

# Department of Environment, Great Lakes, and Energy Water Resources Division

## Supplemental Background Information for Senate Bill 662

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### Background

Section 30701(h) of Part 307, Inland Lake Levels, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (MCL 324.30701 *et seq.*), provides the framework for establishing normal levels, currently defined as follows:

(h) "Normal level" means the level or levels of the water of an inland lake that provide the most benefit to the public; that best protect the public health, safety, and welfare; that best preserve the natural resources of the state; and that best preserve and protect the value of property around the lake. A normal level shall be measured and described as an elevation based on national geodetic vertical datum.

Once a normal level of an inland lake is established in circuit court, the county assigns the responsibility to maintain that lake level to a "delegated authority," which is typically the County Drain Commissioner, but not in all cases. Section 30701(e) defines delegated authority as follows:

(e) "Delegated authority" means the county drain commissioner or any other person designated by the county board to perform duties required under this part.

Section 30702(3) further defines the responsibility of the delegated authority:

(3) If a court-determined normal level is established pursuant to this part, the delegated authority of the county or counties in which the lake is located shall maintain that normal level.

In practice, the delegated authority will typically maintain a normal lake level through acquisition of property and construction and/or maintenance of a dam.

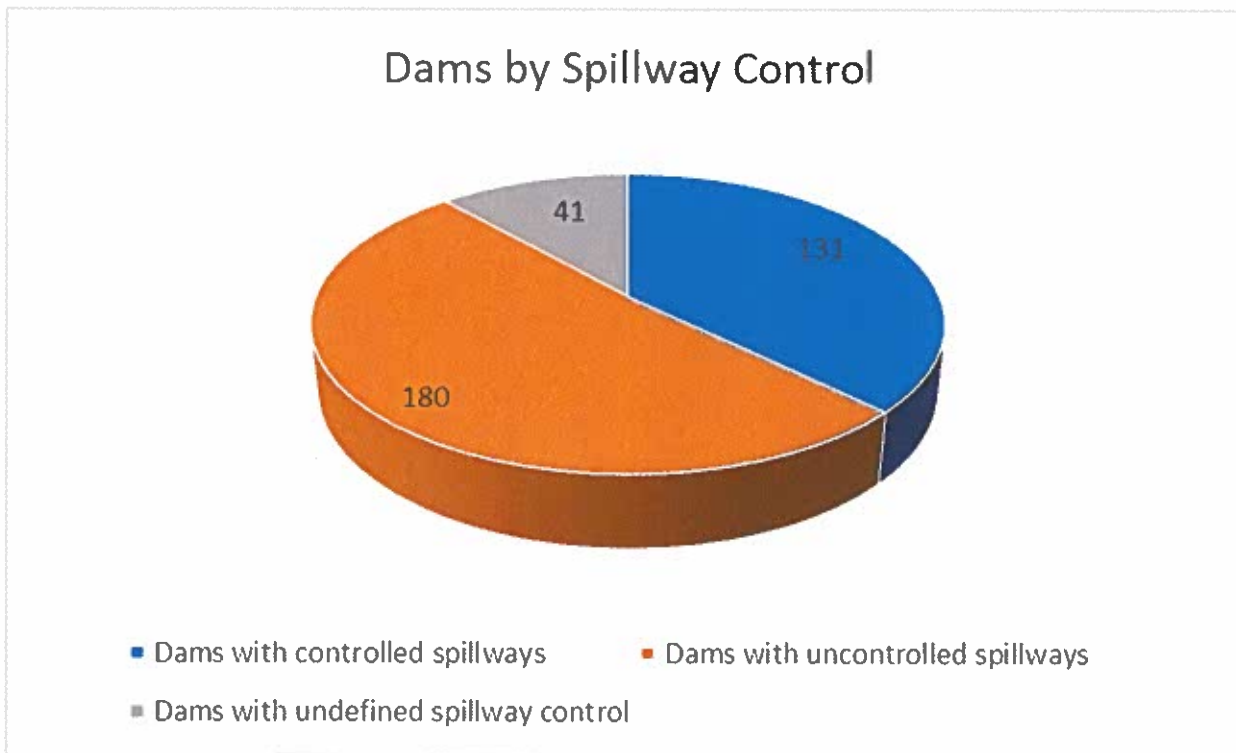
In 2019 Citizens for Higgins Lake Legal Levels sued Roscommon County for failing to maintain the normal levels\* of Higgins Lake exactly as defined in the 1982 court order that established the normal levels of the lake. A March 18, 2022, opinion by the State of Michigan Court of Appeals overturned a previous Roscommon County Circuit Court decision that stated that the "normal level" as defined under Part 307 was a target level and that minor deviations from the normal level did not constitute violation of the lake level order. The Court of Appeals opinion differed from the lower court's decision in that it concludes that the intent of the Legislature, when drafting Part 307, was that a delegated authority

\*The 1982 circuit court order establishing the normal level of Higgins Lake contains both a summer (1154.11 feet NGVD29) and winter level (1153.61 feet NGVD29).

“shall” maintain the “normal level” of the lake and, therefore, should petition the circuit court each time any departure from the normal level is necessary and that there is no discretion built into the statute or circuit court order.

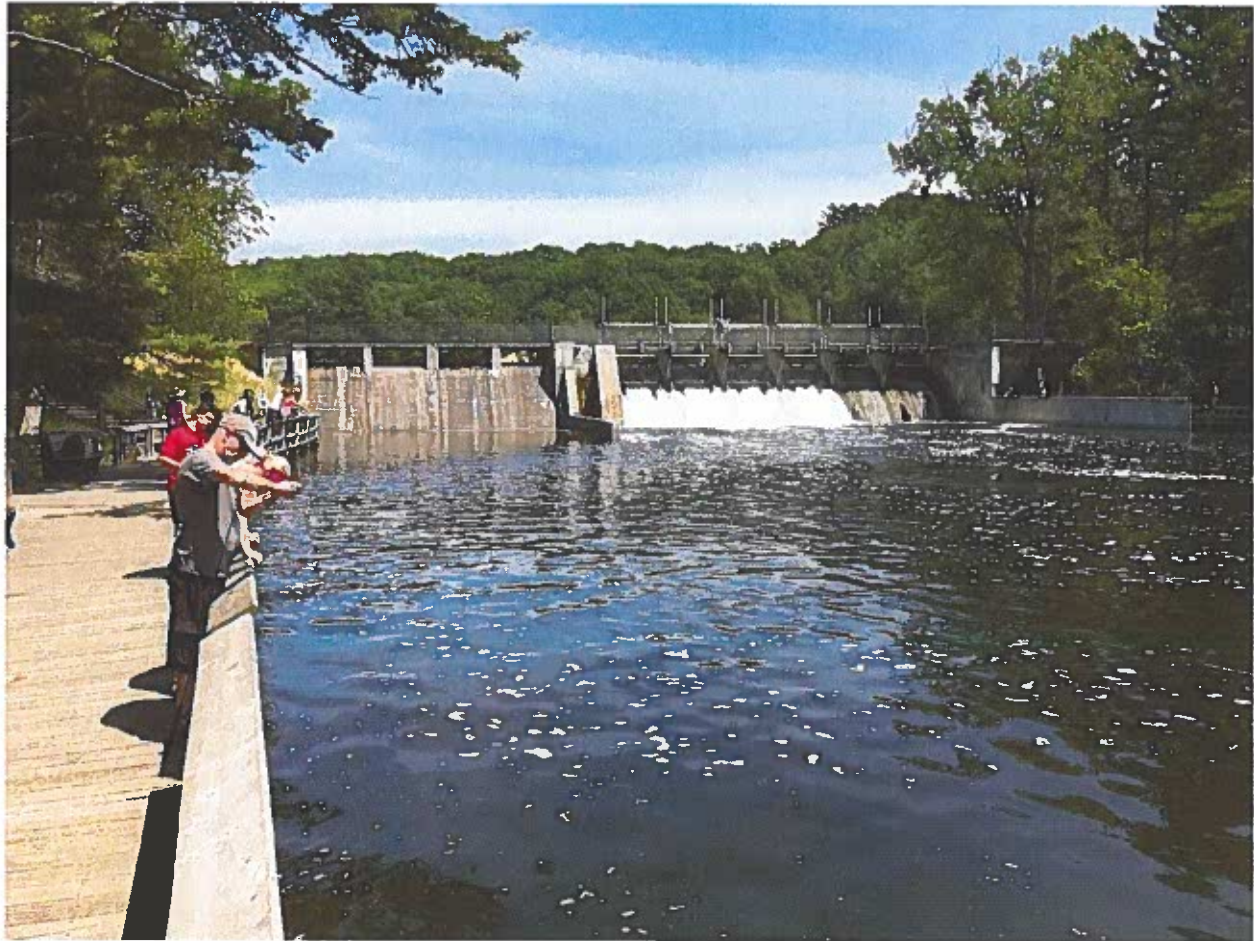
The below analysis demonstrates that, given the inconsistent nature of precipitation and stream flows, coupled with the limited ability of dams to regulated water levels; it is impractical or even impossible to maintain normal lake levels exactly and that departures from the normal level occur very frequently. If the provisions in Senate Bill 662 redefining “normal level” are not adopted, counties that maintain lake level control structures will, more often than not, be in violation of Part 307 and the circuit court orders that established the normal levels on their lakes.

At the time of this analysis, there were 352 lakes in Michigan with circuit court ordered normal levels, either established under Part 307 or one of its predecessors. Of those 352 lakes, only 131 had dams at the outlet with what is known as a controlled spillway, or a spillway that has any ability to regulate flows out of the lake, such as stoplogs, gates, valves, etc. Of the remaining lakes, 180 had dams with uncontrolled spillways, or what is known as “fixed crest” spillways that do not have any mechanisms for regulating flows or controlling lake levels. The remaining 41 have undefined spillway control, indicating that the Department of Environment, Great Lakes, and Energy (EGLE), Water Resources Division’s (WRD) Dam Safety Unit either does not have enough information to establish the nature of the spillway or has not updated the inventory database to indicate spillway control.



**Figure 1.** Dams in Michigan by Spillway Control Type  
*Source: EGLE-WRD Dam Inventory Database as of March 22, 2022*

By nature, controlled spillways have some ability to regulate lake levels by adjusting stoplog levels or gate/valve openings to increase or decrease outflow from the lake. However, controlled spillways have a finite capacity to maintain an exact lake level. When flows increase beyond the capacity of the gates or valves to incrementally control the water surface elevation, increases in lake levels will occur.



**Figure 2.** Example of a controlled spillway with several gates.  
*Source: EGLE 2019 Dam Safety Inspection Report – Hamlin Lake Dam*



Uncontrolled spillways have no mechanism to perform this function, so flow depths and lake levels are subject to fluctuation with increased rainfall or drought conditions. Any change in flow rate, up or down, will cause an increase or decrease in lake level, respectively.



**Figure 3.** Example of an uncontrolled spillway with a fixed crest.

*Source: EGLE 2019 Dam Safety Inspection Report – Hoister Lake Dam*

No matter what type of spillway exists, all dams have limitations in which they can incrementally control lake levels, in that if rainfall and inflows to the dam increase beyond the hydraulic capacity of the dam, increases in the lake level will occur. Conversely, if drought conditions persist, losses from the reservoir from evaporation, irrigation, infiltration, or other means can cause the flows at the dam to decrease, and the lake level will fall. It is impossible for dam operators to maintain exact lake levels when these factors are considered.

In conclusion, the WRD supports the amendments proposed in Senate Bill 662, in that:

1. The Legislature did not likely intend for the term “normal level” to mean an exact level from which any departure would result in violation of Part 307 and the circuit court order establishing the level.

2. Per the above analysis, less than 40% of all Part 307 regulated dams have any ability to regulate lake levels over a range of flow conditions. The remaining >60% have no ability to regulate lake levels over any range of flow conditions. All dams will fail to maintain a static lake level at some point.
3. There has been a large uptick in counties petitioning the circuit courts to amend lake level orders to allow for deviations from the normal level. This is in direct response to the Higgins Lake decision and has placed additional burden on the counties and State agencies.
4. The proposed amendments would allow for fluctuations of lake levels to occur due to flow conditions and as otherwise permitted by EGLE. This will protect counties from being sued for not maintaining lake levels exactly and lessen the burden associated with lake level order amendments to allow for deviations.