



Secord Dam 2021 Update #1

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Secord Lake Association
PO Box 176
Gladwin, MI 48624
email: secordlakeassociation@gmail.com
website: <https://www.secordlakeassociation.org/>

As your association, we feel confident the FLTF is listening to the Secord community and understands the urgency to restore the lake levels for the lake property owners, the local businesses, and the county. Along with the FLTF, we are working to bring back the lake as quickly as possible, meeting all the guidelines required by FERC and the State of Michigan.

The Secord Lake Association (SLA) has two members on the FLTF Board. Our SLA President, Phil Dast and SLA VP Chuck Sikora. The purpose of this update is to focus on FLTF actions pertaining to Secord Lake.

The FLTF is addressing the critical issues. As mentioned in the [December SLA 2020 Year In Review](#) with the acquisition of Secord dam by Gladwin County in December, maintenance / repair work has started and progress is being made. The SLA will continue to communicate information to the best of our ability.

As Secord Lake property owners, we may not like the information shared regarding timelines or costs. The SLA will continue to share what we know to be true. There are many statements that have been made since this past summer that are not true resulting in confusion and mistrust of the process to restore Secord. Let us address these “myths” to create a place to move forward with our reality.

Myth #1 – Can the county commissioners, or the FLTF or the SLA raise the water level now?

Reality - There is no one person or single elected body in the county, the state or the federal government that has the authority to raise the water level. **The state and federal government have the final authority once their requirements are met. The townships, counties, FLTF, SLA do not have the authority to raise the lake level.**

Myth #2 – The Secord dam did not breach, there is no reason not to raise the water level.

Reality - There is more damage resulting in the need for repairs to Secord dam than has been communicated by Boyce Hydro. Secord dam is considered a “high hazard dam” and the dam was not healthy prior to the May flood event due to decades of neglect by the private owner regarding maintenance and upgrades.

Myth #3 – The simple hole can be repaired with concrete for \$30,000 and there is no reason not to fill the lake.

Reality - This is a misrepresentation communicated repeatedly by Boyce Hydro.

Myth #4 – The Dam Safety Report issued by Boyce Hydro indicates a simple concrete repair is all that is needed.

Reality - The Dam Safety Report submitted by Boyce Hydro in June 2020 was deemed incomplete and was not accepted as written by FERC. This incomplete report has been used as reference material by Boyce Hydro to support their comments pertaining to the three prior Myths. In a letter dated July 21, 2020, FERC issued a letter with an additional 21 action items over 5 pages to augment the report submitted by Boyce. Adding to the confusion, Boyce Hydro failed to mention the numerous environmental and engineering studies required to determine how to design the final engineering plans to obtain government approvals.

MOVING FORWARD

The FLTF is addressing the critical issues and intends to have them completed by May 2021. It is important to note that the critical issues are interim measures to address immediate safety concerns. They are not permanent fixes.

Secord Dam is a high hazard dam with embankments similar in design to Edenville Dam. Engineers deemed the dam not healthy before the May flooding and FERC has clearly stated it will not authorize raising the water levels until the dam is permanently repaired.

FERC and the state continue to remind the FLTF that history MUST NOT repeat itself. This means the agencies must have full confidence that another failure cannot occur. There will be intense regulatory oversight and involvement in this process to ensure safety, and the agencies have indicated they will be very conservative with dam design and construction. The county and FLTF have a duty of care to keep people safe.

The final construction timeline will depend on receiving regulatory approval from the agencies for design. The FLTF will follow the process and timing as set forth by the regulatory agencies.

Before Secord construction can begin, as the dam owner the county via the FLTF must provide:

- Independent forensic investigation report
- Public Informational Presentation of Feasibility Study
- Rain study (probable maximum precipitation or PMP study)
- Flood study (probable maximum flood or PMF study)
- Hydrology and modeling
- Preliminary engineering reports
- Submittal for USDA funding approval
- Final design and construction plans
- EGLE Permitting
- Approval of financing
- Bid letting
- Computation of costs
- Special assessment hearings

According to FLTF engineers, in consultation with state and federal authorities, the following items are critical to the restoration of interim lake levels at Secord Lake.

1. **Completion of FERC's Risk Analysis** of restoring the lake to a safe interim level while the permanent repairs are being implemented. FERC staff advised the FLTF on January 5, 2021, that the analysis has been completed and a draft report is under review. FERC provided no indication when the report would be finalized and made available.
2. **Independent Forensic Team Investigation Findings.** FERC staff confirmed the investigation is still in progress. FLTF expects the investigation will be completed in 2021, but neither FERC, the State, nor FLTF have any control over the investigation team. The team is completely independent.
3. **Spillway Adequacy.** Secord is classified a High Hazard dam. The existing "zero freeboard discharge capacity" (i.e., filling the lake to the brim with no room for wave action or wind run-up) is 12,130 cubic feet per second (cfs). According to the latest Ayers analysis, the ½ probable maximum flood (PMF) flow based on EGLE criteria is 18,000 cfs. The full PMF flood (FERC criteria) is 43,000 cfs. These values will likely change based on the probable maximum precipitation (PMP) and updated flood studies. Before Secord Lake can come back up, the spillway capacity needs to be increased to pass an inflow design flood as determined by the agencies. It is unlikely that regulators would allow the lake to be brought back up until additional spillway capacity is installed.
4. **Water Retaining Structures.** The earthen embankments are of similar design to the Edenville embankment, which failed during the May 2020 flood event. A July 21, 2020 FERC letter identifies concerns with embankment seepage, sloughing and the functionality of the drainage system. Geotechnical investigations and structural analyses are required to address these concerns. Until these issues are addressed, engineers assess the ability of the embankments to safely withstand another flood event is uncertain – at best.
5. **Hydropower.** Based on Essex's October 2020 discounted cash flow analysis, Secord would not produce positive cash flows over the 20-year study period. The Net Present Value (NPV) of revenues over the study period is estimated to be over \$1 million. Deducting operating and maintenance costs of \$830,000 yields a margin of \$260,000. Capital expenditures for relicensing, interconnection, and equipment replacements total \$920,000, resulting in a negative NPV of \$660,000 over 20 years.

Near Term Schedule

FLTF is implementing an aggressive schedule for a public process that must follow a regulatory path. Imagine you are building an airplane that is already up in the air flying. One can look at rebuilding the dams in the same way. They are already in service, yet they need significant repairs and upgrades to make them safe and operable for the long-term. The Secord situation is even more challenging because we do not yet have the design criteria for spillway capacity or the findings of the independent forensic investigation team.

You would not travel in an unsafe airplane and we should not live, boat, fish, or swim around an unsafe dam structure. We must remember the mission is to rebuild for the long-term. Property owner and community safety is the highest priority.

FLTF – Secord Specific Frequently Asked Questions

What are the main repair issues for Secord Dam?

There are two fundamental repair issues that must be addressed before the water level can be raised:

1. Insufficient spill capacity to meet regulatory criteria, including state of Michigan requirements.
2. Excessive seepage in embankments, issues with external stability and internal erosion control. Secord Dam significantly falls short of current design standards for earthen embankments.

Could a coffer dam or temporary dam be used to bring back the water while final repairs are being made?

A cofferdam, which is a temporary structure, is generally used to de-water a portion of the impoundment to enable repair or construction of the dam. It does not have the functionality or durability of a permanent dam and would be an unjustified use of funding since it does not provide a permanent fix.

Is FLTF bidding out the work and offering it to the lowest bidder?

FLTF is asking for competitive bids from contractors. With a process like dam restoration and construction, it is not wise to pick the lowest cost or cheapest contractor. The FLTF approach is to choose contractors that provide the best quality for the cost, i.e., the best value.

If critical repairs are completed by May could dam reconstruction begin this summer?

Critical studies will not yet be completed, including the forensic investigation, rain studies and the updated flood study. If the dam is rebuilt without those studies, the dam may not meet regulatory requirements for safety. Based on the amount of time needed to complete these studies, create the detailed engineering plans, and gain regulatory approvals, the answer is “no, it is unlikely reconstruction will begin this summer”.

Has the FLTF asked FERC and the state what is needed to refill the lake?

FERC and the State continue to remind the community that history must not repeat itself. This means the agencies must have full confidence that another failure cannot occur. There will be intense regulatory oversight and involvement in this process to ensure safety, and the agencies have indicated they will be very conservative with dam design and construction. Yes, the county and FLTF has been told what is needed before Secord can be refilled.

Which lakes will come up first?

The intention is for Secord and Smallwood lakes levels to be raised first.

Do Sanford and Wixom lake levels need to come back up before Secord can come up?

No, it is not necessary for Sanford and Wixom water levels to return so that Secord and Smallwood levels can be raised.

In closing, we realize there is a lot of information packed into this update. Remember the FLTF Secord specific meeting on February 11th. To learn more visit our website at www.secordlakeassociation.com If you have questions or comments, we welcome them at secordlakeassociation@gmail.com.

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