

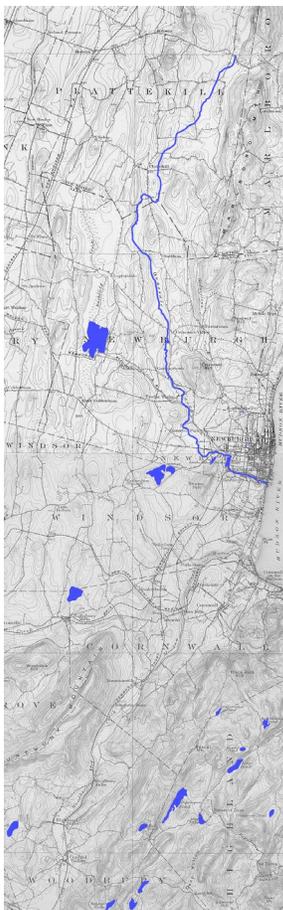
“Conservation is getting nowhere because it is incompatible with our Abrahamic concept of land. We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect. There is no other way for land to survive the impact of mechanized man, nor for us to reap from it the esthetic harvest it is capable, under science, of contributing to culture.”

“That land is a community is the basic concept of ecology, but that land is to be loved and respected is an extension of ethics. That land yields a cultural harvest is a fact long known, but latterly often forgotten.”

Aldo Leopold, A Sand County Almanac

Quassaick Creek Nature Center Newburgh, NY

The Quassaick Creek



The Quassaick Creek headwaters begin in the rural Ulster County town of Plattekill. The creek flows down over 300 vertical feet through the Town of Newburgh in Orange County, finally forming the border between the City of Newburgh and Town of New Windsor, and entering the Hudson River. Many smaller creeks feed the Quassaick, and form the basic outline of the watershed. The creek provided two very important resources for the region, fresh water for human consumption and power and water for 18th and 19th century industry along the creek. These industries included grist and woolmills and at least one gunpowder mill. The creek has been restricted with a series of dams or *weirs*, forming Chadwick, Orange and Washington Lakes. Washington Lake was the source of drinking water for the City of Newburgh. Unfortunately due to pollution from Stewart Airport, the lake is currently not being used, and water is being diverted from other reservoirs further north. Today the creek, despite being an extraordinary natural resource, is somewhat ignored.

*Quassaick Creek and
Associated Lakes*

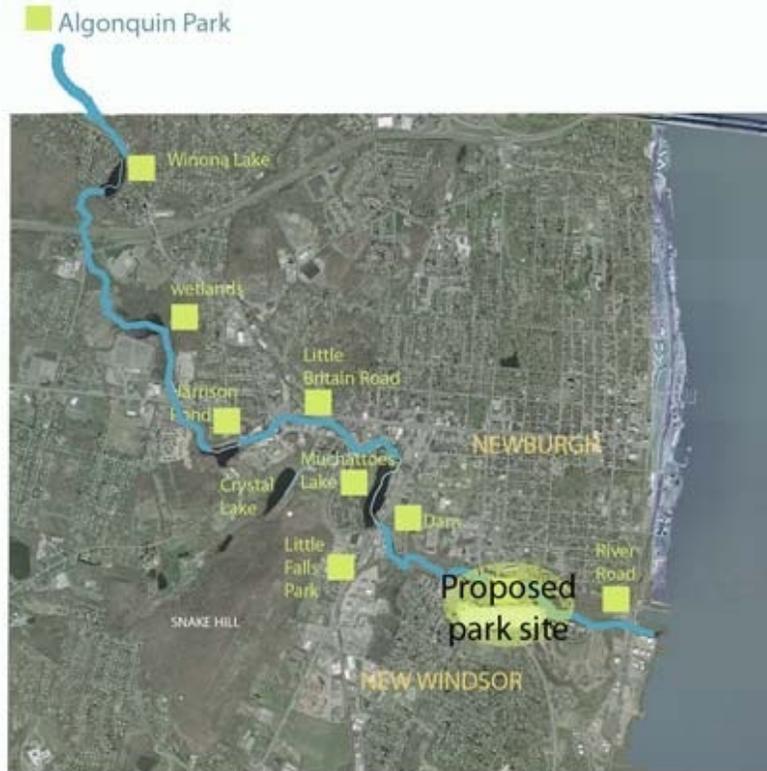
The Quassaick Creek Watershed Alliance

The alliance is a group of mostly local residents with professional or vocational experience who are devoted to the renaissance of Quassaick Creek. Their mission is:

“To involve individuals and entities, both public and private, as advocates for the development and implementation of a Quassaick Creek Watershed Plan. Our efforts will focus on the protection and restoration of water quality and quantity, recreational values and biodiversity of the Quassaick Creek and its tributaries to promote the health, safety and welfare of our communities.”

The Quassaick Creek Nature Trail

Among many particular goals the alliance is proposing a nature trail, following the Quassaick Creek from the Hudson River to Algonquin Park.



The envisioned trail route from the Hudson River to Algonquin Park

The trail will border the creek, and switch sides, depending on the terrain and the availability of territory. Existing historic bridges and new proposed ones will facilitate this transfer.

Many natural and man-made sights will be seen on a nature hike along the trail. Prevalent are many dams, or more accurately *weirs*, constructions that inhibit the flow of downstream water and raise the elevation of the stream on the upstream side.



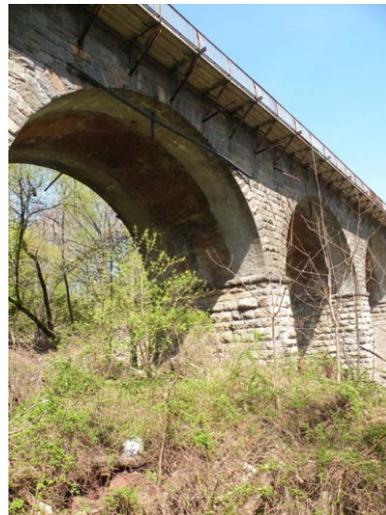
Twin arched stone and brick footbridge



Industrial Chimney Remnant



Dam at Muchattoes Lake

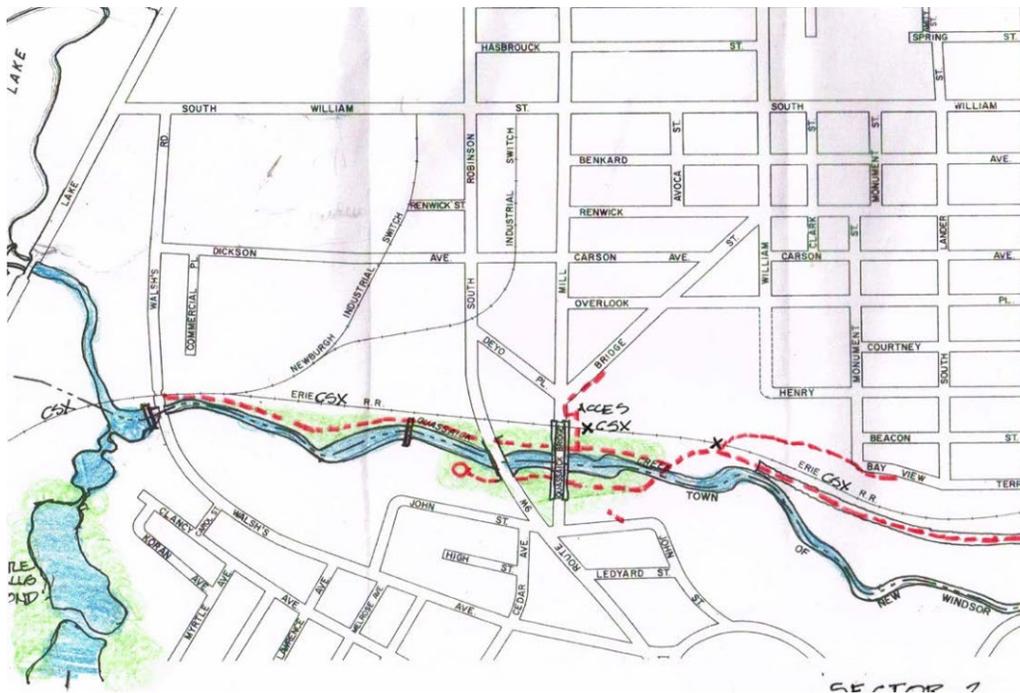


Mill St Bridge

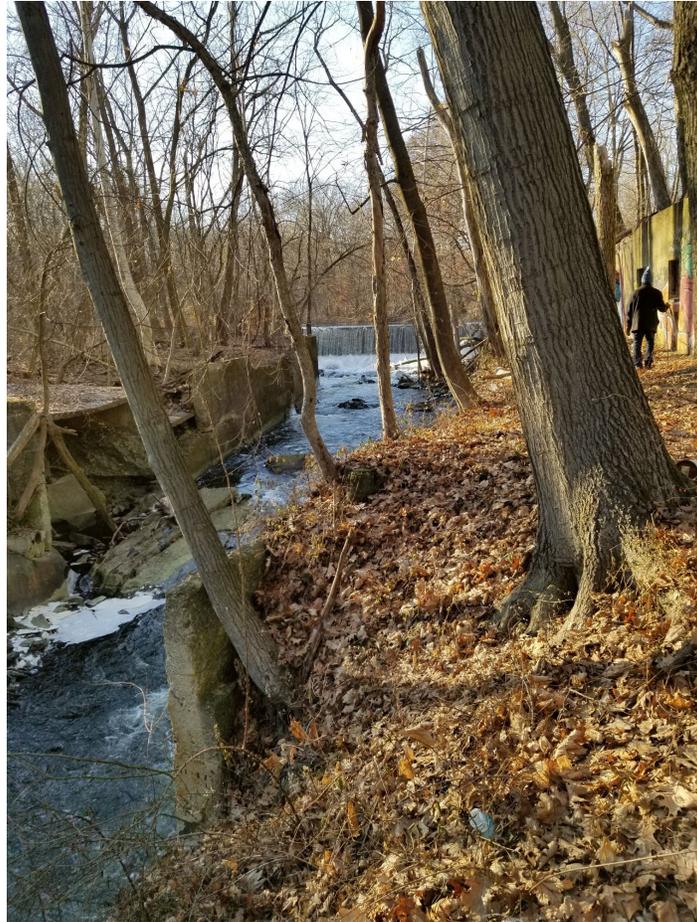
Project

Our project for the semester will involve a State of New York engineering project located on the Quassaick Creek. The City of Newburgh has an existing wastewater pipe, 48" in diameter, buried next to the creek, downstream of the Holden Dam. The creek is eroding the streambed next to the pipe. The state has decided to breach the dam with a weir, and to eventually re-direct the stream away from the pipe. The new weir will be in a portion of the streambed which is flat and spacious. Our project will involve:

Imagining our own weir construction, which will, by necessity, be of cementitious construction. We will design a nature center, a program desired by the Quassaick Creek Watershed Alliance, in this location. The nature center will be fully integrated with the proposed nature trail as well as the proposed weir. In addition, a bridge across the stream will be proposed to facilitate the use of either side of the stream for the trail location.



Area map around the Holden Dam



Views of the Holden Dam

Research

Initial research for the semester shall include, but not be limited to:

The details of the State of New York project to breach the Holden Dam

Weir/Dam design

Concrete vessels

The history of the Newburgh region

Method

Initial tactile research will be conducted concerning concepts required to facilitate the change of elevation of a stream bed.

A Short Reading List:

Beston, Henry. The Outermost House

Carson, Rachel. Silent Spring

Cooper, James Fenimore. The Last of the Mohicans

Cronin, John & Kennedy, Robert, F Jr., The Riverkeepers

Hemingway, Ernest. The Nick Adams Stories

Krakauer, John. Eiger Dreams

Leopold, Aldo. A Sand County Almanac

McPhee, John. The Control of Nature

Thompson, D'Arcy. On Growth and Form

Weems, Mason L. The Life of Washington