Current Lake Level Monitoring and Control Procedures
Village of Wolverine Lake
Wolverine Lake, Michigan

Major Activity	General Purpose	Procedure	Desired Result
Fall Drawdown	Drawdown lake level by 1.5 ft from 918.25 ft mean sea level (MSL) (i.e., summer level) to 916.75 ft MSL (i.e., winter level) starting on October 1st, aimed at reaching 916.75 by December 1st of each year.	On October 1st open one sluice gate approximately 0.2 ft allowing water to flow under it, once level is down to about 917.00 ft MSL, fully open three gates (raising them out of way/use) and allow water to continue to flow over boards set in these sluice gates, which are set at 916.75 ft MSL. The last gate will remain closed. This will require making an additional board for the third gate. If level is not down to about 917.25 ft MSL by November 1st, then open gate to 0.4 ft to allow more rapid drawdown, such that level is at about 917.00 ft by end of second week of November of each year.	Should drop lake level a little slower than historical (Pre-2010) method (about a week slower over all), which will allow more late season use of lake (maybe two weeks longer), while still allowing lake level to be at about 917.00 by the end of the second week of November each year. This should still allow the lake level to be close to the winter level of 916.75 ft MSL by December 1st of each year. This will also allow three gates to remain open at the winter level instead of two.
Winter	Generally maintain lake level at winter level of 916.75 ft MSL.	Once drawdown has been established, allow one sluice gate to remain closed and three gates remain up with flow going over boards set at 916.75 ft MSL. This will require making an additional board for the third gate, if not made earlier. Should the lake level rise above 917.15 ft MSL (0.4 ft above optimal winter level), open closed gate 0.1 ft to allow water to flow under this sluice gate, until level is back to about 916.75 ft MSL (probably over night to a couple days), then close gate.	Generally controls lake level close to winter level of 916.75 ft MSL, but with added control should the lake level rise above 917.15 ft MSL. This should help reduce the potential for added erosion/detrimental conditions on lake during higher than optimal lake levels. Furthermore, having three gates set at the winter level instead of two will allow more water to go over dam during the winter to better maintain the 916.75 ft MSL in the first place.
Spring Fillup	Raise lake level by 1.5 ft from 916.75 ft MSL (i.e., winter level) to 918.25 ft MSL (i.e., summer level) starting on March 1st, aimed at reaching 918.25 before June 1st of each year.	Generally close sluice gates on March 1st to begin spring fillup (unless ice is still on the lake). However, at a minimum, if the lake level reaches 918.25 prior to May 1st, then closely watch the lake level and open one sluice gate 0.05 ft and maintain the lake level close to 918.25 ft MSL, closing gate when level is back to about 918.25 ft MSL (within a day or so). After May 1st of each year, then allow lake level to rise to 918.45 ft (0.2 ft above optimal summer lake level), and open one gate 0.05 to 0.1 ft to maintain level between 918.25 and 918.45 ft MSL (probably a day or two at a time at the most), closing gate when lake level is within aforementioned range.	Allows lake level to rise to summer level, but then more closely controls lake level during spring rainy season, so level generally does not go above 918.45 ft MSL. This should help reduce the potential for added erosion/detrimental conditions on and around the lake during spring rainy season.
Summer	Generally maintain lake level at summer level of 918.25 ft MSL.	As of June 1st, all gates remain closed with flow going over top of sluice gates, which are set at 918.25 ft MSL. If lake level drops below 918.10, lake level augmentation pumps are turned on to raise the lake level back/closer to 918.25 ft MSL. However, if lake level goes above 918.45 ft MSL (0.2 ft above optimal level), and rain is still falling or continued to be forecasted, raise one sluice gate 0.05 to 0.1 ft to allow flow under the gate as well as over the gate until lake level is back to between 918.25 and 918.45 ft MSL (probably over night), then close gate.	Controls lake level close to summer level of 918.25 ft MSL, but with added control should the lake level rise above 918.45 ft MSL. This should help reduce the potential for added erosion/detrimental conditions on lake during higher than optimal lake levels.
Lake Level Monitoring	Monitor lake levels	Collect lake levels at least two times weekly and recorded to help time initiation of lake level control activities, including fall drawdown, spring fillup, and maintaining winter and summer lake levels.	More consistent lake level readings (at least 104 annually) would be available for use, including for comparison with precipitation or other data, and for controlling lake levels.