



**Environmental
Protection**

**GILBOA DAM
RECONSTRUCTION
PROJECT UPDATE**

Schoharie County
Board of Supervisors Meeting

December 17, 2010

GILBOA DAM RECONSTRUCTION PROJECT

**PROJECT GOALS: Ensuring Public Safety
Sustaining Public Water Supply**



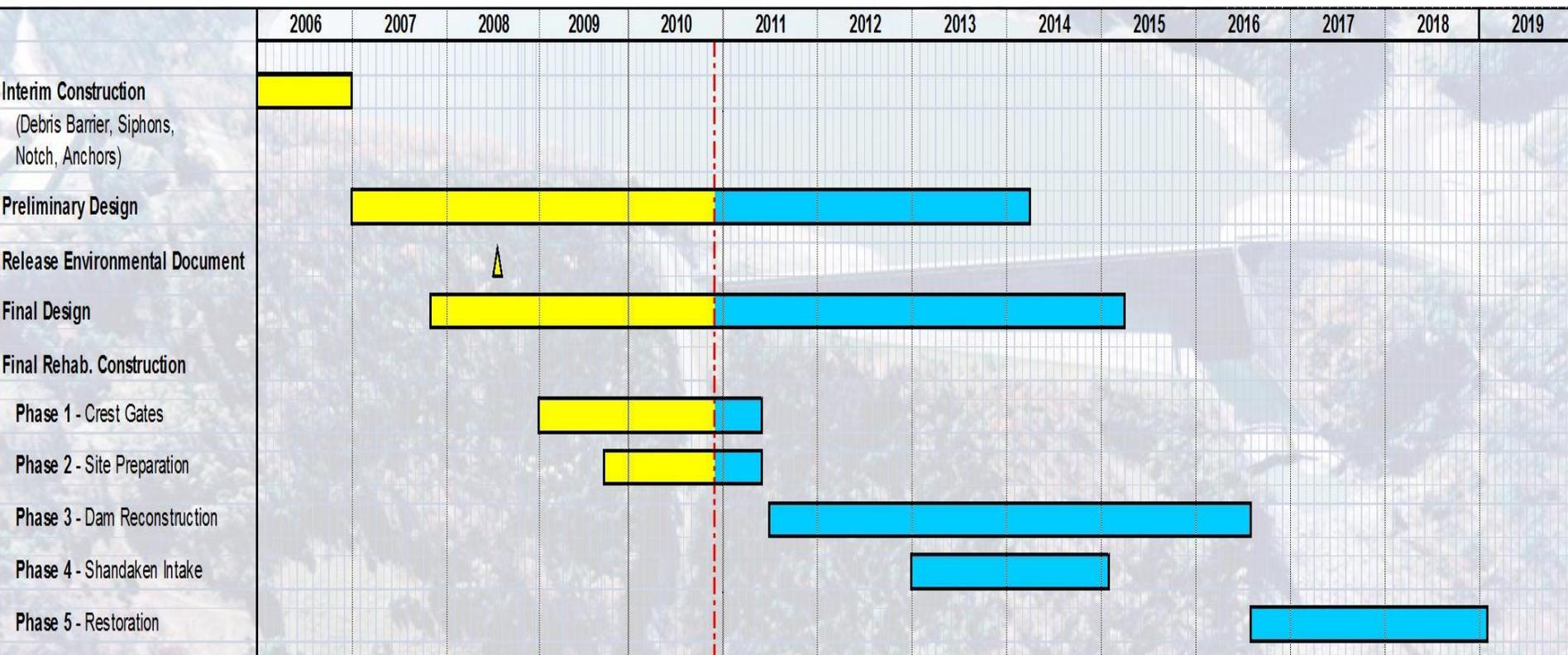
Agenda

- ❖ Project Scope and Current Schedule
- ❖ Design & Construction Status
- ❖ Dam Monitoring & Reservoir Status
- ❖ Permitting, ITRT and Public Coordination
- ❖ Significant Accomplishments to Date
- ❖ Questions

Project Scope

- ❖ Phase 1: CAT-359 Crest Gates Installation
- ❖ Phase 2: CAT-212A Site Preparation
- ❖ Phase 3: CAT-212B Dam Reconstruction
CAT-212C Low-Level Outlet Works
- ❖ Phase 4: CAT-212D Shandaken Intake Improvements
- ❖ Phase 5: CAT-212E Site Restoration

Current Project Schedule



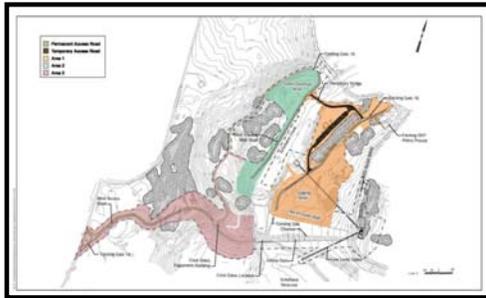
Phase 1: Crest Gates Installation (CAT-359)

- ❖ Anticipated Completion: Spring 2011
- ❖ Gate Equipment Fabricated & Delivered
- ❖ Completion Delayed

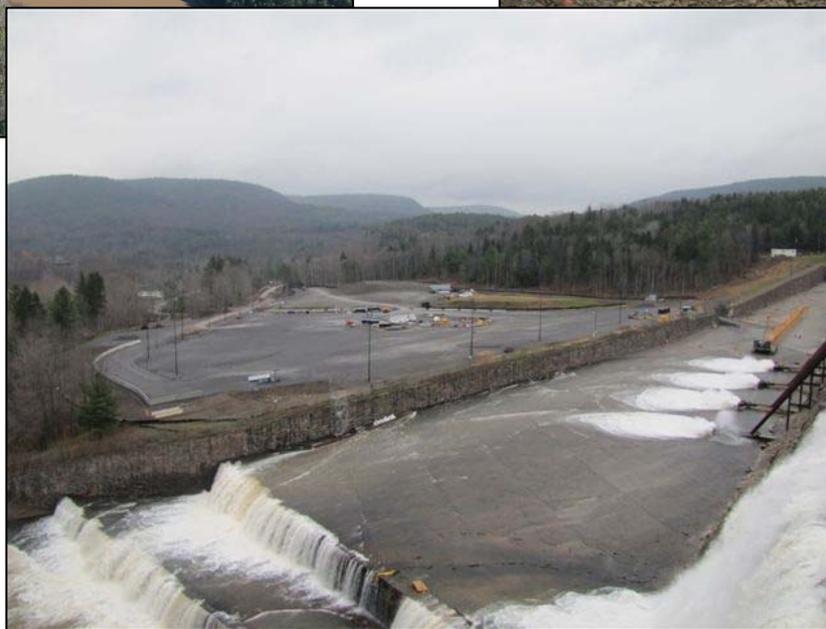


Phase 2: Site Preparation (CAT-212A)

- ❖ Order To Commence Work – September 30, 2009
- ❖ Anticipated Completion – Spring 2011



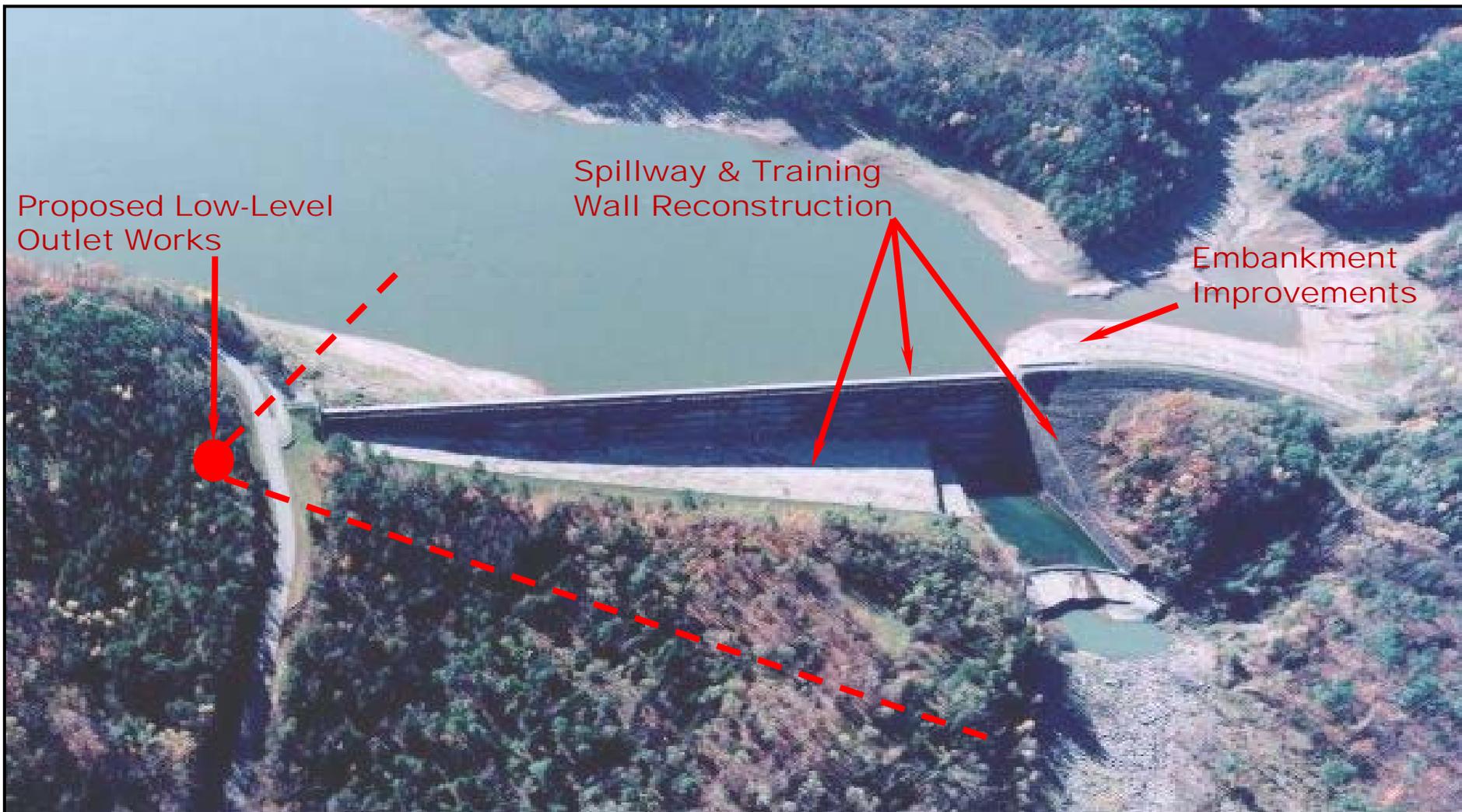
Phase 2: Site Preparation (CAT-212A)



Phase 2: Site Preparation (CAT-212A)



Phase 3: Dam Reconstruction and New LLO



Phase 3: Dam Reconstruction (CAT-212B)

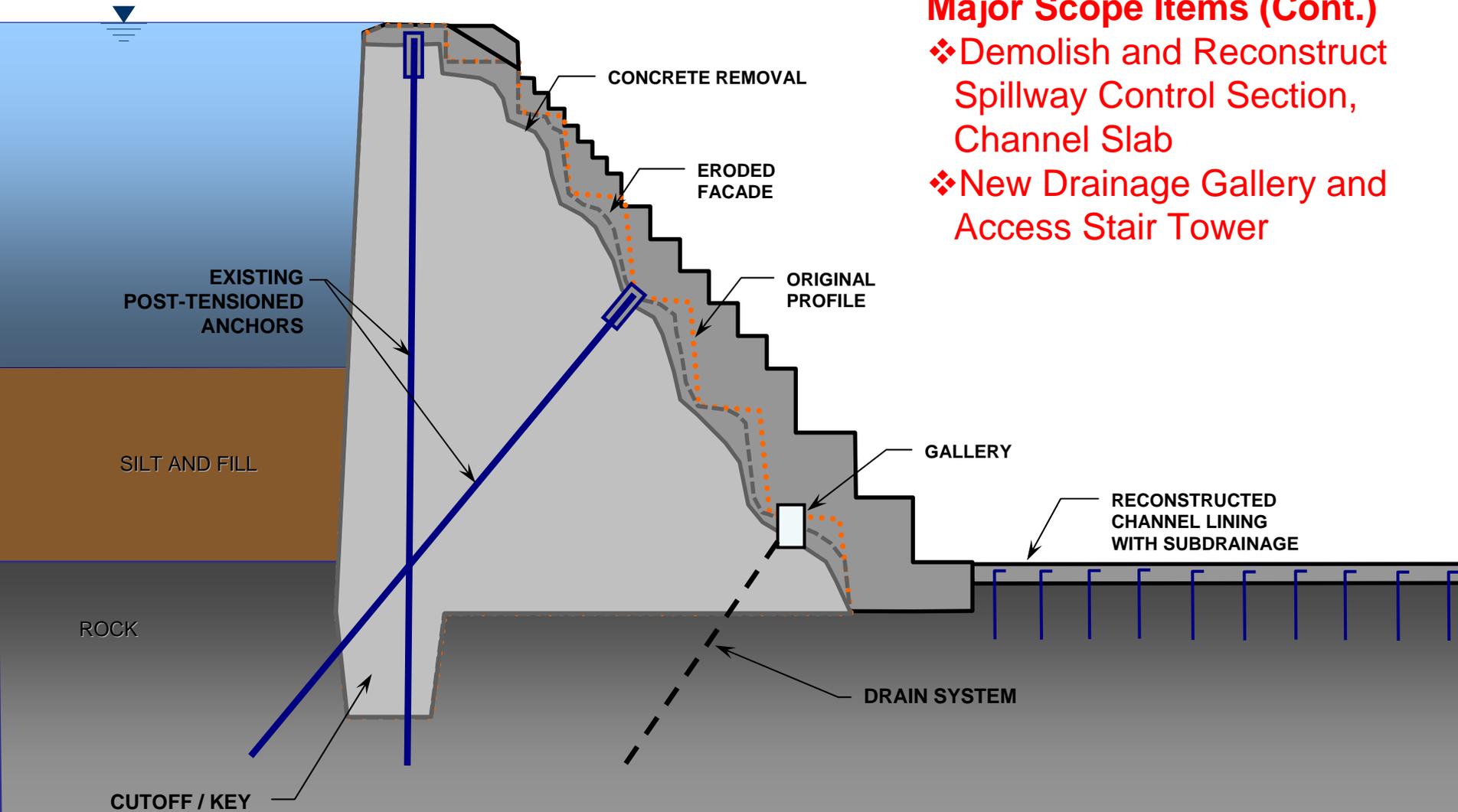
CAT-212B Dam Reconstruction

- ❖ Construction Bids Received – December 16, 2010
- ❖ Order to Commence Work (OTC) – 2nd Qtr. 2011
- ❖ 5-Year Construction Period



- ❖ **Major Scope Items**
- ❖ Install Post-Tensioned Anchors
- ❖ Extend Downstream West Training Wall
- ❖ Stabilize North Training Wall and Improve Drainage
- ❖ Refurbish Upper Gate Chamber
- ❖ Refurbish Existing Stone Masonry
- ❖ Enhance East Overlook Area
- ❖ Improve Instrumentation and Surveillance Systems
- ❖ North Training Wall Service Ramp
- ❖ Reconstruct Intermediate Channel Step, Plunge Pool, and East Upstream Retaining Wall

Phase 3: Dam Reconstruction (CAT-212B) Spillway Control Section Improvements



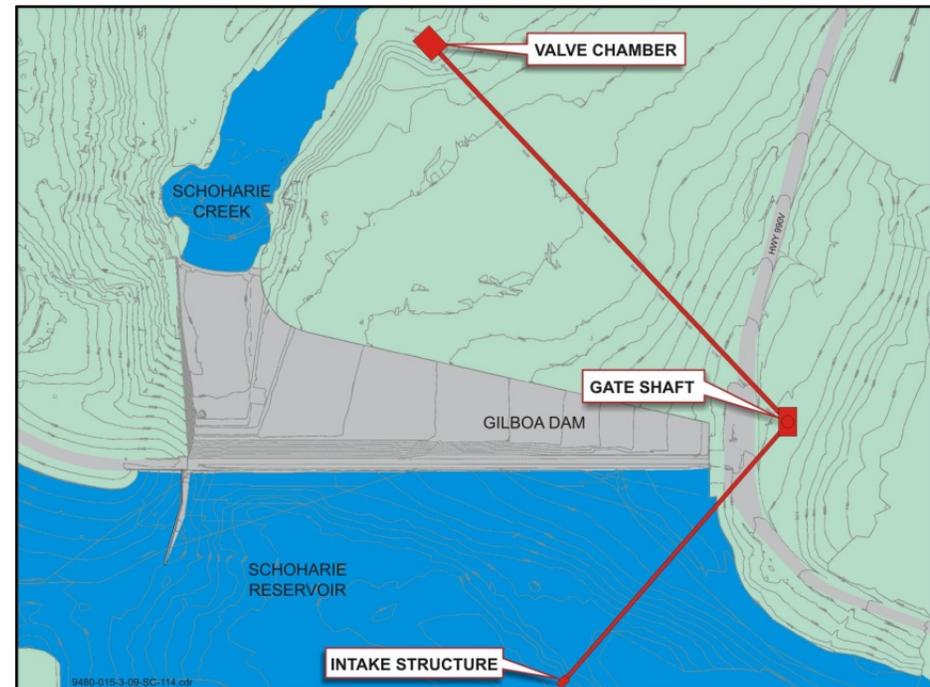
Major Scope Items (Cont.)

- ❖ Demolish and Reconstruct Spillway Control Section, Channel Slab
- ❖ New Drainage Gallery and Access Stair Tower

Phase 3: Dam Reconstruction

CAT-212C Low-Level Outlet Works

- ❖ 60% Design Complete – January 2011
- ❖ ITRT Workshop – February 2011
- ❖ Final Design Complete – December 2011
- ❖ Order to Commence Work:
January 2013
- ❖ 3+ Year Construction Period



Low-Level Outlet (CAT-212C)

Major Scope Items

- ❖ 96 inch Diameter Tunnel
- ❖ Intake Structure / Dredging
- ❖ Gate 15 Access Area
- ❖ Gate Shaft
- ❖ Portal / Hydropower Wye
- ❖ Valve Chamber Site Work
- ❖ Valve Chamber



Dam Monitoring

- ❖ Last quarterly monitoring (Oct 2010) – No unusual observations
- ❖ DEC Biennial Inspection – Conducted November 9, 2010
- ❖ Next quarterly monitoring – January 2011
- ❖ Sentinel Anchors
 - Minor damage to housing during construction; successfully repaired
 - Performing as anticipated



Instrumentation System Enhancement

- ❖ Add instruments (weirs) to monitor foundation drain flows
- ❖ Replace surface monuments disrupted by construction
- ❖ Install load cells in west wall anchors
- ❖ Automate data collection (piezometers, inclinometers, extensometers, new & existing load cells)
- ❖ Remote Monitoring and Operation of Crest Gates and Low-Level Outlet



Permitting & Coordination

- ❖ Coordination continues with DEC; expect declaration of complete application and public notice in early 2011
- ❖ ITRT Coordination
 - 4 of 5 workshops held to date
 - Next workshop – Tentatively February 2011
 - ITRT has endorsed dam design; “Interim” report received May 17, 2010
- ❖ Coordination with County Engineer continues

Significant Accomplishments to Date

- ❖ Debris Boom – Installed 2005
- ❖ Spillway Notch – Constructed 2006
- ❖ Siphons – Constructed 2006 (Continue to operate)
- ❖ Spillway Anchors – Installed 2006
- ❖ Shandaken Intake Dredging – Completed 2008
- ❖ Spillway Crest Gates – Construction 60%+ Complete
- ❖ Gilboa Dam Site Preparation – Construction 50%+ Complete
- ❖ Gilboa Dam Reconstruction – Bids Received
- ❖ Low-Level Outlet Design – ~60% Complete
- ❖ Enhanced Monitoring & Surveillance - Ongoing

QUESTIONS?