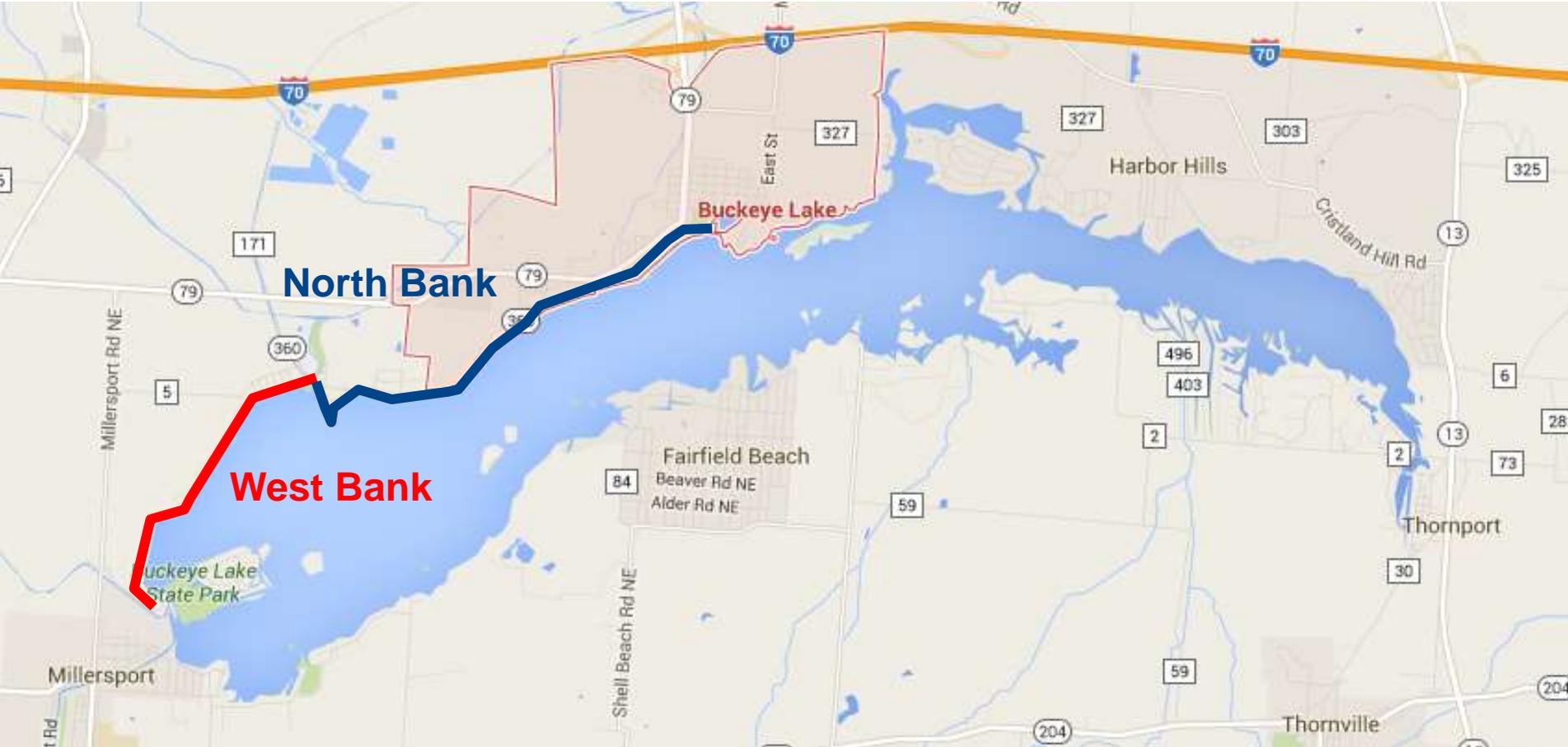


BUCKEYE LAKE DAM

JULY 2016



Lake Map



Site Conditions







Hole in existing stone-masonry wall allows lake water to fill large voids during high lake levels.

Large hole

Tree roots & wires create seepage paths.

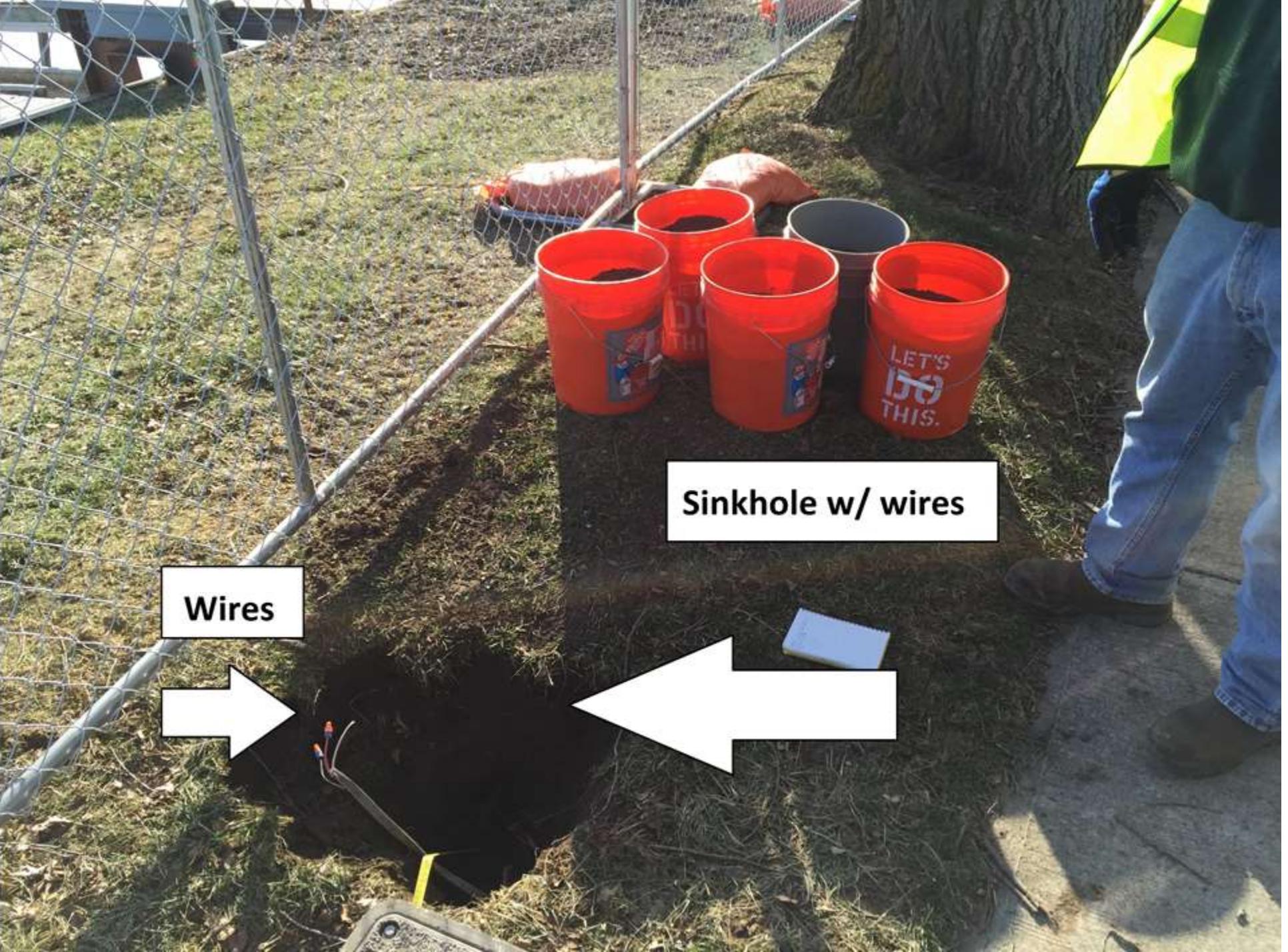




Hole in tree is from heart-rot

15ft from water

5ft deep hole

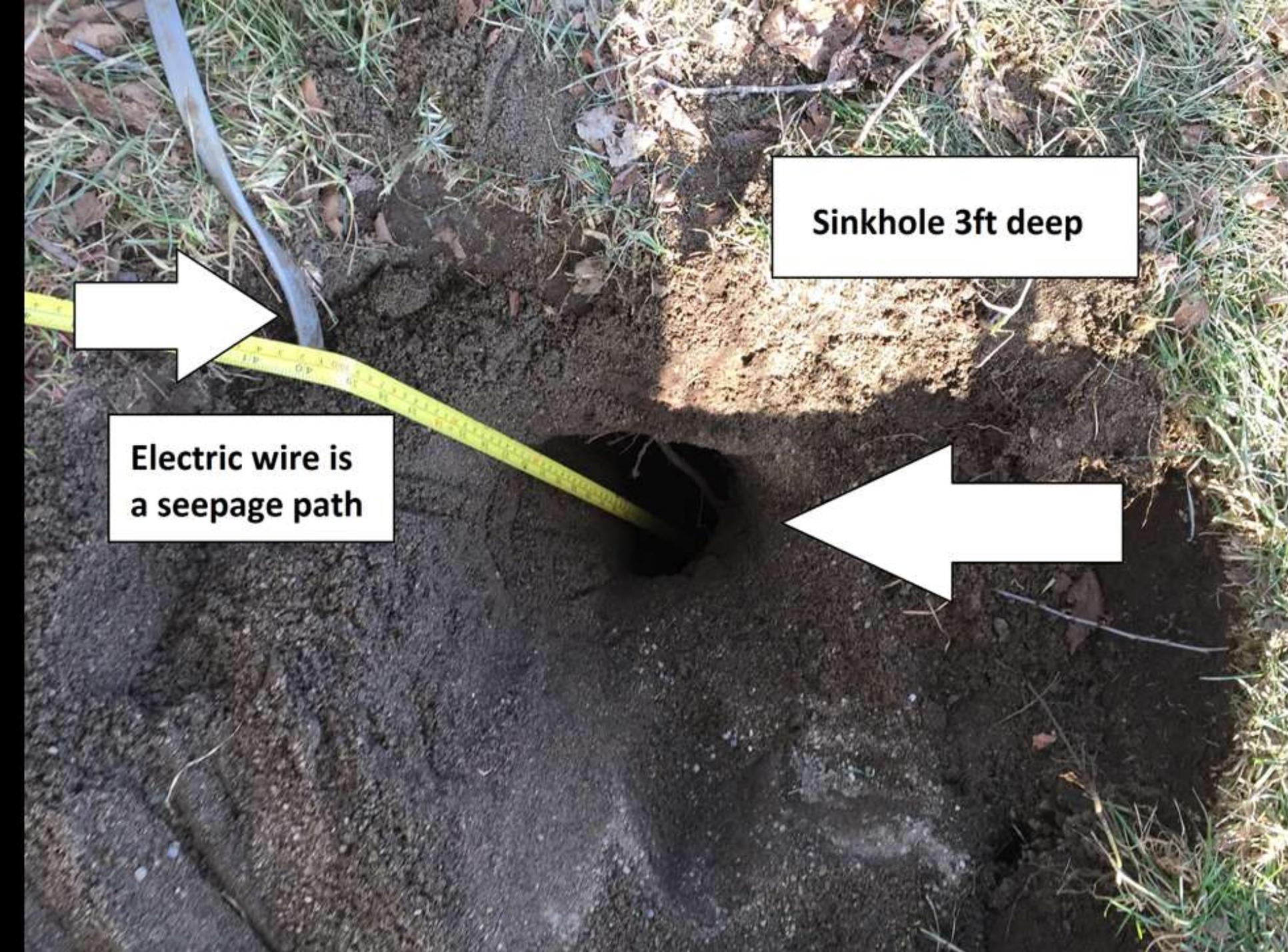


Wires



Sinkhole w/ wires

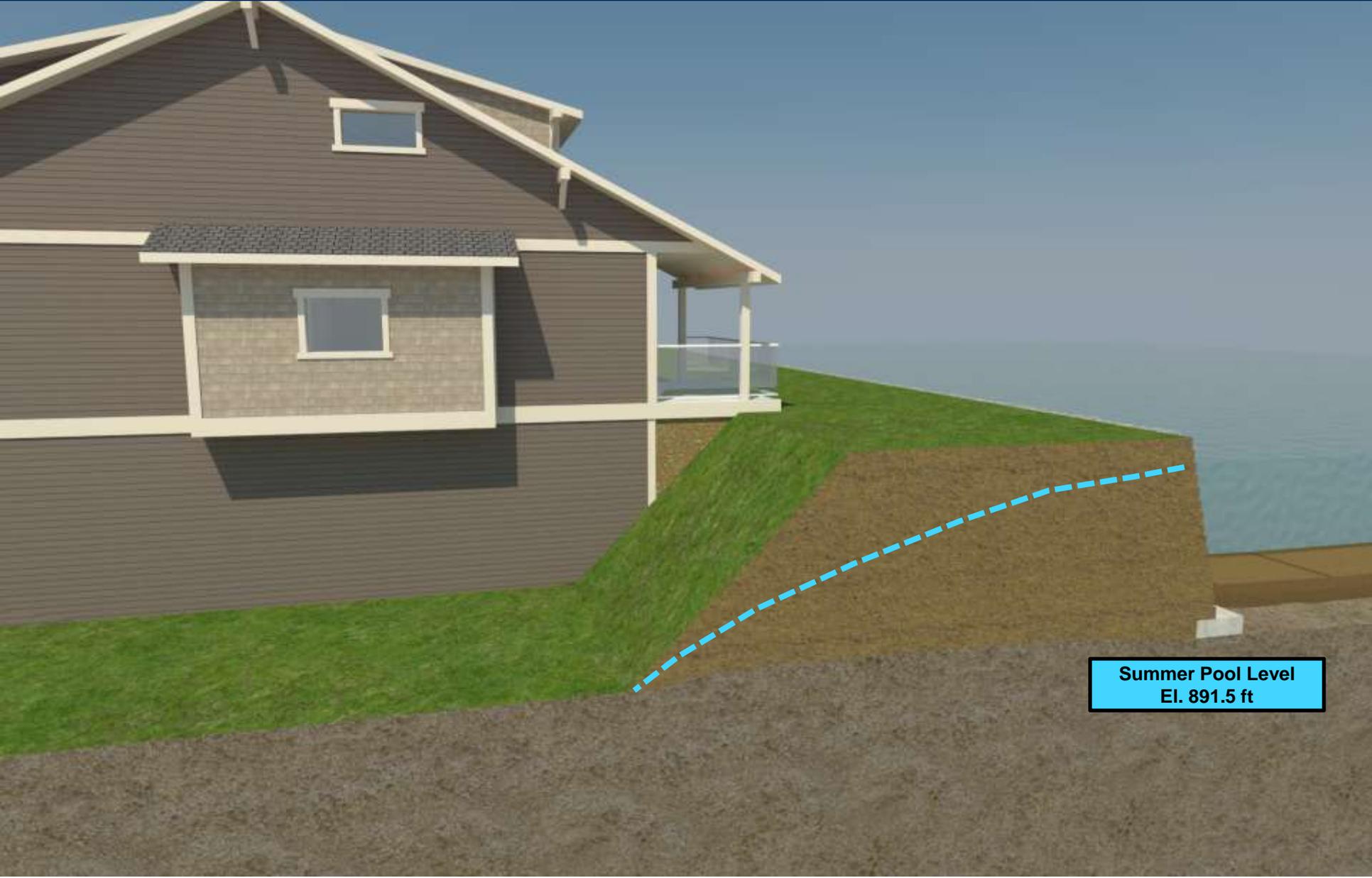




Sinkhole 3ft deep

**Electric wire is
a seepage path**

Private Structure Encroachments



Summer Pool Level
El. 891.5 ft

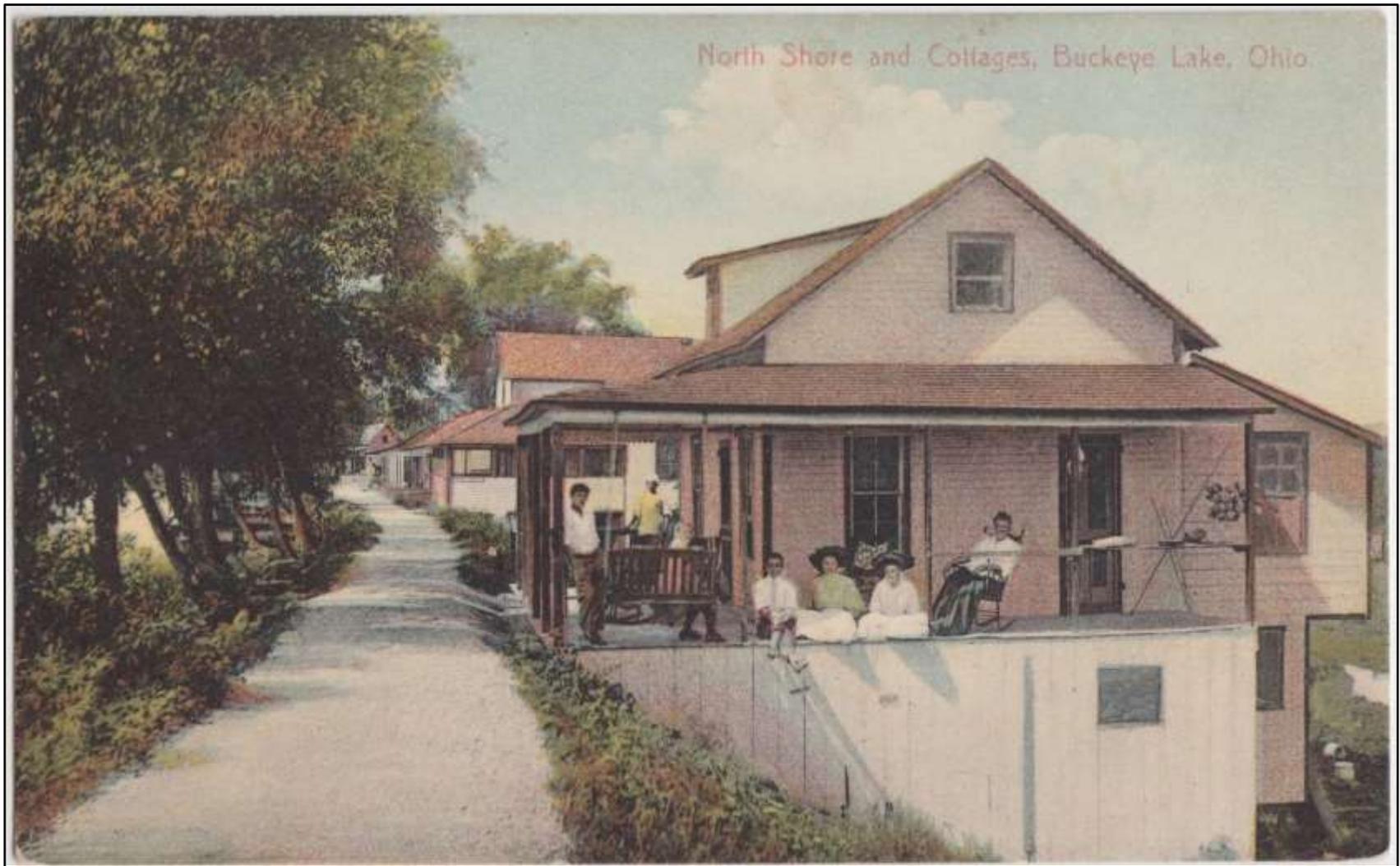
North Bank – Circa 1910



North Bank – Circa 1910



North Bank – Circa 1910



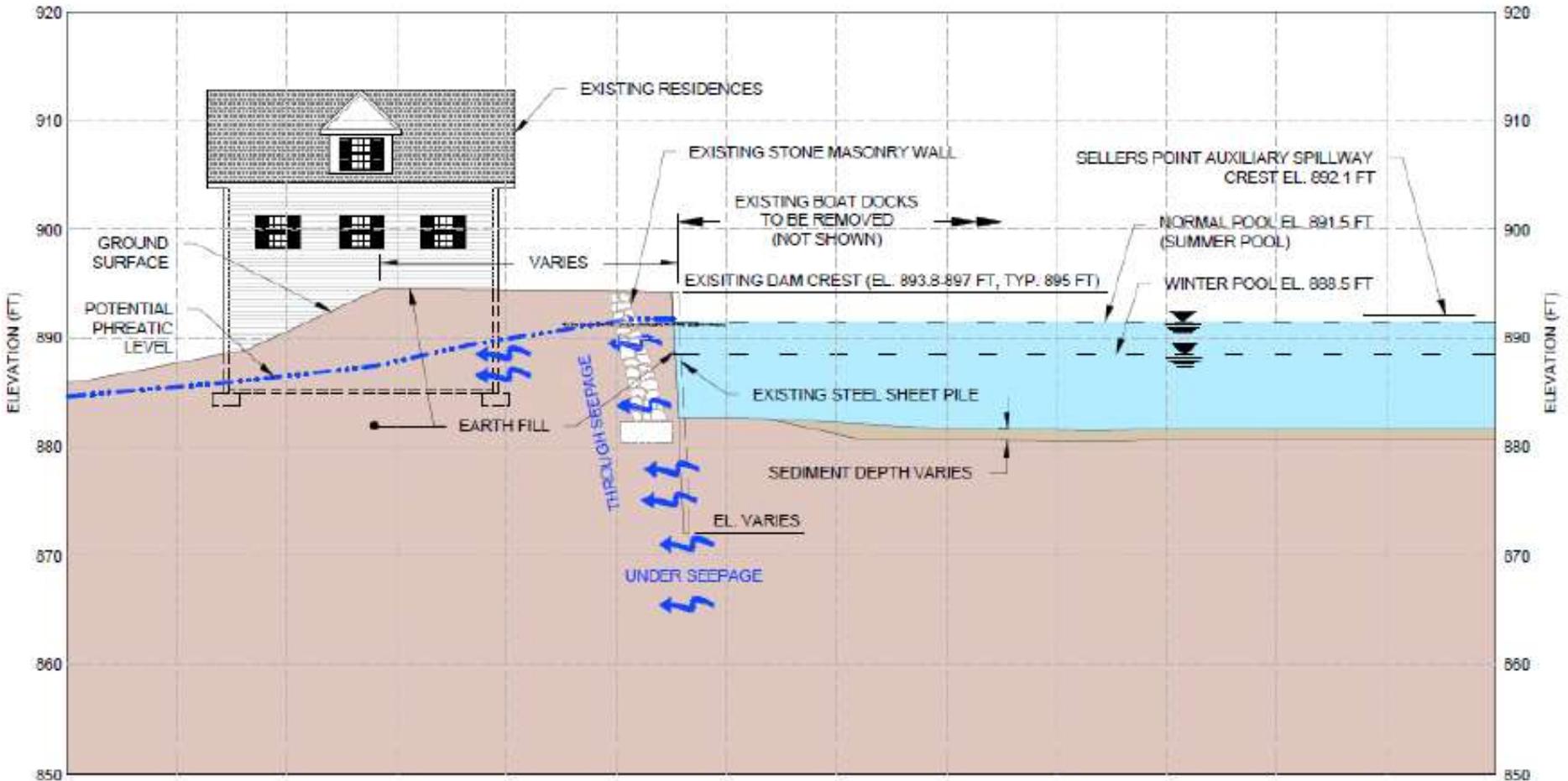
Other Structures



Other Structures



Initial Condition



Embankment Deficiencies:

- **Uncontrolled Seepage**
- **Embankment Stability**
- **Overtopping due to Flooding**

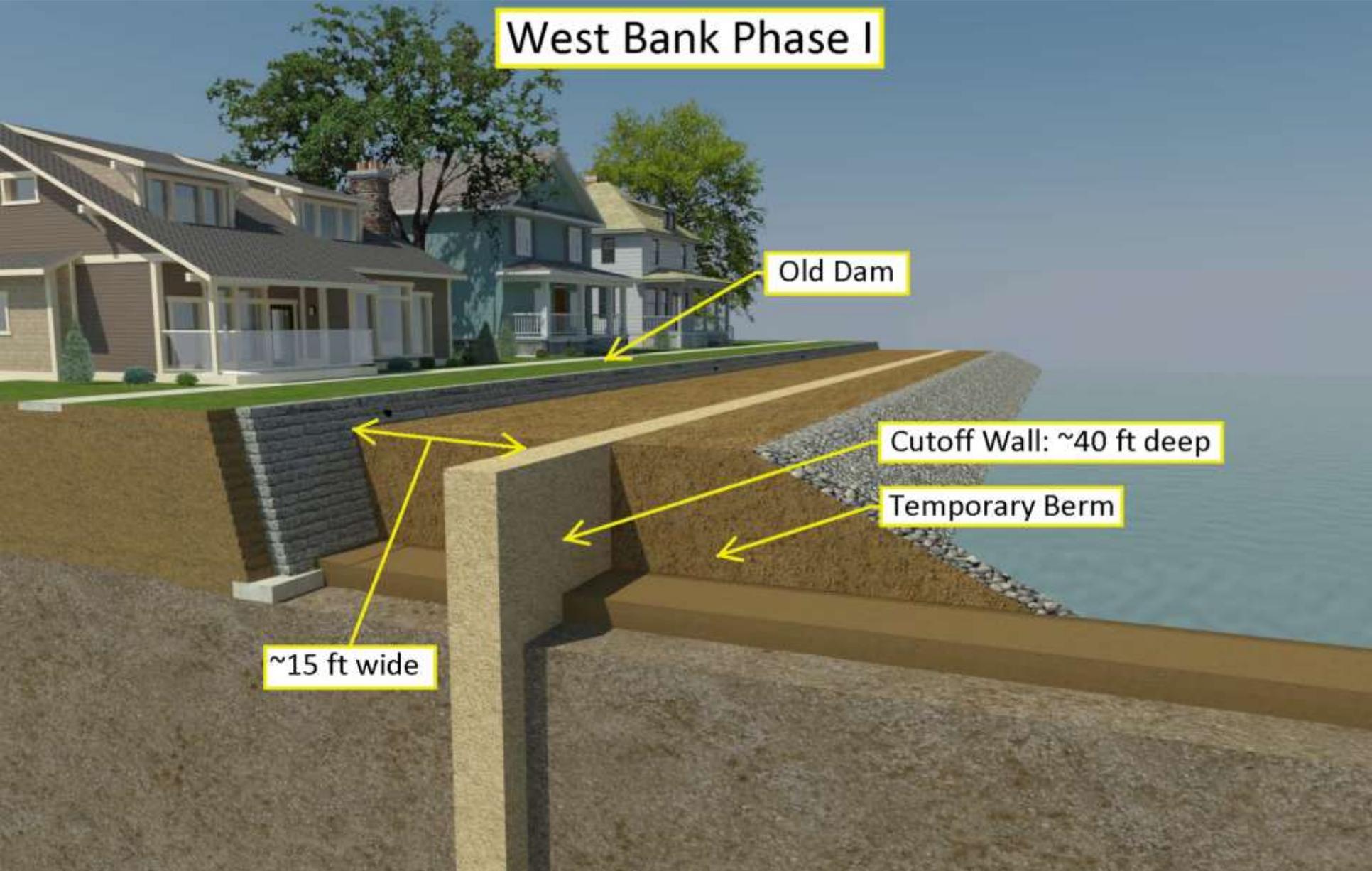
Phase I

Interim Risk Reduction Measures

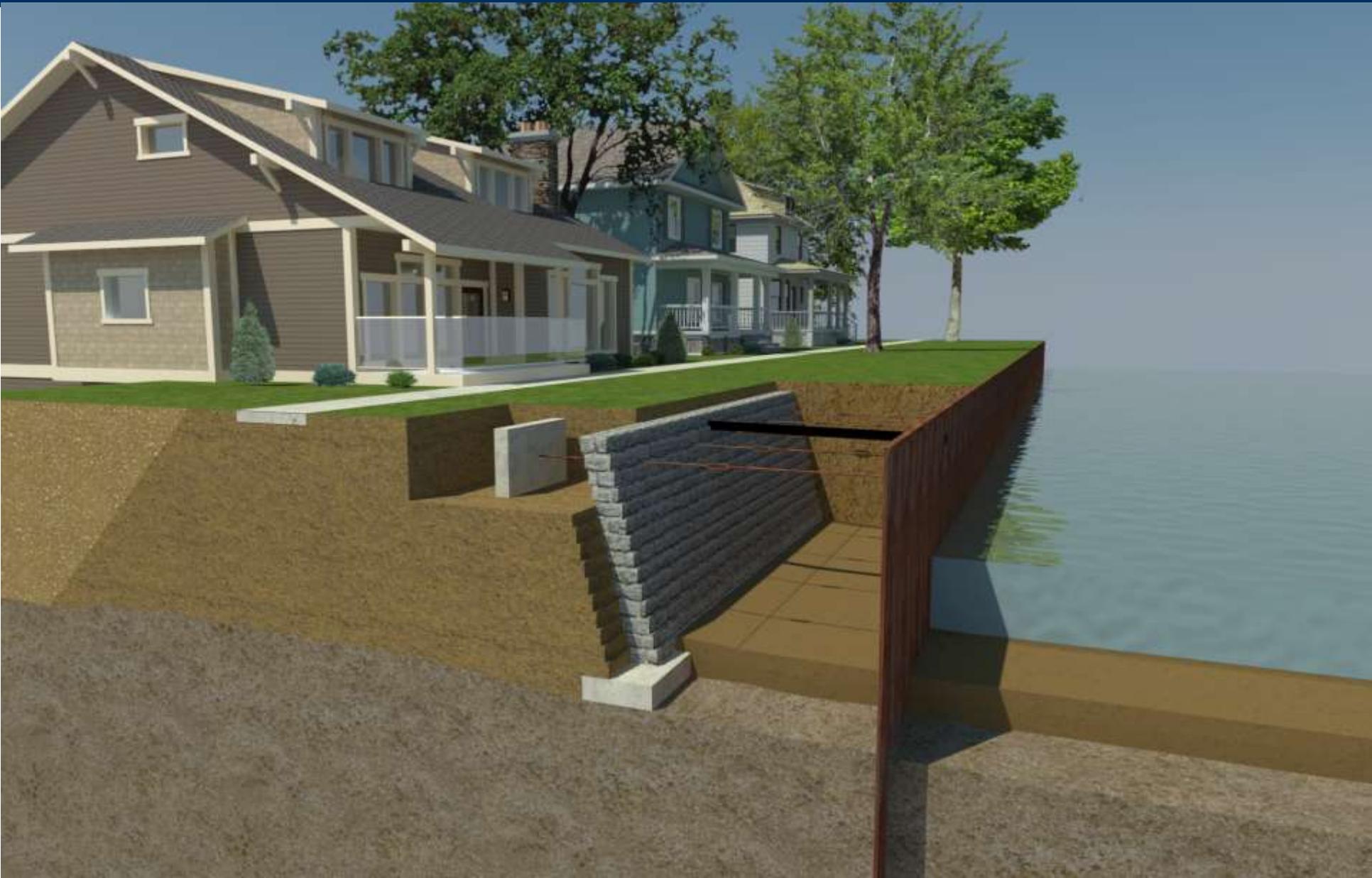
Initial Condition at West Bank



Phase I – IRRM at West Bank



Initial Condition at North Bank

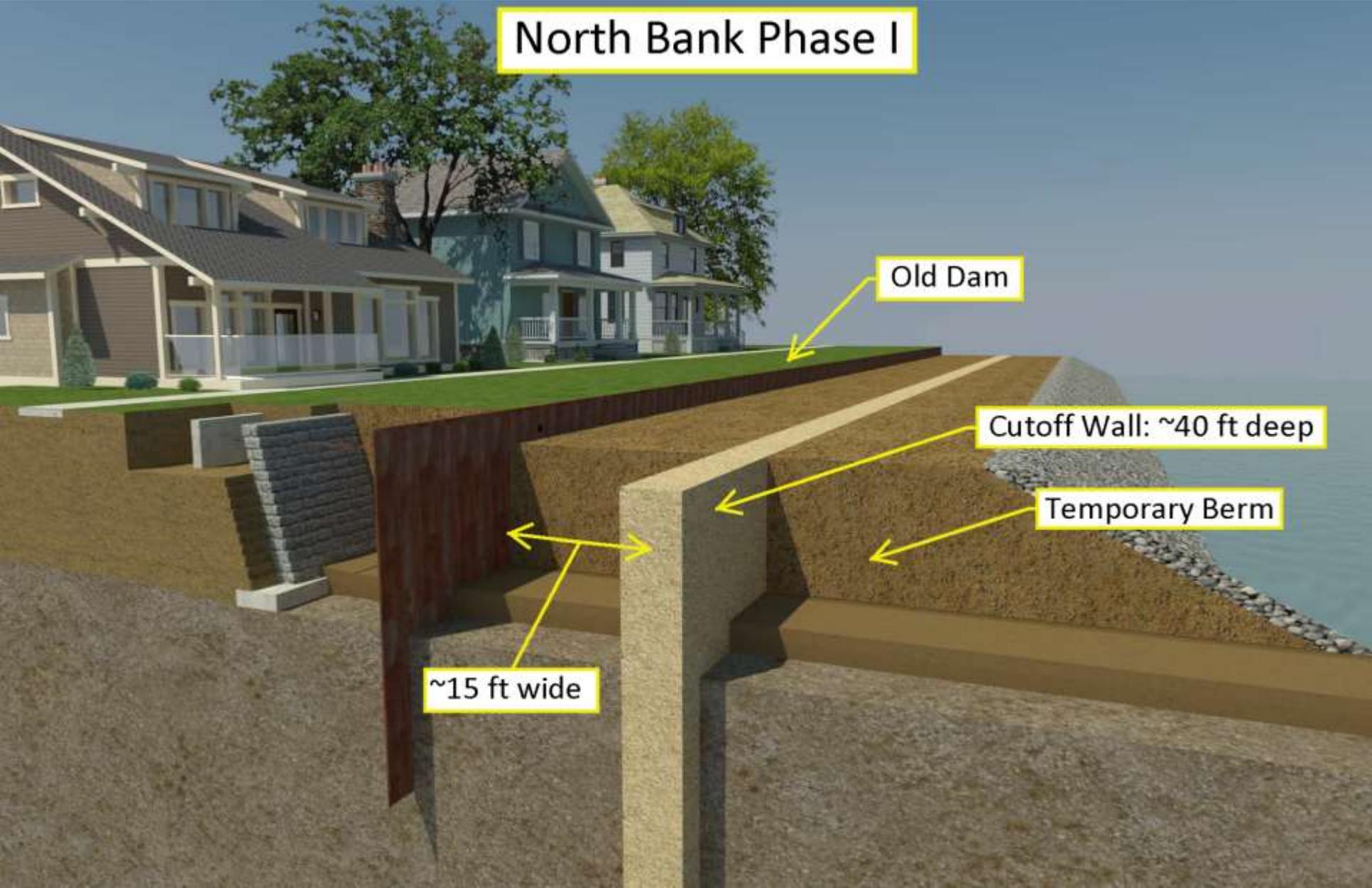


Typical Sheet Pile Wall Construction – Circa 1962



Phase I – IRRM at North Bank

North Bank Phase I



Old Dam

Cutoff Wall: ~40 ft deep

Temporary Berm

~15 ft wide

Phase I

IRRM Construction

Site Preparation – Liebs Island



September 30, 2015

Boat Dock Removal – West Bank



Boat Dock Removal – North Bank



Embankment Stability Berm Placement



Embankment Stability Berm Placement



March 23, 2016

AMIL Gate Primary Spillway



Sellers Point Auxiliary Spillway



Soil Mix Cutoff Wall Installation – Auger Method

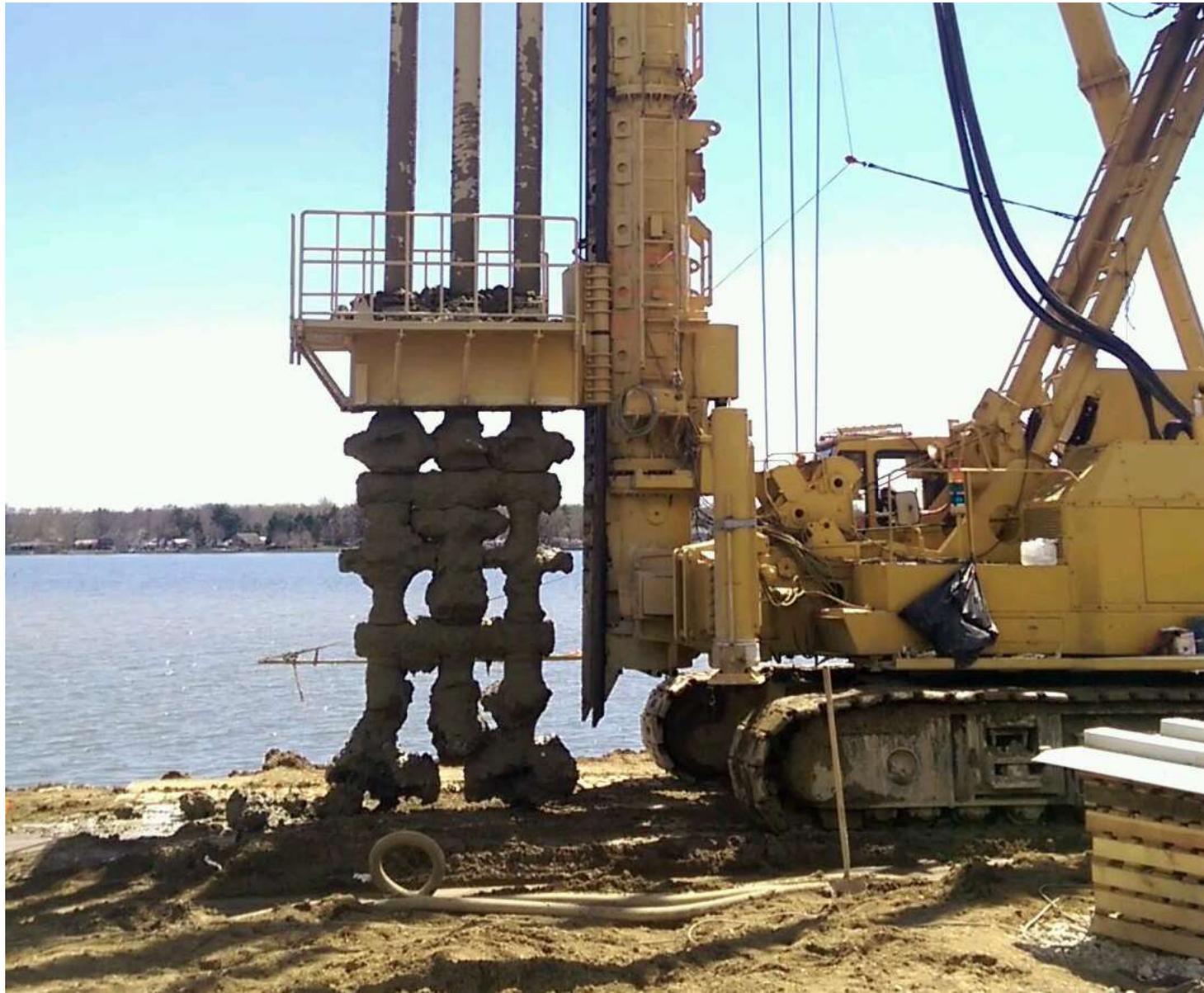


February 22, 2016

Soil Mix Cutoff Wall Installation – Auger Method



Soil Mix Cutoff Wall Installation – Auger Method



Soil Mix Cutoff Wall Installation – Trenching Method



Soil Mix Cutoff Wall Installation – Trenching Method



SMCW Spoils Removal



Subsurface Data Collection



SMCW Testing



Allow Lake Level Raise



BUCKEYE LAKE DAM
Stop Log Installation



May 26, 2016

Water Level

MSL Elevation – Sellers Point Spillway

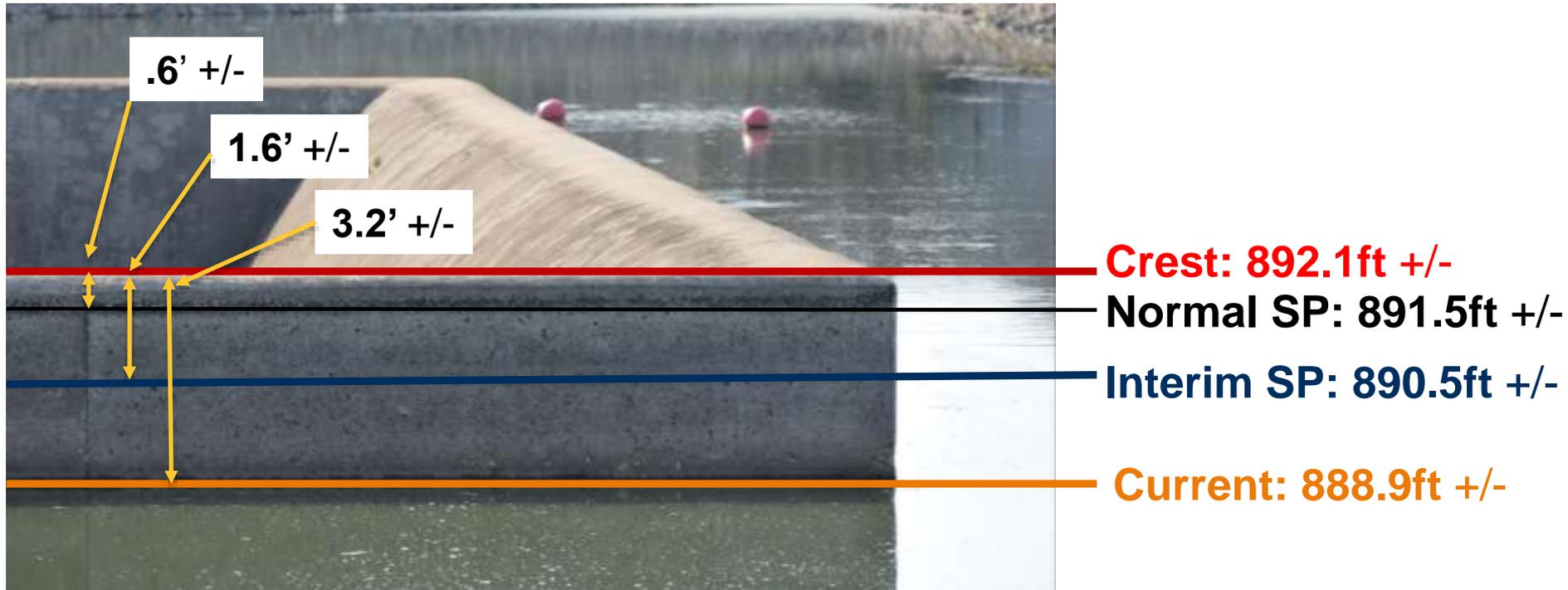


Image not to scale. 7-26-16 Elevation at USGS Millersport Gauge (8am).

- All measurements are based on Mean Sea Level (MSL).
- MSL is a standardized reference point to measure elevations.
- Depth is not used due to variations in lake bed.

Phase II

New Dam Concept

Dam Remediation Principles

- **Dam Safety, the design will:**
 - Meet all dam safety requirements.
 - Facilitate safety inspection of dam from land and water.
 - Facilitate rapid repair of dam if needed.
 - Avoid penetrations and other modifications that could weaken dam.

Dam Remediation Principles

- **Expedited Schedule:**
 - Design and Construction will be expedited to return the lake to normal as soon as possible.
 - ODNR will actively manage water level during construction to assure dam safety.

Dam Remediation Principles

- **Community Engagement:**
 - ODNR will continue to share information with and receive feedback from stakeholders through multiple channels.
 - Dam safety risk reduction is the top priority for information-sharing with the public.

Dam Remediation Principles

- **Public Access to State Property**
 - ODNR wants to optimize public access to ODNR lands and lake once dam is complete.
 - Public safety will be the top consideration for public-access decisions.

Dam Remediation Principles

- **Design for Future:**

- Dam will be designed with the community in mind.
- A buttress wall will be built between new cutoff wall and old dam face.
- Dam will feature a vertical face on the lakeward side.
- Berm remnants on the lakeward side of cutoff wall will be removed.
- Top of dam will accommodate safety inspections using ODNR vehicles.
- Design will allow for sensible post-construction enhancements that do not elevate risk.

Dam Remediation Principles

- **Fiscal Responsibility:**

- Ohio legislators have appropriated sufficient taxpayer funds to design and build a safe dam.
- The dam will be designed to minimize ongoing maintenance costs.
- Community proposals for non-dam related enhancements are beyond the current budget scope.

Dam Remediation Principles

- **Permitting New Docks Along Dam:**
 - ODNR plans to allow homeowners on the dam to have access to docks in the future.
 - Docks will not be allowed to be attached to the dam.
 - Sufficient clearance will be required between docks for dam safety repairs and boater safety.
 - Docks will be allowed to be installed only from lakeward side to avoid damage to the dam.
 - Docks will be required to be installed using ODNR-approved materials and methods to ensure a dock can be readily removed in an emergency.
 - No docks or boatlifts will be allowed to be stored on top of the dam.

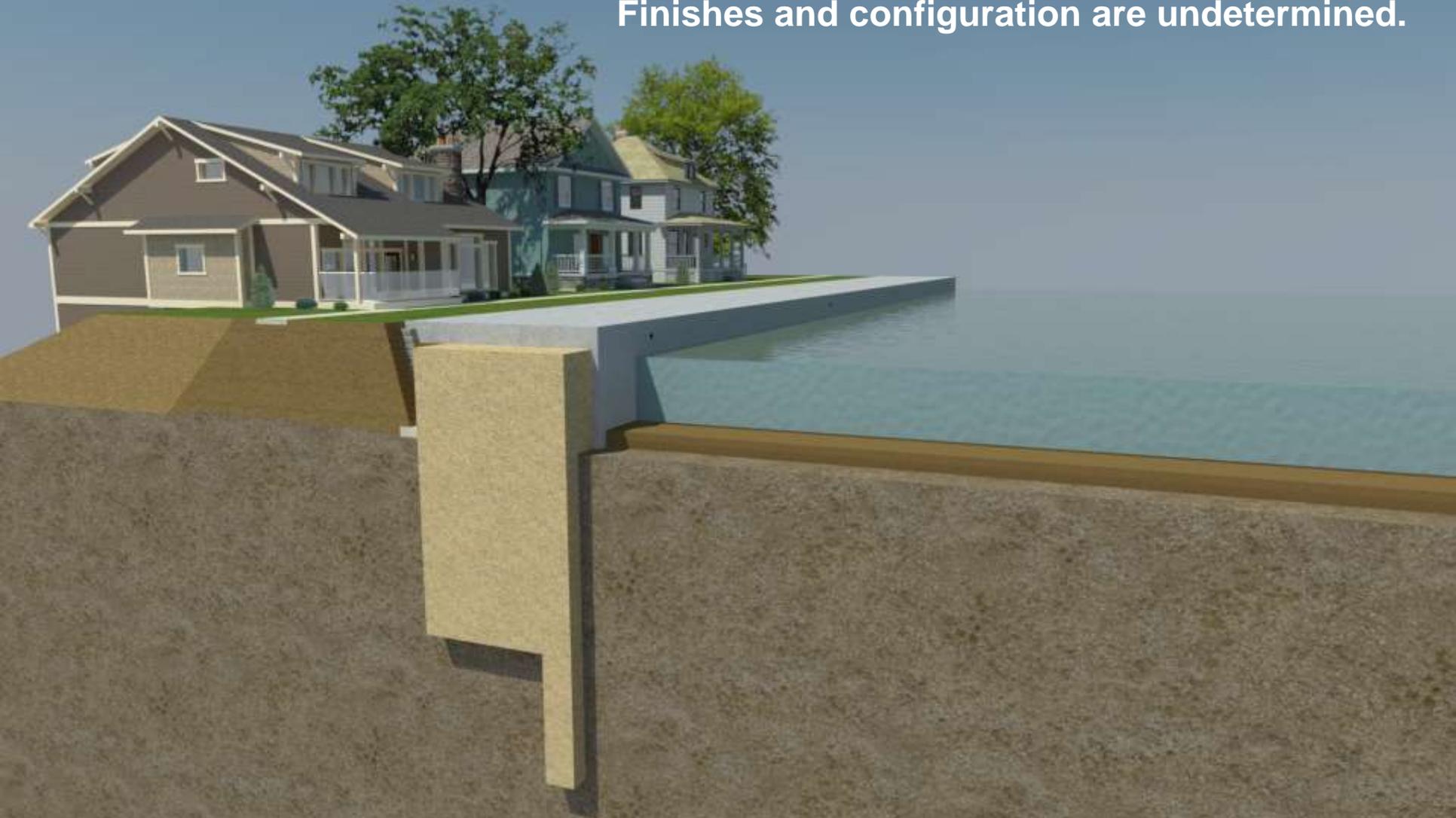
(continued)

Dam Remediation Principles

- **Permitting New Docks Along Dam (continued):**
 - Docks will be restricted to a certain width to ease visual inspection of the dam; e.g. wide “party docks” that could conceal long reaches of the dam will not be allowed.
 - Docks and other structures along dam will require ODNR approval before installation.

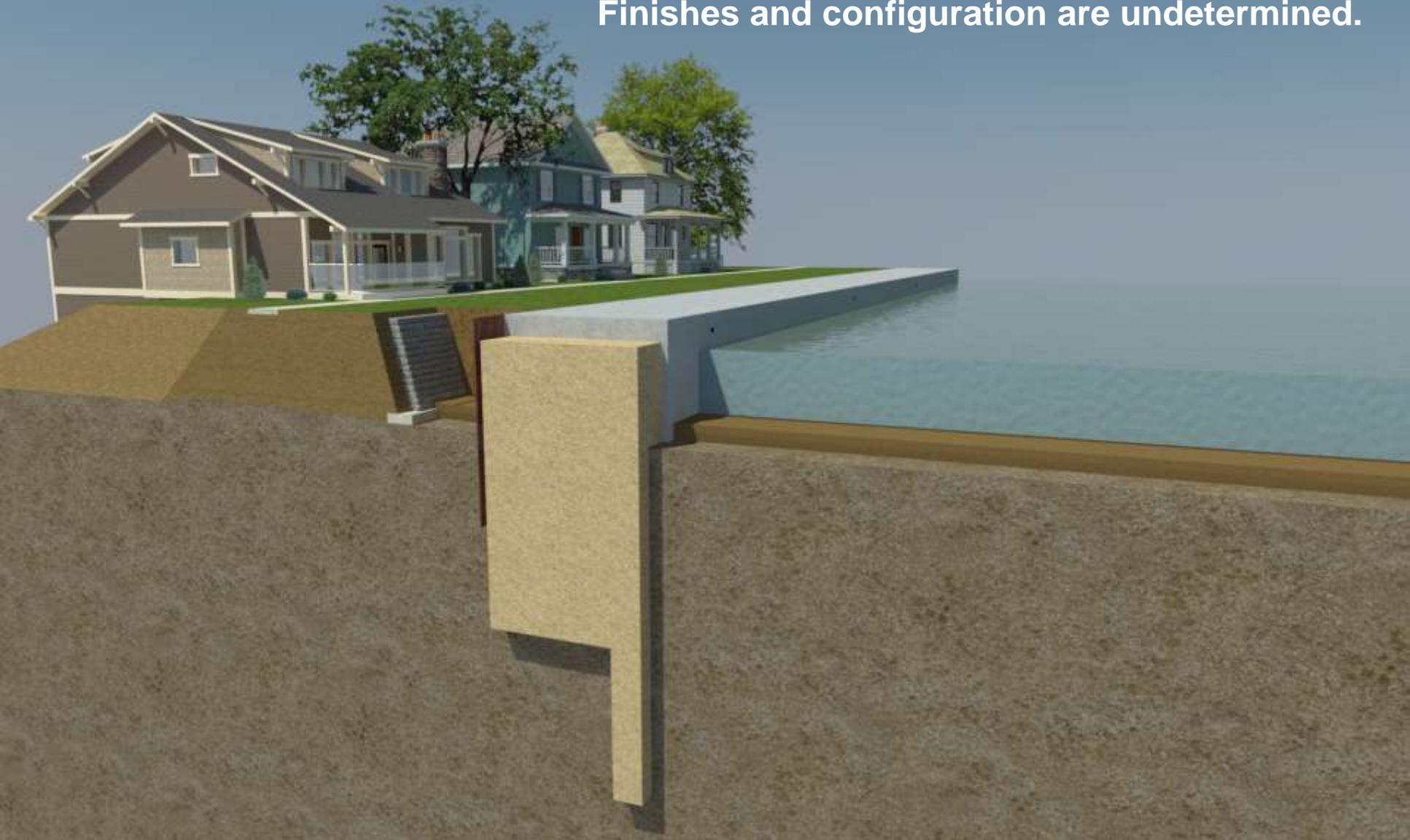
Phase II – New Dam at West Bank

Conceptual & for informational purposes only.
Finishes and configuration are undetermined.



Phase II – New Dam at North Bank

Conceptual & for informational purposes only.
Finishes and configuration are undetermined.



Schedule

- **Summer/Fall 2016**
 - Crest clearing
 - Continue Design and Public Outreach
- **Early 2017 – Soil Mix Buttress Construction**
- **Summer 2017 – Dam Crest and Facing Construction**
- **2019 – Construction Complete**

QUESTIONS?

IAN NICKEY

CALL: 614-221-2800

EMAIL:

IAN.NICKEY@HICKSPARTNERS.COM