing the amount of salt needed on these areas.

Rain Barrel

Stormwater is diverted off the roof, through a downspout, and into this barrel. This collected water is stored and used for irrigation instead of using tap water, saving water especially in dry summer months.

What You Can Do

There are lots of ways you can help manage stormwater and keep local waters clean and healthy.

Simple ways to help

- Don't dump trash or oil on roads or in storm drains Clean up your pet's waste and dispose of it properly
- ☑ Avoid or minimize use of chemicals and fertilizers in your yard

- 🗹 Plant a rain garden
- ☑ Plant a tree ☑ Collect roof run-off in a rain
- barrel and use it to water your gardens
- permeable surfaces

-Nutrient reduction from soil, root system, and microorganisms







No-Mow Open Space Area

This area is kept more natural in order to decrease the amount of impervious surfaces in the parking lot and enhance infiltration of precipitation

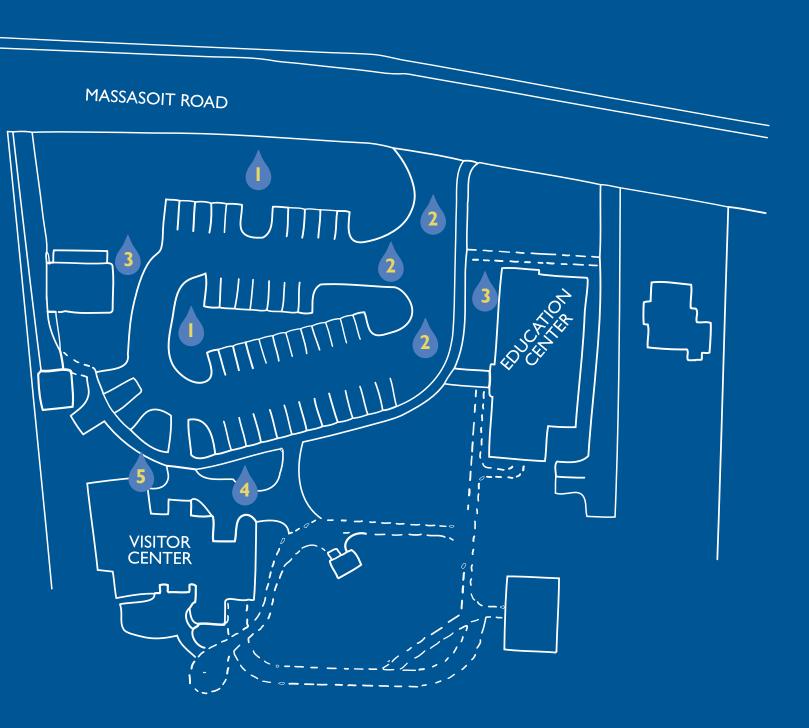
Stormwater Capture

These grates at carefully placed areas of the parking lot allow any stormwater running off the pavement to be caught and diverted back into the rain gardens

These gardens, built in shallow depressions, capture runoff and allow the plants and soil to filter the water and remove pollutants. The plants also provide habitat

Landscaping and home improvement

- ☑ Replace pavement with



In Your Community

- ☑ Talk with your neighbors and friends about keeping local waters clean and healthy
- Encourage your public works department to install stormwater management features
- ☑ Advocate for local development rules that allow for low-impact development approaches
- ☑ Join your local planning board or conservation commission; get involved in municipal plans
- ☑ Support your local land trust and conservation organizations so they can protect more land
- ect was funded by an agreement (CE96184201) awarded by the Environmental ncy to the New England Interstate Water Pollution Control Commission



