



STORMWATER SOLUTIONS

Mentor Lagoons Nature Preserve and Marina

About Mentor Lagoons

This 450-acre property, located right on the shores of Lake Erie, was purchased by the City of Mentor in 1997 and 1998 and is Ohio's newest nature preserve. This site features both a marina, with a safe harbor and direct access to Lake Erie, and a nature preserve, which includes a mile and a half of Lake Erie beach and five miles of hiking trails through coastal forest and marsh.

What's the Problem with Stormwater?

When it rains, stormwater washes over roads, parking lots, roofs, and other hard surfaces. Along the way, it picks up dirt, leaves, oils, metals, and chemicals. This polluted runoff typically flows directly to a ditch or storm drain and into our streams without being treated. Runoff also heats up over hard surfaces, increasing stream temperatures and harming sensitive native fish and other aquatic life. Large stormwater volumes can overwhelm municipal infrastructure and cause urban flooding and stream erosion.

Mentor Lagoons Marina

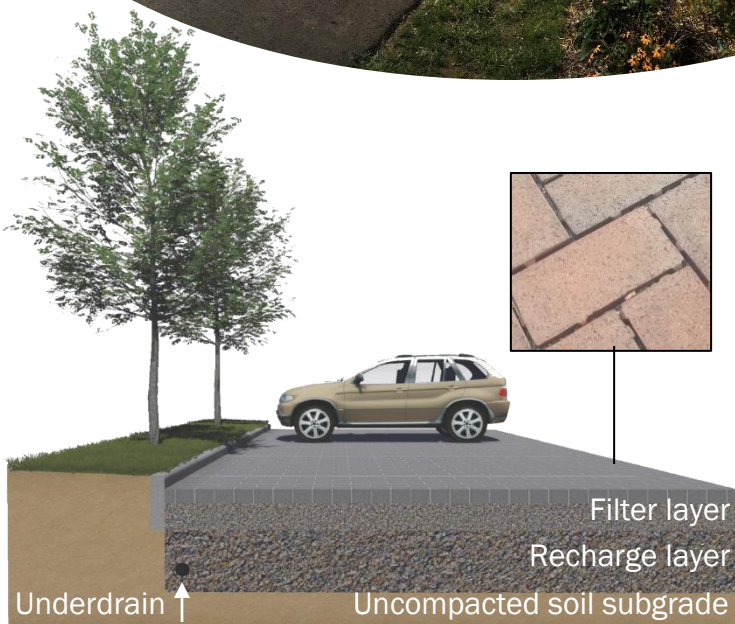


STORMWATER: SLOWING IT DOWN, SOAKING IT UP



Innovative Stormwater Solutions

Using green infrastructure (permeable pavers and bioretention) instead of more traditional "gray" infrastructure (pipes and basins) mimics natural landscapes by soaking up water, cooling it down, and filtering out pollutants. Green infrastructure is an innovative solution to solving stormwater pollution!



Permeable Pavement

This site has 24,600 square feet of permeable pavement. Stormwater flows into the spaces between the pavers and is filtered through layers of rock before it is slowly released from an underdrain into the native soil and groundwater or Mentor Marsh.



Before



After



Gullying and erosion
Poor wildlife habitat
Ineffective drainage
Few aesthetic benefits

Stormwater capture and treatment
High quality habitat
Effective infiltration
Attractive landscaping

Bioretention

3,200 square feet of bioretention was installed to treat drainage from the boat storage facility building and perimeter area. Rainwater is taken up by deep-rooted, native plants and drains through layers of sandy soil and gravel that filter out pollutants. The plants also serve as habitat and food for native pollinators.



Coastal forest



Mentor Lagoons

Lake Erie



Protecting Lake Erie Biodiversity

The Mentor Marsh is the centerpiece of a complex ecosystem along six miles of Lake Erie coastline. It includes more than 1,400 acres of ecologically sensitive green space and opportunities for passive recreation. Use of green infrastructure to reduce stormwater runoff is one key way to help protect habitat quality in this fragile coastal ecosystem. The Cleveland Museum of Natural History and their project partners are also treating invasive species, such as the common reed grass (*Phragmites australis*). *Phragmites* is a salt-tolerant plant that took over after the marsh was contaminated by the dumping of salt mine tailings in 1966. On-going restoration efforts help promote more diverse and healthy native plant and animal communities.



Removal of *Phragmites*, a non-native invasive reed, gives native plants and trees a chance to grow.

The City of Mentor received financial support for this project in the amount of \$250,000 from the EPA through the Great Lakes Restoration Initiative.

