

**Irogami Lake – Silver Lake, PROPOSED
Managing Water Levels Between the two Lakes
Silver Lake Management District, January 2020**

Background

Lake Irogami and Silver Lake are connected by a culvert/dam located on State Road 21. This allows water to move between the two lakes when conditions allow it. The height of the lip on the culvert/dam on the Irogami side is set at 867.61' which is approximately 2 inches above the OHWM set for Irogami at 867.49'. The lip of the concrete apron on the Silver Lake side is 867.41. These levels were verified by a certified survey done on July 25, 2018.

In the past, before State Road 21 was last reconstructed, this type of structure did not exist. It was simply an open culvert that had an old fashioned 'stop log' mechanism to control water levels/movement. (refer to <http://townshipofmarion.com/lake-districts/silver-lake/>, *Irogami Fish Spawn*) The highway reconstruction dramatically changed this situation. There have been other discussions on assisting fish spawning in the area (refer to website: *Silver Outlet Booth's Marsh*)

Historically water flowed, on infrequent occasions, from Irogami into Silver. However, due to the unusual weather of the past several years, the level of the water in the two lakes has risen dramatically and equalized the level of the two lakes. For the last few years water has been flowing from Silver into Irogami. This is occurring because a weir was placed on the east shore of Irogami during flooding conditions in the 1990's. The weir was placed by the Federal Emergency Management Agency (FEMA) in a marshy area that was a natural drainage area before it was filled in many years ago. This weir was reconstructed and improved by the Silver Lake Sanitary District (SLSD) in the late summer of 2019. SLSD has operational responsibility for the weir from the FEMA placement.

Current Situation

Over the last several years the area around the two lakes has experienced some VERY large precipitation events. This has caused the water levels in the lakes to rise dramatically. The impact to the lakes and the surrounding area has been significant. Last year Silver implemented a 'slow no wake' using an ordinance that the Town of Marion had available. This was in place for the entire summer. Numerous riparian owners spent many thousands of dollars placing riprap to protect their shorelines from erosion. Although the 'slow no wake' was in effect for the entire summer and helped the lake ecologically, it hurt the recreational usage side of things. It is everyone's best interest to strive to avoid this situation going forward.

Proposed Solution

The Silver Lake Management District (SLMD) proposes to develop a system that would allow water to be moved from Silver into Irogami when water conditions are such that the water movement between the two lakes has basically stopped. The solution would include placing a pump by the culvert/dam on State Road 21 so water could be moved from Silver into Irogami. This pump would be activated when Irogami's water level would be at or below its OHWM. It would also be necessary to install a mechanism that would be able to stop water from back flowing into Silver. (Refer to proposed construction proposal for details) This would allow Irogami to maintain a more consistent water level and also allow Silver to reduce its water level to a point that would be closer to its OHWM. This positions the 2 lakes in a better situation to accommodate large precipitation events as Silver could be lowered below what the culvert/dam currently allows. The ability to manage the water level between the 2 lakes is beneficial to the entire area. Irogami would gain the capability to maintain a more consistent water level.

Proposed Construction & Operation

A concrete pad would be constructed on the Silver Lake side of the culvert/dam adjacent to the culvert/dam. A small structure would be built on the pad and would be used to house a pump. Electricity would be provided as the source for running the pump. Pump operation would be controlled manually and would only operate when water is at or below Irogami's OHWM. An agreement on how much water would be moved at any given time would have to be made between the two lake districts. The goal should be to keep Irogami around its OHWM when water is available in Silver to move via the pump. As long as Silver is over its OHWM, the agreement would be in force and the pump could be operated per the agreement.

Maintenance

All costs associated with designing, maintaining and operating this system would be born by Silver Lake Management District (SLMD). Alliant Energy will supply electric service for the temporary pump. All the associated fees will be the responsibility of SLMD.