

# Four Lakes Task Force

Gladwin and Midland Counties' Delegated Authority  
of the Four Lakes Special Assessment District

## Community Information Session: Webinar

### Status Report

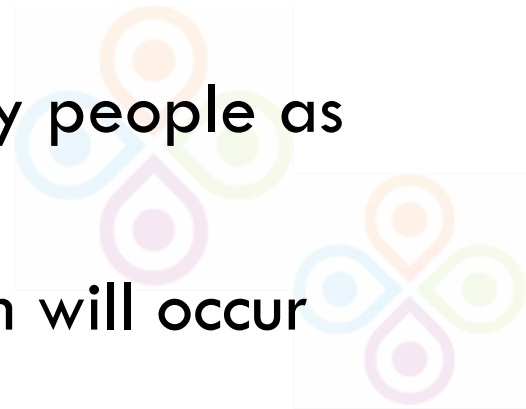
October 9, 2024



# This is an Information Session

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- These meetings are focused on keeping the community informed and providing an opportunity to ask questions
- This meeting is being held virtually to accommodate as many people as possible
  - This is not a board meeting or hearing – no formal action will occur
- We will take questions at the end

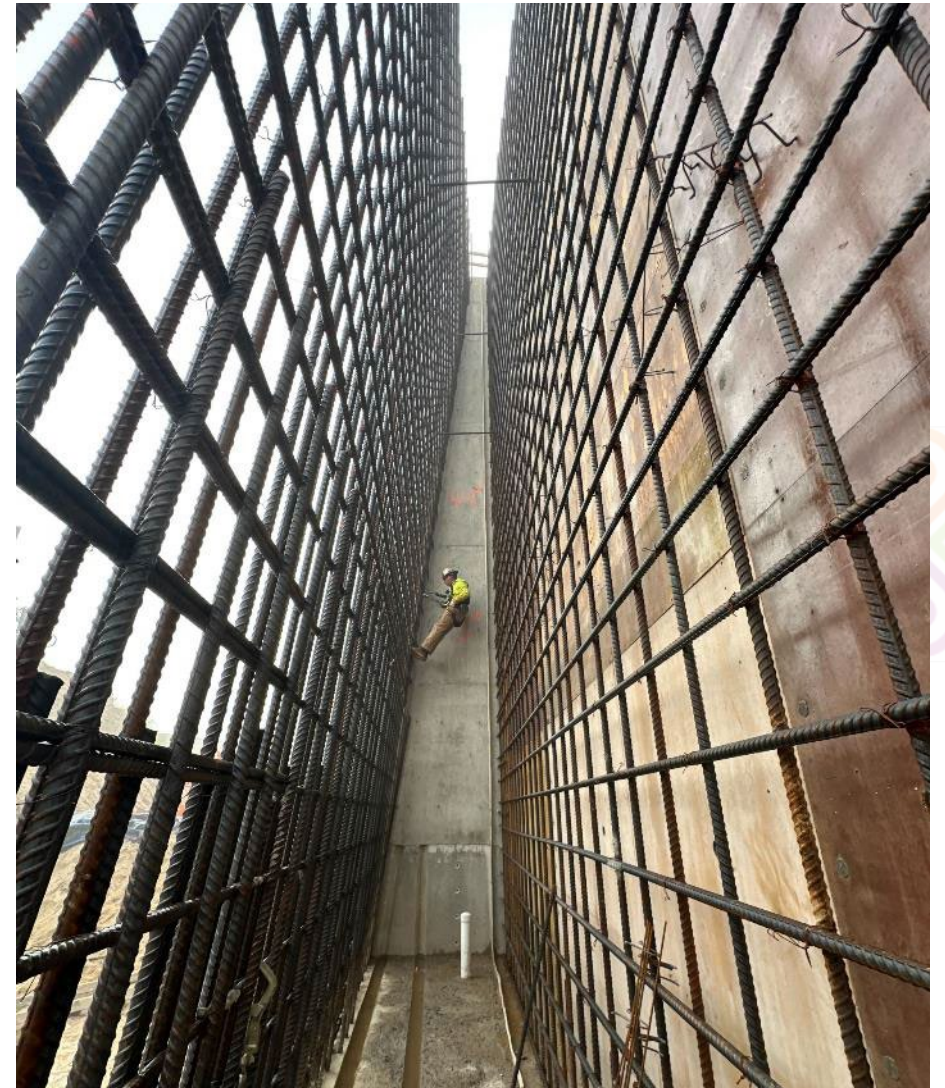


# Agenda

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1. Dam Safety Report
  - *Troy Naperala, GEI*
2. Financing
  - *Kayla Stryker, FLTF*
3. Legal Status
  - *Joe Colaianne, Clark Hill*
4. Restoration Status
  - *Dave Kepler, FLTF*
5. Questions and Answers

*Pictured: City Re-Steel installing reinforcement in Sanford right sloped wall downstream of the right abutment*







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## Safety Status

Troy Naperala, PE, GEI, Program Manager

*Pictured: Sanford pier construction*

# Issues After Dam Failure/Flood

All Dams had similar issues prior to 2020 that needed to be addressed<sup>1</sup>

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- ❑ Spillways had inadequate capacity
- ❑ Concrete components of the dams showed signs of deterioration and were beyond their design life
- ❑ Existing tainter gates were beyond design life and exhibited signs of deterioration. The hoisting mechanisms were insufficiently sized for the range of design service loads and did not meet current industry design standards
- ❑ Embankment dams were overly steep, had insufficient slope stability, and exhibited excessive amounts of seepage
- ❑ Downstream energy dissipation and erosion protection was inadequate

1. Included in GEI reports and EGLE requirements in June 30, 2021 letter

# Safety Status – Spillway Capacity

IDF: Inflow Design Flood  
cfs: cubic feet per second

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DAM	Boyce System (Pre-Failure)			At Suspension			Dams at Completion		
	Flow (cfs)	% IDF	Annual Exceedance Probability (years)	Flow (cfs)	% IDF	Annual Exceedance Probability (years)	Flow (cfs)	% IDF	Annual Exceedance Probability (years)
Secord	7,500	41	150	10,865	60	800	16,385	100	10,000
Smallwood	23,000	82	3,500	24,115	85	4,900	28,000	100	10,000
Edenville	13,500**	24	20*	27,300	49	200	55,400	100	5,000
Sanford	20,000**	46	50*	28,000	51	200	54,900	100	5,000

\* In 2020 Edenville failed at ~100+ AEP event; Sanford auxiliary spillway failed; \*\*Estimated using same design conditions as dams at completion

## Key Takeaways:

- Have not met safety design intent or enabled the dams to pass the EGLE permitted design storm at all four dam sites based on Model Dam Safety Program Guidelines<sup>2</sup>
- However, at suspension we will meet at least the 200-year event at each dam

2. The Model Dam Safety Program (MDSP) is a collaborative effort between the Association of State Dam Safety Officials (ASDSO) and FEMA National Dam Safety Program.





**SECORD**



# Secord Dam –Safety Status

SUSPENSION DATE:  
**OCTOBER**

Major Work Component	Current Status	Status at Suspension
Principal Spillway	In progress	In progress (bay 1 and 2 in progress)
Auxiliary Spillway	Completed	Completed
Seepage Cutoff Wall with Filter/Drains	Completed	Completed
Dam Slopes Flattened	Completed	Completed
Low Level Outlet	In progress	In progress (downstream component mostly complete and upstream in progress)

## Key Takeaways:

- Lake level to remain at current level until completion
- Flows being routed through auxiliary spillway
- Gap in work remaining within the principal spillway which includes crest gates, spillway rehab, energy dissipation, and low-level outlet





**SMALLWOOD**



# Smallwood Dam –Safety Status

SUSPENSION DATE:  
**OCTOBER**

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Major Work Component	Current Status	Status at Suspension
Principal Spillway	In progress	In progress (bay 1 is partially complete)
Auxiliary Spillway	Mostly completed	Mostly completed
Embankment Filter/Drains	Right side completed; left side not started	Right side completed; left side not started
Dam Slopes Flattened	Not started (Left side only)	Not started (Left side only)
Low-Level Outlet	In progress	Completed

## Key Takeaways:

- Lake level maintained at current level until completion
- Flows being routed through low-level outlet and bay 2
- Gap in work remaining within the principal spillway which includes crest gates, spillway bay 1 and 2 rehab, and energy dissipation





# EDENVILLE

# Edenville Dam –Safety Status

SUSPENSION DATE:  
**JUNE**

Major Work Component	Current Status	Status at Suspension
Principal Spillway	Not started	Not started
Auxiliary Spillway	Not started	Not started
Seepage Cutoff Wall with Filter/Drains	Partially completed	Partially completed
Dam Slopes Flattened	Partially completed	Partially completed
Low Level Outlet	Not started	Not started

## Key Takeaways:

- ❑ Water level to remain at current levels until construction resumes
- ❑ Flows being routed through State of Michigan stabilized principal Tobacco spillway and demolished Tittabawassee principal spillway
- ❑ Gap in work remaining in auxiliary spillway, principal spillway which includes crest gates, energy dissipation, and low-level outlet





**SANFORD**



# Sanford Dam –Safety Status

SUSPENSION DATE:  
**FEBRUARY '25**

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Major Work Component	Current Status	Status at suspension
Principal Spillway	In progress	Partially completed (w/out gates)
Auxiliary Spillway	Not started	Not started
Seepage Cutoff Wall with Filter/Drains	Not started	Not started
Dam Slopes Flattened	Not started	Not started
Low Level Outlet	In progress	Completed

## Key Takeaways:

- ❑ Must complete current phase before suspension
- ❑ Water level to come up at suspension to spillway crest elevation
- ❑ At suspension flows routed through principal spillway w/out gates
- ❑ Gap in work remaining is gate installation, embankment, roller compacted concrete



# Safety Status Summary

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- Dams are all under construction and are not complete
- Significant durability improvements when completed
- Safe stopping points are identified for temporary suspension of construction, and reviewed with EGLE
- Flow capacity:
  - ▣ Auxiliary spillway complete on Secord and Smallwood
  - ▣ 200-year event at suspension for Edenville and Sanford
- The identified safe stopping points must be met
  - ▣ Dams cannot be left in the suspended condition. They must be completed or removed





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## Financing

Kayla Stryker, Treasurer, Four Lakes Task Force

*Pictured: Smallwood Dam*



# Computation of Cost

**1 Establishment of Special Assessment District**

Establishment of Special Assessment District and Legal Lake Level were set as a result of the May 2019 Court Order, all costs associated with the hearing, land aquisition and design engineering were either private or public grants and no Special Assessment District funds were required

\$0

Preparation of Assessment Roll and Levying Assessments for Capital Roll

\$50,000

**2 Construction Administration - Quality Assurance, Quality Controls, Surveying, Project Controls**

Secord	\$10,200,000
Smallwood	\$7,800,000
Edenville	\$15,800,000
Sanford	\$13,200,000

**3 Estimated Cost of Construction**

All lakes: site safety, booms, Electrical services	\$7,200,000
Secord	\$57,000,000
Smallwood	\$42,400,000
Edenville	\$127,000,000
Sanford	\$76,800,000

**4 Estimated Cost of Appeal**

\$100,000

**5 Cost of Mailing, Publishing Notices and Administration**

\$9,500

**6a Loan & Bond Issuance Costs**

USACE Loan Fee	\$250,000
Rating Fees	\$75,000
MAC Fee	\$900
Printing notice of sale and official statement	\$3,250
Michigan Department of Treasury Filing for bond	\$1,100
Michigan Department of Treasury Filing for loan	\$1,100
Bond Counsel and Financial Advisor for loan	\$180,000
Bond Counsel and Financial Advisor for bond	\$220,000

**6b Cost of Capitalized Interest**

\$6,000,000

*Gross Sum of Expenses* \$364,290,850

*Contingent Expenses (9.5 ±%)* \$34,584,150

*Total project computation of cost* \$398,875,000

Less State of Michigan Grant -\$180,000,000

Less USDA Boom Grant, MDOT Settlement -\$1,175,000

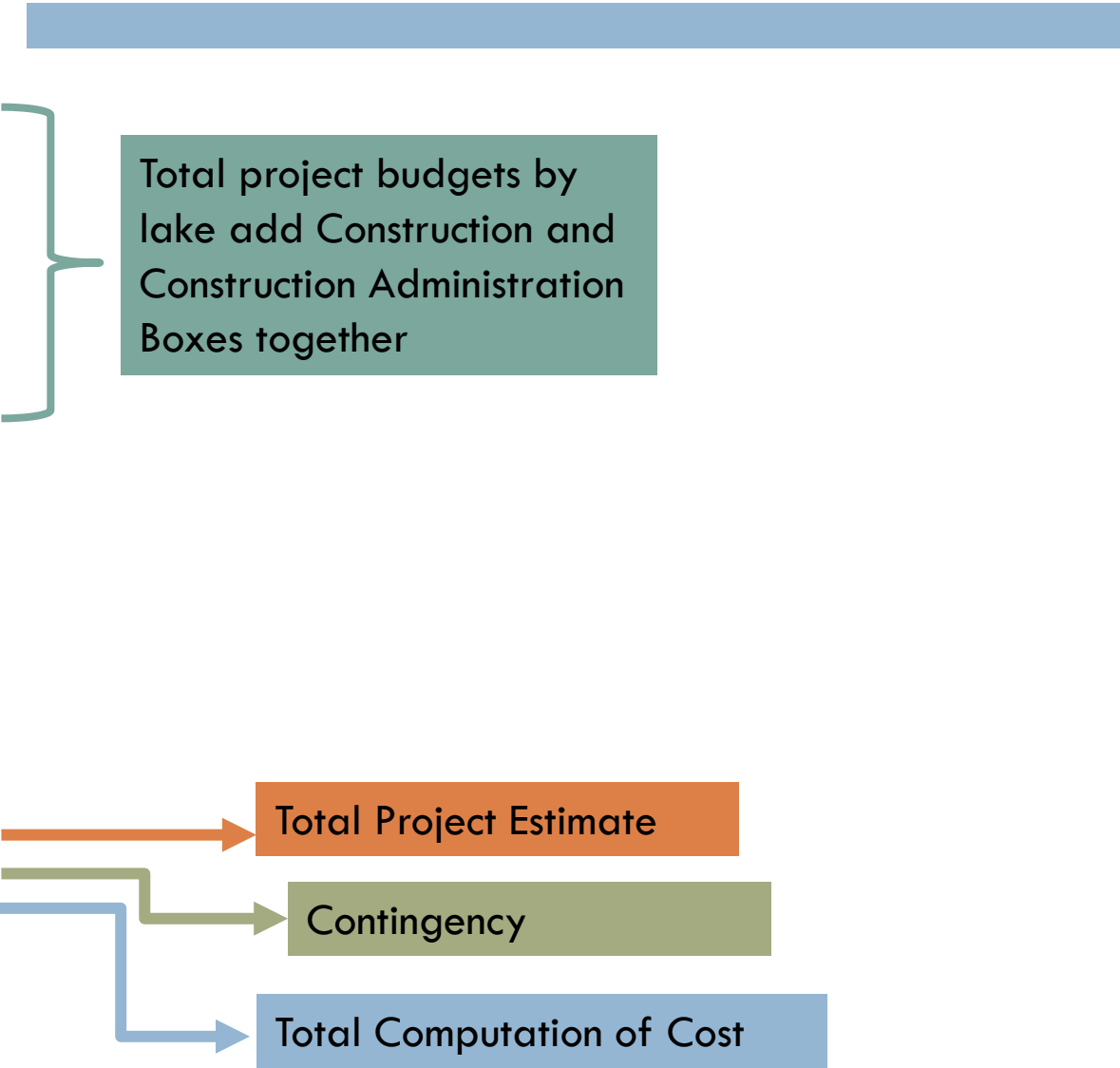
*Total amount to be assessed* \$217,700,000

Total project budgets by lake add Construction and Construction Administration Boxes together

Total Project Estimate

Contingency

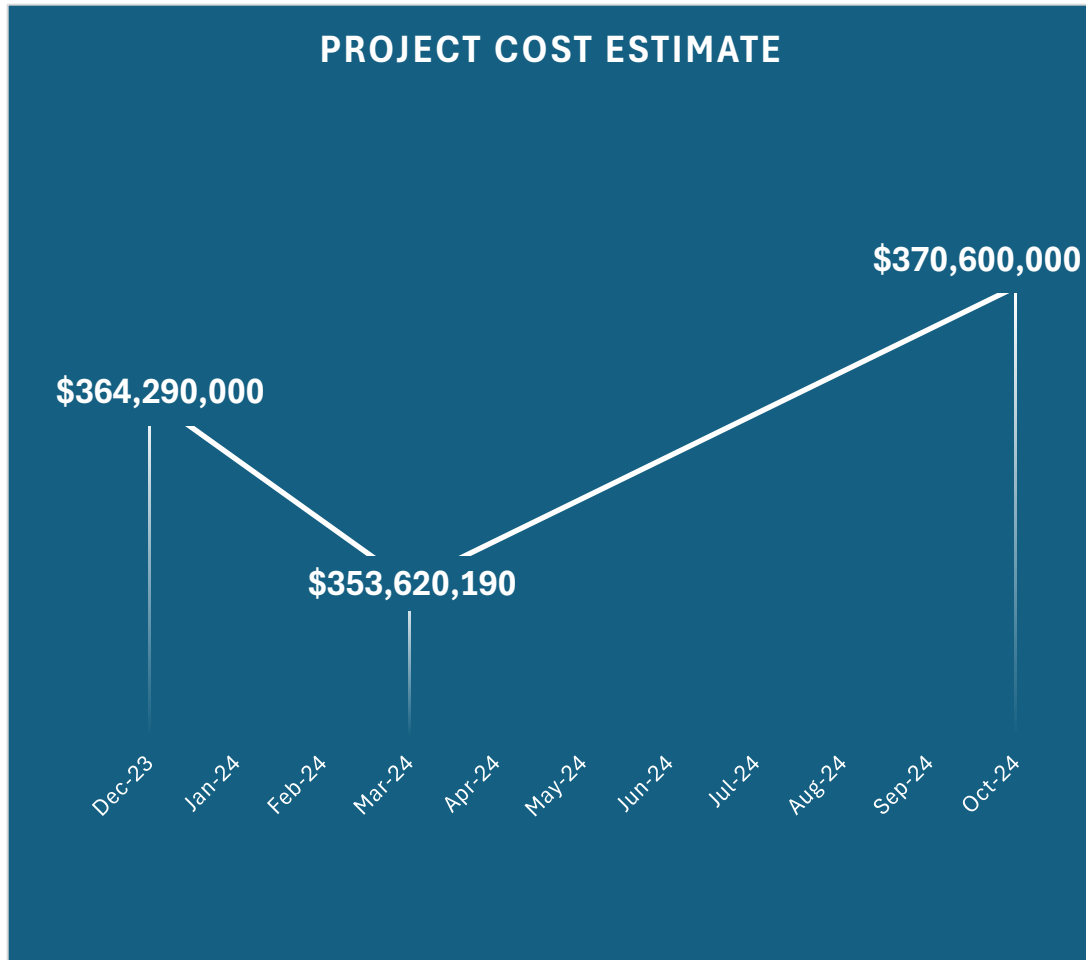
Total Computation of Cost



# Overall Project Cost Estimates –

## Contingency Not Included

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- **December 2023** project cost estimates included contracts in place at Secord, Smallwood, Sanford and cost estimate at Edenville\*
- **March 2024** Edenville bids came in under cost estimates reducing project estimate to \$353M\*\*
- **October 2024** project estimate increased due to suspension cost by up to \$20M\*\*\*, utilizing the savings from Edenville and bringing the project estimates back in line with December 2023 estimate

\*Computation of Cost

\*\*Edenville Bid Results

\*\*\*Communication on Suspension Impact (\$10-20 million)



# Spend by Dam

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	SECORD	SMALLWOOD	EDENVILLE	SANFORD	ALL DAMS
Estimated Spend by Project Suspension	\$54M	\$40M	\$20M	\$50M	\$6M
Total Estimated Budget*	\$68M	\$50M	\$125M	\$90M	\$21M

- FLTF had \$180M in State of Michigan (SOM) funds to utilize for restoration
- Total expenditure of SOM funds on restoration as of suspension totals \$170M; \$3M withheld for construction retainage; \$7M remaining for post-suspension activities

\*Total budget numbers do not include contingency, escalation or remobilization

# Financing Update

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- The Approved Plan of Financing\* was based on 40 years and estimated 5% interest, with a 6% maximum approved rate by the counties
  - ▣ FLTF has been determined by the U.S. Army Corps as ineligible for a Corps Water Infrastructure Financing Program (CWIFP) loan
  - ▣ Per the approved FLTF Plan of Financing, municipal bonds will now be used in place of a CWIFP loan\*\*
- **Interest rates between USACE CWIFP loan and municipal bonds are now similar\*\*\***
  - ▣ Municipal bond rates are currently ~4%\*\*\*
  - ▣ Outside of interest rates, a CWIFP loan would have provided benefits to the FLSAD in that it allows for deferred payments up to 5 years and flexibility in principal structure

[\\*FLTF Plan of Financing](#)

[\\*\\*October 12, 2023, Webinar on USACE Loan](#)

[\\*\\*\\*Bloomberg Interest Rates](#)



# Current Funding Status

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## Funding 2025 and Beyond

- Have funds for maintenance, operations and legal through 2025
- Will have ~\$7 million in State of Michigan grant remaining following total project suspension in early 2025

## Additional Funding Updates

- Awarded a new FEMA HHPD grant, totaling \$433,698
- Outstanding grant requests:
  - ▣ EPA Climate Justice Grant, application totaled \$17.7M
  - ▣ Appropriation requests totaling \$8.25 million, 3 USDA Community Facilities grants
  - ▣ DNR Fisheries grant \$150,000



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## Legal Status

Joe Colaianne, Partner, Clark Hill PLC

*Pictured: Secord Dam spillway*



# Legal Status

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- Heron Cove Appeal Status
  - ▣ All briefs are filed
  - ▣ Expecting a hearing in December with the Appellate Court
  
- Heron Cove Lawsuits
  - ▣ All briefs are filed
  - ▣ Waiting on response from U.S. District Court





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## Restoration Status

Dave Kepler, President, Four Lake Task Force

*Pictured: Secord Dam primary spillway work*



# Restoration Progress Report – Key Takeaways

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- The only path forward is to repair the dams and restore the lakes
  - “Doing nothing” is not an option
  - Removing the dams would require significant efforts to stabilize and manage environmental impacts
- The dams are not designed for flood control or feasible for FERC hydropower licensing



Scan the QR code with your phone to view the Progress Report

# Construction Schedule

Dam	Suspension Date and Description	Estimated Substantial Completion Date Published October 2023	Estimated Substantial Completion Date Assuming Early 2025 Restart
<b>Secord</b>	<b>October 2024</b> Auxiliary spillway is complete	<b>September 2025</b> +/- 3 months	<b>May 2026</b> +/-3 months
<b>Smallwood</b>	<b>October 2024</b> Auxiliary spillway is complete and low flow outlet is stabilized	<b>March 2025</b> +/- 3 months	<b>November 2025</b> +/-3 months
<b>Edenville</b>	<b>June 2024</b> Suspended	<b>August 2026</b> +/- 6 months	<b>August 2027</b> +/-6 months
<b>Sanford</b>	<b>January 2025</b> Completion of current work near primary spillway	<b>April 2026</b> -3/+8 months	<b>May 2026</b> +/-3 months





# Issues Being managed

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1. **Legal Timing**
  - HCA has said they would appeal to the Supreme Court on numerous occasions – this would add at least 2-3 months
2. **Maintaining the system for the foreseeable future**
  - Funding through any legal scenarios for the next 3 years
3. **Edenville permitted by the end of the year**
4. **Obtaining and spending grants and funds for dams and environmental improvement to maintain momentum on the restoration, until we get legal resolution**



# 4 Years Later – It's Still the Only Path Forward!

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## Dam Safety

- ❑ Safer than *May of 2020*
- ❑ They do not meet current requirements or the requirements in the permits



“

...no occurrence is sole and solitary, but is merely a repetition of a thing which has happened before, and perhaps often.

- Mark Twain

## LAKE RESTORATION

*REMAINS THE BEST ALTERNATIVE*

- ❑ Public safety
- ❑ Environmental restoration
- ❑ Protect and preserve property values around the lake



## Questions and Answers

Please use the Q&A feature in GoToWebinar or email questions to [info@fourlakestaskforce.org](mailto:info@fourlakestaskforce.org) and we will address as many questions as we can

- Questions that have been asked multiple times before and are on our FAQ page we will not address but we will forward a link to you
- Attendees with multiple questions may have only the first one answered. We will remove attendees that are disrespectful in their questions or statements
- We are limited in the answers we can provide related to Heron Cove Association or legal matters related to their lawsuits

# Upcoming Meetings

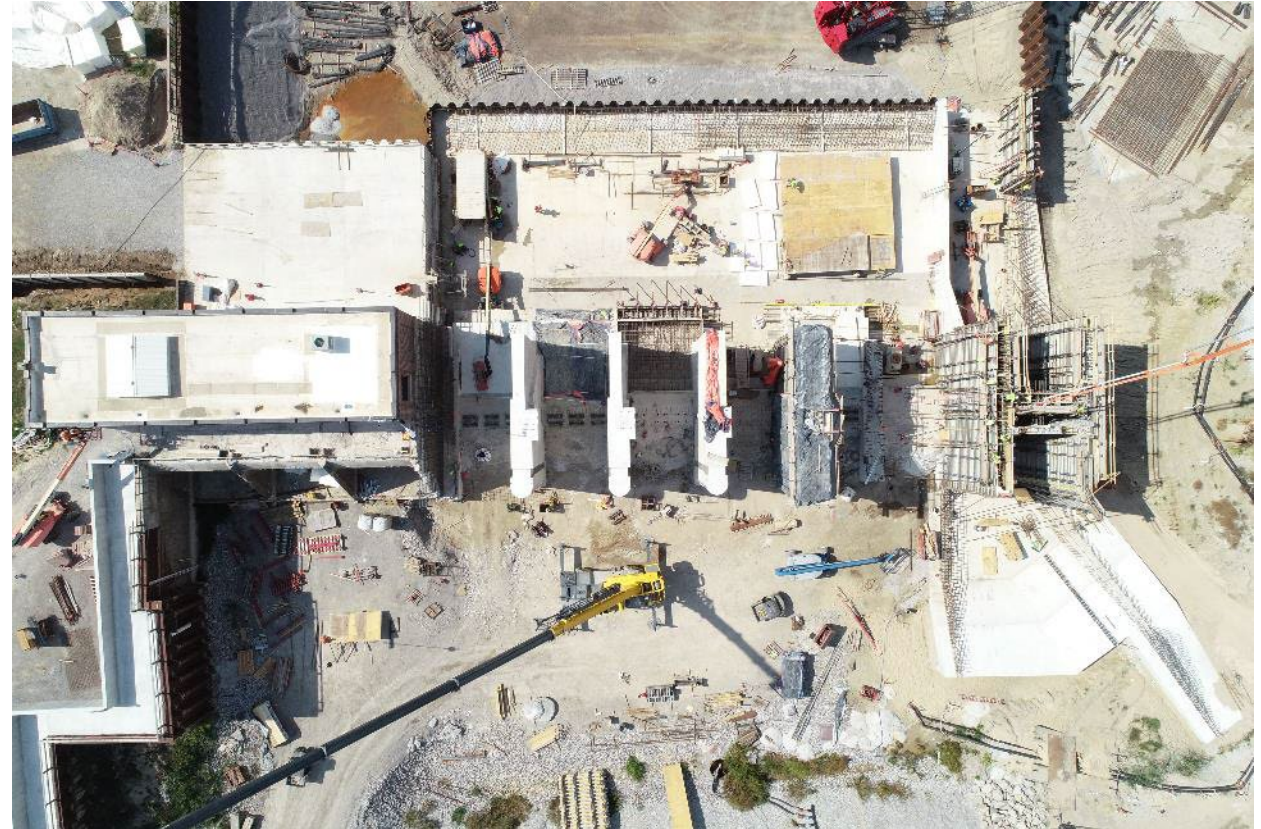
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## Informational Sessions (5:00 – 7:00 pm)

- December 4

## Board Meetings (12:00 – 2:00 pm)

- October 15
- December 10



*Pictured: Pier construction on Sanford*



