

Newfound Lake Levels: Complexities in Resource Management

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Managing our natural resources—our open spaces, rivers, mountains, and lakes—involves working with many stakeholders, all who value a different aspect of that resource. It is necessary to strike a balance so that the resource uses are protected while making it accessible to all users. Recently, Newfound Lake level is an issue that requires working with all lake users in order to protect the ecology of the lake while maintaining the lake's values for stakeholders.

From a water quality perspective, high lake levels can lead to increased shoreline erosion, which can contribute unhealthy nutrients to the lake system. Higher nutrient levels lead to nuisance and harmful algae blooms and decreased water clarity, which can impact the property values along the shorefront. High lake levels can completely inundate beach areas, a situation that property owners don't like.

On the other hand, low lake levels make it difficult for boaters to launch and access their boat and to navigate shallower areas of the lake. New Hampshire Fish and Game also reports that the round whitefish, a threatened species that's found in only two water bodies in New Hampshire (Newfound Lake and the Connecticut River) may be negatively impacted by low lake levels in the winter time.

The Newfound Lake watershed is dominated by steep and forested slopes. There are two main tributaries: the Cockermouth River and the Fowler River. These two rivers contribute more than half of all water entering Newfound Lake. In high intensity rainstorms, such as the storm that dumped more than five inches of rain on Groton on July 12, 2019, the lake levels are quite responsive. Not only did this bring sediment to the lake, the lake levels rose nearly a foot. A high lake level does not provide the flexibility necessary to accommodate the incoming flow from this storm. This is one demonstration how maintaining high lake levels can reduce our resilience to extreme events. Already under climate change, we are experiencing a higher frequency of intense rainstorms, and this is expected to continue.

Around the state there is also an increase in the use of wake boats. These motorboats are designed to kick up a large wake behind them enabling people to surf behind the boat with no tow rope. These large waves can be disruptive to boaters and can increase shoreline erosion.

A dam further downstream on the Newfound River produces hydro-electric power, and a certain flow is required to maintain the flow of electricity. The lake impoundment dam must release a certain amount of water to maintain flow at this downstream dam. Newfound Lake is controlled by a dam at its outlet to the Newfound River on the south end of the lake. The dam is owned and operated by the Dam Bureau of the New Hampshire Department of Environmental Services. From 1982-2018, the Dam Bureau has followed the same management plan.

Over several public input meetings held by the Dam Bureau, conservation groups such as the Newfound Lake Region Association and New Hampshire Audubon, lakefront towns (Alexandria, Bridgewater, Bristol, and Hebron), recreationists (including representatives from the boating industry), and members of the public gathered to discuss the values they have for Newfound Lakes, and how their use of Newfound as a resource is impacted by the level of the lake.

These competing interests are often conflicting. How can we best serve these varying interests while protecting the integrity of the Newfound Lake ecosystem? A compromise of sorts is required by all parties.

An interim management plan is now in place. The lake will be kept at a lower level than the 1982-2018 historic level, to protect the shoreline from erosion. The current modified interim management drawdown rate will be slower to ensure boat access into the fall. Newfound Lake is a state-owned resource. The numerous competing interests make management challenging. Boat use, hydro-electric power, shorefront property, water quality, and aquatic wildlife all feel the effects of the level of the lake. Add in changing weather patterns from climate change and lake level management becomes even more complex.