

**Feasibility Study to Eradicate Aquatic Invasive/Nuisance Species in  
Canaan Lake, North Patchogue and Upper and Lower Lakes, Yaphank**

**Steering Committee Interim Meeting for Upper and Lower Lakes, Yaphank  
March 30, 2010  
Brookhaven Town Hall  
6:30 – 9:00 PM**

Present:	Name	Affiliation	E-mail
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	<b>Kevin Molloy</b>	<b>NYS Assemblyman Dean Murray</b>	<a href="mailto:Molloy@assembly.state.ny.us">Molloy@assembly.state.ny.us</a>
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	Audrey Kessler	South Yaphank Civic Association	
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	Joseph T. Scesny	Yaphank Resident	

*Note: Names in bold are members of steering committee.*

Adrienne Esposito began the meeting at 6:40 with a call for a round of introductions.

Sara da Silva and Chic Voorhis made the presentation: *Feasibility Study to Eradicate Aquatic Invasive/Nuisance Species in Canaan Lake, North Patchogue and Upper and Lower Lakes, Yaphank*. The purpose of this meeting is to discuss with the steering committee for the Carmans River's Upper and Lower Lakes, the timeline/schedule, existing conditions information and draft fish passage designs.

**Task 1 – Lakes Characterization & Existing Conditions.** They started with a discussion of the timeline and the group established that the next steering committee meeting would be in mid-July. This is when NP&V plans to have three of the four sets of sampling data completed – which once collected will be sent to SUNY Stony Brook labs for analysis with a projected two-week turnaround. Having data from different seasons is necessary for a complete analysis and this will complete Task 1. Current lake characterization and existing conditions work includes identifying and characterizing the watershed, watershed area land use & existing public lands, ownership of underwater land, pollution & shoreline inventory within 100 feet of Upper and Lower Lake, water quality review, water quality monitoring and sediment composition, bathymetry & muck depth, density of aquatic invasive plants with comparison from 2007, and 2009 invasive

plant distribution map for both lakes. From the invasive plant density and distribution maps from 2009 we see that currently, in Upper Lake *Cabomba caroliniana* (Fanwort) is the primary plant with a tiny bit of milfoil in the southeast corner. In Lower Lake, there is only *Myriophyllum heterophyllum* (Variable leaf watermilfoil) – no *Cabomba* was noted. Small stands of *Phragmites* were found along both southern shorelines. Comments included:

- Having slides colored more clearly and pictures made larger for the next presentation
- Street overlay map from Suffolk County Comprehensive Water Resources Management Plan (Task 15B) may be easier to read for groundwater contributing area.
- Review County Preservation Fund inventory for potential pollutant sources (it utilized inventory information to develop list of desirable acquisition parcels).
- Town Planning is preparing a report on underdeveloped land which will be useful for identifying potential conservation easements.
- A nursery on Middle Island Road cleared large areas of land and is a potential pollutant source. Town looking into whether violation occurred.
- On Hard's Lake, *Cabomba* is present but not flowering and growing out of control; temperature variation may play a role – many tributaries into Hard's Lake may bring in enough cold water.
- Harvester success – it couldn't get close enough to the shoreline to cut and collect fragments (which floated into the shallows and may have contributed to spread of the plant).
- Greenhouse scenario may be occurring – E-W orientation of Lower Lake may be promoting more growth than N-S orientation of Upper Lake.
- Sierra Club Water Sentinels Program – started performing water quality nutrient analysis in early 2009 at Upper Lake Dam and found high levels of phosphorus; results posted on their website (<http://www.liwatersentinels.org/>) with assistance of Linda Froelich (science teacher with LI BOCES) they are setting up a phosphorus lab to more accurately measure this nutrient.

**Task 4 - Options for fish passage at upper and lower lakes.** The conceptual fish passage designs for Upper and Lower Lakes were presented. The passages were designed mostly for Alewives as they are poor swimmers. As for the passage at Upper Lake, it would only be opened seasonally as the fish are not constant all year. Requests were made to have the open passage extended into the fall for brook trout because different species of fish travel at different times of the year. There were concerns on the size of the opening for the fish ladder and whether children jumping off into the lake would be in danger of getting into the opening. Question as to whether rock ramp could be installed through spillway and whether spillway could be widened – explained that there is not enough distance to do so as resultant velocity of the water due to slope would be too high for alewife. Not feasible to continue rock ramp below the roadway without taking out the road. In the concept design, all dam modifications should be addressed at once, including spillway widening. [After heavy March rainfalls, Mill House Inn parking lot was a lake and the spillway was defeated on both sides].

The design for Lower Lake was harder to design because of the culvert and steep drop in elevation; fish will have to make their way up a fish ladder and enter a turn box before exiting the ladder into the lake. Replicating the rock ramp passage like the one in Riverhead (300' long) is not an option at either lake because of the short distances and elevations of the culverts. Discussions by the group included opening up the currently closed spillway bypass (steel tube which used to feed the Saw Mill) at Lower Lake as an alternative option. Anthony Graves acknowledged that using the old pipes will be even more difficult for the Alewives because it will have a high velocity. Secondary problems with this included impacts from scouring of downstream wetland vegetation and resultant turbidity. However, use of bypass spillway may be necessary to compensate for reduce spillway capacity if fish ladder is installed through culvert. Bypass was traditionally opened once or twice a year for the saw mill, but not done since Kenny Hard donated bottom of Carmans River to the Town in 1964-65. Once the Town took it over, they stopped opening the bypass spillways.

Other comments:

- DEC Dam Safety will want to know safety/capacity concerns known and addressed before issuance of a permit for dam modifications.
- Will Pine Barrens need to approve dam modifications? (Likely not because it is non-development)
- There was a request to have Rich Orson available at the next meeting to discuss alternatives in more detail.
- Required DEC permits will include Wild and Scenic Recreational Rivers, Freshwater Water, and Dam Safety.
- Town is still working to secure funding for hydrologic analysis necessary for dam safety permits.

**Task 2 – Management Alternatives.** NP&V discussed possible solutions being explored include dredging, aquatic herbicides, shading (chemical dyes) mechanical harvesting, benthic barriers(blanketing), hand/suction harvesting, drawdown/drawup, biological control (introduction of grass carp), dam removal/modification, combinations(integrated plant management), and no action.

After discussing the optimum conditions for invasive plants, the group discussed Making Conditions Less Favorable for Long-Term Control. Comments:

- Alleviating shallow depths through dredging may require follow-up dredging. Sediments may have high lead from hunting.
- It was noted that run off of road salts could possibly have an effect and elevated chloride concentrations documented in the river may make conditions more favorable. Invasives may be first visible sign of sodium impacts?
- County ban on fertilizers during off-season may play role in water quality improvement in coming years.
- The question of possible genetic variability of milfoil in these lakes may be worth considering.
- It was discussed that the lakes are 95% groundwater fed and that most of the incidents of invasive plants correlate with the locations of storm water inputs and areas of higher development.
- An alternative management idea was to install artesian wells deep down into the aquifer to bring up colder water in strategic locations and change the overall water temperature of the lakes making the lake unfavorable to the invasive plants. NP&V will add it to the list of possible management options and will research whether this has been done anywhere else.
- Trout Unlimited may have access to funding for fish passage and water quality improvements – they are interested in partnering.
- Best boat access for Upper Lake at Town beach on Swezey Property.

### **Next steps: Public Meeting**

Will be held on April 21<sup>st</sup> at the Yaphank Fire House. Camilo Salazar (Suffolk County) will be in charge of the details. He will get a meeting announcement together to go on Suffolk County’s website and will distribute information to the other groups and residents. The public will want to know “what is going to be done and when” (instead of scientific approach) but the main focus of the meeting will be “Understanding the Problem” (not for identifying remediation purposes). It was agreed that the meeting should be mainly informative – it should have more details than this meeting had, but should be in a language and terms that the general public will understand. It should include explanation of land use component, SEQRA process and need to respect the process. Should also address impacts on lakes and downstream communities. The time of the meeting changed from 7pm to 9pm so that more of the community can attend. County should advertise in papers, ABCO website, and with fliers at the firehouse and Mill House Inn.

Next steps – NP&V will send around the Presentation after changes/updates are made.

Next Meeting – Our next steering committee meeting is currently set for July 26<sup>th</sup> at 7:00PM (Brookhaven Town Hall). All team members should be present. E-mail presentation to steering committee.

The meeting ended at 9:07pm