


# Ellicott Creek Park Living Shoreline Project


This project was completed in 2017 with support from the Greenway Ecological Fund and in partnership with Erie County Department of Parks, Recreation and Forestry and Ecological Restoration Inc.

Living shoreline restoration at this site incorporated unique features including creation of turtle nesting and vernal pool habitats. The project also incorporated invasive species removal, reconnection between the land and water, enhanced aquatic habitat and vegetation, and establishment of valuable native plant communities throughout. The image below depicts the signage at the project site, followed by before and after pictures.




**BUFFALO NIAGARA  
WATERKEEPER**

## LIVING SHORELINES ELLICOTT CREEK PARK







**Site Before Living Shoreline Project**

The shoreline you see here today once looked very different. Before this "Living Shoreline" was created, turf lawn and invasive plants dominated the shoreline (shown above). In-water habitat was lacking and poor water quality conditions resulted from bank erosion and untreated runoff discharging directly into the creek. Shoreline erosion and bank undercutting was caused primarily by daily fluctuations in water levels and a lack of vegetation.



**Living Shoreline Restoration**

Living Shoreline projects restore gradual slopes, protect shorelines with logs and boulders, and re-establish native plants to create a more natural and seamless transition between land and water. It is estimated that 90% of life found in freshwater ecosystems is born and raised in these vital water-land transition areas. The Living Shoreline here at Ellicott Creek Park re-establishes this "ribbon of life" along the water's edge, supporting numerous wildlife species including bats, waterbirds, fish, amphibians, and beneficial insects. This restored shoreline also provides improved public access and recreational opportunities for park visitors. The photograph above shows the conditions as they were just after construction in October 2017.



**BEFORE LIVING SHORELINE**

**LACK OF AQUATIC HABITAT**  
The absence of logs, boulders, and vegetation as well as the muddy creek bottom offer little habitat value to fish and wildlife.

**PESTS**  
Turf grass can attract nuisance species such as the Canadian Goose. When it rains, goose droppings flow directly into creeks and rivers, adding excess nutrients that can lead to harmful algae growth.

**Endangered Species**  
The Northern Long-eared Bat has a strong dependence on large blocks of older forests like the floodplain forest that once defined the Ellicott Creek area. Their survival is currently endangered by forest fragmentation, human disturbance, environmental contaminants such as pesticides, and other forms of habitat destruction.

**SHORELINE EROSION & SEPARATION**  
The shallow root systems of turf grass offers little protection to the shoreline from erosive forces. As the shoreline erodes it becomes steeper which creates a distinct separation between the land and water, making it difficult for wildlife to access critical habitat. Over time, shoreline erosion can also lead to property loss.

**IMPAIRED WATER QUALITY**  
Shoreline erosion and surface water runoff cause the creek water to become cloudy, also adding excess nutrients that lead to poor water quality. The health of our waterways are directly linked to the ability to support fish and wildlife populations and recreational opportunities.

**GRADUAL AQUATIC TO UPLAND TRANSITION**

**AFTER LIVING SHORELINE**

**AQUATIC HABITAT**  
Boulders, logs, and vegetation in the water provide important feeding, resting, and spawning grounds for fish and are beneficial to many other wildlife species like waterbirds. Aquatic vegetation also adds oxygen to the water, improving the quality of habitat for fish and other aquatic species.

**IMPROVED WATER QUALITY**  
Native vegetation growing in-water and along the shoreline helps to reduce erosion while absorbing and filtering pollutants and nutrients.

**Diverse Shoreline Habitat**  
Many freshwater turtle species, such as the Spiny Softshell turtle spend much of their time in creeks and rivers, feeding and basking on logs and rocks. They also utilize upland habitats for nesting. By creating a gradual slope along the shoreline and installing native habitats, the living shoreline restoration aims to improve conditions for a variety of turtles and amphibians.

**NATURAL SHORELINE PROTECTION**  
Extensive root systems of native plants and trees hold in soil, and offer protection from erosive forces. Other natural materials like boulders, logs, and river stone also help to reduce erosion by absorbing and dispersing energy.

**GRADUAL SHORELINE TRANSITION**  
Creating a gradual transition between the land and water improves accessibility for both people and wildlife, introducing more vegetation offers habitat for local wildlife and requires little maintenance.

**BENEFICIAL SPECIES**  
Planting a variety of native plants not only strengthens the shoreline and improves water quality, but also attracts birds, bats, and frogs which are natural predators of pest species like mosquitoes.



**BEFORE**



**AFTER**

