



The Four Lakes of Gladwin and Midland Counties Plans and Progress

Following the May 19, 2020 dam failures, Four Lakes Task Force (FLTF) immediately began a recovery and restoration process to bring back the lakes and dams.

As part of the Recovery Phase, FLTF implemented stabilization and safety measures on all the dams to improve safety and operations in the interim period until full restoration measures can be conducted. The Restoration Phase involves engineering design and construction. This flyer describes in greater detail those efforts and the planned path forward.

Recovery Phase 2021-2023

\$40M in Stabilization, Erosion Control, Debris Removal

With private support, funds from the State of Michigan and matching grants from the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), approximately \$40 million of repairs are being done to stabilize the damaged dams, abate shoreline erosion and remove tons of debris from the dry lake beds.



Secord Lake



Smallwood Lake



Wixom Lake



Sanford Lake

Design Flood and Precipitation Studies

FLTF precipitation and flood studies have confirmed capacity design.

- Design is based on Inflow Design Flood (IDF) guidelines issued by the Federal Emergency Management Agency (FEMA)
- Each of the four dams must and will have greater spillway capacity than prior to the May 2020 flood
- FLTF studies are being shared with EGLE, the U.S. Army Corps of Engineers, FERC and other agencies

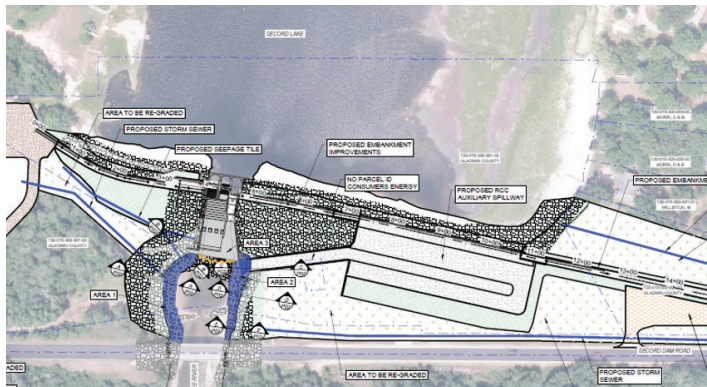
Estimated Design Capacity of Dams Stated in Flood Frequency (CFS)				
	Secord	Smallwood	Edenville	Sanford
Pre May 2020 - Capacity	7,695	10,185	20,670	29,690
Current Design Estimate	17,500	25,500	55,000	55,000
Current State Requirement	12,700	15,600	44,600	44,900
Dam Design Estimate in Flood Frequency	>10,000 Years	>10,000 Years	>5,000 Years	>5,000 Years

Restoration Phase 2022-2026

Estimated Dam Restoration Costs

The estimated repair and restoration amount is \$250 million, with a planning range of between \$230-\$270 million. Engineering, estimated at \$12.5 million, is being paid by the state grants. The table below shows the target time by dam.

	Restored In
Secord Dam	2024
Smallwood Dam	2024
Edenville Dam	2026
Sanford Dam	2025



Drawing of Secord Dam upgrades.

Environmental Restoration Plan

The lakes, wetlands, wildlife and aquatic organisms that were the basis of a healthy ecosystem on and near Wixom and Sanford lakes have been damaged by the Boyce dam failure of May 2020. While the return of Sanford and Wixom to normal lake levels will bring back significant ecosystem capacity, the environmental recovery of these two lakes will take decades. FLTF is engaged with EGLE to complete a Natural Resource Restoration Study and implement a long-term Lake Management Plan for both lakes to be in place by the return of the normal lake levels. The cost to develop the plan is \$2.4 million.



Wetland high resolution LiDAR mapping.

Lake Restoration Progress

