

# Nanticoke Creek Site 3 – Plan- Environmental Document

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Second Agency Meeting  
December 12, 2024

Town of Lisle Office  
9234 NYS Route 79  
Lisle, NY 13797



# Meeting Agenda

1. Logistics, Introductions, and Objectives
2. Background
3. NRCS Watershed Rehabilitation Program and NEPA Process
4. Purpose and Need
5. Summary of Data Collection
6. Primary Dam Safety Deficiencies
7. Summary of Alternatives to Address Existing Deficiencies
8. Which Alternatives were eliminated vs. developed for Detailed Study
9. Agency, Property Owners, and General Public Discussion
10. Closing

# Introductions

## Lead Federal Agency

USDA Natural Resources  
Conservation Service (NRCS)



- David M. Walowsky Jr. | *Project Lead*

## Project Sponsor

NYS Department of Environmental  
Conservation (NYSDEC)



- Jennifer Everleth, P.E. | *Operations, Design & Construction Engineer*

## Consultant Lead

RJH Consultants, Inc.



- Robert Huzjak, P.E. | *Project Manager*
- Adam Prochaska, Ph.D., P.E., P.G. | *Task Lead*
- Hailea Henry, E.I | *Staff Engineer*

## Environmental Consultant

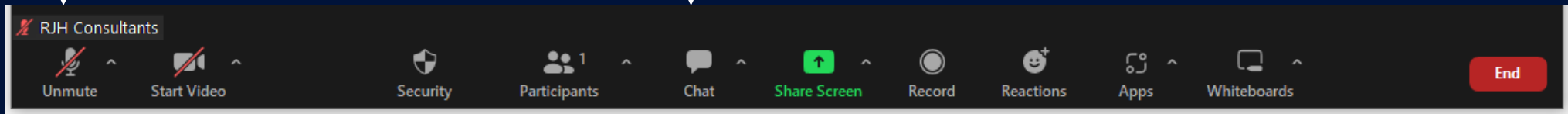
WSP USA



- Ghazoll Motlagh, P.E., CFM | *Project Manager*

# Meeting Logistics

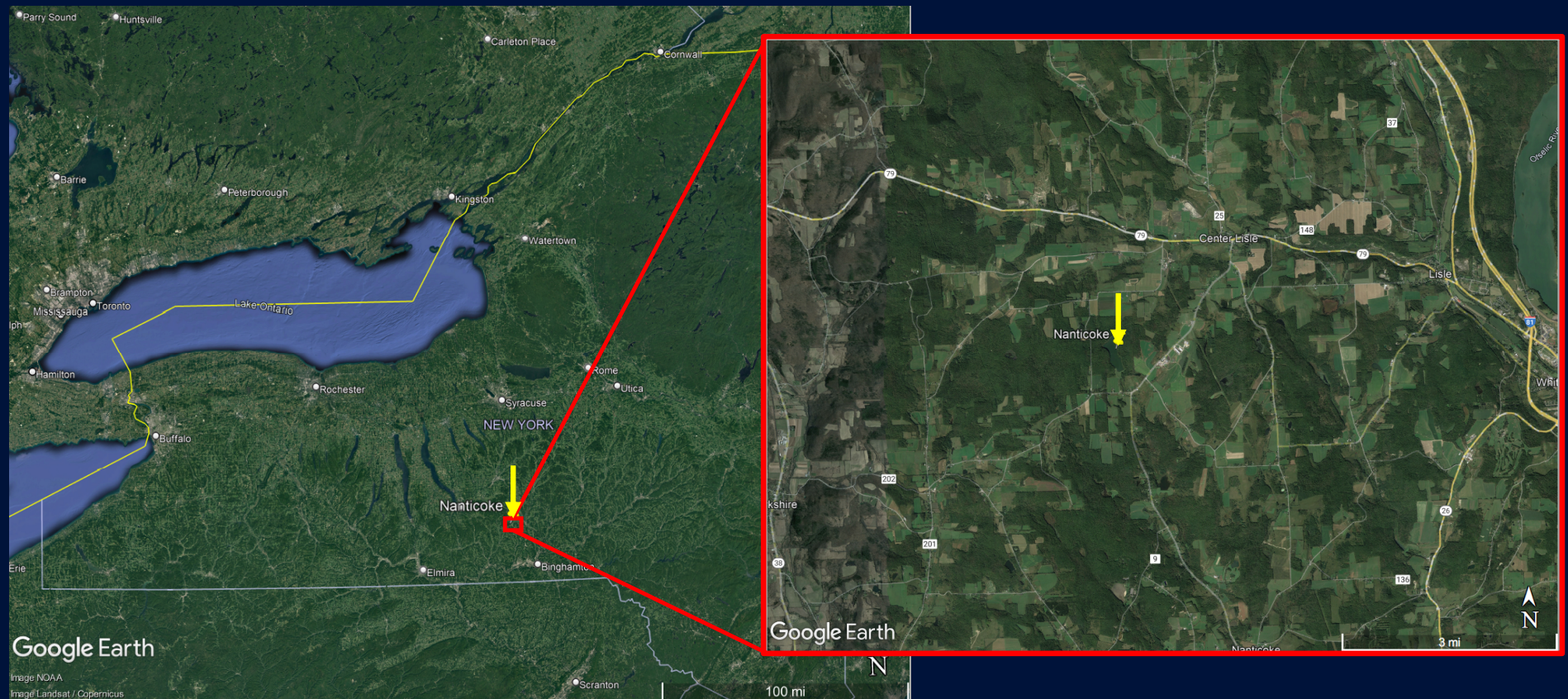
- Instructions to **Meeting Attendees**
- Instructions to **Online Attendees**
  - Muted and unable to speak.
  - Chat function is enabled and being monitored.
  - Add name, address, and email/phone number to the meeting chat.



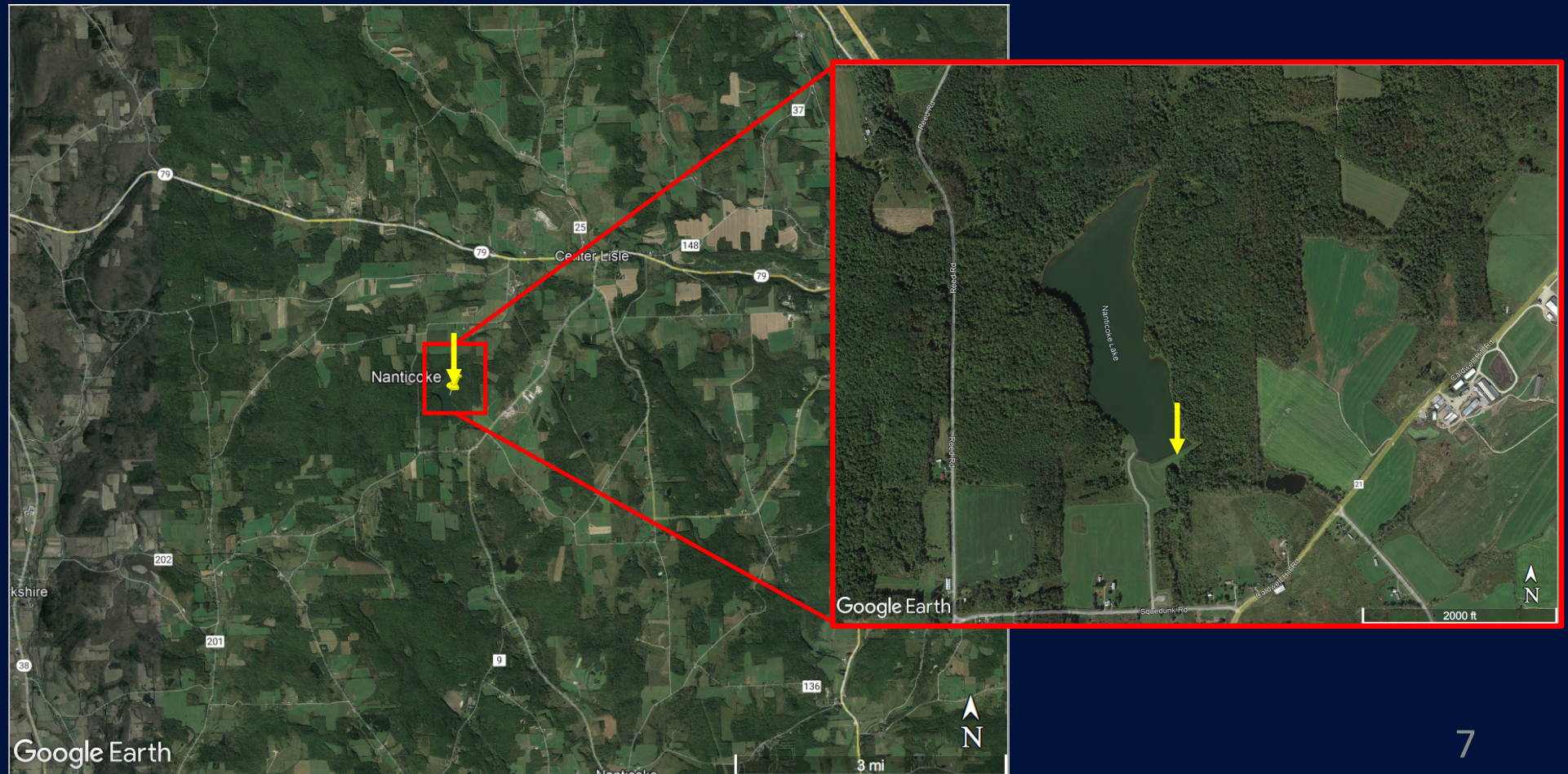
# Meeting Objectives

1. Provide update on progress of work
2. Explain alternatives considered
3. Present Sponsor's preferred alternative
4. Get public opinion and feedback on preferred alternative
5. Provide updates on remaining work tasks

# Nanticoke Creek Site 3 Project Location



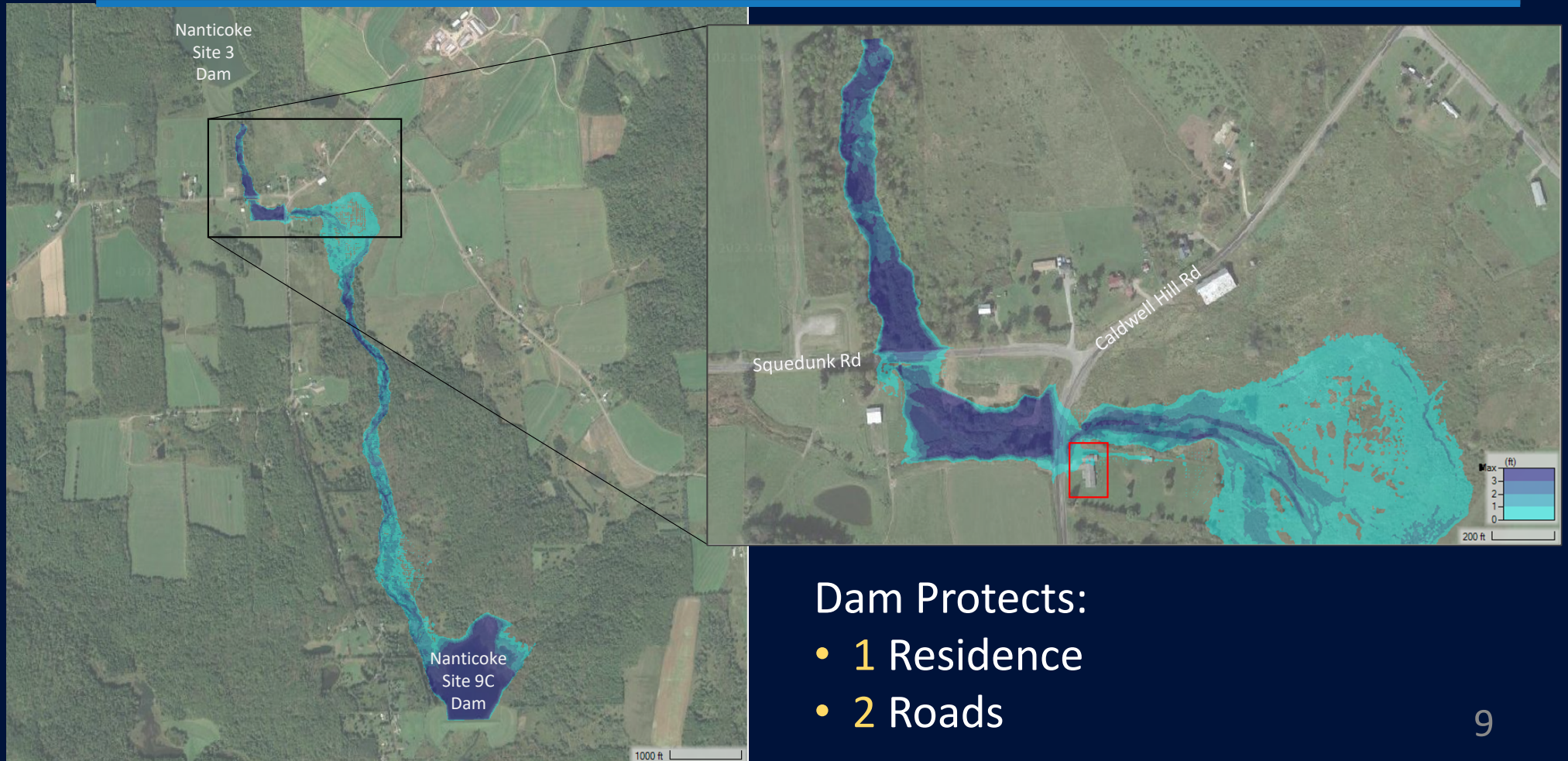
# Nanticoke Creek Site 3 Project Location



# Background

- Designed and built in 1975 as a **significant hazard potential** dam for the purposes of:
  - Recreation
  - Fish and Wildlife Development
  - Flood Control
- Reclassified by DEC as a **high hazard potential** dam around 2017 because of potential to cause a dam failure at Nanticoke Site 9C Dam downstream.

# Benefits – No Dam 100-Year Flood



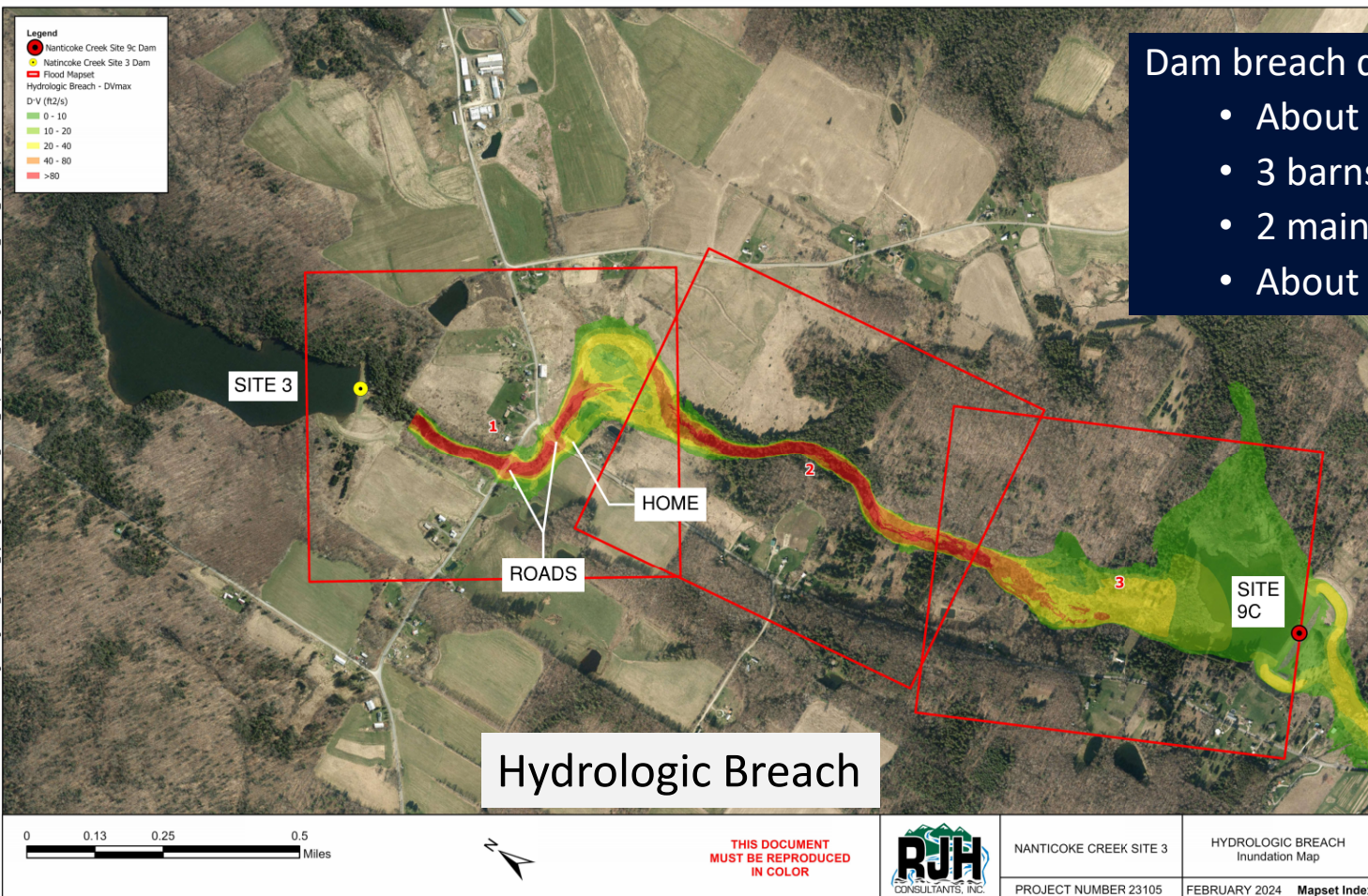
Dam Protects:

- 1 Residence
- 2 Roads

# Dam Breach Inundation

Dam breach during FBH would impact:

- About 1 home and 7 people
- 3 barns/sheds/garages
- 2 main local roads and minor highways
- About 1 life lost



# Watershed Rehabilitation Process

**Proactive Approach:** NYSDEC applied to rehabilitate Nanticoke Creek Site 3 Dam



**This project is currently in the Watershed Planning phase, which involves:**

- Identify the purpose and need.
- Identify and gather data on dam safety concerns.
- Evaluate key resources.
- Evaluate potential solutions.
- **Select the preferred alternative.**
- **Determine if federal funding should be pursued to implement solutions.**

# Scope of Work

## Project Planning Phases

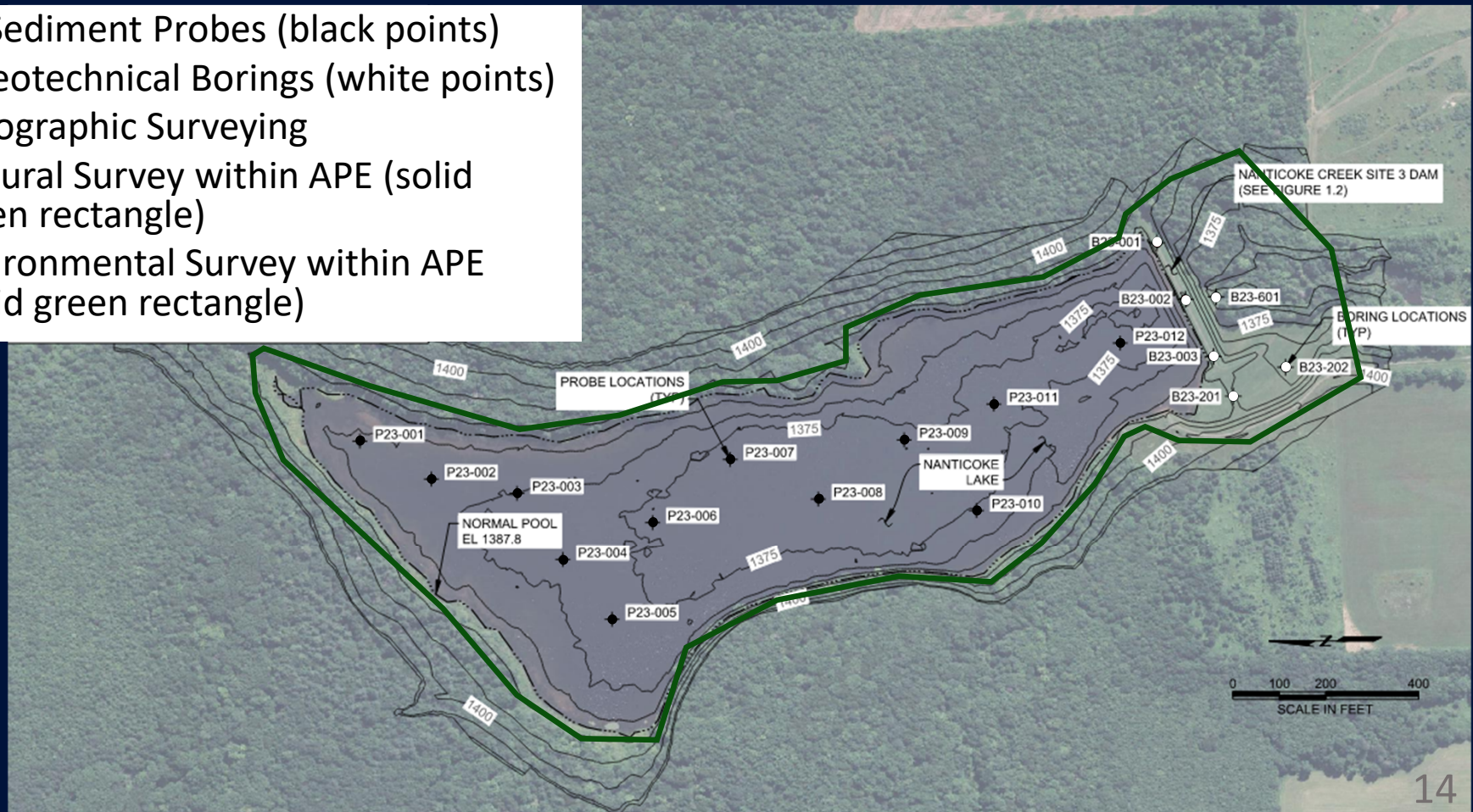
- **Phase I:** Goals, Objectives, Purpose and Need, Inventory and Analyze Resources
- **Phase II:** Alternatives Formulation and Evaluation
- **Phase III:** Prepare Plan-Environmental Document

# Purpose and Need

- **Purpose**
  - Maintain current level of flood protection
  - Comply with NRCS and NYDEC dam safety, design, and performance criteria
  - Minimize environmental, economic, and social impacts
- **Need**
  - Dam does not meet current NRCS and State of New York dam safety criteria

# Summary of Data Collection

- 12 Sediment Probes (black points)
- 6 Geotechnical Borings (white points)
- Topographic Surveying
- Cultural Survey within APE (solid green rectangle)
- Environmental Survey within APE (solid green rectangle)



# Summary of Final Data Collection

- Cultural Survey within Expanded APE (dashed yellow rectangle)
- Environmental Survey within Expanded APE (dashed yellow rectangle)



# Dam Components and Access

## Earthfill Embankment

- Height: 31.5 feet
- Crest Width: 14 feet
- Crest Length: 618 feet

## Principal Spillway

- Rectangular Riser
- 30-inch Outlet Pipe

## Auxiliary Spillway

- Base Width: 125 feet

## Site Access

- From parking area and entrance gate 0.25-miles south of site



# Identified Deficiencies

## Geometry and General Deficiencies:

- FBH predicted to overtop the dam 1.3 feet
- Embankment crest width is less than 14 feet in some areas
- Embankment crest does not slope to drain
- Downstream embankment slope has inadequate FS
- No survey monuments or piezometers

## Inadequate Seepage Protection:

- No chimney filter
- Fine drain material in drain (dewatering) pits is not compatible with glaciolacustrine foundation soil
- The principal spillway does not have an appropriate filter diaphragm
- Toe drain is asbestos cement, is inaccessible for inspection, and does not include sediment traps or seepage measurement devices
- Does not meet required FS against uplift

## Auxiliary Spillway Deficiencies:

- The Auxiliary Spillway must be raised 0.1 foot to not be engaged by the PSH
- Spillway berm does not meet minimum crest width criteria in some areas

## Principal Spillway Deficiencies:

- The Principal Spillway conduit does not meet criteria for core microcracking
- It does not appear the concrete cradles extend up to the spring line
- The principal spillway includes three anti-seep collars which are no longer state of practice
- The existing impact basin does not meet minimum width recommendations
- The low-level drain is not reinforced concrete pipe (cast-iron) and does not have adequate structural capacity

# Initial Array of Alternatives to Address Deficiencies

- **Alternative 1 (No Action/Future Without Project (FWOP))**
  - *Continue to operate dam in its current condition and accept the risk of failure*
- **Alternative 2 (Decommissioning)**
  - *Breach the dam, purchase and demolish structures in downstream inundation limits*
- **Alternative 3 (Nonstructural)**
  - *Breach the dam, construct downstream improvements to protect existing structures*
- **Alternative 4 (Structural)**
  - *Rehabilitate the dam to address deficiencies and meet current standards*

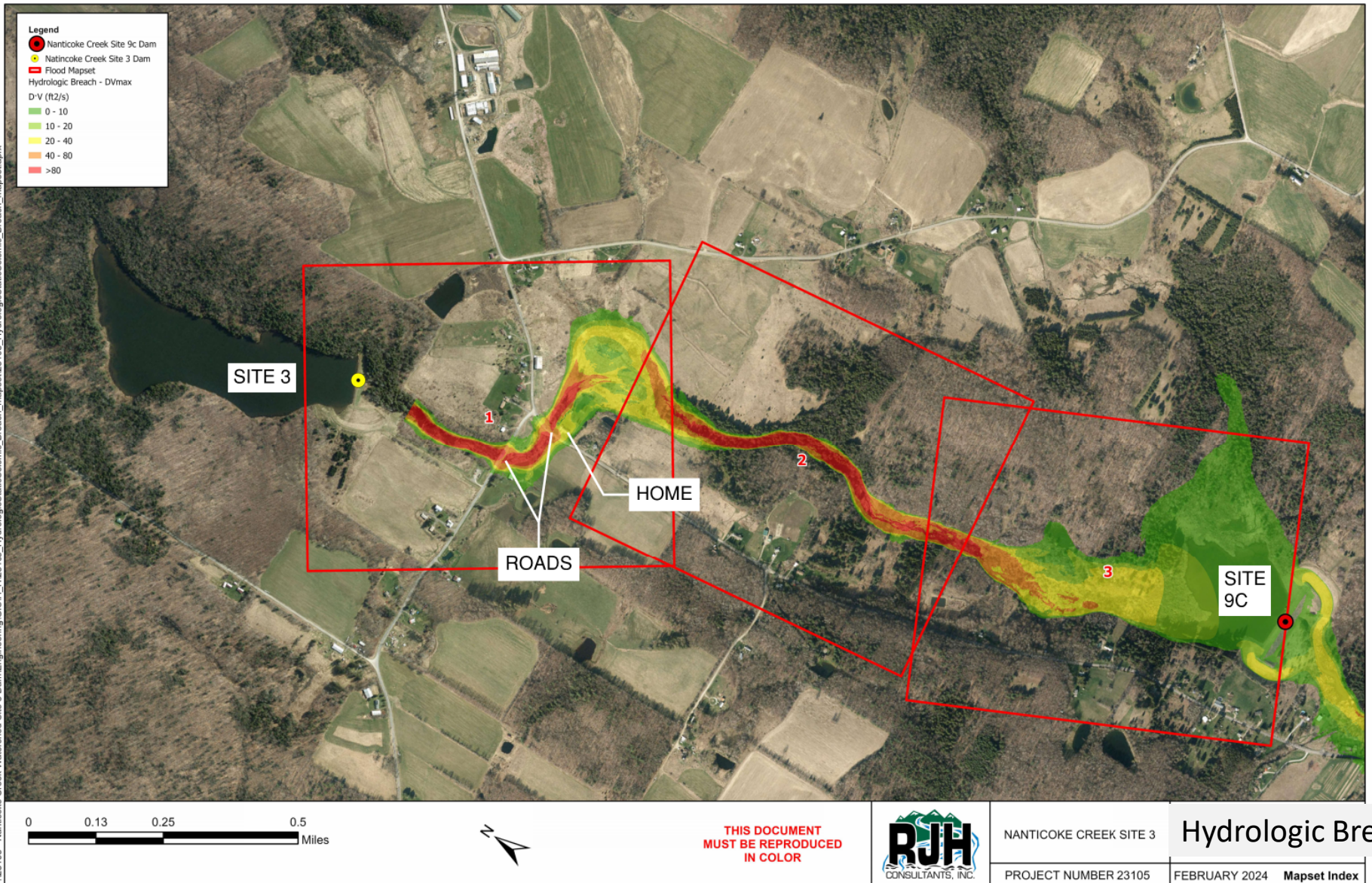
# Alternative 1

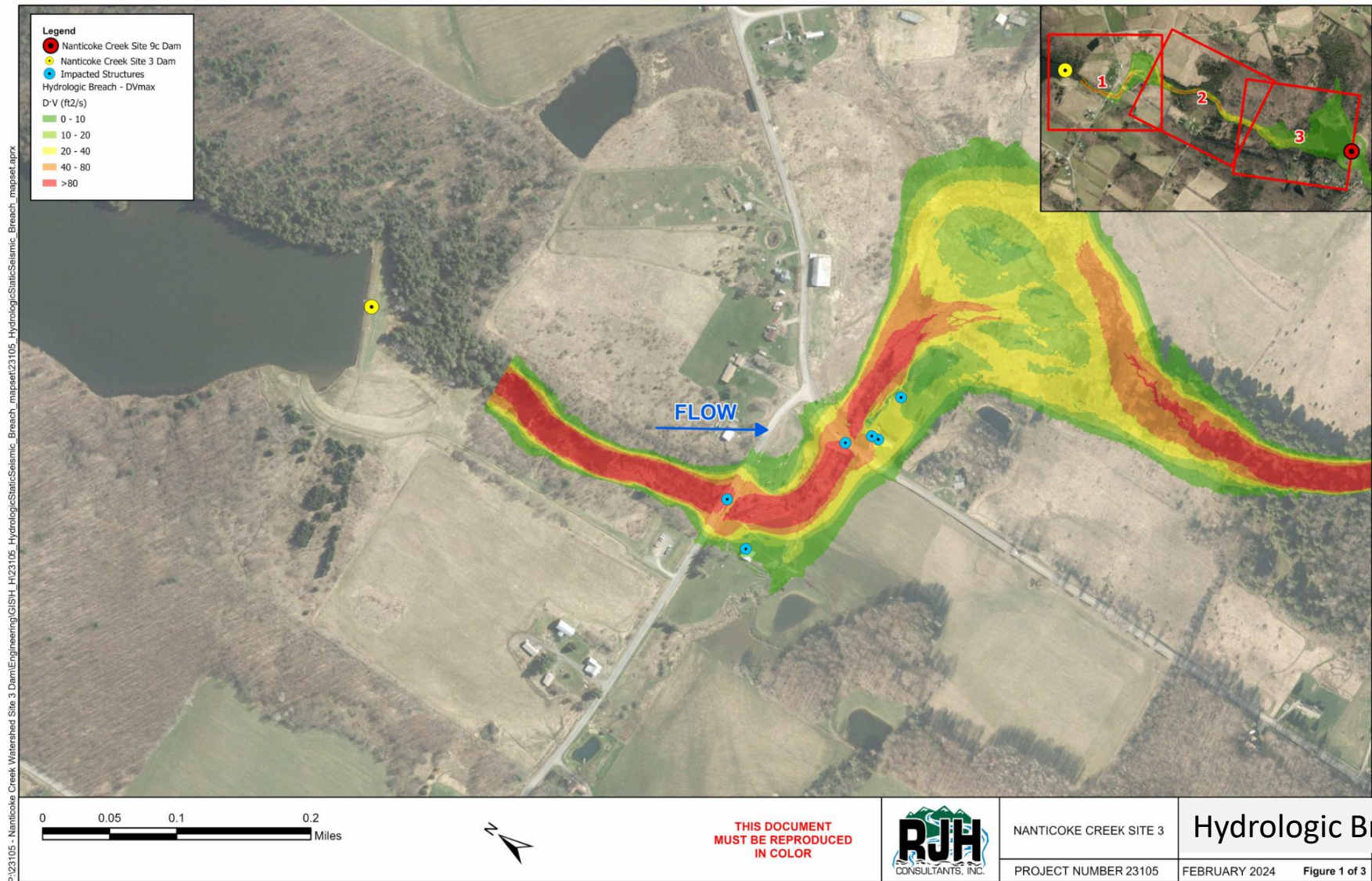
# Alternative 1 (No Action/FWOP)

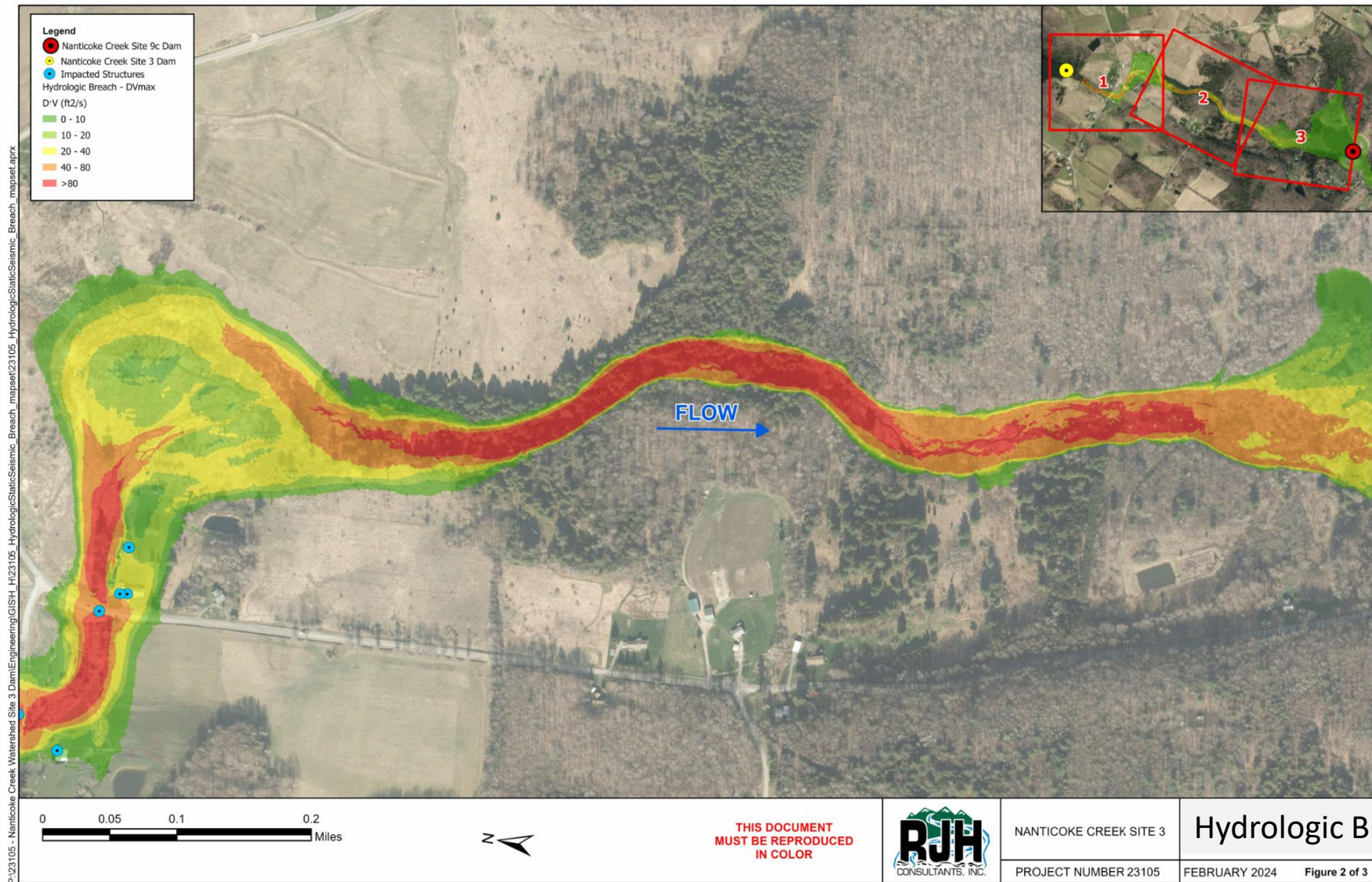
- Downstream consequences will depend on hydraulic load at time of failure

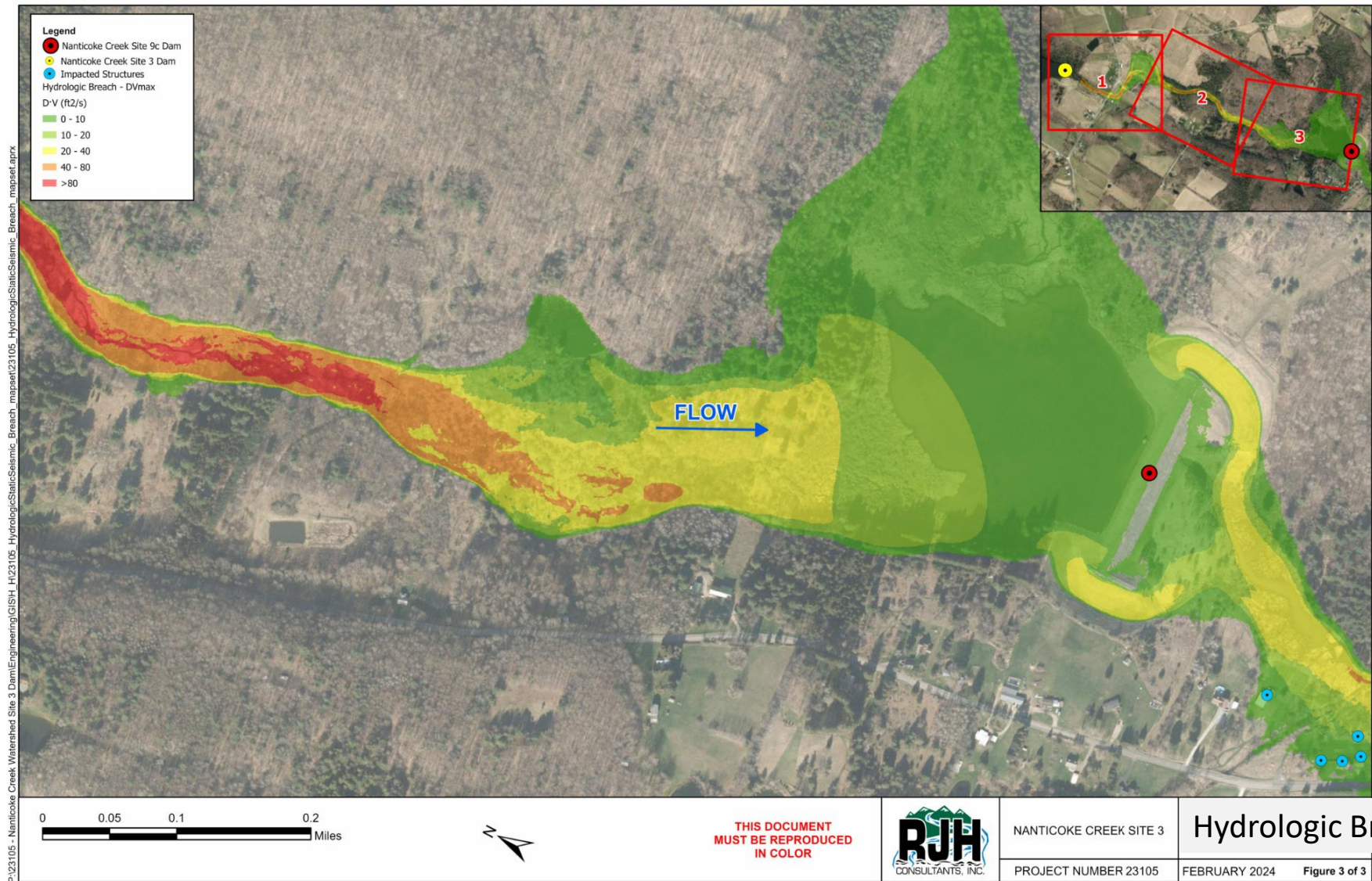
		Hydrologic Breach	Static Breach	Seismic Breach
Load		Peak of FBH	ASW Crest	Normal Pool
Peak Discharge (cfs)		19,900	500	400
Inundated Structures	Barns/Sheds/Garages	3	2	2
	Homes	1	1	1
	Main Local Roads and Minor State Highways	2	2	2
Population at risk (PAR)		7	7	4
Estimated lives lost (LL)		0.6	0.06	0.03
Results in Failure of Site 9c Dam:		Yes	No	No

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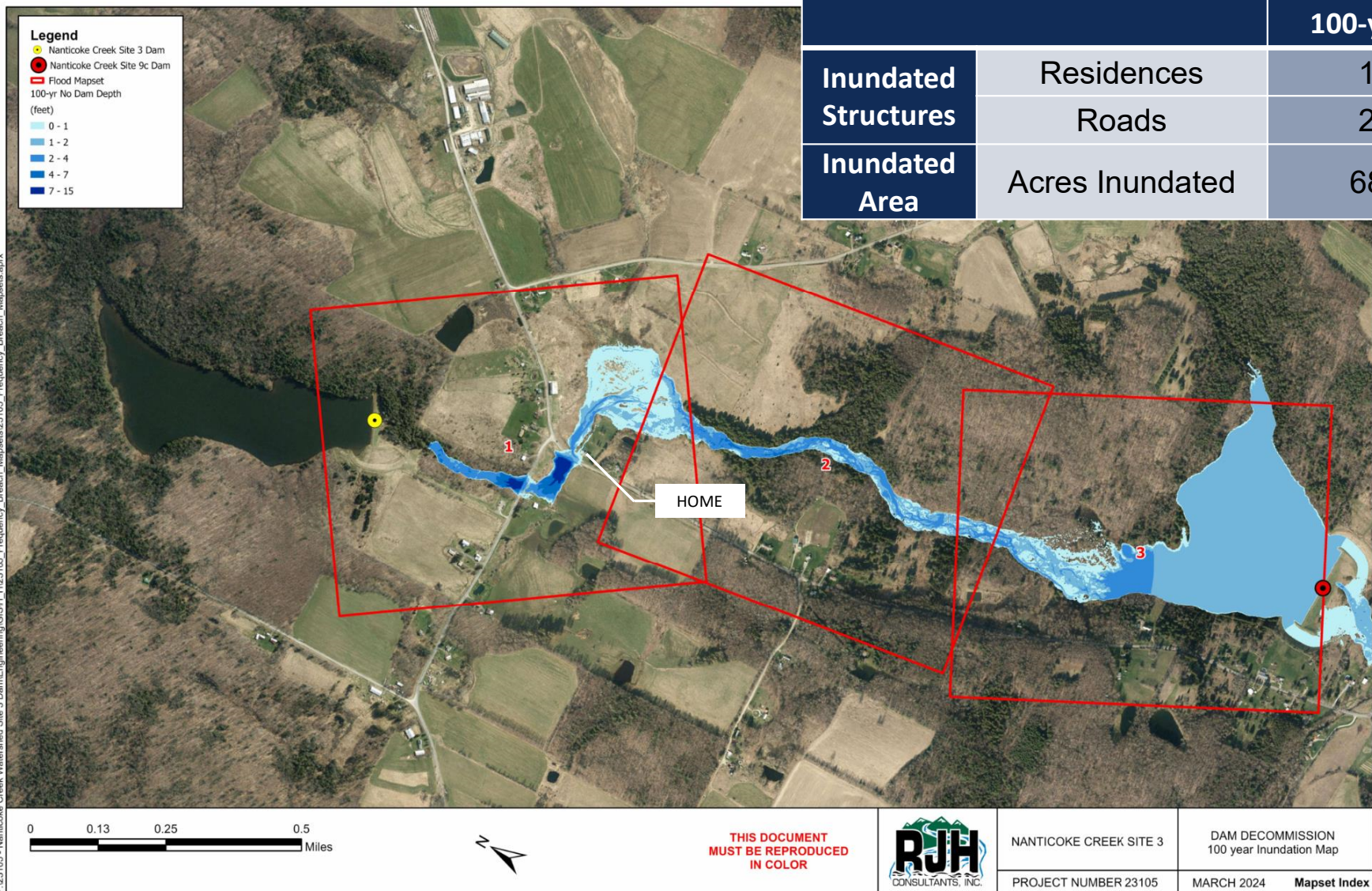
# Alternative 2

## Alternative 2 (Decommissioning)

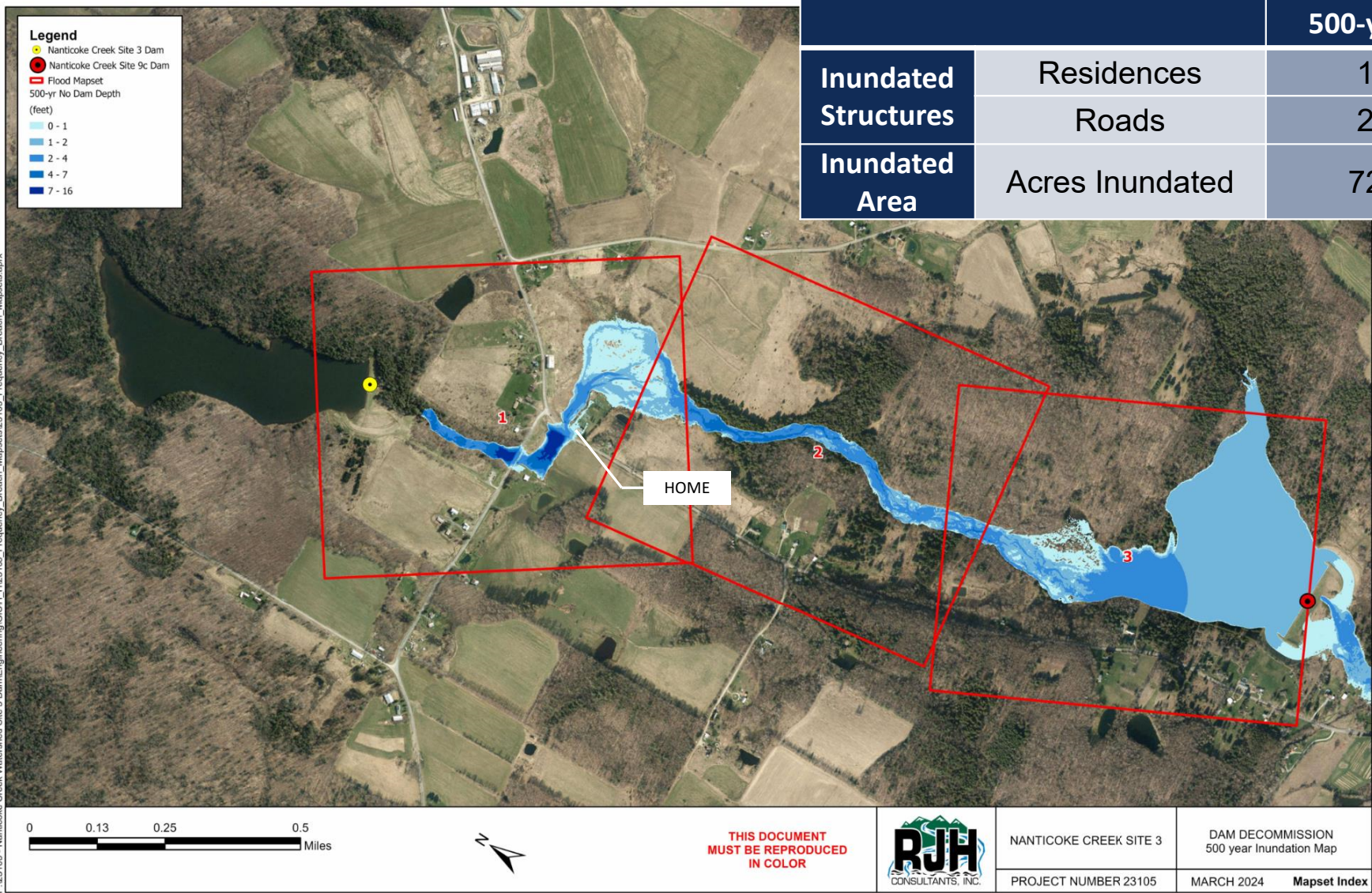
- Breach existing dam and stockpile material onsite
- Demolish principal spillway structures and dispose of off-site
- Reclaim and revegetate reservoir bottom to stabilize sediment
- Purchase downstream properties and demolish structures in the inundation area



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		500-year
Inundated Structures	Residences	1
	Roads	2
Inundated Area	Acres Inundated	72

# Alternative 3

## Alternative 3 - Hazard Classification Reduction

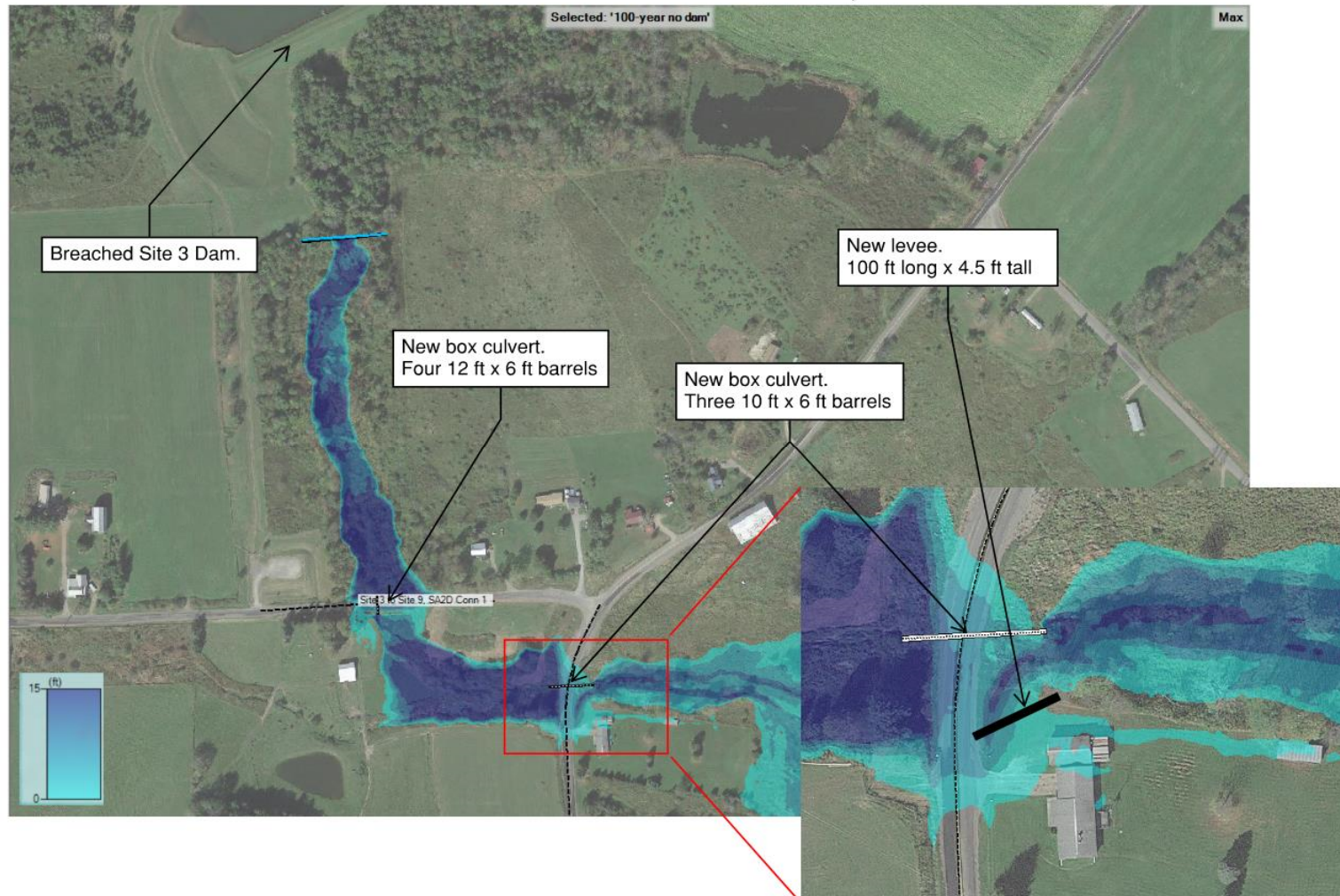
- Peak discharge from dam failure must be less than 1,110 cfs to not impact downstream residence
- A peak flow of 1,110 cfs corresponds to embankment crest ~15 feet lower than the existing dam (tallest possible Low-Hazard Dam)
  - *Reservoir could store 50-year inflow if it was normally empty*
  - *Reservoir could store 25-year inflow if normal pool was 5 feet deep*
- Alternative was eliminated from detailed study:
  - *Does not provide meaningful flood protection*
  - *Does not provide aquatic habitat and reservoir for recreation*

## Alternative 3 (Nonstructural)

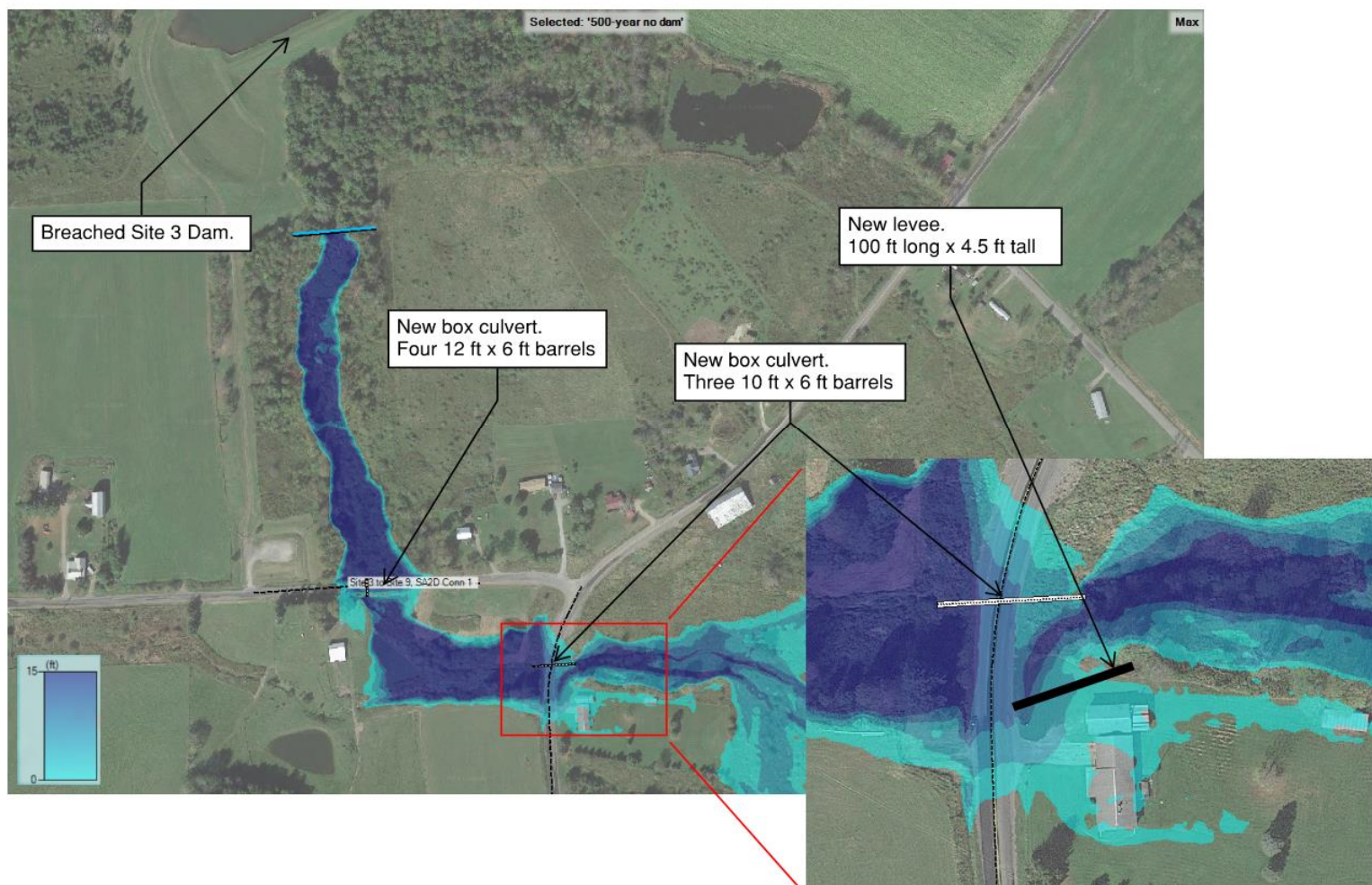
- Breach existing dam and stockpile material onsite
- Demolish principal spillway structures and dispose of off-site
- Reclaim and revegetate reservoir bottom to stabilize sediment
- Construct downstream facilities to manage flooding
- Purchase vacant lands in the inundation area



## Nonstructural - 100-year



## Nonstructural - 500-year



# Alternative 4

## Modification Concepts Considered – Eliminated✖ or Carried Forward✔:

### Geometry and General Deficiencies:

- FBH predicted to overtop the dam 1.3 feet
  - ✖ • *Widen the auxiliary spillway* – not enough property to prevent overtopping
  - ✖ • *Parapet Wall* – not allowed by TR-60 for flood routing (NRCS criteria)
  - ✔ • *Downstream embankment raise* – prevents overtopping by raising crest elevations and addresses other deficiencies
- Embankment crest width is less than 14 feet in some areas
  - ✖ • *Local Crest Steepening* – creates maintenance and stability issues, does not address toe drain deficiencies
  - ✔ • *Downstream embankment raise* – widens and raises dam crest and addresses other deficiencies
- Embankment crest does not slope to drain
  - ✖ • *Local Crest Steepening* – creates maintenance and stability issues, does not address toe drain deficiencies
  - ✔ • *Downstream embankment raise* – dam crest constructed to slope to drain and addresses other deficiencies
- Downstream dam slope has inadequate FS
  - ✔ • *Downstream embankment raise* – construct downstream raise at a 3H:1V or flatter
- No survey monuments or piezometers
  - ✔ • *Install Instrumentation* – included with all modification concepts

## Modification Concepts Considered – Eliminated✗ or Carried Forward✓:

### Inadequate Seepage Protection:

- No chimney filter
  - ✗ • *Bio-polymer filter trench – difficult to construct*
  - ✓ • *Downstream embankment raise – construct a chimney filter as part of downstream embankment rehabilitation*
- Fine drain material in drain (dewatering) pits is not compatible with glaciolacustrine foundation soil
  - ✗ • *Relief wells – has maintenance issues, could miss localized permeable zones*
  - ✓ • *Extend Trench Drain – extend trench drain into glaciolacustrine soil to relieve artesian pressures*
- The principal spillway does not have an appropriate filter diaphragm
  - ✗ • *Bio-polymer filter trench – difficult to construct*
  - ✓ • *Downstream embankment raise – construct a filter diaphragm as part of downstream embankment rehabilitation*
- Toe drain is asbestos cement, is inaccessible for inspection, and does not include sediment traps or seepage measurement devices
  - ✓ • *Downstream embankment raise – construct new toe drains for modified embankment*
- Does not meet required FS against uplift
  - ✓ • *Downstream embankment raise – increases self weight of the embankment and protects against uplift*

## Modification Concepts Considered – Eliminated✖ or Carried Forward✔:

### Auxiliary Spillway:

- The Auxiliary Spillway must be raised 0.1 foot to not be engaged by the PSH
- Spillway berm does not meet minimum crest width criteria in some areas
- ✔ • *Raise control section and broaden berm – addresses PSH deficiency, addresses crest width criteria*

## Modification Concepts Considered – Eliminated✗ or Carried Forward✓:

### Principal Spillway:

- The Principal Spillway conduit does not meet criteria for core microcracking
- It does not appear the concrete cradles extend up to the spring line
- The principal spillway includes three anti-seep collars
- The existing impact basin does not meet minimum width recommendations
- The low-level drain is not reinforced concrete pipe (cast-iron) and does not have adequate structural capacity
- ✗ • **Conduit Slip Lining** – conduit diameter would be significantly reduced
- ✓ • **Cured in place pipe (CIPP) liner** – lining the low level inlet pipe and principal spillway conduit, smaller reduction in diameter
- ✓ • **Downstream embankment raise** – construct a filter diaphragm, extend the principal spillway conduit, and reconstruct a new impact basin

# Structural Modification Concept:

- **Geometry and General Deficiencies**

- Construct downstream embankment raise
  - *14-ft-wide crest at El. 1396.0, slopes to drain*
  - *Install instrumentation*

- **Inadequate Seepage Protection**

- Construct downstream embankment raise
  - *Blanket drain and chimney filter*
  - *New filter diaphragm*

- **Auxiliary Spillway**

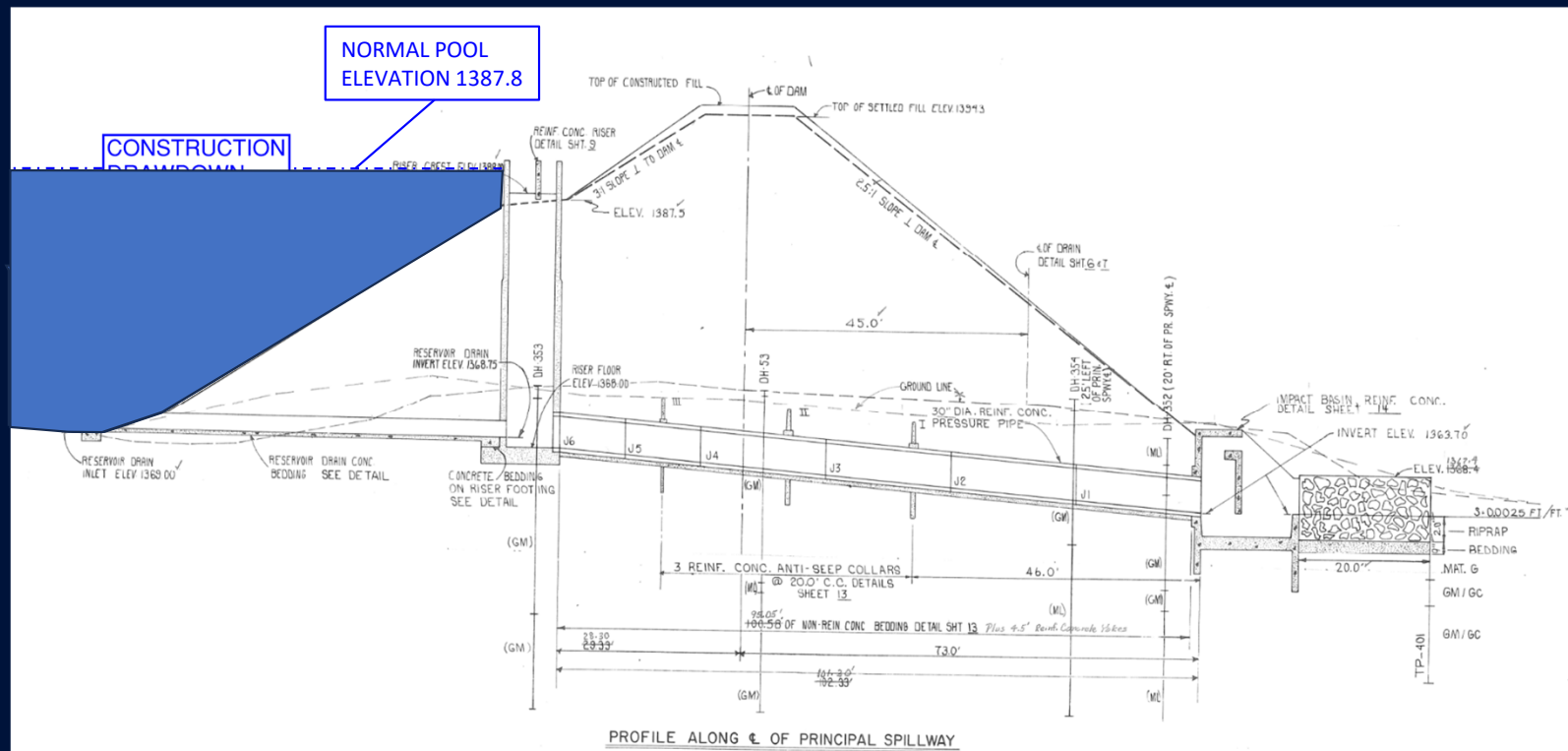
- Raise and broaden Auxiliary Spillway berm

- **Principal Spillway**

- CIPP liner
  - *New filter diaphragm*
- New Impact Basin

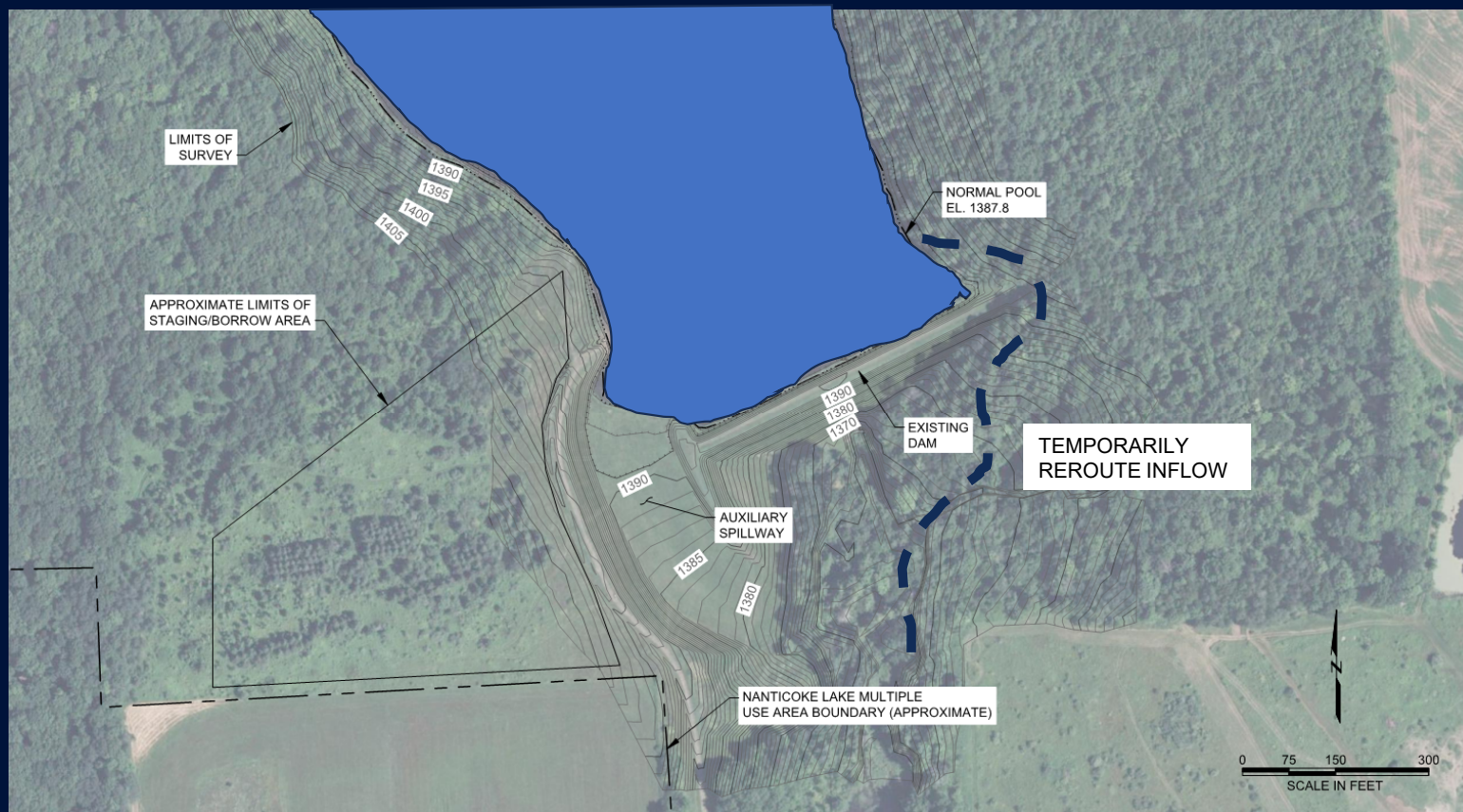
# Alternative 4 (Structural Rehabilitation):

- Lower reservoir for construction season, route inflow, and dewater construction areas



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- Lower reservoir for construction season, route inflow, and dewater construction areas



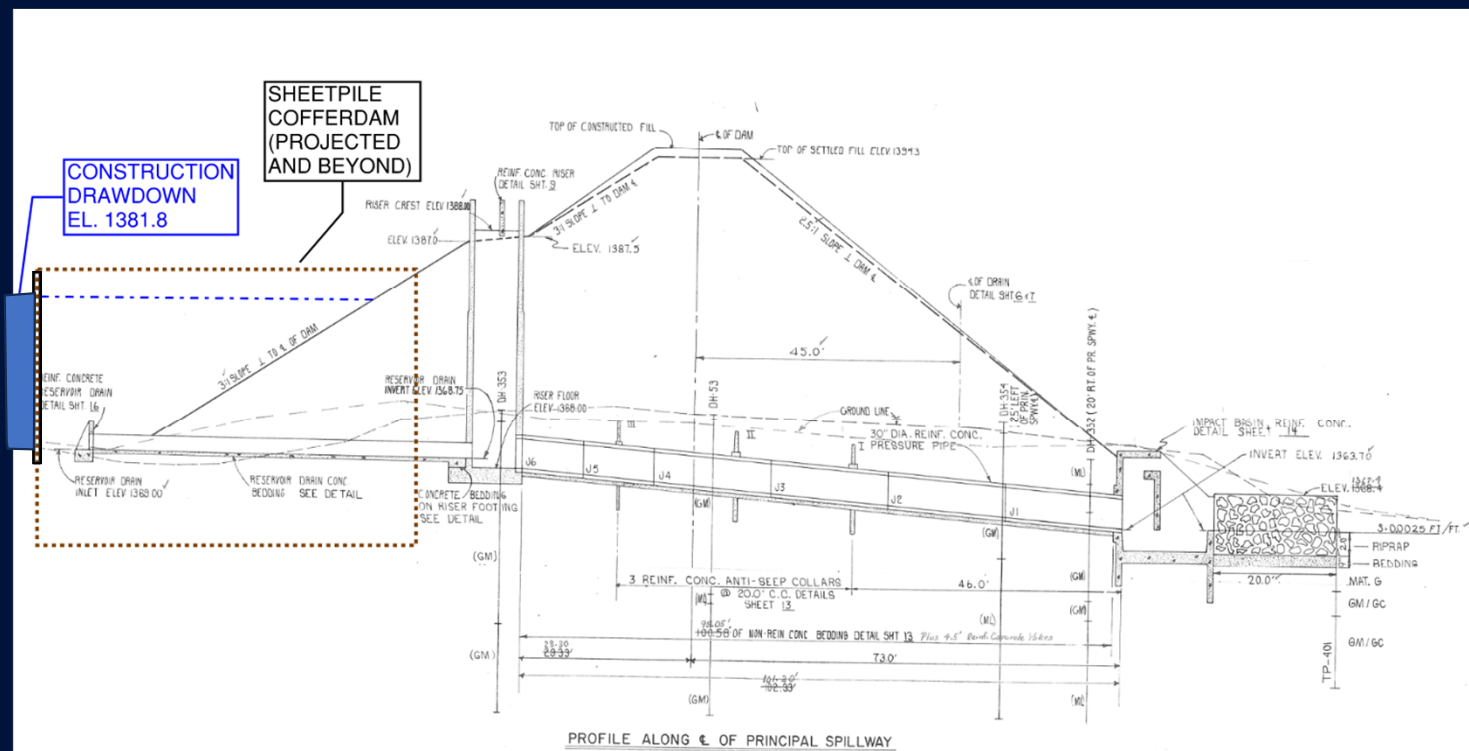
## Alternative 4 (Structural Rehabilitation):

- Construct a cofferdam around the low-level inlet



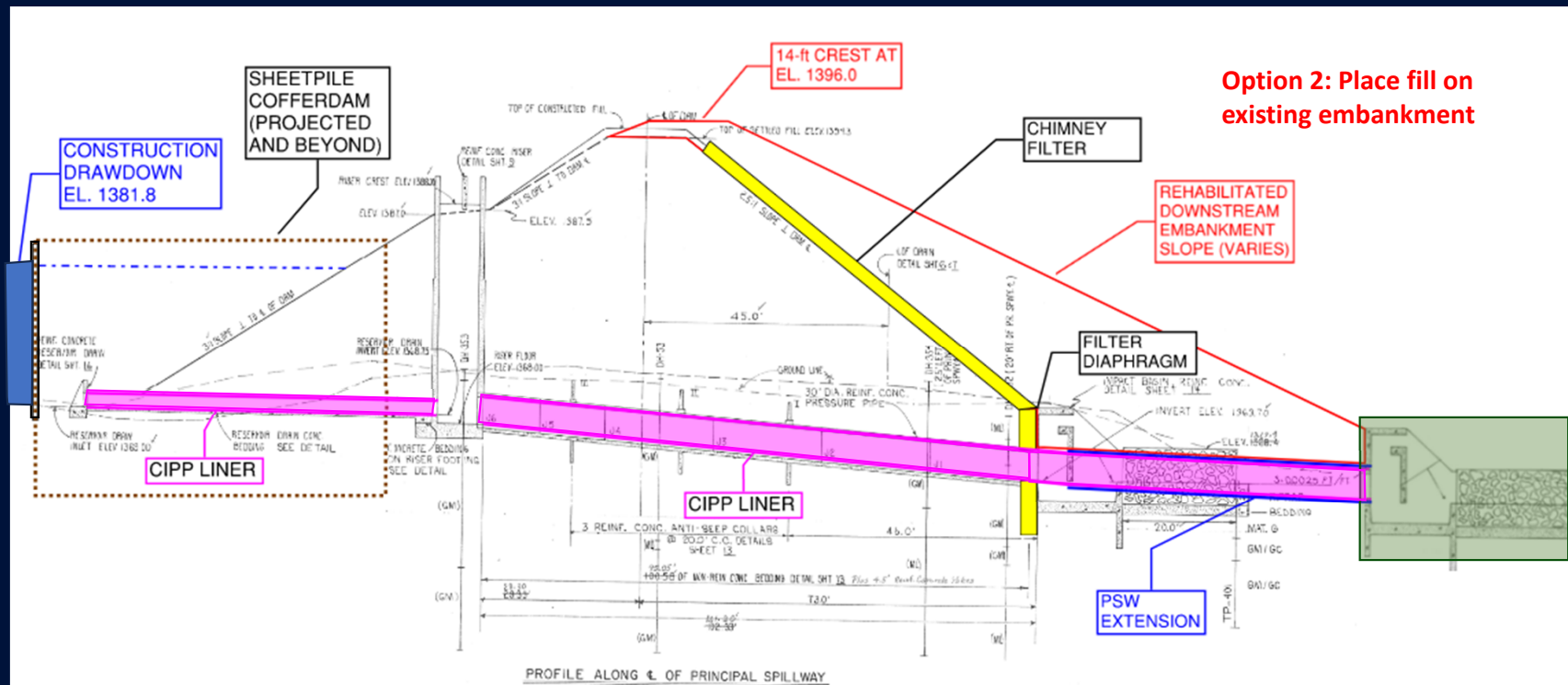
## Alternative 4 (Structural Rehabilitation):

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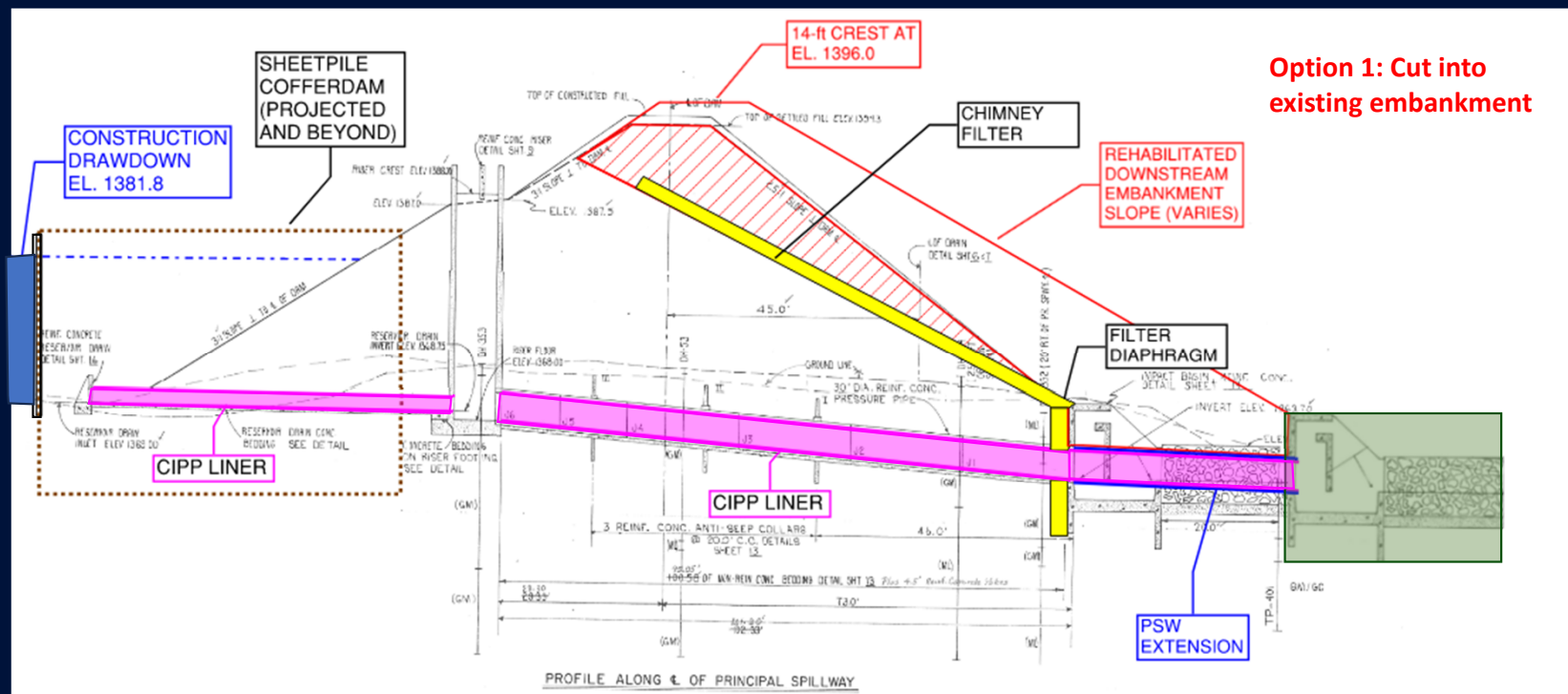
# Alternative 4 (Structural Rehabilitation):

- Demolish impact basin and dispose of offsite
- Construct filter diaphragm, blanket drain, and chimney filter
- Construct downstream embankment raise, raise and broaden auxiliary spillway berm, install instrumentation
- Extend principal spillway conduit, install 12-foot-wide impact basin, CIPP liner in low-level drain and principal spillway conduit



# Alternative 4 (Structural Rehabilitation):

- Demolish impact basin and dispose of offsite
- Construct filter diaphragm, blanket drain, and chimney filter
- Construct downstream embankment raise, raise and broaden auxiliary spillway berm, install instrumentation
- Extend principal spillway conduit, install 12-foot-wide impact basin, CIPP liner in low-level drain and principal spillway conduit

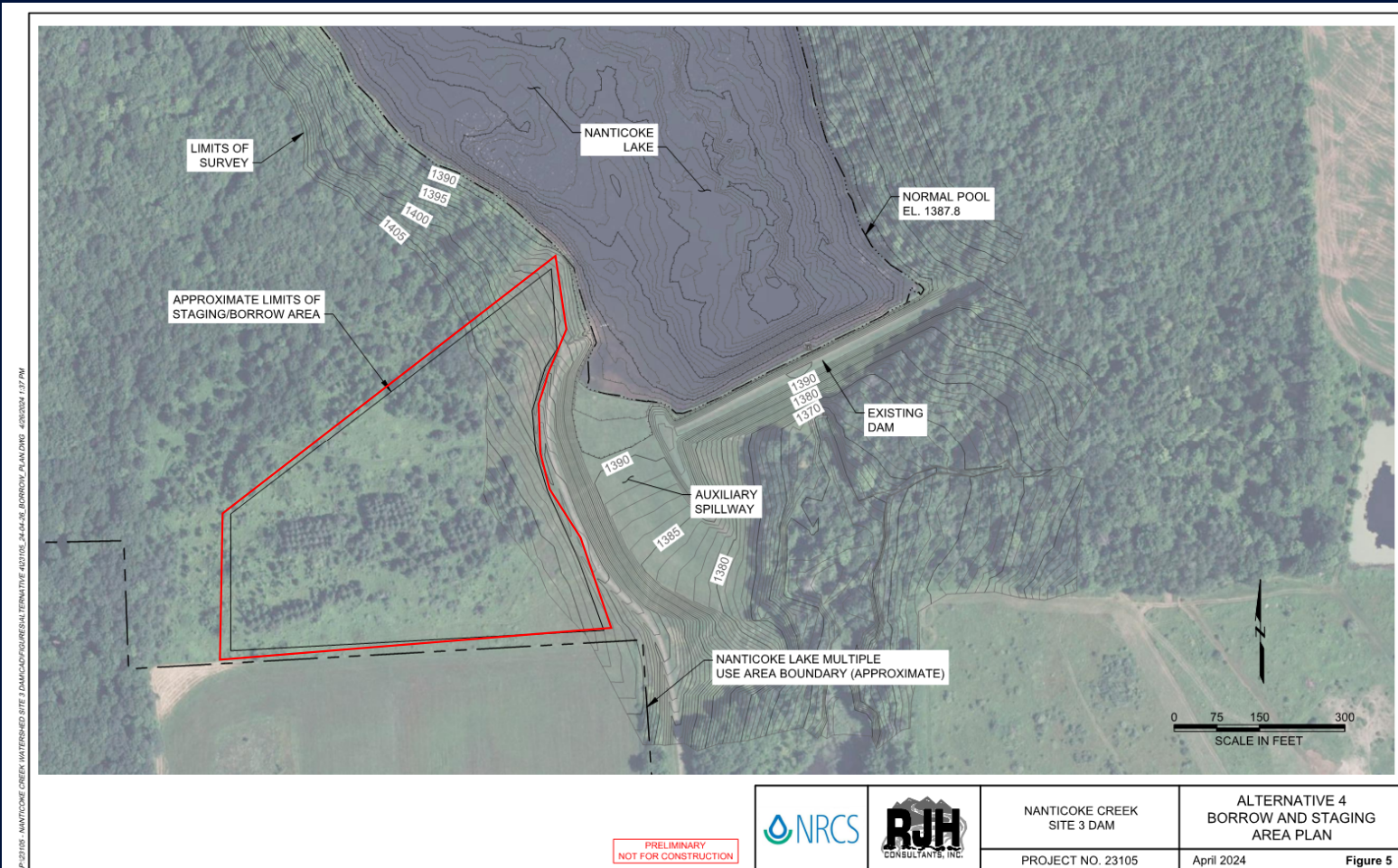


## Alternative 4 – Auxiliary Spillway Deficiencies

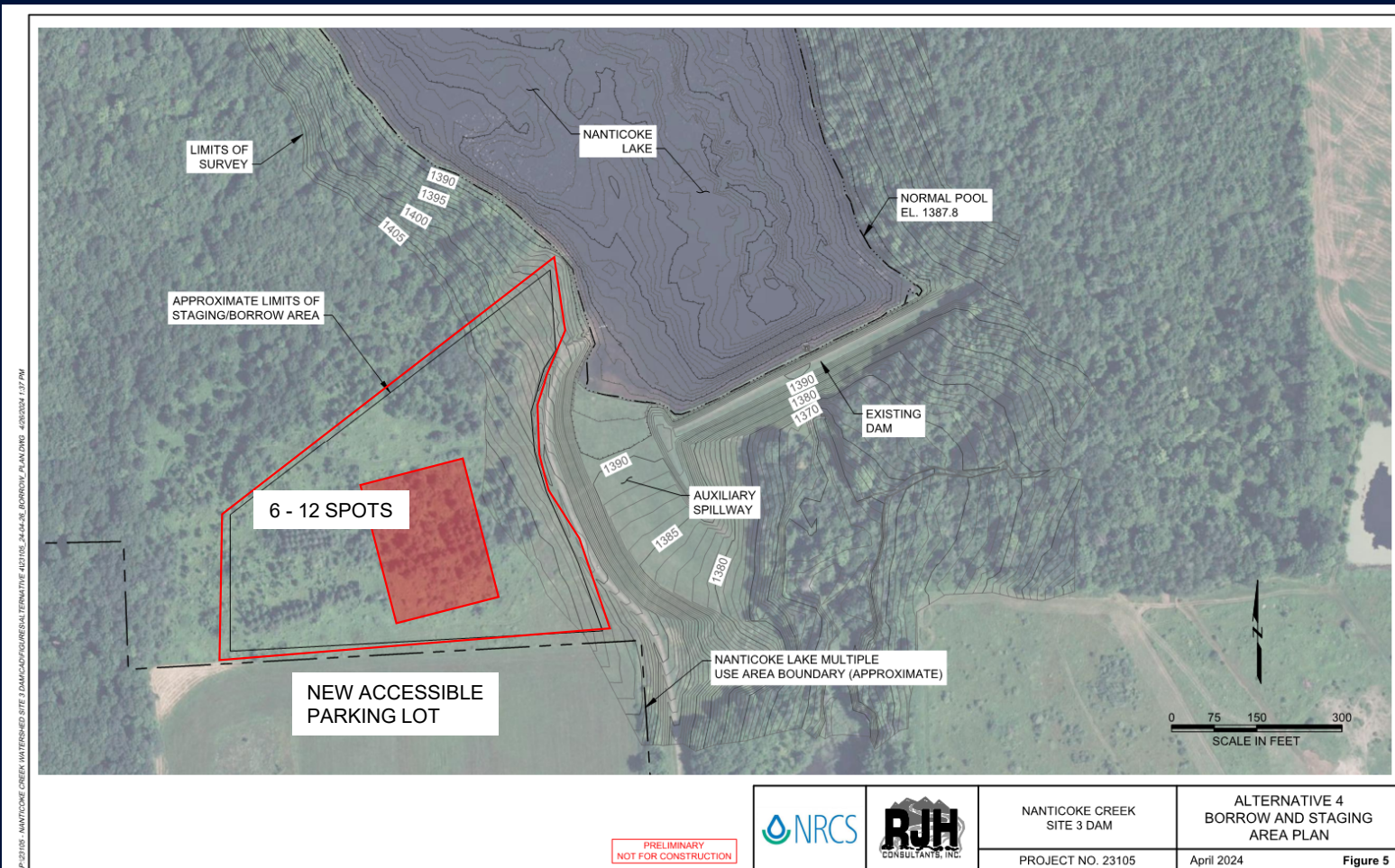
- Raise and Broaden the Auxiliary Spillway Berm



## Alternative 4 – Staging and Borrow Area



## Alternative 4 – Parking Lot



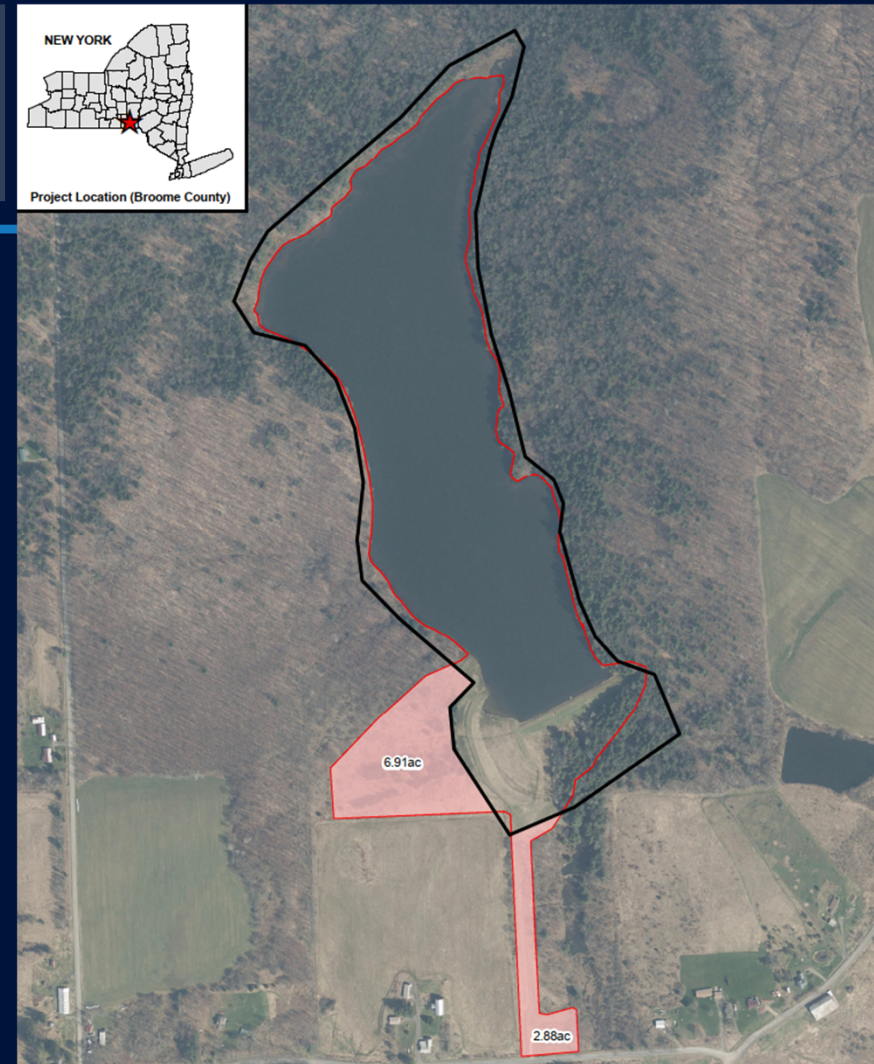
# Cultural and Environmental Impacts

## Area of Potential Effect (APE) Studied:

- 63.7 Total acres
- 43.4 ac Inundated by lake
- 20.3 ac Surrounding areas
- 9.8 ac Expanded APE to be evaluated

## Types of Resources evaluated:

- Environmental
- Architectural
- Archaeological










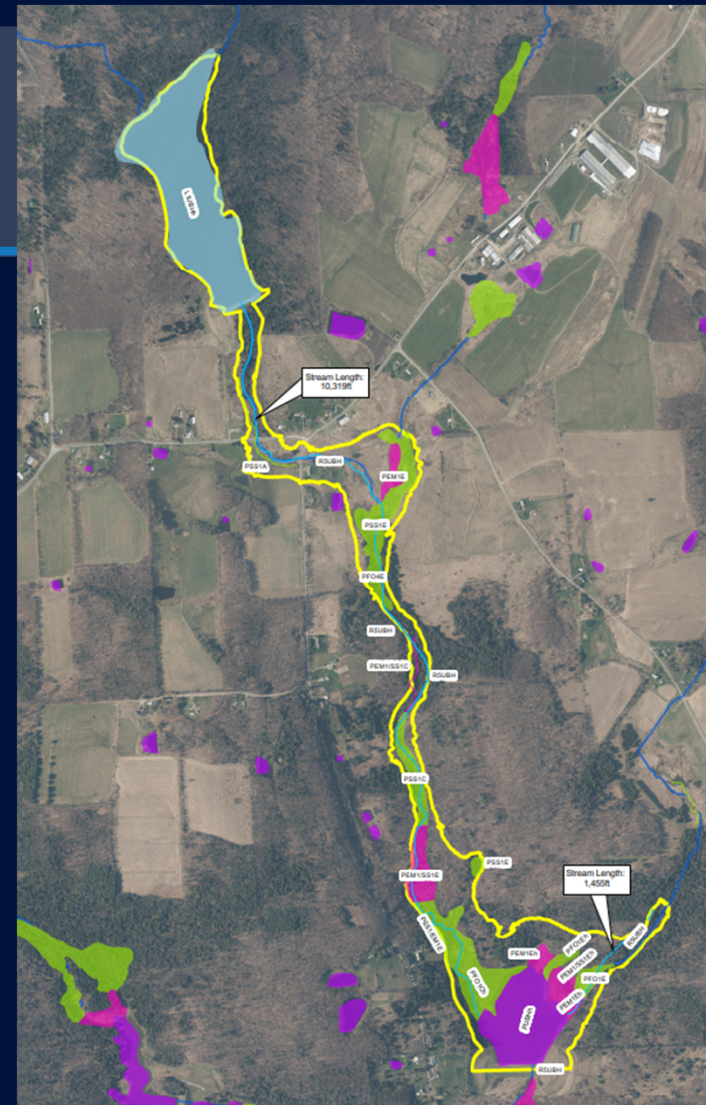
# Wetlands

## Wetlands within Hydraulic Breach Area

- 43.32-acre Lacustrine
  - 11.36-acre Palustrine emergent
  - 30.12 Palustrine Forested/Shrubbed
  - 3.47-acre Riverine Wetlands
  - 23.8-acre NYSDEC Class 2 Wetlands\*
- \*Captured within the NWI wetlands above

### LEGEND

	Stream		Freshwater Forested/Shrub Wetland
	Alternative 1 Hydraulic Breach Inundation Limits		Freshwater Pond
	Freshwater Emergent Wetland		Lake
			Riverine



# Endangered Species

- Potential limited foraging habitat for northern long-eared bat
- Limited roosting habitat for northern long-eared bat.
- Limited habitat for monarch butterfly.



# Environmental Impacts – Alternative 1 – FWOP

If *no action* is taken, there is potential for **dam failure**.

- ❖ In the event of dam failure, there could be both short- and long-term impacts to natural resources within the breach inundation area.

Short-term Impacts	Long-term Impacts
<ul style="list-style-type: none"><li>• High flows could damage natural resources within the breach inundation area, including suitable bat roosting habitat</li><li>• Flooding and sediment could adversely impact stream habitats and water quality</li><li>• Failure would result in an overtopping breach potential downstream at Site 9C dam</li></ul>	<ul style="list-style-type: none"><li>• Failure would result in loss of 46 ac lake that provides aquatic habitat</li></ul>

- ❖ In the absence of a dam breach, no impacts to natural resources would occur and current conditions would persist.

## Environmental Impacts – Alternative 2 - Decommissioning

Short-term Impacts	Long-term Impacts
<ul style="list-style-type: none"><li>• Potential water quality impacts during construction*</li></ul>	<ul style="list-style-type: none"><li>• Re-establishment of approximately 2,474 linear feet of stream habitat</li><li>• More natural stream flows and more frequent flooding downstream within the 500-year inundation area</li><li>• Loss of approximately 46-acre lake that provides aquatic habitat</li></ul>
<p>*Best Management Practices (BMPs) would be used to limit adverse impacts.</p> <p>**Adverse impacts could be avoided by adhering to seasonal clearing restrictions if tree clearing is required.</p>	

## Environmental Impacts – Alternative 3 – Non-Structural

Short-term Impacts	Long-term Impacts
<ul style="list-style-type: none"><li>• Potential water quality impacts during construction*</li></ul>	<ul style="list-style-type: none"><li>• Re-establishment of approximately 2,474 linear feet of stream habitat</li><li>• More natural stream flows and more frequent flooding downstream within the 500-year inundation area</li><li>• Loss of approximately 46-acre lake that provides aquatic habitat</li></ul>
<p>*Best Management Practices (BMPs) would be used to limit adverse impacts.</p> <p>**Adverse impacts could be avoided by adhering to seasonal clearing restrictions if tree clearing is required.</p>	

# Environmental Impacts – Alternative 4 - Structural

Short-term Impacts	Long-term Impacts
<ul style="list-style-type: none"><li>•Temporary land disturbance and potential water quality impacts during construction*</li><li>•Temporary loss of aquatic habitat during construction if pool were partially drained</li></ul>	<ul style="list-style-type: none"><li>•Continued attenuation of stream flows as a result of the dam</li></ul>
<p>*Best Management Practices (BMPs) would be used to limit adverse impacts. **Adverse impacts could be avoided by adhering to seasonal clearing restrictions if tree clearing is required.</p>	



# Environmental Impacts – Summary

Potential Effects of Proposed Alternatives				
Resource Concern	Alternative 1*	Alternative 2	Alternative 3	Alternative 4
Threatened & Endangered Species	✓	✱	✱	✱
Wetlands	✓	X	X	✱
Hydrology	✓	✓	✓	X
Pond Habitat	✓	✓	✓	X
Stream Habitat	✓	⚠	⚠	X
Flooding	✓	✓	✓	X
Water Quality	✓	✱	✱	✱
<p>* Impacts associated with Alternative 1 assume dam breach occurs</p> <p>✓ Impact</p> <p>X No Impact</p> <p>✱ Adverse impacts could be avoided by adhering to seasonal clearing restrictions and use of Best Management Practices (BMPs)</p> <p>⚠ Re-establishment of habitat</p>				

# Architectural Impacts – Alternative 1 – FWOP

If *no action* is taken, there is potential for **dam failure**.

- ❖ In the event of dam failure, there could be both short- and long-term impacts to historic resources within the breach inundation area of Site 3 and potentially Site 9C.

## Historic Resources\* within the Hydrologic Breach Inundation Area

- |                                                                                                                                    |                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• The historic earthen dam embankment**</li><li>• One agriculture-related building</li></ul> | <ul style="list-style-type: none"><li>• 1 residential building</li></ul> |
|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|

\*None of the historic buildings or structures appear eligible for listing in the National Register of Historic Places (NRHP). All appear to be common types found throughout the region and country, although an assessment of each resource is necessary to determine eligibility requirements.

\*\*The dam embankment was previously surveyed by WSP in April 2023 and recommended as not eligible for listing in the NRHP.

- ❖ In the absence of a dam breach, no impacts to historic resources would occur and current conditions would persist.

# Architectural Impacts – Alternative 2 - Decommission

## Historic Resources\* within Alternative 2's LOD and 500-year Flood Inundation Area

- |                                         |                            |
|-----------------------------------------|----------------------------|
| • The historic earthen dam embankment** | • One residential building |
|-----------------------------------------|----------------------------|

\*None of the historic buildings or structures appear eligible for listing in the National Register of Historic Places (NRHP). All appear to be common types found throughout the region and country, although an assessment of each resource is necessary to determine eligibility requirements.

\*\*The dam embankment was previously surveyed by WSP in April 2023 and recommended as not eligible for listing in the NRHP.

# Architectural Impacts – Alternative 3 – Non-Structural

## Historic Resources\* within Alternative 3's LOD

- The historic earthen dam embankment\*\*

\*None of the historic buildings or structures appear eligible for listing in the National Register of Historic Places (NRHP). All appear to be common types found throughout the region and country, although an assessment of each resource is necessary to determine eligibility requirements.

\*\*The dam embankment was previously surveyed by WSP in April 2023 and recommended as not eligible for listing in the NRHP.

# Architectural Impacts – Alternative 4 -Structural

## Historic Resources\* within Alternative 4's LOD

- The historic earthen dam embankment\*\*

\*None of the historic buildings or structures appear eligible for listing in the National Register of Historic Places (NRHP). All appear to be common types found throughout the region and country, although an assessment of each resource is necessary to determine eligibility requirements.

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# Archaeological Impacts – Alternative 1 – FWOP

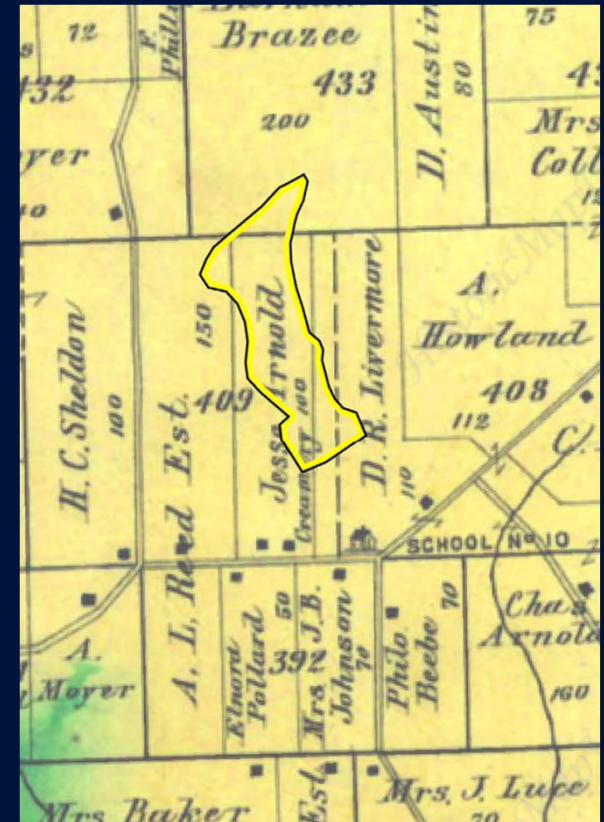
- In April 2023, WSP completed a Phase 1 archaeological survey of approximately 108.7 acres
  - No archaeological sites or isolated finds were found within the surveyed area
  - Background research revealed that no previously recorded sites were located within a two-mile buffer of each proposed LOD
- Alternative 1 does not require ground disturbance and no archaeological survey will be required



APE in 1855 (Gifford et al. 1855)

## Archaeological Impacts – Alternative 2 - Decommissioning

- Includes proposed ground disturbance
- Soils suggest a relatively stable landform that, while not necessarily containing potential for deeply buried deposits, could contain intact soils containing archaeological materials in the upper soils.



APE in 1908 (Northwest Publishing Company, 1908)

## Archaeological Impacts – Alternative 3 – Non-Structural

- Includes proposed ground disturbance
- Soils suggest a relatively stable landform that, while not necessarily containing potential for deeply buried deposits, could contain intact soils containing archaeological materials in the upper soils.
- Includes proposed culvert and bridge replacements on Squedunk Road and Caldwell Hill Road

## Archaeological Impacts – Alternative 4 - Structural

- Includes proposed ground disturbance
- Soils suggest a relatively stable landform that, while not necessarily containing potential for deeply buried deposits, could contain intact soils containing archaeological materials in the upper soils.

# Summary of Environmental and Cultural Impacts

Potential Relative Impacts			
Alternative	Environmental	Architectural	Archaeological
1 – Future without Project*	High	Medium	Neutral
2 – Decommissioning	Medium	Low	Low
3 – Non-Structural	Medium	Neutral	Medium
4 – Structural Rehabilitation Option 1	Low	Neutral	Neutral <sup>†</sup>
» 4 – Structural Rehabilitation Option 2	Low	Neutral	Neutral <sup>†</sup>
* Impacts associated with Alternative 1 assume dam breach occurs <sup>†</sup> Neutral impacts reflect desktop analysis with no findings but may require field verification for the preferred alternative » Preferred Alternative			

# Resource Categories of Concern & Ecosystem Services Id'd

## *Public Involvement*

Based on previous survey the resources marked with a plus (+) represent the resources of greatest concern.

The preferred alternative would minimize the long-term impacts to these resources of greatest concern.

General concerns or comments?

## *Resource List*

- Wetlands +
- Critical Habitat
- Floodplains +
- Recreation +
- Cultural Resources
- T&E Species
- Fish and Wildlife +
- Forests +
- Invasive Species +
- Land Use
- Migratory Birds
- Natural areas
- Parklands +
- Prime and Unique Farmland +
- Riparian Areas +
- Public Health and Safety +
- Regional Water Resource Plans +
- Scenic Beauty +
- Scientific Resources
- Soil Resources
- Water Quality +
- Water Resources +
- Wild and Scenic Rivers
- Waters of the US +
- Social Issues
- Essential Fish Habitat +
- *Other...*

# Summary of Construction Costs

Alternative	Approx Construction Cost (\$ millions)
1 (No Action)	\$ 0.0
2 (Decommissioning)	\$ 1.7 for 100-year and 500-year
3 (Nonstructural)	\$ 1.7 for 100-year \$ 2.0 for 500-year
4 – Option 1 (Structural): Excavate and Reconstruct embankment dam	\$ 2.1
4 – Option 2 (Structural): Downstream Embankment Raise	\$ 1.9

Note: Costs only represents construction costs. Costs do not include engineering, design, permitting, or other costs associated with design.

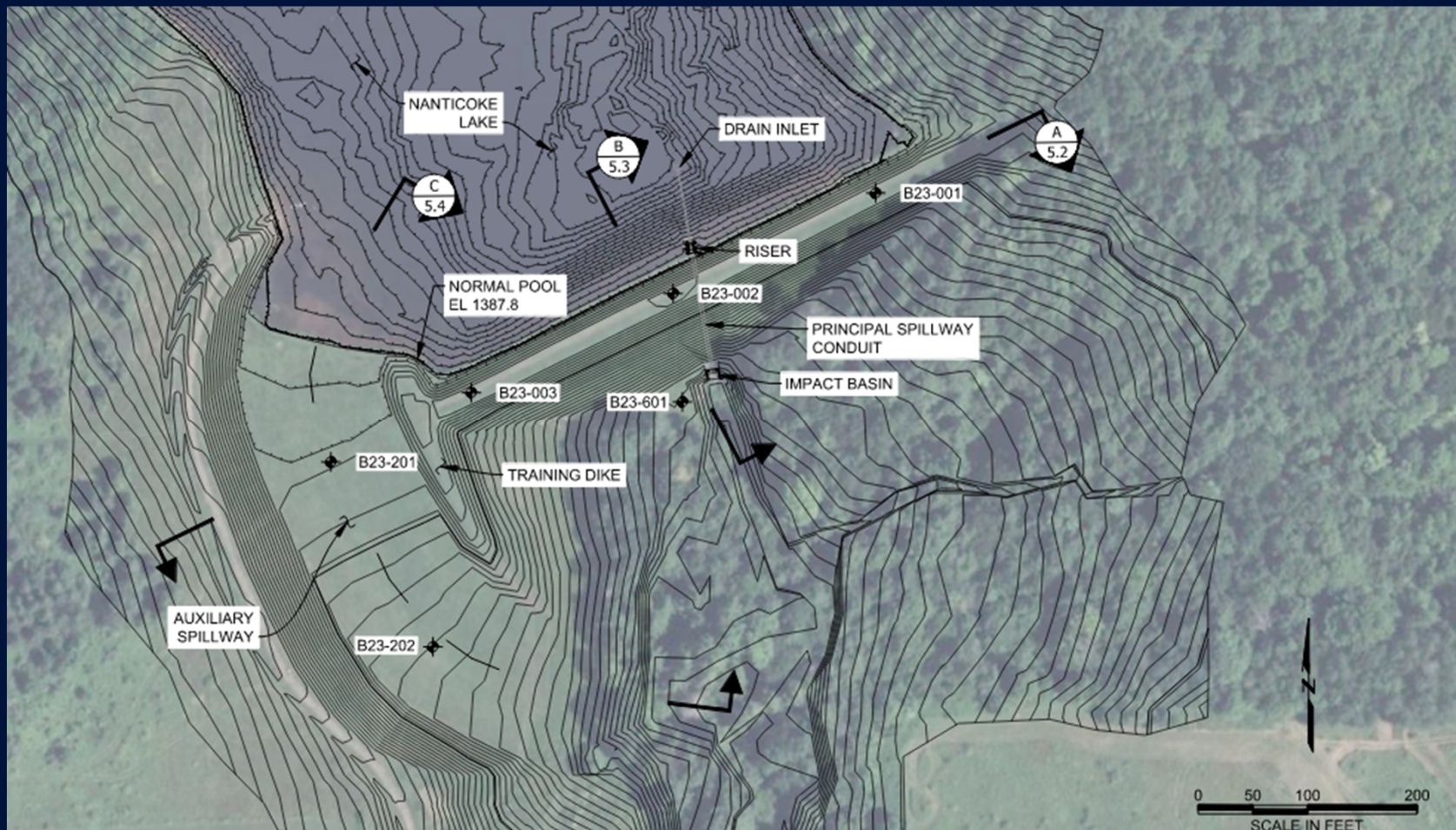
## Sponsor's Selection of Preferred Alternative

- ✘• Alternative 1 (No Action) is not preferred.
  - *Does not address existing dam deficiencies/inadequacies*
  - *Does not mitigate existing risks to public safety*
- ✘• Alternative 2 (Decommissioning) is not preferred.
  - *Flood control benefits of the dam would be lost.*
  - *Residents from 1+ homes would need to be relocated.*
  - *Recreational and environmental benefits of the reservoir would be lost.*
- ✘• Alternative 3 (Nonstructural) is not preferred.
  - *Flood control benefits of the dam would be lost.*
  - *Downstream flooding would be increased for rainfall events that fall either upstream or downstream of the dam.*
  - *Recreational and environmental benefits of the reservoir would be lost.*

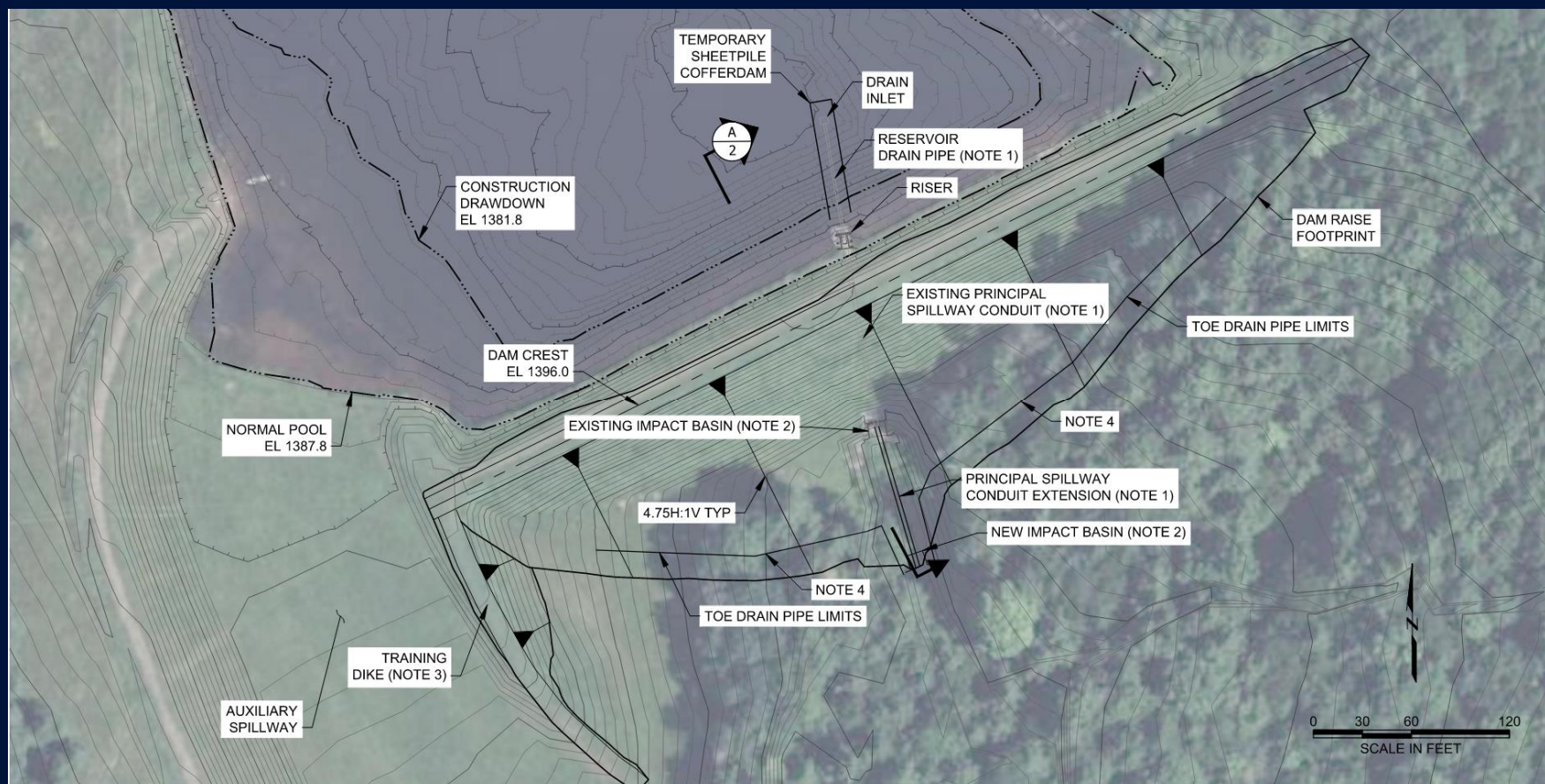
## Sponsor's Selection of Preferred Alternative

- ✓ • Alternative 4 (Structural) is preferred.
  - *Provides increased flood protection benefits over existing dam*
  - *Meets updated dam safety criteria*
  - *Mitigates public risk associated with the existing dam*
- ✗ • 4 – Option 1: Reconstruct the downstream embankment at 3H:1V slope
  - *Excavates into existing embankment – higher construction risk*
- ✓ • 4 – Option 2: Reconstruct the downstream embankment at 4.75H:1V slope
  - *Does not excavate into existing embankment – less construction risk*
  - *Higher confidence during construction*
  - *Long term maintenance will be easier than Option 1*

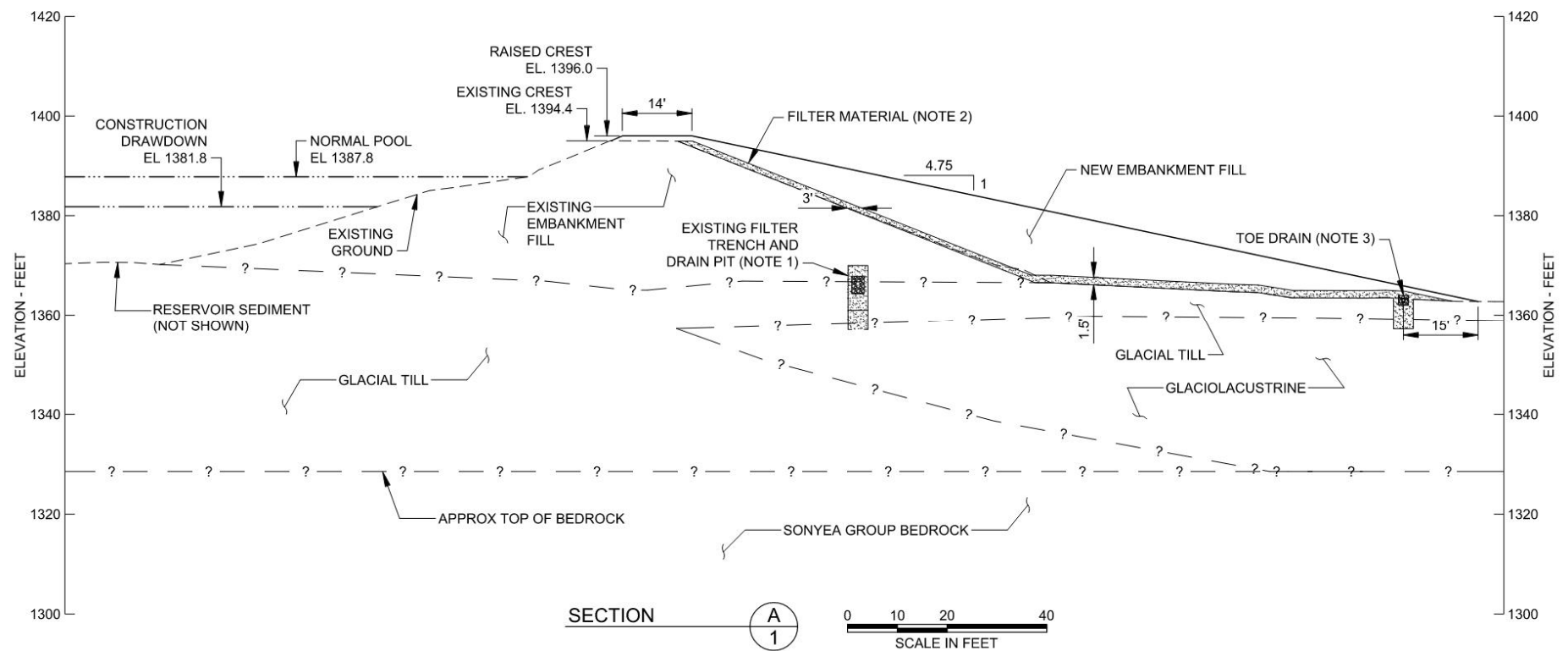
## Alternative 4 – Existing Conditions



## Alternative 4 – Option 2 Plan



## Alternative 4 – Option 2 Section



# Open Discussion/Questions



# Public Input/Information

- Two remaining opportunities for public and agency input:
  - **Alternatives Meeting – Today**
    - Provided: Report on how input was incorporated and presentation of alternatives
    - Requested: Input on selected alternative
  - **Draft Plan-Environmental Document Review Meeting**
    - Provided: Review of the Draft Plan-Environmental Document
    - Requested: Comments on the Draft Plan-Environmental Document

Comments are due to [NanticokeCreek@rjh-consultants.com](mailto:NanticokeCreek@rjh-consultants.com) by: January 12, 2025

# Schedule

Alternatives Meeting

**December 12, 2024**

Public review of draft documents.

**Spring 2026**

Next Public Meeting

**Spring 2026**

Planning Completion

**Summer 2026**

# Closing Comments

## Final Thoughts

- Planning phase of a bigger project.
- Schedules and timelines are targets, not rigid.
- The participation of public and agencies is voluntary **BUT CRITICAL TO A SUCCESSFUL PROJECT.**
- The project is intended to reflect the values and opinions of the local agencies and community whenever possible.
- Project webpage: <https://www.nrcs.usda.gov/conservation-basics/conservation-by-state/new-york>

Send questions and comments to:

- Email: [NanticokeCreek@rjh-consultants.com](mailto:NanticokeCreek@rjh-consultants.com)

Comments are due to [NanticokeCreek@rjh-consultants.com](mailto:NanticokeCreek@rjh-consultants.com) by: January 12, 2025