



# Four Lakes Task Force Restoration Plan STATUS UPDATE

## Executive Summary

A feasibility study and Restoration Plan for the restoration of the lakes was completed and published in May of 2021. It outlined the Recovery Phase with a cost of approximately \$50 million. The study estimated a cost for to Restore the Four Lakes and their dams and ecosystems at \$250 million. This report is an update on the progress made on the Restoration Plan. For planning purposes, the financing plan remains set at \$250 million assuming a total project cost between \$230 and \$270 million.

The State of Michigan recently approved a significant appropriation for \$200 million to assist in the restoration of these Four Lakes. This is assurance that the Recovery effort and engineering of the Restoration are fully funded. The repair and restoration of the dams is significantly funded.

In 2022 there will be an Operations Assessment implemented for the management, operations and program costs. In this Operations Assessment, lakefront owners will be on average \$180/year, and all backlot owners will be below \$120.

The schedule remains unchanged for having Secord and Smallwood dams restored in 2024, Sanford Dam in 2025 and Edenville in 2026.

Progress and the relevant chapters of the Restoration Plan have been updated in this report to reflect the new developments in the Financing Plan.



## Introduction

With Boyce Hydro Power (Boyce) under significant compliance issues with its Federal Energy Regulatory Commission (FERC) licenses, Gladwin and Midland Counties (the Counties) and the Four Lakes Task Force (FLTF) had worked for over two years on a plan to transfer the four dams (Secord, Smallwood, Edenville and Sanford) and the Secord, Smallwood, Wixom and Sanford Lakes (Four Lakes) to public ownership for repair.

The transfer was governed under Part 307, inland lakes of the Natural Resource and Environmental Protection Act 451 of 1994 (Part 307). FLTF, the Counties' Delegated Authority under Part 307, had entered into an agreement with Boyce to transfer ownership, repair the dams and maintain the Part 307 legal levels as defined. The first installment for a two-year transition period to transfer ownership of the Four Lakes and dams was to occur in June of 2020. This agreement did not proceed.

On May 19, 2020, after days of steady rain, the Edenville Dam in Gladwin County, Michigan, failed. The resulting surge overtopped the Sanford Dam in Midland County, causing it to fail. The upstream Secord and Smallwood dams were damaged by the flood and ordered by FERC to be fully lowered for inspection and repair. Ten thousand people were evacuated from the area, which was declared a national disaster by the President of the United States. The community was left with extensive economic, environmental and property damage. Boyce filed for bankruptcy protection and is now insolvent.

The only path forward to protect the safety, welfare and environment of the lake communities was for Gladwin and Midland counties to take the properties through their eminent domain authority under Part 307. In December 2020, the counties obtained the title of the dams, gaining control of the properties, and making it possible to begin work in earnest to repair the dams and restore the lakes. FLTF, as the Counties' Delegated Authority, performed emergency repairs and continues to manage the recovery and restoration of the Four Lakes system.

Studies and engineering are underway to repair and restore the four dams and their lakes. The plan targets restoring Secord and Smallwood legal lake levels in 2024, Sanford in 2025 and Wixom in 2026. This effort to date has been supported by \$22.5 million in grants from the State of Michigan and \$5 million of private donations and grants. As well, there have been matching funds from the USDA Natural Resource Conservation Service (NRCS) for approximately \$15 million, with another \$20 million of potential future grants.

A feasibility study and Restoration Plan<sup>1</sup> for the restoration of the lakes was completed and published in May of 2021. It outlined the Recovery Phase with a cost of approximately \$50 million. The study estimated a cost to restore the Four Lakes and their dams and ecosystems at \$250 million.<sup>1</sup> If the lakes are not restored, the cost for dam removal and environmental mitigation was estimated to be up to \$125 million. The study identified at least \$10 million of further state grants needed in 2022 to get to a path to restore the dams.

A \$200 million appropriation from the State of Michigan was passed by the state legislatures and approved by Governor Whitmer on March 30, 2022. The measure will significantly reduce the burden on property owners and make it possible to stay on track for construction. Property owners will be

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<sup>1</sup> FLTF Restoration Plan: <https://www.four-lakes-taskforce-mi.com/restoration-plan.html>.



responsible for the shortfall of funding of approximately \$60 million. Given this and the progress of FLTF's engineering and flood studies, the financing plan and Special Assessment structure are clear.

Progress and the relevant chapters of the Restoration Plan have been updated in this report to reflect the new developments in the Financing Plan.

## Public Sector Consultants Survey

FLTF hired Public Sector Consultants (PSC) in 2021 to survey all property owners within the Four Lakes Special Assessment District (SAD). Most property owners have owned their property for 10 years or more, yet half indicated they would consider selling their property if the lakes are not restored. Most agreed that people outside the SAD should contribute to the cost of rebuilding and repairing the dams. A large majority felt their lake access was important, and wanted the dams rebuilt. While 31 percent were not willing to pay anything, over 60 percent were willing to pay \$500/year or more.<sup>2</sup>

A new survey will be performed in April and May 2022 to inform the Counties and FLTF of the general sentiment of the community, given the updated financing plan.

## Regulatory Oversight and Government Support<sup>3</sup>

Since the dam failures, the Four Lakes community has received strong support from our federal and state elected officials who agree that the lakes and dams must be restored. On May 27, 2021, U.S. Senators Debbie Stabenow and Gary Peters, along with representatives Moolenaar, Kildee, Dingel and Lawrence, wrote to the Environmental Protection Agency (EPA) and the Federal Energy Regulatory Commission (FERC) requesting assistance with recovery.<sup>4</sup>

In a letter<sup>5</sup> dated June 29, 2021, Liesl Clark, director of the Michigan Department of Environment, Great Lakes and Energy (EGLE), affirmed support and cooperation to restore the lakes and supported the concepts put forth in our Restoration Plan. On June 30, regulatory authority<sup>6</sup> for the lakes reverted to the State of Michigan (from FERC) and on July 7, FLTF reaffirmed its commitment<sup>7</sup> to work collaboratively with the regulatory bodies to bring back our lakes. FLTF has had ongoing and regular meetings with EGLE and other state and federal agencies to restore the dams, lakes and their ecosystems.

On March 30, 2022, a \$200 million appropriation was passed by both the Michigan House of Representatives and the Senate and was signed by Gov. Gretchen Whitmer.

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<sup>2</sup> *Four Lakes Task Force Survey Results* by PSC: [https://www.four-lakes-taskforce-mi.com/uploads/1/2/3/1/123199575/psc\\_four\\_lakes\\_task\\_force\\_survey\\_results.pdf](https://www.four-lakes-taskforce-mi.com/uploads/1/2/3/1/123199575/psc_four_lakes_task_force_survey_results.pdf).

<sup>3</sup> All FLTF regulatory correspondence: <https://bit.ly/FLTF-regulatory-correspondence>.

<sup>4</sup> Letter from Michigan Delegation to EPA and FERC: <https://bit.ly/letter-EPA-FERC>.

<sup>5</sup> Letter from Liesl Clark: <https://bit.ly/Clark-letter>.

<sup>6</sup> EGLE recognition of county ownership of dams: <https://bit.ly/EGLE-recognition>.

<sup>7</sup> Kepler's letter to EGLE regarding framework for restoration: <https://bit.ly/framework-restoration>.



**Figure A1: Funds Received To-Date and Anticipated**

Source	Amount
<b>State of Michigan and Michigan Economic Development Corporation</b>	\$22.5 million (\$5 million granted pre-dam-failure from MEDC + \$2.5 million grant for recovery + \$15 million grant for restoration)
<b>Private Fundraising</b>	\$5 million for general use
<b>USDA Natural Resource Conservation Service (NRCS)</b>	\$20-\$40 million for erosion, stabilization and debris removal, subject to matching grants from state and local funds
<b>USDA Community Facilities Grant</b>	\$750,000 for installation of booms on Secord and Smallwood lakes. \$400,000 FEMA grant for engineering
<b>State of Michigan 2022 Grant</b>	\$200 million for restoration of the Four Lakes and dams
<b>State of Michigan Grant to EGLE for FLTF</b>	\$15 million for permitting, licensing, environmental projects (\$3 million to match ~\$9 million from NRCS EWP)

## Updated Cost Estimates to Recover and Restore the Dams

### Remaining Efforts for Recovery Phase

#### *Secord Dam and Smallwood Dam*

Following the May 19, 2020 event, FERC ordered the Secord and Smallwood dams to be lowered for inspection and repair. The storm event caused downstream erosion damage to Secord Dam and severe downstream erosion damage to Smallwood Dam. As part of the Recovery Phase, FLTF implemented stabilization and safety measures to improve dam safety and operations in the interim period until full restoration measures can be installed. 2021 recovery efforts included primary spillway concrete repairs, riprap installation, site safety improvements and installation of monitoring/security equipment. Upstream safety booms are planned for installation in the summer of 2022.

#### *Edenville Dam*

The recovery effort at the Edenville Dam is substantially complete and included constructing the stabilization improvements outlined in the post-failure Michigan Department of Environment, Great Lakes and Energy (EGLE) Emergency Order and Permit (WRP026173 v. 1), dated November 19, 2020. Phase I construction of the Edenville Dam interim stabilization began in November 2020 on the Tobacco River side of the dam and included lowering the former Tainter gate spillway approximately 13-feet, constructing stabilizing sister walls, restoring the natural flow path of the Tobacco River, and stabilizing the downstream river channel immediately downstream of the dam.

Phase II recovery encompassed the Tittabawassee River side of the Edenville Dam and is comprised of four structures damaged during the May 2020 flood event: the former left embankment (breach location), Tainter gate spillway, powerhouse and right embankment. The recovery efforts included stabilization of the right embankment following significant erosion to the upstream slope and dam crest, demolition of the former Tainter gate spillway and approach channel to restore the natural flow path of the Tittabawassee River, and installation of an I-Wall dam with seepage cutoff and riprap for overtopping protection across the breach channel (former left embankment).



The Phase I and Phase II work was substantially completed by February 2022, with completion by September 2022. Work remaining at Phase I includes a safety boom upstream of the Tobacco spillway. Work remaining at Phase II includes final grading, seeding and establishment of vegetation downstream of the breachway. Most of the recovery work completed at Edenville was eligible for the NRCS EWP, which provided 75 percent contribution to the project cost, with the remaining project cost funded by State of Michigan appropriations to FLTF and USDA community facility grants.

### *Sanford Dam*

The recovery effort to stabilize the Sanford Dam commenced in January 2022. The recovery effort consists of the following three phases: Phase I – site preparation and site access, Phase II – spillway modification, and Phase III – I-Wall construction at the breached embankment. Phase I is complete while Phase II is underway and includes demolition of the former Tainter gate spillway, construction of a new stepped concrete weir and restoring the Tittabawassee River to its pre-flood location. Phase III includes the construction of an I-Wall dam through the breachway (former right embankment) and is planned to start in late spring 2022. All recovery efforts are anticipated to be completed by the fall of 2022. Like the Edenville recovery efforts, most of the work that has or will be completed will be eligible for the NRCS EWP program and the remaining cost will be funded by State of Michigan appropriations to FLTF.

### *Shoreline Erosion & Debris Removal*

In addition to the recovery effort at the dams, FLTF and NRCS identified numerous debris removal and shoreline stabilization projects eligible for the NRCS EWP Program to protect residential homes and critical infrastructure from damage related to active eroding following the rapid drawdown of Wixom Lake and Sanford Lake. The total NRCS eligible effort is estimated at \$15.25 million with \$5.25M of this work to be completed in 2021. In 2022, more projects are planned to include numerous shoreline erosion sites, culvert reconstruction projects and debris removal within the bottomland of Wixom Lake and Sanford Lake.

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Recovery Effort	Overall Budget	Work Completed to Date	Work to be completed	Funding from Other Sources (Federal, USDA-CF, Homeowners, Etc.)	Local Cost from other appropriations-SOM, EGLE
Dam Stabilization	\$24,600,000	\$13,500,000	\$11,100,000	\$7,400,000	\$3,700,000
Debris Removal	\$6,200,000	\$500,000	\$5,700,000	\$4,000,000	\$1,700,000
Shoreline Erosion	\$8,000,000	\$4,000,000	\$4,000,000	\$2,700,000	\$1,300,000
Safety Booms	\$1,250,000	\$410,000	\$840,000	\$795,000	
Total	\$40,050,000	\$18,410,000	\$21,640,000	\$14,895,000	\$6,700,000



## Current Restoration Phase Cost Estimates

The following paragraphs provide current restoration cost estimates for the construction phase of the repair and restoration of the Secord, Smallwood, Edenville and Sanford Dams and legal lake levels. The cost estimates, summarized in the following paragraphs, do not include costs for design engineering, regulatory permitting, program management or costs incurred in advance of receiving construction bids for the restoration projects.

Each dam is currently in the engineering design and EGLE permitting phases. The cost estimates provided in the report have been updated from the previously provided 30 percent design reports, which are available on FLTF’s website. Currently, engineering design is between 30 percent and 75 percent complete, depending on the dam. Edenville and Sanford are closer to 30 percent and Secord and Smallwood are close to 75 percent. As engineering progresses, the cost estimates provided in the report will be updated again.

These “up front” costs are being funded by private donations or State of Michigan appropriations to FLTF. The estimates were developed in accordance with AACE International’s Cost Estimate Classification System,

The cost estimates also do not include natural resources and ecosystem restoration funds to restore and monitor the ecosystem after the lakes are restored. FLTF and its consultants are working with EGLE and other agencies on an environmental assessment and restoration plan, which will include a plan to identify funds from outside of the Four Lakes Special Assessment district to manage the recovery of the ecosystem. The cost estimates also do not include dam and lake level annual operation and maintenance expenses. These are annual costs that must be funded by the Special Assessment District.

### Secord Dam

The updated Secord Dam cost estimate is summarized in Figure A3 (Class 3 Upper Limit +15 percent and Class 3 Lower Limit - 10 percent). Compared to the 30 percent Design Cost Estimate for Secord Dam, the 60 percent Design Cost amendments are associated with modifying the concrete auxiliary spillway to a Roller Compacted Concrete (RCC) auxiliary spillway and the replacement of the PZC Steel Pile cutoff walls for the construction of Soil Cement Bentonite (SCB) Cutoff Wall. In addition, costs associated with utility relocations, environmental/wetland mitigation purchases, backup power implementation, road restoration, SCADA system implementation, electrical and mechanical site civil and permit conditions were included.

**Figure A2: Secord Dam 60% Design Cost**

Item	Description	Class 3 Lower Limit	RCC Auxiliary Spillway (60% Design)	Class 3 Upper Limit
0.00	General Conditions	\$ 2,302,920	\$ 2,558,800	\$ 2,942,620
1.00	Site Preparation and Cofferdams	\$ 2,002,500	\$ 2,225,000	\$ 2,558,750
2.00	Site Demolition / Abandonment	\$ 571,500	\$ 635,000	\$ 730,250
3.00	Embankment Dam Earthwork	\$ 3,072,870	\$ 3,414,300	\$ 3,926,445
4.00	General Site Improvements	\$ 303,098	\$ 336,775	\$ 387,291
5.00	Structural	\$ 15,449,580	\$ 17,166,200	\$ 19,741,130
6.00	Electrical	\$ 580,500	\$ 645,000	\$ 741,750



<b>7.00</b>	<b>Architectural</b>	\$ 315,000	\$ 350,000	\$ 402,500
<b>8.00</b>	<b>Site Restoration &amp; Demobilization</b>	\$ 126,000	\$ 140,000	\$ 161,000
<b>9.00</b>	<b>Site Civil/Environmental/Utilities</b>	\$ 607,500	\$ 675,000	\$ 776,250
<b>10.00</b>	<b>Contingency</b>	\$ 2,533,147	\$ 2,533,147	\$ 2,533,147
	<b>Subtotal</b>	<b>\$ 25,331,468</b>	<b>\$ 28,146,075</b>	<b>\$ 32,367,986</b>
	<b>Construction Administration</b>	\$ 2,814,608	\$ 2,814,608	\$ 2,814,608
	<b>Construction Permitting &amp; Monitoring</b>	\$ 500,000	\$ 500,000	\$ 500,000
	<b>Total</b>	<b>\$ 31,179,222</b>	<b>\$ 33,993,829</b>	<b>\$ 38,215,741</b>

### *Smallwood Dam*

The updated Smallwood Dam cost estimate is summarized in Figure A4 (Class 3 Upper Limit +15 percent and Class 4 Lower Limit -10 percent). Compared to the 30 percent Design Cost Analysis for Smallwood Dam, the 60 percent Design Cost amendments are associated with altering the auxiliary spillway from concrete to rock in the spillway chute, utility relocations, environmental/wetland mitigation purchases, backup power implementation, road restoration, SCADA system implementation, electrical and mechanical site civil and permit conditions.

**Figure A3: Smallwood Dam 60% Design Cost**

<b>Item</b>	<b>Description</b>	<b>Class 3 Lower Limit</b>	<b>Riprap Auxiliary Spillway (60% Design)</b>	<b>Class 3 Upper Limit</b>
<b>0.00</b>	<b>General Conditions</b>	\$ 2,455,110	\$ 2,727,900	\$ 3,137,085
<b>1.00</b>	<b>Site Preparation and Cofferdams</b>	\$ 1,912,500	\$ 2,125,000	\$ 2,443,750
<b>2.00</b>	<b>Site Demolition / Abandonment</b>	\$ 450,000	\$ 500,000	\$ 575,000
<b>3.00</b>	<b>Embankment Dam Earthwork</b>	\$ 3,155,560	\$ 3,506,177	\$ 4,032,104
<b>4.00</b>	<b>General Site Improvements</b>	\$ 207,450	\$ 230,500	\$ 265,075
<b>5.00</b>	<b>Structural</b>	\$ 15,009,075	\$ 16,676,750	\$ 19,178,262
<b>6.00</b>	<b>Electrical</b>	\$ 846,000	\$ 940,000	\$ 1,081,000
<b>7.00</b>	<b>Architectural</b>	\$ 652,500	\$ 725,000	\$ 833,750
<b>8.00</b>	<b>Site Restoration &amp; Demobilization</b>	\$ 90,000	\$ 100,000	\$ 115,000
<b>9.00</b>	<b>Site Civil/Environmental/Utilities</b>	\$ 2,227,500	\$ 2,475,000	\$ 2,846,250
<b>10.00</b>	<b>Contingency</b>	\$ 2,700,569	\$ 2,700,569	\$ 2,700,569
	<b>Subtotal</b>	<b>\$ 27,005,694</b>	<b>\$ 30,006,327</b>	<b>\$ 34,507,276</b>
	<b>Construction Administration</b>	\$ 3,000,633	\$ 3,000,633	\$ 3,000,633
	<b>Construction Permitting &amp; Monitoring</b>	\$ 500,000	\$ 500,000	\$ 500,000
	<b>Total</b>	<b>\$ 33,206,896</b>	<b>\$ 36,207,529</b>	<b>\$ 40,708,478</b>

### *Edenville Dam*

An updated design cost analysis was prepared for the Edenville Dam based on the design alternative selected at the March 23, 2022, Alternative Selection Meeting, as summarized in Figure A5 (Class 4 Upper Limit +25 percent and Class 4 Lower Limit -15 percent). Compared to the previous 30 percent Design for Edenville Dam, the updated alternative design is consistent with the initial 30 percent design, with the left half of the powerhouse to be demolished and reconstructed as a crest gate spillway with the remainder of the powerhouse to be abandoned in place.



Amendments to the updated alternative design include a LLO within both spillway structures, the downstream slope has also been flattened from 2.5H:1V to 3H:1V and the SCB cutoff wall and parapet wall have been adopted as the preferred cutoff wall and minimum freeboard systems. In addition, costs associated with utility relocations, environmental/wetland mitigation purchases, backup power implementation, road restoration, SCADA system implementation, electrical and mechanical site civil and permit conditions were included.

**Figure A4: Edenville Dam 30% Revised Design Cost Analysis**

Item	Description	Class 4 Lower Limit	Alternative 3 (30% Design Estimated Costs)	Class 4 Upper Limit
0.00	<b>General Conditions</b>	\$ 3,541,100	\$ 4,166,000	\$ 5,207,500
1.00	<b>Site Preparation</b>	\$ 1,245,250	\$ 1,465,000	\$ 1,831,250
2.00	<b>Site Demolition / Abandonment</b>	\$ 428,145	\$ 503,700	\$ 629,625
3.00	<b>Tittabawassee Embankment (Breached Section)</b>	\$ 3,554,235	\$ 4,181,453	\$ 5,226,816
4.00	<b>Tittabawassee Embankment (Stabilized Section)</b>	\$ 6,533,753	\$ 7,686,769	\$ 9,608,461
5.00	<b>Tobacco Embankments</b>	\$ 7,303,419	\$ 8,592,258	\$ 10,740,323
6.00	<b>New Gated Spillways and Outlets Works- TBW</b>	\$ 16,265,600	\$ 19,136,000	\$ 23,920,000
7.00	<b>New Gated Spillways and Outlets Works- TBO</b>	\$ 6,813,528	\$ 8,015,916	\$ 10,019,894
8.00	<b>Powerhouse Rehabilitation</b>	\$ 1,062,500	\$ 1,250,000	\$ 1,562,500
9.00	<b>New Labyrinth Spillway</b>	\$ 4,725,575	\$ 5,559,500	\$ 6,949,375
10.00	<b>Discharge Channel</b>	\$ 167,131	\$ 196,625	\$ 245,781
11.00	<b>Site Restoration</b>	\$ 1,275,000	\$ 1,500,000	\$ 1,875,000
12.00	<b>Site Civil/Environmental/Utilities</b>	\$ 3,315,000	\$ 3,900,000	\$ 4,875,000
13.00	<b>Contingency</b>	\$ 21,758,790	\$ 21,758,790	\$ 21,758,790
	<b>Subtotal</b>	<b>\$ 56,230,237</b>	<b>\$ 66,153,220</b>	<b>\$ 82,691,525</b>
	<b>Construction Administration</b>	\$ 8,065,322	\$ 8,065,322	\$ 8,065,322
	<b>Construction Permitting &amp; Monitoring</b>	\$ 500,000	\$ 500,000	\$ 500,000
	<b>Total</b>	<b>\$ 86,554,349</b>	<b>\$ 96,477,332</b>	<b>\$ 113,015,637</b>

**Sanford Dam**

An updated design cost analysis was prepared for the Sanford Dam based on the design alternative selected at the March 23, 2022, Alternative Selection Meeting, as summarized in Figure A5 (Class 4 Upper Limit +25 percent and Class 4 Lower Limit -15 percent). Compared to the 30 percent Design Cost Analysis for Sanford Dam, the updated alternative design cost amendments are associated with six new hydraulic gates, an earthen embankment with Roller Compacted Concrete (RCC) overtopping protection, an RCC auxiliary spillway, RCC/CIP concrete training walls, utility relocations, environmental/wetland mitigation purchases, back-up power implementation, road restoration, SCADA system implementation, electrical and mechanical site civil and permit conditions were included.



**Figure A5: Sanford Dam 30% Revised Design Cost Analysis**

Item	Description	Class 4 Lower Limit	6 Gates & RCC Overtopping Armor (30% Estimated Costs)	Class 4 Upper Limit
0.00	General Conditions	\$ 3,720,450	\$ 4,377,000	\$ 5,471,250
1.00	Site Preparation	\$ 2,586,550	\$ 3,043,000	\$ 3,803,750
2.00	Site Demolition / Abandonment	\$ 151,300	\$ 178,000	\$ 222,500
3.00	Left Embankment	\$ 850,850	\$ 1,001,000	\$ 1,251,250
4.00	Middle Embankment	\$ 2,930,800	\$ 3,448,000	\$ 4,310,000
5.00	RCC Auxiliary Spillway	\$ 7,943,250	\$ 9,345,000	\$ 11,681,250
6.00	Right Embankment - Non-Overflow RCC Armoring	\$ 2,143,700	\$ 2,522,000	\$ 3,152,500
7.00	Gated Spillway	\$ 19,700,450	\$ 23,177,000	\$ 28,971,250
8.00	Powerhouse Rehabilitation	\$ 616,250	\$ 725,000	\$ 906,250
9.00	Misc. Excavation	\$ 153,000	\$ 180,000	\$ 225,000
10.00	Site Restoration	\$ 127,500	\$ 150,000	\$ 187,500
11.00	Site Civil/Environmental/Utilities	\$ 1,241,000	\$ 1,460,000	\$ 1,825,000
12.00	Contingency	\$ 14,819,540	\$ 14,819,540	\$ 14,819,540
	<b>Subtotal</b>	<b>\$ 42,165,100</b>	<b>\$ 49,606,000</b>	<b>\$ 62,007,500</b>
	Construction Administration	\$ 5,910,600	\$ 5,910,600	\$ 5,910,600
	Construction Permitting & Monitoring	\$ 500,000	\$ 500,000	\$ 500,000
	<b>Total</b>	<b>\$ 63,395,240</b>	<b>\$ 70,836,140</b>	<b>\$ 83,237,640</b>

### Dam Restoration Cost Summary

The May 2022 Restoration Plan has the Repair and Restoration at \$215 Million, with a sensitivity of +/- 25 percent, and a planning estimate was set at \$250 million. All the construction factors and permitting factors have now been built into the estimates.

The total project cost range, from lowest to highest, for the restoration of Secord Dam, Smallwood Dam, Edenville Dam and Sanford Dam are summarized below in Figure A7.

**Figure A6: Summary of Dam Restoration Costs - Secord, Smallwood, Edenville and Sanford Dams**

Lower Limit	<b>\$ 214,335,707</b>
Middle Limit	<b>\$ 237,514,830</b>
Upper Limit	<b>\$ 275,177,495</b>

Secord Dam and Smallwood Dam have increased in overall estimates, due to the amount of flow capacity they must pass and the small property footprint that these dams sit on. These are not the same conditions on the lower two dams.

For planning purposes, given the market volatility and unknowns, the lower limit is not as likely to be



achieved, and it is unlikely that the sum of the projects will all be at the upper limit. Therefore, **the financing plan remains set at \$250 million assuming a total project cost between \$230 and \$270 million**. As stated above, as engineering progresses, the cost estimates provided in this report will be updated.

## Administrative, Operations and Transitional Costs

The operations costs for the years 2022 through 2024 are estimated to be \$4.7 million and will be needed for the operations, maintenance and program costs of the Four Lakes system during the transition to their normal levels. The Four Lakes Operations Assessment will be levied across the Four Lakes Special Assessment District, with a computational cost of \$1,564,000 per year.

**Figure A7: Computation of Costs**

		Total 3 year	2022	2023	2024
<b>1</b>	<b>Expense of Maintenance of the Lake Level Structure</b>				
	Program Office (Finance, Admin, Communications, Legal)	\$1,140,000	\$360,000	\$380,000	\$400,000
	Dam and Lake Operations	\$2,370,000	\$750,000	\$790,000	\$830,000
<b>2</b>	<b>Establishment of Special Assessment District</b>	\$465,000	\$425,000	\$20,000	\$20,000
	Preparation of Assessment Roll and Levying Assessments				
	Estimated Cost of Mailing, Publishing, Notices				
	Estimated legal fees				
<b>3</b>	<b>Acquisition</b>	\$80,000			
<b>4</b>	<b>Estimated Cost of Appeal</b>	\$25,000	\$25,000		
	Gross Sum of Expenses	\$4,080,000	\$1,560,000	\$1,190,000	\$1,250,000
	Contingency 15%	\$612,000	\$234,000	\$178,500	\$187,500
<b>Assessment Total Sum</b>		<b>\$4,692,000</b>	<b>\$1,794,000</b>	<b>\$1,368,500</b>	<b>\$1,437,500</b>
<b>Annual Assessment Amount</b>		<b>\$4,692,000</b>	<b>\$1,564,000</b>	<b>\$1,564,000</b>	<b>\$1,564,000</b>

## Critical Success Factors

There were four critical issues identified in the May 2020 Restoration Plan that could impact the success of the project. These issues have essentially been mitigated. However, they will remain as areas of focus.

1. **Financing and Affordability:** Significant funds were granted to the restoration effort to assure a community affordable financing plan. Continued areas of focus are:
  - Managing project costs, especially in a period of inflation and volatility
  - Finding financial support for those with low income and who have homestead properties
  - Continue to seek grants and donations to address for the recovery. This



will be more focused on need, or specific areas, that the Four Lakes Special Assessment District cannot legally fund

2. **Permitting and the environment:** EGLE, while still playing its role as regulator, has agreed to support the community in the efforts to restore the lakes, and in development of an Environment Restoration Plan. Continued areas of focus:
  - Complete the Restoration Plan and transition to individual lake planning
  - Field studies of the snuff box mussel which is an endangered species
  - Timeliness and costs of environmental permitting
3. **SAD methodology:** The Operations Assessment of property owners of the Four Lakes Special Assessment District is being established. In 2022, areas of focus:
  - Put in place an Operations Assessment to cover administrative and program costs, as well as the operations of all four dams that are regulated by EGLE
4. **Precipitation and flood studies:** These have been completed, with the capacity designs set for the northern two dams and to be completed for the lower two dams this year. Continued areas of focus:
  - Complete floodplain mapping upstream and downstream of dams
  - Permitting, future state safety requirements
  - Community understanding of how the dams will work in the watershed at different storm frequencies



## §10 — Chapter 10: Financing Plan

### §10a. Funding Operations, Administration and the Program

Four Lakes Task Force (FLTF) intends to use a special assessment as the funding mechanism for operations and maintenance costs. The operations and maintenance costs are estimated to be \$4.7 million over three years and will be used for the operations and management of the lakes during the transition to their normal levels, the development of operational plans and long-term, ongoing operations. The assessment will be normalized to \$1.564 million per year. Using a Special Assessment District (SAD) to provide the funds needed for operations and maintenance has been part of the financing plan since dam pre-failure and is the only way to ensure a safe and sustainable future for the Four Lakes system.

### §10b. Dam Repair and Reconstruction

The primary source of repair and reconstruction will be the \$200 million State of Michigan grant appropriated in March 2020. This grant does not cover the total project cost and has a 20 percent match requirement. Therefore, capital improvement costs will be needed to cover a portion of the construction and repair costs. Property owners will not be assessed for these costs until the engineering design is final, all permits are in, and construction bids have been received. The current estimated timeframe to levy a special assessment for the capital improvement projects is 2024, with the first payment in 2025. More detail on current estimates and the specifics of such an assessment can be found in [Chapter 11c](#).

The Four Lakes SAD will provide funding for the project with financing secured by assessments. FTLF is evaluating options for different loans or bonds. For those familiar with the Special Assessment process in the Michigan Drain Code of 1956, ACT 40, as amended, the development of the Four Lakes SAD assessments under Part 307, follows a similar process.

Local units of governments, such as a county, city, township, village, or other statutory authorities (e.g., lake level Special Assessment District), cannot borrow money from conventional lenders under loan agreements, or pledge municipal property or assets as collateral to secure loans unless expressly provided by law. Therefore, a municipal bond, which is debt security used to finance the construction of public infrastructure such as roads, bridges, water systems and sewer systems, would be one way the Four Lakes SAD could obtain funding. Conventional bonds are one of the fastest ways for a county to obtain funding for a project. These bonds typically have up to a 30-year duration and would require the county to assume the risk of borrowing money on behalf of the SAD.

FLTF is working closely with the U.S. Department of Agriculture (USDA) to secure long-term, low-interest loans to finance this project, after State grants or other future donations or grants are used. The preferred financing alternative is to obtain a USDA Rural Development Loan. The USDA is the only program that assesses project affordability and can supplement a loan with some grant funding if the project is eligible. On October 16, 2020, the USDA issued a response indicating that the Four Lakes reconstruction projects are eligible for loans. USDA Financing would additionally allow a 40-year duration for financing, which would reduce annual costs to homeowners within the SAD.



## §10c. Grants and Donations

To date, FLTF has received approximately \$5 million in private grants and donations and an additional \$22.5 million in grant funding from the State of Michigan. Erosion, debris removal and dam stabilization work has been funded through nearly \$15 million in grants through the NRCS EWP Program, which covers matching grants of approximately 75 percent of construction costs and 100 percent of engineering costs for eligible projects. Because of the work FLTF has done to secure grants and donations, property owners have not yet paid anything towards recovery and restoration. Additionally, the engineering and design studies to date have been funded through grants and donations.

The State of Michigan recently approved a significant appropriation for \$200 million to assist in the restoration of these four lakes. In addition to the \$200 million appropriation, \$15 million was appropriated to the Department of Environment, Great Lakes, and Energy (EGLE) for department resources and expenses related to permitting, inspection, review and consultation for projects associated with flooding and dam management related to the dam failure in May 2020. The \$15 million appropriation includes \$3 million to match an estimated \$9 million of funds from the USDA Natural Resource Conservation Services Emergency Watershed Protection (NRCS EWP) program that will be used for the remaining debris removal and to address shoreline erosion that is occurring from the dam failures.<sup>8</sup>

FLTF is regularly reviewing grant opportunities and communicating with local foundations and others to seek funding wherever it may be available. In addition, FLTF is engaged in an active advocacy program and is continually seeking federal and state grants and funding to reduce the overall burden to the county and the lake property owners.

## §10d. Lake Level Special Assessment

The Four Lakes SAD is an established boundary of lakefront properties along or near the four lakes, and backlot properties with dedicated (private easement) access. The original intent was for properties within the SAD to share financial responsibility by paying an annual assessment on the property's tax bill. The SAD offers a method of financing the acquisition, operations, maintenance, repairs and improvements to the dams to ensure that they meet State of Michigan dam safety standards, per Part 315 "Dam Safety" of NREPA, MCL 324.31501 et seq. (Part 315).

### Special Assessment Legal Process

Part 307, also referred to as inland lake levels, is a part of the Natural Resources and Environmental Protection Act 451 of 1994. Part 307 authorizes the counties to defray the costs of acquiring, designing, constructing, improving, repairing and maintaining lake-level projects by special assessments. Specifically, Section 30711 (MCL 324.30711) provides:

- (1) The county board may determine by resolution that the whole or a part of the cost of a project to establish and maintain a normal level for an inland lake shall be defrayed by special assessments against the following which benefited from the project: privately owned parcels of land, political subdivisions of the state and state-owned lands under the jurisdiction and control of the

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<sup>8</sup> The \$15 million grant also includes \$3 MM for flood management plans downstream of the Four Lakes. It is unclear how the remaining EGLE funds will be used, but FLTF believes they should be used to offset EGLE or FLTF costs in Environmental Restoration or permitting requirements that have yet to be defined.



department. If the county board determines that a special assessment district is to be established, the delegated authority shall compute the cost of the project and prepare a special assessment roll.

- (2) If the revenues raised pursuant to the special assessment are insufficient to meet the computation of cost included in section 30712, or if these revenues are insufficient to meet bond obligations, the special assessment district may be reassessed without hearing using the same apportioned percentage used for the original assessment.

The use of a special assessment has been a part of the plan for funding and financing the maintenance of the Four Lakes since work began on the project as all stakeholders seek to benefit from the levels being maintained.

- (1) MCL 324.30714 governs the procedural aspects of a special assessment, including notice, and states the following: A special assessment roll shall describe the parcels of land to be assessed, the name of the owner of each parcel if known and the dollar amount of the assessment against each parcel.
- (2) The delegated authority shall set a time and place for a public hearing or hearings on the project cost and the special assessment roll. Notice of a hearing shall be by both of the following:
  - (a) By publication of notice at least twice before the hearing in a newspaper that circulates in the special assessment district, the first publication to be at least 10 days before the hearing.
  - (b) As provided in Act No. 162 of the Public Acts of 1962, being sections 211.41 to 211.746 of the Michigan Compiled Laws.
- (3) At or after a public hearing, the delegated authority may approve or revise the cost of the project or the special assessment roll. Before the construction of a project, the county board shall approve the cost and the special assessment roll by resolution.
- (4) The special assessment roll with the assessments listed shall be final and conclusive unless appealed in a court within 15 days after county board approval.

Section 211.741(2) imposes additional notice requirements for governmental authorities that make a special assessment:

- (1) The notice of hearing shall include a statement that appearance and protest at the hearing in the special assessment proceedings is required to appeal the amount of the special assessment to the state tax tribunal and shall describe the way an appearance and protest shall be made.

FLTF has been transparent with the SAD process. Publications and information on the SAD are readily available on the FLTF website. For those familiar with the special assessment process in the Michigan Drain Code of 1956, ACT 40, as amended, the development of the SAD for the Four Lakes follows a similar process.

However, despite the above-referenced provision, Part 307 provides a less elaborate mechanism for review (i.e., appeal) of a lake level special assessment appeal. Appellate review of lake level special



assessments is handled by the county circuit court and not the Michigan Tax Tribunal.<sup>9</sup> As noted above, MCL 324.30714(4) provides, “[T]he special assessment roll with the assessments listed shall be final and conclusive unless appealed in a court within 15 days after county board approval.”

Generally, the creation of a SAD through the power established under Part 307, enjoys a presumption of validity.<sup>10</sup> A property owner challenging a special assessment carries a heavy burden of proof since there is a presumption that the special assessment levy is valid. That said, in 1986, the Michigan Supreme Court reviewed a case where property owners challenged a special assessment levied against their properties for road improvements.<sup>11</sup> The property owners argued that the special assessment against their properties was invalid because the cost of the improvements exceeded the increase in value of the properties and that there was no special benefit conferred on their properties beyond that of the community at large. The Michigan Supreme Court held that municipal decisions regarding special assessments are presumed to be valid and that special assessments against properties should be upheld by the courts unless there is substantial or unreasonable disproportionality between the amount assessed and the value that accrues to the land because of the improvements made.

As it relates to the Four Lakes special assessments, to decide whether substantial or unreasonable disproportionality exists between the special assessment and value that accrues to the properties within the SAD because of the improvements, it is necessary to evaluate pre- and post-improvement property values. It is not necessary that there be a “rigid dollar-for-dollar balance” between the amount of the special assessment and the amount of the benefit (increased value) to the property.

## **Municipal Bonds and Notes**

Local units of governments, such as a county, city, township, village, or other statutory authorities (e.g., lake level SAD), do not have the authority to borrow money from conventional lenders under loan agreements, or pledge municipal property or assets as collateral to secure loans unless expressly provided by law.<sup>12</sup> This follows the basic understanding that local units of government have only those powers to borrow as expressly granted by Michigan law. The power to raise revenue and incur debt depends on the statutory powers granted to the specific governmental unit.

A municipal bond is debt security used to finance the construction of public infrastructures such as roads, bridges, water systems and sewer systems. Most governmental units and many non-profit organizations are authorized to issue municipal securities in the form of a bond or note to raise funds for capital improvements. Municipal securities are generally issued on a tax-exempt basis, which means that the interest on the security paid by a governmental unit is tax-free, making the bonds attractive to investors.

The Four Lakes SAD must operate within a restrictive set of rules in financing specific projects. Part 307 authorizes this district to issue bonds, notes, or lake level order in anticipation of the collection of special assessments.<sup>13</sup> Bonds and notes issued by a lake level SAD must comply with Michigan’s

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<sup>9</sup> *In re Project Cost & Special Assessment Roll for Chappel Dam*, 282 Mich. App. 142, 147, 762 NW2d 192, 195-96 (2009).

<sup>10</sup> *Crompton v Royal Oak*, 362 Mich. 503, 514, 108 NW2d 16 (1961).

<sup>11</sup> *Dixon Road Group v Novi*, 426 Mich. 390, 395 NW2d 211 (1986).

<sup>12</sup> MCL 141.2301.

<sup>13</sup> MCL 324.30705



Revised Municipal Finance Act<sup>14</sup> and may have a final maturity date not exceeding 40 years. As additional and secondary security, the county board of commissioners by a vote of two-thirds of its members may pledge the full faith and credit of the county for payment of the bonds or notes issued by the SAD.<sup>15</sup> Finally, proceedings relating to the making, levying and collection of special assessments authorized by Part 307 and “the issuance of bonds, notes, or lake level orders in anticipation of the collection of the special assessments shall conform as nearly as possible to the proceedings for levying special assessments and issuing special assessment bonds as outlined in the drain code of 1956, 1956 PA 40, MCL 280.1 to 280.630.”<sup>16</sup>

## **§10e. Use of Special Assessment District for Financing**

FLTF intends to use the special assessment funding mechanism for operations costs and capital improvements costs. The operations costs account for the operations and management of the lakes during the transition to their normal levels, emergency repairs, the development of operational plans and long-term, ongoing operations. Using a SAD for acquiring the funds needed for operation and maintenance has been part of the financing plan since the project’s beginning pre-failure. The capital improvement costs will cover a portion of the construction and repairs costs and property owners will not be assessed for these costs until the engineering design is final, all permits have been received and construction bids have been received.

### **Conventional Bonds**

Conventional bonds can be sold through the counties, at current market interest rates of approximately 3-3.5 percent. Ten-year loans are typical durations that can be expected on the market. Conventional bonding is the fastest way to obtain money for the construction of a project which can happen in a few months. With this alternative, the counties need to be willing to assume the risk associated with borrowing the money for the SAD, as well as having an adequate bond approval to do so.

### **USDA Rural Development Loan**

The USDA Office of Rural Development (RD) is an agency that runs programs intended to improve the economy and quality of life in rural America. RD financing offers up to 40-year loan terms and possible partial grants for the construction of community facility projects at low, intermediate and market interest rates (2-3 percent), based on the median household income of the service district. The application for this program is extensive and while RD financing is an attractive alternative for those communities that cannot afford larger payments, the project would ultimately cost more in the long run due to a longer loan period.

The RD application process is extensive, including requiring a Preliminary Engineering Report (PER) which is an extension and elaboration of the Restoration Report and an environmental report (ER). While Spicer Group, Inc. prepares the PER, there is an agency called Rural Communities Assistance Program (RCAP) that can complete the ER for no charge. The application preparation and funding approval process typically takes approximately six-nine months to complete and obtain a funding obligation, not including any land acquisition or easements that may need to be secured.

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<sup>14</sup> 2001 PA 34, MCL 141.2101 to 141.2821.

<sup>15</sup> MCL 324.30705(4).

<sup>16</sup> MCL 324.30705(3)



RD receives its funding from the federal government on the state's fiscal year cycle (October 1st – September 30th). However, applications can be submitted at any time of the year and are on a first-come, first-served basis; there is no scoring system. Also, there are no Qualifications Based Selection Process (QBS) selection process requirements for selecting a consultant. The construction work is not subject to prevailing wage rates, but the materials are subject to American iron and steel requirements. When an application is submitted and approved, RD will “obligate” the money. With the \$200 million state grant, FLTF is now engaged with USDA to be the secondary funder of the projects, with capital needed in the 2025 to 2026 construction period.

RD will not approve financing for any work needed by individual homeowners. There are separate programs through USDA that can provide financial assistance for a private construction portion of a project for eligible elderly and/or low-income residents. Application for funds is the responsibility of the homeowner.

USDA loan comparison to conventional bonds:

#### **Advantages**

- Lower interest rate
- More flexibility in terms (up to 40 years, versus 20 to 30 years)
- Principal can be paid down w/o penalty

#### **Disadvantages**

- More reporting and paperwork
- Early commitment to absolute loan number

USDA's goal is to provide as much financial assistance as possible to as many communities as possible. It is the only program that assesses project affordability and can supplement a loan with some grant funding if the project is eligible. FLTF is proactively managing costs and schedules.

In fall 2020, the FLTF SAD authorized an RD pre-application to be submitted to determine funding eligibility. On October 16, 2020, RD issued a response letter (Appendix 10<sup>17</sup>), indicating that all four dam reconstruction projects are eligible for loans.

## **§10f. Financing Conclusion**

FLTF will use approximately \$10 million of the \$200 million State grant to finish engineering and permitting. Along with an additional \$3 million in matching funds from Egle for the NRCS EWP program to finish recovery. This will leave approximately \$190 million for the construction phase of the Four Dams. Private and federal funds, along with SAD financing, will more than meet the community match requirement.

## **§10g. Special Assessment Timeline**

The Operations Special Assessment will be implemented in 2022. FLTF will provide its best estimate on a Capital Assessment, which won't be implemented until there are future hearings and county commissioners' review in 2024 or 2025.

- February and April 2022: Preliminary days of review
- June 2022: Four Lakes Special Assessment hearing(s)
- June 2022: Board of commissioners' approval
- June-August 2022: Time allowance for appeals



- December 2022: Operations Assessment appears on winter 2022 taxes



## §11— Chapter 11: Special Assessment District, Property Benefits and Affordability Analysis

### §11a. Introduction

An assessment of property owners of the Four Lakes Special Assessment District (SAD) must be put in place to restore and maintain the lakes. While this assessment will be the secondary source of funding for dam restoration, it is the foundation of funding required to restore the lakes and attract supplemental funding. It assures there is a financial means for long-term sustainability for operating and maintaining the lakes.

It is important to have a fair and consistent methodology for the assessment of benefits to restore and maintain the lakes. FLTF has presented initial methodologies for establishing benefit factors on the website and during informational webinars. FLTF implemented substantial outreach programs, which have been effective, as it has received a substantial amount of input from property owners regarding the SAD benefit factors. FLTF is continuing to update the factors and anticipates the benefit factor methodology, including additional benefit factors for undevelopable lots, to be developed. This includes water frontage, water widths and water depths at each lakefront lot.

The State of Michigan grant is the primary source of funding for dam restoration therefore the capital special assessments will be managed as one. Managing all dams as one project will allow for economies of scale that will result from consolidated financing, material buying power, program management, construction, and operations oversight. This will keep costs down and result in lower assessments than if the projects were financed individually.

This assessment is personal to everyone on the lake. Based on the FLTF project team's analysis, studying the ability of property owners to pay based on the economic demographics of the communities on the Four Lakes, the conclusion is: In general, the \$200 million state grant makes the assessment affordable to most of the community.

See Appendix 11<sup>17</sup> for the complete economic summary provided by PSC. See Appendix 5<sup>17</sup> for complete PSC survey results. With the \$200 million in funding, FLTF will enhance restoration plans to provide more clarity regarding assessments and advocate based on the updated planning estimates. There will be a clear focus on project execution, continued focus on private, state and federal funding support, and support for environmental restoration.

### §11b. Operations, Capital Improvement and Transition Assessment

There will be two separate assessment rolls to restore and sustain the lakes. The four dams and lakes restoration will be managed, as it has been, as a total system. The acquisition, restoration and long-term maintenance of the lakes are more effectively managed and operated as one project in one SAD. These lakes are hydraulically linked in their operations and managing this as one project brings economic scale and expertise beyond what one lake community could manage. Property owners have

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<sup>17</sup> Restoration Plan appendices: <https://www.four-lakes-taskforce-mi.com/restoration-plan.html#appendix>.



the option to pay the assessment off in less than 30 years, should they choose. It is anticipated that the capital improvement assessment will be for 30 years.

There also will be an operations and maintenance assessment for all property owners from all lakes of the Four Lakes system. This assessment will be updated frequently and will fund operations and maintenance. There will be an initial O&M assessment before the dams are reconstructed, which is referred to as the “transition assessment.” As the dams and lakes are restored, the assessment amount will be updated to reflect post-restoration operations and maintenance. The operations and maintenance assessment (planned for the winter 2022 tax bill) to cover the costs to operate the dams even before the dams are restored. This assessment will be allocated among all four lake properties based on the benefit derived.

The method to calculate the benefit for each parcel is the same for both the capital and operations and maintenance assessments and is calculated by:

- Apportionment of benefit: The benefit factors assigned to the property divided by the total amount of benefit factors for all the properties on or with access to each lake will be used to apportion costs on a percentage basis. This will be multiplied by the total computation of costs for either the operations and maintenance or the restoration to the legal lake level
- Multiplying the percentage of benefit by the landowner’s portion of computation of cost will yield the parcel owner’s annual Capital Assessment
- A parcel owner may pay the principal upfront or the remaining principal off in any year. The levy remains with the property. Annual numbers reduce over time until the principle of the loan is paid off. The principal is paid down in equal proportions each year of the term of the loan (e.g., 1/30 for a 30-year loan). Interest is applied each year on the remaining principle
- Note, when both the operations and maintenance and Capital Assessments are in place, the total annual assessment is the total of the operational assessment plus the annual Capital Assessment

## **§11c. Assessments for the Four Lakes Special Assessment District**

The State of Michigan has appropriated \$200 million to the Four Lakes dam reconstruction projects. FLTF will have to utilize \$10 million of the \$200 million in the interim to get to construction, meaning \$190 million will be applied to dam reconstruction costs. Given the \$250 million construction planning estimate explained in detail in Chapter 10, FLTF anticipates a need for a \$60 million Capital Assessment.

FLTF has updated Capital Assessment estimates to follow the “All Lakes” model defined above and based on a \$60 million Capital Assessment estimate. The estimates to follow anticipate 30-year financing and an interest rate of 3 percent with a Capital Assessment likely to begin in 2024. FLTF has defined a range of assessments as between .25 and 1.



A total of 91 percent of all parcels within the Four Lakes SAD are anticipated to receive an assessment between .25 and 1. Homeowners are encouraged to review their parcels on the assessment map<sup>18</sup> available on the FLTF website. The range of updated assessment estimates (based on a \$60 million Capital Assessment) is illustrated in Figure A8 below.

**Figure A8: Planning Level Assessments Given Current State Funding of \$200 Million Estimating a Capital Assessment of \$60 million\***

	Principle Payment	Annual Assessment
High End of Range (1)	\$9,430	\$460
Average Assessment (.75)	\$7,075	\$345
Low end of Range (.25)	\$2,360	\$115

\*Assuming 30-year financing, 3 percent interest. Annual cost illustrated is average annual payment.

**Capital Assessment Ranges**

Assessment	Principle Payment	Yearly Assessment	Yearly Assessment Range	Percent of Properties
High End of Range (1)	\$9,430	\$460	\$460 or Greater	9%
Average Assessment (.75)	\$7,075	\$345	\$345 to \$460	52%
Low end of Range (.25)	\$2,360	\$115	\$115 to \$ 345	39%

**Operations Assessment Ranges**

Assessment	Yearly Assessment	Yearly Assessment Range	Percent of Properties
High End of Range (1)	\$240	\$240 or Greater	9%
Average Assessment (.75)	\$180	\$180 to \$240	52%
Low end of Range (.25)	\$60	\$60 to \$180	39%

<sup>18</sup> FLTF SAD map: <http://bit.ly/SAD-map>.



## §11d. Understanding Sensitivities

Current planning estimates indicate that \$60 million is the best assessment estimate given the current construction planning estimates and all funds that have been allocated to the project to date. It is important to understand there are some sensitivities to consider surrounding the current estimates. Sensitivities could contribute to increasing or lowering the assessment estimates provided in [11c](#). A summary of some of these sensitivities follows.

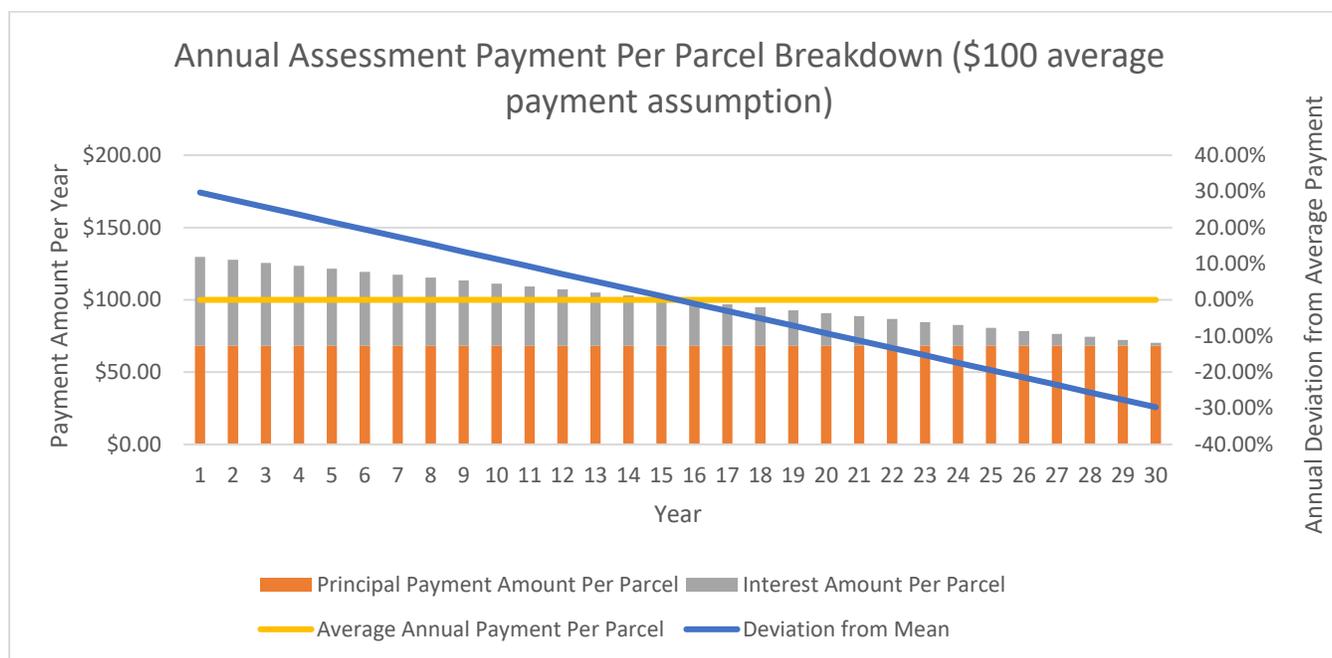
**Increase in construction costs.** The current \$60 million Capital Assessment estimate is based on preliminary construction planning estimates and current levels of State of Michigan funding. As design engineering efforts continue in the coming years, these construction planning estimates will be revised with greater certainty and could increase or decrease. The current construction planning estimates of \$250 million include a confidence interval of +/- 25 percent. If construction costs were to increase or decrease, it would impact the amount that is needed in a Capital Assessment. To provide homeowners with an idea of what this would mean on a per parcel basis, for a parcel with a factor of 1, a cost increase or decrease of \$20 million would mean +/- \$60 per parcel on an annual basis.

**Increase in interest rates.** FLTF is assuming a 3 percent interest rate for a Capital Assessment in 2024. Current interest rates for USDA financing are around 2.5 percent, therefore, 3 percent is only an estimate for 2024 financing rates based on current trends in the market. Ultimately, the interest rate could be higher or lower than 3 percent and would impact annual assessment costs. To help homeowners understand in greater detail what this would mean for their specific assessment, on a per parcel basis for a parcel with a factor of 1, an increase in interest rates of 1.5 percent would cause a cost increase of approximately \$50 per parcel.

**Financing Term.** The current Capital Assessment estimates assume 30-year financing, should FLTF ultimately have the ability to seek other financing and a 40-year financing term is realized, annual assessment costs could decrease by approximately \$60 for a parcel with a factor of 1.

## §11e. Variation in Annual Assessment Amounts

It is also important for homeowners to understand that the annual payment for the Capital Assessment will not be the same dollar amount year after year. As stated in [Section 11c](#), all numbers cited in this report are using the average annual payment. Each year, homeowners will experience a slight change in the annual amount due. To summarize, the first-year annual payment will be approximately 30 percent higher than the average payment and the last payment will be approximately 30 percent lower than the annual payment. The below graph summarizes how the annual assessment payment varies year over year utilizing a \$100 average assessment assumption to clearly illustrate the variation in annual payment over the life of the assessment.



## §11f. Part 307 Special Assessment

The Part 307 special assessment to return the Four Lakes to normal lake levels is not a tax. Rather, it is a specific levy to recover the costs of improvements that confer or preserve benefits, relieve a burden, or create special adaptability upon the land (not a person) within the Four Lakes SAD.

It is not the present use of the property that determines the benefit it receives from an improvement, but its available use. This includes a use that may be rendered more feasible by the carrying out of a project in connection with the assessment that is levied. A Part 307 special assessment is not based on the tax assessment of your property or whether a landowner chooses to use the benefit. Rather, the special assessment is based on an approved computation of costs and apportioned to each property based on benefits derived for that property.

Before a special assessment can be imposed, the delegated authority is required to prepare a computation of the cost of the project. This also applies to operational costs. The special assessments are necessary to defray the costs outlined in the computation of cost (or project costs). Initially, it is the role of the delegated authority (FLTF) to prepare the computation of cost, apportion those costs and prepare an assessment roll. In addition, the delegated authority is responsible for providing notice to all property owners and public entities of a hearing to consider objections to the project costs and assessment roll, before presenting the project cost and assessment roll to the Midland and Gladwin county boards of commissioners for their approval. The special assessment cannot be imposed without undertaking the procedures outlined in Part 307.

The Four Lakes system is complex because of its geographic reach, multiple plot configurations and diversity of waterways. Benefit factors in connection with the apportionment of costs are being developed and considered to apply uniformly across the properties within the SAD. Significant analysis is underway to develop a fair system of benefit factors for apportioning costs to properties in the district.

This analysis, using existing current project cost estimates with current benefit factors, will be used to



determine and estimate future assessments. This is a living document and model, as costs are refined and as FLTF does lot-by-lot evaluations. FLTF encouraged landowners to bring their concerns to FLTF so it may determine if the benefit factors have been accurately applied to the property when costs are apportioned.

## §11g. Revisiting Benefits Factors

The law requires the delegated authority to act in good faith in apportioning benefits and that the assessment should equal the costs apportioned against properties. Property owners want the benefit calculation to be fair, as does FLTF, and it is required by law. A benefit model was created and is available on the FLTF website.<sup>19</sup> This model was derived based on the existing weed district assessments for the Four Lakes.

It is clear that a simple model considering standard lots and backlots, as illustrated, works well when there is consistency with uniform lots and backlots with clear and similar access points.

This is not the situation with the Four Lakes, which are complex and have a great amount of variability in function, shape and depth.

Lakefront properties have a wide variation in frontage, access, depth, zoning and other relevant factors. Apportionment models are still valid using a defined base unit, but there will be benefit factors that will increase or reduce apportionment of cost to properties and by extension the amount of the assessment.

The special assessment methodology is developed to accurately depict the amount of benefit a parcel receives from the Part 307 legal lake levels. The methodology has been updated numerous times to account for feedback received from landowners during various public meetings and preliminary reviews. The assessment benefit factors are used to determine the apportionment associated with each assessable parcel within the district. The benefit factors include the following:

- Base factor: All parcels are assigned a base benefit factor which include either a 0, 0.5 or 1
- Water frontage: The frontage factor is a weighted factor given solely to lots with direct access to the water
- Water view: The water view factor measures the width of the waterway in front of a parcel perpendicular to its frontage
- Water depth: There are three depths which a parcel can be assigned: less than two feet, two to four feet, and greater than four feet. The lower the water depth, the lower the benefit factor amount
- Public lands: With the inclusion of the at-large Operations Assessment for the counties and townships/villages, the parcels owned by these entities will now receive a zero-base benefit
- Derived: This factor is applied to non-residential properties within the SAD

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<sup>19</sup> FLTF website: [fourlaketaskforce.org](http://fourlaketaskforce.org).



The factors are multiplicative, and a total factor and subsequent apportionment are assigned to each parcel. When determining the factor's values, the system was reviewed as a whole, and the methodology was developed to create an equitable assessment for all parcels within the Four Lakes SAD.

All direct waterfront parcels are subject to all the factors listed above. For back lot parcels with deeded or dedicated access, the access location is evaluated and that is then carried over to the backlots which may use that location to access the water. Please note that the best quality back lot will typically have ½ the assessment of the typical front lot.

## **County, Township and Village Portion of SAD Cost**

FLTF is currently planning that Midland and Gladwin counties would each be apportioned 3 percent of the annual operations and maintenance cost. Additionally, another sum of 3 percent of the annual operations and maintenance project cost would be apportioned across local municipalities located within the Special Assessment District.

With respect to the Capital Improvement Project, it is currently planned that the counties and local municipalities would not participate in this CIP special assessment because of the \$200 million grant from the State of Michigan.

## **§11h. Capacity to Pay (Affordability)**

The Four Lakes SAD covers eight townships, with great economic diversity in lake owners' household incomes and home values. The economic diversity includes:

- Income from poverty levels to households earning in the top 1 percent of the country.
- Home structures ranging from undeveloped properties to homes over 6,000 square feet.
- Homestead percentages of less than 50 percent to greater than 80 percent.

## **Assessment as a Percentage of Market Value**

The 2019 State Equalized Value (SEV)<sup>20</sup> was doubled to calculate the "market value" of the property before the Edenville Dam failure. This was used as the market value of the property with the lake at its legal lake level. There has been a lot of volatility and speculation in the time since the disaster. In its modeling, FLTF analyzed each property's assessment as a percentage of the market value of the property, to maintain the market value if a lake was returned. This is reported in the following section.

The ability to pay is generally irrelevant in the context of apportioning costs and imposing a special assessment. Nonetheless, in addressing the restoration of the Four Lakes system, however, FLTF believes that it is important to understand and assist landowners in the SAD who, because of a variety of reasons, are economically disadvantaged to pay an assessment. FLTF will work with the community to help those property owners in need of financial assistance.

The Four Lakes System has approximately 8,408 parcels. Of those parcels, FLTF has determined that 7,957 of these parcels will likely be assessable. Approximately 58 percent of the parcels in the Four

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<sup>20</sup> State Equalized Value - One half (1/2) of your property's true cash value see: <https://www.michigan.gov/taxtrib/0,4677,7187-25923-126336--,00.html>.



Lakes are homesteaded, indicating that most of the lots on these lakes are primary residences. Based on the current assessment numbers and the below data which compares the market value to assessment principal, the \$60 million Capital Assessment spread across the Four Lakes is affordable for 95 percent of all assessable parcels and is affordable to 97 percent of homesteaded parcels. A significant majority of the Four Lakes have the ability and willingness to pay.

**Figure A9: Aggregate Homestead and Non-Homestead Lake Parcels**

	Number	Percentage
Total Parcels	8408	100%
Total Assessable Parcels	7957	95%
Parcels with 0 assessment	315	3%
Non-Homestead (Second Home or Rental)	3481	41%
Parcels under 30% Assessment	7955	95%
Homestead Claimed	4904	58%
Average Market Value for Assessable Parcels	\$127,208.40	N/A
Market Value at 30% Assessment	\$973.04	30%
Market Value Range for Assessable Parcels	\$400 to \$1,025,800	N/A
<i>Low end of Range</i>	\$400.00	0%
<i>First Quartile</i>	\$46,200.00	25%
<i>Second Quartile</i>	\$106,600.00	50%
<i>Third Quartile</i>	\$173,600.00	75%
<i>Average at Top 10% of Range</i>	\$527,213.54	90% to 100%
<i>Top of Range</i>	\$1,205,800.00	100%



**Figure A10: Aggregate Homestead Lake Parcels**

	Number	Percentage
Total Parcels	4904	100%
Total Assessable Parcels	4767	97%
Parcels with 0 assessment	27	1%
Parcels under 30% Assessment	4767	97%
Average Market Value for Assessable Parcels	\$155,457.69	N/A
Market Value at 30% Assessment	\$973.04	30%
Market Value Range	\$1,000 to \$1,147,600	N/A
<i>Low end of Range</i>	\$1,000.00	0%
<i>First Quartile</i>	\$73,000.00	25%
<i>Second Quartile</i>	\$134,800.00	50%
<i>Third Quartile</i>	\$208,300.00	75%
<i>Average at Top 10% of Range</i>	\$547,961.76	90% to 100%
<i>Top of Range</i>	\$1,147,600.00	100%

## §11i. Lowering the Cost of the Assessment

The funds received by the State of Michigan in the amount of \$200 million alleviated significant concerns related to affordability for most of the Four Lakes Special Assessments. However, a Capital Assessment of \$60 million may create an affordability issue for perhaps 5 percent of the population<sup>21</sup> but should be affordable to 95 percent of the lake community. FLTF is sensitive to the affordability concern and will continue to work to address ways to help the lower-income population impacted by such an assessment.

<sup>21</sup> FLTF Restoration Plan in Chapter 11i Reviews the Lake Community Economics: <https://www.four-lakes-taskforce-mi.com/restoration-plan.html>.