Goose Creek—Cattail

Loudoun County, Virginia

The Nature Conservancy
Virginia

Stream Restoration in the Potomac Watershed

The purpose of this project is to provide stream restoration, enhancement, and preservation, upland buffer restoration and preservation, and livestock exclusion on 29,000 linear feet of stream on an approximately 816-acre site in Loudoun County. The Cattail property contains unnamed tributaries of Crooked Run, a major tributary of Goose Creek, which is a state scenic waterway and a priority waterway for The Nature Conservancy. These waterways are also part of a complex stream network that has been ranked by TNC as having the highest relative resilience to climate change.

Existing Conditions

The property has been in agricultural use for many years. The vast majority of the streams have little to no buffer and have been directly impacted by current or past agricultural activities including straightening and ditching. Nearly half of the agricultural land previously contained cattle which had access to the streams. Other areas of the property have been used for row cropping and hay for many years. These intensive farming activities have resulted in widespread channel instability and degradation of in-stream and riparian habitat, and overall poor water quality conditions.

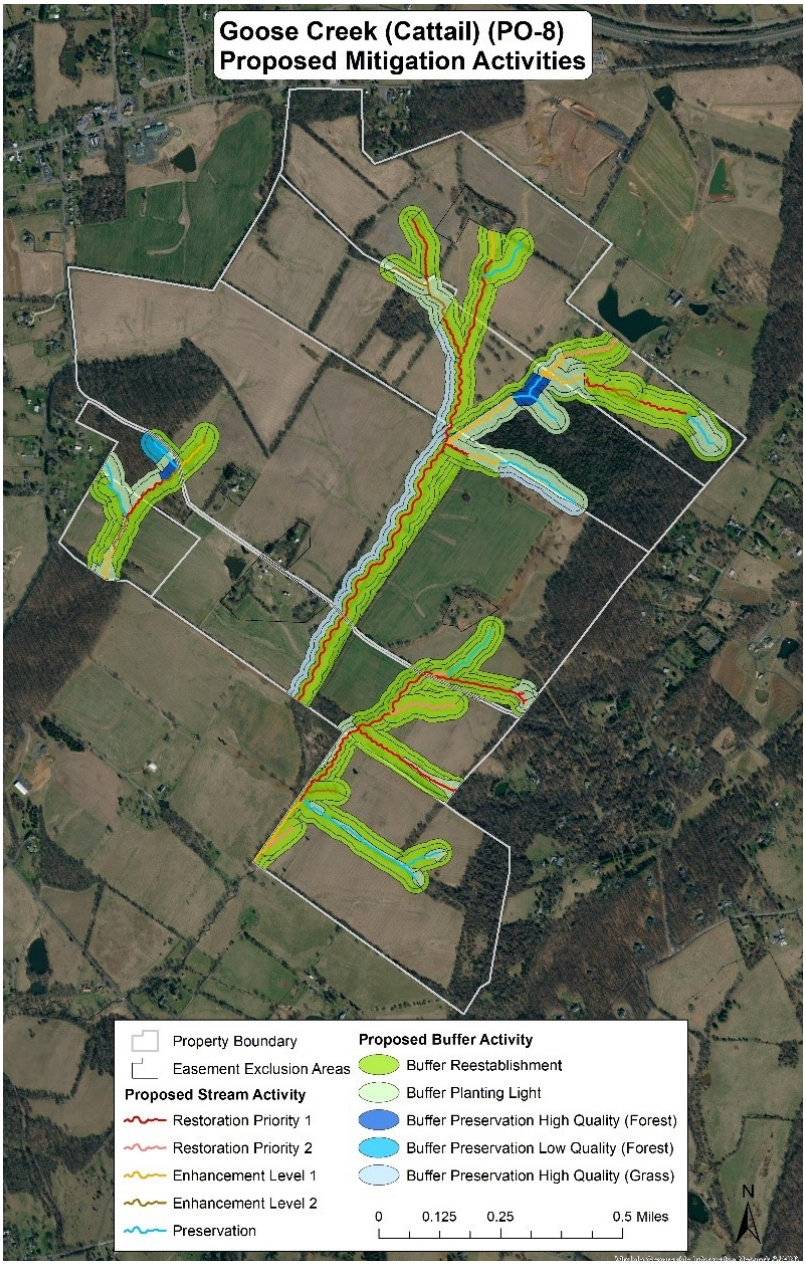
In addition to the impacts to the property associated with farming, the property was threatened with development pressures as a result of its close proximity to the Washington D.C. area.

Quick Facts

- Largest VARTF stream restoration project to date.
- Will protect up to 150-feet of riparian buffer along 30,000 linear feet of stream.
- Will restore or enhance over 24,000 linear feet of stream.
- Will improve water quality for tributaries to Goose Creek, a state scenic waterway.
- Will generate over 33,000 stream credits.

Existing conditions on the property.

Virginia Aquatic Resources Trust Fund



Concept Restoration Plan

Restoration Activities

In 2010, the landowner contacted TNC about protecting this property, and opportunities for stream restoration quickly became evident. Phase I of the project included initial preservation activities and livestock exclusion. A conservation easement was placed on the property in 2011, protecting a 35-foot riparian buffer, and livestock were removed.

Phase II of the project will include expanding the stream buffer protected under Phase I, and completing additional stream and buffer restoration, enhancement, and preservation activities. An overlay easement will be placed on the expanded mitigation site to protect a riparian buffer up to 150 feet wide.

Over 175 acres of open field will be preserved and reforested.

Project Status

An existing conditions assessment, concept plan, and Section 106 survey work have been completed. Plans are pending agency approval, and restoration activities are expected to occur in 2022.

Restoration work will entail reducing the steep height of the stream banks, realigning stream channels, adding meanders and habitat structures, and enhancing the buffer through invasive species control and tree planting. Overall project goals include:

- Improve water quality by restoring or enhancing the forested riparian corridor.
- Protect existing high quality streams and buffers that provide important habitat.
- Reduce sediment inputs by restoring degraded streams and removing cattle.
- Return a stream network to a stable form that supports biological functions important to aquatic and terrestrial species.