CUBA LAKEDam and Outlet Spillway Repair Projects

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TEAM INTRODUCTIONS



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AGENDA

- Dam Overview
- Rehabilitation Plan
- Construction Impacts
- Additional Information



Introduction

- Cuba Lake Dam and Cuba Lake Outlet Spillway are NYS Department of Environmental Conservation (DEC) regulated facilities owned by the NYS Office of General Services (OGS)
- OGS is planning to make repairs to the dams to provide long-term stability and bring to substantive compliance with NYSDEC safety requirements







Cuba Lake Dam

- Low-level outlet system constructed with downstream control
- Downstream control is not in compliance with NYSDEC dam safety design standards
- Repairs include the installation of a new low-level outlet system





Cuba Lake Outlet Spillway Dam

- Cuba Lake Outlet Spillway Dam is located on the Seneca Nation Oil Spring Territory
- Cuba Lake Outlet Spillway Dam consists of a primary spillway and a concrete secondary spillway
- The Concrete Secondary Spillway is in poor condition and is undermined
- Repairs include replacing the existing concrete secondary spillway overlay with a new cast-in-place reinforced concrete slab, underlain by a filter drainage system



Project Schedules (2023-2024)





REHABILITATION PLAN



Cuba Lake Dam Rehabilitation

- New three-pipe siphon system to be installed and existing outlet pipes to be grouted and abandoned in-place to repair the deficient conditions
- OGS evaluated five remediation alternatives and the siphon system was chosen because it minimizes impacts to reservoir levels during construction and limits construction activities in Cuba Lake while providing long-term stability



Outlet Spillway Rehabilitation

 Secondary spillway concrete to be replaced with new reinforced concrete slab to remediate the deteriorated conditions







Permitting Process

- Projects will meet the requirements of the State Environmental Quality Review Act
- Environmental review and permitting are underway. Coordination is occurring with:
 - Seneca Nation (SNI)
 - United States Army Corps of Engineers (USACE)
 - New York Department of Environmental Conservation (NYSDEC)
 - State Historic Preservation Office (SHPO)





US Army Corps of Engineers®



Department of Environmental Conservation



Parks, Recreation and Historic Preservation



Benefits of the Projects

- The projects will improve the long-term safety, operations, and control of the dam system and will allow the dams to substantively comply with NYSDEC safety regulations with minimal construction effects
- No additional water will be discharged downstream as a result of these projects and lake levels will be maintained in a similar manner





CONSTRUCTION IMPACTS



Lake Drawdown

- Lake drawdown typically occurs from November – March each year
- Due to construction, the drawdown period could be slightly extended this year and could occur as early as mid-October 2023 through as late as April 30th, 2024, with potential of similar drawdown in Fall 2024-Spring 2025.





Construction Extents: Cuba Lake Dam

- The construction extent of Cuba Lake Dam is approximately 6.2 acres with 0.7 acres of land disturbance
- Access to the main dam embankment and State-owned parking area will be restricted during construction
- Temporary cofferdam and all essential erosion and sediment control measures needed to protect the water quality of Cuba Lake and downstream wetlands and waterbodies will be installed prior to construction
- Limited underwater work is outside the cofferdam, but will not impact water quality





Construction Extents: Cuba Lake Outlet Spillway Dam

- Construction extent is approximately 0.6 acres
- OGS is coordinating with SNI to obtain permission to utilize parking areas adjacent to the spillway, which will restrict area to contractor use only
- Temporary cofferdam and all essential erosion and sediment control measures needed to protect the water quality of Cuba Lake and downstream wetlands and waterbodies will be installed prior to construction





Cultural and Historical Effects

Cuba Lake Dam

- The Cuba Lake Dam's low-level outlet gatehouse will be selectively demolished, as required for the installation of the new system
- SHPO has determined this structure to be of cultural and historic value. As such, OGS will prepare documentation of the gatehouse, outlet valve controls, and outlet channel walls and a narrative about the history of Cuba Lake and Feeder Reservoir



Cuba Lake Outlet Spillway Dam Area

- The Outlet Spillway Dam area located on the Seneca Nation Oil Spring Territory is considered by the Tribal Historic Preservation Office (THPO) to have historic and cultural value
- Improved signage will be developed and installed in the area with content to be developed in conjunction with the THPO





Environmental Effects

- No permanent or long-term environmental effects are anticipated
- Temporary effects during construction include interim displacement of fish and wildlife
- The main spillway will continue to operate and discharge water from the lake as in past years
- A mussel survey has been completed and impacts are not anticipated
- Erosion and sediment control practices will be installed and maintained throughout the projects to minimize sedimentation downstream and to minimize potential impacts to resident mussels



For additional information or questions please contact us at

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Or download the project fact sheet at

bit.ly/cubadamfactsheet

