

River Residents Get What Lake Balancers Spill

By KEN NORTON

In order to understand how Lake Winnepesaukee is managed, it is important to understand a few basic facts.

The level of the Big Lake is controlled by the Lakeport Dam, which is under the jurisdiction of the New Hampshire Division of Water Resources. Water released from the Lakeport Dam flows through Lake Opechee, Lake Winnisquam and Silver Lake and then down the Winnepesaukee River until it joins the Merrimack River in Franklin where the two rivers converge to form the Merrimack River. The maximum safe discharge flow for the Winnepesaukee River is 2,600 cubic feet per second (cfs) from Lakeport Dam.

The level of Lake Winnepesaukee is measured by a gauge at the Weirs, with a measurement of 504.32 feet above sea level considered to be a full lake. According to this gauge, a measurement of .08 is equal to an inch of water on the lake, thus a reading of 504.40 would mean the lake is one inch above full level. One inch of precipitation in the watershed can cause the level of Lake Winnepesaukee to rise 3 inches

In 24 hours. In contrast, a discharge of 2,600 cubic feet per second for 24 hours can only lower the level of the lake 1.5 inches. The Citizen publishes lake levels, and discharge flows on a daily basis in the weather section.

You don't have to be a rocket scientist to see from these figures that a little rain can cause the level of the lake to rise significantly in a short period of time and that even at maximum discharge it can take several days to release enough water to bring the level of the lake back down. Other factors, such as whether the ground is frozen or saturated or if there is snow-melt in the watershed, can compound the problem by causing more water to end up in the lake, and to make the level of the river much higher due to streams and rivers flowing into it.

These can combine to increase the possibility of flooding. Their answer to this dilemma would seem to be to keep the lake at a safe level to absorb spring rainfall and runoff. This must be balanced by other considerations, most notably recreational interests on the Big Lake. Obviously, this is also a critical concern. However, this is also a critical concern area where no one seems to be able to quantify exactly what this means

Community Commentary

While it is measurable what discharge flows will cause downstream flooding, and how high the lake will rise from specific precipitation, it is not clear what minimum level the lake needs to be maintained at for recreational purposes. Too little water can severely disrupt boat traffic on the lake and limit access to certain channels. Too much water in the lake is also a problem and can cause "no wake" restrictions and property damage from flooding. It is also important to acknowledge that no matter how well the watershed is managed, some flooding is inevitable for property located in the flood plain whether on the lake or downstream.

An additional complication is the presence of six active hydroelectric dams between Lakeport and Franklin. They are located at Lakeport, Avery Dam (behind Laconia City Hall), Lochmere Dam, Clement Dam in Tilton, and two dams in Franklin. These dams produce clean electricity. Each of these dams pay the State of New Hampshire for the water they use. This generates

very much needed and appreciated Rob Burbank AMC Public Affairs Director

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much-needed funds for the state coffers. While each of these dams have slightly different capacities, they can produce the maximum amount of power — and revenues for the state — with a discharge flow of between 1,000 and 1,200 cfs. Any discharge much above this must be bypassed. This is a critical part of the equation. When the Division of Water Resources allowed the lake to fill to near capacity while simultaneously cutting the discharge flow back as low as 366 cfs on April 8, it meant the hydropower producers were well below their capacity. Now that the State is forced to increase the discharge to over 2,000 cfs on April 25, this is literally money down the drain. In addition to the damage caused by flooding, it means this water that could have produced both electricity and state revenues is wasted.

The issue of dredging, which inevitably surfaces whenever flooding occurs needs to be laid to rest once and for all. Comments made last week by Division of Water Resources representatives concerning past proposals to dredge the Winnepesaukee River are misleading and irresponsible. The intent of these statements is to imply that safe management of the watershed is not possible due to natural restrictions in the Winnepesaukee River.

After the flooding in 1984, and after extensive study by the Army Corps of Engineers, a plan was proposed for flood control management. The two part plan included structural changes — dredging — to the Winnepesaukee River and better regulation of Lake Winnepesaukee by using a fill curve to gradually bring the lake to full level by June 1. The fill curve was a computer generated model based on historical data including average rainfall, lake levels and discharge rates. The Army Corps of Engineers Winnepesaukee River Basin Feasibility Report of 1985 states "85 percent of the total benefits that are expected to result from implementation of the recommended plan are attributed to non-structural changes in the present regulation of Lake Winnepesaukee." To this date, the Division of Water Resources has been unwilling to implement this type of fill curve. To suggest that

dredging — at a proposed cost of over \$5 million taxpayer dollars — is the solution is a classic big government approach to solving a problem to which a cost free solution — better management of the Big Lake — already exists.

No one can predict the weather, and currently the Division of Water Resources is in the unenviable position of constantly having to do just that. This creates a conundrum where it must simultaneously try to ensure the safety and needs of water users both on the Big Lake and those downstream. Dialogue between all involved parties needs to occur, and compromises will need to be hammered out.

What would be beneficial for everyone involved — especially the Division of Water Resources — is the adoption of a specific model with guidelines and protocols for lake levels and discharges. This would establish clear and understandable expectations and eliminate second-guessing and go a long way towards balancing safety, recreation and energy interests.

Ken Norton of Tilton is a member of the Friends of the Winnepesaukee River.

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