

Lake Hopatcong Dam: What is the basis for the 12 cubic foot per second minimum outflow ?

Following the acquisition of Lake Hopatcong by the state in 1922, action by the Association of Musconetcong Millers resulted in a court order requiring a minimum outflow of 12 cfs. The first rules for the manipulation of the gates at Lake Hopatcong were established on October 20, 1932. These rules are found in Appendix A of the current Lake Hopatcong Water Level Management Plan and reference the minimum of 12 cfs.

Current Support for the 12 cfs minimum outflow

According to the New Jersey Geological Survey, a minimum outflow of 12 cfs is a “reasonable estimate” of what flow would be at this location without the Lake Hopatcong dam in place.

New Jersey Geological Survey “Reconstructed Streamflow in the Musconetcong River at Lake Hopatcong”, Hoffman, Jeffrey L. January 2010 *“This reconstruction provides some insight into how the lake affects river flows. The passing flow required by the lake's operation plan (12 cfs) results in higher streamflows during dry periods than would otherwise occur. After a sustained dry period, when lake levels are lower than normal, filling the lake results in lower streamflows than would occur if the lake were not there. Thus the schedule of releases from the lake has implications both on lake levels and downstream flows. A frequency analysis of monthly low flows shows that the current passing flow is a reasonable estimate of the monthly median low flows in the summer.”*

Larry Baier, New Jersey Department of Environmental Protection, Chair, Lake Hopatcong Water Level Management Plan Citizens Advisory Committee (Meeting Notes January 12, 2010) *“The New Jersey Geological Survey (NJGS) reconstructed flows in the Musconetcong River to allow a comparison of minimum flows out of Lake Hopatcong to median low flows if Lake Hopatcong didn't exist (report provided). Expectedly, Lake Hopatcong has had a dampening effect on high spring flows since the gates on the dam are closed while the Lake is refilling and because of the massive storage in the Lake relative to the small drainage area.”* *Fall flows with the Lake Hopatcong dam in place tend to be slightly higher than would naturally occur due to the additional water releases to lower the lake for the winter. Overall the effect of Lake Hopatcong on the Musconetcong River low flows immediately downstream is a flattening of the hydrograph.”*

Lake Hopatcong Water Level Management Plan August 21, 2010 DRAFT *“The Division of Fish and Wildlife believes that the 12 CFS passing flow in the current plan is generally protective of the downstream resources. This is due to the existence of those resources despite a long history of operating the Lake Hopatcong Dam with a minimum passing flow of 12 CFS. In fact, the ecology of the section of the Musconetcong River between Lake Hopatcong and Lake Musconetcong has stabilized in reliance on the 12 CFS passing flow that has been in place since prior to 1932.”*

