Hudson River - Black River Regulating District

Hudson River Area Apportionment

Hudson River Area Apportionment

- *Overview of the Hudson River - Black River Regulating District*
- *History of the current fiscal crisis*
- *Need for an Apportionment*
- *Apportionment Methodology*
- *Questions and Answers*

The Board

Hudson River Area

Philip W. Klein
(Chair)
Saratoga Springs

Ronald Pintuff
(2nd Vice Chair)
Northville

Paul Cornell
Gloversville

Black River Area

Pamela S. Beyor
(1st Vice Chair)
Black River

John K. Bartow Jr.
Adams Center

Audrey B. Dunning
Ilion

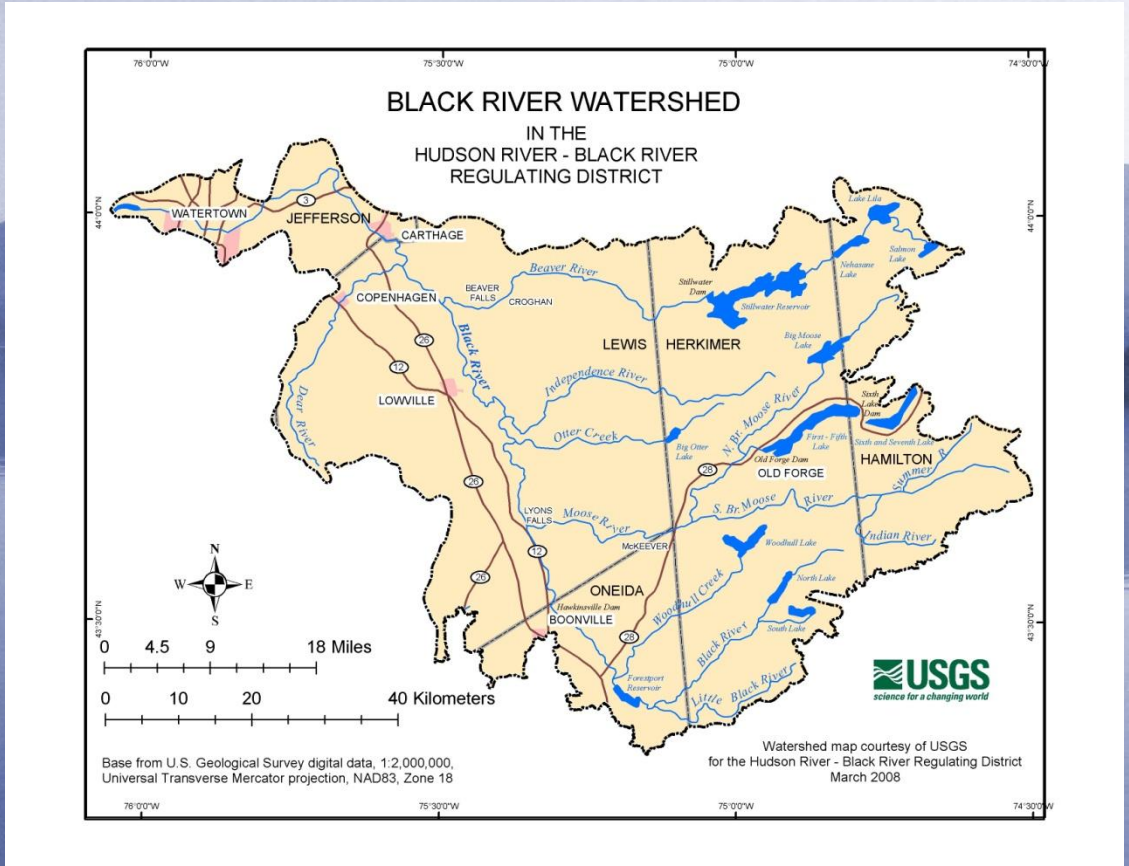
David W. Berkstresser
Old Forge

Mission

The mission of the Hudson River-Black River Regulating District is to regulate the flows of the Hudson River and Black River for the purposes of flood protection and flow augmentation.

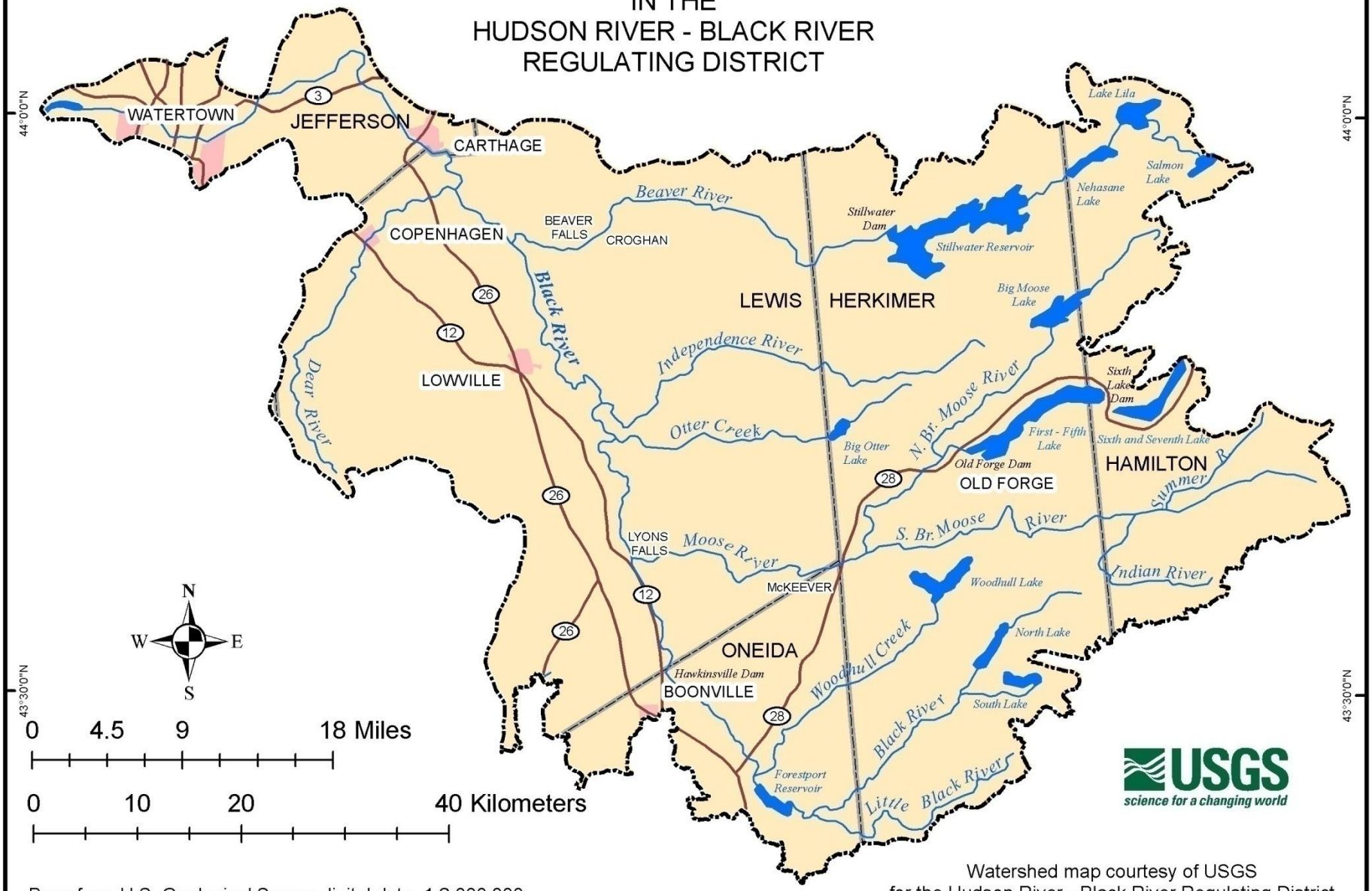
Black River Area

The Black River watershed encompasses an area of 1916 square miles in Jefferson, Lewis, Oneida, Herkimer and Hamilton Counties.



BLACK RIVER WATERSHED

IN THE HUDSON RIVER - BLACK RIVER REGULATING DISTRICT



USGS
science for a changing world

Base from U.S. Geological Survey digital data, 1:2,000,000,
Universal Transverse Mercator projection, NAD83, Zone 18

Watershed map courtesy of USGS
for the Hudson River - Black River Regulating District
March 2008

How a River Control District Is Building Its Reservoir

Organization of First River Regulating District Under New York Conservation Law—Details of the Stillwater Reservoir

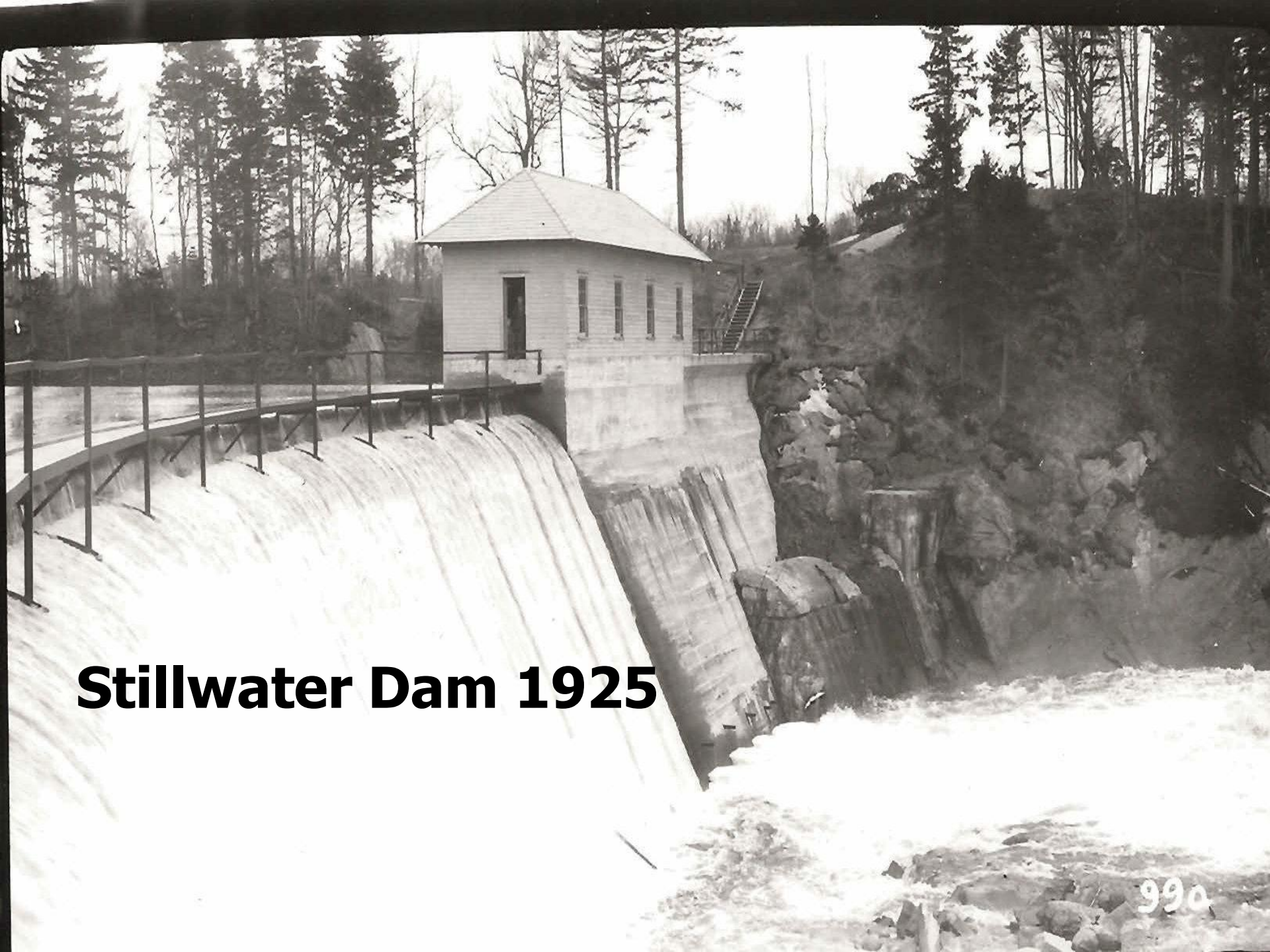
By E. S. Cullings

Chief Engineer and Secretary, Black River Regulating District, Watertown, N. Y.

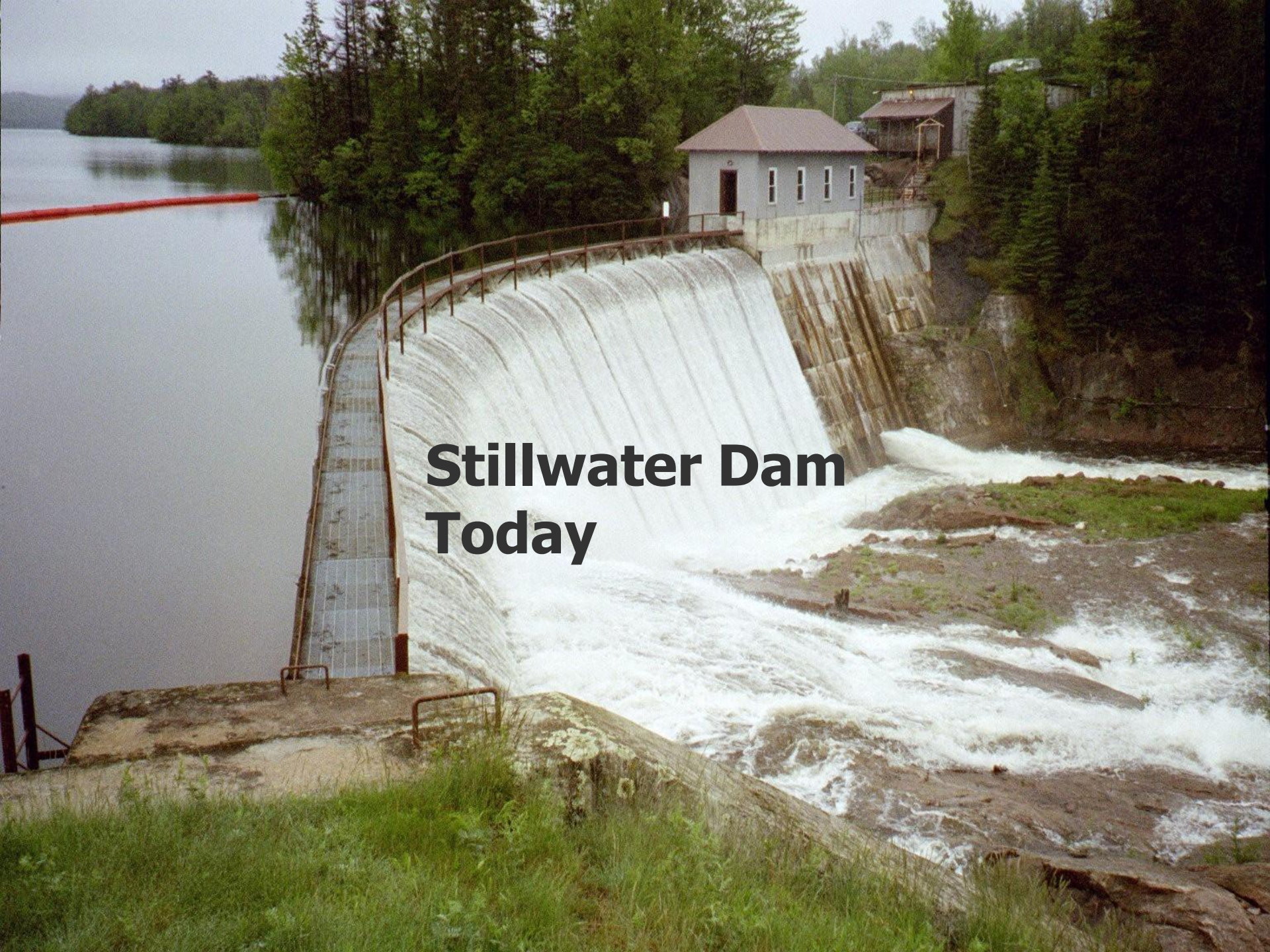
AS THE Black River Regulating District was the first of such districts to be organized under the New York State Storage Reservoir Act (Article 7-A of the Conservation Law) the fact that the enlargement of the Stillwater Reservoir is now under way is of unusual interest because this reservoir is the first piece of construction to be undertaken under this important act. The reservoir is one of a series of reservoirs to be constructed on the Black River and its tributaries. Although the act was passed in 1915 and the Black River Regulating District was organized in 1919 its plans for the construction of reservoirs have been delayed until the present because all the pioneer work of operating under the new law and all the litigation over its various provisions has fallen on this district. This pioneer work is now completed and a second district, including the Upper Hudson River, has been organized [illegible] other districts have been filed with the State Water Control Commission.

1919

Black River Regulating District



Stillwater Dam 1925

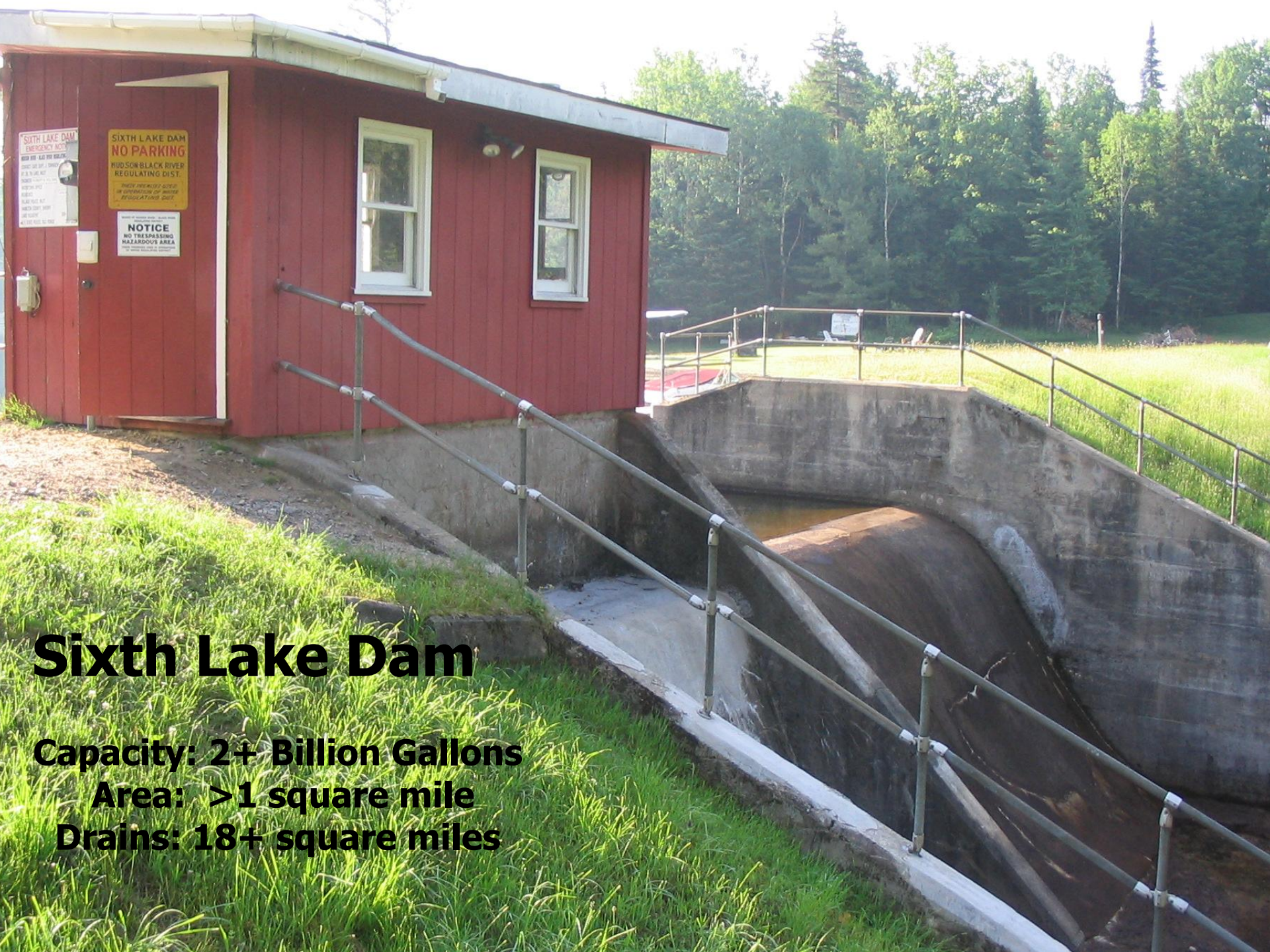

Stillwater Dam
Today

Stillwater Reservoir

capacity – 34+ billion gallons
10+ square miles
drains 170+ square miles

Old Forge Dam

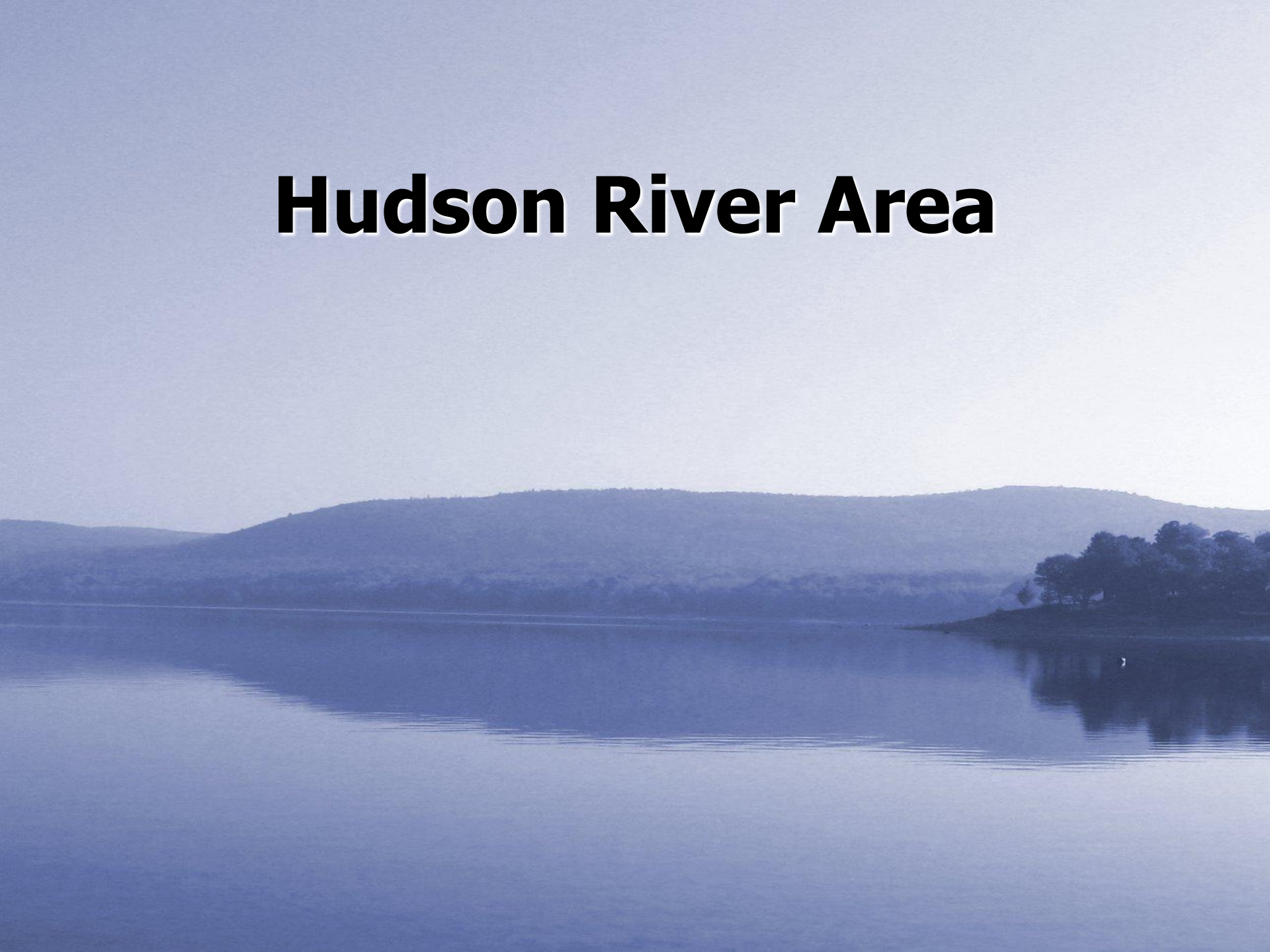
Capacity : 6.8 Billion Gallons
Surface Area:1.1+ Square Miles
Drains: 50+ Square Miles



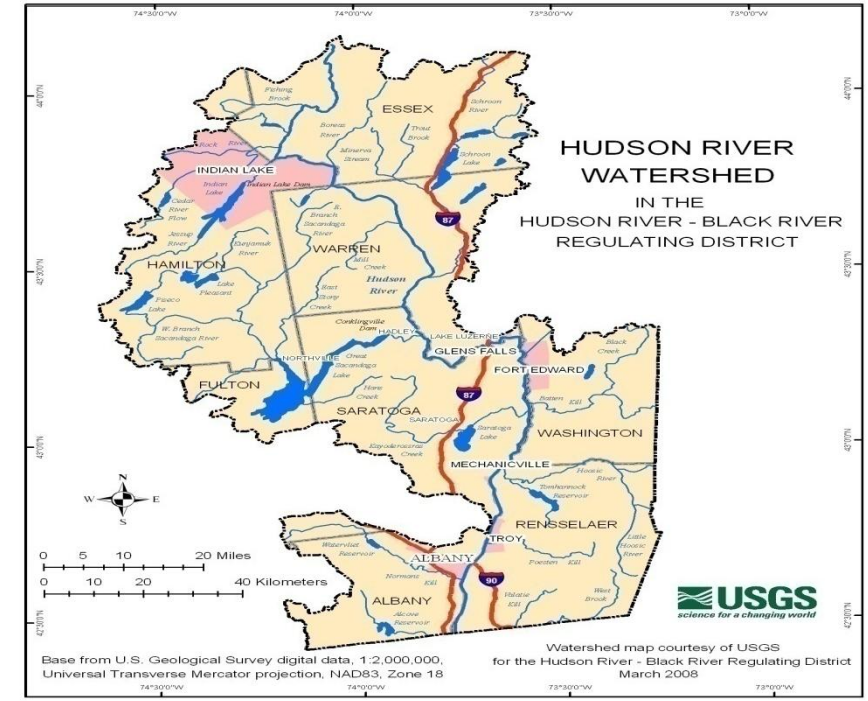
Sixth Lake Dam

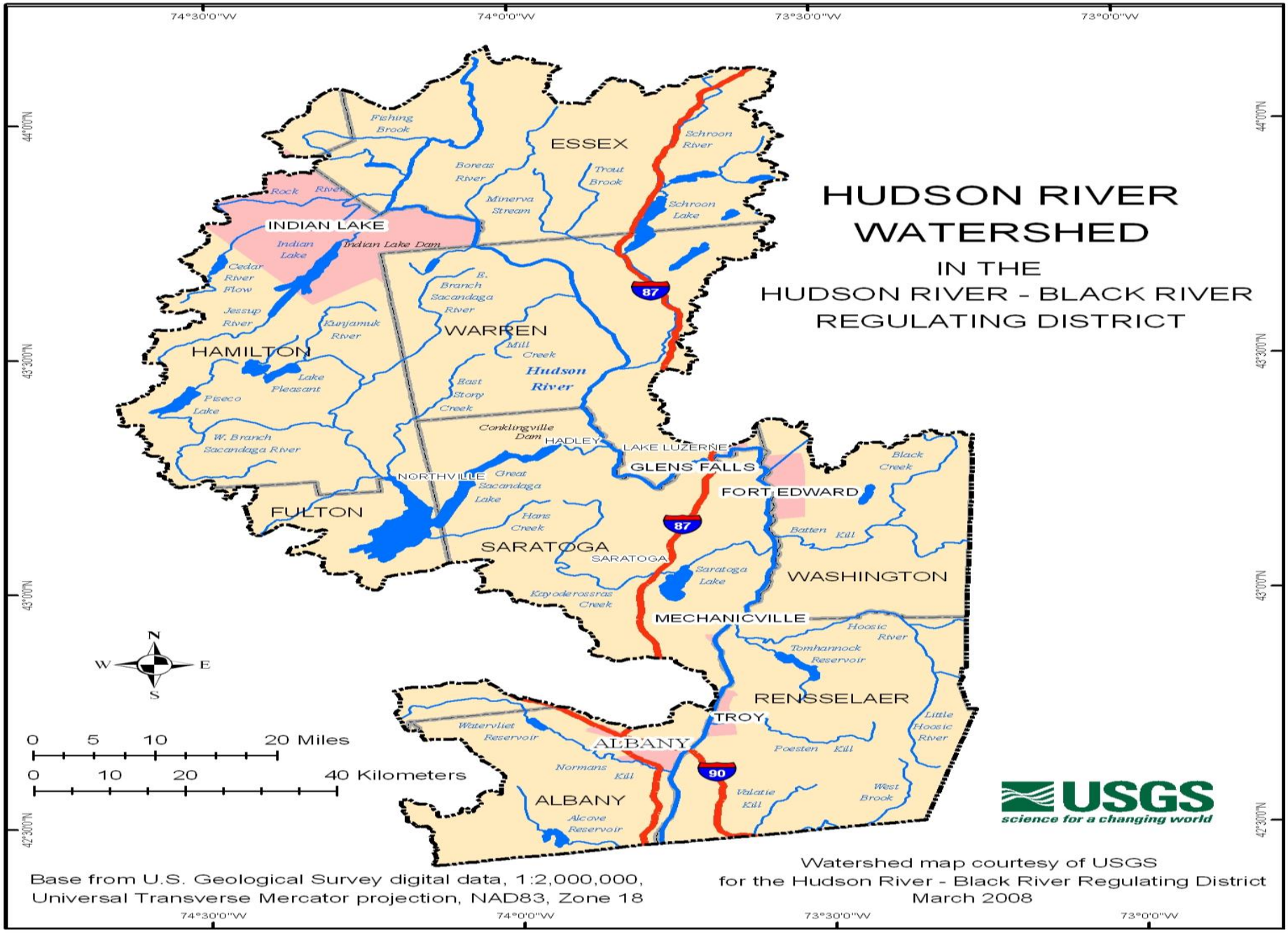
Capacity: 2+ Billion Gallons
Area: >1 square mile
Drains: 18+ square miles

Hudson River Area



The Hudson River watershed encompasses an area of 8300 square miles in Albany, Essex, Fulton, Hamilton, Rensselaer, Saratoga, Warren, and Washington Counties.

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42°30'0"N
HUDSON RIVER WATERSHED
IN THE
HUDSON RIVER - BLACK RIVER
REGULATING DISTRICT
ESSEX
INDIAN LAKE
WARREN
HAMILTON
FULTON
SARATOGA
HADLEY
LAKE LUZERNE
GLENS FALLS
FORT EDWARD
WASHINGTON
MECHANICVILLE
RENSSELAER
TROY
ALBANY
ALBANY
NORTHVILLE
Fishing Brook
Boreas River
Trout Brook
Schroon River
Schroon Lake
Minerva Stream
Rock River
Indian Lake
Indian Lake Dam
Cedar River Flow
Jessup River
Kunjamuk River
E. Branch Sacandaga River
Mill Creek
Hudson River
East Stony Creek
Piseco Lake
Lake Pleasant
W. Branch Sacandaga River
Conklingville Dam
Great Sacandaga Lake
Hans Creek
Kayoderosseras Creek
Saratoga Lake
Black Creek
Batten Kill
Hoosic River
Tomhannock Reservoir
Little Hoosic River
Poesten Kill
West Brook
Valatie Kill
Normans Kill
Watervliet Reservoir
Alcove Reservoir
87
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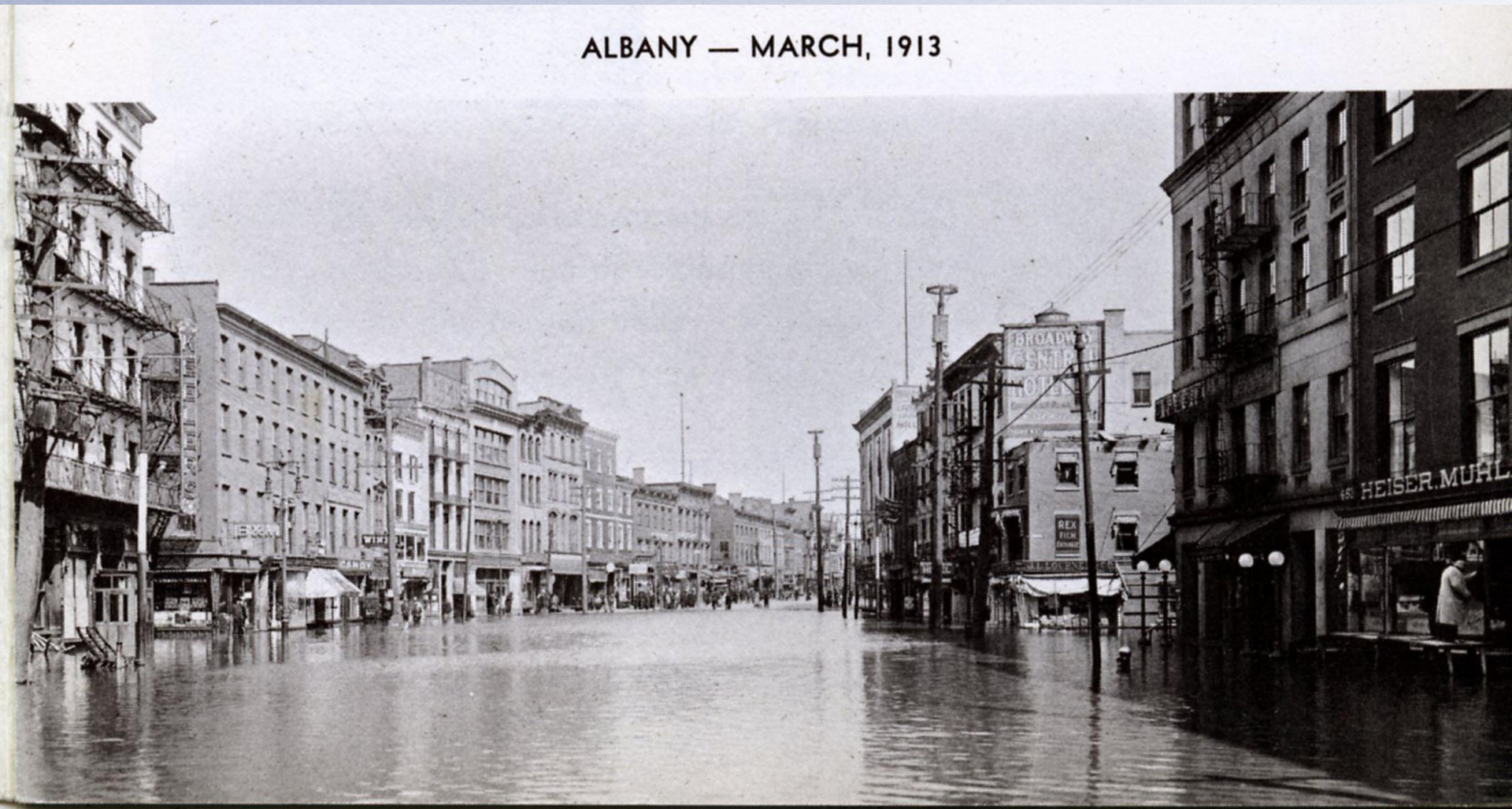
USGS
science for a changing world
Base from U.S. Geological Survey digital data, 1:2,000,000,
Universal Transverse Mercator projection, NAD83, Zone 18
Watershed map courtesy of USGS
for the Hudson River - Black River Regulating District
March 2008

1913 Flood in Albany, NY



Broadway in Albany, NY
March 29, 1913

August 1922, a petition was granted and a final order entered creating the **Hudson River Regulating District**.

STATE OF NEW YORK

WATER CONTROL COMMISSION

IN THE MATTER

-of the-

City of Glens Falls

Application of L. P. Boyle, and others, for the Organization of a River Regulating District to be known as the Hudson River Regulating District.

MINUTES OF PUBLIC HEARING held in the above entitled matter, in the Hearing Room of the State Conservation Commission, 23 South Pearl Street, Albany, N. Y., Tuesday, July 25th, starting at 10:00 A. M. (Daylight Saving Time). (1922)

PRESENT:

HON. CHARLES D. NEWTON,

HON. C. TRACEY STAGG,

MR. R. G. FINCH.

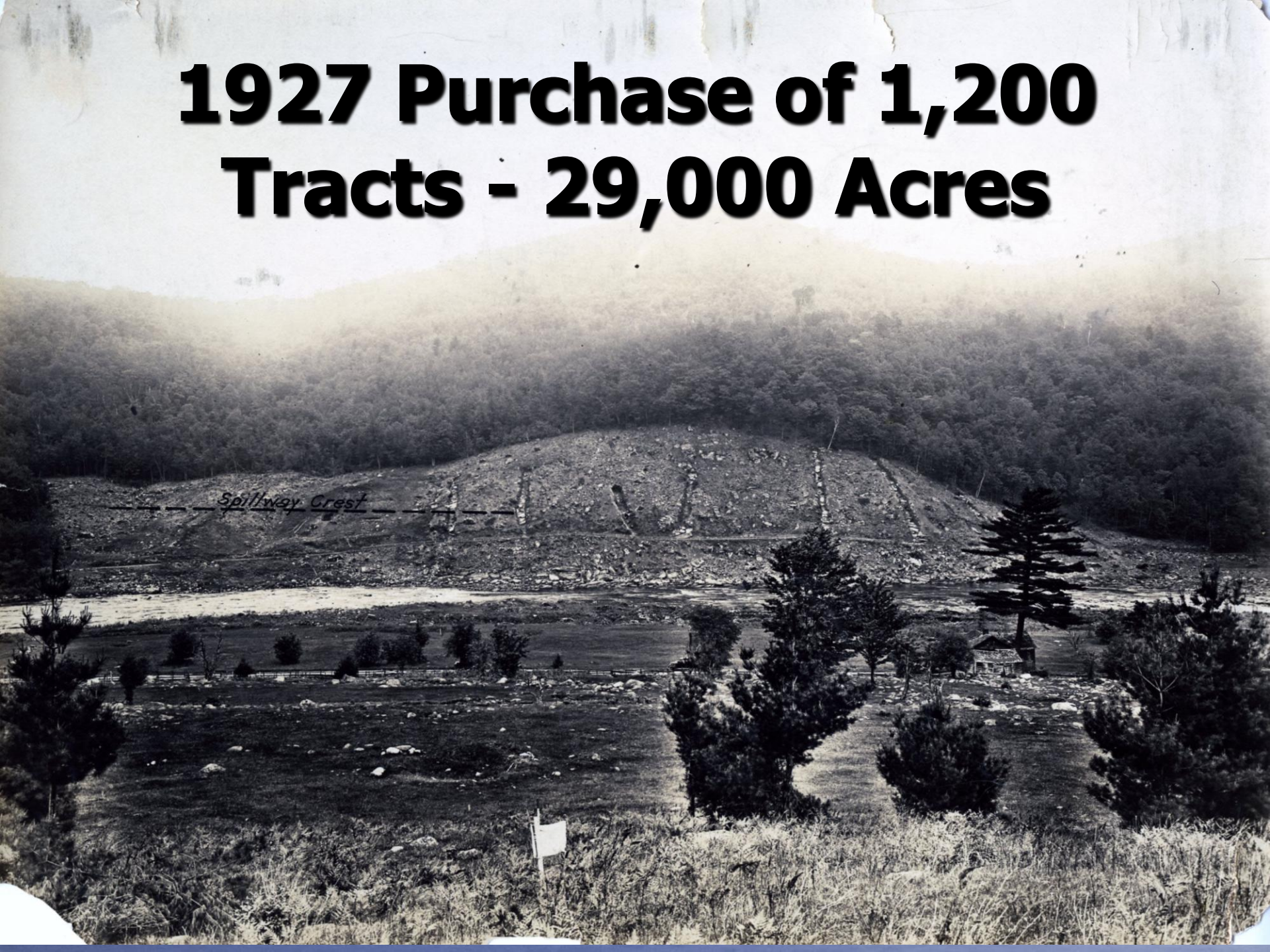
APPEARANCES:

ALLEN WARDWELL, Esq., 15 Broad street,

Hudson River Area

Hudson River Regulating District
1922 - 1959

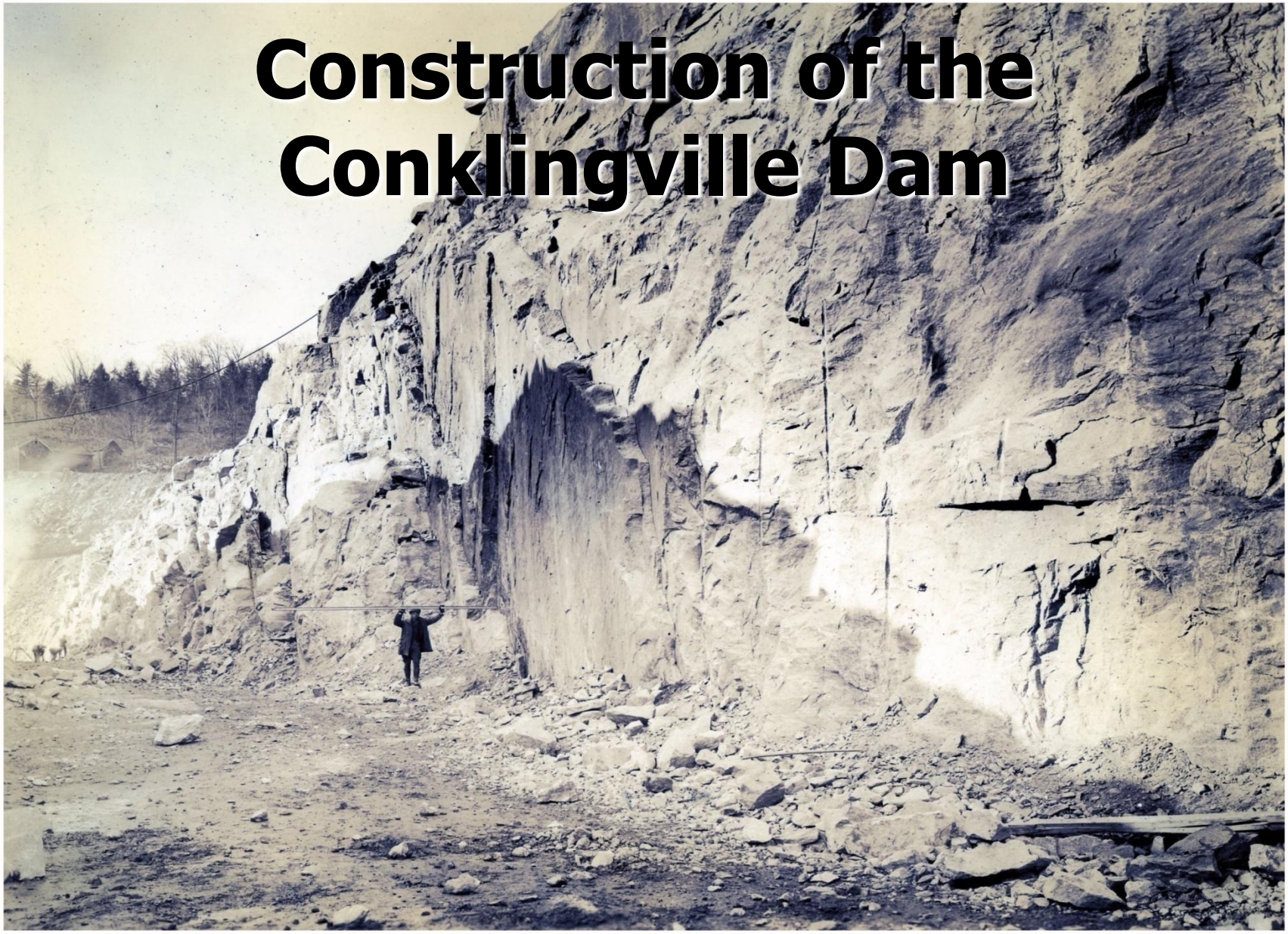
1927 Purchase of 1,200 Tracts - 29,000 Acres



12,800 Acres Cleared

1928 Conklingville Dam Site Prior to Construction

Construction of the Conklingville Dam

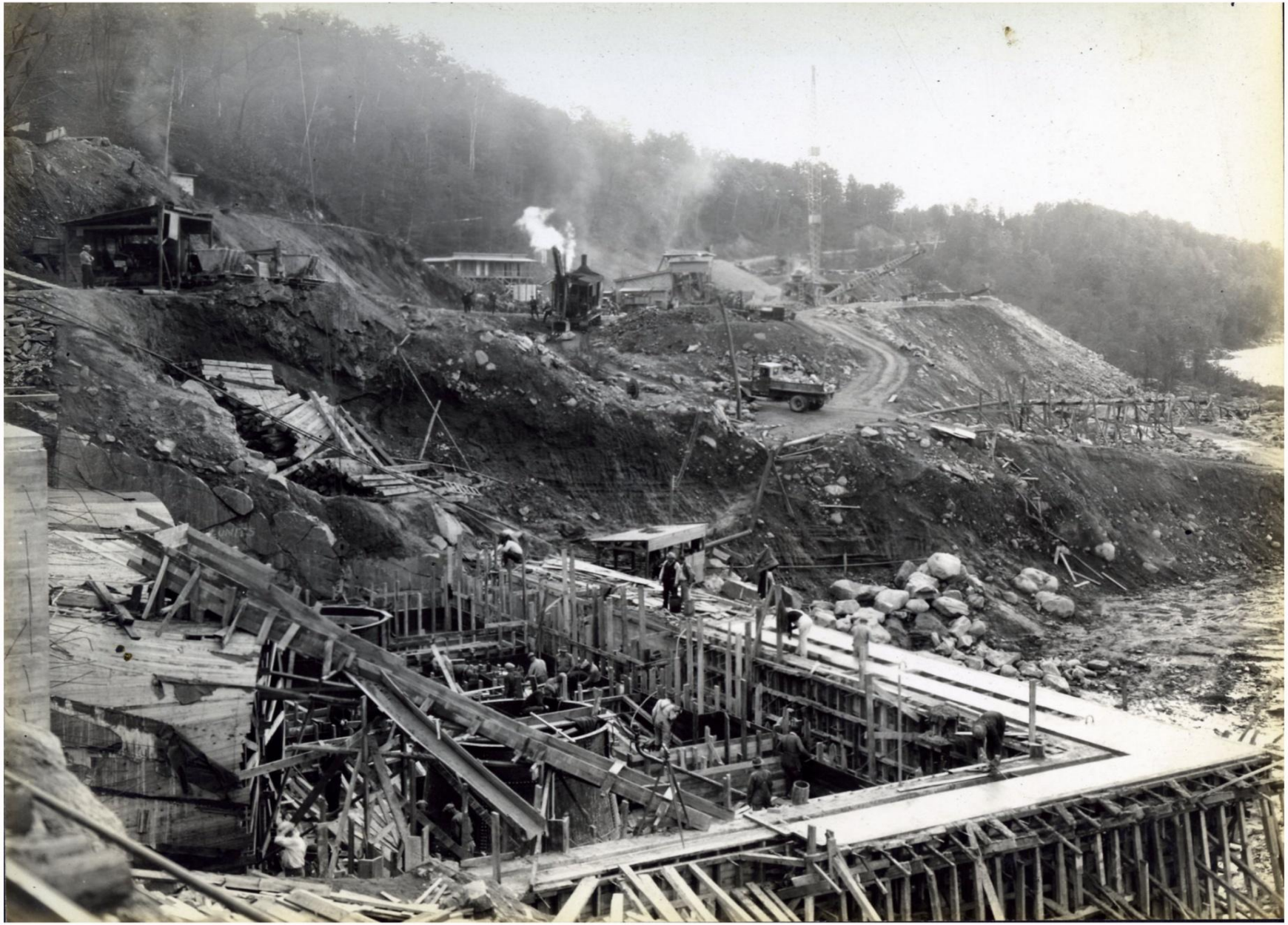


North side of excavation for approach channel looking west from Sta. 8 & 40. Bottom of cut at El. 720.

GSL-No53 January 1, 1929

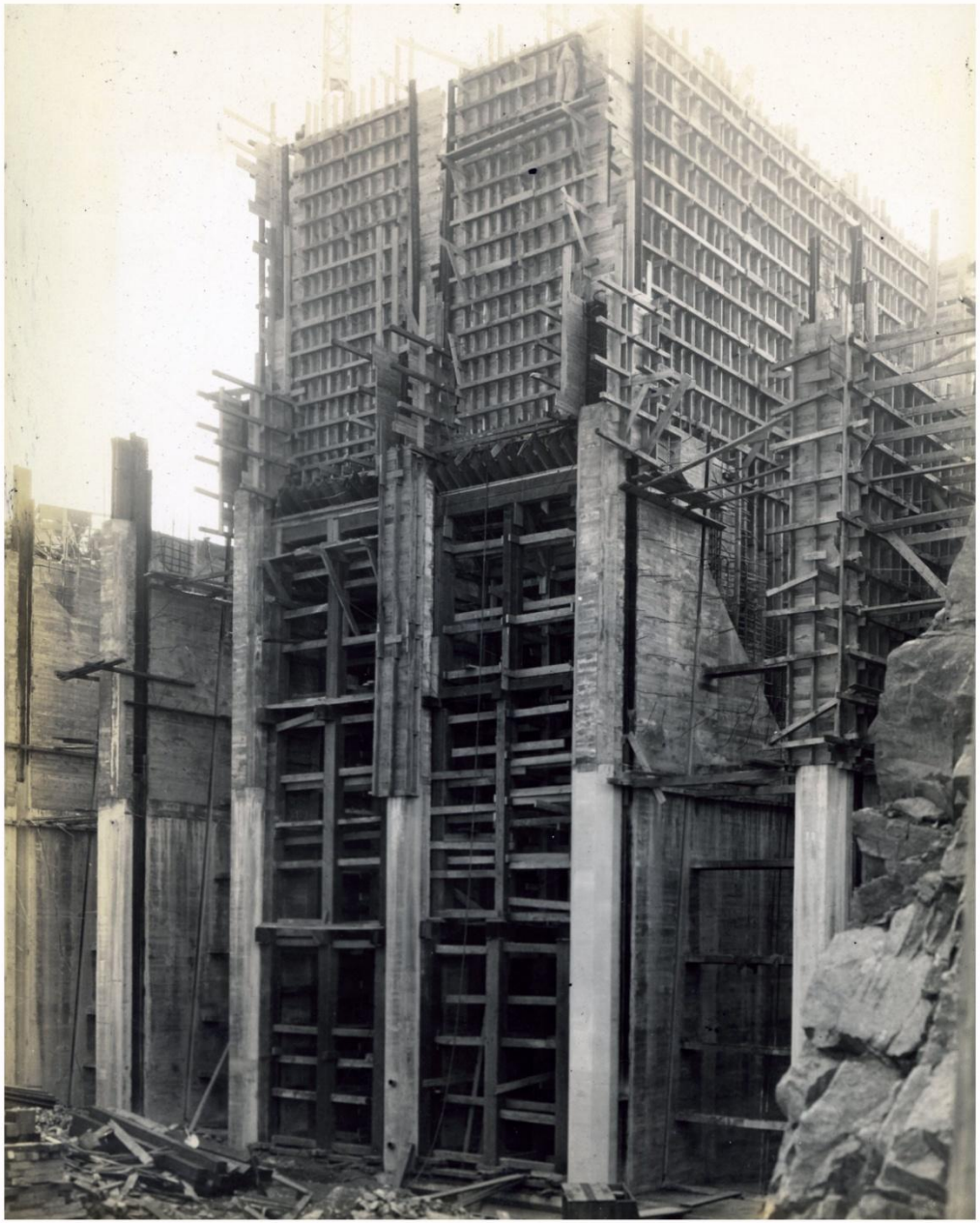
View of outlet channel.

Steam shovel lifting upstream valve extension to swing into final position in outlet channel.



Power House. Looking Southeast across generator section from West side of plant.

GSL-No160 November 4, 1929



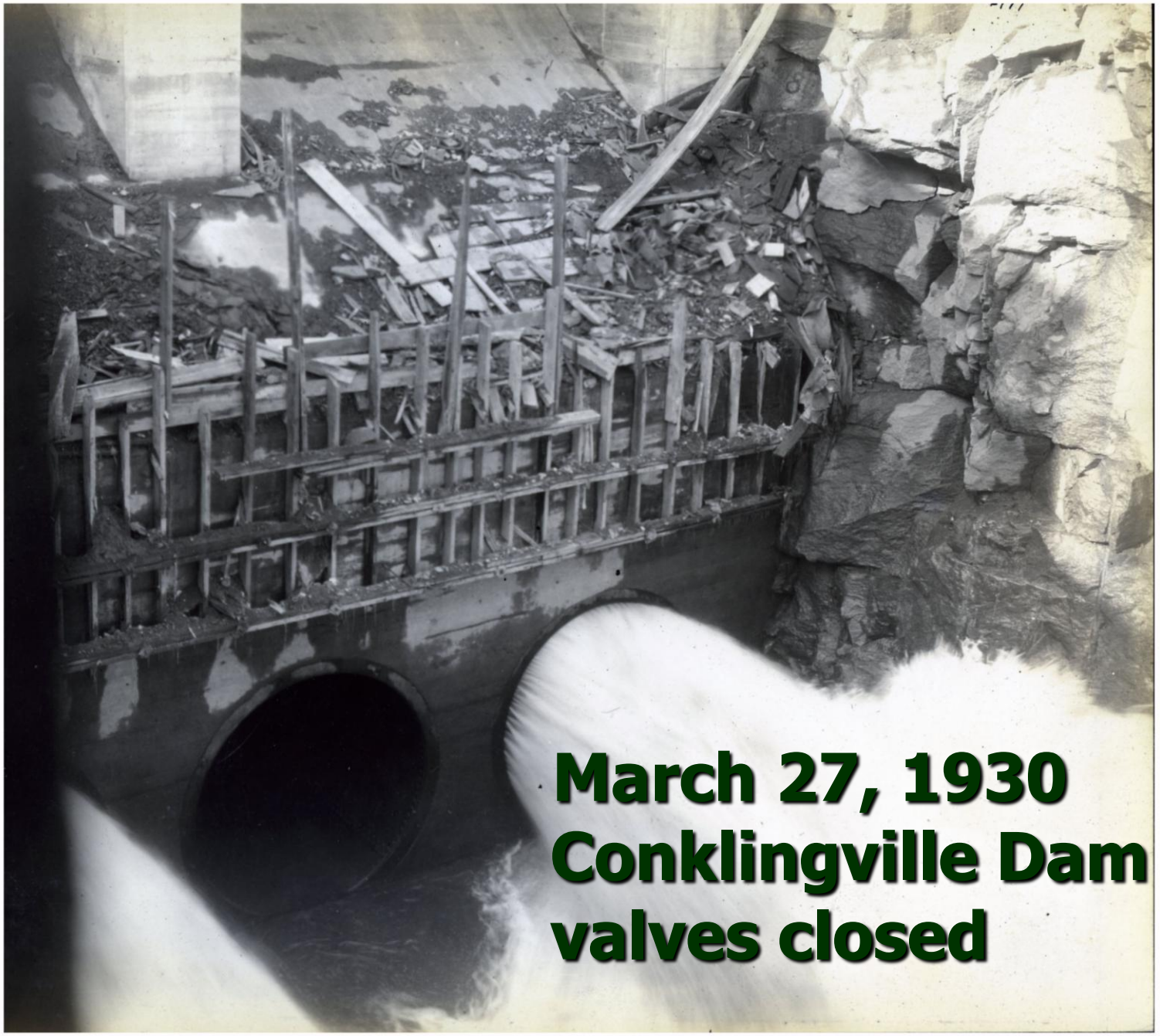
Upstream side of Power House. Top of forms, center unit, at El. 780.

- **March 27, 1930**
  Conklingville Dam valves closed
  Reservoir filling begun

- **Total cost of Reservoir: $12,000,000**

- **Cost to State, local taxpayers: $0**

GSL-No177 March 27, 1930

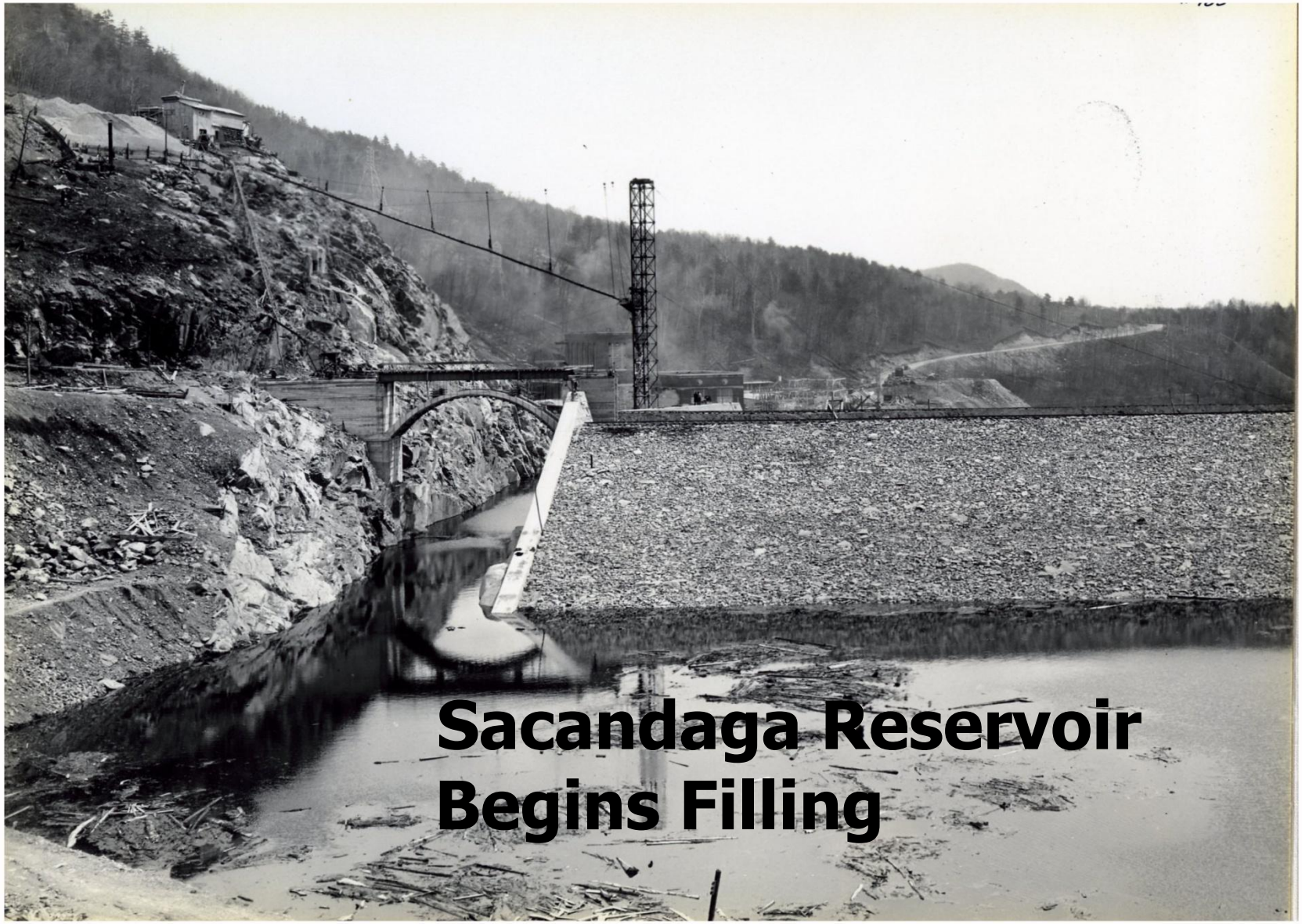


March 27, 1930
Conklingville Dam
valves closed

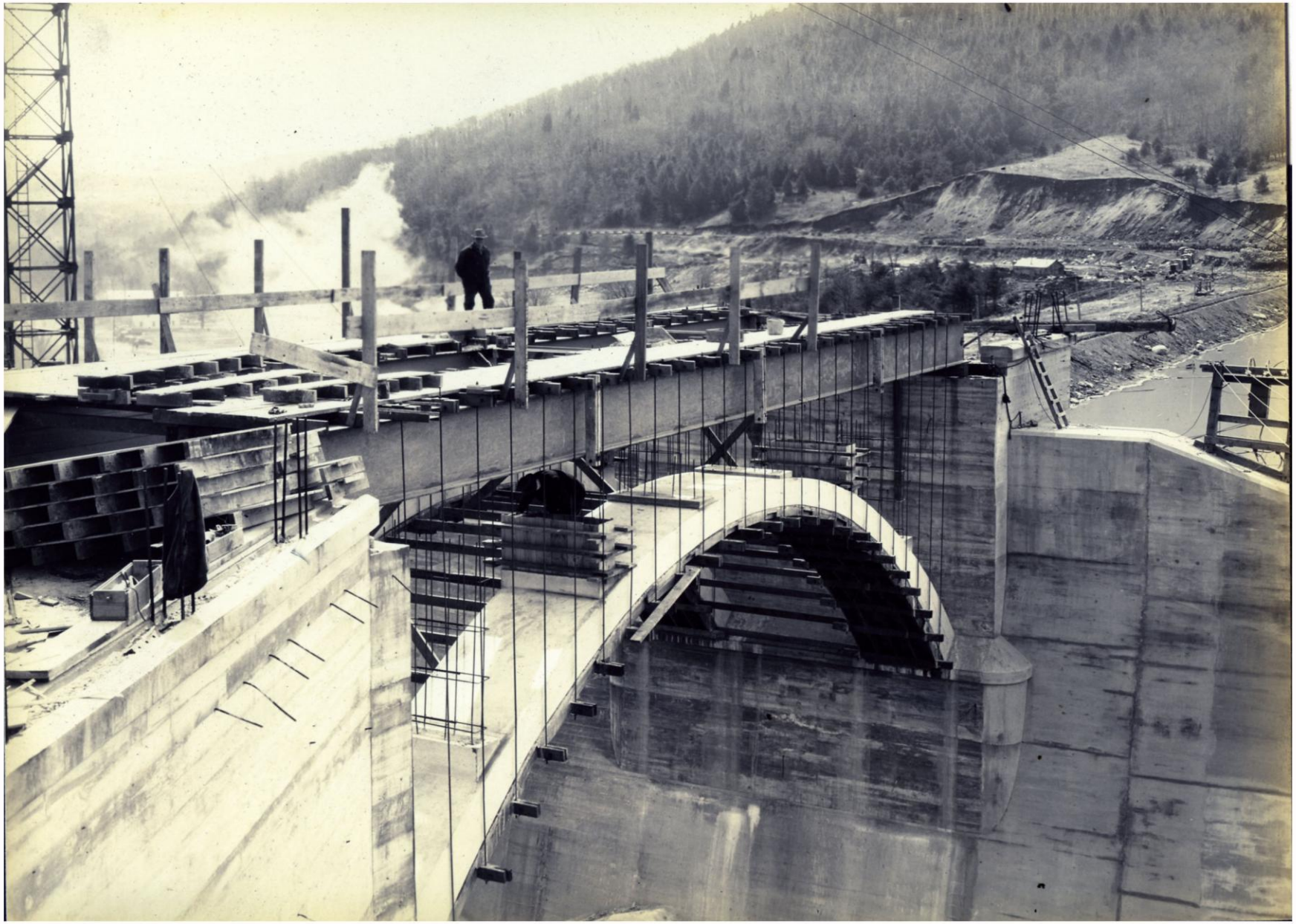
View showing outlet with one valve closed.

GSL-No185a

April 16, 1930

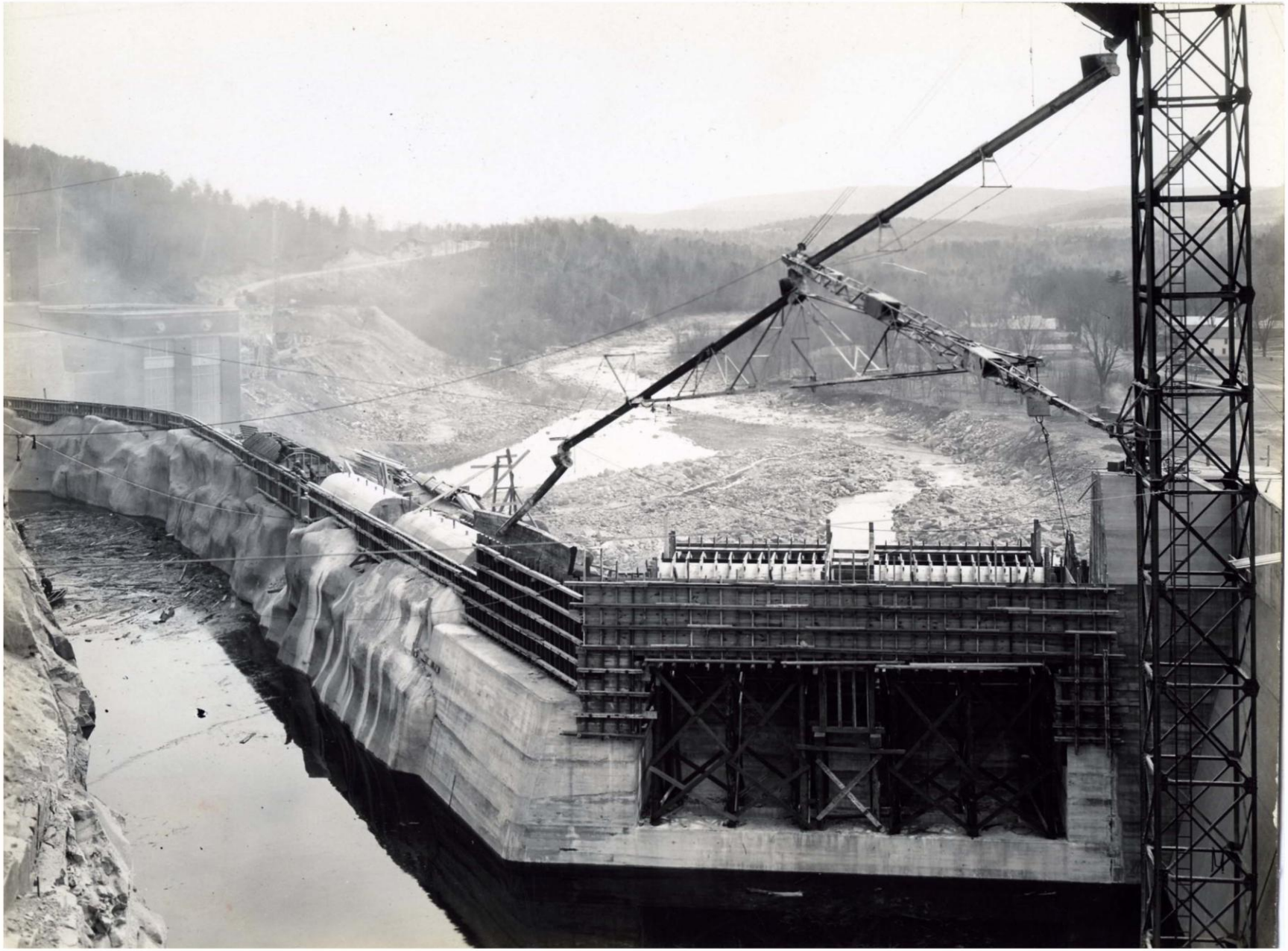


GSL-No191 April 16, 1930



View of arch rings and reinforcement for arch bridge, looking north.

GSL-Misc1008 April 16, 1930



Concrete placement at spillway and siphons.

GSL-No222 August 25, 1930

View of Fore Bay at Power House. Transformer and switching station in middle background.

Sacandaga Reservoir

- Total Capacity…37,800,000,000 Cubic Feet (283,000,000,000 Gallons)
- Water Surface at Elevation 771 (Spillway Crest)…26,700 Acres (41.7 Square Miles)

- Land Acquired…29,000 Acres (45.5 Square Miles)
- Length of reservoir…29 Miles
- Length of shoreline…125 Miles
- Maximum width of reservoir…28,000 Feet
- Maximum depth of reservoir…70 Feet
- Sacandaga Watershed…1,044 Sq. Miles

Conklingville Dam

- Elevation of top of Conklingville Dam…795.0 Feet above mean sea level
- Length of main dam…1,200 Feet
- Length of concrete spillway…400 Feet
- Maximum height of dam…115 Feet
- Width of dam at top…40 Feet

Form 66. 6-6-41—1000

BOARD OF HUDSON RIVER REGULATING DISTRICT

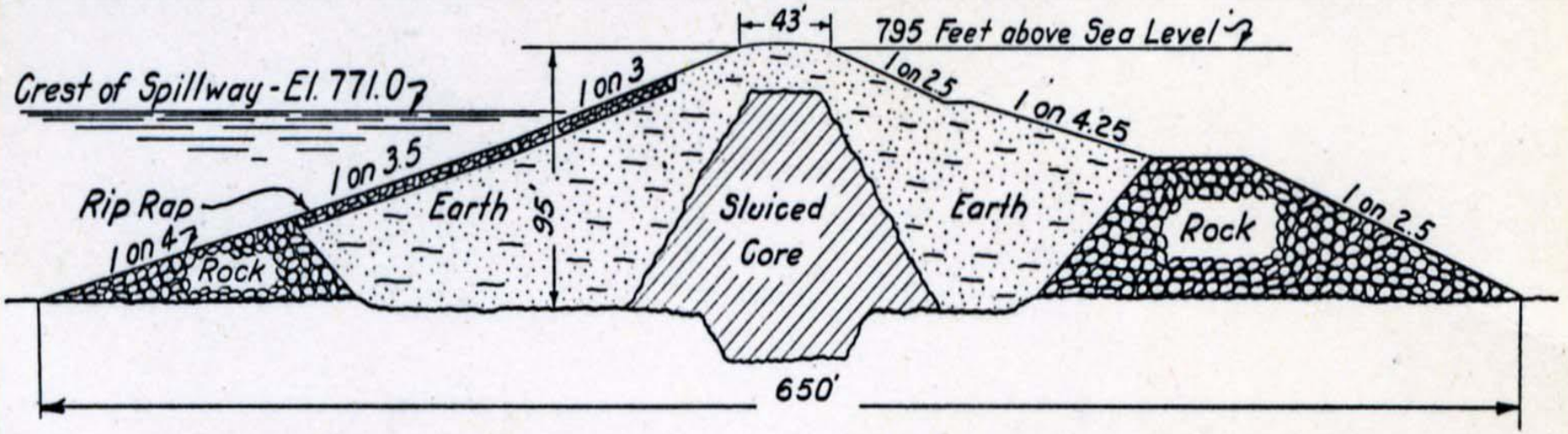
J. WARD RUSSELL, *President*

THOMAS MILLER JOHN M. MOONEY

Members of the Board

ROSCOE IRWIN, *Counsel* JOHN J. MURPHY, *Sec'y-Treas.*

EDWARD H. SARGENT, *Chief Engineer* ALBERT S. CRANE, *Cons. Engineer*



CONKLINGVILLE DAM

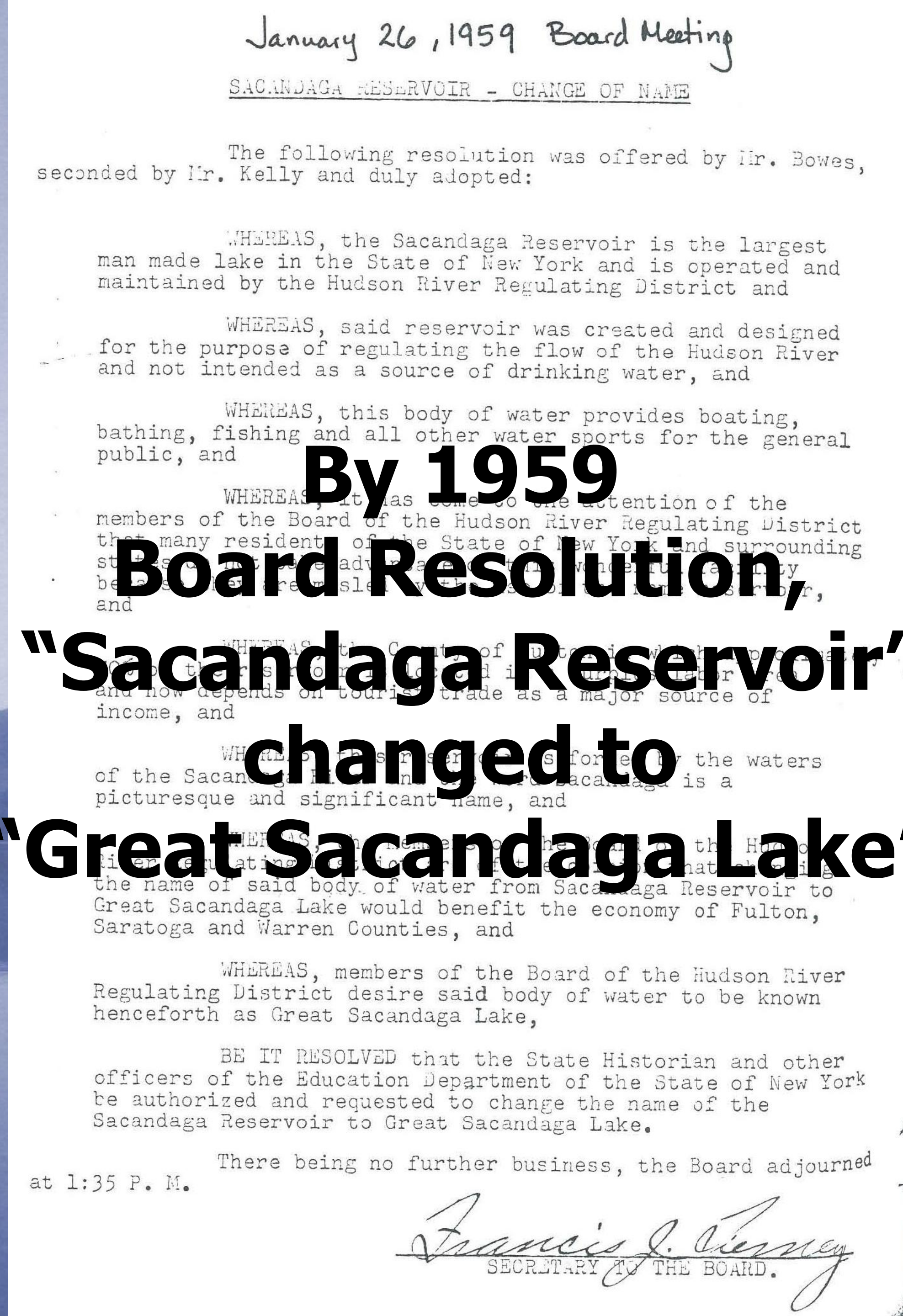
670,000 Cubic Yards of Earth Fill.
120,000 Cubic Yards of Rock Fill.
200,000 Cubic Yards of Rock Excavation.
15,000 Cubic Yards of Concrete
Length of Dam 1100 feet.
Spillway - 400' Weir and 2-8'x18' Siphons.

SACANDAGA RESERVOIR

Area - 27,000 Acres 42.3 Square Miles.
Capacity - 37.8 Billion Cubic Feet - 283 Bil. Gallons
Length 27 Miles.
Width - 3000 to 28000 Feet.
Length of Shore Line - 125 Miles.
Flow Line Elevation 771.0' above Sea Level

P.R.M. Del.

By 1959
Board Resolution, "Sacandaga Reservoir" changed to "Great Sacandaga Lake"


January 26, 1959 Board Meeting

SACANDAGA RESERVOIR - CHANGE OF NAME

The following resolution was offered by Mr. Bowes, seconded by Mr. Kelly and duly adopted:

WHEREAS, the Sacandaga Reservoir is the largest man made lake in the State of New York and is operated and maintained by the Hudson River Regulating District and

WHEREAS, said reservoir was created and designed for the purpose of regulating the flow of the Hudson River and not intended as a source of drinking water, and

WHEREAS, this body of water provides boating, bathing, fishing and all other water sports for the general public, and

WHEREAS, it has come to the attention of the members of the Board of the Hudson River Regulating District that many residents of the State of New York and surrounding [illegible], and

WHEREAS, [illegible] and now depends on tourist trade as a major source of income, and

WHEREAS, [illegible] the waters of the Sacandaga [illegible] Sacandaga is a picturesque and significant name, and

WHEREAS, [illegible] the name of said body of water from Sacandaga Reservoir to Great Sacandaga Lake would benefit the economy of Fulton, Saratoga and Warren Counties, and

WHEREAS, members of the Board of the Hudson River Regulating District desire said body of water to be known henceforth as Great Sacandaga Lake,

BE IT RESOLVED that the State Historian and other officers of the Education Department of the State of New York be authorized and requested to change the name of the Sacandaga Reservoir to Great Sacandaga Lake.

There being no further business, the Board adjourned at 1:35 P. M.

Francis J. Tierney
SECRETARY TO THE BOARD.

Regulating District Merger Is Signed

(Special to The Times)

Albany, April 25.—Governor Rockefeller has signed a bill which calls for consolidation of the Black river and Hudson river regulating boards ending the era of two separate regulating boards. The governor [illegible] a similar measure [illegible].

Approval of the measure now provides for creation of a new Black river-Hudson river regulating district to be operated by a combined five-man control board. Two members of the new board will represent the Black river district with three from the present Hudson river district.

In the consolidation move, the positions of five Democratic county chairmen will be abolished. They include two members of the Black river board—James J. Butler of Carthage, Jefferson county, and Louis C. [illegible], Lewis county chairman. The three-man board is headed by Bernard A. [illegible], Warren county.

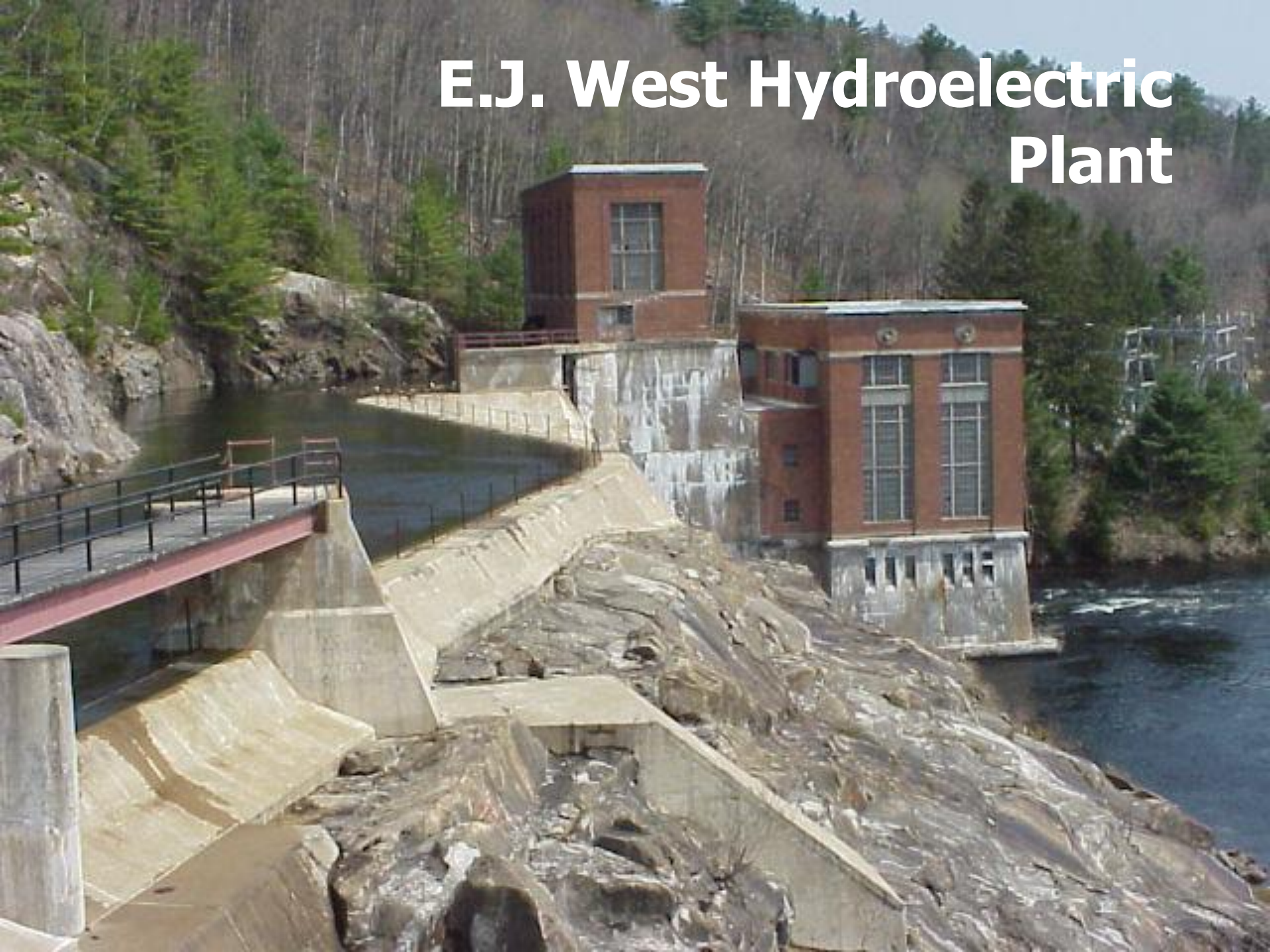
The [illegible] justification for the merger is economy, although only one position will be eliminated. Instead of a three-member board for each district, there will be a five-member board for the consolidated district.

1959

Hudson River-Black River Regulating District

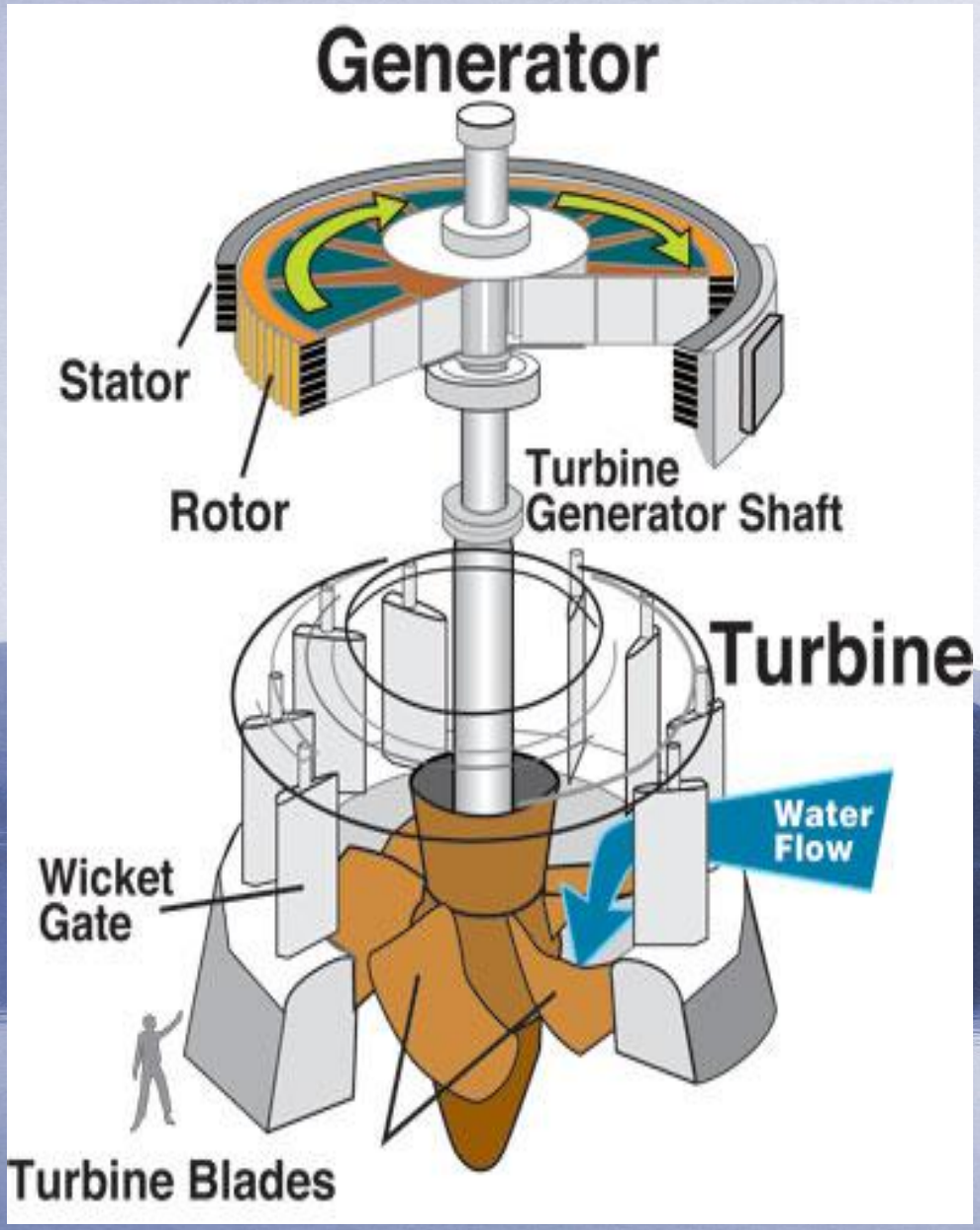
The Hudson River-Black River Regulating District is a New York State public benefit corporation established by the NYS Legislature in Article 15, Title 21 of the Environmental Conservation Law (ECL).


Conklingville Dam on
Great Sacandaga Lake today


E.J. West Hydroelectric Plant


Hydro Units at E.J. West

Water spins the turbine, which spins the generator, producing electricity.

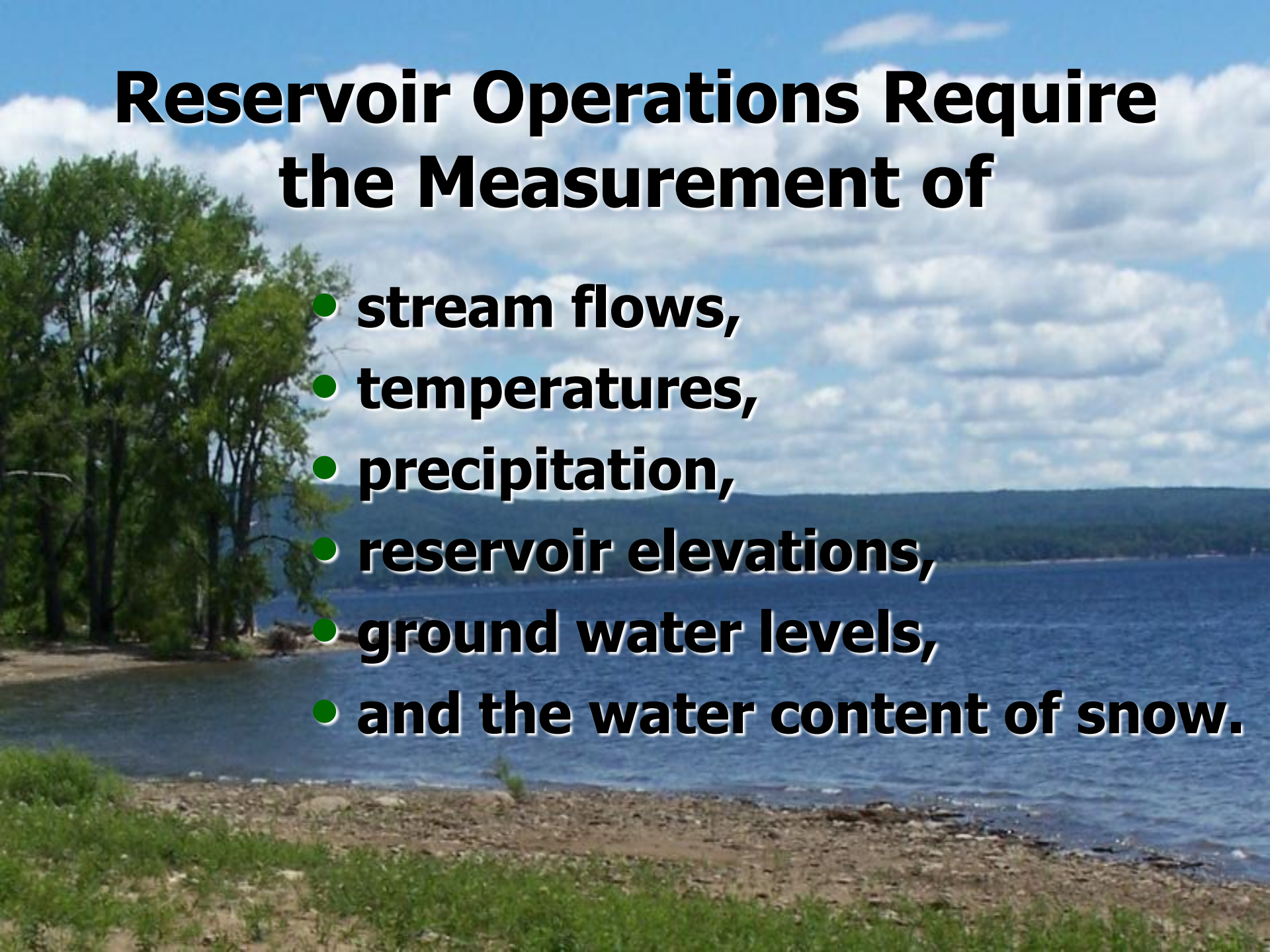



The Regulating District's hydroelectric beneficiaries can produce enough clean and renewable electricity for 450,000 homes.

To Fulfill the Mission

For flood protection, the Regulating District stores water in its reservoirs.

For flow augmentation, the Regulating District releases water from its reservoirs.



Reservoir Operations Require the Measurement of

- stream flows,
- temperatures,
- precipitation,
- reservoir elevations,
- ground water levels,
- and the water content of snow.

Measuring Precipitation

Measuring Stream Flows


Snow surveys


60
55
50


Shoreline Stabilization and
Erosion Control

2009
4,780 Tons of Stone,
repairing 6,741 linear feet (1 1/4 miles) of shoreline at 677 sites


HUDSON-BLACK RIVER
05.07.2009


The Regulating District inspects, maintains and repairs our dams and other facilities.


2006 Repair of Dow Valve


N86A


Indian Lake Dam
on Indian Lake


Indian Lake
Dam


Indian Lake
Capacity: 17.5 Billion Gallons
Surface Area: 6.96 Square Miles
Drains: 131 Square Miles


HISTORY OF THE
CURRENT FISCAL CRISIS AND
NEED FOR AN APPORTIONMENT

1991: Niagara Mohawk (NiMo) filed an application for license renewal with the Federal Energy Regulatory Commission (FERC) at the E.J. West hydroelectric project downstream from the Conklingville Dam on Great Sacandaga Lake

FERC considered the E. J. West plant and the Conklingville Dam to be a "Single Unit of Development" and required that both be licensed

1993: Regulating District becomes a co-applicant with Niagara Mohawk (NiMo)

Interested parties identified issues relevant to the FERC licensure process

2000: *Upper Hudson/Sacandaga River Offer of Settlement* **executed**

Offer of Settlement Section 8.4 recognizes the Regulating District's statutory right to implement changes to its benefit assessments through appropriate Regulating District procedures .

Signatories to this Offer of Settlement acknowledge the assessment of charges is done by the Regulating District Board per Article 15, Title 21 of the NYS Environmental Conservation Law (ECL).

2002: FERC issues original license to Regulating District for the dam and reservoir components (Conklingville Dam and Great Sacandaga Lake).

The E. J. West powerhouse and generating facilities are licensed to Erie Boulevard Hydropower, LP (currently Brookfield Renewable Power).

2007: A Hudson River Area hydroelectric project owner, Albany Engineering Corp, challenges FERC's authority to allow the Regulating District's assessments under NYS law.

The U.S. Court of Appeals grants Regulating District's Motion to Intervene in support of FERC's defense of FERC's Order

November 2008: U.S. Court of Appeals rules against FERC and remanded the complaint back to FERC for determination of an appropriate remedy.

February 2009: Regulating District files Motion with FERC to Establish Settlement Proceedings and Interim Headwater Benefits Charges

May 2009: FERC issues its Remand Order providing 180 days for parties to reach settlement acceptable to FERC

FERC issues an Order Appointing Settlement Judge and Scheduling Settlement Conference

July 2009: FERC Settlement Judge declares impasse

August 2009: FERC initiates "Headwater Benefits Determination" to establish headwater benefits charges due from the owners of downstream FERC-licensed hydropower projects

Federal Power Act (FPA) §10(f) allows licensees to be reimbursed for "interest, maintenance and depreciation", not operations including school and property taxes.

FERC "Headwater Benefits Determination" expected to result in a significant reduction in revenue from the FERC-licensed hydropower projects

Dealing with the Fiscal Crisis

November 2009: Regulating District Board retained Lemery Greisler as Bond Counsel to assist in the issuance of a Tax Anticipation Note (TAN)

The Board directed Regulating District staff to complete an apportionment for the Hudson River Area and develop an apportionment schedule for the purpose of generating revenue

The Regulating District's mission requires the continued operation and maintenance of the high hazard and moderate hazard dams under its authority

The lack of incoming revenue jeopardizes the Regulating District's ability to fulfill that mission

In addition to the Apportionment, the Regulating District is working to secure funds to ensure continued operation

December 2009: Regulating District Board Engaged Fiscal Advisors & Marketing, Inc. in Connection to the issuance of a Tax Anticipation Note (TAN)

January 2010: Regulating District Board passed a Resolution to Approve an Apportionment for the Hudson River Area

January 2010: Regulating District Board passed a Resolution to Adopt Apportionment Grievance Hearing Procedures through Emergency Rulemaking

Tuesday, March 30, 2010: Regulating District Board to conduct a Hudson River Area Apportionment Grievance Hearing at Saratoga Springs Holiday Inn 10:00 AM

APPORTIONMENT METHODOLOGY

The Apportionment identifies those areas of the Regulating District's Petition Area which receive a flood benefit.

The Regulating District's dam and reservoir operations protect vast areas from routine flooding.

Flood protection benefits are provided to properties in the floodplain and to the greater community which avoids loss of public infrastructure.

Flood protection benefits not only those directly impacted, but also those who rely upon the goods, services and infrastructure in those areas.

The 100-year flood is widely considered the benchmark by which flood events are measured.

Albany, Rensselaer, Saratoga, Warren and Washington Counties derive flood protection benefits.

Staff used in-house generated flood inundation data, NYS Office of Real Property data and U. S. Geological Survey topographic maps to identify flood-protected properties.

Calculation of an apportionment involved three stages of analysis:

1. Hydraulic Modeling of the Hudson River for the "without GSL" 100-year flood,

2. Generation of GIS map layers and an inventory of properties within the floodplain,

3. Summation of property values and a calculation of the relative proportion of benefit based on the total value of properties within the floodplain in each county to the total value of properties within the floodplain in all five counties.

The *HEC-RAS* generated floodplain water surface data was exported to *ArcGIS* where it was combined with topographic mapping, and real property tax maps to develop inundation mapping.

The combined GIS map layers were used to develop an inventory of properties and property values, by town, city and village, which were located within the floodplain.

Property value data was exported from *ArcGIS* to an Excel spreadsheet, sorted by county, and adjusted to "market value" (full value), as necessary, through application of equalization rates.

The Apportionment will be finalized after a Grievance Hearing and approval by the NYS Department of Environmental Conservation (DEC).

Assessments will be based on the Apportionment.

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Hudson River-Black River Regulating District - Windows Internet Explorer

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Hudson River-Black River Regulating District

Page Tools

NEW YORK STATE

David A. Paterson, Governor

HUDSON RIVER-BLACK RIVER REGULATING DISTRICT

The Hudson River-Black River Regulating District is a New York State public benefit corporation that protects public health and safety by regulating the flow of waters in two great neighboring watersheds in the Adirondack Region: the Upper Hudson River and the Black River.

Established by the New York State Legislature (Article 15 Title 21 of the Environmental Conservation Law), the Regulating District works year-round to reduce flooding caused by excess runoff and augment river flow when river flows are low.

- Upper Hudson River Watershed
- Black River Watershed
- Gauge Data and Reservoir Releases
- GSL Permit System
- News & Bulletins
- Board Meetings
- Forms and Applications
- Corporate Information
- Reports, Policies and Procedures

Conklingville Dam on Great Sacandaga Lake

What is the Regulating District's mission?

What does the Hudson River-Black River Regulating District do?

Why did New York State form the Regulating District?

How did the Regulating District evolve?

How does the Regulating District operate the reservoirs?

How is the Regulating District funded?

Why is the Regulating District vital for New York State?

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Hudson River-Black River Regulating District

NEW YORK STATE

David A. Paterson, Governor

HUDSON RIVER-BLACK RIVER REGULATING DISTRICT

The Hudson River-Black River Regulating District is a New York State public benefit corporation that protects public health and safety by regulating the flow of waters in two great neighboring watersheds in the Adirondack Region: the Upper Hudson River and the Black River.

Established by the New York State Legislature (Article 15 Title 21 of the Environmental Conservation Law), the Regulating District works year-round to reduce flooding caused by excess runoff and augment river flow when river flows are low.

- Upper Hudson River Watershed
- Black River Watershed
- Gauge Data and Reservoir Releases
- GSL Permit System
- News & Bulletins
- Board Meetings
- Forms and Applications
- Corporate Information
- Reports, Policies and Procedures

Conklingville Dam on Great Sacandaga Lake

What is the Regulating District's mission?

What does the Hudson River-Black River Regulating District do?

Why did New York State form the Regulating District?

How did the Regulating District evolve?

How does the Regulating District operate the reservoirs?

How is the Regulating District funded?

Why is the Regulating District vital for New York State?

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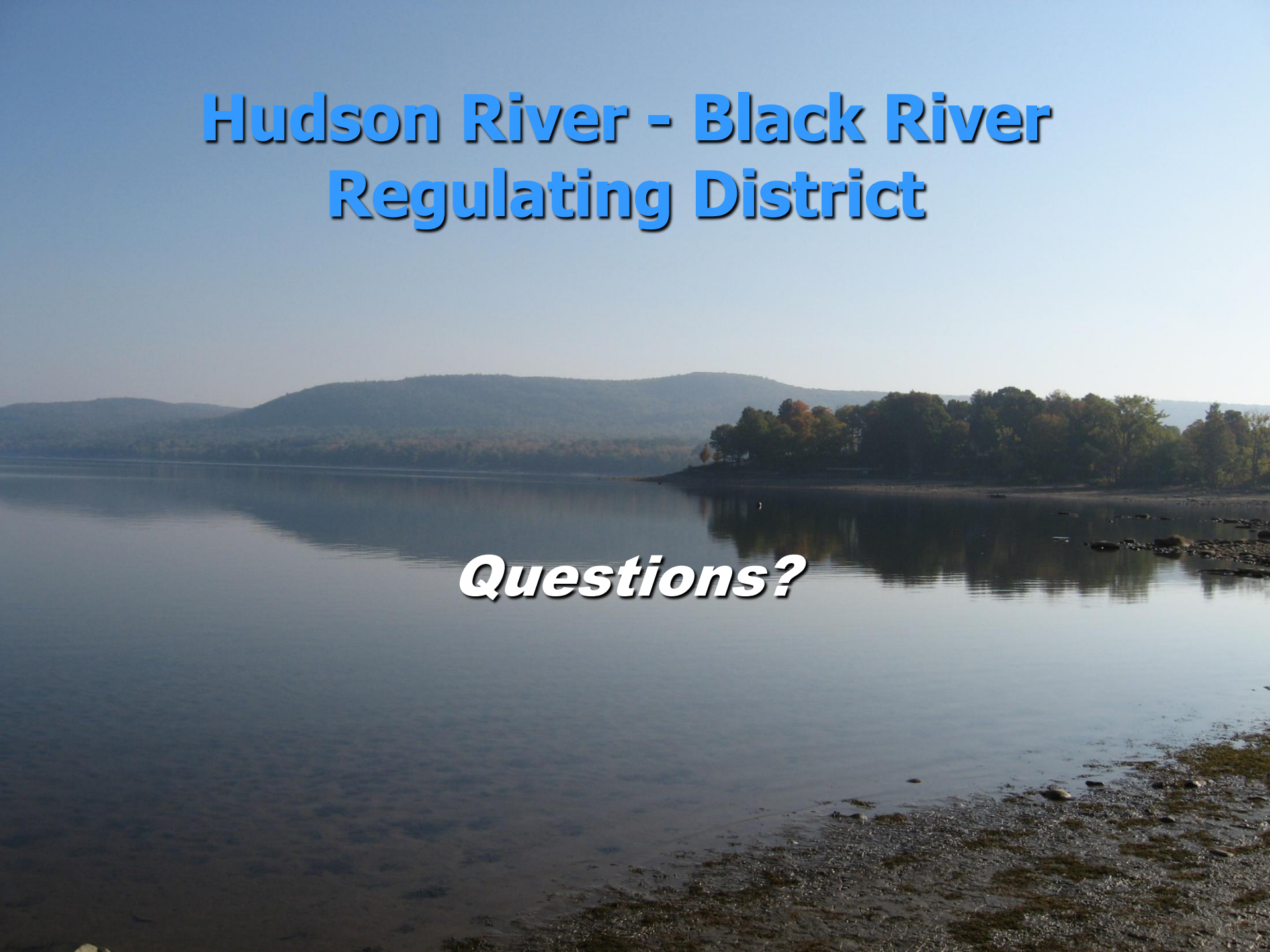
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Questions?


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Thank you!

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- *The Sacandaga Story, A Valley of Yesteryear* by Larry Hart
- Albany Institute of History & Art
- Brookfield Renewable Power
- (Google Live Maps) http://maps.live.com
- http://en.wikipedia.org/wiki/File:Water_turbine.jpg


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March 30, 2010