

The History of Water Level Management on Lake Independence 1976-2014

by Mike McLaughlin

In 1976 the Hennepin County Board was petitioned by several Lake Independence shoreline owners to add a control structure at the outlet. The property owners were concerned about frequent low water levels over the previous several years. Some years the water was so low that shoreline owners needed to join their neighbors' docks together in order to reach open water.

On September 27, 1976 the Hennepin County Board passed a resolution authorizing construction of a control weir, or dam, on the Lake Independence outlet at the bridge on Independence Road. After studying the shoreline plant material and soil types, and looking at the average water levels going back to 1935, the DNR set the ordinary high water level at 956.8 feet above sea level. The DNR then examined the wetlands and land use upstream and downstream and determined that the weir height could be set at 956.0 feet above sea level. The DNR is THE authority on water levels and does not allow changes to water levels that will negatively impact wetlands or land use in the adjoining watersheds. A wooden weir was built under the outlet bridge shortly thereafter.

In 1983 construction plans were drawn up for a new concrete replacement bridge and replacement wooden weir. They were built at the same outlet site, but the weir height remained at the same elevation, 956.0 feet as per DNR requirements.

During a period of time, roughly from 2000 to 2011, the lake levels exceeded the designated ordinary high water level, or OHWL, almost continuously except for a few lower levels in 2007 and 2009. Major shoreline erosion and the accompanying addition of phosphorus pollution from the eroding soil occurred. One property owner lost old oak trees that had been growing on the shoreline for 100 years. It should be noted that other, mainly newer shoreline owners, assumed that the new higher lake levels were "normal", and set their docks and lifts accordingly.

Many expensive shoreline erosion control projects were undertaken by The City of Independence, Medina, the PSCWMC, and LICA. It was disturbing to many people that the water was so high it was damaging some of these projects. In 2003, after receiving many shoreline erosion complaints, the LICA Board held meetings with the Three Rivers Water Manager to determine what could be done to reduce erosion and nutrient load caused by high speed boats operating close to shore during those times of high water. Waves from boats weren't the only factor in shoreline erosion, but it was a factor that could be controlled and minimized. After conferring with other limnologists, and doing comparisons to other area lakes which had ordinances restricting high speeds, the Water Manager determined that one foot above the OHWL, or 957.8 feet, would strike a balance between high speed boaters' rights and the need to protect the lake's rapidly eroding shoreline. The LICA Board concurred with this assessment.

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Because the lake is divided down the middle on the boundary between two cities, LICA went before both the City of Medina's and the City of Independence's councils to officially request a No-Wake 250 Feet from Shore Ordinance from both councils. This request was granted by the Medina Council on August 19, 2003 and the Independence Council shortly thereafter.

Concurrently, efforts were made to determine why the lake levels stayed high for great periods of time. It was felt that the outlet channel was clogged with cattail growth and sediment, but a study would be required to verify this before large sums of public money could be spent to remedy the situation.

A group representing the City of Medina, the City of Independence, Three Rivers Park District, Hennepin County Environmental Services, and LICA met in October, 2011 to discuss options to restore the capacity of the outlet channel. It was agreed by consensus to develop a joint cooperative agreement, conduct the hydrologic analysis in 2012 and begin an implementation phase in 2013. In April 2012 Hakkenson Andersen provided an overview of their initial channel survey. It was determined that the general issue was poor water flow primarily, but not exclusively, in the area between Independence Road and Pagenkopf Road.

In May 2012 the LICA president went before the two City Councils of Medina and Independence and requested their financial involvement in paying for a complete study. In July 2012, it was agreed to pay Hakkenson Anderson approximately \$5000 to conduct a full study.

Results of the study determined that the outlet channel was heavily blocked in the area between Independence Road and Pagenkopf Road. It had filled in with bogs and vegetation, restricting the normal water flows through that channel. Although the water got through this area, the bogs and vegetation that had developed over the years had choked down this channel so flows through it were greatly impeded. This backed water up into the lake for much, much longer durations than in the past. It was noted that further study would need to be done to determine remedies for possible blockages or flow problems further downstream.

Bids to fully dredge and remove all the vegetation and sediment approached \$277,000. Brad Spencer, City of Independence Council member, held a meeting with the DNR in May, 2013 and it was agreed to allow side casting, an unusual concession, but only if just vegetation was removed from the channel, not sediment. This reduced the project cost to under \$50,000 for removing vegetation along the 2,400 foot channel, approximately 15 to 18 feet wide. It was noted that this might not be a totally effective effort, but the thought at the time was to try this affordable project instead of doing nothing because the cost of total dredging was unaffordable.

In July 2013, the LICA Board held a public meeting at Independence City Hall to allow citizens to voice their opinions. It was noted that water level could be a very divisive issue for shoreline owners. With a few exceptions, overwhelmingly, the citizens of Medina and Independence expressed agreement with the project. The biggest question expressed was "Why is it taking so long?" Sunram Construction was then hired to do the clean-out work with a floating backhoe and it was completed late Fall, 2013.

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Even with the clean-out completed, there have been many periods of high water, due to unusual amounts of rain. Each lake is unique. Unlike many other area lakes that drain much faster, Lake Independence does not. The elevation of the outflow channel recedes very slowly on the long journey, through many wetlands, on the way to the Crow River. Once these downstream wetlands are saturated, excess water has no where to drain quickly.

Shoreline owners complained that many boaters were not complying with the No-Wake 250 Feet from Shore Ordinance. And shoreline erosion continued. It was realized that it was difficult for boaters to gauge their distance from shore. Besides, large boats designed to create huge waves could be operating in the middle of the lake and still send damaging waves crashing to the shoreline. The LICA Board had conversations with the Hennepin County Sheriff's Water Patrol. The Patrol was totally on board with a change to No Wake Whole Lake because they felt that was an ordinance that was enforceable. The LICA Board then voted to request that the two cities change the No Wake ordinance to include the entire lake, thereby better protecting the shoreline. LICA's president again went before the two City Councils and formally requested the change to "whole lake". The City of Medina changed the ordinance to reflect whole lake on December 2, 2014 and the City of Independence followed suit.