

Quarterly Report #1

Town of Crown Point - Eagle Lake Milfoil Eradication

Contract: C303601

September 30, 2008

Prepared by: Rolf Tiedemann, Project Coordinator and ELPOI member

The following items took place towards the Eagle Lake Milfoil Eradication Project during the time period prior to Sept 30, 2008. They are roughly in order but no specific time for completion is implied by their order. Photos of the summer 2008 work can be found at http://www.eaglelake1.org/photo_album.html

- Composed and distributed 3 “Spring” ELPOI newsletters informing ELPOI members and riparian lake property owners of the summer 2008 milfoil project and enlisting their support, see [February 2008 Newsletter](#), [April 2008 Newsletter](#), [May 2008 Newsletter/ Membership Renewal/ Annual Meeting Notice](#)
- Worked closely with both Ti and Crown Point Town Supervisors and their staff for coordination of all plans for the Invasives Species Grant in 2008
- Worked closely with the ever supportive officers of the ELPOI in coordination of planning and securing volunteers to help with the project
- Purchased 1,500 pounds of steel ballast for mats, transported it from Rochester to EL (best price, easy access)
- Constructed an “Herbicides” Information web page that has links to manufacture, product information, product label, MSDS sheets, toxicology studies and more, see [Herbicide](#) also see [Herbicide specific information](#)
- Addressed issues of concern for proposed Renovate herbicide use raised by 2 riparian property owners
- Compiled an extensive library of technical information regarding milfoil and other invasives from; lake associations, state agencies, interested academia’s etc., see [Environmental Issues- Invasives](#)
- Secured as a donation approximately 6,000 square feet of “mill wire” from International Paper Corp. (IP) for use as benthic mats
- Secured a contract with Lycott Environmental to hire a project coordinator/ topside dive attendant and 4 divers for the summer of 2008
- Coordinated with DEC, APA and other local and State officials to ensure all planning was appropriately carried out.
- Worked with NYS Office of General Services OGS, Allen Bauder, to obtain letter of permission for APA 0 to 2 meter permit application, see [2008 OGS Letter](#)
- Obtained plant results from the Natural Heritage Program Plant Identification Survey identifying a rare plant located in Crown Point Bay at the northeastern end of lake (well away from any planned 2008 work area) see [natural heritage plant survey](#)

- Verified that previously obtained permits (non jurisdictional letters) from DEC and APA for hand harvesting and matting were still in effect, see <http://www.eaglelake1.org/milfoilproject.html> for copies of letters
- Secured job applications/ hired divers and topside personnel
- Completed APA permit application to hand harvest and mat in waters less than 2 meters, see [APA Under 2 Meter Permit](#)
- Secured lake resident volunteer(s) commitments to work on mat construction
- Stitched (zip-tied) 1,500 pounds of ballast to approximately 6,000 square feet of mill wire (sized approximately 10' x 16') (approximately 4 pounds per square foot of mat)
- Secured donation of work float building materials from Town of Crown Point
- Secured donation of plastic barrels for buoyancy floats for construction of "work barge" from Harbour Industries
- Secured donation of "Hooka" surface air compressor with accessories to support four divers from Town of Crown Point
- Secured donation of dive "goodie bags" for milfoil collection from Town of Crown Point
- Secured donation of underwater video camera and surface video TV/VCR recorder from ELPOI
- Secured donation of a handheld GPS unit from ELPOI
- Secured donation of fragment collection tools (pool skimmers) from ELPOI
- Completed construction of 8' x 18' work barge, see [2008 Project Pictures](#)
- Secured lake resident volunteers to launch work barge
- Secured donation of 24' pontoon boat with engine from Hyde's Boat & RV for summer of 2008 for use as staging for diver related activities
- Met with ELPOI Board Members to outline specific plans for summer 2008 work schedule and planned work areas, see [Board of Director Minutes 5-24-2008](#)
- Received cost estimate for Herbicide Containment Study Protocol from Allied Biological, 3 site locations with curtains and dye testing \$89,000, see [Containment Protocol Proposal](#)
- Shared Herbicide Containment Study with ELPOI officers and APA
- Secured permission from lake resident property owner to dispose of removed milfoil in a secure composting setting on his property
- Placed seasonal, lighted, milfoil patch hazard marker buoys
- Checked milfoil "kill rate" at a 2007 demonstration test site (patch 12), where one (1) 10' x 16' mat had been positioned/placed (no sign of milfoil or other vegetation under mat, some signs of small root milfoil plants collecting in sediment on top of mat)
- Had ELPOI transfer \$14,000 to Town of Crown Point milfoil eradication account
- Shared with ELPOI general membership at July Annual Meeting news of receipt of Eradication Grant and specifics for 2008 project and plans for future years of work including use of Renovate see [Annual Meeting Minutes 7-2008](#)

- Addressed dialog about lake resident concern for use of recycled mill wire and possible environmental impact (did not have “in hand” a copy of DEC’s Benefits of Use Determination (BUD) letter allowing International Paper (IP) to provide mill wire for this use)
- Compiled and shared with ELPOI membership the 2008 ELPOI Annual Report, see [2008 Annual Report](#)
- Secured BUD and follow-up confirmation that BUD is still in effect from both DEC and IP, see [BUD Determination](#)
- Secured lake resident volunteers to help with milfoil fragment collection during times of diver work
- Initiated procedures to track labor specific to project
- Worked with involved parties on completing payroll/ reimbursement documents related to project expenditures
- Constructed a “Recent Events” web page to provide timely updates to the milfoil project and lake happenings, see [Recent Events](#)
- Secured permission/ notified local land owner(s) in location 48 regarding work in front of their place
- Placed twenty-two (22) 10’ x 16’ mats and hand harvested 22 large goodie bags from patch 48 on 2003 GPS Survey, patch just south of causeway bridge in western basin of lake, see map at [2003 GPS map](#). Patch 48 in 2003 was identified to be approximately 2,600 square feet - matt coverage in summer 2008 for this area was approximately 3,500 square feet approximately 35% greater in dense patch size and the hand harvest area that extended beyond this was several thousand square feet larger.
- Secured permission/ notified local land owner(s) in location 11 regarding work in front of their place
- Placed fourteen (14) 10’ x 16’ mats and hand harvested 12.5 large goodie bags from the tip of patch 11 (patch 11 is a collection of several small patches located in front of the “cabins” along Rt. 74). The owner of the cabins started an independent perimeter hand-harvesting project in fall of 2007. Placement of mats and hand harvesting completed the work on the patch at this site.
- Secured permission/ notified local land owner(s) in location 36 - 41 regarding work in front of their place
- Placed all remaining donated mill wire mat material over the leading (western) edge of patch 36 at the entrance to Ti Bay
- Met with ELPOI Board regarding progress to date and need for additional materials, interest/ directions for spending remainder of funds in Aids to Localities Grant by end of Aug 2009, and to get OK to purchase additional mat ballast and tarp material, see [Board of Director Minutes 7-19-2008](#)
- Purchased an additional 3,800 pounds of steel ballast for construction of additional mats
- Researched sources and type of material that could be used as mat material beyond mill wire (contacted Lake George Association, DEC, Lycott Environmental, Lake Luzerne and others)

- Selected “lumber tarp” material as replacement, see [Lumber Tarp Specifications](#)
- Received DEC permission to use it if it is new material, see [DEC OK to use lumber tarp](#)
- Purchased 6,000’ x 10’ roll of lumber tap material for use a benthic mats (black on white)
- Constructed 13,800 square feet of lumber tarp mats (sized 10’ x 21’), used all 3,800 pound of ballast (approximately 3.8 pound per square foot of mat)
- Completed a photo slide show of procedures to complete mat construction, see [Mat Assembly Photos](#)
- Completed matting and hand harvesting of patch 36
- Matted and hand harvested patches 37, 38, 39, 40
- Identified, matted and hand harvested several new 200 – 1000 plus square foot patches of 2003 GPS survey unidentified patches, between patch 36 and 41
- Surveyed patch 41 and identified significant tree tops and other debris that created opportunity for diver entanglement, material is believed to have come from clearing along Rt. 74. Dive team collectively decided not to harvest/mat this patch in interest of safety
- Completed a boat float/swim over waters on south shore from patch 41 to 44, identified several small hand harvest sites not identified on 2003 GPS survey, these will be addressed in 2009 as interest for immediate work to move forward was to place remaining assembled mats before losing divers for season
- Inquired and received confirmation of “permission to over winter benthic mats” see [Inquire letter](#) see [Affirmative response to over winter](#)
- Completed an underwater video swim over survey of patch 24 (approximately 35’ x 250’ with its long edge parallel to and about 30 feet off shore) prior to matting see [Invasive Videos](#) and [Eagle Lake Milfoil Videos](#)
The shallow waterside (3 – 4 foot depth) had a distinctive edge between milfoil and native vegetation with a narrow 3-6 foot interface band; the deep-water edge (20 – 25 foot depth) had a hard edge between plants and ledge rock with no native vegetation in the area. The milfoil was growing in the silt it had trapped on the rock. Gradation of slope at this site was significant, this combined with a lack of anything for an anchor to grab into made anchoring the work float at this location difficult, it required wrapping the anchor line around large rocks at the bottom.
- Placed forty-one (41) 10’ x 21’ mats, 8610 total square feet, over patch 24. This patch was identified in the 2003 GPS survey at 7344 square feet in size. This was a 17% increase in previous identified patch size
- Completed very limited hand harvesting at patch 41, as focus was on getting mats placed due to coming of seasons end
- Carefully removed several “long plant specimens” from near the deep edge of patch 24 and measured plant length, plant length was 16 plus feet, roots to top

- Observed several distinct differences in milfoil plant communities as mating and hand harvesting took place:
 - Patch 48, milfoil was strong and robust, mats were placed over plants with little break off of fragments, there was negligible tall native vegetation in the area, hand harvested plant root mass produced limited amounts of stirred up silt and was easy to remove, bottom was a mix of ledge/boulders, rocks and sand
 - Patch 11, milfoil fragmented more than that at 48 but was still limited, for the most part this area had only milfoil with very limited native vegetation around the patches, bottom was sand and fine dirt that produced reasonable amounts of stirred up silt when individual plants and roots were removed
 - Patch 36, milfoil was very fragile and produced a “blizzard” of fragments as mats were placed over it; isolated milfoil plants outside the matted patch were mixed with a robust amount of native vegetation varying from short to very tall making it difficult to locate these isolated plants. The bottom was very silty and produced dense clouds when isolated plants were removed
 - Patch(s) 37 – 39 were similar in fragmentation to patch 11 but hand harvesting was very challenging as the bottom was a hard well packed sand and small pebble mix that made getting roots out difficult.
 - New patches between 36 and 41 were all similar in fragmentation to patch 11, what was most notable was that one patch was growing on a bed of small coble that was raked at about a 45* angle with no native vegetation around it.
 - Patch 24 had fragmentation similar to 48, the bottom was ledge rock covered with minimal amounts of milfoil root/ plant trapped sediment. The gradation of the bottom required careful placement of mats so that they didn’t slide down the hill
- Obtained APA final details for proposed herbicide use required aquatic vegetation survey (1/4 mile radius of proposed treatment sites)
- Hired Allied Biological to complete Tier III Aquatic Vegetation Survey, see [Photos -completing the survey](#)
- Logged for four divers a total of 398.5 hours of dive time, actual underwater time is slightly less than this
- Logged 109.25 hours of top side diver support time
- Placed a total of 118 mats, fifty-two (52) 10’ x 16’ and sixty-six (66) 10’ x 21’ for a total of 24,200 square feet
- Removed 90.5 large goodie bags of milfoil with an estimated weight of 5,910 pounds
- “Eradicated” milfoil from approximately 8 of the 50 plus locations identified in the 2003 GPS survey
- Eradicated milfoil from several locations not identified as having milfoil in the 2003 GPS survey
- Billed approximately \$11,300 in diver and dive support services

- Composed and distributed a September 2008 ELPOI newsletter informing ELPOI members and riparian lake property owners of the Summer 2008 milfoil project outcomes, see [September 2008 Newsletter](#)
- Coordinated with Lake Management firm Allied Biological details for hand harvest and matting effort and interest in use of an herbicide for milfoil control
- Completed a brief surface visual inspection of above mat sites to verify mats are still in place (no apparent billowing from plant decomposition), noticed that in several places milfoil was growing out from mat overlap area, also noticed that rather tall plants (18 – 24 inch plus) had re-grown out of previously, just weeks earlier, hand harvested native vegetation areas.
- Returned 24' pontoon boat to Hyde's Boat and RV for winter storage
- Secured permission from local resident and moved work float to their "beach" area for winter storage
- Removed milfoil buoy markers for winter storage
- Winterized all dive and project related equipment and supplies

End of work for this reporting period 9-30-2008