

## **The Rule Curve**

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A “rule curve”, otherwise known as a regulating diagram, is a graph of water levels to which a particular body of water is regulated. For each day of the year the graph shows the water level or range of water levels to be targeted by the New York State Thruway Authority Canal Corporation (NYSTACC). The rule curve for Seneca Lake calls for a summer level of 446 feet Barge Canal Datum (BCD), with a range of plus or minus three-tenths of a foot. Similarly, in winter the rule curve calls for a level of 445 feet BCD with a range of plus or minus three-tenths of a foot. Cayuga Lake, on the other hand, has a rule curve that varies from a high of 384 feet BCD to a low of 379 feet BCD over the course of the year and a range that can vary from as much as 22 inches to as little as 2.5 inches on a given day.

Theoretically, using a rule curve to regulate lake levels results in predictable water levels year after year. In practice, however, the wide range allowed by the rule curve for Cayuga Lake can create very unpredictable water levels. On any September 1<sup>st</sup>, for example, when the rule curve for Cayuga Lake allows for a high level of 384 feet BCD to a low level of 382.7 BCD, a range of 16 inches exists. One year the lake could be 16 inches higher on that date than the next year and yet both levels would be on target with the rule curve.

**The Finger Lakes Ecology Association (FLEA) supports the current rule curve for Seneca Lake and lake levels within the rule curve for Cayuga Lake.** For example, the NYSTACC currently targets a level of 383.5 feet BCD as a summer level for Cayuga Lake. This is a level within the rule curve, a level which seems to serve most interests on the lake and one which we (FLEA) support. We also support a minimum level of 380 feet BCD for a winter level for Cayuga Lake and would support the maximum levels allowed by the rule curve for the fall. We do not want to change the rule curve, we want to target specific levels within the existing rule curve.

As for the regulation of water levels in the late winter to early spring period, we do not believe that there should be any attempts at changing the rule curves or the manner in which the lakes have been regulated for the past several decades. Given the shortcomings of the canal system as a flood control system and the size of its drainage basin, we recognize that there is a potential for flooding during extremely wet springs. To keep the lakes lower than the present rule curve levels in winter in anticipation of extremely wet springs, as some people have proposed, not only opens us up to the potential of water shortages during dry periods, but would also be very disruptive to the littoral zone of the lake (the shallow 10 percent of the lake that produces 90 percent of the lake’s life).

Following the existing rule curves has allowed for a stabilized ecosystem and socio-economic infrastructure on Cayuga and Seneca Lakes for many decades. The Finger Lakes Ecology Association members ask only that lake levels be managed in a manner and at levels consistent with the past practices and are firmly opposed to any changes or experimentation with the levels of these two lakes.

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