

Whaley Lake Dam

District Update 2015

Saturday, February 28, 2015

Lakeside Park

2 Lakeside Drive, Pawling NY 12564

Overcoming the Technical & Legal Challenges of
Extending the Useful Life of a Very Important
176-year Old High Hazard Dam with No Access and
No Owner

Outline

- Introduction
 - Dam Safety Committee
 - Town Board Members
 - Project Engineer
- Whaley Lake Dam
- Legal Issues
- Access Issues
- Investigations Performed & Findings
- Remediation Options
- Question & Answers

Whaley Lake

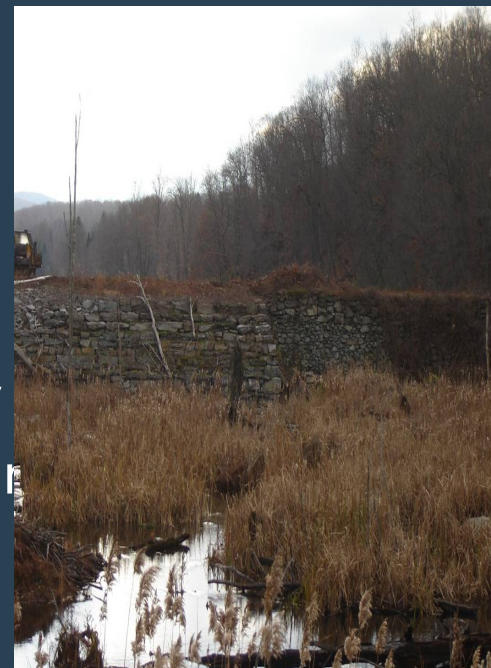


Basic Information About Dam

- **Dam Name:** Whaley Lake Dam
- **Nat. ID Number:** NY00270
- **Town:** Pawling
- **Hazard Potential:** High Hazard, Class C
- **Size Classification:** Large
- **Coordinate location (lat, long):** 41o34'17.5", 73o39'27.6"
- **Street Address:** NYS Route 292
- **Current Purpose of the Dam:** Recreation and Conservation
- **Constructed:** ca. 1837
- **Length:** 330 feet
- **Structural Height:** 18 feet
- **Hydraulic Height:** 15 feet
- **Crest Width:** 30 feet
- **Type of Dam:** Earth embankment with dry stone masonry walls
- **Low-Level Outlet:** 20-inch diameter iron pipe with knife gate valve

Whaley Lake

- Town of Pawling 8700 Residents
- 500 properties surround Lake
- 400 +/- properties with Lake Rights
- 1985 Town of Pawling Town Board Action
- 1997 Town Commence Current Action
- 2000 Restoration and Rehabilitation Study
- 2006 District Ratification (Whaley Lake Dam Improvement District)
- Estimated Cost of Repairs (2000)
 - Estimate \$2.3 million



Whaley Lake Dam



Ownership, Access & Funding



Ownership, Access & Funding

- No Legal Owners
- Dutchess County, NY holds Property “In Rem”
- Deeded Access Across Western Property
- Zoning Board of Appeals Decision Includes Access
- Court Ordered Search Warrant for Trespass on Dam – DONE, COMPLETED
- Local License Agreement for Crossing During Study- DONE, COMPLETED
- Dutchess County - \$65,000
- NYSDEC – \$1.0 Million (Clean Water / Air Act) – Available
- Federal Gov’t - ** \$3.0 Million (Water Resources Act of 2005)
 - Working with Congressman Gibson of Funding through the current “Farm Bill”
- Estimate on project \$2.3 Million (2000)
- Local Residents – \$ 2.6 million (Bond through District)

Legal Window For Investigation

YOU ARE HEREBY DIRECTED to execute this Search Warrant between the hours of
0:00 AM and ^{6:00} PM between the dates of SEPT. 8 & NOV. 30th, 2009

This Search Warrant is issued this 28th day of AUG., 2009



HON. KEVIN A. DENTON
Justice of the Town of Pawling

Temporary Access Easement

ARTICLE II

ACCESS LICENSE

Section 1. Declaration of Access License. The Licensor hereby declares that the Property shall be held subject to, and together with, the rights and obligations in, to, under and over the Access License Area. By entering into this License Agreement, neither party is waiving any access or easement rights they may have vis a vis the Property or the Dam parcel, and each party specifically reserves any and all rights to access the Property or the Dam parcel they may have.

Section 2. Rights and Obligations.

a. The Town shall have a non-exclusive License for all purposes of vehicular and pedestrian ingress to, and egress from, New York State Route 292 over the Access License Area to the Dam.

Construction Project Challenges and Decisions

- **Design Options**

- Style
- Appearance

- **NYS - “SHiPO”**

- **Water Level**

- Lower Level: **5 feet**

- **Access**

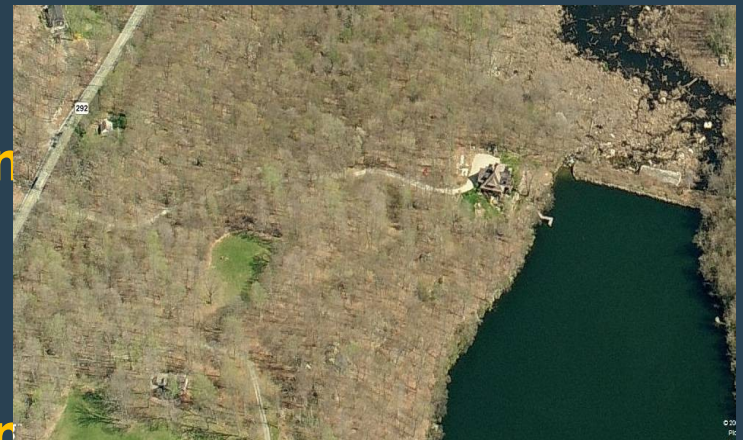
- Future

- **Acquire property ONLY as needed**

- Construction

- Conservation Easement

- **Off Site Property Mitigation Project**



NYSDEC Status of Dam

- DEC determines dam in poor condition
- DEC order to repair dam
- Dam abandoned – owner not found
- DEC wants the structure to be Repaired or Breached

View from West Abutment



Temporary Equipment Access



Temporary Access Constructed



Investigations Performed

Piezometer (Monitoring Well) Installation



Site Stabilization



Findings



Inadequate Spillway

Spillway Condition and Capacity Assessment



Inadequate Outlet Capacity



20 Inch Cast Iron Drain Pipe

Uncontrolled Seepage/Leakage

- **Leakage near Existing Low Level Outlet Discharge**



Inoperable Drain Valve

Inoperable Low Level Outlet Drain Valve



Sinkholes



Widespread Leakage/Seepage

Substantial Seepage



Flow Along Downstream Toe of Dam



No Access to the Dam



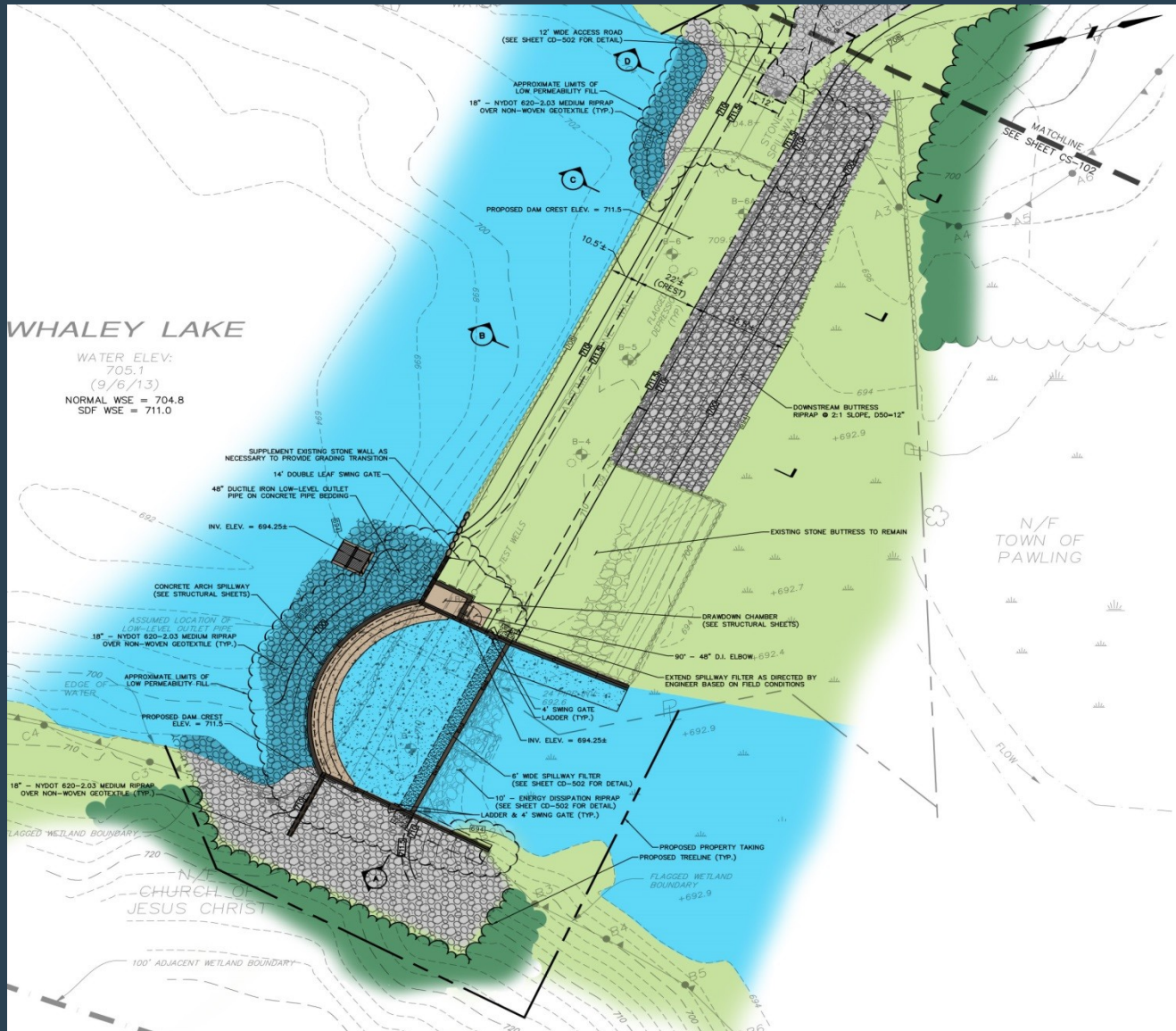
Access Obtained

- *New Physical (dry) access to dam from the North
 - Purchase of section of Adam property for ACCESS ONLY
 - Route 292 to Railroad Tracks: 18.79 acres
 - This gets us to the Left Abutment
- No legal right to trespass on dam parcel
 - “Search Warrant” Expired
- Access to dam
 - Working with Dutchess County Executive Molinaro, County Attorney, Commission of Finance, and adjacent property owners on acquisition of recommended property for construction and future access & maintenance

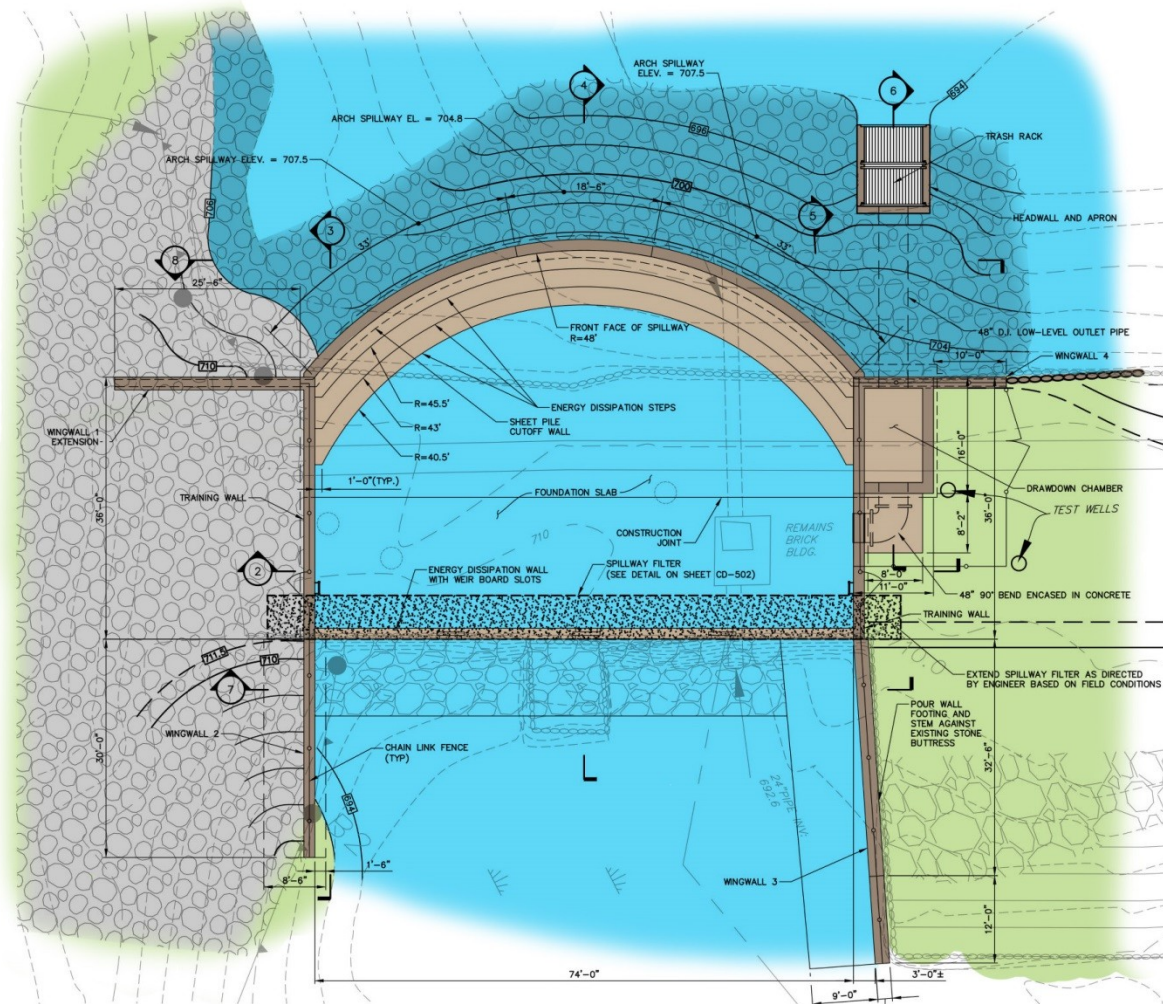
Recommended Solution



Proposed Dam Improvements



Increased Spillway Capacity



Latest Review From NYSDEC

- **Whaley Lake Dam - Application review**
- **DEC Id# 230-0625**
- 2/3/15 - Don Canestari Review- New engineer assigned to the project
- December 2014 re-submission (#?)
- Dave's comments were from August 2014. Application was determined to be incomplete due to technical comments issued by NYSDEC.

DEC Review Comments

- **Construction Inspection Plan with Hold Point Inspections. Include Inspection in Final plans.**
- **Passive Pressure utilized in Stability Analysis. Please review Factors of Safety & determine whether additional concrete, extension of Cutoff Wall can eliminate the reliance on Passive pressure.**
- **Question on the Hydrology/Hydraulic Analysis and the references used for the computations.**
- **NYSDEC wants F&O to better define sinkholes and how they will be addressed during construction**
- **DEC wants clarification on Riprap, Filter Blanket Material and whether a bedding layer is needed**
- **Provide further detail/elevations for upstream armoring being completed**
- **How will Toe area of the Buttress be cleared? How will maintenance be performed**

- **Structural Details of the Arch Spillway and how it is tied to the Spillway Training**

What Are The Next Steps?

- **Respond to NYSDEC latest Comments**
- **Acquisition of Left & Right Abutment Properties**
- **Access Road; Release of the RFP & Construct the road from Route 292 to the Dam Parcel**
- **Pawling Planning Board Approval - “Lot Line”**
- **Transfer of Ownership of Dam Parcel**
 - **Supreme Court, Dutchess County, Town of Pawling**
- **NYSDEC Permit(s) Award**
- **Lower Level of the Water**
- **Formal Bidding of the Proposed Project - 2 months**
- **Review Bid Submittals**
- **Contract Award**
- **Start of Construction**

Residents Questions

- Q: What NYSDEC Permit will be needed to work on our waters edge land?
- Q: What LOCAL Permits will be needed to work on our waters edge lands?

LOCAL ORDANINCE

- Code of the Town of Pawling;
 - **Chapter 111**
 - This chapter shall be known as the "**Freshwater Wetlands and Watercourse Protection Law** of the Town of Pawling." Its purpose is to regulate the dredging, filling, deposition or removal of materials, including vegetation; the diversion or obstruction of water flow; the placement of structures in, and other uses of, the ponds, lakes, reservoirs, natural drainage systems and wetlands located in the Town of Pawling; and the requirement of permits therefor, providing for the protection and control of wetlands, waterbodies and watercourses.

Chapter 111 Section 4B

"Acts allowed without a permit"

- **Chapter 171**

– " STORMWATER, SOIL EROSION AND SEDIMENTN CONTROL"

AGAIN: What Are The Next Steps?

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Questions/Discussion



Whaley Lake

Thank You

Pawling Town Board

Dam Safety Committee Members

Fuss & O'Neill

Zarecki & Associates

Local Volunteers

and most important

District Residents