Martin Dunham Reservoir Dam

at Grafton Lakes State Park

Community Meeting

June 11, 2025

New York State
Parks, Recreation and
Historic Preservation

Welcome Exercise

1. Why is this project important to you?
2. What drew you to this meeting?

Please answer the questions above on a sticky note and paste it to the wall.

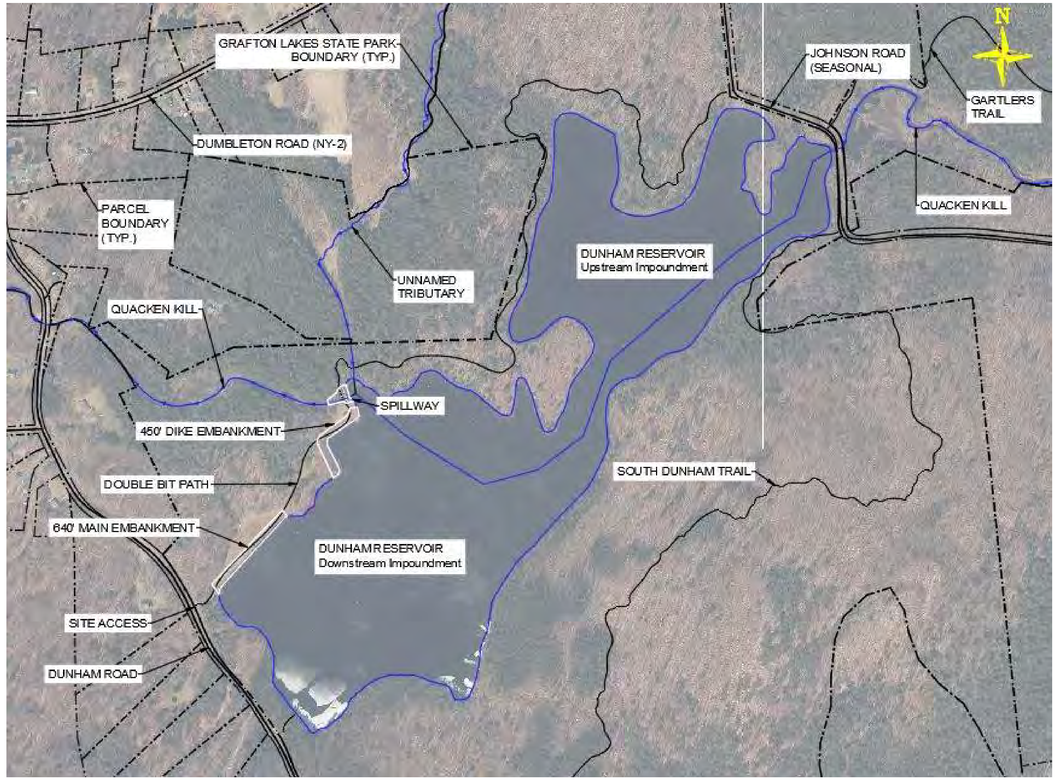
Project Overview

Main Earth Embankment Dam

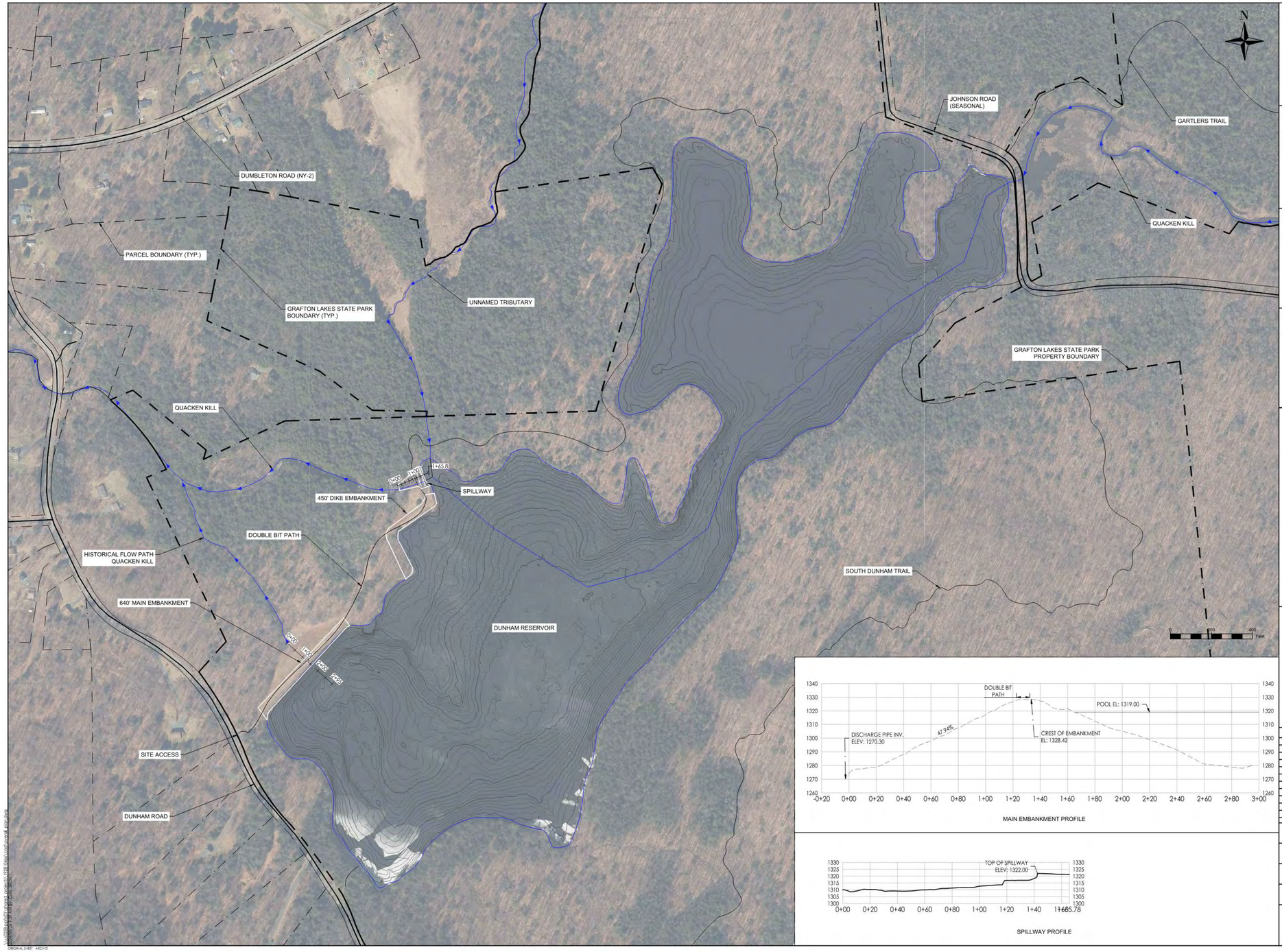
Gatehouse & Low-level Outlet Works

Concrete Spillway Weir and Earth Embankment Dike

- The dam and reservoir were built circa 1911 as a water supply for City of Troy.
- The reservoir is no longer used as a drinking water source.
- The site is part of Grafton Lakes State Park.
- The dam is not in compliance with NYSDEC Dam Safety Requirements and is a risk to the community downstream if it were to fail.
- NYS Parks completed a feasibility study in 2024-2025 to understand options for bringing the dam into compliance with NYSDEC Dam Safety Requirements.



Existing Conditions



MAIN EMBANKMENT PROFILE

SPILLWAY PROFILE

NEW YORK STATE OF OPPORTUNITY. Parks, Recreation and Historic Preservation

Hudson Valley District
19 Roosevelt Drive
Saratoga Springs, New York 12866
(518) 584-2000
Regional Director: Alane Ball Chinian

Project Location:

Grafton Lakes State Park - Dunham Reservoir Dam
254 Grafton Lakes State Park Way
Grafton, NY 12052

Project Title:

Dunham Reservoir Dam Scoping for Decommissioning - Phase 2

Sheet Title:

EXISTING CONDITIONS

Legend:

- ROAD CENTER LINES
- STATE PARK TRAILS
- WATER BODIES AND TRIBUTARIES
- PARCEL BOUNDARIES
- GRAFTON LAKES STATE PARK PROPERTY

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Revision:

No.	Date	Description

Drawn By: M. MCNUTT	Date: 27 SEPT, 2024
Design By: J. COLE	Scale: AS NOTED
Checked By: B. RIZZO	Sheet: 2

Project Number: D006085 SAR-003A

Drawing Number: C-001

Dam Safety

Regulating the safety of dams in the state is the responsibility of the New York State Department of Environmental Conservation (NYSDEC) Dam Safety Program. It is managed by professional engineers and technicians. It is the state's goal to prevent dam failures, as well as to prevent loss of life or damage to infrastructure or the environment.

The main functions of the program include: safety inspections of dams, technical review of proposed dam construction and modification, monitoring of remedial work for compliance with dam safety criteria, and emergency preparedness.

Above: Martin-Dunham Reservoir Dam (earth embankment dam and gatehouse)

Dam Safety Ratings

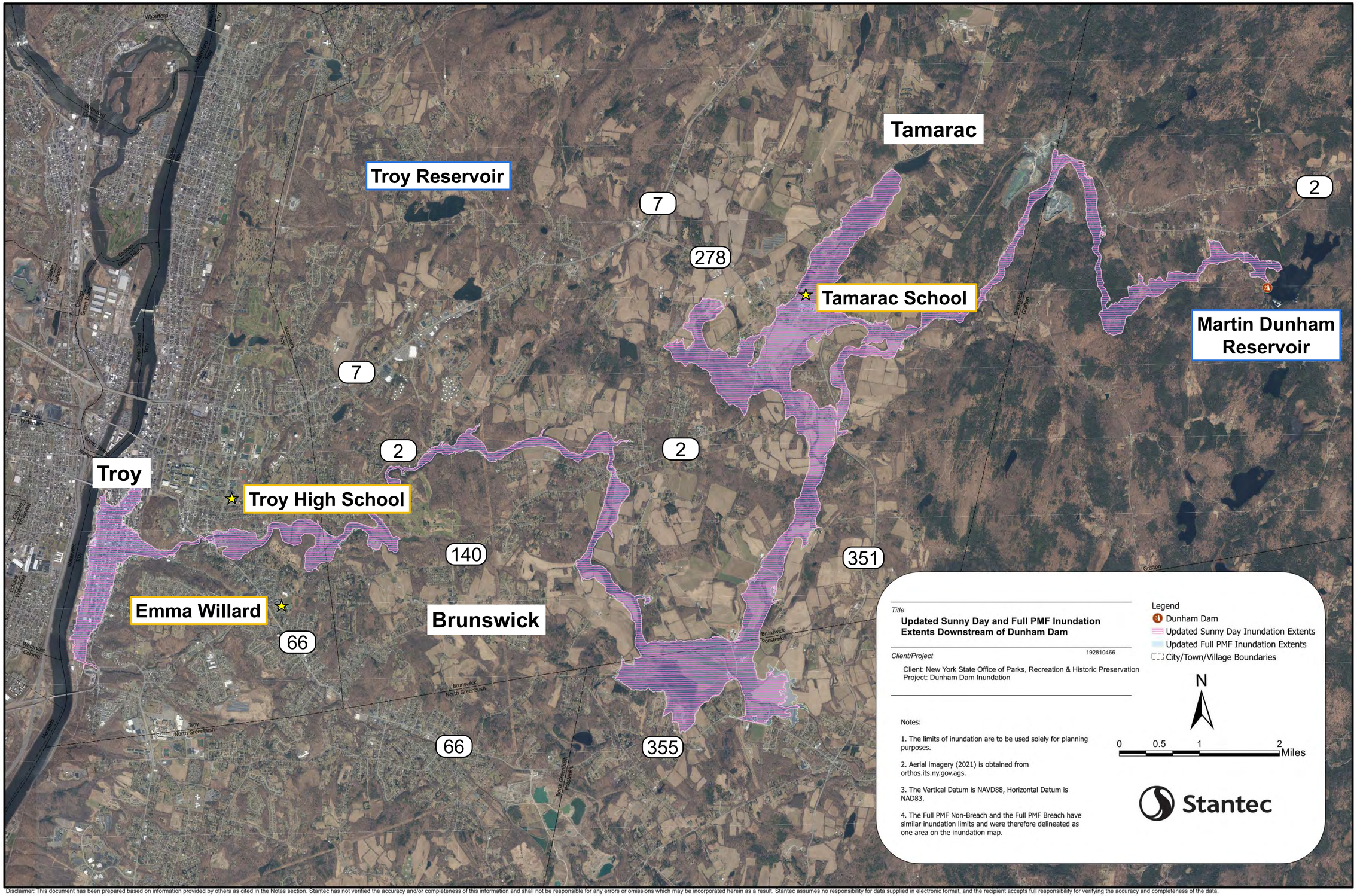
NYSDEC uses two types of categories to rate dams in New York State: (1) hazard rating and (2) condition rating. The combination of both hazard and condition ratings are used to understand safety for dams across the state.

Hazard ratings: The hazard class of a dam indicates the estimated consequences if the dam were to fail. The classification is not a reflection of the condition of the dam. Rather, it is driven mainly by what is located downstream (such as homes and businesses) and thus the threat of potential damage if the dam were to fail. Dunham Dam is a Class C, High Hazard dam, meaning a failure could result in widespread damage to homes, highways, commercial buildings, water supply, important utilities, loss of life or widespread economic loss.

Condition ratings: NYSDEC uses four categories to describe the condition of dams: (1) unsafe, (2) unsound, (3) deficiently maintained, and (4) no deficiencies noted. The Dunham Reservoir Dam is rated as "unsound," meaning that the safety of the dam cannot be assured. Deficiencies causing this rating can include seepage problems, structural stability inadequacies, or inadequate spillway capacity.

Further reading: Dam Infrastructure: Understanding and Managing the Risks, Office of the NYS Comptroller, 2018
https://mitigateny.org/resource_library/shmp_appendices/dam_safety

Inundation Extents



Evaluation of Options

The options for bringing the dam into compliance with NYSDEC Dam Safety Requirements include:

- Rehabilitate the Dam
- Remove the dam and restore the stream
- Remove the dam without restoring the stream

NYS Parks evaluated these options using the criteria described in the table to the right.

The evaluation process and the meaning of each criterion will be described further during tonight's presentation.

	Remove hazard?	Total Estimated Project Cost	Impacts to infrastructure?	Physical processes (sediment)	Wildlife and ecology	Recreational impacts?
Option 1: Rehabilitate Dam	Yes	$20.0M	No impact	No impact	No change	No change
Option 2: Removal with stream restoration	Yes	$9.6M	Gatehouse and spillway removed	Requires sediment management	Improve habitat connectivity, fish passage, hydraulic variability	Fishing, hiking, birding would remain. Boating would not.
Option 3: Removal without stream restoration	Yes	$6.1M	Gatehouse and spillway removed	Requires less sediment management than #2	Improve habitat connectivity, fish passage, hydraulic variability	Fishing, hiking, birding would remain. Boating would not.

Existing Views of the Quaken Kill

Approximately 3,000 ft upstream of reservoir

Approximately 2,000 ft upstream of reservoir

Approximately 1,000 ft upstream of reservoir

Approximately 300 ft downstream of earth embankment dam