



NEW YORK
STATE OF
OPPORTUNITY

Hudson River -
Black River
Regulating District



Old Forge and Sixth Lake Dam Rehabilitation Projects

Background and Project History

Dam structures are subject to Department of Environmental Conservation (DEC) Dam Safety Regulations

2015 Engineering Assessments

- Design Flood
- Hydraulic Capacity
- Structural Stability
- Outlet Discharge Capacity

2022 Assessment and Alternatives Analysis

Findings

Old Forge Dam

- Inadequate discharge capacity (dam overtopping during design flood)
- Inadequate low level outlet discharge capacity
- Inadequate factor of safety (spillway - sliding stability)

Sixth Lake Dam

- Inadequate discharge capacity (dam overtopping during design flood)
- Inadequate low level outlet discharge capacity
- Inadequate factor of safety (dam – seismic loading stability)
- Inadequate factor of safety (spillway – seismic loading stability)

Corrective Measures

Increase project discharge capacity

Increase gate outlet capacity

Spillway designed to meet safety regulations

Embankment dam designed to meet safety regulations

Corrective Measures

Old Forge Dam

- Inadequate discharge capacity (dam overtopping during design flood)
Increase spillway length
- Inadequate low level outlet discharge capacity
Increase gate outlet capacity (quantity and size)
- Inadequate factor of safety (spillway - sliding stability)
spillway designed to meet safety regulations (more concrete)

Corrective Measures

Sixth Lake Dam

- Inadequate discharge capacity (dam overtopping during design flood)
Increase spillway length
- Inadequate low level outlet discharge capacity
Increase gate outlet capacity (quantity and size)
- Inadequate factor of safety (dam – seismic loading stability)
embankment designed to meet safety regulations (more earth)
- Inadequate factor of safety (spillway – seismic loading stability)
spillway designed to meet safety regulations (more concrete)

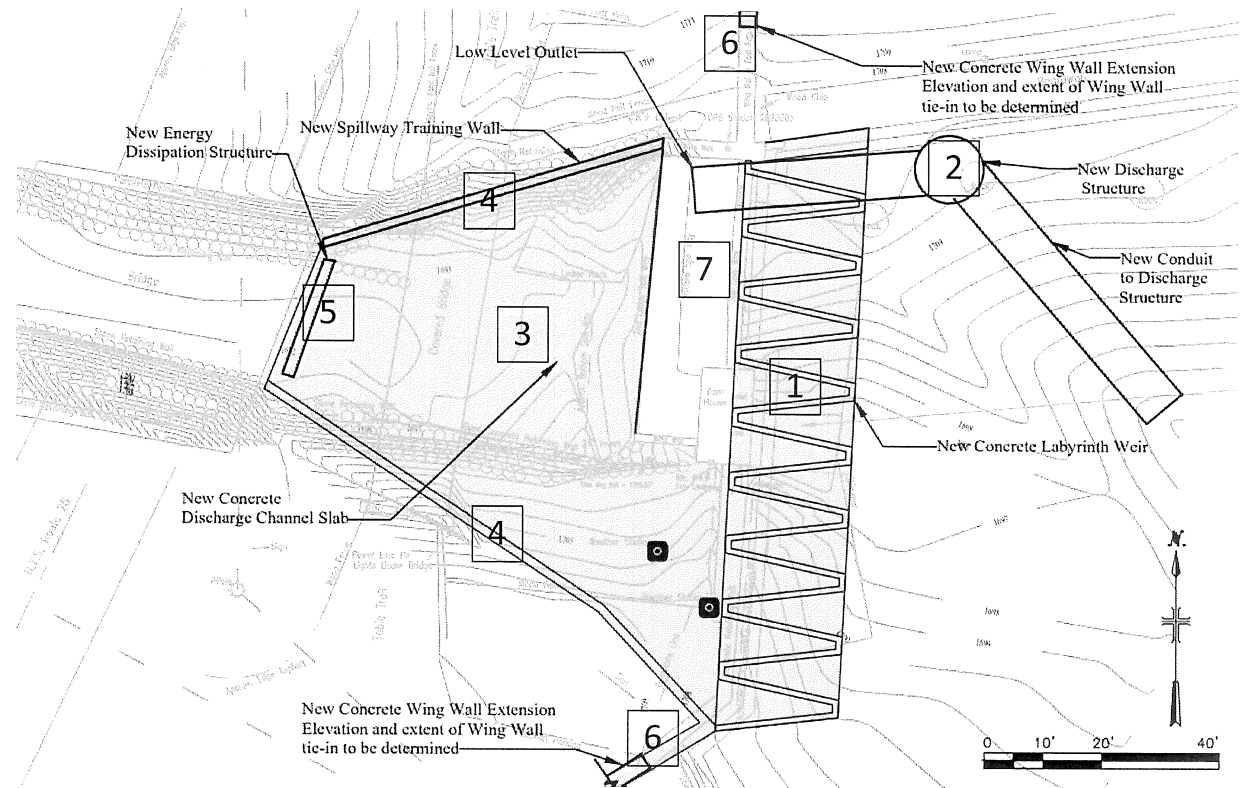
Old Forge Dam Rehabilitation Concept



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1. Labyrinth Spillway Structure
2. New Outlet Structure w/ Gates
3. Discharge Chute / Slab
4. Training Wall Extensions
5. Energy Dissipation
6. Abutment Tie-in
7. Existing Structure



Sixth Lake Dam Rehabilitation Concept



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1. Existing Outlet Structure
2. Labyrinth Spillway Structure
3. New Outlet Structure w/ Gates
4. Discharge Chute / Slab
5. Training Wall Extensions
6. Energy Dissipation
7. Upstream Buttress
8. Downstream Slope Filter and Buttress

