



CANDLEWOOD LAKE AUTHORITY

P.O. BOX 37 • SHERMAN, CONNECTICUT 06784-0037 • (860) 354-6928 • FAX (860) 350-5611

Minutes of Regular Meeting February 8, 2012

Attending:

H. Berger	Sherman
P. Schaer	Sherman
M Toussaint	New Milford
H. Mayer	New Milford
J. Murphy	Brookfield
W. Lohan	Brookfield
E. Siergiej	Danbury
N. Gyle	New Fairfield
B. Kemble	New Fairfield

Absent:

M. Calandrino	Danbury
R. Guendelsberger	New Milford
E. Hayes	Sherman
J. Hodge	New Fairfield
F. Cioffi	Brookfield

L. Marsicano, CLA Executive Director
 M. Howarth, CLA Public Education Director
 F. Frattini, CLA Administrative Coordinator
 D. Vane, Chief of Marine Enforcement, CLAMP

Recorder: E. Siergiej

Guests: M. Propper, Danbury
 C. Robinson, Danbury

Howie Berger, Chairman, called the regular meeting of the Candlewood Lake Authority to order at 7:34 P.M. at Brookfield Town Hall, Brookfield, CT. He welcomed the guests, noting that Chris Robinson will be the new Danbury Delegate once he is sworn in.

Secretary's Report: Ed Siergiej, Secretary, asked if there were any corrections to the minutes of the October 12, 2011 Regular meeting and the December 14, 2011 Special meeting, with none, Mark Toussaint moved to approve the minutes of October and December as written, seconded by Phyllis Schaer and voted with all in favor. Minutes have been accepted as written.

Chairman's Report: Howie Berger, Chairman, reported the items that would be taken up this evening are:

RECEIVED FOR RECORD
DANBURY TOWN CLERK

2012 FEB 14 P 3:41

BY: 

- A. Zebra Mussel Forum in Great Barrington, MA
- B. Drawdown
- C. New legislation
 - a. 26-foot boat length
 - b. Phosphorus control in fertilizer
 - c. Zebra Mussel rule that the Lake Patrol can enforce
 - d. Legislation that will add invasive species to existing legislation regarding invasive plants
- D. MOA update
- E. Land issues around the lake
- F. Partnering with WCSU and their Foundation for research projects
- G. Incredible work on the new CLA website
- H. Advertising
- I. Email fundraising appeal
- J. Patrol Officers as Zebra Mussel ambassadors
- K. A Visit to Rocky River Plant
- L. Larry Marsicano meeting with John Shue of FirstLight
- M. Meeting to explain the CLA to a member of the NM Town Council who is running for Representative Clark Chapin's seat
- N. Report on the recent fundraising mail appeal
- O. Reminder that all delegates must be a member of at least one standing committee
- P. New Fairfield needs a representative on the Executive Committee
- Q. Reactivate the Legislative Sub-committee
- R. Reconstitute a boat sticker program

Mr. Berger noted that Attorney Backer is waiting to hear from DEEP's attorney Melinda Decker on the MOA. He asked if the delegates would like to visit the Rocky River plant before the April meeting and then meet in the New Milford office. FirstLight will explain the role of Rocky River as to how it pertains to their generation. He advised that an appeal letter was sent out to a target group of about seventeen hundred and to date donations from the appeal and a few received prior total around \$25,000. With additional funds anticipated from Project CLEAR \$3,000 and the Dragon Boat Race \$4,000 that would mean that the CLA needs another ten thousand to make up the needed \$42,000 in the budget before the end of the fiscal year.

Vice Chairman's Report: Mark Toussaint, Vice Chairman, reported that he, Mr. Marsicano and Harold Mayer had met with The Mayor of New Milford noting that she is concerned about CLA's relationship with FirstLight but was glad that Mr. Marsicano will be meeting with Mr. Shue of FirstLight on a somewhat regular basis. Mr. Toussaint complimented Mark Howarth on the appeal letter that was sent out as a job well done.

Treasurer's Report: Treasurer Phyllis Schaer noted that the reports for the months of July to December 2011 and for January 2012 had been sent to the delegates prior to the meeting, with no questions regarding the reports, Ed Siergie made a motion to accept the Treasurer's Reports of Income and Expenses for the months ended from July to December 31, 2011 and January 31, 2012 as presented, motion seconded by Jerry Murphy and voted with all in favor. Treasurer's Reports for the months ended July 31, August 31, September, 30, October 31, November 30 and December 31, 2011 and January 31, 2012 have been accepted and filed for audit. Mrs. Schaer complimented Mr. Howarth on his fundraising capabilities and noted that the CLA needs to keep up the fundraising efforts. Thank you Mr. Howarth.

Executive Director's Report: Larry Marsicano noted that his written reports for January and February are attached to these minutes. He spoke about while gathering information on the Zebra Mussel issue he came in contact with a Dr. Kelly, a PhD working with the Bureau of Reclamation water delivery systems out West. He has suggested a theory on how to create a barrier between Laurel Lake and The Housatonic River. His theory is to diffuse carbon dioxide (CO₂) into a small system i.e. pipe/brook – you will be able to kill adults and veligers as CO₂ is a narcotic to mollusks. The CO₂ also lowers the pH for a short time and will kill them before they can get to the river. He has indicated that this has not been done in the field but this area lends to a place to try. If this does work it could possibly eliminate zebra mussels from Lakes Lillinonah and Zoar and would help to alleviate the pumping restraints the mussels have put on FirstLight. Discussion followed. It was noted that to have Dr. Kelly come out here to have discussions with stakeholders and visit potential sites would cost \$6,000.

Mr. Marsicano reported that Senator Rorabeck and Representative Chapin are sponsoring a bill to limit phosphorus use in fertilizers used lawns. Discussion followed and Norma Gyle noted that the CLA needs to be on board early to keep an eye on the legislation as it moves through the legislature. Mr. Marsicano noted that as he also represents the CT Federation of Lakes as its President, both the CLA and CFL along with Tom McGowan of Lake Waramaug are following it. Mr. Marsicano noted that he would go to Hartford to testify in support of the concept when the time comes. Discussion followed. Mr. Berger moved that the CLA actively support the legislation regarding the ban on phosphorus in fertilizers used on established lawns and have the CLA provide whatever testimony that would be appropriate to move the bill forward, moved by Mark Toussaint and seconded by Jerry Murphy and voted with all in favor. Motion carried.

Boat Length legislation – Members and staff from the CLA attended the public hearing held by the CT DEEP on a proposed reregulation to limit the boat length on Candlewood to less than 26 feet. There was language grandfathering some vessels exceeding the proposed limit as the limit goes with the boat not the owner. The public hearing was held to get comments and suggestions on the proposed regulations which are scheduled to go into affect for the 2012 boating season.

Mr. Berger asked anyone who would like to serve on the Legislative Sub Committee to please let him know.

Mr. Berger noted that DEEP enforces the transporting of zebra mussels as a misdemeanor. Discussion followed on how is it enforced if the ramps are not manned on a regular basis. Mrs. Schaer noted that at the Zebra Mussel Forum they were told that Education and Public Outreach is the primary deterrent; just get the word out and you can change the public's perception.

Mr. Marsicano noted that FirstLight is scheduled to begin raising the lake February 21st and is concerned that the river may warm up earlier this year due to the warm winter, further constraining their ability to pump.

Public Education Director's Report: His Reports for January and February are attached. Mark Howarth gave a presentation of the new CLA website – it is not yet up and running but should be soon. Mr. Berger noted that on the site there would be an area where for a donation you can obtain certain Candlewood items. Also there will be an area on the site where for a

donation you can advertise your business – more on this at the March meeting. Thank you to Mark Howarth on a great new site.

Committee Reports:

Equipment/Facilities: Chairman Ed Siergiej noted nothing to report

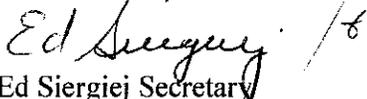
Public Awareness: Chairman, Mark Toussaint reported on the opportunity to team up with WCSU and their Foundation on interesting projects concerning Candlewood Lake. More on this next month.

Watershed Management: Mr. Marsicano reported on a very large aluminum dock that has been constructed more like a swim area than a dock of simple construction. This has been brought to the attention of FirstLight, the DEEP and the Town. Also at Shoreview Estates there was a Beach Improvement project, which there was no permit from the City of Danbury – this is also being looked into. A permit is being sought after the fact. This brought up the discussion that the CLA is not in the loop of the notification process of projects on the waterfront. Discussion followed and it was suggested that the CLA renew its relationship with the Towns land use officers.

Mr. Berger noted some points from the Zebra Mussel Forum were things that work are to contact the public to make them aware of the situation, make them self certify that they are complying – they have found that this worked and increased participation. Mr. Berger wanted to get a sense from the delegates on funding Dr. Kelly’s trip if he came out here to have meetings to discuss the CO₂ theory. Discussion followed. The Delegates supported bringing Dr. Kelly out. Mr. Berger asked Chief Vane if the Lake Patrol officers could look for zebra mussels, hand out information and record contact and sector information on their daily reports.

With no further business to come before the Candlewood Lake Authority, Jerry Murphy moved to adjourn, seconded by Ed Siergiej. Meeting adjourned at 9:32 P. M.

Respectfully submitted,



Ed Siergiej Secretary

Frances Frattini, Administrative Coordinator

r/b/lm

These minutes are not considered official until they have been approved at the next regularly scheduled meeting of the Candlewood Lake Authority.



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***Executive Director's Report
February 6, 2012
Larry Marsicano***

The following report summarizes activities of January 6, 2012 thru February 6, 2012.

INVASIVE SPECIES

We coordinated and Howie hosted a conference call with Dr. Kevin Kelly on January 18th which included the Director and other staff from HVA, Ethan Nedeau of Biodrawiversity, Jesse Young of Congressman Chris Murphy's Office. Dr. Kelly is a PhD research scientist with the Federal Bureau of Reclamation who we've been corresponding with regarding a theory of his on how to stop the flow of zebra mussel veligers from Laurel Lake into the Housatonic River.

HVA coordinated a zebra mussel forum on February 4th in Great Barrington, MA. Approximately 70 stakeholders from both CT and MA with interests in zebra mussel management / prevention attended. We were able to discuss our hopes of bringing Dr. Kelly out to have a meeting with stakeholders in both States to discuss the feasibility of field testing his theory. There was general support by attendees.

We have been in constant contact with Dr. Kelly, Jesse Young and others in efforts to bring him out here in late February or early to mid March.

We worked with Dr. Mitch Wagener in setting temperature / soil moisture probes in exposed Candlewood Lake sediments on Monday, January 30th. This research is an extension of earlier efforts to understand sensitivity of Eurasian watermilfoil root cells to temperature and desiccation in laboratory experiments.

Shannon has been developing a web-based registration form for aquatic invasive removal projects on Candlewood Lake.

We have been working with State Representative Clark Chapin on introducing legislation to revise laws regarding transport of aquatic species (see attached).

PROJECT CLEAR / EDUCATION

We met with Education Connection on Tuesday, January 10th to discuss grant options for Project CLEAR.

DRAWDOWN

Drawdown reached target depth of ~424 ft above sea level (CL&P datum) on January 20th. We continue tracking lake level, weather, river flow, etc. on the website.

LAND USE ISSUES

In my January report I mentioned that CLA was to be requested to review plans for Shoreview Estates Beach improvements in Danbury by the Danbury EIC. We received plans in mid January which Gary Dufel and I reviewed and developed comments for. The proposed work was planned to occur at the same site where we learned of extensive filling and grading on the / in the water in April of 2011. We had notified FLPR at that time, asking if the work had been permitted. They responded that it was not permitted and they would be taking enforcement action. With the exception of an email stating that they (FLPR) were working with the adjacent landowner to stabilize the site in May, we did not hear anymore regarding that site until the December EIC minutes. As far as we know, no enforcement action was ever taken. No permit for the work was ever issued by EIC.

The letter Mr. Dufel and I crafted was discussed at the Watershed Committee Meeting of the night of Tuesday, January 24th. On the night of Wednesday, January 25th I attended the EIC meeting to present our comments and discuss our concerns in person. Another site walk was scheduled for February 2nd, which I was unable to make due to a prior commitment.

WCSU RELATIONS

I was invited to participate in a meeting at WCSU on January 12th with the Chairman and faculty of Biological and Environmental Science Department, the Director of Development and the Director of Public Relations at WCSU to discuss developing WCSU into a more prominent participant in addressing issues on Candlewood and other nearby lakes. WCSU intends on fundraising to develop resources for WCSU to continue their efforts in aquatic invasive species research and were looking for the help of the CLA in doing so. The Director of Development attended Executive Committee meeting on February 1st and I had a subsequent meeting with her on February 2nd. On Friday, February 3rd invitations were sent from WCSU President Schmotter's Office for a "Coffee and Conversation" to selected members of the lake community, myself, and others from WCSU. That "C&C" is scheduled for early March.

FIRSTLIGHT POWER RESOURCES / FERC

I have a breakfast meeting with John Shue, FLPR VP of Hydro and Wind, scheduled for Tuesday, February 7th. Mr. Shue and I have exchanged several emails to create an agenda for our meeting. Mr. also graciously rescheduled our meeting when a conflict developed for me on the original appointment.

RECREATION MANAGEMENT

On the night of Wednesday, January 4th several of us attended and participated in the public hearing held at the Whisconeer School in Brookfield on the proposed vessel length limit size for Candlewood Lake.

BUDGET

We have met with several of the CEO's to discuss the budget. These included: with First Selectman Clay Cope of Sherman with Sherman Delegates on Wednesday, January 11th with all three Sherman Delegates; with First Selectmen John Hodge and BOF Members in New Fairfield on Tuesday, January 17th with New Fairfield Delegate Norma Gyle; and with Mayor Murphy of New Milford and staff from her Finance Office on Monday, January 30th with New Milford Delegates Mark Toussaint and Harold Mayer.

OTHER

I was guest lecturer for Kevin Dunleavy's Environmental Studies Class at Immaculate on Friday, January 6th

I was guest lecturer for Dr. Chris Kukk's Environmental Issues – International Relations class at WCSU on Thursday, February 2nd

Several of us met with NM Town Councilman Cecilia Taylor-Buck who is running for State Representative of the 67th District

I participated in a press conference hosted by State Representative Clark Chapin and State Senator Andrew Roraback who are forwarding legislation to ban use of fertilizers with phosphorus on established lawns.

Proposed Statute Revision

Currently:

Sec. 15-180. Transporting vessel or trailer without inspecting for and properly removing and disposing of vegetation. Penalty.

- (a) No person shall transport a vessel, as defined in section 15-127, or any trailer used to transport such vessel, in the state without first inspecting such vessel for the presence of vegetation and properly removing and disposing of any such vegetation from such vessel or trailer.
- (b) Any person who violates the provisions of this section shall be fined not more than one hundred dollars for each such violation.

(P.A. 03-136, S. 6.)

History: P.A. 03-136 effective June 26, 2003.

See Sec. 15-140e re courses in safe boating operation to include instruction in the proper inspection of vessels and trailers for vegetation, and the proper disposal of such vegetation.

Sec 15-180(a) should be modified to:

Sec. 15-180. Transporting vessel or trailer without inspecting for and properly removing and disposing of vegetation. Penalty.

- (a) No person shall transport a vessel, as defined in section 15-127, or any trailer used to transport such vessel, in the state without first inspecting such vessel for the presence of aquatic invasive animals as determined by the Commissioner or any vegetation and properly removing and disposing of any such animal or vegetation from such vessel or trailer.



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***Executive Director's Report
January 5, 2012
Larry Marsicano***

The following report summarizes activities of December 6, 2011 thru January 6, 2012.

INVASIVE SPECIES

We continued our collaboration with WCSU on a pilot zebra mussel veliger early detection / monitoring study. In addition to providing much of the logistical support in the field, we also did much of the microscopic analyses, and writing & editing of the report which was submitted to the CT DEEP on the 29th of December. Several pages are attached to this report.

We have continued to correspond with Dr. Kevin Kelly of the Bureau of Reclamation and have reached out to the Housatonic Valley Association to partner with us on this effort. On December 21st we met with HVA at their offices in Cornwall Bridge to discuss the theory and strategy to develop support. It was agreed upon that a conference call with Dr. Kelly would help HVA in getting up to speed prior to presenting the concept to their board for approval to support. We have made arrangements to have that conference call on January 18th.

Several of us will be attending the Housatonic River Zebra Mussel Forum on Saturday February 4th at Bard College at Simon's Rock in Great Barrington, MA. Several of us will participate in a panel discussion or moderate one of the breakout sessions.

I was contacted by John Hodge who was on business at Lake of the Ozarks, MO. He relayed some information regarding zebra mussels as part of the diet of blue catfish (*Ictalurus furcatus*). I asked our WCSU intern, Shannon Ring, to do some investigating. I can provide some of that research or discuss it further at the board's request.

We received a draft report from EnviroScience Inc. on the past summer's milfoil weevil stocking program. I reviewed and provided comments on the draft report. We received a final report which I have forwarded to the Town of New Fairfield. There were no major surprises in the report and the real test of the sustainability and effectiveness of the weevils will occur next season. The page containing much of the data is attached to this report.

DRAWDOWN

In November I reported that after discussing with FLPR, the power company had planned to draw the lake down to 424 feet by the end of December. FLPR's press release distributed to us and local media stated that the drawdown would be completed by the first week of January. Shortly thereafter an accident occurred at the CL&P switchyard next to the Rocky River Power Plant. The accident precipitated the decision not to lower the lake until the equipment had been repaired. At a December 8th meeting with FLPR we were told that the drawdown would resume when equipment was fixed and probably be complete in the second week of January.

We received correspondence from FLPR that the repairs had been completed by Tuesday, December 20th. On Wednesday, January 4th, Mark Howarth had learned the target date had been pushed back to Friday, January 21st. On January 6th I received correspondence from FLPR indicating that they planned to reach their target by the end of the third week of January and possibly sooner if there is a cooling trend.

The office has been very busy fielding phone calls and emails regarding the lake level and concerns over docks and other property. Unfortunately, for most of those we relayed the information that we had at the time... down by the second week of January. We will begin responding to inquiries that the lake will be lowered by the end of the third week of January.

LAND USE ISSUES

East Pembroke, Danbury

We submitted additional comments to EIC on December 14th subsequent to our meeting with CCA on November 28th. Among our additional recommendations was the inclusion of a written construction sequence and limits on areas below the 440 that those doing the work would be allowed to cross. The intent was to limit shoreline disturbance since the site was accessible by water only.

59 Ta'agan Point Road, Danbury

I received a call from a homeowner at 59 Ta'agan Point Road. This was the site we participated in a site visit to view stormwater runoff issues and the measures owners had taken without approvals. This is also the site where the large L-shaped dock resides. The homeowner was requesting a letter from us in support of their plan. Since I had not seen any plan (only visited the site) I declined and requested that I receive a copy of the application. I have since spoken to the Danbury Enforcement Officer.

Shoreview Estates, Danbury

We read under New Business in December 14th EIC minutes of an application to reconstruct the Shoreview Estates community beach. In speaking with the Danbury Enforcement Officer I learned that this was also an application "after the fact" that included filling below the 440. Ralph Gallagher who is the GC for the project was requested to seek input from FLPR and CLA. We have received no request at this time.

FIRSTLIGHT POWER RESOURCES / FERC

We drafted and submitted comments on December 15th to FLPR on their draft minutes of the October 24th Lake Advisory Committee meeting. FLPR subsequently addressed the comments from all present at the meeting in a report submitted to FERC on December 29th which included revised minutes. How FLPR addressed our comments in that submittal is attached to this report.

On December 8th CLA participated in a meeting hosted by Richard Kehoe from Senator Blumenthal's Office and Rob Michalik from Congressman Murphy's Office. In addition to those gentlemen and the CLA, others in attendance were the CEO's of the member municipalities and representatives from FLPR. Much of the discussion was about the role of CLA and FLPR in management of the lake. The lack of communication between the entities surfaced and we both were advised to develop better communications. One such manner to do that suggested by one of the CEO's was for regular meetings between the CLA Executive Director and an executive from FLPR. I will be meeting with FLPR Vice President John Shue on February 6th.

RECREATION MANAGEMENT

We assisted CT DEEP in planning a public hearing held on January 4th regarding the proposed regulation to limit vessel size on Candlewood Lake. Several of us attended and provided testimony in support of the regulation. There were several others who spoke in favor and about seven, largely from CLUB*A, who spoke against the proposed regulation. One of their arguments was that larger vessels tended to raft in the coves and don't present a problem. I have contacted the president of the Hollywyle Cove Association regarding these developments. We receive calls from Hollywyle Cove residents annually about large numbers of large vessels rafting and partying in that cove every weekend. I encouraged them to submit written testimony which will be accepted up until 4 PM on January 27th.

BUDGET

Following budget approval at the last board meeting, the Danbury budget packet was completed and submitted on December 15th. The four other member municipalities also received it as well as budget proposal spreadsheets in the format they are accustomed to. Thanks go to Committees for input and especially to Howie, Phyllis and France for their hard work on this.

OTHER

I had the pleasure of advising Marina Renzi and Katerina Ringes who are 8th graders from the St. Rose School in Newtown. For their Science Horizon's project they wanted to experiment with the effects of electromagnetic energy on growth of *Scenedesmus sp.*, a colonial green algae which we have in Candlewood Lake. The two day experiment was conducted at our New Milford Office on December 19th and 20th when I met and worked along side the students and their mothers, Mrs. Renzi and Mrs. Ringes. The students and their mothers were extremely grateful for our help. I will advise you on how they did in the science competition once I learn.

I accepted the invitation from Kevin Dunleavy, former CLA Delegate from New Milford and faculty member at Immaculate High School, to lecture to his Environmental Science class. That presentation occurred on Friday, January 6th and was well received.

Report

**Early Detection / Monitoring of Zebra Mussel Introductions from the Housatonic
River in Lakes Candlewood, Lillinonah and Zoar: A Pilot Program**

Stephen M. Wagener

Edwin Wong

Melissa Garafola

Ana Bortoletto

Maria Bortoletto

Western Connecticut State University

And

Larry Marsicano

Candlewood Lake Authority

December 31, 2011

Executive Summary

In 2009 zebra mussels (*Dreissena polymorpha*) were found in Laurel Lake, its outlet Laurel Brook, and below the confluence of Laurel Brook and the Housatonic River in western Massachusetts. A year later Lakes Lillinonah and Zoar were also found to contain small colonies of adult zebra mussels. Candlewood Lake is a pumped-storage reservoir, which takes much of its water from the Housatonic River. As such, Candlewood Lake is also clearly at risk from introduction of this aquatic invasive species. To date, however, zebra mussels have not been observed in Candlewood Lake.

Among the methods routinely used to detect veligers in water samples are cross-polarization light microscopy (CPLM) and polymerase chain reaction (PCR) assay. CPLM views a plankton sample through a light microscope and polarizing filters with the plains of polarization at a 90° angle. As a result veligers glow with a dark cross.

PCR (Polymerase Chain Reaction) is used to aid in the identification of zebra mussel DNA in aquatic samples. We tested several PCR primer sets used for zebra mussels in the literature, and have determined optimal primer sets and PCR conditions for the specific detection of zebra mussel DNA in a mixture of plankton DNA from Candlewood Lake. We conducted a pilot study of early detection and monitoring for zebra mussel veligers in Lakes Candlewood, Lillinonah and Zoar using these two methods.

After spending a great deal of time becoming familiar and proficient with these two complex methods and adapting them to local conditions, we are now more confident in our ability to distinguish veligers from the large amount of background planktonic biomass. All the samples collected from Candlewood Lake this past summer have been examined by CPLM, most of them several times and by more than one person. One single zebra mussel veliger has been provisionally identified in each of five of the 18 samples taken from Candlewood. Several samples from Lake Zoar contained too many veligers to count. Thus far we have not found veligers in either Lake Lillinonah or the Housatonic River.

Due to the possibility of a false positive, great care must be taken in accepting the apparent single veliger found in a few samples from Candlewood Lake. We advise

considering only those samples that contain numerous verified veligers as “true positives”.

We hope to continue this study in the year to come, expanding the sampling season so that we might better understand the timing of zebra mussel reproduction. Now that the best primer sets have been identified for PCR, we expect that DNA analysis will be increasingly fruitful in the next year. As resources allow we will sequence the genomic DNA from the Candlewood Lake plankton community to add to the precision of the analysis.

Conclusions

With both cross-polarization light microscopy (CPLM) and DNA analysis (PCR), detecting zebra mussel veligers in the high amount of plankton biomass is a challenge. We currently have no substantial evidence that zebra mussel veligers are in Candlewood Lake. Using CPLM, we have found large numbers of veligers in Lake Zoar. We tested several PCR primer sets, and have determined optimal primer sets and PCR conditions for the specific detection of zebra mussel DNA in a mixture of plankton DNA from Candlewood Lake.

I. Introduction

Eurasian watermilfoil (*Myriophyllum spicatum*, hereafter referred to as milfoil or EWM) is an exotic aquatic species that tolerates a wide range of growing conditions and out-competes native vegetation. Monocultures of milfoil limit recreational use, reduce biodiversity, and can cause detrimental changes to water temperature and dissolved oxygen in severe infestations.

The milfoil weevil (*Euhrychiopsis lecontei*), an insect native to North America, has been augmented in Candlewood Lake, Fairfield and Litchfield Counties, Connecticut, to suppress the growth of milfoil. This weevil is a specialist herbivore of milfoil and damages the plant in multiple ways. The most significant impact is caused by weevil larvae as they damage the meristem, or growing tip, and burrow through the stem. Nutrient flow in the plant is disrupted and the stem loses buoyancy and collapses in the water column. A cascading effect pulls neighboring plants lower into the water column and the rate of photosynthesis is significantly reduced in these stems.

In 2008, EnviroScience Inc. donated 10,000 weevils to be stocked in three sites for an experimental biological control program overseen by researchers from the Connecticut Experiment Station and Western Connecticut University. In 2009, First Light Energy supported the initiation of EnviroScience's **Milfoil Solution**[®] biological control program; however lake conditions prevented weevil stocking and postponed the first augmentation until 2010.

8,000 weevils, initial and follow-up surveys of both stocking sites established by EnviroScience were contracted for 2011. The following is a project outline of **Milfoil Solution**[®] at Candlewood Lake:

Year	Survey Dates	Sites Stocked	Number of weevils
2008*	Initial: 7/2 Follow-up: 8/27	A, D, F	10,000
2010	Initial: 6/23 Follow-up: 8/24	F, G	16,000
2011	Initial: 6/29 Follow-up: 9/1	G	9,000**
2012	--	--	TBD

* Experimental stocking by Western Connecticut State University.

**Due to a surplus in the culturing laboratory and the time-sensitive nature of live organisms, 1,000 weevils were stocked in addition to the contracted amount at no charge.

II. Survey Methods

An initial survey is performed prior to weevil stocking and a follow-up survey is conducted six to eight weeks later. These surveys are integral in monitoring changes that occur in both the augmented weevil population and the health of the milfoil over the course of the program in order to make informed management decisions. Qualitative observations in these surveys include the overall density and health of milfoil, identification of native plant species present, and the presence of weevils and weevil-induced damage. Quantitative measurements include milfoil density and weevil population density. Milfoil density is determined by

Table 1. Laboratory Analysis of Average Weevil Population Density in Candlewood Lake

Site	Parameter measured	Initial Survey June 23, 2010	Follow-up Survey August 24, 2010	Initial Survey June 29, 2011	Follow-up Survey September 1, 2011
F	Damage to Samples	3%	11%	21%	13%
	Total weevils	0.00	0.00	0.00	0.00
	Total stems analyzed	30.00	27.00	29.00	30.00
G	% Damage	11%	30%	14%	0%*
	Total weevils	0.00	19.00	0.00	0.00
	Total stems analyzed	28.00	27.00	29.00	30.00

*Laboratory analysis of samples at Site G did not include damage at the time of the September survey, but field observations included weevil-induced damage to approximately 25% of stems. See Section IV.

Table 2. Average Density of EWM (stems/m²) in Candlewood Lake

Site	Initial Survey June 23, 2010	Follow-up Survey August 24, 2010	Initial Survey June 29, 2011	Follow-up Survey September 1, 2011
F	55.6	200.0	59.3	59.2
G	72.2	152.8	77.8	63.0

ATTACHMENT B – Stakeholder Comments and FirstLight Responses

Stakeholder name and comment	FirstLight Rersponse
CTDEEP 1: "Minutes look good to me."	FLPR thanks you for your participation in the annual LAC 2011 meeting
CTDEEP 2: Clarify questions concerning FLPR protocols for dock permitting, standardizing decision- making and better notification of the Towns and CLA.	FLPR modified the minutes to reflect this conversation.
CLA 1: Add information not captured in draft	FLPR modified report to include comments
CLA 2 : Change quoted text	FLPR modified report to include comments
CLA 3: Clarify text	FLPR modified report to include comments
CLA 4: Add information not captured in draft	FLPR modified report to include comments
CLA 5: Requested more communication on permitting process	FLPR modified report to include comments
CLA 6: Add information not captured in draft	FLPR modified report to include comments
CLA 7: Add information not captured in draft	FLPR modified report to include comments



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February 8, 2012
Public Education
Mark Howarth

Website:

There has been extensive work done on our new website. This redesign will not only be a more attractive site (visually) but it will have a lot more information for the public to access and learn from. A major challenge of having so much information to make available to the public is organizing it in a way that it is easy to navigate through and find what you are looking for. That has been a big focal point on this new site design. We have nearly completed the work for this new site and are hoping, barring any unexpected issues, to launch shortly.

Zebra Mussel Forum:

On Saturday, February 4th, we traveled to Great Barrington, MA for the day to attend a regional forum on zebra mussels. It was coordinated by the HVA, with the purposes of getting the CLA's Zebra Mussel Task Force as well as the MA Zebra Mussel Task Force and others together to discuss the zebra mussel threat in the area and share information and ideas on how we can stop the spread of zebra mussels and potentially work together to achieve those goals.

The forum started with two morning presentations, one from Ethan Nedeau from Biodiversity, the scientist who discovered zebra mussels in Lakes Lillinonah and Zoar in October 2010 followed by a presentation from Doug Jensen from Minnesota Sea Grant, who shared his experiences in battling the spread from this invasive species.

Following lunch there was a panel discussion on Local Management Tools and Strategies and then we divided up into break-out sessions. I co-moderated the Prevention & Decontamination session. Finally we all reconvened where the moderators recapped and discussed their group's break out session ideas.

It was a well-attended event (approx. 75 individuals) and was a positive step in the effort to help prevent the spread of zebra mussels.



CANDLEWOOD LAKE AUTHORITY

P.O. BOX 37 • SHERMAN, CONNECTICUT 06784-0037 • (860) 354-6928 • FAX (860) 350-5611

January 11, 2012
Public Education
Mark Howarth

Appeal Letter:

The appeal letter went out the week of December 20th and we are receiving responses daily.

Website:

Progress on the new website design continues, with a lot of data and new features being added to upgrade what the old site had to offer to the public. If all goes well we are hopeful for a launch in the near future.

Electronic Newsletter:

We sent out an eNewsletter at the end of December. Topics included:

Boat Length Bill - Public Hearing on January 4th
Drawdown Status... The water is still high... for a reason
Zebra Mussel Interim Report...released to public
New Laws Regarding Zebra Mussels... existing regulations now includes zebra mussels
Is That a Zebra Mussel on My Boat? So far, false alarms... but people are on the lookout
Getting the Message Out
Flood Insurance Rate Maps
2011 Candlewood Lake Dragon Boat Race... A look back on some summer fun

Boat Length Public Session:

On January 4th, at 6:30 the CT Department of Energy and Environmental Protection (DEEP) hosted a public session on Candlewood's Boat Length regulation. There were approximately 20 people in attendance. They had the opportunity to make public comment (and submit their comments in written format). Leading the session were Eleanor Mariani and Timothy Delgado from the DEEP.