Maidford River

Riparian Buffer Restoration Project

Riparian buffers like the one shown here help reduce flooding, improve water quality and enhance wildlife habitat.

The Maidford River is the primary source of water to Nelson Pond and Gardiner Pond, which are part of the drinking water supply for Aquidneck Island.

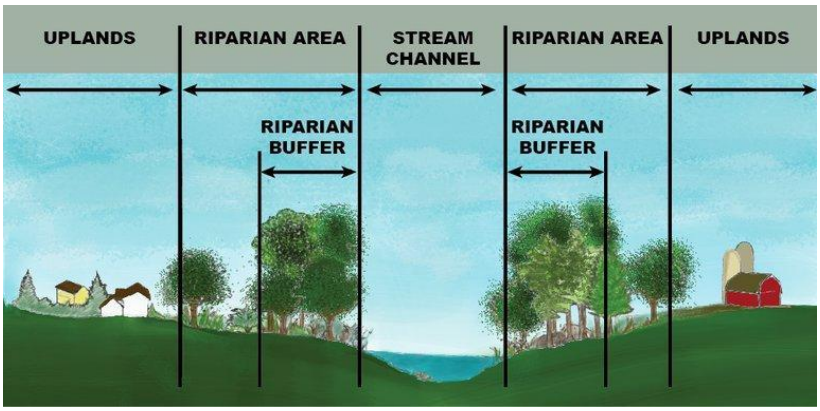
The quality of the water in the Maidford River suffers from several forms of pollution, including bacteria, nitrogen, phosphorus, and suspended solids. Not only does this pollution affect the river itself, but also other critically important resources. Excessive levels of nitrogen and phosphorus threaten Aquidneck Island's drinking water sources by causing algal and cyanobacteria blooms in Nelson and Gardiner Ponds. And high levels of bacteria can contribute to beach closures at Third Beach. The sources of pollution include runoff from streets, lawns and farms, as well as direct runoff of pollutants from unprotected lands adjacent to the river itself. Climate change and its related impacts will exacerbate these challenges in coming years.

A recent study of the Maidford River conducted for the Aquidneck Land Trust (ALT) found that **much of the river's riparian buffer is degraded and impacted by both agricultural and residential land use.** This loss of riparian buffer has negatively affected water quality and exacerbates flooding in the watershed.

About Riparian Buffers

The health of any river depends upon the upland area that drains into it. A **riparian buffer** is the land next to a river or stream that is usually vegetated with trees, shrubs, ferns and other groundcover, with a natural layer of previous year's growth. This vegetation protects the river system by filtering contaminants from upland areas. The environmental and economic benefits of riparian buffers are well documented, and include:

- Reducing flooding by slowing stormwater runoff that travels over the land and into the river
- Improving water quality and reducing non-point source pollution by trapping pollutants and debris that would otherwise end up in the river
- Increasing streambank stability
- Providing wildlife habitat
- Improving aesthetics for human residents



Buffer Restoration

Property owners with land adjacent to the river can help protect the island's drinking water source by taking steps to re-establish natural buffers or improve existing buffers. The Southeast New England Network is working with the Aquidneck Land Trust and the Town of Middletown to restore the Maidford River to reduce flooding and protect water quality. If your property includes a buffer area, we can help you restore or improve it.

ABOVE: Lack of riparian buffer and mowing right up to the river's edge are a common problem along the Maidford River, and can lead to streambank instability. **BELOW:** A recently-restored riparian buffer which will better protect water quality and create habitat for wildlife.

Each property is unique and options for riparian buffer restoration will vary for each. Generally speaking, the wider the riparian buffer, the greater the benefits. Buffers of 35' to 100' width are considered a minimum to protect water quality, and the State of Rhode Island uses a standard of 200' as protective for drinking water tributaries, as well as water quality and some habitat functions. Where lot size prevents buffers of these widths, restoring the area immediately next to the river to stabilize the streambank is better than doing nothing.

A buffer with diverse plant species is better than one with fewer species. Specific buffer restoration options could include:

- Creating a "no mow" buffer. This is one of the simplest steps a property owner could take.
- Seeding an area with a conservation seed mix, tailored to the soil conditions on your property. Over time, and without mowing, new plants grow in the buffer. This is an easy and cost-effective way to get a lot of diverse plants, but it takes time.
- Planting a combination of native trees, shrubs and herbaceous plants is a great way to build a more established riparian buffer without waiting for seeds to mature.

Regardless of which restoration option(s) you choose, clearly marking the buffer with signs is important so that someone does not accidentally mow, cut, trim or rake your restored buffer.

Restoration options can be tailored to the needs and aesthetic preferences of each property owner. Project partners are asking each buffer property owner to recognize their responsibility and make the most of this opportunity for assistance to help improve the Maidford River, and protect the island's drinking water source.

FOR MORE INFORMATION:

Information and resources for property owners interested in restoring and improving riparian buffer on their properties can be found online at http://snepnetwork.org/buffer/. **To schedule a free on-site assessment** of your property and discuss specific restoration options, contact Jed Thorp with Save The Bay at 401-272-3540 x113 or jthorp@savebay.org.

The Maidford River Restoration Project *is a pilot project of the newly-formed Southeast New England Network, funded by a US EPA grant. The Network was formed to assist Southeast New England communities to advance stormwater management and ecological restoration, and develop sustainable revenue streams to support these efforts into the future. The Maidford River Restoration Project is a partnership that includes the Town of Middletown, Aquidneck Land Trust and Save The Bay with assistance from local consultants and technical experts.*