



CANDLEWOOD LAKE AUTHORITY

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

Minutes of Special Meeting March 18, 2013

Attending:

H. Berger	Sherman
J. Hodge	New Fairfield
M Toussaint	New Milford
H. Mayer	New Milford
J. Wodarski	New Milford
J. Murphy	Brookfield
W. Lohan	Brookfield
P. Schaer	Sherman
E. Hayes	Sherman
C. Robinson	Danbury (7:36PM)
E. Siergiej	Danbury (7:36PM)

Absent:

B. Kemble	New Fairfield
N. Gyle	New Fairfield
D. Rosemark	Danbury

L. Marsicano, CLA Executive Director
 M. Howarth, CLA Public Education Director
 F. Frattini, CLA Administrative Coordinator

Recorder: M. Toussaint

Guests: S. Randall, Sherman
 C. Cope, First Selectman Sherman
 C. Jellen, Selectman, Sherman
 B. Stryker, New Fairfield
 J. McAlister, New Fairfield
 G. Linkletter, Sherman

RECEIVED AND FILED
TOWN CLERK'S OFFICE
DANBURY, CONN.

MAR 25 2013

at 3:05 pm Delock Map# _____

 Town Clerk

Howie Berger, Chairman, called the special meeting of the Candlewood Lake Authority to order at 7:30 P.M. at Mallory Town Hall, Sherman, CT. He welcomed the guests and asked the new delegate from New Milford to say a few words.

Joe Wodarski noted that he and his wife have been attending the CLA meetings for a long time and now will be sitting at the table, he is a retired NYPD officer and has had a lifelong interest in Candlewood Lake and looks forward to working with the CLA and no longer sitting in the audience.

Minutes: In the absence of the Secretary, Frances Frattini, noted there were no corrections to the minutes of the January meeting, Jerry Murphy moved that the minutes of the January 9, 2013 meeting be accepted as written, seconded by Phyllis Schaer and voted with all in favor. Motion carried, minutes accepted.

Treasurer's Report: Mrs. Schaer asked for a motion to approve the Treasurer's Reports for the months ended from July 31, 2012 to February 28, 2013. John Hodge noted that he had not seen the treasurer's report. Mrs. Schaer indicated that all delegates were sent a copy of this month's treasurer's report for review prior to the meeting, as is the standard practice before every meeting, so they have the opportunity to read it before the meeting. Mr. Hodge then "How are we doing?" Mr. Berger gave a brief overview of the fundraising initiatives and Mrs. Schaer advised that the CLA is working within the present budget. With no further discussion Harold Mayer moved to accept the Treasurer's Report of Income and Expenses for the months ended from July 2012 to February 2013 as presented, seconded by Mark Toussaint, with John Hodge abstaining, motion carried and Treasurers Reports have been filed for audit.

Chris Robinson and Ed Siergiej arrived at 7:36 P.M.

Accomplishments and Goals of the CLA:

Mr. Berger advised that he, committee chairs and staff would give a report on the accomplishments and further goals of the Authority. This would be done with the help of a PowerPoint presentation. He offered that the CLA deserves to be recognized for the professionalism of the organization and the large list of accomplishments that have been achieved with such a small staff and budget funding shortfalls. The CLA has had to run a deficit budget for many years to meet increasing demands. The structure of the CLA is a municipality however it cannot tax and relies on the member Towns for its funding. The Towns have been reluctant to increase their funding due to their own economic pressures and had suggested that the CLA use fundraising to supplement the funds needed to cover their programs. The CLA has a number of fundraising efforts – newest is selling Candlewood Lake merchandise which has been favorably received by the lake community, the Dragon Boat Race going into its fifth year has been growing as both a community event and to bring in more funds. Grants for environmental activities have been applied for and sometimes received, Project CLEAR received a grant from the Meserve Foundation and is a project that has taught lake science and stewardship to numerous high school students from the surrounding towns. The Annual Lake Clean Up while not a moneymaker is a great community event and cleans up the shoreline of the Lake.

He presented a slide that showed administrative costs and reported that in the past either the Towns or the Treasurer at that time asked that all salaries expenses be designated in one place, i.e. Administration even though the correct allocation of time spent by the staff splits their time between the many work committees of the CLA – on this sheet he showed how the costs are allotted to the specific committees thus more appropriately allocating true costs and reducing basic administrative costs considerably.

The Lake Patrol provides nineteen hundred to two thousand hours of patrol annually and will also in the proposed 2013-14 budget. The commitment to providing this level of service was not reduced in our proposed budget.

The CLA has partnered with Western Connecticut State University (WESCONN) who has won a President's Institutional Community Service Award for research on zebra mussels.

He reviewed proposals that were made over three months ago when the CLA was preparing its 2013-14 Budget proposal prior to submitting it to the Towns.

Earlier in the year at an invasive species sub-committee meeting First Light Power Resources (FLPR) noted that Candlewood cannot count on deep drawdowns for Milfoil control, as they may be the reason for the blue-green algae appearing in the lake.

Recently FLPR sent a letter to the Housatonic Valley of Council of Elected Officials (HVCEO) advising that they will be reallocating their donation to the area Lake Authorities i.e. ten thousand to each Lake Lillinonah and Lake Zoar Authorities and fifty thousand to Candlewood. When FLPR reduced their contribution before, the Town's banned together and

supported the CLA and funding was restored. The CLA was not notified of this reduction until after the CLA had submitted its budget proposal to the Towns

In light of these issues there was a meeting held in New Milford between members of the CLA and members of FLPR. At this meeting FLPR noted that this may have been the last deep drawdown, they are not interested in a leading role in alternative milfoil control measures as that is the responsibility of the CLA and that funding was being reallocated. Mr. Hodge noted that he had advised FLPR that if they thought the residents were upset by the proposed dock fee, how do you think they will be about the milfoil?

At the suggestion of Mr. Hodge First Light agreed to evaluate the position and meet again in a few weeks.—At the second meeting between members of the CLA and members of FLPR held at FLPR offices. FLPR offered the following information. FLPR explained that the Hydro market was not as profitable as it was historically and indicated that drawdowns do not make money. FLPR noted that contribution decisions were made at the Houston office, not locally and there was talk of de-funding the CLA further in the future.

The CLA has been studying alternative methods of milfoil control including harvesters and Grass Carp as chemicals were looked at by Towns. The Authority believes that the Grass Carp would be the best solution but the problem is how to keep the fish from going down the penstock and what about the 100 residents who own the land under the water. FLPR has noted that milfoil control is the responsibility of the Lake Authority per State Statue and not theirs. It was suggested that an electric gate could restrain the Grass Carp. FLPR has asked for a Master Plan for Grass Carp use and they will review but funding is up to the CLA/Towns. No substantial progress or compromise was put forth by FLPR at the second meeting. This prompted Mr. Hodge to ask FLPR to consider what it would be like without the Authority. Upon receiving no reaction, he noted that he would be recommending to his and the other towns to de-fund the CLA. Mrs. Schaer noted that during the same meeting with FLPR Danbury delegate Daniel Rosemark reminded them that they have the responsibility of a balance between energy, environment and recreation per their FERC license and that they were only presenting reasons why they can't do things.

Mr. Berger reported that the Mayor of New Milford, speaking for the five towns advised the CLA that they (the towns) may not be funding more than FirstLight and that we should prepare a budget based on fifty thousand dollars per town for the next fiscal year. After speaking with the town of Sherman Selectman they offered their support and did not agree with this drastic reduction in the CLA budget. Mr. Berger spoke with Mayor Murphy of New Milford to discuss the issues the town leaders had with the CLA.

A presentation was given to the New Milford Town Council and they appeared to be responsive to keeping the CLA budget flat for the next year. But it has come out in the press that New Milford has only approved fifty thousand dollars and New Fairfield and Danbury are considering following suit

The CLA has a list of accomplishments and a set of future goals and this functional document will be sent to the towns. The document is intended to convey the breadth and depth of the services the CLA offers.

Larry Marsicano, Executive Director noted that the short one page annual report requested by Sherman and sent to all the Towns has been embellished and expanded in the report that is attached.

Lake Patrol: Ed Hayes, Co-Chair of the Public Safety Committee spoke on the health of the Lake Patrol which is very good. The hiring of POST certified officers has supplemented the seasoned officers and still gives the lake an armed patrol with the POST officers carrying firearms. These two groups have been working together very well as morale is up. The DEEP

has renewed the MOA for the operation of the Patrol and relations with the DEEP have never been better. The goals are to continue with the same number of on-water hours, continue to enforce BUI on the lake with the POST certified officers who are appointed as constables in the Town of Sherman. They will be enforcing the invasive species laws which are now a fineable offence. The committee will be reviewing the procedure of reviewing docks. He together with Co-Chair Jerry Murphy and Chief of Marine Enforcement Doug Vane are looking forward to another successful season. Jerry Murphy advised that the Lake Patrol is a very positive presence for the Authority with the public and they are a good public relations arm of the CLA.

It was noted that Public Safety functions with Equipment and Facilities, which is the committee responsible for the buoys on the lake and the maintenance of all the CLA vessels, as well as all equipment of the Authority.

Public Education and Outreach: Mark Howarth reported on the accomplishments starting with the new CLA website, Project CLEAR in its 10th year, four E-Newsletters that went out last year, many presentations to local community groups, the 13th Annual Lake Clean-up, the 4th Annual Dragon Boat race, the Annual fundraising appeal and the goals including the above named annual events, new email platform creating better communication with constituents, it has indicated that there is a 40% open rate on the CLA emails so the message is getting out there, already 45 new people have signed up to be on the distribution list. The CLA will again be at New Milford Village Fair Days, and Science at Night seminars at WESCON. Mark Toussaint noted that the education/outreach benefit is the outcome, it has dramatically increased the awareness of the community.

Water Quality: Mr. Marsicano reported that monitoring data goes back to 1983 – it shows variations from year-to-year and even during a season. This year CLA will be doing a robust statistical analysis of the data together with a WESCON mathematician. Mr. Marsicano stated that nutrients cause algae blooms and buffers and watershed regulations limit nutrient runoff into the water. He noted that the Authority is the first place that neighbors call when there is a disturbance on the shoreline.

He advised that blue-greens algae are the dominant group in the lake, some blue-greens can have toxins but most do not and these algae are fed by the excess phosphorus in the water. Our data shows that drawdowns have no real effect on the blue-green algae population. The CLA has always been opposed to annual deep drawdowns because of environmental factors. Dr. Knoecklein's recent report drew no conclusions but asked a number of questions – FLPR has hired Dr. Knoecklein to continue his research on the effects of drawdowns on water quality and for the research he will be using the data collected by the CLA over the years. FLPR is not interested in grass carp, as they are concerned about the problem of how to keep them in the lake. It is a DEEP requirement that they cannot leave the body of water that they are put in. Mr. Marsicano noted that CT DEEP has shown a willingness to work with us on some of the challenges.

Invasive Species: Phyllis Schaer reported that the Zebra Mussel Task force is a regional board sponsored by CLA that will be meeting on April 3, 2013. She noted that WESCON has been working on DNA fingerprinting of the Zebra Mussels to determine where they came from. WESCON has received the Presidential Award for this and other zebra mussel work they have done. CLA is collaborating with DEEP to implement a study of the use of carbon dioxide on Laurel Brook, in conjunction with Dr. Kelly of the Department of the Interior, CT DEEP has committed twenty-five thousand dollars for this work and last week, Larry Marsicano, CLA, Bill Hyatt, DEEP and Mitch Wagner of WESCON all visited the site. Ms. Schaer has been collaborating with the DEEP on a boat-cleaning handbook that will be available this year. They

have been looking into alternative methods of milfoil control. There is concern over the blue-green algae and possible phosphorus loading in the lake, she has found that disturbances in the watershed (i.e. clear cutting), active farmland and developed shoreline can cause phosphorus loading and increase the blue-green algae in a lake. She presented satellite reprints showing how Phosphorus runoff from developed shoreline and farm land fertilization after a rain clearly show where the phosphorus loading is coming from. Under development is a project to provide satellite imaging of Candlewood Lake to track the phosphorous loading and effect on Candlewood Lake, particularly as it has a direct impact on the potential for increased Blue Green Algae. This will be further reviewed at the April 3rd Task Force meeting, as well as additional ways to contain the Grass Carp.

She noted that the CLA is the only agency formed solely to protect the lake on behalf of the residents of the 5 municipalities that is consistently concerned with the water quality issues of Candlewood Lake.

Discussion on the owners of the land under the water – there are approximately one hundred and apparently FLPR does not have an up-to-date list of these.

Mr. Marsicano advised that under the FERC license the CLA is involved through its appointments by FERC on the Lake Advisory Committees and Technical Committees. He added that he had just received 150+ pages of reports that will be discussed at the meeting in 7 days as part of the Technical Committee meeting for the Nuisance Plant Monitoring Plan article in the FERC license

Mr. Berger noted that the preceding presentation is a factual basis for discussion and asked the delegates to comment – this is what we have done and the question is “what to do now?”

Some group has to be responsible for the Lake to see that the Licensee abides by their license. Going forward – as Chair of the CLA he is proud of what the staff has done and would like to see the Authority move forward. Discussion followed.

Mr. Berger noted that is frustrating to not have the support of all the towns when it comes to our budget. The best outcome for the community would be for the Towns to support the CLA and hold FLPR responsible for their commitment to the lake and restore their funding level to that of the Towns. Mrs. Schaer asked how is it that the Towns do not support their own agency that works to protect the water of the lake for the benefit of all the towns. This does not benefit anyone if it is left to a for-profit company. The water quality could deteriorate, without the CLA it would be disastrous for the lake. Discussion followed.

Mr. Hodge noted that Mayor Murphy had asked the CLA to provide a reallocated budget proposal based on the fifty thousand dollars per town appropriations and asked that this be provided before the Towns finalize their budget proceedings. Discussion continued - noting that there is question of courtesy on the part of all concerned. Has FLPR done everything to protect the lake or do they just what to make a profit, they own the land under the water not the water and it appears that their first priority is making money.

For some reason there is a negative reaction to the CLA – there is no respect for what the CLA does from the other side. Delegates who volunteer their time for the good of the Lake believe that their Towns do not support them. FLPR is not interested in land use issues to protect the Lake, that is under the Towns Inland/Wetlands boards but there is something wrong here when the Authority charged to protect the lake is not supported by the Towns by being informed of any activity on the shoreline.

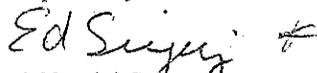
A member of the audience noted that as a member of the public he could take this to the public through petitions and the media which could be negative publicity for FLPR.

It was noted that the Towns handle development on the shoreline and CLA can review and analyze the plans, is it not better to do this before something detrimental happens, why not include the CLA in the process as unchecked development on the lake can destroy the water quality and the CLA only wants to protect it. Mr. Hodge reported that all 5 Town CEO's want to protect the lake-but how do we get there. "FLPR does not want the CLA, do not have to and do not want to deal with you (CLA)." Mrs. Schaer reminded Mr. Hodge and the delegates that the letter the 5 Towns submitted to FLPR requesting the CLA be noticed and included in Land Use Permit applications was actually done because it was first proposed and suggested at a meeting by Mr. Laudenant of FLP as a way of improving communication and necessary for FLPR to notice the CLA. We followed their request, which they subsequently denied.

Must we (CLA) battle with them to protect the Lake?

With no further business to come before the Candlewood Lake Authority, Mark Toussaint moved to adjourn, seconded by Jerry Murphy. Meeting adjourned at 9:36 P. M.

Respectfully submitted,

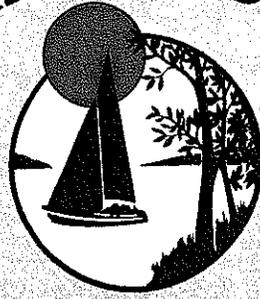

Ed Siergiej Secretary
Frances Frattini, Administrative Coordinator

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.

Note: It appears that there was a problem with the recorder and there are no tapes of this meeting. Notes taken at the meeting were used for these minutes.

CANDLEWOOD



LAKE AUTHORITY

www.candlewoodlakeauthority.org

2012 ACCOMPLISHMENTS AND FUTURE GOALS

CANDLEWOOD LAKE AUTHORITY DELEGATES

Brookfield

William Lohan
Jerry Murphy
Open

Danbury

Chris Robinson
Edward Siergiej
Daniel Rosemark

New Fairfield

Norma Gyle
John Hodge
Bruce Kemble

New Milford

Harold Mayer
Joseph Wodarski
Mark Toussaint

Sherman

Phyllis Schaer
Howie Berger
Edward Hayes

Overview of Challenges and Responses

Candlewood Lake often times experiences boater overcrowding on summer weekends, resulting in potentially unsafe boating conditions and creating user-conflict among different user groups.

- The CLA Marine Patrol operates on Candlewood Lake from April through September.
- The Patrol utilizes two patrol boats and two wave runners (jet skis), to interact with the boating public and enforce boating law, in addition to boating under the influence and on board marine sanitation device laws.

Invasive plant species such as Eurasian watermilfoil have been in Candlewood Lake since the 1970's, where as invasive animal species such as zebra mussels currently threaten to enter Candlewood's waters.

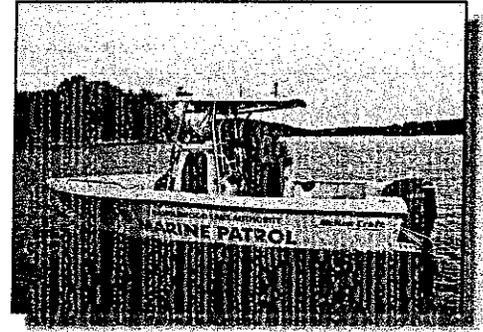
- The CLA is aggressively researching and planning an alternative solution to milfoil control. Presently, sterile grass carp appear to be the most environmentally friendly, and economically feasible, solution for Candlewood Lake.
- The CLA's Zebra Mussel Task Force is a regional group of experts and stakeholders, working to prevent the spread of zebra mussels into Candlewood, and address the recent invasion of zebra mussels in Lakes Lillinonah and Zoar, since 2010.
- The CLA is working closely with Bureau of Reclamation, as well as Western Connecticut State University and the CT DEEP on locally testing breakthrough research which would prevent live zebra mussels from getting into the Housatonic River system, using carbon dioxide.

Water Quality is threatened by human development (including polluted storm water runoff) along the shoreline and within the watershed of Candlewood Lake. In addition, controlling Eurasian watermilfoil through draw downs and other means can have a negative impact on Candlewood's ecosystem, including water quality and is being implicated in causing a decline in water quality.

- The CLA will continue to monitor water quality and continue to add to 31 years of water quality monitoring data.
- CLA is undertaking robust statistical analysis of the 31 year database to determine if there is trending of water quality.
- The CLA continues to hold to policy that conducting annual deep draw downs can have an adverse impact on Candlewood Lake's ecosystem.

Recreation Management / Public Safety / Candlewood Lake Authority Marine Patrol

The Candlewood Lake Authority Marine patrol (CLAMP) logged 1,546 man-hours on the water and 406 man-hours off the water (which included CT Department of Energy and Environmental Protection (CT DEEP) required training) resulting in a wide variety of professionally handled contacts with the recreational boating public (e.g. infractions, warnings, assistance), participation in public events (Fire & Safety Days, parades, etc.), and other services improving public safety (e.g. removing hazards to navigation).



CANDLEWOOD LAKE AUTHORITY MARINE PATROL ACTIVITY

	2010	2011	2012
Total Hours	1922	1982	1952
Hours on Water	1173	1443	1546
Hours off Water*	749	539	406
Verbal Warnings	275	251	223
Written Warnings	12	10	10
Summons	16	14	25
Boat Contacts	337	324	318

*Hours off water include: Retraining & Recertification, Off-Lake Paperwork, Admin. Time

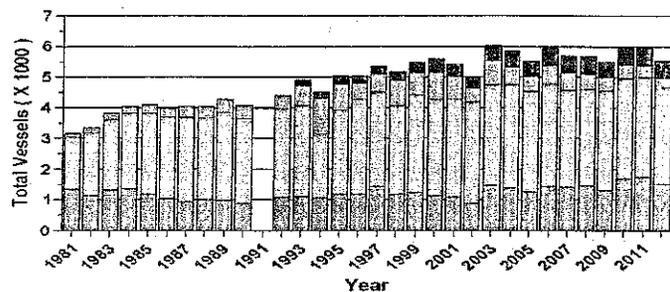
Other Public Safety Accomplishments

- Five new officers were hired, with three of them having POST-certified law enforcement credentials, increasing the total number of POST-certified officers to six. Some were appointed Special Constable in the Town of Sherman providing for higher levels of law enforcement on the Lake.
- The Memorandum of Agreement between the CLA and the CT DEEP was extended for three more years.
- As part of the CLAMP's expanded role and reach, now having POST certified officers on the Patrol, they enforced Boating Under the Influence laws, taking part in "Operation Dry Water" in cooperation with the CT DEEP, and also enforced On Board Marine Sanitation Device laws to help ensure the health of Candlewood's waters.
- Reviewed and commented on permit applications (e.g. swim area, regatta, etc.) as requested by the CT DEEP.



Cleaned buoys being transported back to base.

Annual Resident Vessel Count Data



	PWC	With Cabins	Without Cabins	Unregistered
2008	577	401	3151	1456
2009	477	452	3231	1397
2010	578	423	3204	1683
2011	552	398	3245	1746
2012	526	340	3134	1507

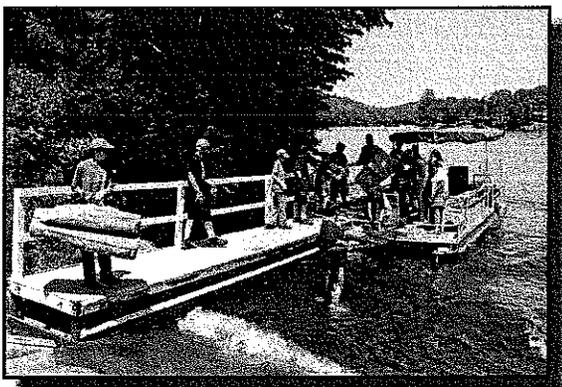
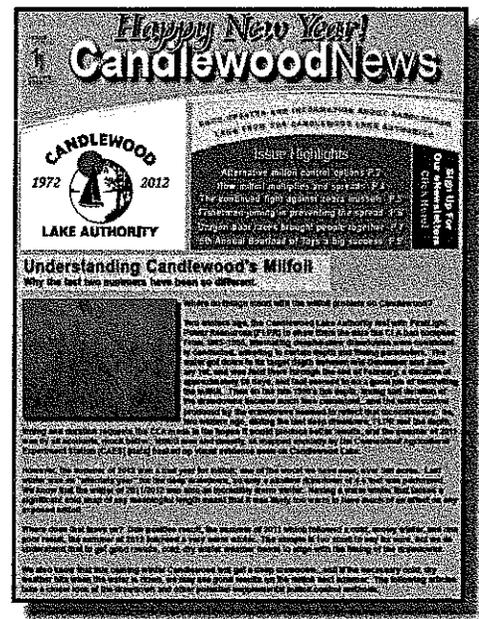
- The CLA deployed, maintained and removed 72 hazard, navigation and speed regulation buoys Candlewood.
- The CLA did its annual resident vessel count, which counts and categorizes every resident boat on the Lake.

Marine Patrol Goals: 2013-2014

- Patrol hours will be the same as in recent years - between 1,950 and 2,000 hours.
- The CLA Marine Patrol will carry the same level of insurance as in recent years.
- The CLA Marine Patrol will use the same vessels as in recent years.
- The CLA Marine Patrol will now also be enforcing invasive species laws (Public Act No. 12-167)

Public Education / Outreach / Project CLEAR

- The CLA developed and released a new, more intuitive and informative website (www.candlewoodlakeauthority.org) which it regularly maintained and it authored, designed and released four CLA Electronic Newsletters to the Authority's 1,600+ emails distribution list.
- The CLA co-coordinated the 9th year of its environmental science enrichment program – Project CLEAR (Candlewood Lake Environmental Awareness and Responsibility) – offered to 125 high school students in five surrounding school districts. The program has also evolved to offer a similar experience to 125 local middle school students.
- Numerous public presentations were provided, as requested by community groups including New Milford Rotary Club, Danbury Chamber of Commerce, Western Connecticut State University (WCSU), New Fairfield Senior Center, and others.



Clean up debris being unloaded for disposal.

- The Authority coordinated its 13th Annual Candlewood Lake Clean Up, where 200 volunteers filled a 30-yard dumpster with debris found along the shoreline and also held its 4th Annual Dragon Boat Race, which attracted nearly 400 competitors and hundreds more spectators.
- CLA also implemented a successful fundraising appeal and assisted WCSU in development efforts to fund additional faculty/student research on Candlewood and surrounding inland water resources.

Education & Outreach Goals: 2013-2014

- CLA will be leading and coordinating the 14th Annual 2013 Candlewood Lake Clean Up.
- CLA will be coordinating the 5th Annual Candlewood Lake Dragon Boat Race fundraiser and community event.

Continued...Education & Outreach Goals

- CLA will provide in-the-field scientific expertise and coordination for Project CLEAR
- CLA will continue to advance their communication with the Candlewood Lake community through a newly implemented email marketing platform, regular updates to their website and Facebook page, participation in community events such as New Milford's Village Fair Days, as well as other outreach efforts, including Science at Night Public Seminars at WestConn where we address current issues on the Lake for the public in an interactive question and answer format.

Lake / Shoreline / Watershed Management

- The 2011 water quality and bacteria monitoring programs were completed and the 2012 programs initiated within the past fiscal year.
- The 2012 goose management program was successfully implemented.
- Upon request from local land use agencies, CLA reviewed site plans and/or visited shoreline sites where activities were proposed or occurred including those at 21 Cedar Drive, Northwest Passway / Shady Knolls, 59 Ta'Agan Point, East Pembroke Road, Shoreview Estates, and 25 Reynolds Road in Danbury as well as Pine Island in New Fairfield.



Water Quality Testing

Water Quality Goals: 2013-2014

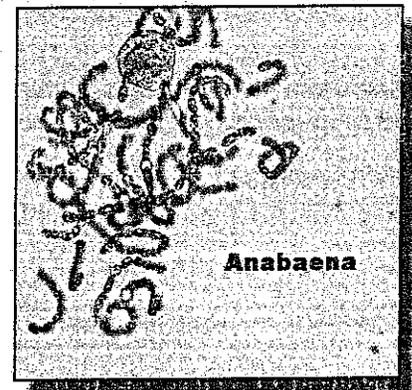
The Candlewood Lake Authority is continuing to analyze 30 years of Candlewood's water quality data looking for any changes. To date, scientific evidence does not seem to indicate a change in water quality.

One of the symptoms of declining water quality can be more frequent algal blooms, with blue-green algae blooms particularly worrisome because of the cyanotoxins they sometimes produce. Candlewood Lake has historically been a lake with a blue-green algae-dominated phytoplankton based on assessments of the phytoplankton as far back as the early 1980s. Beach or lake closings due to cyanotoxins had never occurred in Connecticut until this last year when it occurred for the very first time at Lower Bolton Lake in Bolton, CT. This year we intend to perform qualitative assessments of the phytoplankton in Candlewood Lake throughout the season, and measure monthly chlorophyll, the



CLA's Demo Buffer Garden

photosynthetic pigment in plants and algae, which provides a measure of the quantity of algae in the water. This will give us a good means of assessing risk from blue-green algae blooms.



Candlewood Lake blue-green algae collected and photographed by 2012 Project CLEAR students.

As with many ecosystems there exists natural variability or ranges of conditions that can exist in a given year and over the course of many years. We

Continued... Water Quality Goals

can observe this, for example, if we look at the average Secchi transparency data collected since the inception of the monitoring program in 1983. Secchi transparency is a measurement of the clarity of the water and we measure it in meters of depth. Over the course of 30 years annual mean levels were in the range of 2.25 to 2.5 meters eleven times and within the range of 2.5 to 2.75 meters nine times. This means that average Secchi transparency fell between 2.26 and 2.75 (a range of approximately 20 inches) 20 of the 30 years it has been measured. The fact that the average for 2012 was 2.45 meters and in 2011 was 2.68 meters therefore comes as no surprise to those who spend a lot of time on the lake. (see figures 1 & 2 below)

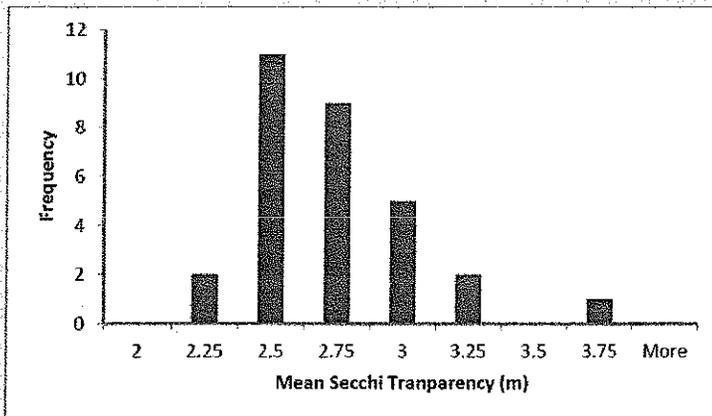


Figure 1. Histogram for mean Secchi transparency on Candlewood Lake from 1983 through 2012. Each value on the x-axis represents the upper limit of a range with the lower limit set just above the upper limit of the range below it. For example, the frequency for 2.5 meters is 11 and means that in the 30 years of measuring this water quality characteristic the average fell between 2.26 meters and up to 2.5 meters 11 times.

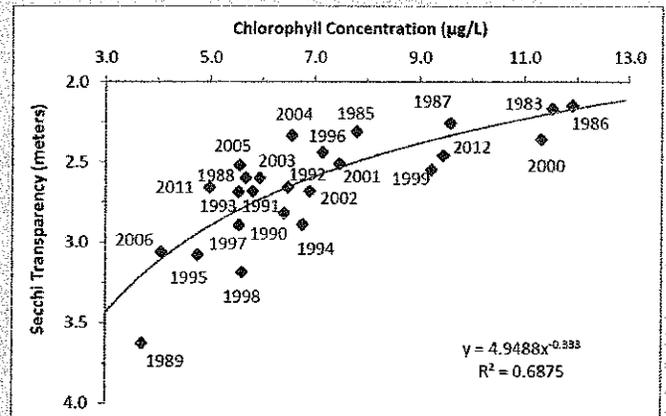


Figure 2. Regression analysis of annual mean chlorophyll concentration vs. annual mean Secchi transparency from 1983 - 2006, 2011, and 2012 in Candlewood Lake. Chlorophyll concentrations denote the amounts of phytoplankton, including blue-green algae (also known as cyanobacteria), in the lake. Secchi transparency is measured in meters of depth while chlorophyll is measured in micrograms per liter.

There are a number of ecological factors that can reduce water quality in a lake, including loss of shoreline vegetation or buffer, increased stormwater runoff in the watershed without sufficient treatment, failing septic systems, and others. Because these pressures and others are a constant threat to Candlewood, the CLA will continue to collect data and closely monitor the water quality of the lake – as it has for the last 30 years – to determine if conditions are worsening, improving or remaining status quo. This year we will also be working with faculty at WCSU to conduct more robust scientific analyses on the 30 year water quality database to statistically determine which direction, if any, water quality is trending.

Invasive Species Management

- The CLA continued facilitating & coordinating the milfoil weevil stocking/monitoring pilot program in conjunction with EnviroScience, Inc. and WCSU.
- The Authority also piloted a milfoil removal registration program and contributed to an independent investigation

on the effects of winter drawdowns on the ecology of the Lake.

- CLA led stakeholders of the Zebra Mussel Task Force resulting in the Interim Report on the Findings & Recommendations of the CLA Zebra Mussel Task Force for the Prevention of Introduction and Control of Zebra Mussels at Lakes Candlewood, Lillinonah & Zoar and were awarded Housatonic Valley Association's Conservationist Award for their efforts.
- The Authority successfully implemented several of the recommendations from the Zebra Mussel Task Force's Interim Report including: obtaining funding and developing a early detection and monitoring pilot program for zebra mussel veligers on the three reservoirs and Housatonic River in conjunction with WCSU, resulting in additional funding from the CT DEEP for the 2012 season, and implemented a host of education and outreach initiatives, including billboards, local cable shows, signage (on all three reservoirs), and volunteer training coordination.
- The Authority also developed a relationship with a nationally leading expert on zebra mussels, Dr. Kevin Kelly, and investigated his theory on how to prevent recruitment from upstream sources. CLA successfully applied for grants to fly Dr. Kevin Kelly out from Colorado to New England, coordinated stakeholder meetings in both CT and MA, and a WCSU Science at Night seminar, for him to discuss his theory with stakeholders and the public, and assisted in developing a pre-proposal which he submitted to his agency, the Bureau of Reclamation (US Dept. of Interior), for a grant to test his theory in both CO and New England inland waters.



CLA Billboard on Rt. 37 Danbury

Invasive Species Management Goals: 2013-2014

This year stands to be one of major significance in efforts to stop the spread of zebra mussels. Because the CLA created a coalition of federal, state, and local partners, field-testing a method for stopping the migration of zebra mussels down the Housatonic River to where they now are found in Lakes Lillinonah, Zoar, and Housatonic and where they threaten to enter Candlewood Lake, will occur. Soon, the CLA staff and WCSU faculty and students will be testing the use of CO₂ in preventing the spread of zebra mussels down the River based on research by Dr. Kevin Kelly of the Bureau of Reclamation (part of the Department of the Interior). The experimental design work by Dr. Kelly and actual testing by WCSU and CLA is being funded (up to \$25,000 dollars) by the Connecticut Department of Energy and Environmental Protection. In addition, CLA and WCSU will continue to conduct zebra mussel monitoring of Lakes Zoar and Lillinonah with funding also provided by the CT DEEP.

CLA also intends to regionally lead in education and outreach efforts, including finding funding for invasive species billboards, which are shown as the most effective means of large-scale outreach. The CLA has already submitted grant proposals to establish volunteer monitoring program using artificial substrates in our lakes to look for establishment of adult zebra mussels.

The CLA will also continue to explore alternative methods of Eurasian watermilfoil management including the use of triploid grass carp. FirstLight Power recently shared at select meetings that they have designs to discontinue the biennial deep drawdown and that future efforts and expense will be the responsibility of the CLA and the towns they represent. The triploid grass carp seem to be the most cost effective method available and are used successfully elsewhere.

FirstLight Power Resources (FLPR) & FERC

- The CLA participated in meetings, reviews of draft reports and minutes, and FLPR submittals to FERC stemming from a Recreation Management Lake Advisory Committee, a Technical Committee associated with the Nuisance Plant Monitoring Plan (NPMP), and another associated with winter drawdowns for milfoil management.
- The CLA also submitted to FERC a Request for Clarification / Rehearing in response to FERC's approval of a modification to the NPMP.
- In efforts to develop a collaborative relationship with FLPR, CLA regularly met with their VP of Wind & Hydro as recommended at a meeting with municipal CEOs and representatives from Senator Blumenthal's and Congressman Chris Murphy's offices in December of 2011.
- CLA also had a letter drafted, signed by the CEOs of the member municipalities, and sent to FLPR respectfully requesting notification of their receipt of applications for proposed activities below the 440 as well as the permits they issue for those activities that are approved.

FLPR & FERC Goals: 2013-2014

The CLA is listed in FirstLight's FERC license as members of the Lake Advisory Committee under the Recreation Management Plan and as members of Technical Committees for the Nuisance Plant Monitoring Plan and for Annual Drawdown Advisement. Each group meets annually, shares information, reviews and comments on meeting minutes (no minutes are kept for the Annual Drawdown Advisement Technical Committee), and comments in writing on minutes before FirstLight reports to FERC. The CLA will continue to be an active, leading voice at all these meetings to advocate what is in the best interest of the lake and those who use value it.

The CLA continues to believe that shoreline management is paramount to the health of Candlewood Lake and will continue to advocate for transparency on decisions FirstLight makes with regards to use of project lands that can affect the health of the lake. It is anticipated that FERC will render a decision on the Shoreline Management Plan (SMP) in the future. When it does, we plan to thoroughly review it and provide comments to FERC as necessary. FERC has already listed us as members of the Lake Advisory Committee under the SMP and we are committed to the same level of participation as is given the other FERC-related committees we sit on.

General Operations

- The CLA maintained six vessels, five trailers, several docks, a truck, and office facilities and/or grounds in Sherman and New Milford.
- The Authority also maintained its demonstration Buffer Garden and worked with an Eagle Scout to make improvements at that site.
- CLA overhauled its primary work vessel used for educational purposes as well as deployment and retrieval of regulatory and hazard buoys.
- The CLA performed all its own administrative services.

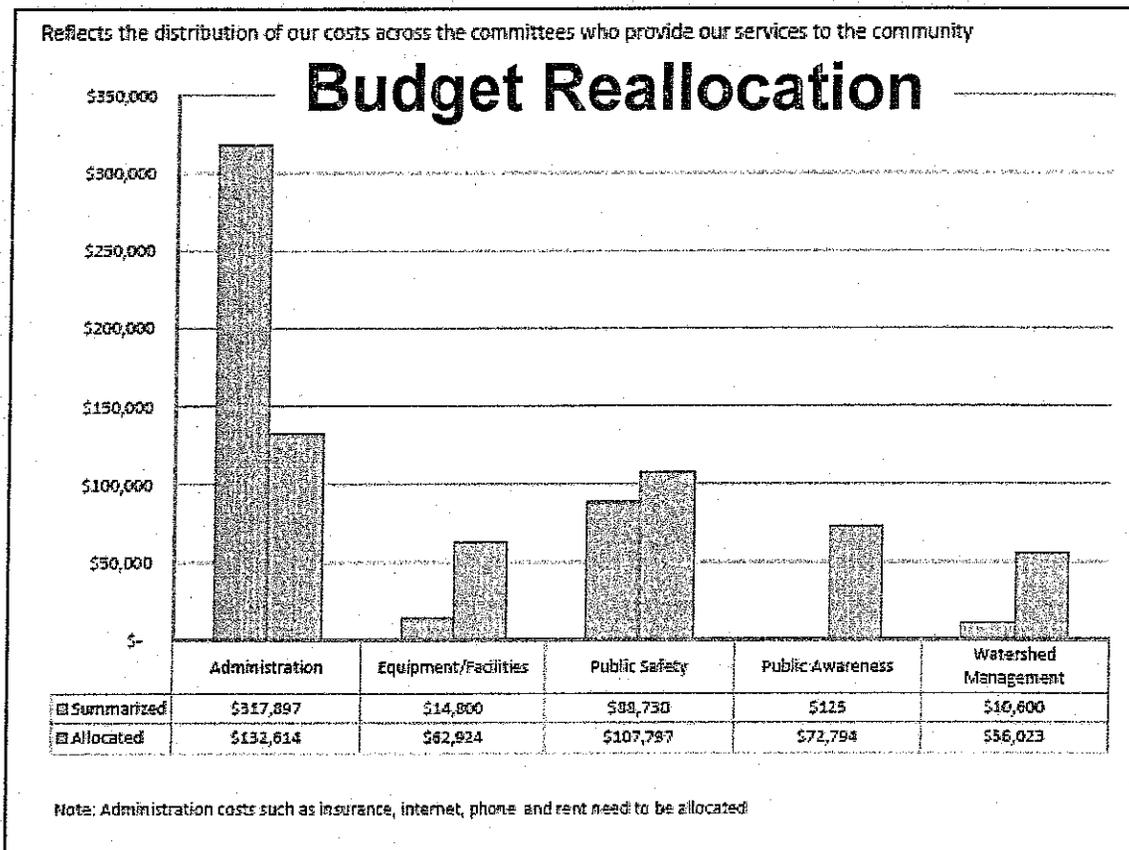


Eagle Scout Dimitrius Psaltos and his parents.

General Operations Goals: 2013-2014

The CLA is steadily working on migrating its data backup processes to a cloud based system. In addition, the CLA is also planning technology changes that will eliminate our need (and expense) for land-based telephone and cable internet service at our Sherman Field Office.

CLA will continue to maintain its fleet of vessels and vehicles, implement a hazard and regulatory buoy program, fulfill its contract with the State of Connecticut for their buoys on Candlewood Lake, and maintain its docks, offices and the grounds provided by the Town of Sherman.



The CLA had recently investigated presenting its budget so that salaries and wages of staff would be reallocated and presented within the committee budgets to more appropriately reflect uses of resources in carrying out its mission. Since salaries and wages are currently presented in the CLA's Administration budget, the new proposed presentation would show less in the Administration budget and more in Equipment/Facilities, Public Safety, Public Awareness, and Watershed Management.

The figure above was a result of that investigation and utilized the CLA's revised 2012/2013 budget and estimations of the percentages of time by the Executive Director, Operations Manager, Administrative Coordinator, and Public Education Director allocated toward efforts and tasks of the various committees. For example, the Executive Director's time is directed in large part to Watershed Management and Public Awareness and to lesser degrees to Administration, Public Safety, and Equipment/Facilities. The Administrative Coordinator spends considerable time providing administrative services (book-keeping, record-keeping, pay role, taxes, bill-paying, etc.) and record-keeping for the Patrol which would fall under Public Safety.