



State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

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Lake Ashuelot Estates Association
P.O. Box 105
Washington, NH

In re: Ashuelot Pond Dam
Washington, NH
Dam # 245.05

NOTICE OF DECISION ON
DETERMINATION OF LAKE LEVEL

Summary of Decision

The request to rescind the Notice of Decision, Determination of Lake Level issued in September 1991 ("the Order"), as requested by the Lake Ashuelot Estates Association on June 14, 1999 under RSA 482:79, is denied. Based on a review of all the oral and written testimony, submitted as part of this Lake Level Investigation, I have concluded that there is not sufficient clear, convincing, scientific and objective evidence, at this time, to support rescinding the Order. However, the Order is hereby modified to allow additional deep drawdowns with prior approval from the Department of Environmental Services (DES) as necessary for the implementation of the DES study as described in the *Project Proposal for the Evaluation of Drawdown on the Aquatic Flora and Fauna of Ashuelot Pond ("the Pond")*, Washington dated March 28, 2001, as amended in accordance with further consultation between DES, Lake Ashuelot Estates Association, the Ashuelot Pond Association, and other parties that have previously been designated by DES as interveners in all proceedings on this matter.

Background

Ashuelot Pond ("the Pond") is a natural waterbody of approximately 390 acres located in Washington, NH. Three dam-controlled ponds feed the Pond. Lake level in the Pond is controlled by the dam at the outlet, which is owned and operated by the Lake Ashuelot Estates Association, Inc. (LAE). The Pond is shallow, with the average depth approximately 8 feet. DES estimates that fifty percent of the bottom of the Pond is covered with rich mud, forty percent is covered with rock, and the remaining ten percent is covered with gravel. Because the Pond is shallow, sunlight reaches the bottom, and this, in combination with the mud and organic material, provides good conditions for plant growth. (*Status Report: Lake Ashuelot; prepared by Environmental Scientists, Inc. dated December 5, 1980*) Aquatic vegetation found in the Pond includes pickerel weed, water lilies, arrowhead, pondweed, bladderwort, and milfoil. The Pond is in the early stages of eutrophication, the natural aging process where the water volume becomes smaller as sediment and organic debris accumulates on the bottom and shoreline.

There are two associations affiliated with the Pond, the LAE and the Ashuelot Pond Association (APA), which are comprised of approximately 377 property owners and 50 property owners, respectively. There are several property owners who are not affiliated with either organization. The LAE members reside primarily on the northeast side of the Pond and the APA members primarily on the southwest side.

RSA 482:79, Investigation of Levels of Inland Waters, states in part that “the department may.... upon complaint of not less than 10 owners of property on any inland public water in the state, make a preliminary investigation of conditions affecting the use and enjoyment of any such public water whenever it shall be of the opinion that such investigation would be in the public interest.....If, as a result of such further investigation after public hearing, the department shall be of the opinion that such management and control is lawful, but that changes in the manner of the exercise of the right of management and control would be of benefit to others, without undue injury to the owner of the outlet, it shall direct such changes as in its opinion would be of benefit to the public and private interests concerned.” Within the last 11 years, DES has received two petitions under RSA 482:79 to investigate the Pond:

- On October 16, 1990, 107 petitioners, principally individuals with property interests on the southwest side of the Pond, petitioned DES, requesting that the department hold a lake level hearing in accordance with RSA 482:79, regarding the drawdown of the Pond. In their petition, the petitioners claimed that the Pond was being drawn down in September and refilled late the following spring. They claimed that this practice resulted in the loss of fire protection to the property owners on that side of the Pond, eliminated access to (at the time) 25-cabins and homes that did not have road access and needed to be accessed by water, and may have negatively impacted the quality of the water in the Pond as well as the aquatic species that inhabit the Pond. The petitioners also claimed that the previous owners of the dam never lowered the level of the Pond more than three feet; and the petitioners requested that this drawdown limit be reestablished. In July 1991, DES conducted a hearing in accordance with RSA 482:79 and issued the Order. (*Attachment A*). In the Order, DES granted the dam owner an annual drawdown of the Pond to a depth of 3.5 feet to begin no earlier than Columbus Day, with a drawdown below 3.5 feet every fifth year to conduct aquatic weed control, to conduct shorefront improvements, and to inspect and repair the dam.
- On June 14, 1999, members of the LAE submitted a petition to DES under RSA 482:79 for a lake level investigation of the Pond and a request for the rescission or modification of the Order. LAE claimed that the use and enjoyment of Ashuelot Pond had been adversely impacted by the Order and that LAE and property owners who use the Pond had been injured and harmed as a result. LAE maintains that the Order unduly restricts it by limiting the frequency, depth, and timing of a deep drawdown.

Summary of Public Testimony

A public hearing was held on July 8, 2000 at the Camp Morgan Lodge in Washington. Members of LAE, APA, and other persons testified at the hearing. During the hearing, a question arose with respect to adequate notice for the hearing; thus, the record remained open until August 7, 2000 to receive additional testimony and evidence. Additional written testimony was submitted by individuals either in favor of or against rescinding the Order, and reflected issues discussed at the hearing. Testimony received at the public hearing and during the public comment period is summarized below.

At the July 2000 hearing, Lindsay Collins, Chairman of the Board of LAE, testified on behalf of LAE. Collins stated that LAE acquired the dam in the early 1980s and is responsible for maintaining the dam, 10 miles of community roads, a beach and beach house, and a boat launch. Collins stated that LAE has spent \$20,000 to maintain the dam and improve the dam's gate operation by installing erosion prevention measures, replacing the gate mechanism, and constructing a building to protect and provide better access to the gate. (*Testimony of Collins*)

Collins also stated that the LAE believed that the use and enjoyment of Ashuelot Pond has been adversely impacted by the Order and that LAE and property owners who use the Pond have been injured

and harmed as a result. LAE maintains that the Order unduly restricts it by limiting the frequency, depth, and timing of a deep drawdown. Specifically, LAE believes that the Order adversely impacts "its ability to be prudent in its maintenance of the dam, its ability to maintain the recreational value of the Pond through weed control, have caused [*sic*] undue liability on the dam owner due to the required timing of restoring the water level following a deep drawdown, inhibited the ability of property owners to maintain their shorefront, and affects property values due to increased weed growth." Collins emphasized that "LAE has been unable to protect the recreational enjoyment of the Pond and property values of all property owners through regular drawdowns for weed control." (*Testimony of Collins*) Collins presented photographs taken in the summers of 1994 and 1996 that depict an abundance of aquatic weeds in the water and washed up onto the shore.

LAE urged DES to rescind the Order for the following reasons: (1) the Order is ineffective to control weeds; (2) the Order does not provide the opportunity or a practical way for shoreline property owners to clean up their waterfront property on a regular basis; (3) restoring the level of the Pond by placing a large amount of water under the ice in December is unsafe and places an unreasonable liability on LAE; (4) because there is no public recreational area on the Pond, and thus, almost no use by daily recreational users, any public interest considerations must lean toward LAE; (5) LAE and APA are in the best position to determine the amount and timing of drawdowns because changes in the inflow can cause rapid changes in the Pond's water level, and on-site monitoring is required to respond to the changes; and (6) the Town of Washington's fire chief supports a deep drawdown and believes it will not result in a decrease in fire protection. (*Testimony of Collins*)

LAE also asserted that if DES rescinds the Order, LAE would adhere to the following procedures: (1) discuss a proposed drawdown at the April LAE Board of Directors meeting and coordinate the drawdown with Millen Pond; (2) discuss the proposed drawdown with the APA Board of Directors; (3) in early July, have LAE and APA present the drawdown proposal to their memberships; (4) have the LAE and APA Board of Directors review membership response to the drawdown and discuss any differences; and (5) notify DES and the Town of Washington, and post a notice of the drawdown on the LAE and APA bulletin boards at least 30 days before the start of a planned drawdown. (*Testimony of Collins*)

A majority of the people who testified at the hearing were members of LAE who testified in favor of rescinding the Order. Most of this testimony focused on how the increased weed conditions adversely affect property values and recreation activities. One individual requested a deep drawdown to repair a bridge to his property that was damaged in a 1997 hurricane. (*Letter from John R. McKinnon, received June 26, 2000*) The Town of Washington's fire chief testified that because of the unsafe condition of the bridge he will not allow the fire trucks to drive over it. (*Testimony of Robert Wright*) In response to testimony that aquatic life had been reduced by the drawdowns, several people testified that they did not believe that such wildlife had been adversely affected and that they continued to see frogs and salamanders in the water.

The Board of Selectmen for the Town of Washington submitted written testimony stating that LAE "...is in the best position to monitor and control the lake level for the recreational enjoyment of the vast majority of the property owners. Over many years, we have found LAE Association to be responsible property owners and one of our Town's largest supporters of environmental issues, such as maintaining water quality and abiding by and enforcing the Comprehensive Shoreline Protection Act. The 1991 restrictive Order will have a negative impact on property values and is not in the best interest of the public." (*Town of Washington, letter dated July 21, 2000*)

Several APA members and other property owners testified against rescinding the Order. This testimony focused on access and environmental issues. Several people testified that an early drawdown would deny access to the camps on the southwest side because there are no roads to this area and they rely

solely on water to reach these properties. The APA submitted written testimony that a majority of its membership opposes rescinding the Order stating that "the best interest of Ashuelot Pond requires State involvement. The State reviewed the Pond condition in 1991 and established procedures for the [P]ond and the APA finds no compelling reason to change the 1991 procedures." (*Ashuelot Pond Association, letter dated July 25, 2000*)

Jody Connor, DES Director of Limnology, submitted written testimony that evaluated the effects of lake drawdown on aquatic weeds. (*Connor Memo dated June 21, 2000*) Connor noted that in 1977 and 1986, DES inspected the Pond for aquatic weeds and identified weeds in several areas of the Pond but concluded that it was not a problem in most locations. The memo notes that between 1977 and 1986, most aquatic weeds decreased in abundance. (Burweeds and milfoil remained the same and several new weed species appeared; grass species increased due to the lower water level.).

Connor also cited a 1980 report by Cooke in which the effectiveness of drawdowns as a means to control aquatic weeds was evaluated. (*Cooke, Dennis G., Lake Level Drawdowns as a Macrophyte Control Technique, Water Resources Bulletin, 1980*). Cooke identified that positive results of drawdowns could include low cost, absence of toxic chemicals, selective aquatic weed control, and an opportunity to improve docks, dams, and swimming areas. However, he also concluded that, while some weeds may decrease in abundance, others may increase or remain the same. Other possible environmental problems associated with drawdowns include: algal blooms following re-flooding; reduction in invertebrates necessary to fish diets due to drying and freezing; oxygen depletion with subsequent fish kills; incomplete dewatering of sediments in areas of heavy snow or frequent winter rain; changes in composition and /or density of populations of amphibians and other animal species; succession of plants that do not provide as much food for waterfowl due to repeated annual drawdowns; increase in invertebrate density after reflooding but with decreases in species diversity, thus affecting waterfowl and fish; and rapid establishment of resistant species of macrophytes.

Findings

The DES findings regarding the major issues raised during the public comment period are summarized below.

(1) There is currently insufficient clear, convincing, scientific, and objective evidence to conclude that an alternative to the Order would be more effective in controlling weeds.

It is clear that property owners have been affected by the abundance of aquatic weeds. Photographs in the record depict certain areas of the Pond and the shoreline thick with weeds. Persons testified that the weeds adversely affect property. However, no objective information, such as quantitative data on changes in weed density between 1991 and the present, exists to clearly indicate that the drawdown frequency specified in the Order has been ineffective at aquatic weed control. In fact, the most effective combination of drawdown frequency, timing and duration of drawdowns is unclear for the Pond.

The 1991 Order specified that deep drawdowns cannot start until after Columbus Day for a number of reasons:

- Historic practice in New Hampshire has been to draw down reservoirs right after Columbus Day to reasonably assure that there is opportunity for boating on reservoirs through this holiday weekend. In this case, earlier drawdowns also adversely impact access to some properties on the Pond, although the number of properties where access is impacted is less than that in 1991.
- For weed control, earlier drawdowns are not justified. Aquatic weed control depends on frost penetration into the soils when the soils are not covered by snow, which will not typically occur until November, leaving several weeks after Columbus Day to draw down the Pond. LAE has expressed

concerns that drawdowns cannot be completed, if started after Columbus Day. However, based on analysis of streamflow in the Ashuelot River and the discharge capacity of the dam, DES believes that, if properly coordinated with upstream dam owners and with some modifications to historic operating practices, it is likely that successful drawdowns may be initiated after Columbus Day. DES has offered technical assistance to LAE for this purpose.

Based on discussions with all parties after receipt of comments on a Draft Notice of Decision dated October 11, 2000, DES developed a proposal entitled *Project Proposal for the Evaluation of the Effects of Drawdown on the Aquatic Flora and Fauna of Ashuelot Pond, Washington, March 28, 2001* (Attachment B). The proposed work is intended to foster a partnership of DES, LAE and APA to develop an objective baseline and temporal trends for aquatic weed densities and species in the Pond. The proposal may need to be amended to respond to technical issues that have been raised by the LAE in its review of the proposal. However, without the type of information to be collected under the proposed project, it is not possible to conclude that any particular management approach has or has not been effective. In the absence of objective information, DES has concluded that the drawdown cycle specified in the Order remains a reasonable approach, considering all public interests and the negative impacts that DES concluded in 1991 existed prior to the Order.

(2) The Order provides opportunities for shoreline property owners to clean up their waterfront property on a regular basis.

The Order allows a 3.5-foot drawdown every year, thus providing opportunity for routine or minor repairs to shoreline structures. Deep drawdowns are allowed every five years to provide opportunity for major repairs to shoreline structures and waterfront property. We believe that this is a reasonable approach.

(3) The Order does not require that the Pond be refilled when ice is on the Pond, and, therefore, does not place any additional liability on LAE.

The 1991 Order requires only that the reservoir water level be restored to full pond level by June. LAE's practice of restoring the reservoir water level in the fall, soon after drawdown, is done at their sole discretion. Restoration of the water level in December, or earlier, is an acceptable, but unusual, practice when deep drawdowns occur in New Hampshire reservoirs for aquatic weed destruction. Typically, these reservoirs are held at the lower level for the duration of the winter and restored during spring runoff. DES is concerned that the preference of LAE to restore the water level in the Pond by December may not lead to optimum aquatic weed destruction and believes that this should be further reviewed in the future with this in mind.

(4) Ashuelot Pond is a public water and public recreational resource, regardless of the extent of the current public use of the Pond, and the Order properly balances the public interest in the Pond with the private interest of the property owners on the Pond.

RSA 482:79 clearly states that the DES must conduct its investigations to determine whether the "value of shore property above or riparian rights below such outlet or the enjoyment of such water by the public is seriously and adversely affected". There is no basis to conclude that decisions under RSA 482:79 should lean towards either the dam owner or an existing property owners association. DES must consider the public interest in broader terms, including the interests of the APA, other property owners, the general public, and the Pond ecology. The 1991 Order was clearly intended to balance the impacts of drawdowns with other interests by specifying the allowable timing and frequency of these drawdowns. We believe that the Order met, and still meets, the criteria of RSA 482:79: "of benefit to the public and private interests concerned" without "undue injury to the owner of the outlet."

DES strongly agrees with LAE that both LAE and APA are well-positioned to act as stewards of the Pond for its long-term preservation and the development of effective operating procedures. Both associations are clearly deeply concerned with the Pond's ecology and recreational value. However, the LAE and APA are clearly not in accord on the timing and frequency of drawdowns, triggering conflicting petitions to DES under RSA 482:79 in the last ten years. DES has offered significant resources to further develop a partnership with, and between, these associations and develop a better understanding through objective analysis of the Pond ecology. In the absence of this data, DES has concluded that the five-year cycle for deep drawdowns specified in the Order is a reasonable means to control aquatic weeds, allow for property maintenance, and address other public needs. This is open to future consideration when more objective data becomes available.

Decision

The request of rescission of the 1991 Order is denied for the reasons discussed above.

However, the Order is modified as follows:

Additional deep drawdowns may occur with prior approval of the Department of Environmental Services (DES) as necessary for the implementation of the DES study as described in the Project Proposal for the Evaluation of Drawdown on the Aquatic Flora and Fauna of Ashuelot Pond, Washington dated March 28, 2001, as amended.

Appeals

This Decision may be appealed to the New Hampshire Water Council ("Water Council") by filing an appeal to the Water Council that meets the requirements specified in the Procedural Rules of the Water Council, Env-WC 200, within 30 days of the date of this Decision. Copies of the rules are available from the DES Public Information Center at (603) 271-2975 or at <http://www/state.nh.us/desadmin.htm>.

So Ordered,

Date:

JUNE 6, 2001



Harry T. Stewart, P.E.
Director, Water Division
Department of Environmental Services

Attachments

- A. September 1991 Notice of Decision, Determination of Lake Level
- B. Project Proposal for the Evaluation of the Effects of Drawdown on the Aquatic Flora and Fauna of Ashuelot Pond, Washington, March 28, 2001