

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

**Steering Committee Start-up Meeting for Upper and Lower Lakes, Yaphank
September 16, 2009
Brookhaven Town Hall
6:30 – 8:30 PM**

Present:	<u>Name</u>	<u>Affiliation</u>	<u>E-mail</u>
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	Chad Trusnovec	Yaphank Resident	112huntr@optonline.net
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	Adrienne Esposito	Citizens Campaign for the Environment	aesposito@citizenscampaign.org
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The purpose of this meeting is to discuss with the steering committee for the Carmans River’s Upper and Lower Lakes, the timeline/schedule, approach to the project, and available information.

Introduction – Camilo Salazar (SCDEE) - welcome and introduction of consultant to the group.

Presentation of Timeline and Approach– Chic Voorhis and Sara da Silva, NP&V

- Chic Voorhis provided overview of consultant team members: Nelson, Pope & Voorhis, Nelson & Pope Engineers, Dr. Chris Gobler of SUNY School of Marine and Atmospheric Science (SoMAS), Mike Bontje of B. Laing Associates, and Dr. Richard Orson of Orson Environmental Consulting.
- Power Point slide presentation on approach to tasks and available known information for the feasibility report. Importance of a good plan for funding, stakeholder buy-in and permitting was stressed.
- Return of historic name use for Upper (Willow) and Lower (Lily) Lake acknowledged.
- Coalition to Save the Yaphank Lakes website acknowledged as a wonderful resource for information.

The presentation covered the following topics:

1. **Project Overview Schedule:** NP&V recommended timeline be adjusted to extend Task 1 (Lakes Characterization and Existing Conditions) & 2 (Management Alternatives) through end of next year to allow for full year of detailed water quality (wq) sampling under Task 1b by SUNY (particularly parameters necessary to

assess potential presence of cyanobacteria and cyanotoxins). Chart Guthrie provided good overview of cyanobacteria biology and highlighted they are nitrogen fixers and capable of growing in lakes with even relatively small amounts of N.

2. **Task 1a: Watershed delineation and characterization** - To be conducted by NP&V
3. **Task 1b: WQ Review, Monitoring & Sediment Composition**

Existing data sources to be compiled and reviewed by NP&V/SoMAS for inclusion in draft/final report:

- a. 2007 depth/sediment data from A. Graves (Town);
- b. Coalition's available wq data (collected in conjunction with Tim Green of Brookhaven National Lab, Town, and Boy Scout Troop 433);
- c. Suffolk County DHS's Oct/Dec'08 wq data at Upper Lake Spillway
- d. 2005-2006 Carmans River wq report from SUNY grad student (George Costa will provide contact info)

Proposed data from Consultant Team:

- SoMAS to do comprehensive **water quality sampling** - max of 4 sampling events per year at 3 stations per lake; one cool weather sampling and 3 warm weather samplings) to enable assessment of fluxes in water chemistry and biological components (including potential cyanotoxins) between warm and cold weather. Parameters to be tested include DO, temperature (surface & bottom), pH, turbidity, water clarity, dissolved nutrients, **bottom sediment substrate and organic content**, and parameters for detection of potential cyanotoxins (e.g. chlorophyll, phycocyanin, phytoplankton assemblage, cyanotoxin extraction). Will be started this September.

4. **Task 1c: Bathymetry, Pollution Sources, Dams, Bulkheads & Living Resources**

Existing data sources to be compiled and reviewed by NP&V/BLaing for inclusion in draft/final report:

- a. 2007 depth/sediment data from A. Graves (Town);
- b. 2008 stormdrains into lakes (Coalition)
- c. 2007 Aquatic Invasive Species Maps (Town)
- d. 2006 Aquatic Plant Inventories (DEC)
- e. Sensitive Species & Habitats in vicinity (NY Natural Heritage Program; USFWS)
- f. Upper Lake Only
 - i. 2008 bathymetry data (PWG Engineering)
 - ii. 2007 Dam Inspection Report (PWG Engineering)

Proposed data from Consultant Team:

- BLaing/NPV to conduct shoreline and cross-lake surveys and NPV to compile all available info into GIS database to produce following mapped information
 - Updated macrophyte map (including *Phragmites* along shoreline)/living resources
 - *Phragmites* not previously considered a target species, but all agree would be useful to incorporate for consideration in management options/impacts
 - visible pollutant sources map (Coalition's data amended if necessary)
 - Bulkheads/hardened shorelines/dams/spillway locations
 - Fill in data gaps in bathymetry information.

5. **Task 1d: Underwater Land Ownership, Legal Designations & Example Plans**

Existing data sources to be compiled and reviewed by NP&V/BLaing/Orson for inclusion in draft/final report:

- a. Tax maps for ownership info
- b. Legal designations
- c. Review existing management plans for species of interest (Cabomba, Myriophyllum, Phragmites)
 - i. Harvester recently used on Lily Lake – tested last fall, but primarily April through September (not yet used on Willow Lake)... Anthony Graves gave presentation on this at end of power point and extensive discussion about success & funding issues ensued (see below).
- d. Literature review of available plans and nuisance plant alternatives
 - i. Chart Guthrie suggested reading “Diet for a Small Lake” – reference is on Coalition's website under resources.

6. **Task 2: Management Alternatives**

- a. Currently, mechanical harvesting has been implemented in Lower Lake
- b. Team will build on existing information, work with stakeholders, equally assess all options and work towards consensus.
- c. NPV/BLaing/Gobler will use matrices to assess alternatives and analyze:

- i. Direct/indirect impacts
- ii. Maintenance effort/cost of short & long-term controls
- iii. Regulatory requirements/consideration
- iv. Community support

7. **Task 3: Meetings & Stakeholder Involvement**

- a. Team will coordinate with County, Town, Carmans River Task Force, Local Councilperson, NYSDEC, Coalition & other stakeholders (e.g. residents).
- b. Agreed that Upper & Lower Lake meetings will be held together
- c. Public education and collaboration will be used to understand history of the system (e.g. historical modification), identify modes of introduction, control inoculants, instill responsibility
- d. Meeting breakdown:
 - i. Steering Committee (for each lake)
 - a) 1 start-up (*September 2009 – this meeting*)
 - b) 1 interim (*January – March 2010*)
 - c) 1 Progress (single meeting at end of Tasks 1&2) (*January – April 2010*)
 - d) 1 wrap-up (*January – February 2011*)
 - ii. Public Meetings (for each lake) – *County to publicize two weeks in advance*
 - a) 1 initial to highlight existing conditions; discuss options (*April – May 2010*)
 - b) 1 interim to build consensus toward preferred alternative (*July – August 2010*)
 - c) 1 additional final (if necessary, to assist in selecting alternative) (*Nov. – Dec. 2010*)

8. **Task 4: Options for Fish Passage at Upper & Lower Lakes**

Existing data sources to be compiled and reviewed by NP&V/N&P/BLaing/SoMAS/Orson:

- a. SSER Barrier Inventory/Prioritization Project (NP&V, 2007)
- b. Prior Engineering/DPW Rehabilitation Reports (e.g. 2007 Dam Inspection Report for Upper Lake - PWG Engineering)
- c. Previous options (designed by C. Orvis at USFWS) considered & funded, but never proceeded
 - i. Chart Guthrie stated that bond act grants in place to fund fish passage implementation... just need contracts in place.
 - a) Lower Lake = County Project
 - b) Upper Lake = Town Project

Proposed methodology/data:

- a) Fresh look with public meetings to gather input & build consensus
- b) Partner with USFWS through formal DEC request (NPV will coordinate with Chart Guthrie). USFWS will revise previous preferred alternative if warranted
- c) Additional conceptual alternatives to be designed/provided by N&P engineers/Dr. Orson

9. **Task 5: Annual Reports & Public Summary**

- a. Public summary to be provided with final annual report and published on website

10. **Task 6: Establish & Maintain a Public Domain Website**

- a. Will be up and running shortly

Public Comments/Questions –

Regarding Timeline & SEQRA (State Environmental Quality Review Act)

1. Adrienne Esposito requested that 1) the project timeline be revised in accordance with earlier discussion to better accommodate first two tasks, 2) the presentation be updated accordingly and sent to her for dissemination to the Steering Committee and public.
2. Chad Trusnovic (Yaphank resident) - concern over extending timeline. NPV explained that existing wq data collected by other agencies will be compiled/reviewed by Dr. Gobler, however full year of comprehensive wq monitoring still desirable and NPV would prefer to finalize Task 1 & 2 accordingly next fall. Draft Task 1 report would still be provided in spring 2010, but finalized later in the year pending additional monitoring results.
3. Martin Van Lith inquired about SEQRA Process. C. Voorhis explained that if DEIS is needed, our feasibility study would form the basis of the DEIS, including evaluation of impacts and alternatives, & be relatively easy to complete. Feasibility report will provide much of the scientific and economic data that is necessary to determine whether further EIS review is necessary.

- a. For the Peconic River Sportsman's Club's use of Sonar several years ago at Donahue Pond. (west of Connecticut Ave. in Manorville), a certain level of environmental review was necessary. Esposito requested that Chart Guthrie look into what level of review was given. Graves/Guthrie added that the Peconic project was mostly private land and privately funded, so it likely did not receive as much review as when dealing with a public project.
4. Is there anything that the Town/County can do in anticipation of SEQRA to speed it up? Can an EIS and SEQRA be done in tandem? Mr. Voorhis - nothing can be sped up until a proposed action has been determined and agreed upon (won't be determined until the end of the feasibility process). A. Graves - state has to evaluate the potential for significant environmental impact for a proposed action. If there is potential for significant impact, it's assumed that a positive declaration of impact will be determined/issued under SEQRA, which would then trigger need for preparation of an Environmental Impact Statement (EIS). If full SEQRA procedures not followed, anyone can file a lawsuit if proposed action is initiated. Chart Guthrie added that this is why the County has invested and funded this feasibility study.

Regarding Invasives & Existing Management Plans

1. B.Laing's invasive restoration project on Artist Lake was for Town. Dye used in 1980's to control vegetation.
2. Evaluation of harvester was suggested before continuing with its use in Lower Lily or using it in Upper Lake.

Regarding Water Quality Data

1. Audrey Kessler - Coalition's wq data is collected every two weeks. Tim Green at Brookhaven National Lab (BNL) currently doing the testing w/the Coalition. Another WWTP company operator does once per month testing of nearby STPs and surface water (nitrogen, phosphorus and dissolved oxygen?), and then reviews the Coalition's data to make sure everyone is finding the same conditions.

Regarding Community Involvement

1. Esposito - any other community involvement would occur other than meetings? Yes, website will be up shortly to keep the community informed and allow public input.
2. Guthrie (DEC), Esposito (Carmans River Task Force) and Peggy Judd (CSYL) - would like to be notified and present for the Canaan Lake meetings.

Anthony Graves Provided an Overview on Success of the Harvester in Lower Lake

- 912 employee hours (Town Highway Department personnel) on harvester totaling \$43,400 cost (32 employee hours spent just to launch the harvester).
- Harvester machine operated for 24 days, approximately 1 day per week (generally Mondays) from April to September, but also includes test days in Fall 2008 and a few days when run in a row.
- 83 tons of plant material were brought to the landfill.
- Machine is able to be adjusted down to 6', but lake is not much deeper than 2'.
- The harvester was purchased by the Town from Peconic River Sportsman's Club and is the only known harvester in the county. The Sportsman's Club used the machine on a lake double the size and ran the machine almost constantly, but couldn't keep up. DEC permit for Sonar chemical was obtained and used. [As per search of DEC database, 10-year DEC permit for cutting the weeds issued in 1998 (DEC #1-4799-00037/00003); In 2006, DEC issued a 1-year permit (#1-4799-00037/00017) to apply the aquatic pesticides SONAR PR and SONAR Q over a 5 acre plot of Donahue Pond to control invasive Fanwort].

Discussion on success of the harvester:

- Connie Kepert - Highway Dep't has asked whether they can stop for the year. Community input revealed that the harvester kept the lake more clear early in the season, but as summer went on, it became hard to tell where the harvester was operating and not as successful.
- Previous quote received from a lake management company for \$30K to clean up both lakes in one shot (no maintenance). Would this help?
- Questions posed: Was it worth it? Plant is starting to die back this time of year... should harvesting continue this season? Worth the financial cost? Should a lake management company be brought in to harvest both lakes once? Worthwhile to keep just a fishing lane or boating lane open? Did the harvesting enable residents to do any more boating?

- i. Chad Trusnovic - aggressive management needed; operate machine full time, otherwise, harvesting may not be worth investment. Significant build up of islands in the lake, because insufficient flow to carry away sediments. Well established vegetation on islands has begun blocking views.
- ii. Graves re-iterated the harvester always known to be just a band-aid because these plants grow fast. Can cut it way back in the fall, but has been estimated to grow 7" per day in the spring. Harvesting is just mowing an underwater lawn.
- iii. Citizens aren't able to use their lake and fix is needed, but Town has limited resources.
- iv. Kepert - Last year, \$20K used to buy the machine from Peconic Sportsman's Club. This year, located \$40K in funds from a cell phone tower to operate the harvester. Not known where the other \$3,400 came from. Additional funding being sought. Additional funding from another source being lined up, but would be used for long-term solution.
- v. A. Kessler - money obtained from Caithness Fund to fix Upper Dam spillway and east walls.
- vi. Residents didn't realize harvester was only funded to run 1 day/wk, and assumed it would run for several days at a time. Graves - Hwy Department didn't have adequate personnel to operate the harvester for multiple days at time, and it wouldn't operate while raining.
- vii. Lower Lake residents' comments:
 1. worthwhile, but needs to be done more often. Hard work just to keep the spillway open. Large volume of material generated ... spillway needs to be cleared daily. Many homeowners are already taking shifts to keep it open.
 2. harvesting didn't help their section of shoreline.
 3. more fish activity in harvested areas
 4. recommend hiring company with prior \$30K quote to provide relief on both lakes this fall.
 5. C. Trusnovic - no pattern to mowing. Spillway was constantly clogged. Improvement in areas harvested and the benefit lasted several days. Harvesting should continue through fall, and done in a set pattern (not random zig zags). A limited area where weeds can be off-loaded. Permit required off-loading into payloader, but Hwy Dep't not likely to leave payloader for citizen volunteer use. Another stockpile site would be needed until Hwy can come haul away material. Volunteer Town employees suggested.
- viii. Guthrie - DEC would have a problem with stockpiling harvested plant material because it can be washed back into the water by rain, and can partially block the boat ramp. DEC is willing to work with the Coalition to ID a different off-loading site for stockpiling. Worthwhile for residents to draw a map of critical areas to be mowed, including side channels to homes.
- ix. Graves - Lower Lake residents should sit with Hwy Department to generate map for mowing. ID areas where mowing not necessary. Also, residents could flag their dock to signal the harvester to come mow.
- x. Guthrie - continue harvester into fall. DEC stocking trout in mid-October and would like to see the lake open for fishing. *Cabomba* dominating Lower Lake this season (sometimes switches with milfoil) and persistent throughout winter (only *Myriophyllum* dies back).
- xi. Kepert will meet with Highway Supervisor to look at the budget and see if additional funds available for fall harvesting. Will look into whether harvester drivers could be County employees for 1/3 of cost, or whether a program could be set up to train volunteers to also operate the harvester.
- xii. Van Lith - volunteer labor worth exploring? C. Trusnovic - numerous truck drivers in Yaphank who would likely help. Unions and insurance may be prohibitive. Kepert and Trusnovic agreed worthwhile to explore. If Hwy Dep't doesn't have personnel, outside consultant should alternatively be explored.

- Next meeting will occur once some water quality assessment and base characterization information is available. Coordinate with Esposito to orchestrate.
- Esposito requested that the revised slides be sent to her for dissemination to Carmans River Task Force.

The meeting ended at 8:45 p.m.