



CANDLEWOOD LAKE AUTHORITY

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Public Hearing – February 2, 2009 Environment Committee

Testimony Submitted by Larry Marsicano, Executive Director
Candlewood Lake Authority
January 26, 2009

Introduction

Thank you for the opportunity to present testimony regarding Proposed Bill 5823 – *AN ACT CONCERNING THE RECREATIONAL USE OF CANDLEWOOD LAKE*. The Candlewood Lake Authority supports this bill for the reasons outlined below.

Candlewood Lake is the largest lake in Connecticut with approximately 5,500 acres of surface water and over 60 miles of shoreline. The lake was created in the late 1920s as part of a hydroelectric project. Since that time lakeside homes and communities (tax districts, associations, etc.) have increased to occupy approximately 60% of the shoreline, which accentuates many of the recreational user conflict issues. From a recreational perspective the lake is arguably Connecticut's most important inland water resource, with diverse recreational boating communities utilizing the lake's waters.

Like other natural resources attracting many outdoor recreation enthusiasts, Candlewood suffers from overcrowding and recreational user conflict. Conflicts exist between various user groups on the water as well as between user groups on the water and the residents of the shoreline areas.

Many local residents, elected leaders, and the Candlewood Lake Authority (CLA) believe that recreational use of Candlewood Lake has reached levels that not only create user conflict, but also jeopardize public safety on the lake, despite the efforts of the Connecticut Department of Environmental Protection (CTDEP), their Environmental Conservation (ECON) Police, and the CLA and their Marine Patrols (CLAMP) who provide a law enforcement presence. This was evidenced in a report out of Western Connecticut State University which polled local residents on lake concerns (Table 1). Because of this, it is the position of the CLA that efforts must be taken to reduce some of the recreational pressures.

Quantifying recreational pressures in lakes is challenging at best. Data on lake use is often lacking. Determining what constitutes unsafe conditions can be subjective. There are models in the literature that attempt to quantify boating carrying capacity, i.e. the number of boats (in-use or total) a lake safely supports. In the case of Candlewood Lake, there is some quantifiable data on recreational usage and some attempts to determine carrying capacity have been made. This testimony provides some of the recent recreational use data for Candlewood, compares it to other lakes in the State, and looks at attempts to quantify carrying capacity based on models developed in Connecticut.

Table 1. Top ten concerns of community members from 2001 study.

Concern	Frequency Of Observation (%)
Nuisance Weeds	4.9
Jet Skiers / Jet Skis	8.0
Open Space Preservation	8.6
Not Enough Lake Patrols	9.0
Fishing Tournaments	9.9
Noise Pollution	11.6
Day Users/Ramp Fees/Out-of-Staters Users	16.8
Decreasing Water Quality	17.6
Increasing Size of Boats	18.3
Overcrowded Conditions	23.2

In-Use Carrying Capacity

Mr. Michael Payton from the CT DEP Boating Division developed a modeling tool to aid in gauging carrying capacity in lakes. This model is similar in some ways to other models used across the country to assess recreational boating pressures on water resources. It must be emphasized that these models are only a tools, and that carrying capacities can be influenced by variables not always incorporated in a particular model, including the shape of the waterbody (circular vs. irregular).

Using the Payton model, the in-use vessels carrying capacity for Candlewood Lake is estimated at 448 vessels, i.e. the maximum of vessels capable of operating on the lake safely is 448; numbers of in-use vessels above that may compromise safety. The model's calculation of total carrying capacity (in-use and docked/moored vessels) is estimated to be 4,480 vessels.

The FERC-approved Recreation Management Plan requires FirstLight Power Resources to conduct six aerial in-use watercraft counts on Candlewood Lake from May through Labor Day every sixth year of the current license. The first set of data was collected in the summer of 2008. The data collected this past summer (Table 2)

indicates that in-use capacity (448 vessels) was often surpassed base on the Payton Model. It should be noted that the data was collected during a year when fuel prices were at unprecedented high levels.

Table 2. In-use boating activity on Candlewood Lake. Data was collected by flyovers conducted on summer holiday and other selected weekends. Counts are compared to the in-use boating carrying capacities developed by Michael Peyton of the CT DEP.

Date	Powerboats	Sailboats	Canoe / Kayak	PWC	Total	Peyton's Carrying Capacity
May 25 th	318	17	10	3	348	Not exceeded
June 21 st	426	3	9	13	451	Exceeded
July 12 th	417	9	12	12	450	Exceeded
July 19 th	476	4	14	21	515	Exceeded
August 9 th	403	11	5	17	436	Not exceeded
August 31 st	581	10	20	26	637	Exceeded
Mean	437	9	12	15	473	Exceeded

In the Recreation Plan submitted to and approved by FERC, the power company's consultant utilized a density standard of 12 acres per vessel. By dividing the entire lake surface (5,420 acres) by the standard, one is able to determine a theoretical maximum number of in-use vessels on the lake, which equals 452 vessels. Based on the 2008 aerial flyover data, this theoretical maximum number was reached or exceeded on four of the five dates data was collected. The mean number of in-use vessels also exceeds the theoretical maximum number. It should be noted that actual in-use vessel densities are higher in selected areas of the lake since the in-use vessels are not equally distributed across the lake.

Vessels Size

Models to estimate carrying capacity use a variety of variables in their formulas. Some for instance look at the shape of the lake, i.e. round and open vs. irregular with arms and small coves. Vessel type and size can also influence the carrying capacity of a waterbody. For example, many more canoes could operate on a given lake without jeopardizing safety than could small power boats because small power boats need more area to operate safely. Larger power boats would need even more room to operate safely than small power boats. Therefore a higher percentage of larger power boats on a lake could reduce the carrying capacity number.

There has been an increase over time on the number of larger vessels with cabins on Candlewood Lake. These larger vessels typically contain on-board heads that are required to be sealed before use on Connecticut's inland waters. These vessels also have the potential to displace larger volumes of water during operation and throw large

wakes which can result in shoreline erosion and personal property damage to docks and vessels attached to those docks. The Candlewood Lake Authority receives complaints of this nature often.

Total Carrying Capacity

Since the early 1980s, the CLA has conducted a moored/docked vessel count on Candlewood Lake. In the early morning hours of the first weeks in August, CLA staff slowly cruise along the entire shoreline and count all vessels docked, moored, or beached. Counts include vessels observed along private residential areas, community marinas, commercial marinas, and municipal marinas. Trends gleaned from those counts are provided in Fig. 1.

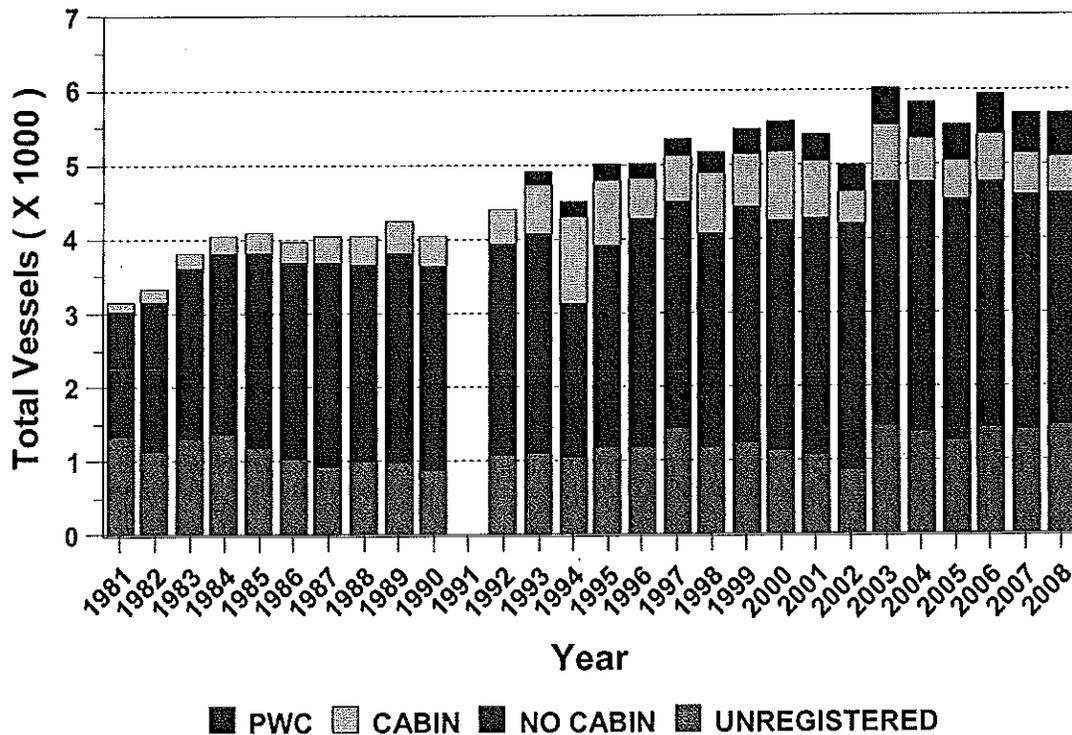


Figure 1. Results of the CLA's annual docked/moored vessel count.

Total carrying capacity has been exceeded at Candlewood since 1993 based on the Payton model (4,480 total vessels) and the CLA's moored/docked vessel counts total. It must be pointed out that the CLA's vessel data do not typically include vessels that access the lake for a short period of time by way of the numerous boat ramps on Candlewood Lake.

There are few data available that provide insights into the visiting / transient boating population on Candlewood Lake. Those that do exist include:

- There are two state ramps on Candlewood Lake and one on Squantz Pond. The CT DEP Boating Guide (2008) specifies that parking at both ramps on Candlewood can accommodate 100 cars.
- Each of the five municipalities bordering Candlewood Lake provides a ramp at their park on the lake. Data on town permits or passes issued by each municipality may be available.
- Many of the approximately 65 lakeside communities (tax districts, associations, etc.) have a launch ramp. An undetermined number of homes on the lake also have ramps. There is no known data on use of those ramps.

Fishing Tournaments

One of the few quantifiable sources of recreational use data for Candlewood Lake comes from the records maintained by the CT DEP Fisheries Division on permitted fishing tournaments. Up until this year, the CLA has used notifications of tournaments emailed to us by the Fisheries Division to determine numbers of tournaments on Candlewood and other inland waters each year. This year however, the Fisheries Division was able to provide data on tournaments permitted in 2008 in an Excel spreadsheet. There were 899 tournaments permitted by the CT DEP in 2008 on Connecticut's inland waters with 169 of the total permitted for Candlewood Lake. Total vessels permitted in bass tournaments on Candlewood were 3,270 with numbers of vessels for a given tournament ranging from as few as four to as many as 95.

In recent years an increase in the number of night tournaments has been noted. This may be due to the lack of availability to clubs to hold tournaments on Candlewood during the day since they, by rule, can not use more than half of the available public parking spaces at the CTDEP ramps. In 2007 and 2008, 22 and 13 night tournaments, respectively, were scheduled. In both years, Candlewood Lake led the state in the number of night tournaments scheduled.

Lastly, it was determined in a survey conducted by the CLA in 2000 that Candlewood Lake hosts more organized fishing tournaments than any other lake in New England. Part of that is due to the fact that tournaments are not prohibited in Connecticut during the spawning season as they are in other New England states.

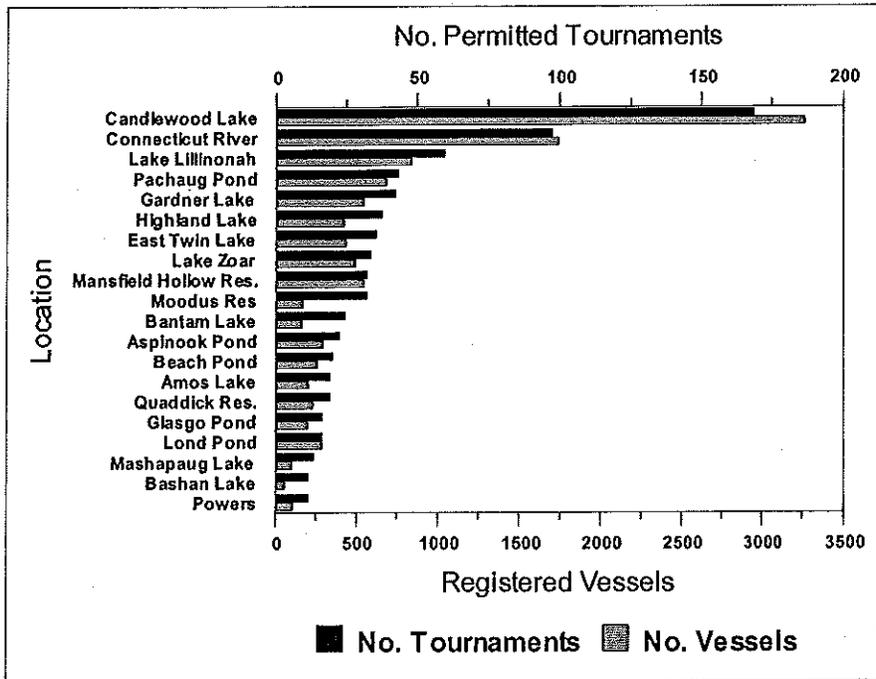


Figure 2. Total tournaments and total vessels permitted by the CT DEP in 2008 for inland waters hosting ten or more tournaments based on data provided by Fisheries Division. There are 46 other inland waterbodies in Connecticut that hosted nine or less tournaments in 2008.

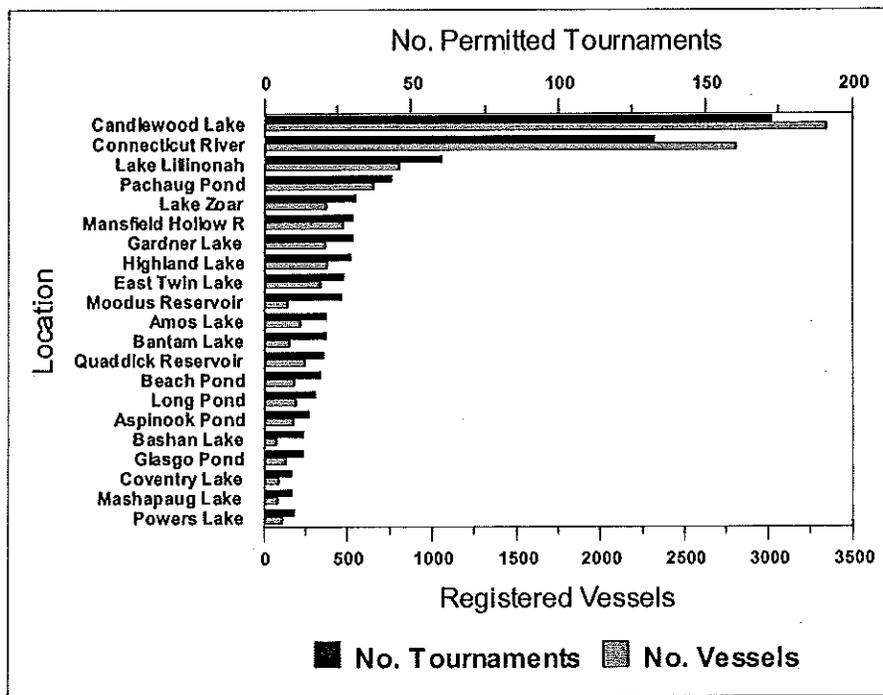


Figure 3. Total tournaments and total vessels permitted by the CT DEP in 2007 for inland waters hosting ten or more tournaments based on notifications from Fisheries compiled by the CLA.