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Section 6
APPENDIX

to

Lake Pocotopaug
Management Recommendations

East Hampton Ad Hoc Lake Advisory Committee

March 28, 1995

Peter Aarrestad, Barton Blau, Kathy Ferner, Julie Pearce, George Pfaffenbach,
Mark Philhower, Maria Foss-Rand, Thomas Wells and Raymond Zatorski

*"As for me, give me the companionship of
a small lake with sweet crystal water..."*

Carl F Price, "Yankee Township", 1941

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It is the position of the AHLAC, that petitioning the legislature for "extraordinary power" is premature at this time, and would unfairly focus attention on our town by suggesting that we are incapable of effectively managing our own affairs. Arguments for establishing a watershed authority have included the following: 1) to obtain the authority to ban or regulate the use of fertilizers, and 2) to create a special tax district to help finance future projects. Although possessing the authority to ban fertilizers may sound appealing, it is the position of the AHLAC that a watershed wide restriction would be unenforceable and overly restrictive. The AHLAC believes that the public outreach efforts regarding fertilizer usage and maintenance of vegetated lakeshore and riparian buffer areas conducted to date have already yielded positive benefits to the lake ecosystem. Future education efforts and voluntary reductions in fertilizer usage must continue. A separate tax district would unnecessarily burden the towns bureaucracy and would create resentment amongst watershed residents. Many lakeshore residents, and others, already feel as though they are overtaxed.

In summary, the AHLAC recommends against establishing a watershed authority at this time. However, as the Town of East Hampton develops and implements effective lake and watershed management plans in future, establishing such an authority could be reconsidered if the need arises.

DRAFT POSITION STATEMENT

Date: 3/10/95

To: Ad Hoc Lake Advisory Committee

From: Peter Aarrestad, Ad Hoc Lake Advisory Committee (AHLAC)

Subject: Position paper regarding a watershed authority.

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As directed at the 3/7/94 meeting of the AHLAC, I have drafted the following statement regarding the establishment of a watershed authority. As this issue has received lengthy discussion on numerous occasions, I believe this paper accurately represents the committee's position on this issue. I hope that the committee will vote to accept or modify this draft position without delay so we can complete our other duties within the short time frame still available.

On September 22, 1992 the Town Council resolved to create an Ad Hoc Lake Advisory Committee. According to item 4. of that resolution, one of the purposes of the committee shall be to "In Liaison with the Town Council and the consultant, develop recommendations toward the furtherance of a watershed and lake management plan and a Lake Pocotopaug Watershed Authority." In addition, item 5. directs the committee to "Consider the points of the Town Council Motion adopted August 25, 1992, pertaining to the establishment of a Lake Pocotopaug Advisory Committee." In relevant directory language of Motion 2 reads: "(1) develop a proposal for a Lake Pocotopaug Watershed Authority, (2) petition the legislature of the State of Connecticut for extraordinary powers for the Town of East Hampton to deal with the watershed through such an authority".

It is clearly recognized that the Town Council directed the AHLAC to consider the establishment of a watershed authority, but did not direct the ADLAC to carry out the steps leading to the establishment of such an authority.

Having clarified our charge regarding this matter, the AHLAC hereby offers the following recommendation with respect to a watershed authority. A brief discussion follows.

The AHLAC hereby recommends that the Town of East Hampton not petition the State Legislature to obtain extraordinary power to develop a watershed authority.

Since Lake Pocotopaug and its watershed exists entirely within the Town of East Hampton, the town already possesses the authority and ability to effectively regulate and manage the watershed in accordance with the powers and discretion granted all towns within the State of Connecticut. This can be done by the Town Council, by ordinance, and by the various land use boards and professional staff by enactment and enforcement of regulations and standards.

Date: December 14, 1989

To: Inland Wetland and Watercourse Commission
From: East Hampton Conservation Commission

Report: Information Concerning the Environmental Consequences of
Placing Sand on Near Shore Areas of Lake Pocotopaug

History

The Lake Area Task Force (LATF) report, distributed in April, 1988, cited the acceleration of the lake aging process by the activities of man in the watershed as the most serious threat to Lake Pocotopaug's continuing recreational viability. The major processes causing lake aging are eutrophication and sedimentation. In its look at sedimentation, the report cited the creation and maintenance of sand beaches as a significant contributor to the sedimentation process. Several recommendations deal directly with the placing of sand. (Pages 36 and 37, LATF report.)

Since that time, because it is a regulated activity under Inland Wetland statutes, there have been numerous applications to the Inland Wetland and Watercourse Commission (IWWC) to place sand on beaches. Previously, permits were rarely sought, but with the heightened concern with the health of the lake and stepped up enforcement, it has become apparent that a policy is necessary for the IWWC to deal with these applications in a consistent and responsible manner. The purpose of this report is to respond to the IWWC's request for information to aid them with developing this policy.

In order to get some idea if the practice of placing sand on beaches is a problem, it is necessary to determine how much sand is being placed, how much is too much, and what effect this sand has on the lake's aquatic environment, and the affect on its viability as a recreational resource.

Reports of actual amounts of sand placed

Sears Park: According to the Park and Recreation Dept., at least 200 truck loads of sand have been placed at Sears Park for beach maintenance since 1961, (probably much more.)

$200 \text{ trucks} \times 27 \text{ tons/truck} = 5400 \text{ tons (200 tons/year ave.)}$

Note: The Town of East Hampton has also placed sand regularly on other areas around the lake, such as Jones Beach.

Edgemere Condominiums: Edgemere had been placing 74 cubic yards of sand per year (until 1988) to maintain their beach.

$74 \text{ cubic yards} = 4 \text{ truck loads, or } 112 \text{ tons/year}$

Lake Pocotopaug Association: At the August, 1989 meeting of the IWWC, the association reported that it placed 18 cubic yards of sand every 2 to 3 years.

18 cubic yards = 27 tons, or **11 tons/year** on average

Guesstimate of sand input due to beach maintenance

The above reports, as interesting as they are, do not give us a very good idea about the total amount of sand entering the lake on a yearly basis. To make some sort of (very) rough ballpark estimate, consider the following: The circumference of lake Pocotopaug is about 4.9 miles, with about 300 lake side lots. Say one out of four of those lot owners maintain their beaches by placing 1 truckload of sand every 3 years.

1 truckload = 27 tons of sand

$\frac{300 \text{ lots} \times 1/4}{3 \text{ years}} = 25 \text{ trucks/year, or } \mathbf{675 \text{ tons/year}}$

This estimate seems reasonable, considering that the above listed reports of sand actually being placed adds up to 323 tons/year, or about half of the guesstimate.

Sediment input to Lake due to erosion

Land is continually eroding. The input of sediment to the lake is dependent on the type of land use in the basin, and the total area of the basin. In pristine times, before Europeans had settled in the lake basin, the watershed was all forested. Erosion rates for forests are minimal. Now that part of the basin has been developed, erosion rates have sharply increased. From the information gathered for the Lake Area Task Force report, the sediment input to Lake Pocotopaug from land use is calculated to be as follows:

In pristine times: **620 tons/year**

At present: **5700 tons/year**

Field observations

The following points were noticed from field observations along the lake's edge:

1. Sand can be retained in level places by bulkheads, railroad ties, etc., at a distance from the water's edge.
2. Sand at or near the waters edge will move into the water due to wave action.
3. Sand placed on slopes near the shore will move down slope due to the action of rainfall and wind.
4. Most of the sand entering the lake will stay near the shore, in shallow water, (say, in 2-3 feet of water or less.) It seems to

move only gradually into deeper water. Finer material will travel to deeper areas.

5. Sand in the water near the shore tends to move parallel to the shoreline due to currents and wave action from prevailing winds and motorboat activity.

6. Concentrated overland flow of stormwater quickly erodes gullies into sand beach areas. Beaches along Lake Drive and North Main Street have serious problems in this respect, due to poor or none existent road drainage structures.

7. Small stone jetties which project out onto the water, perpendicular to the shoreline, effectively reduce movement of sand away from beaches and along the shoreline. In some cases they seem to catch and induce the build-up of sand in beach areas, mostly on the up-current side.

8. What goes in never comes out, unless we take it out.

Comments

The following is a summary of comments gathered from various sources. These sources include:

Charles Fredette, Water Resources Department, DEP
Thomas Mcgowan, Lake Waramaug Task Force
Dr. Lillian Harter, Fresh Water Ecologist
Dr. Peter Rich, Limnologist, Uconn, Storrs
Jerry Neborn, Soil Conservation Service, Litchfield
Steve Gephard, Fisheries, DEP
Brian Murphy, Fisheries, DEP
Robert W. Kortmann, Ecosystem Consulting Service, Inc.
Dr. Gregory Horne, Geologist, Wesleyan University

1. The placing of sand for beaches is a significant contributor to the sedimentation of lakes. Comments ranged from "A management plan should be instituted" (Fredette), to "the practice is very destructive, and should be prohibited" (Dr. Rich).

2. Sand generally used for beaches contains little organic material, and therefore doesn't add significantly to nutrient loading.

3. Sand can affect the quality of fish habitat. Some species prefer gravel areas to spawn. Species that could be affected are small mouth bass, sunfish, and perhaps trout.

4. The reclamation of sand washed into the lake for use on the shore could be a viable alternative. Since this sand will have some silt and organic material mixed in if it has been there long, turbidity could be a problem. Turbidity curtains should be used. Although this silt and organic material content may seem to make it somewhat less desirable in an esthetic sense for use on a beach, rainfall will quickly wash this lighter material away. In the case of Lake Pocotopaug, the ability to draw the level of the lake down would