Boquet Watershed Wetland Monitoring

Boquet River - Essex County, NY
Boquet River Association

Introduction

This 2011 Lake Champlain Basin Program (LCBP)-funded project conducted a vegetative survey on 11 of 40 previously identified and surveyed wetlands in the Boquet River watershed on both public and private lands with an emphasis on monitoring wetland invasives.

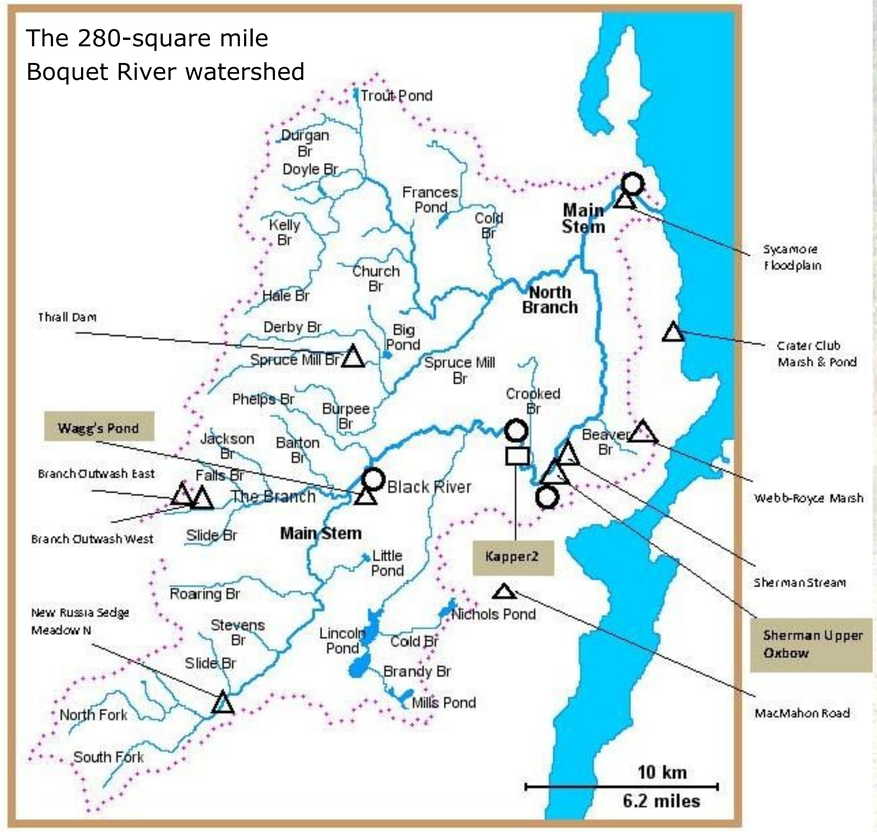
A wetland monitoring program in the watershed was initiated in 2005. Initially, a hydrologic and vegetation survey of 40 wetlands was conducted in 2005. Of these, 20 wetlands were selected for long-term monitoring and a hydrologic and vegetation survey was conducted again in 2006. In 2010, BRASS funded a vegetation survey of 10 of the 20 wetlands. With LCBP funding, a vegetation survey of 9 of the remaining wetlands and 2 alternates was conducted between June 15 and August 15, 2011.

Eleven invasive species were found. They are:

Alliaria petiolata	garlic mustard
Centauria biebersteinii	spotted knapweed
Iris pseudacorus	yellow flag
Lonicera morrowii	morrow's honeysuckle
Lonicera tatarica	tartarian honeysuckle
Lythrum salicaria	purple loosestrife
Pastinaca sativa	wild parsnip
Polygonum cuspidatum	japanese knotweed
Phragmites australis	common reed
Rhamnus catharctica	common buckthorn
Salix fragilis	crack willow

Data was also collected on these two exotic species that seem to be acting in an invasive fashion in these wetlands.

Lysimachia nummularia	creeping jenny
Typha angustifolia	narrowleaf cattail



In 2011, 11 wetlands were monitored. They are shown above as △
There are four sites in the watershed where Galerucella beetles were released in 2002 and 2004. They are shown above as ○
The 3 wetlands that are showing a reduction in purple loosestrife in some of the monitoring sites are highlighted above. They are Sherman Upper Oxbox, Wagg's Pond and Kapper2. Kapper2 was monitored in 2010 and is shown above as □

The **Boquet River** is located within the Adirondack Park. It originates on Dix Mountain, is 47 miles long and empties into Lake Champlain in the Town of Willsboro.

Wetlands owned by NYS in the **Adirondacks** are protected by the NYS Constitution as *Forever Wild*. Wetlands on private property in the Adirondacks are also protected from development by Adirondack Park Agency regulations.

By monitoring wetlands, we learn of natural conditions and changes over time due to environmental influences such as climate change and invasive species. Data also helps guide management decisions to **protect the ecological values of wetlands** such as fish habitat, water quality, flood mitigation and biodiversity.

Methods

Survey methods were based on the U.S. Army Corps of Engineers "Wetlands Delineation Manual" and the Environmental Protection Agency's "Using Vegetation to Assess Environmental Conditions in Wetlands." For each vegetation community at each sample site the parameters included cover type (Cowardin System), species richness, density, abundance, diversity, relative dominance and importance, percent native species and percent invasive species.

Objectives

BRASS' primary goal with this project was to establish a long-term wetland monitoring project in the watershed. By normalizing the data from 2005, 2006 and 2010, with the 2011 data protocols used in this project, we have accomplished this objective.

Results

While not scientifically significant with only two time points five years apart, initial sampling results indicate some invasive species changes in the wetlands. For example, purple loosestrife appeared to decrease at 3 wetlands located not far from the release sites of the Galerucella beetles in 2002 & 2004. Other changes were also noted although less intriguing at this early point in a long-term monitoring project.

Funding will be pursued to monitor wetland vegetation again in 2014-2016. The data collected since 2005 is now organized in a manner to allow any other qualified wetland botanist to continue the monitoring project.

Acknowledgements

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