

## Readers' Forum

### *To the Readers' Forum:*

In response to Dianne Francis of Jamestown who wrote "BPU is Helping Ruin Chautauqua Lake"...I submit the following information:

Yes, the BPU does control the flow of water through the Warner Dam at the foot of the lake, mouth of the Chadakoin, but there are specific, long-standing limits, both natural and humanly mandated, to the degree to which one can open or close the dam's gates.

The Warner Dam is operated under the terms of an agreement, revised in 1980, between the City of Jamestown, Chautauqua County and the State of New York's Department of Environmental Conservation. This agreement clearly defines optimum and minimum lake levels for both the winter months and the warm weather recreational season, from the first of May to the end of October. Based on recorded ten, fifty, and one hundred year averages, and allowing for worst-case scenarios weather-wise, these "optimums" have been determined to provide the best waters for recreation, the safest waters for commercial navigation and utility draw-down, and the healthiest waters for the preservation of fish and wildlife.

Throughout the summer, the gates of the Warner Dam are controlled to maintain the lake at an ideal 1308.2 feet above mean sea level (msl). With a lack of runoff from the watershed and summer evaporation rates, the lake level will drop. Added to the challenge of maintaining a lake elevation is another requirement – the operation of the South Chautauqua Sewer District wastewater treatment plant requires a flow of 60 cubic feet per second (cfs) down the outlet as part of its operating procedure.

If, in a dry season, the lake should approach a level of approximately 1307 feet msl, the gates are incrementally closed (there are three gates) to preserve whatever volume the lake has on reserve, although no one has come up with a means to prevent the biggest water-robber – evaporation.

Conversely, in rainy conditions, the dam will receive overflow, above and beyond the ordinary, beginning at approximately 1308.8 feet msl. 1309 feet msl is considered a "warning" of initial flood stages. The worst flood level ever recorded peaked at 1310 feet msl.

Precipitation in the watershed, depending on the time of year and vegetative and soil conditions may or may not affect the lake level. One inch of watershed runoff will cause the lake to rise one foot. Runoff is not the same thing as rainfall.

Lake elevation is the final element which dictates maximum flow out of the lake and down the Chadakoin River. As the Chadakoin River winds its way through Jamestown, it drops over 50 feet in elevation. Full bank flow has been stated as 1270 cfs through the Village of Falconer.

What is most important to remember is the lake system is totally dominated by weather, particularly – perhaps surprisingly – winter weather. We have very limited capabilities to control the impact of precipitation on the level of our lake. Those "prescribed parameters" that control Warner Dam, among other more obscure factors are the key.

Warner Dam's greatest asset is its ability to limit the summer flows and thus maintain the lake at a desired level. The dam has very little ability to cause maximum high flows since the lake level controls the amount of flow (cfs) through the dam.

The agreement that governs operation of the dam was done to protect property, navigability, and wildlife under nearly every conceivable situation, from flood to drought. The agreement was not reached arbitrarily. It was prepared and accepted only after years of research. It even went so far as to protect, mercifully, those waterfront areas around the lake that, for generations, were so swampy and flood-prone as to be considered uninhabitable, but are nevertheless fully developed today.

THE BPU IS MERELY THE GATEKEEPER FOR THE WARNER DAM.

Susan K. Jones  
BPU Communications Coordinator