

Computing Spofford Lake's water level: Stand on the dam grates and look out the channel. The right hand cement abutment's top surface is at 718 feet above sea level. All measurement are made down to the water (or to the boards) from this surface.

History: The dam (spillway) was built around 1919. The top of the spillway at that time was at 716'. The water level then was about a foot lower than today.

In 1955 the dam was rebuilt with a new spillway structure. Reports at the time indicate the lake level standard was around 716'6".

In 1998, erosion around the spillway developed. A new spillway and outflow culvert was put in 1999. All the engineering studies done for the new construction referenced 716'6" as the normal lake level.

In 2001 and 2002, people at the Lake complained that at 716'6" the lake was too low. After contentious meetings, the Town & DES agreed to a 716'10" summer time level.

Current dam operation: The Selectmen are responsible through the Highway Department for controlling the dam. They try to keep the level at 716'10" in the summer and 715'6" in the off season. The Town has a Lake level Emergency Action Plan regarding the dam that calls for emergency action if the level approaches 717'6". They are to pull boards from the dam to get the level lowered.

The bottom of the spillway has a 6 inch pipe that allows outflow all the time to keep the river downstream wet all the time.

NMHW (Natural Mean High Water) Conclusion from the T.F. Bernier Report to NH DOT of July 2103

Spofford Lake has been raised by damming for 200 years. Water elevation from that time until the late 1950's fluctuated far more than similar natural lakes. The demand for lake water for use as a power source became so significant it resulted in a Supreme Court action in 1894. Even after water ceased to be used as a power source complaints about low water in the lake continued as the town used the lake to flush sewage from Partridge Brook.

Given this long history of fluctuating water elevations finding overwhelming evidence as to the location of the NMHW line was not to be. We are left with bits and pieces of evidence which we must piece together and apply the preponderance of that evidence to make our determination.

Based on physical observations of shore reinforcement and the lack of a naturally occurring shoreline, it is clear the water elevation is well above a NMHW level. The lake was first impounded in 1810 or shortly thereafter. The original impoundment was located in the same location as the current dam, was constructed on ledge, and only minimal amounts of ledge were removed to construct the current dam. Pursuant to the 1894 Supreme Court case (Stearns vs. Hamilton) and surveys by this office, the mean low water elevation is about 711.6' (NAVD88). Observed physical evidence of a shelf and ancient shore are at about 712.8' (NAVD88).

A conservative assessment of all of the physical and record evidence sets the Natural Mean High Water elevation at 712.5 feet of elevation in the North American Vertical Datum of 1988.