February 8, 2019

NJWSA Office
1851 Highway 31,
Clinton, NJ

ROUND VALLEY
RESERVOIR PROJECT

The Round Valley Reservoir Structures Refurbishment and Resource Preservation Project:

No Net Loss (NNL) Compensatory Reforestation Act

NEW JERSEY WATER SUPPLY AUTHORITY PUBLIC NOTICE

ROUND VALLEY RESERVOIR STRUCTURES REFURBISHMENT AND RESOURCE PRESERVATION PROJECT

Take notice pursuant to the provisions of N.J.S.A. 13:1L-14.4, and the No Net Loss Compensatory Reforestation Act, the New Jersey Water Supply Authority will hold a Public Forum on Friday, February 8, 2019 at 11:30 a.m. in the Authority's Executive Office Conference Room located at 1851 Highway 31, Clinton, New Jersey, to provide the opportunity for public comment.

The New Jersey Water Supply Authority is responsible for operating and maintaining the Round Valley Reservoir, located in Clinton Township, Hunterdon County, New Jersey. Round Valley Reservoir contains the largest supply of drinking water in the state. The Authority is planning a project to refurbish the embankments of the Reservoir, composed of the North Dam, South Dam and Dike. These improvements to the embankments will extend the reservoir's operating life and improve its durability. The project requires clearing approximately 40 acres of trees for temporary staging and stockpiling. More than half of the trees being cleared are located in heavily ash-dominant forest stands that are dead or dying as a result of the Emerald Ash Borer.

Any State entity planning to deforest one acre or more, must present its plan for deforestation and reforestation to the public. The Authority will present its plans at the February 8, 2019 forum. Interested persons may present statements orally or in writing relevant to the proposed plans. Written comments may also be submitted until April 9, 2019 at which time the public record will be closed.

All comments should be submitted to the address below or info@njwsa.org:

Marc Brooks, PE
New Jersey Water Supply Authority
1851 State Route 31
Post Office Box 5196
Clinton, New Jersey 08809

ROUND VALLEY
RESERVOIR PROJECT

TEAM INTRODUCTION

ROUND VALLEY RESERVOIR PROJECT

Marc Brooks, P.E.
Chief Engineer

NEW JERSEY EST. 1981 WATER SUPPLY AUTHORITY

Scott Raschke, P.E.
Project Manager,
Consulting Engineer

Schnabel ENGINEERING

Bill Macholdt, PWS
Lead - Permitting and Regulatory Compliance Sub-Consultant

AMY S. GREENE ENVIRONMENTAL CONSULTANTS INC.

OVERVIEW

ROUND VALLEY
RESERVOIR PROJECT

> About Round Valley
> Project Description
> No Net Loss (NNL) Statutory Requirements
> Project Impacts Pertinent to NNL
> Project Website
> Public Comment, Q & A

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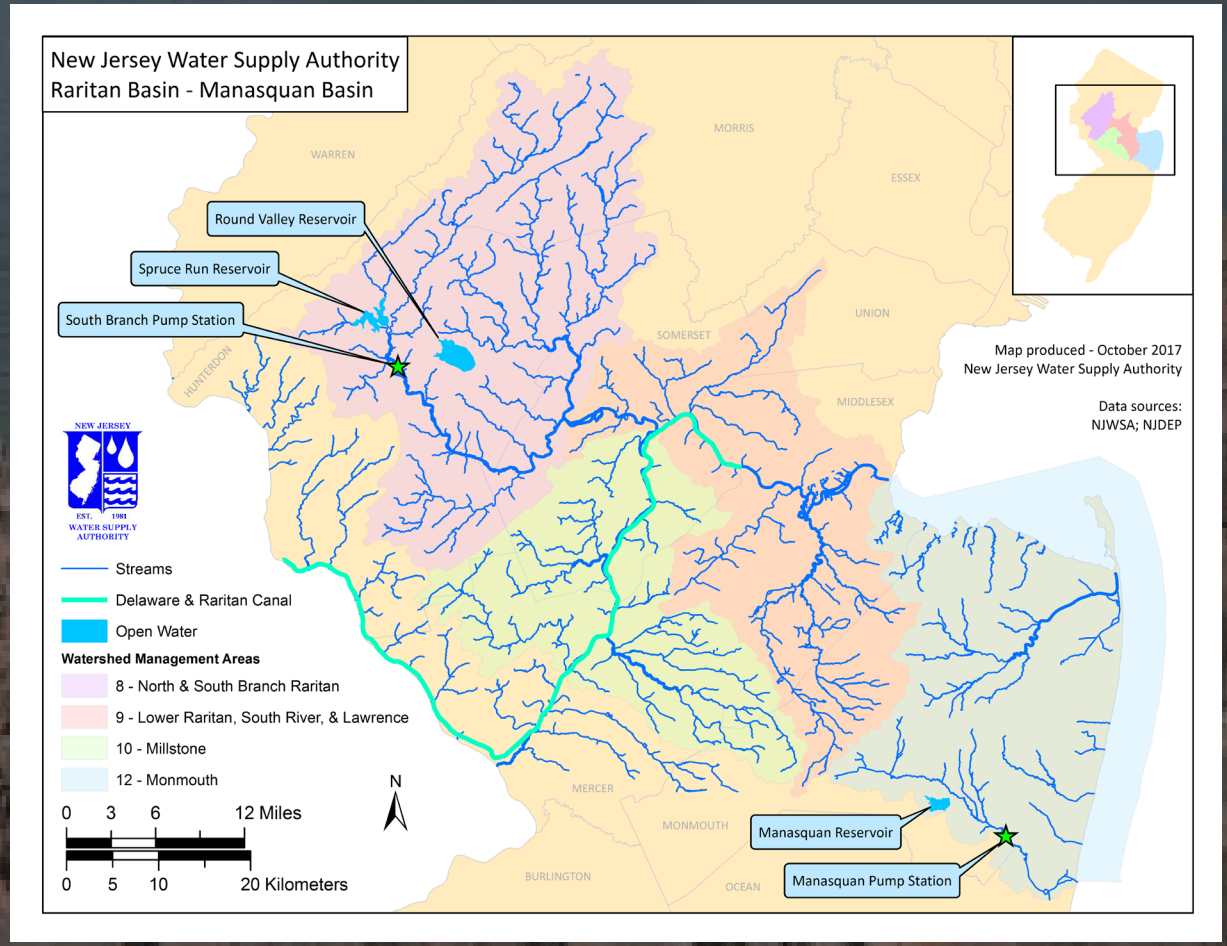
ABOUT US

- Independent State Authority, "in but not of" the New Jersey Department of Environmental Protection
- Created in 1981 to take over and operate existing water supply facilities and implement projects identified in the State Water Supply Plan
- Operate three water supply systems:
  - Raritan Basin System (Spruce Run, Round Valley, D&R Canal)
  - Manasquan Reservoir System
  - Manasquan Water Treatment Plant & Transmission System

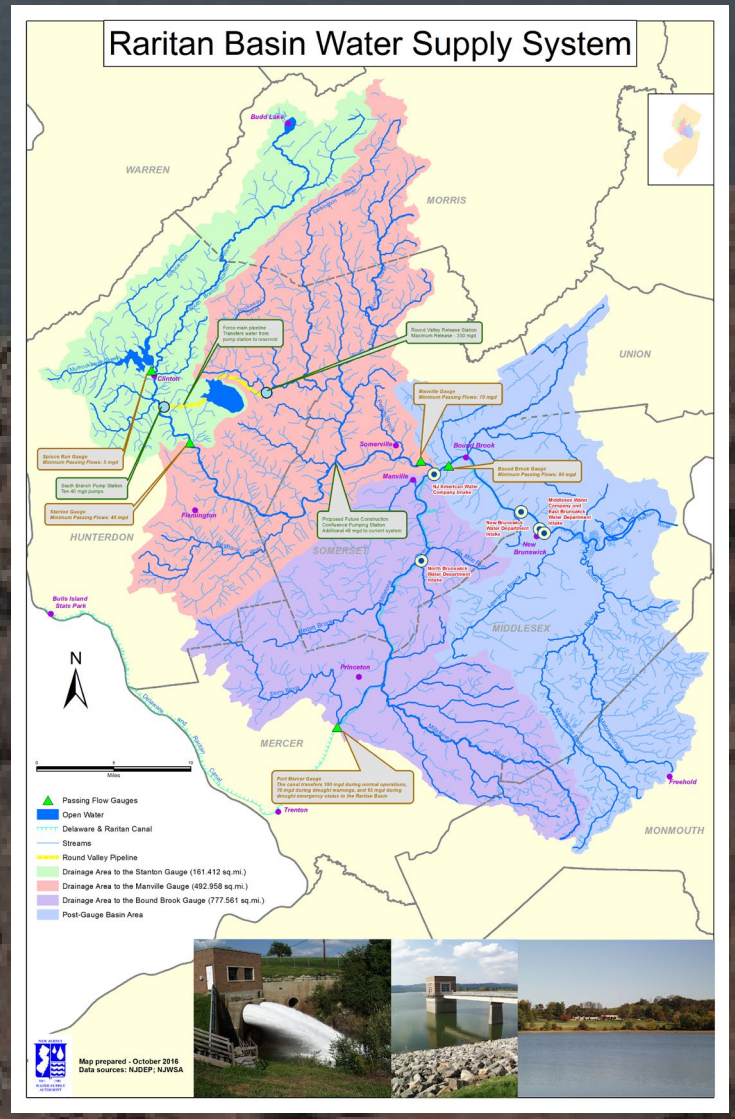


ABOUT ROUND VALLEY

- Three earthen embankments constructed in 1960s to close valley and impound water
- "Class I High Hazard" dams are regulated by NJDEP
- Capacity is 55 billion gallons – largest reservoir by volume in New Jersey
- Round Valley water is released into the South Branch of the Rockaway Creek near Whitehouse Station

ABOUT ROUND VALLEY

- Part of Raritan Basin System, designed to help maintain passing stream flows on the Raritan River
- Raritan Basin System provides 241 MGD in safe yield to ensure adequate water supply and protection against drought
- The safe yield is the amount of water that a reservoir system can supply without fail during the drought of record
- Approximately 1.5 million people in central New Jersey rely on the Raritan Basin System



ABOUT ROUND VALLEY

- "Off stream pumped storage" – reservoir is filled by 3.2-mile pipeline connected to the South Branch of the Raritan River
- South Branch Pumping Station contains ten 40MGD pumps
- In 2017, we pumped for about 6 months and added 7 billion gallons to the reservoir, raising the water level by about 10 feet
- Professional staff are on site every day on the dams: maintenance, instrumentation readings, security
- Dam inspections are conducted quarterly by engineering staff
- NJDEP State Park Service operates recreational aspects
- NJDEP Division of Fish & Wildlife operates fish and game aspects, boat launch

ABOUT THE PROJECT – WHY?

- Protect and maintain State asset to ensure adequate water supply and protection against drought
- Dams were built with an estimated operating life of 50 -100 years and it's been almost 60 years; this is an investment in the State's future
- Design standards have changed since the 1960s – we are retrofitting the structures with the latest engineering approaches to increase resiliency and sustainability for long term water supply needs

ABOUT THE PROJECT

- NJWSA convened a panel of world renowned dam safety experts to advise us on how best to extend the operating life of the reservoir
- Cost of project will be financed through revenue generated by the sale of water – no tax money involved
- NJWSA procured Schnabel Engineering as the Engineer of Record to design and oversee the project

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PROJECT COMPONENTS

3 Earthen Embankments / "Dams"

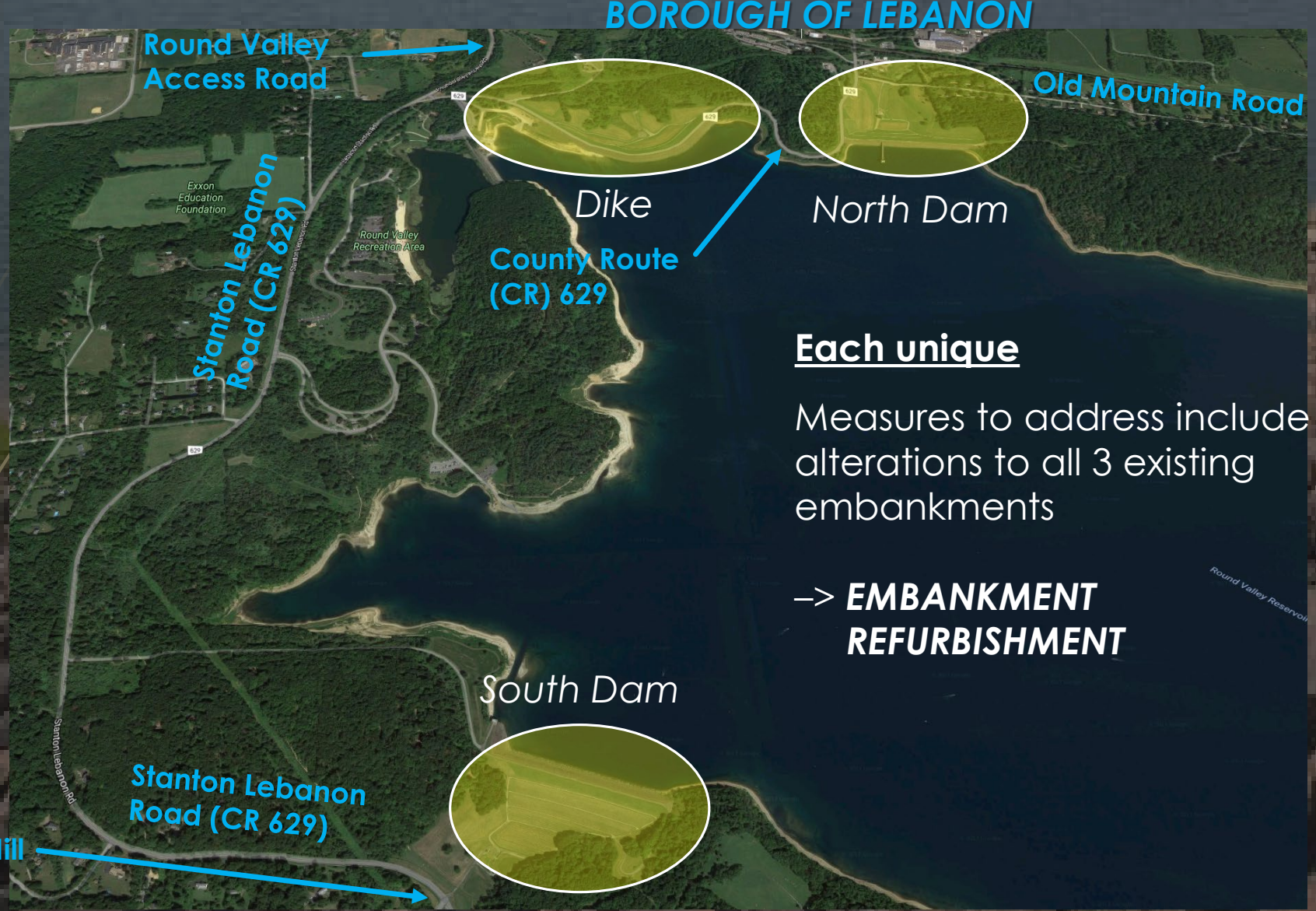
- Dike
- North Dam
- South Dam

(dams are the 3rd and 4th highest in NJ)

"Ancillary" Infrastructure

- Security Monitoring Improvements
- Channel Dredging
- North & South "Tower" Repairs
- Other underground controls / features

EARTHEN EMBANKMENTS

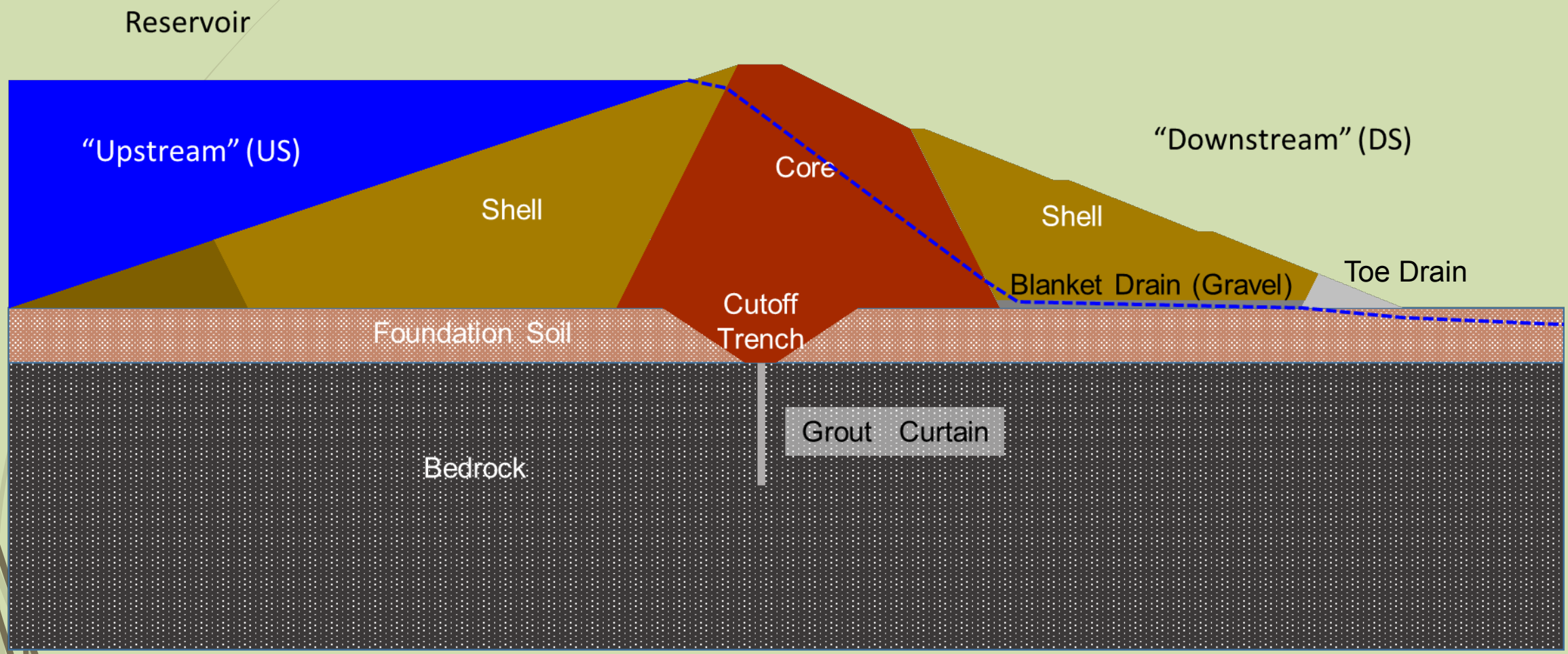


Each unique

Measures to address include alterations to all 3 existing embankments

–> ***EMBANKMENT REFURBISHMENT***

EXISTING EARTHEN EMBANKMENTS



EARTHEN EMBANKMENT REFURBISHMENT

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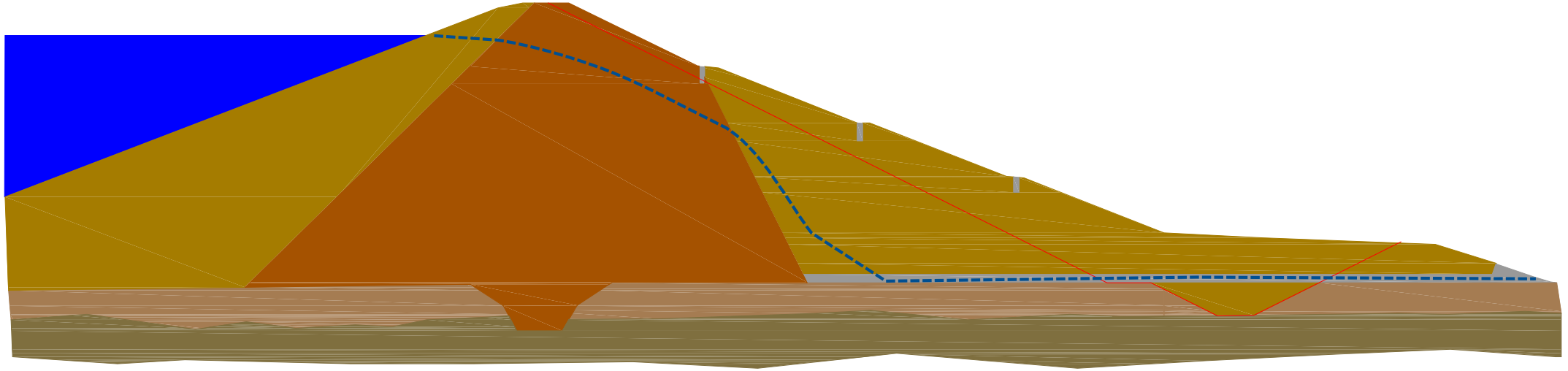

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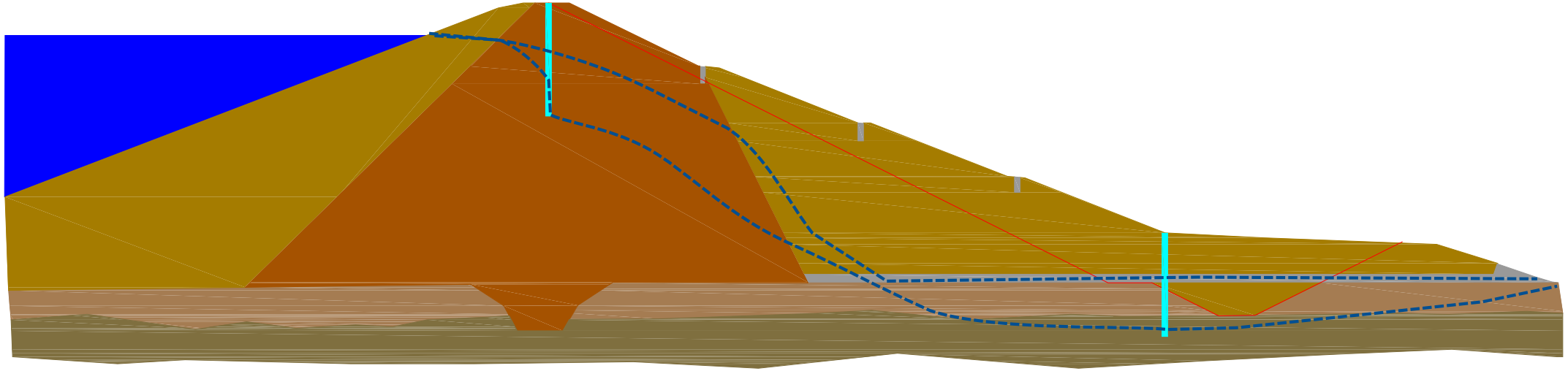

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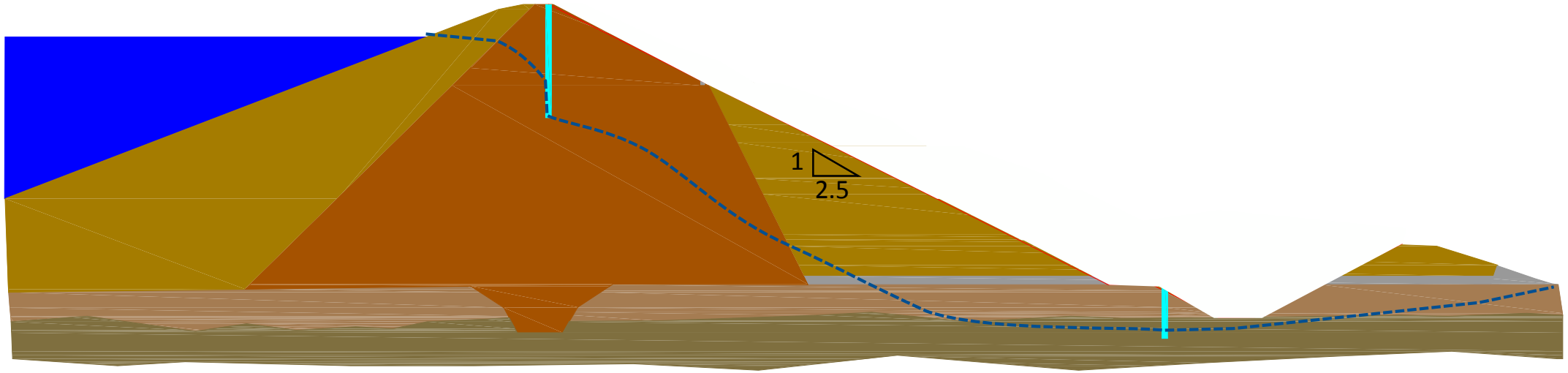

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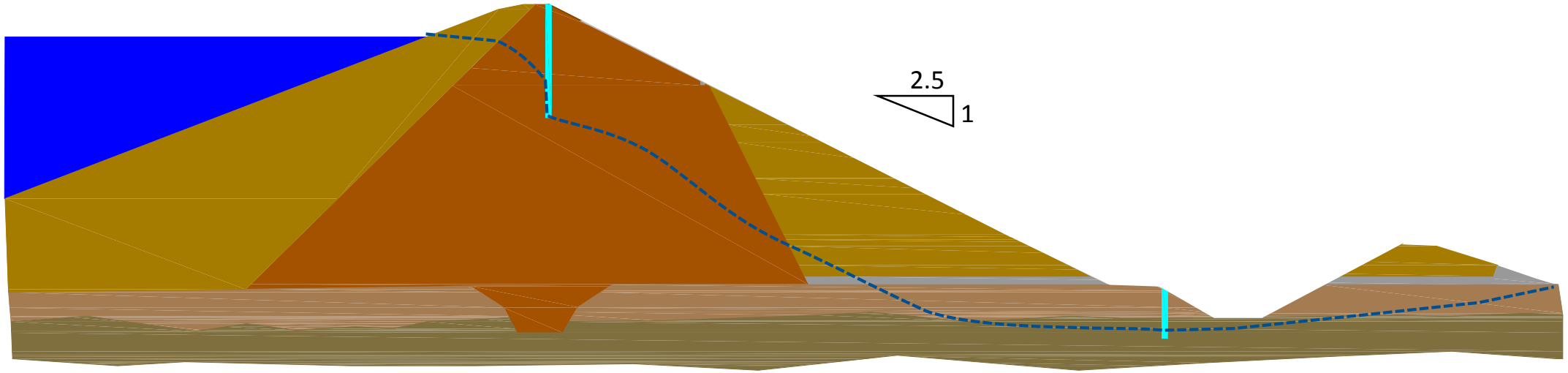

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No Net Loss Compensatory Reforestation Act

- Under NJ DEP Div of Parks and Forestry (N.J.S.A. 13:1L-14.1 et.seq.)
- Applies to all NJ State Entities
- Must replace trees when ½ acre or more of State land is deforested
- State Entity must hold Public Forum to discuss the proposed deforestation with public when >1 acre cleared
- Public comment period 60 days
- Respond to public comments within 60 days
- Prepare a Reforestation Plan
- Plans are subject to review by NJ Community Forestry Council

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Compensatory Reforestation Plan

- Replace trees on site if possible – other options available
- Use mix of native tree species – typical – hickories, oaks, tulip poplar
- 408 whip/container trees (4-6 ft tall) per acre
- 2 Year establishment period – 90% established
- NJFS makes final establishment determination
- NNL Guidelines - https://www.state.nj.us/dep/parksandforests/forest/community/pdf_files/NNL_Program_Guidelines.pdf

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DIKE –
Current Condition
Google Earth
Note: Project impacts identified are based on current work in progress. Acreage and limits shown are approximate, and subject to change.

DIKE – Clearing Required

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NORTH DAM –
Current Condition

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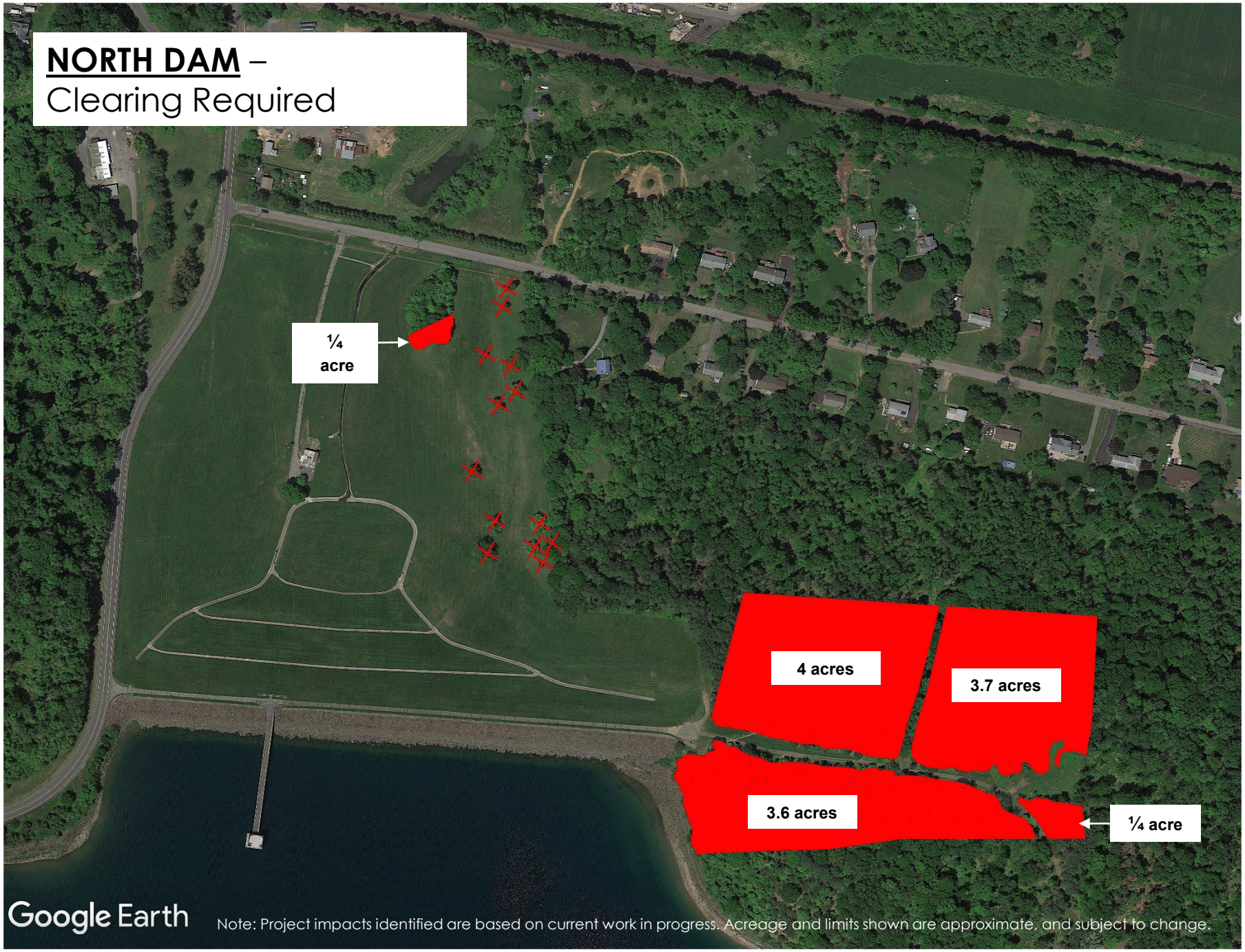
NORTH DAM – Clearing Required



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SOUTH DAM –
Current Condition

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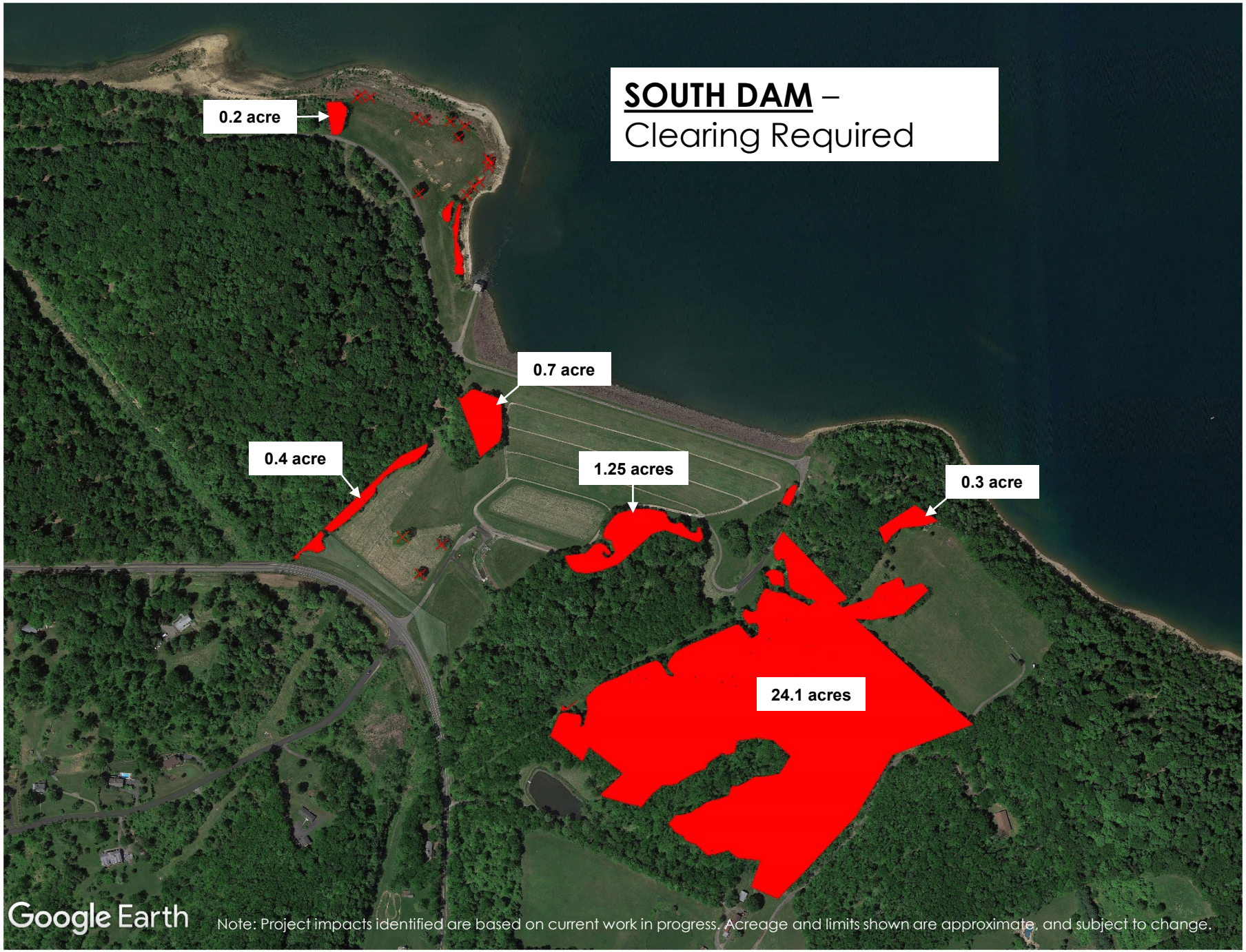
SOUTH DAM – Clearing Required
0.2 acre
0.7 acre
0.4 acre
1.25 acres
0.3 acre
24.1 acres
Google Earth
Note: Project impacts identified are based on current work in progress. Acreage and limits shown are approximate, and subject to change.

South Dam - Ash Tree Area

- Within the major footprint (24.1 Acre) a majority of clearing is an Ash Tree area infested with the Emerald Ash Borer (EAB)
- National problem – expected to kill all ash trees in the next 10 years
- Ash trees must be removed for the safety of the public
- NNL Rules do not require ash trees to be included in Compensatory Reforestation Plan (*)
- NJFS estimated 67.1% of Ash Tree Area are ash trees, 32.9% non-Ash (need to be included in reforestation plan)
- 32.9% of 24.1 Acres ~ 7.9 Acres to be restored

(*) The exemption for ash tree removal for EAB mitigation is contingent upon an EAB/ash management plan for the area. The plan must specify that the ash trees within the impacted area to be cleared were already planned for removal as part of an EAB/ash management plan (which they were)

Note: Project impacts identified are based on current work in progress. Acreage and limits shown are approximate, and subject to change.

Summary of Anticipated Clearing (Deforestation) Required for Project

- North Dam – 11.8 Acres
- South Dam – 27.3 Acres Total
- SD Ash Tree Area – 24.1 Acres
- SD Non Ash tree areas – 3.2 Acres
- Dike – ~1 Acre

Total Clearing – 40.1 Acres

Note: Project impacts identified are based on current work in progress. Acreage and limits shown are approximate, and subject to change.

Summary of Anticipated Mitigation (Reforestation) Required for Project

- North Dam – 11.8 Acres
- South Dam – 3.2 + 7.9 = 11.1 Acres
- Dike – ~1 Acre

Total Area to be Restored – 23.9 Acres

Note: Project impacts identified are based on current work in progress. Acreage and limits shown are approximate, and subject to change.

Reforestation Plan

- Current project planning suggests the 23.9 acres of trees to be included in the Reforestation Plan will fit within the SD Ash Tree Area
- If conditions change and additional area is needed for reforestation, the cleared area at ND will be used for additional reforestation needs

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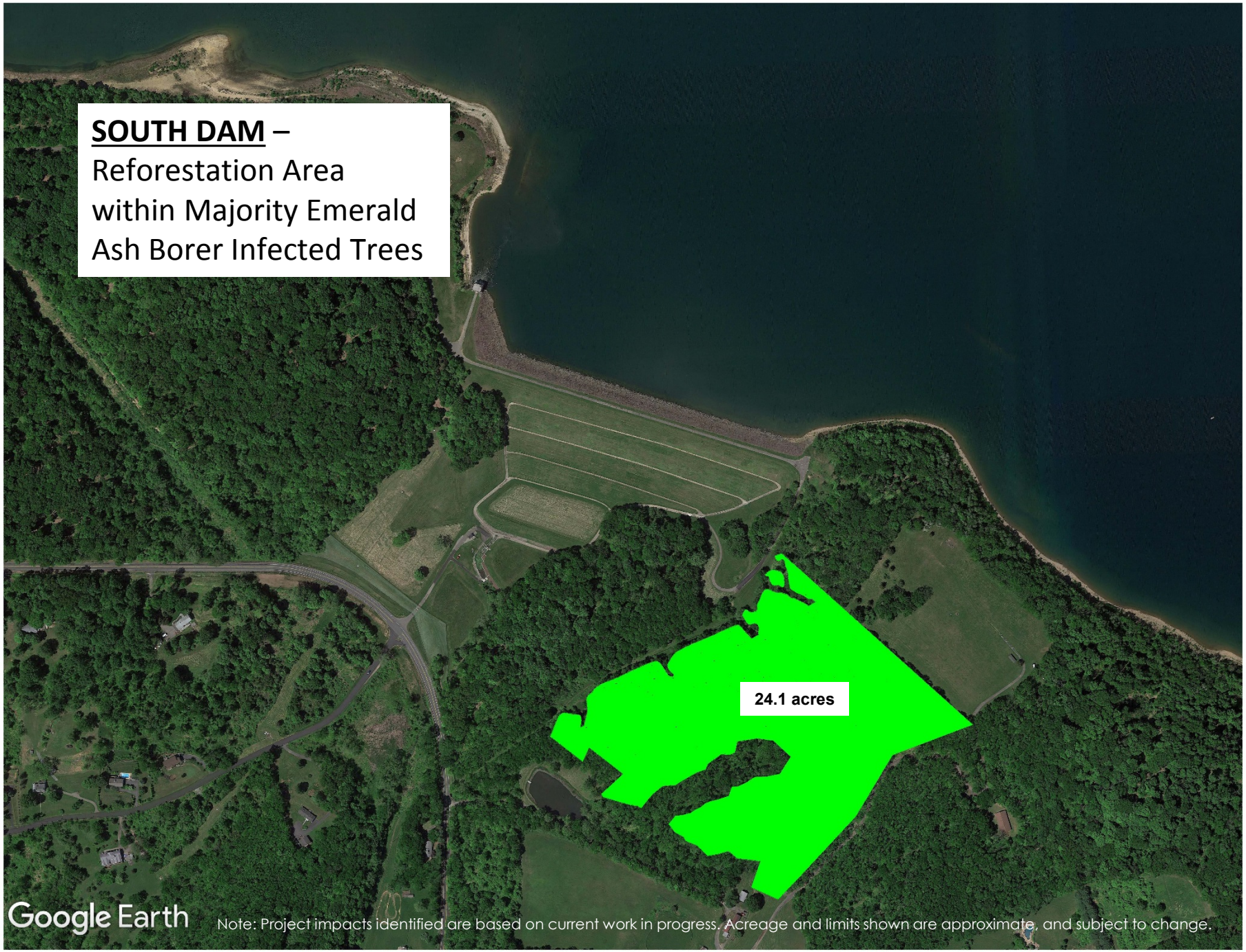
SOUTH DAM –
Reforestation Area
within Majority Emerald
Ash Borer Infected Trees
24.1 acres
Google Earth
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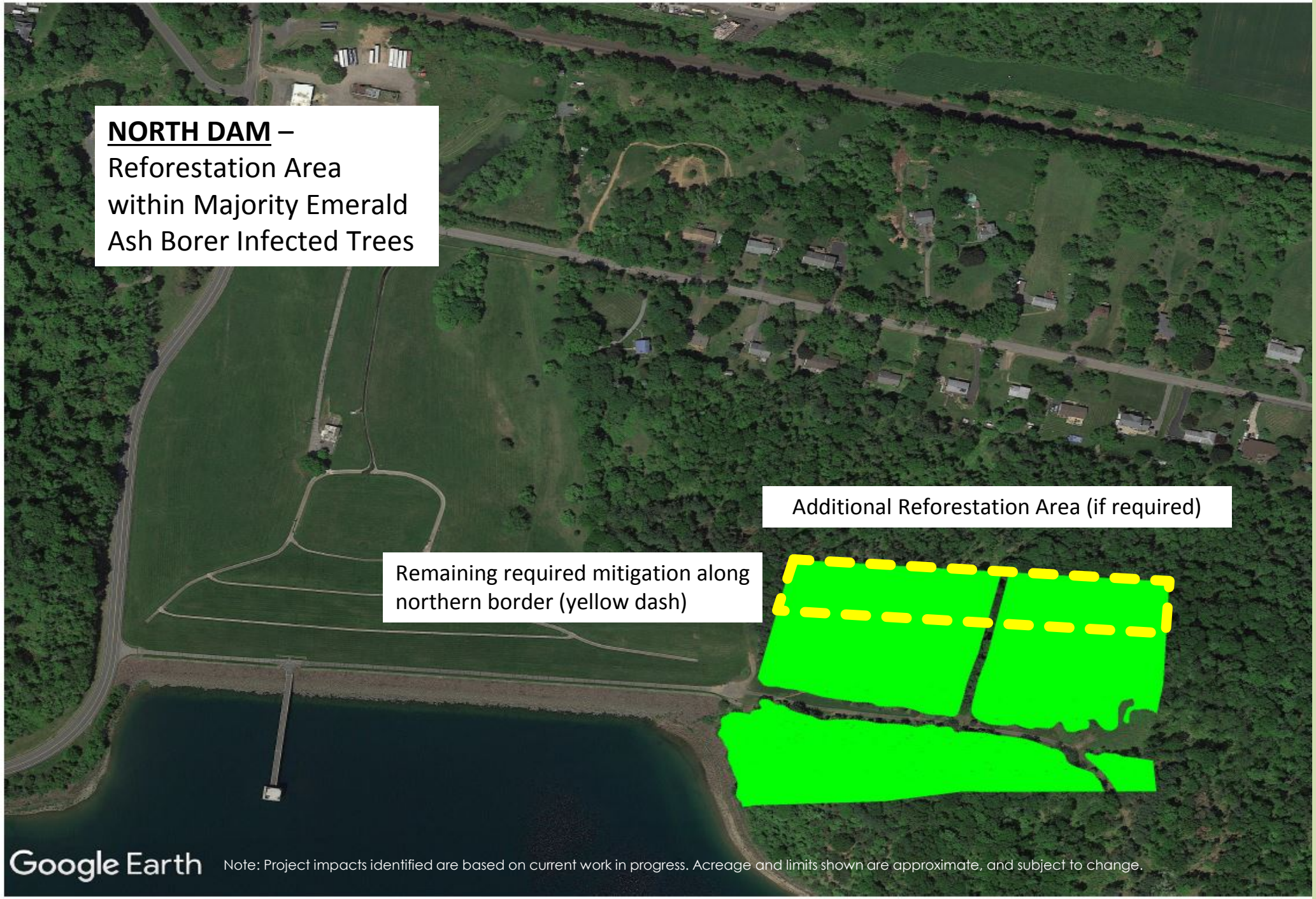
NORTH DAM – Reforestation Area within Majority Emerald Ash Borer Infected Trees
Additional Reforestation Area (if required)
Remaining required mitigation along northern border (yellow dash)
Google Earth
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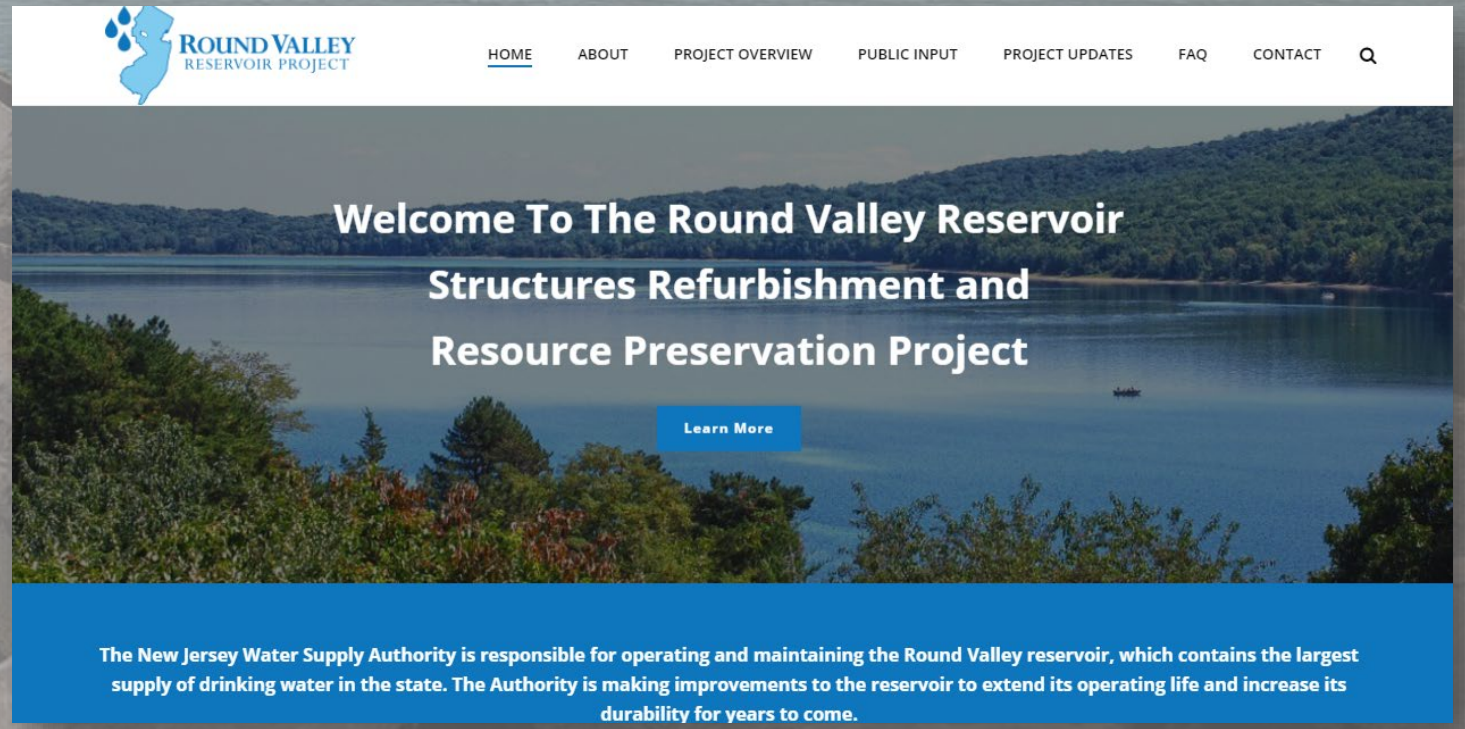
PROJECT WEBSITE

FEATURES:

- About
- Project Overview
- Project Meeting Info
- Project Area Map
- Project Updates
- FAQ
- Contact
  - Email
  - Hotline

www.RoundValleyProject.com



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