



The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES



Thomas S. Burack, Commissioner

March 24, 2011

The Honorable Bob Odell, Chairman
Energy and Natural Resources Committee
Legislative Office Building, Room 102
Concord, NH 03301

RE: HB 278, setting the natural high water mark of Ossipee Lake

Dear Senator Odell:

Thank you for the opportunity to comment on HB 278, as amended, which sets the natural high water mark of Ossipee Lake at elevation 407.25 feet. This is the elevation at which the lake level is maintained, to the extent possible, through the summer recreational season. From past discussions with some of the sponsors of the bill, as well as discussions during the hearing on the bill in the House, it is the understanding of the Department of Environmental Services (DES) that the objective of the bill is to establish the boundary line between the land constituting the lake bed of Ossipee Lake, which is held in public trust by the State of New Hampshire, and the land that is privately owned. DES has no objection to the General Court finding that this boundary line is 407.25. However, to achieve this objective, DES recommends that the bill be amended further so that the new paragraph III to be inserted in RSA 271:20 reads as follows: "The General Court finds, based on all available information, that the natural mean high water mark of Ossipee Lake is 407.25 feet above mean sea level."

Ossipee Lake is a state-owned public water under RSA 271:20. As such, the lake bed below the elevation of the Natural Mean High Water Mark is held by the State of New Hampshire in trust for the public. For natural freshwater bodies like Ossipee Lake, the natural mean or ordinary high water elevation is the elevation delineating the highest water level that has been maintained for a sufficient period of time to leave evidence on the landscape, such as a clear, natural line impressed on the immediate bank, shelving, changes in the character of soil, changes in natural vegetation from predominantly aquatic to predominantly terrestrial, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. The determination of the Natural Mean High Water Mark must be based on the natural, unaltered condition of the lake.

DES currently has an investigation underway to determine the Natural Mean High Water Mark of Ossipee Lake, but the determination is complicated by the fact that a dam has been present at the outlet of the lake since at least the 1860's. According to the 1889 edition of the History of Carroll County, in 1879 the Saco Water Power Company dredged a canal next to the dam at the outlet, which enabled the power company to lower the lake level by six feet. A gate structure was built at the upstream end of the canal to control the water flow from the lake. These structures have been replaced over the years, but the current structures are essentially the same. In 1992, the State of New Hampshire acquired the dam from Central Maine Power, and DES operates the dam with assistance from the Ossipee Lake Authority.

DES Web site: www.des.nh.gov

P.O. Box 95, 29 Hazen Drive, Concord, New Hampshire 03302-0095

Telephone: (603) 271-3503 • Fax: (603) 271-2867 • TDD Access: Relay NH 1-800-735-2964

When the dam was acquired by the state, DES operated the dam, to the extent possible, to keep the lake level at elevation 407.5 through the summer for recreation. More recently, in response to a request from the Ossipee Lake Authority, DES operates the dam to keep a summer lake level at elevation 407.25. After Columbus Day the lake is slowly lowered to approximately elevation 404.0 to provide storage for spring runoff. The drawdown is accomplished by operating the floodgates in the canal structure and removing the stoplogs in the dam. All floodgates remain open and all stoplogs remain out throughout the late fall, winter and most of the spring. However, even with all the outlets of the dam fully opened, the water level of Ossipee Lake typically rises to approximately elevation 410 or above each year, typically in the spring and fall, because of the large drainage area that flows into Ossipee Lake (331 square miles).

DES records indicate that since the 1970's the State of New Hampshire has considered the Natural Mean High Water Mark for Ossipee Lake to be at elevation 410. It appears that this determination was based on historic information, some dating back to the late 1800's, which documents that the normal spring flood height of the lake is approximately 410. However, that determination does not appear to be based on physical observations along the shoreline.

A little over a year ago, the question about the Natural Mean High Water Mark took on a renewed concern among many property owners around the lake, as well as the three communities in which those properties are located. After a series of meetings with representatives of those communities, DES agreed to review, reconsider and, if appropriate, revise the previously made Natural Mean High Water Mark determination for Ossipee Lake. DES began the investigation in the spring of 2010. As part of that investigation, DES toured the shoreline of the lake, including the main lake and the three bays in succession (Broad Bay, Leavitt Bay and Berry Bay) between the main lake and the dam, when the lake was at its summer level, and could find no physical evidence along the shoreline that supported a Natural Mean High Water Mark at elevation 410.

During later detailed field reconnaissance around the lake, DES observed physical features that indicated that the Natural Mean High Water Mark of Ossipee Lake is no higher than elevation 408 feet. However, information presented to or obtained by DES as part of its investigation indicates the need to observe the lake bed, when the lake is drawn down, for evidence of the Natural Mean High Water Mark, such as shelving, below elevation 407. This information includes a plan, dated 1847, of land near the dam site before the dam was constructed as well as documentation from the files of New Hampshire's Division of Historic Resources of Indian artifacts discovered in the lake bed near the shore.

DES was scheduled to reexamine the lake when it was drawn down after Columbus Day in 2010. However, due to heavy rains that occurred this past fall, the water level of the lake did not drop enough to observe the lake bed before the lake was covered with ice and snow. It is likely that conditions will not permit observation of the lake bed until, at the earliest, after the lake is drawn down again in October 2011.

The Honorable Bob Odell, Chairman
March 24, 2011
Page 3 of 3

The Natural Mean High Water Mark that is proposed to be established under HB 278 is consistent with the normal full-pond summer recreational level of Ossipee Lake and is not inconsistent with the findings of DES's investigation to date. For these reasons, DES does not oppose the bill, but recommends that it be amended, as previously specified, to ensure that it achieves the objectives of the sponsors.

Thank you for this opportunity to comment on this bill. Please call either me at 271-3503 or Jim Gallagher at 271-1961 if you have any questions or need additional information.

Very truly yours,



Thomas S. Burack
Commissioner

cc: Representative Mark McConkey
Representative Harry Merrow
Representative David Babson
Senator Jeb Bradley