

Town of Blenheim Long-Term Community Recovery Committee (BLTCRC)
Comments regarding the New York Power Authority (NYPA) Filing of Revised
Study Plan for the Relicensing of the Blenheim-Gilboa Pumped Storage Project,
FERC Project Number: 2685-026

A: Project Area of Potential Effects (APE)

The BLTCRC finds all revised Proposed Study Plans (PSP's) submitted by NYPA to be far too restrictive in geographic scope. NYPA's revised PSP's limit most, if not all study activities, to a Project Area of Potential Effects (APE). The APE as defined by NYPA consistently limit the APE to the geographic borders of the actual BG Pumped Storage Project site.

Such a definition by NYPA seemingly defies the precise title of the APE (Area of Potential Effects). It is the opinion of the BLTCRC the APE should include areas of "potential" effect, as defined.

Potential effects of the BG Facility extend far beyond the actual site of the BG Facility. These effects include flooding along the course Schoharie Creek and the associated drainage basin the Schoharie Creek serves.

The Historic Structures survey should consider historic sites along and in close proximity to the Schoharie Creek which could be negatively affected by upstream operations of the BG Facility including the impoundment / damming of the Schoharie Creek.

As noted above, the Archeological Survey should consider sites along and in close proximity to the Schoharie Creek which could potentially be affected by upstream operations of the BG Facility.

As noted above, and further to the potential Recreational Opportunities that may exist beyond the BG Facility site, consideration should be given to activities that could be potentially enhanced or negatively impacted by BG Facility upstream operations. Such potential activities include, but are not limited to, canoeing, kayaking, fishing, swimming, wildlife viewing, hunting, etc., and a host of other community and tourism related activities.

Obviously, BG Facility operations have a very real impact on downstream flooding and of course, the APE must extend beyond the project boundaries. Accordingly, the BG Facility operations have a very definitive impact beyond the APE in terms of the Socio-Economic Impact as well, including not just taxing implications for the host-community Towns of Blenheim and Gilboa, but for the entire County of Schoharie.

Therefore, the BLTCRC urges and requests the APE be realistically expanded to include all the area of "potential" impacts of the BG Facility operations beyond the very restrictive and non-inclusive, APE. The potential impacts must, by definition, be explored even if only the "potential" exists for significant "effect". Such an expansion of the APE would, at a minimum,

include the geographic flood plain(s) of the Schoharie Creek basin through Schoharie County and the potential effects on those towns located in and near the flood plain, County-wide.

1. Revised Study Plan Comments:

A. Effect(s) of Project Operations on Downstream Flooding Study

The BLTCRC recommends any such Downstream Flooding Study focus on the ability of the BG Facility to mitigate future flooding events. The BLTCRC requests FERC to include any study-identified mitigation capabilities be included in the NYPA Re-license. For far too long it has appeared that NYPA utilizes FERC limitations in the current license as a flood control facility to vacate their responsibility to act to mitigate downstream flooding in high water / storm events.

NYPA itself described how it assisted in mitigating the effects of Hurricane Irene in their own report (copy included) provided at a public information session shortly after the catastrophic flooding of Hurricane Irene. As evidenced by NYPA, the BG Facility possesses the ability to mitigate flooding, at least to some degree, and should endeavor to do so at every opportunity in order to provide an additional measure of safety to downstream residents of Blenheim and beyond. It should be noted the BG Facility was specifically constructed in such a location as to potentially endanger the residents of Blenheim and beyond by the construction of a high elevation reservoir and dam, essentially placing Blenheim and Schoharie County in harm's way should there ever be an upper reservoir earthen dam breach / catastrophic failure / overtopping event (as was nearly the case during Hurricane Irene).

Further, the BLTCRC requests that FERC allow for input, approval and agreement with the Schoharie County NYPA Relicensing Committee as to which qualified firms(s) NYPA proposes to utilize to conduct such studies. It is paramount that unbiased and professionally qualified firms be used for this critical study to ensure the life, safety and property of the downstream residents.

B. Socioeconomic Study and the Effects of the Tax-Exempt Status of the Facility on the neighboring communities

The BLTCRC strongly objects to any methodology in any study that does not include a new and professional assessment of the current value of the BG facility and its associated and connected infrastructure / service portfolio, including the facilities "cold start" value to the City of New York.

NYPA had previously proposed a study that valued / assessed the facility as "vacant land". The BLTCRC requests that the facility simply be evaluated for what exists today and for the past 45 years; a commercial / industrial electrical power generating facility. The site, acquired at least in

part through eminent domain and the threat thereof, certainly exists and certainly is valued at hundreds of millions of dollars. The land at the site simply is not, "vacant".

The impacts on the small, disadvantaged communities from a tax-exempt standpoint are obvious, numerous and economically crippling. If the BG Facility was operated by any other non-governmental or pseudo-governmental entity, the tax revenue provide to the host communities of Blenheim and Gilboa, as well as Schoharie County would be very significant and tantamount to an economic game-changer. The positive impact and overall improvement of life in the host communities would be significant, to say the least. Further, such tax revenues would allow for the host communities, particularly the Town of Blenheim, to act upon and implement improvements to infrastructure and basic residential services as well as to enhance tourism and other business opportunities. Such enhancements are identified, in part, in the Blenheim FEMA ESF-14 Long-Term Recovery Plan, the Blenheim Comprehensive Plan and through projects identified through the recently completed New York Rising Program.

The potential reduction in the residential tax burden should NYPA be taxed as would any private firm operating the BG Facility would assist residents, primarily of low-income, in elevating their standard of living while having NYPA shoulder their fair share of such expenses at the local level. It is unconscionable that a facility such as the BG Facility is allowed to operate with no tax liability nor any meaningful contribution to local government in terms of community infrastructure and support. Absent any such tax-equivalent remuneration, the BLTCRC recommends operation of the facility be transferred to a private energy firm qualified to do so and pay local and state taxes as such.

To reiterate, value and assess the BG Facility for precisely what it is, not what it is not (vacant land) and put in place a payment in lieu of taxes / equivalent compensatory arrangement for the local host communities and County governments, at very least. Any such compensatory payments should also include consideration for the past forty-five (45) years of little or no compensation for the host communities or Schoharie County. The profound negative impacts of the absence of any such compensation to the host communities for decades is clear if one simply visits the host community of the Town of Blenheim.

It is appropriate to underscore the reality that the Town of Blenheim nor the Town of Gilboa sought to have the BG Facility sited within their town borders. Essentially the facility was forced upon the host communities since the site was ideal for the intended purposes of NYPA. Eminent domain was utilized to secure the site and associated property for NYPA facility infrastructure.

Included in the NYPA BG facility infrastructure was the construction of an upper reservoir and earthen dam sited upstream and above the Town of Blenheim. The threat this large impoundment of water created rivals only the further upstream Gilboa dam which serves as a potable water reservoir for the City of New York. Similarly the BG Facility serves the City of New York with inexpensive power when called upon as well as providing "cold start" capacity for the grid should there be a grid failure. This capability makes the BG Facility somewhat unique when

compared to other hydro projects. More conventional hydro projects do not pose as great a threat to life and property as does the BG Facility with the high elevation reservoir. While the metropolitan areas such as New York City benefit by the luxury of having electrical power available and guaranteed, the host communities of Blenheim and Gilboa are largely unrewarded and uncompensated for their lands and the exposure to threat to life and property.

Thus, compensation to the host and neighboring communities should be calculated and considered in not only the direct loss of revenue through the Authority's tax-exempt status, but also in consideration of the socio and cultural effects of having a proverbial loaded gun pointed at the town in the form of an earthen, high elevation dam in close proximity to the Town of Blenheim. In such close proximity in fact there would be little if any hope of effective evacuation should a dam failure occur. The massive loss of property and life would be enormous and almost certain.

In consideration of the above, payments in lieu of taxes and other forms of compensatory payment(s) should be made to the threatened and burdened host communities. While such payments may not remove the risk, it would at very least provide a measure of relief, economically, to a very economically challenged and depressed region (Northern Appalachia).

Make no mistake, such compensatory payments are not in exchange or in substitution of safety, but instead, compensation for living with the omnipresent threat on a daily basis. It is far past the time for the New York Power Authority to conduct the appropriate and independent studies. In that regard the local communities should have a say in the election / approval process of considered, subject matter experts and consultants. It is important to ensure the study and research process is as unbiased as possible. The notion of allowing NYPA unfettered latitude in the selection of engineering and consultant firms seems unfair and potentially biased. Therefore the BLTCRC request that the host and local communities sign off on NYPA's selected study consultants in an effort to guarantee, as much as is reasonable, a fair and impartial study and analysis of the study issues.

In closing, it is the sincere wish of the BLTCRC that one day in the near future NYPA will embrace its assumed role in Blenheim / Gilboa and the duty borne responsibility that is inseparable with the siting and operation of such a large and potentially life-threatening energy production facility in its chosen geographic location in an economically depressed region of New York. The residents of Blenheim, Gilboa and the surrounding local communities and County of Schoharie deserve and are owed nothing less.

Respectfully submitted on behalf of the BLTCRC, February 3, 2015.

Don Airey

Chair – Town of Blenheim Long-Term Community Recovery Committee (BLTCRC)

Chair – Town of Blenheim Comprehensive Plan Committee

Blenheim-Gilboa Pumped Storage Power Project Operations

Features, Functions, Storm Response

January 19, 2012

Lynn H. Hait

Regional Manager, Central NY

Overview

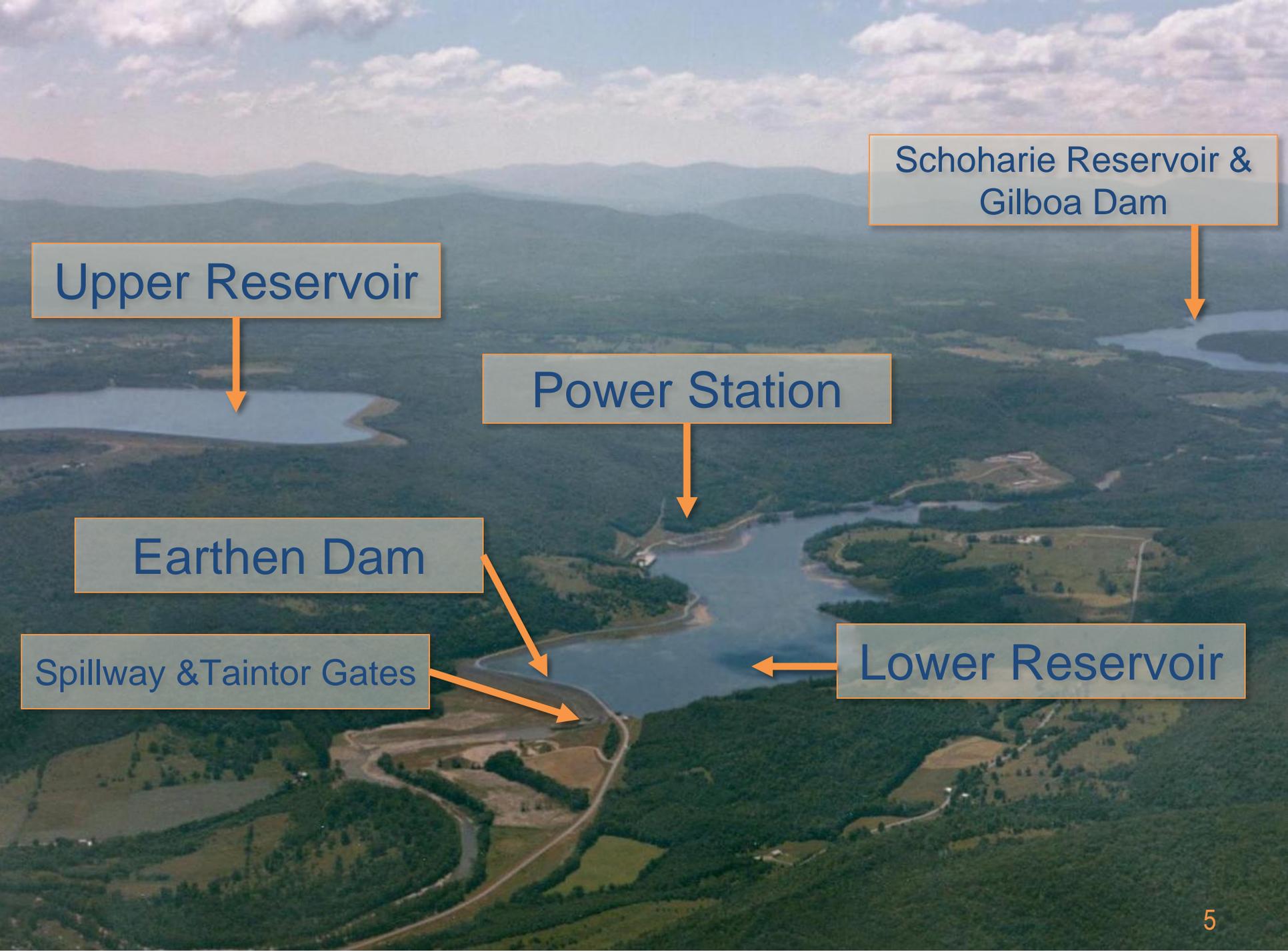
- Welcome
- Presentation Purpose
- Blenheim-Gilboa Power Project Description
- Water Flows and Flood Forecasting
- Tropical Storm Irene Timeline & NYPA response
- Questions from the Audience

Presentation Purpose

- Explain normal and emergency operations of this NYPA power plant
- Clarify misinformation:
 - NYPA was not generating power during the storm
 - Plant not designed for flood mitigation
- Review timeline of Tropical Storm Irene with NYPA actions and outcomes

Blenheim-Gilboa Pumped Storage Power Project





Schoharie Reservoir & Gilboa Dam

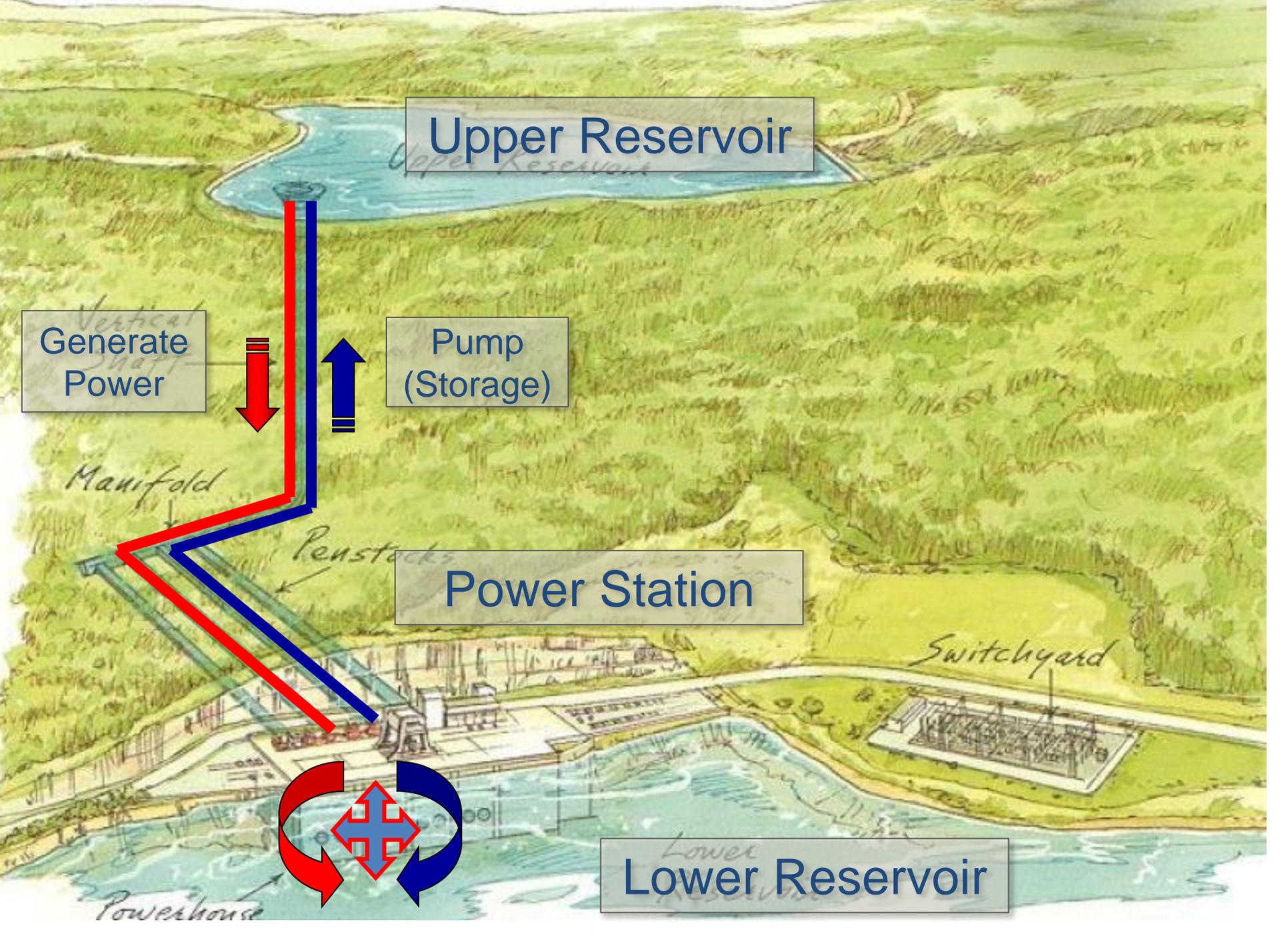
Upper Reservoir

Power Station

Earthen Dam

Spillway & Taintor Gates

Lower Reservoir



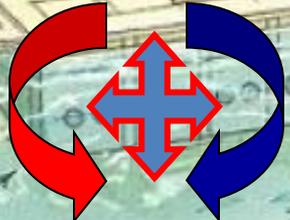
Upper Reservoir

Generate Power

Pump (Storage)

Power Station

Lower Reservoir



Manifold

Penstocks

Switchyard

Powerhouse

Closed System: 40 ft. Operating Range

Lower Reservoir
At high level (pool)



Lower Reservoir
At low level (pool)



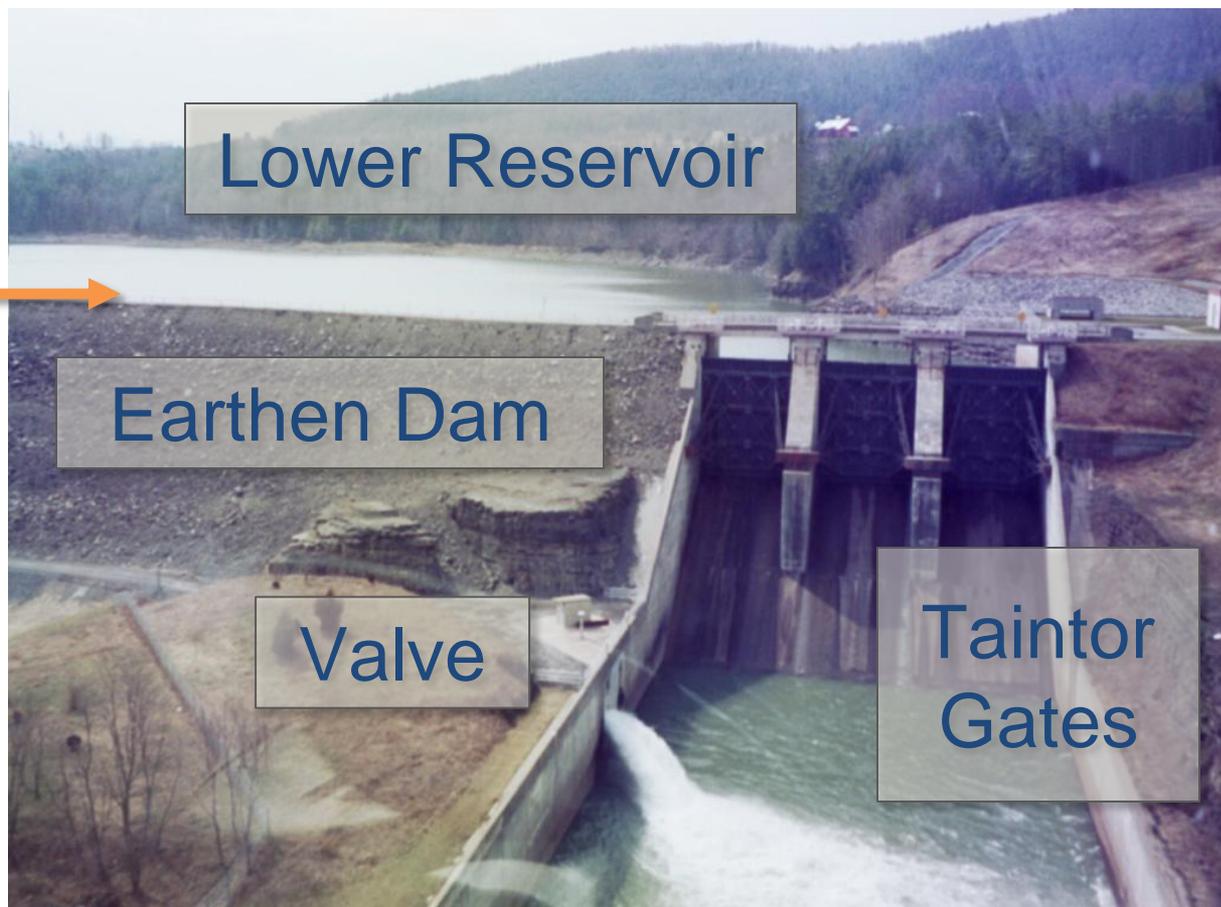
Earthen Dam Design

Blenheim-Gilboa Project

- Designed to hold back water with full lower reservoir, elevation of 900 ft.
- Not designed for water to overtop dam. Dam's nominal elevation was 910 ft.
- Maximum outflow design for spillway was 165,000 cubic feet per second (cfs) at 908.5 ft.
- Taintor Gates used to regulate outflows following design of project

Blenheim-Gilboa Project Spillway

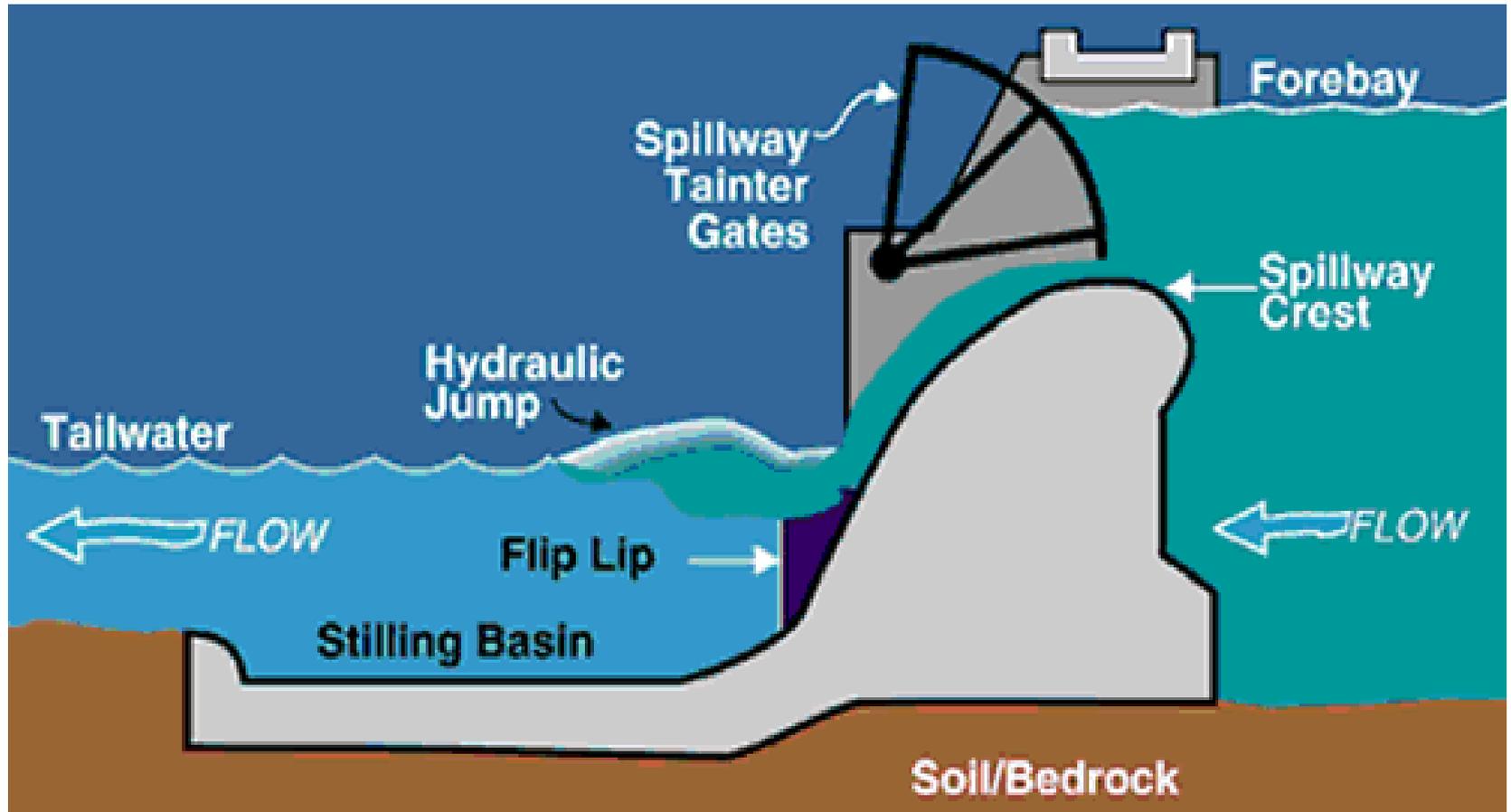
910 ft.
over top



Spillway Operation

- Orifice Flow – gates submerged
 - Normal mode of operation
 - Allows generation operation while controlling flow
 - Slightly lower flows than free discharge
- Free discharge – gates out of water (“natural” operation)
 - Allows max discharge at a given reservoir elevation
 - Generation must be curtailed
 - Assures that when the reservoir elevation is constant or rising that discharge will be slightly lower than inflows

Taintor Gate Operations



Taintor Gate Operations



- Gates open at 1 ft per minute
 - Requires 42 minutes to fully open, each gate
- Redundant gate motor operators and gearboxes
- Redundant power supplies to operate gates

Water Flow and Flood Forecasting

- Measured in cubic feet per second (cfs)
- National Weather Service is the lead
- Models are river-specific using:
 - Precipitation forecast
 - Actual precipitation amounts from radar, observers, collection equipment, and others
 - Actual flows from United States Geological Survey (USGS) stations and gages
- All data is used to come up with an estimated flow in the creek, many variables can make actual flows deviate

Real-Time Flood Forecasting During Tropical Storm Irene

- Contact with National Weather Service and others
- Projected flows changed from 11,000 cfs to 78,000 cfs in a few hours.
- Flash flooding apparent on local roads, culverts and ditches
- Heavy rains continue
- Accuracy and condition of gages

Hurricane / Tropical Storm Irene Projection as of August 24, 2011

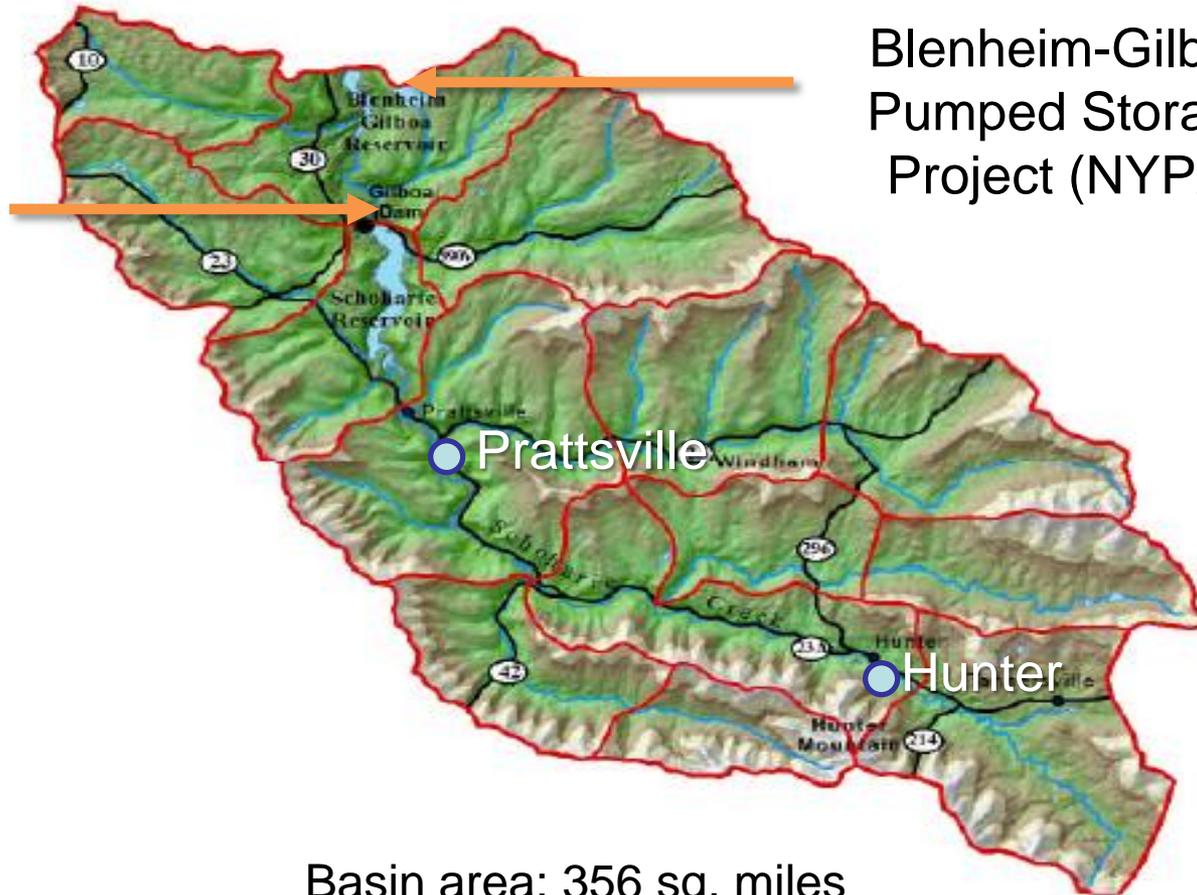


Blenheim Gilboa Drainage Basin

North



Gilboa Dam
(NYC DEP)



Blenheim-Gilboa
Pumped Storage
Project (NYPA)

Basin area: 356 sq. miles

Operations During the Storm

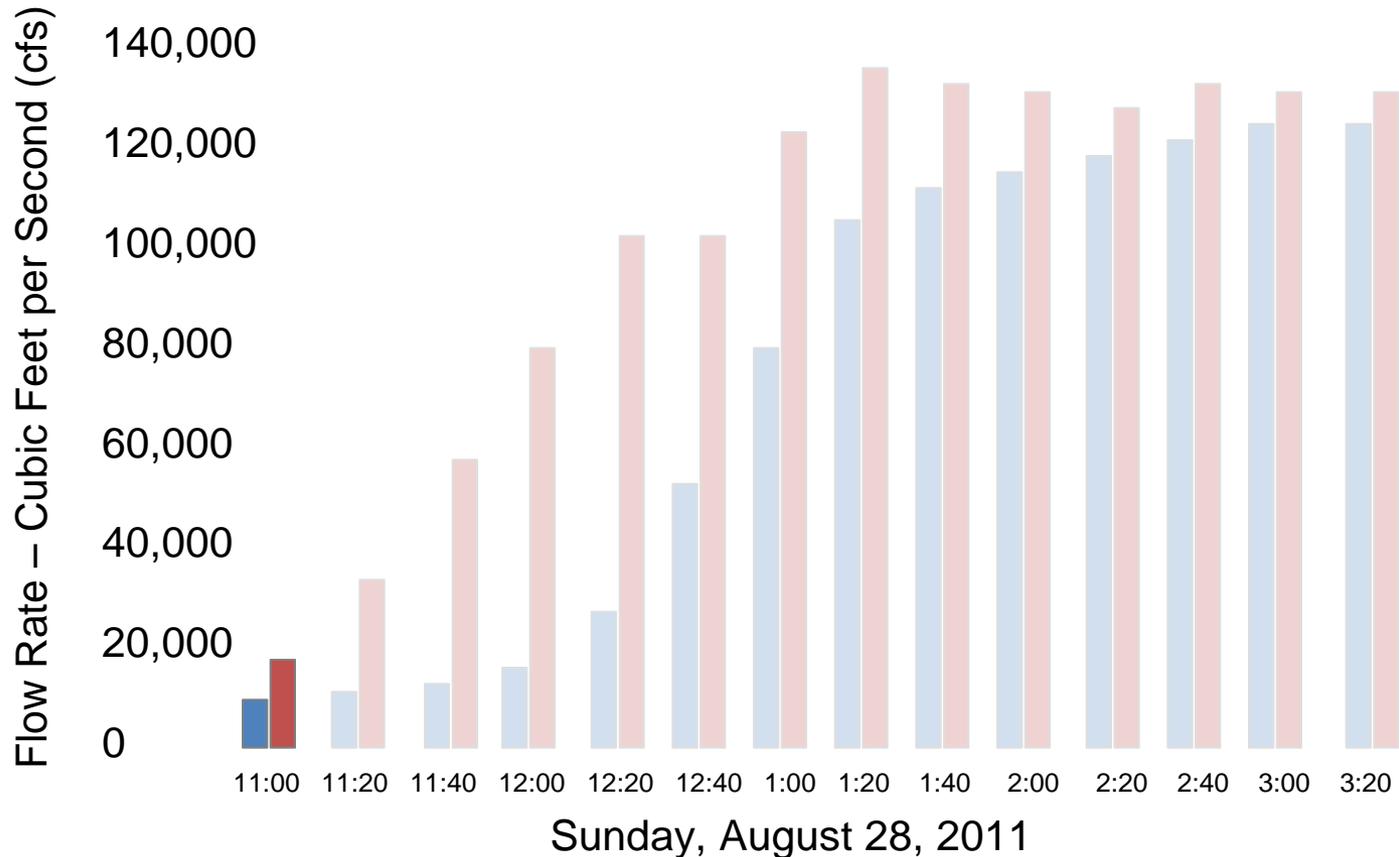
- Follow Emergency Action Plan (EAP) per training and procedures
- Tropical Storm Irene = 500 year flood event
- Manage record water inflows:
 - Focus on preventing over top of the earthen dam
 - Reduce outflow as much as possible within operating limits
- Manage operational challenges, requiring redundant power supply for gate operation
- Concern for employee, family and community safety

Emergency Action Plan (EAP)

- Annual and periodic training and drills conducted
- Required, approved and monitored by Federal Energy Regulatory Commission
 - FERC attends drills
- Type A: Failure is imminent or has occurred
- Type B: A potentially hazardous situation is developing

Tropical Storm Irene Response

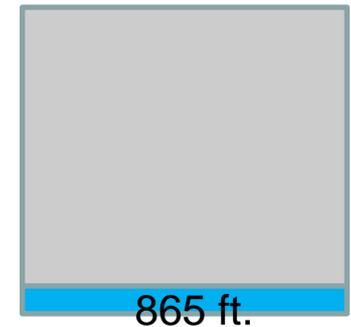
Sunday, 11:00 a.m.



NYPA Lower Reservoir

910 ft. overtop

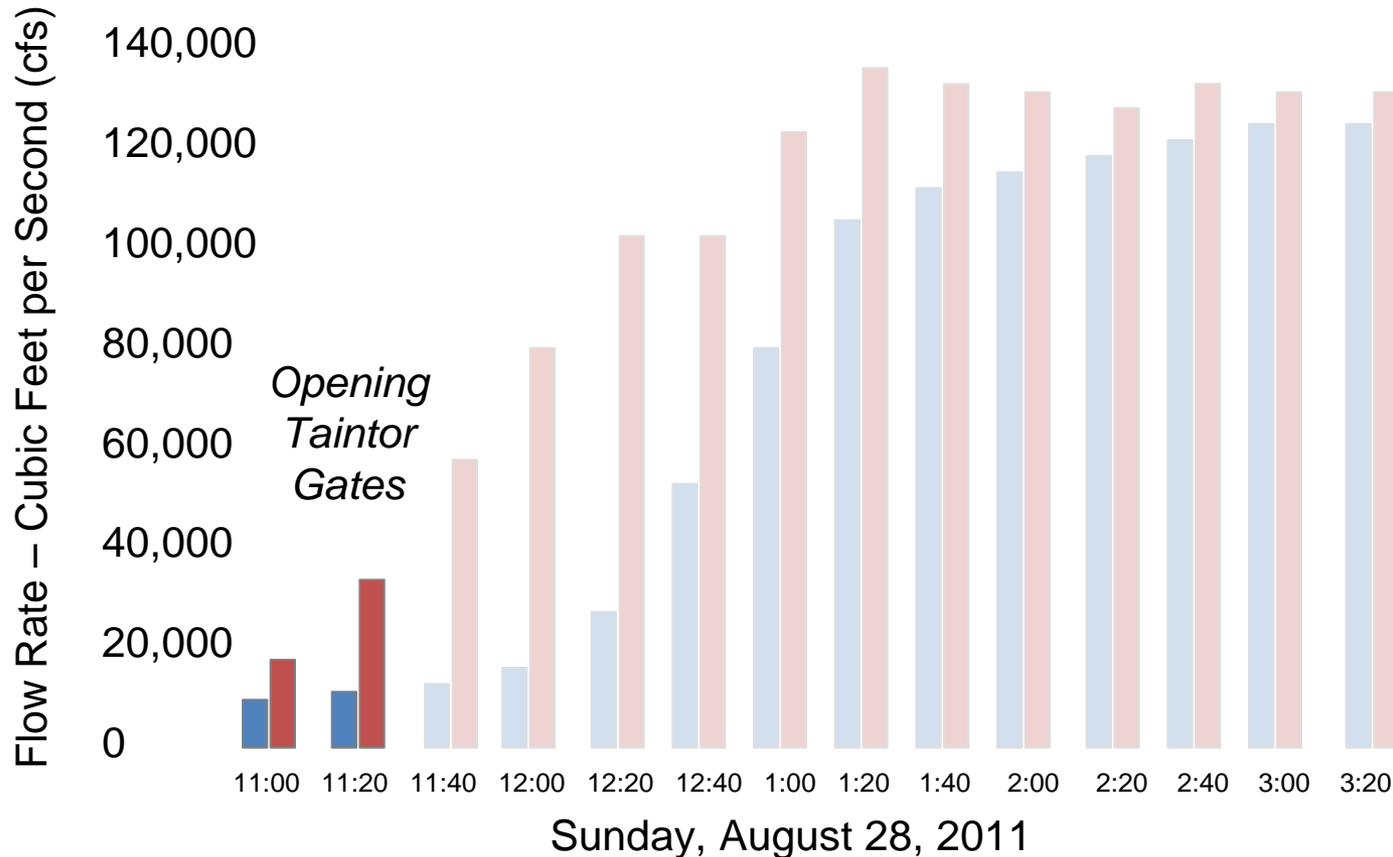
900 ft. full



Outflows 
Inflows 

Tropical Storm Irene Response

Sunday, 11:20 a.m.

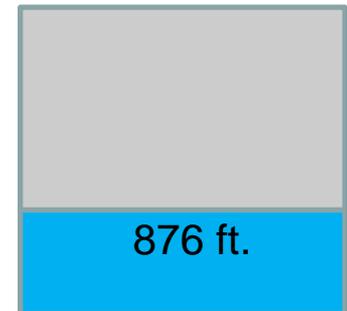


Outflows 
Inflows 

NYPA Lower Reservoir

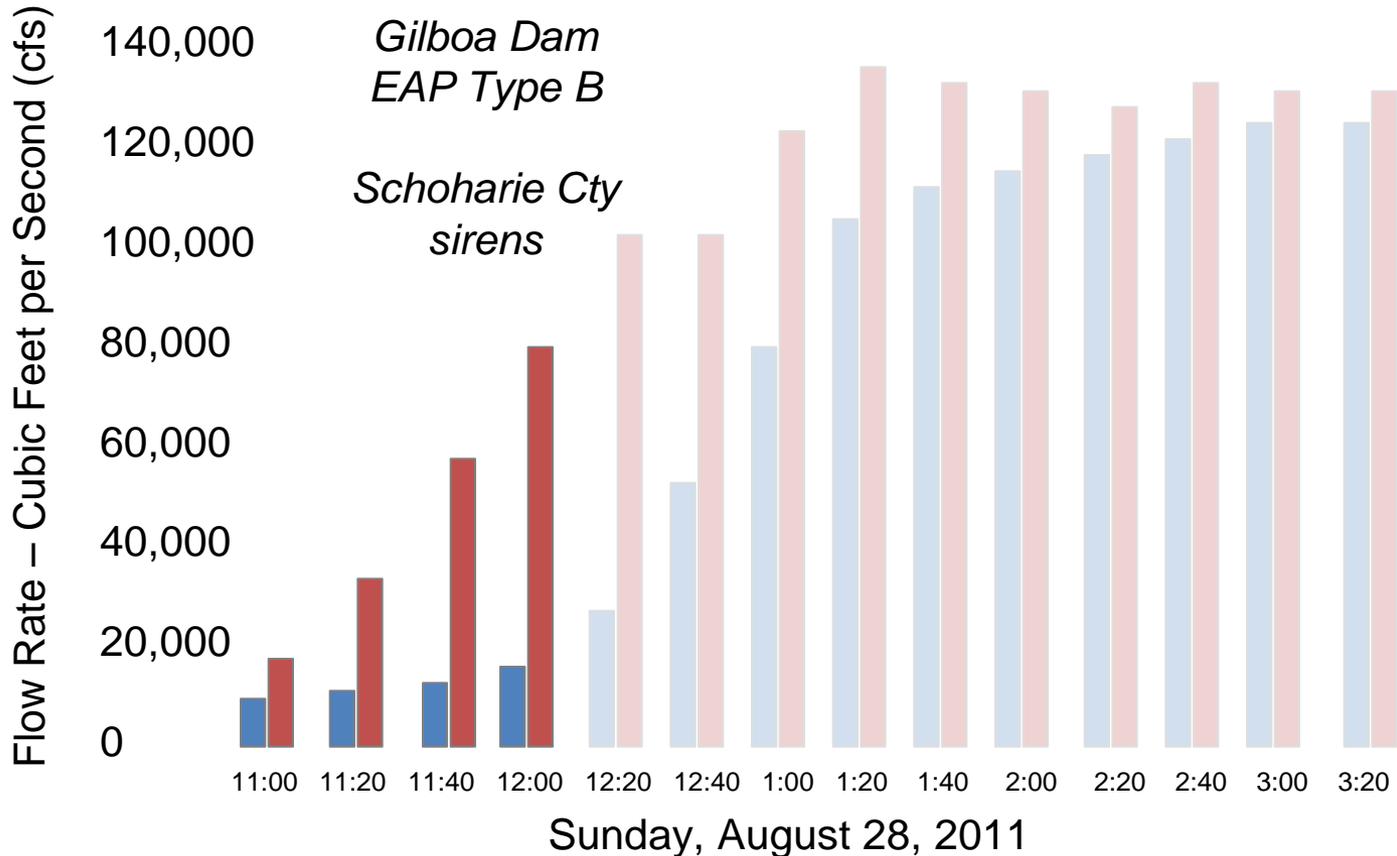
910 ft. overtop

900 ft. full



Tropical Storm Irene Response

Sunday, 12:00 p.m.



Outflows 
Inflows 

**NYPA Lower
Reservoir**

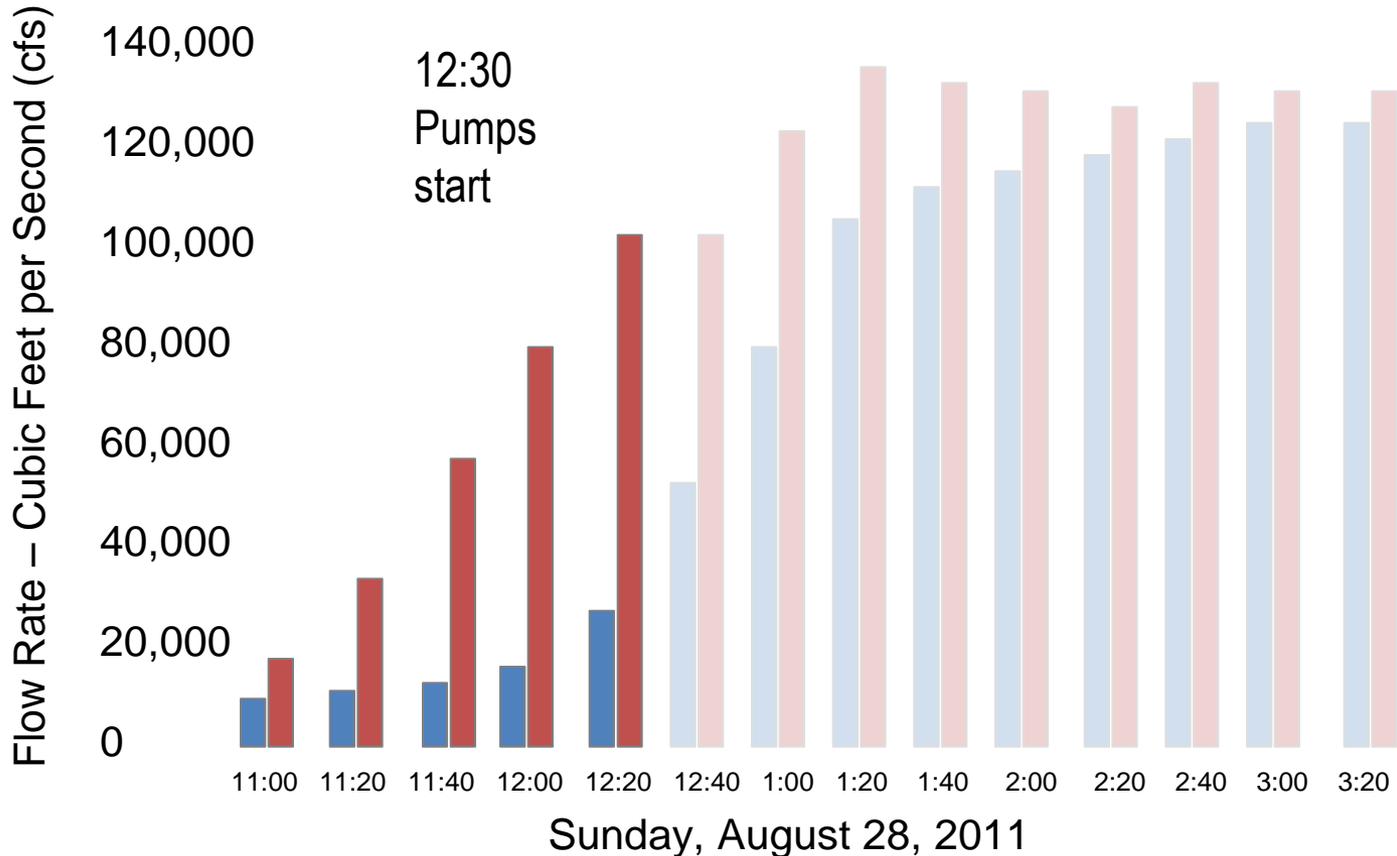
910 ft. overtop

900 ft. full



Tropical Storm Irene Response

Sunday, 12:20 p.m.



Outflows 
Inflows 

NYPA Lower Reservoir

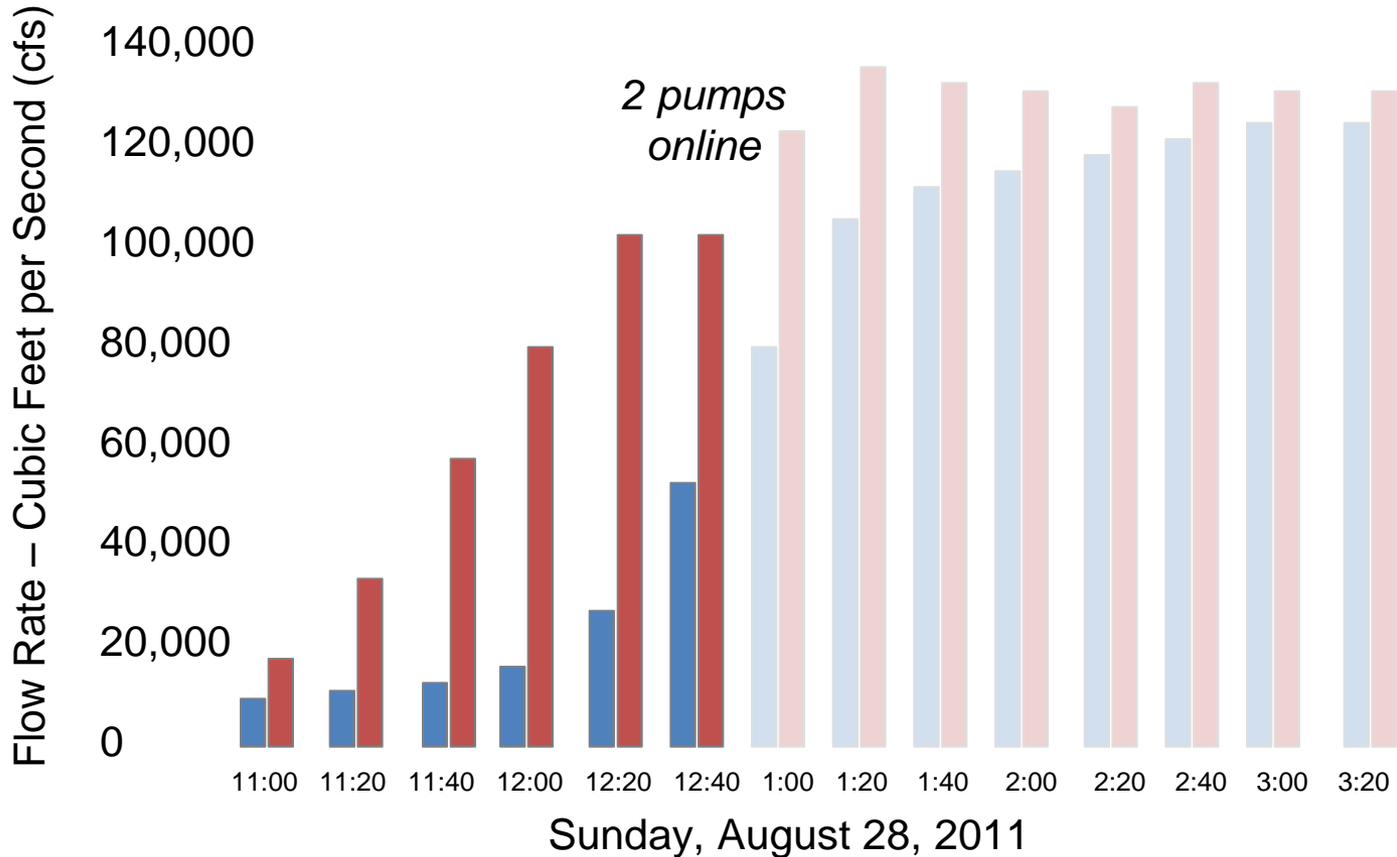
910 ft. overtop

900 ft. full



Tropical Storm Irene Response

Sunday, 12:40 p.m.

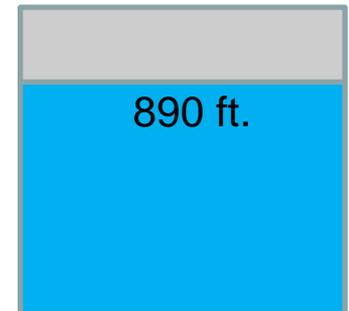


Outflows 
Inflows 

NYPA Lower Reservoir

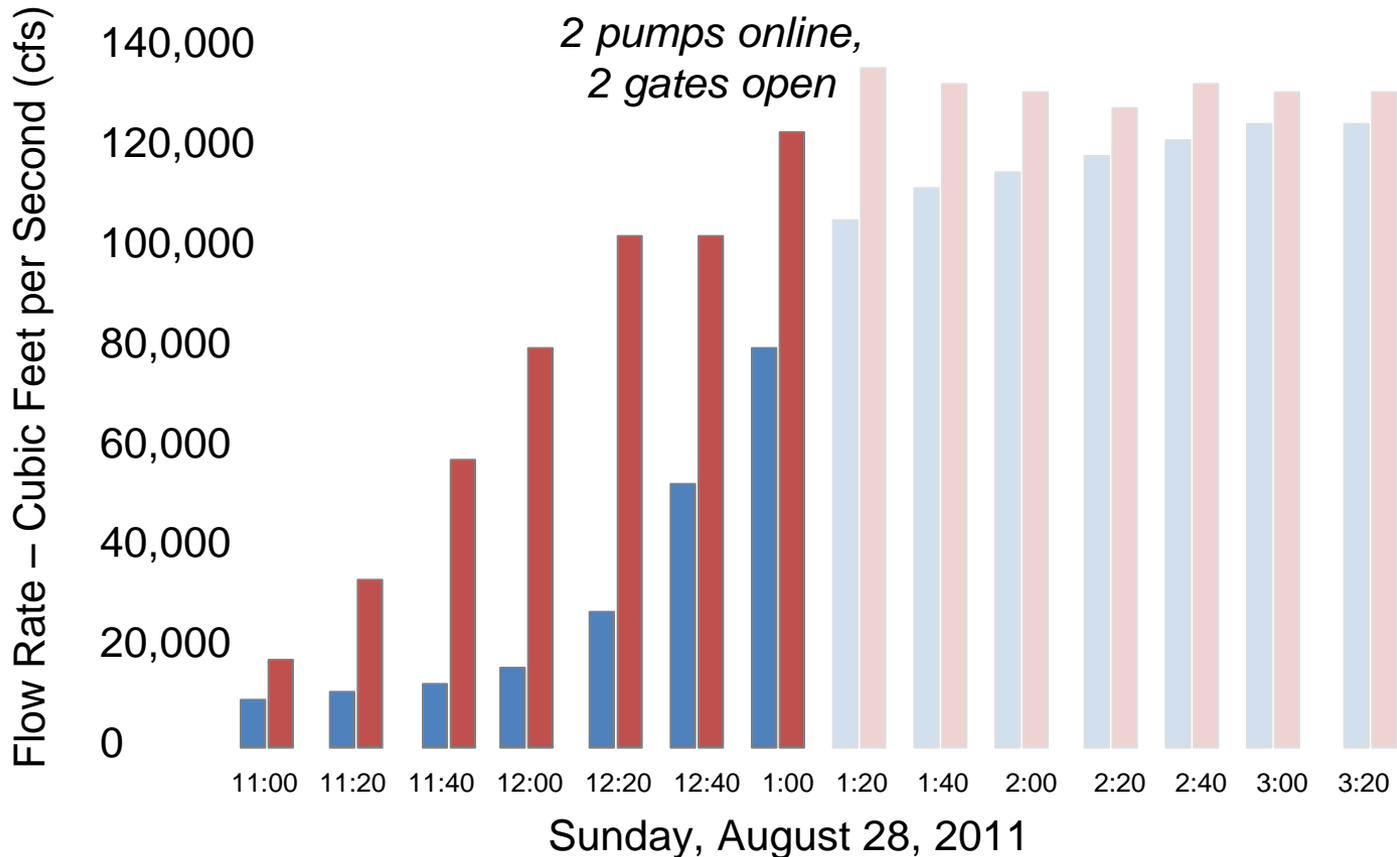
910 ft. overtop

900 ft. full



Tropical Storm Irene Response

Sunday, 1:00 p.m.



NYPA Lower Reservoir

910 ft. overtop

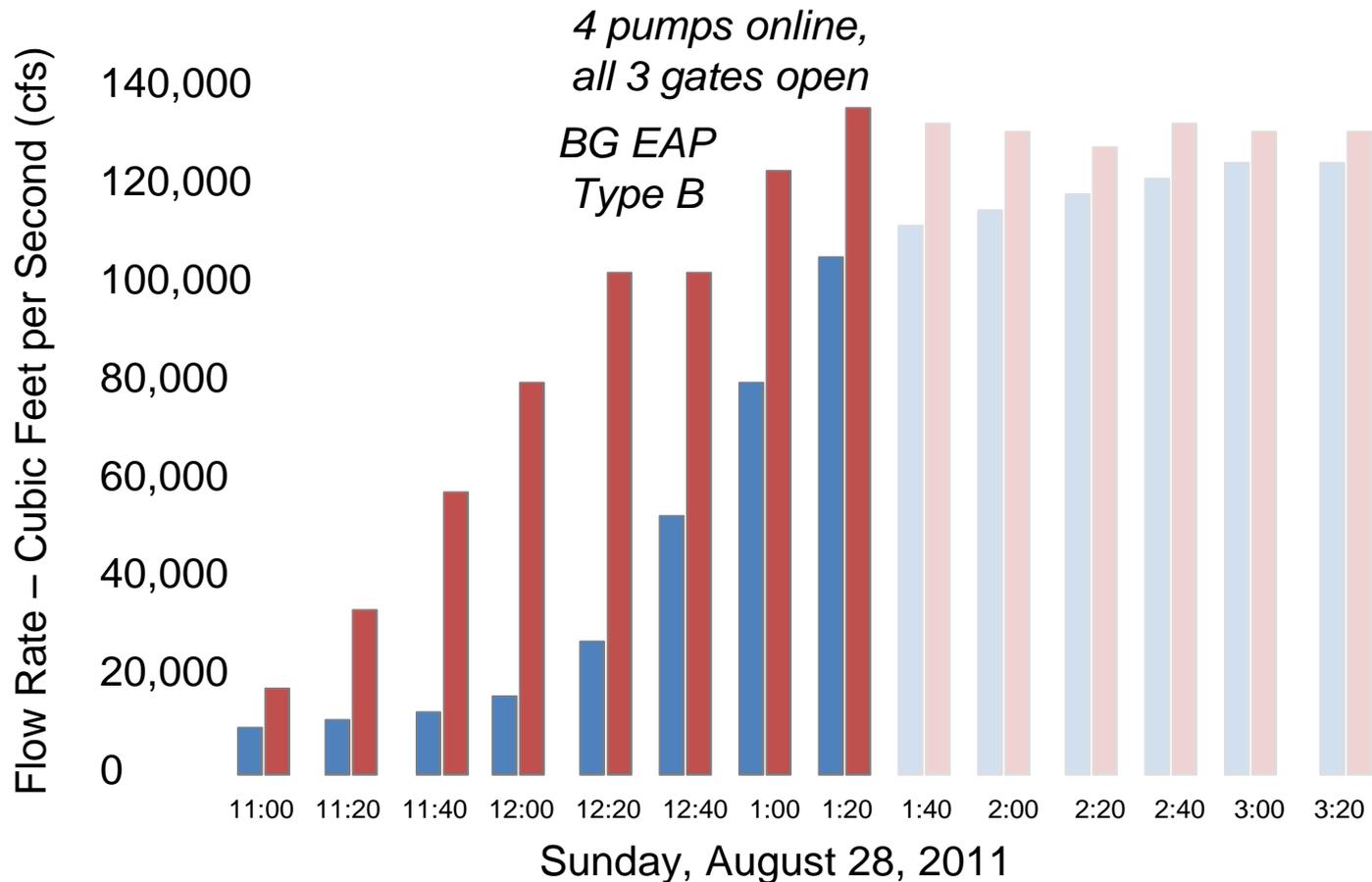
900 ft. full



Outflows 
Inflows 

Tropical Storm Irene Response

Sunday, 1:20 p.m. – Peak Inflow



Outflows 
Inflows 

NYPA Lower Reservoir

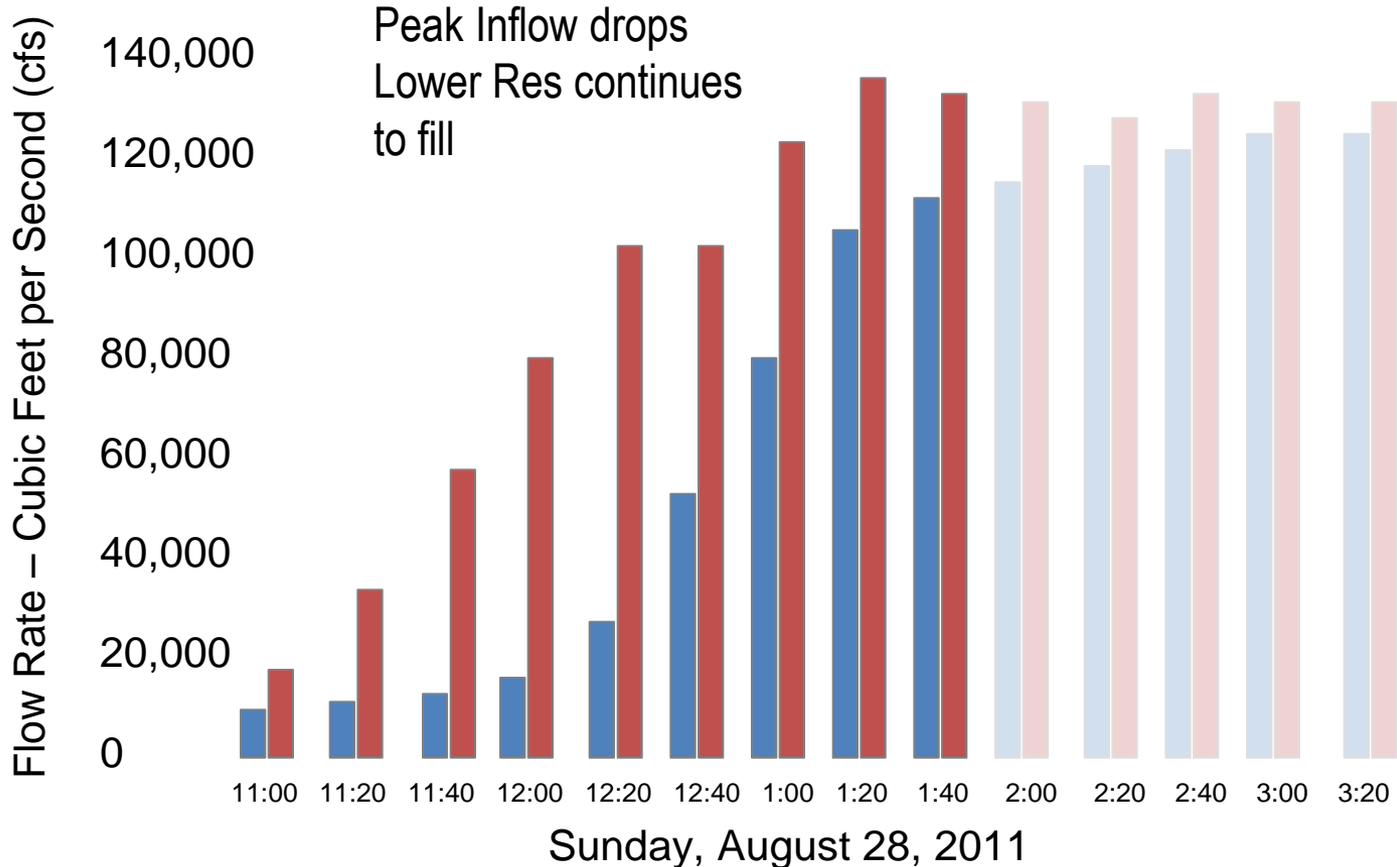
910 ft. overtop

900 ft. full



Tropical Storm Irene Response

Sunday, 1:40 p.m.



Outflows 
Inflows 

NYPA Lower Reservoir

910 ft. overtop

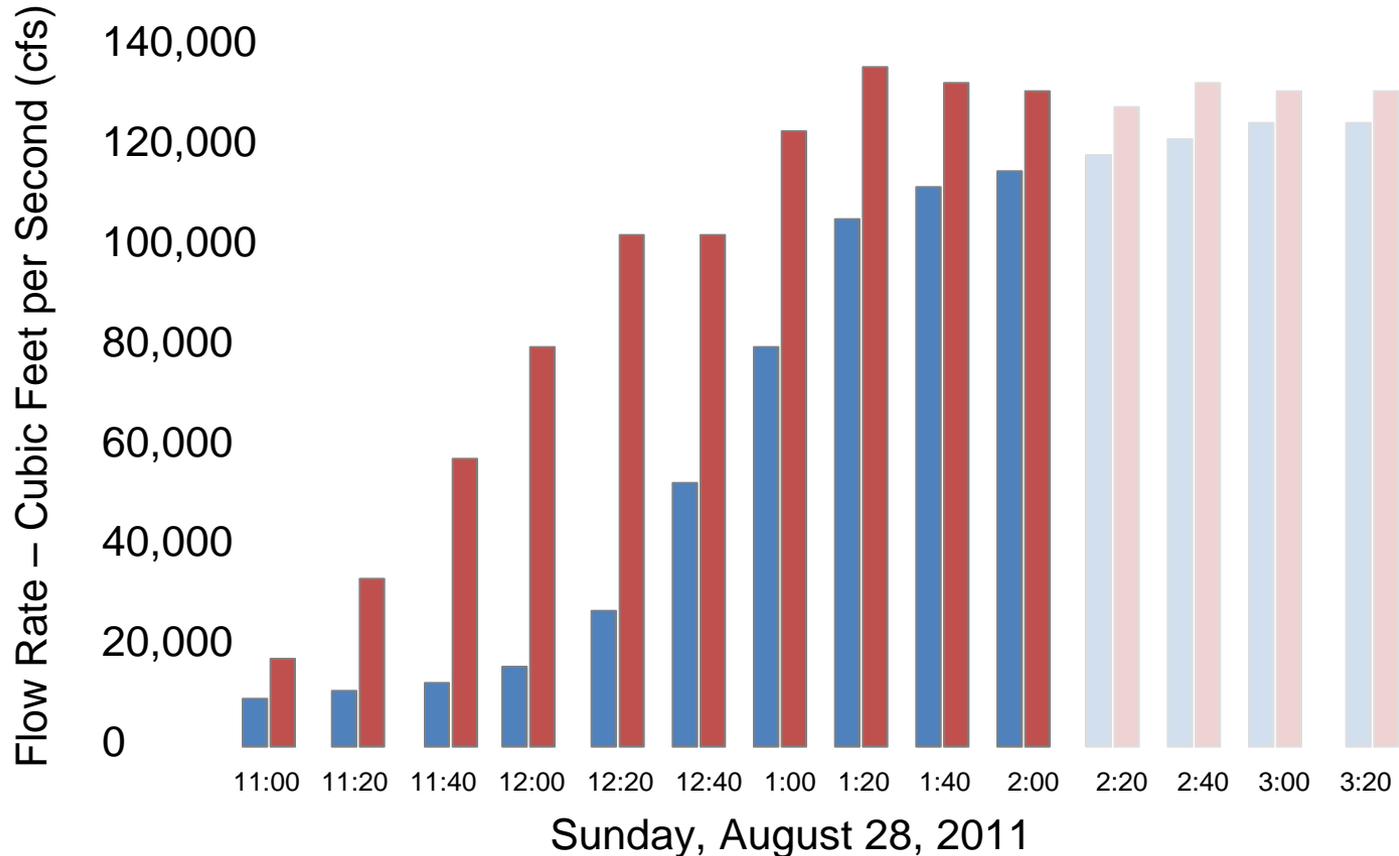
900 ft. full

895.4 ft.



Tropical Storm Irene Response

Sunday, 2:00 p.m.



NYPA Lower Reservoir

910 ft. overtop

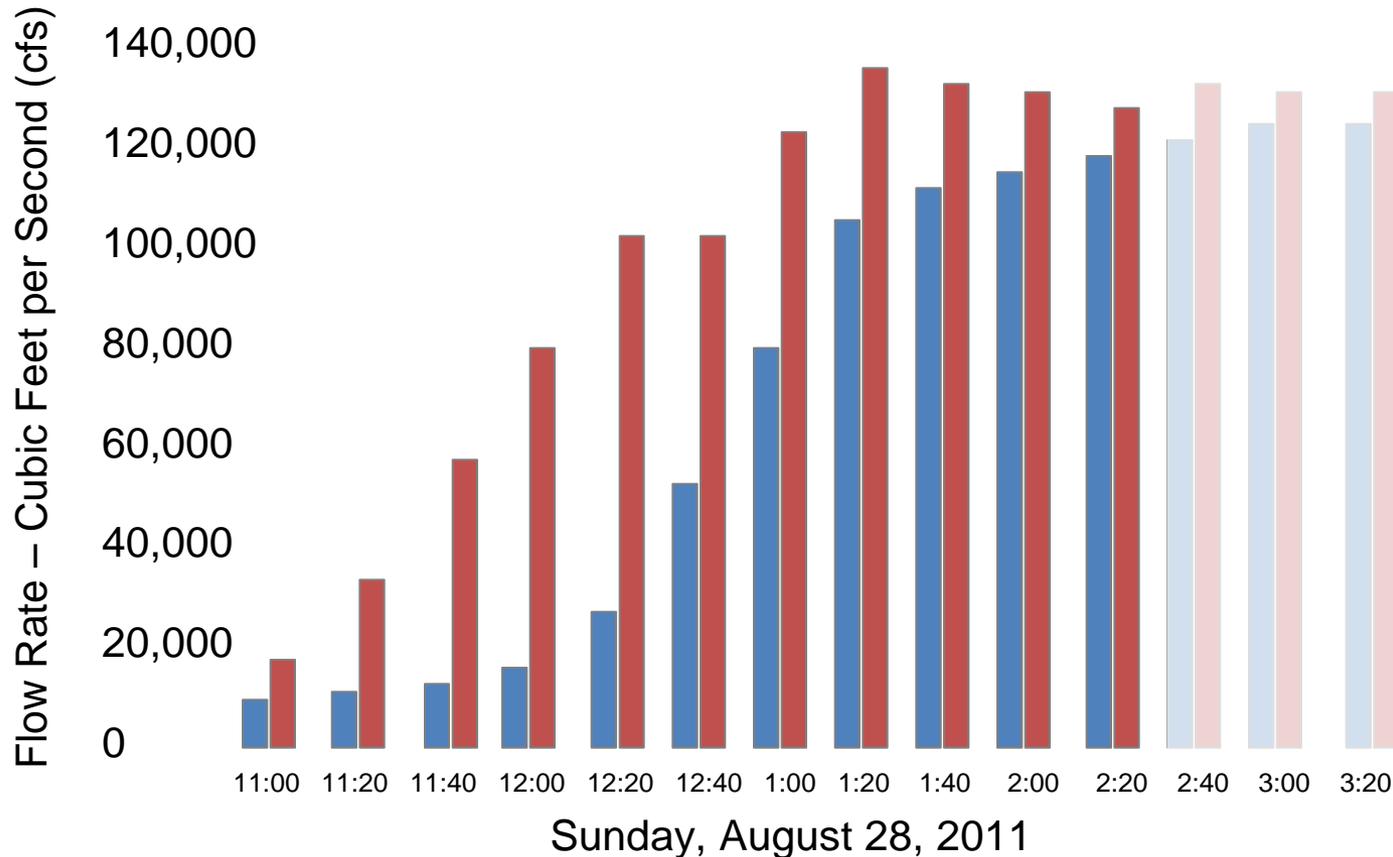
900 ft. full



Outflows 
Inflows 

Tropical Storm Irene Response

Sunday, 2:20 p.m.



NYPA Lower Reservoir

910 ft. overtop

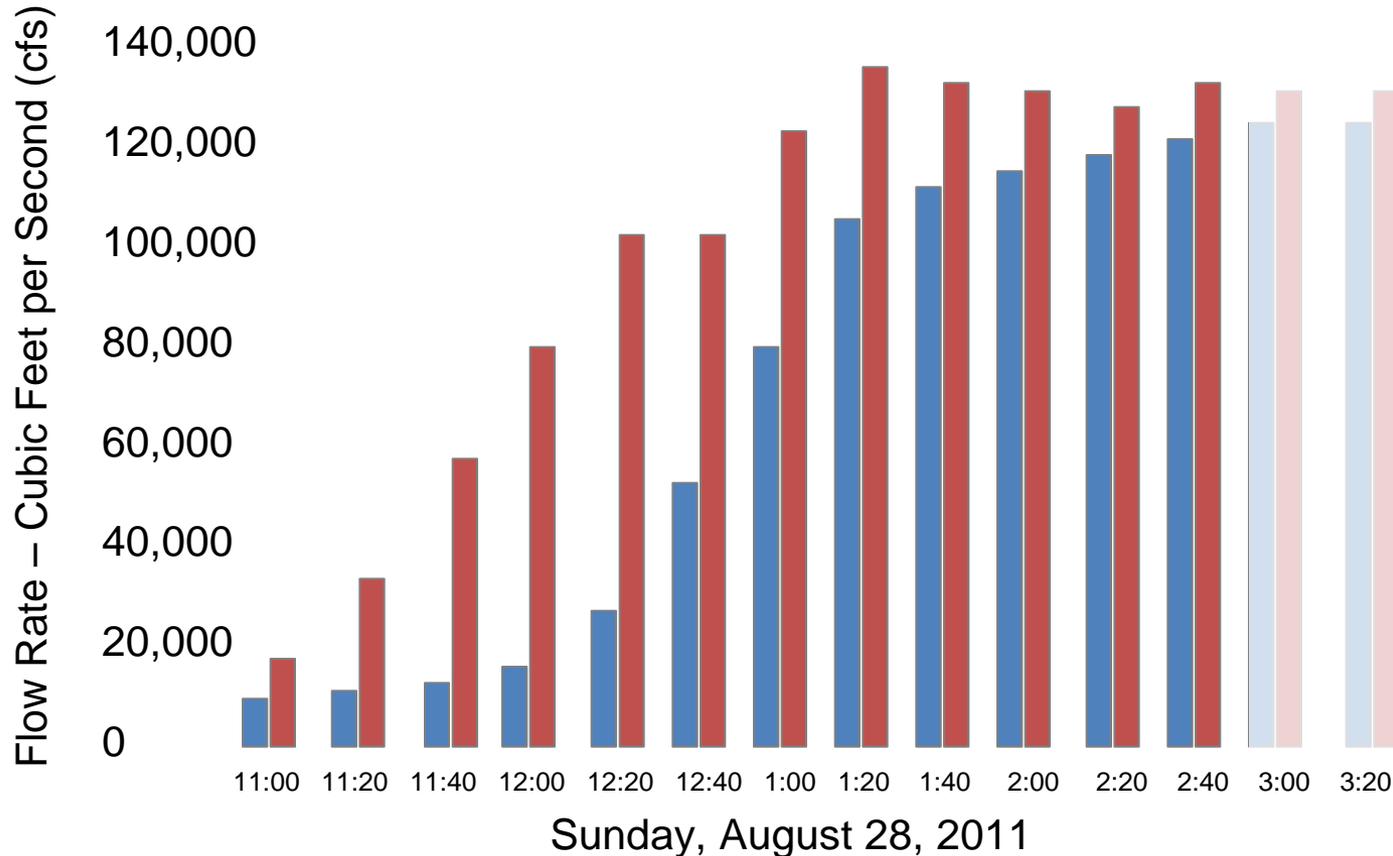
900 ft. full



Outflows 
Inflows 

Tropical Storm Irene Response

Sunday, 2:40 p.m.



NYPA Lower Reservoir

910 ft. overtop

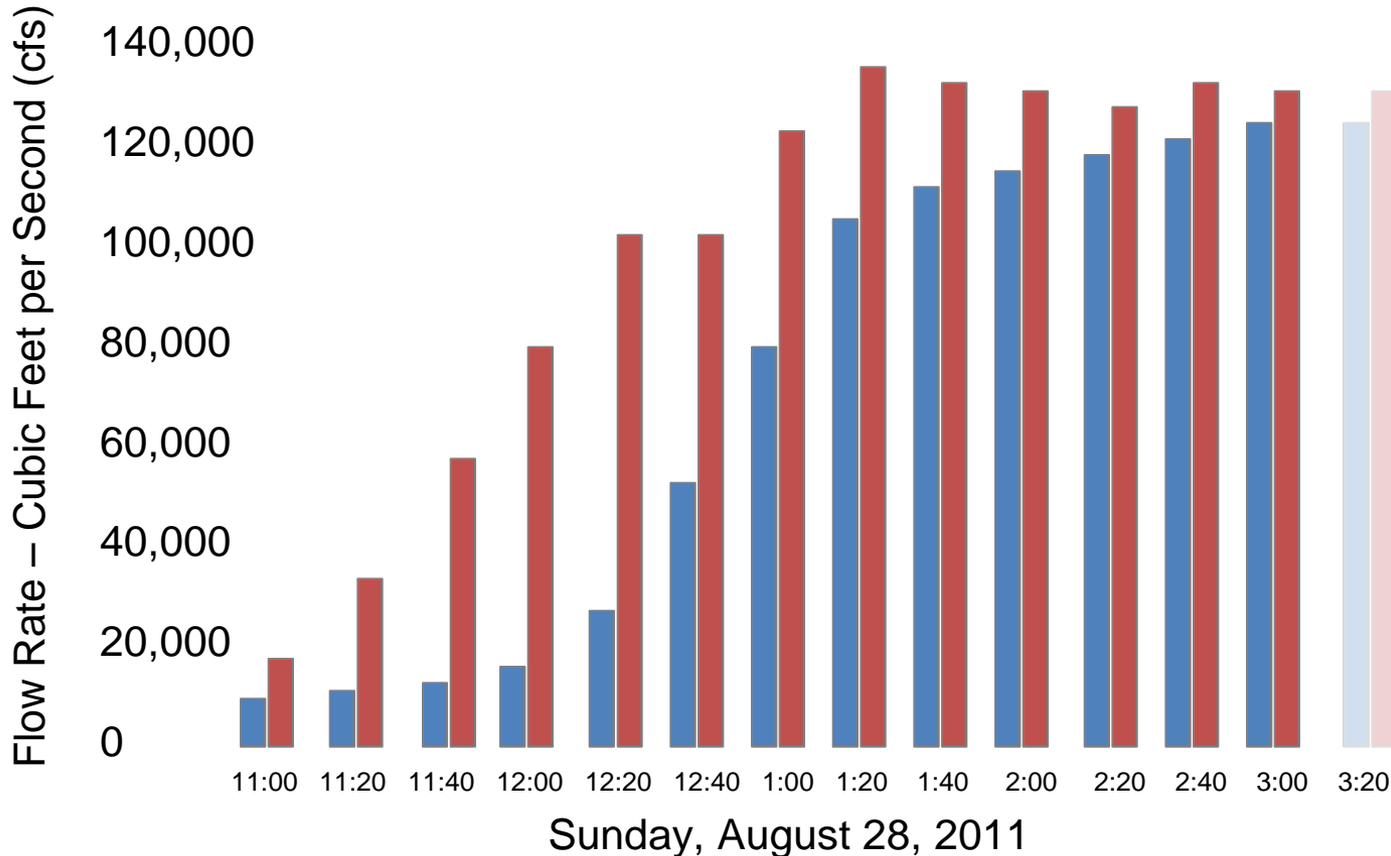
900 ft. full



Outflows 
Inflows 

Tropical Storm Irene Response

Sunday, 3:00 p.m.



NYPA Lower Reservoir

910 ft. overtop

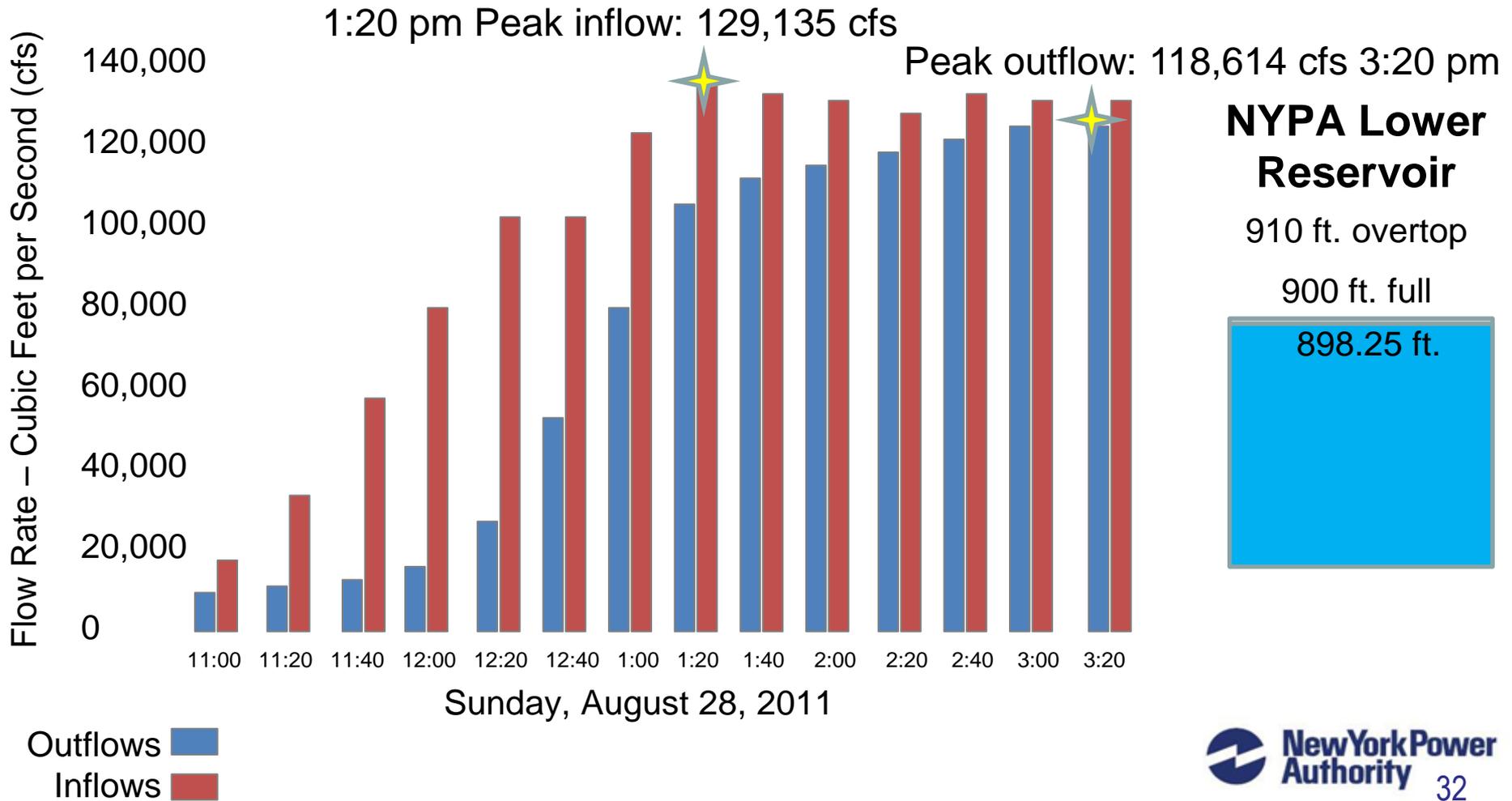
900 ft. full



Outflows 
Inflows 

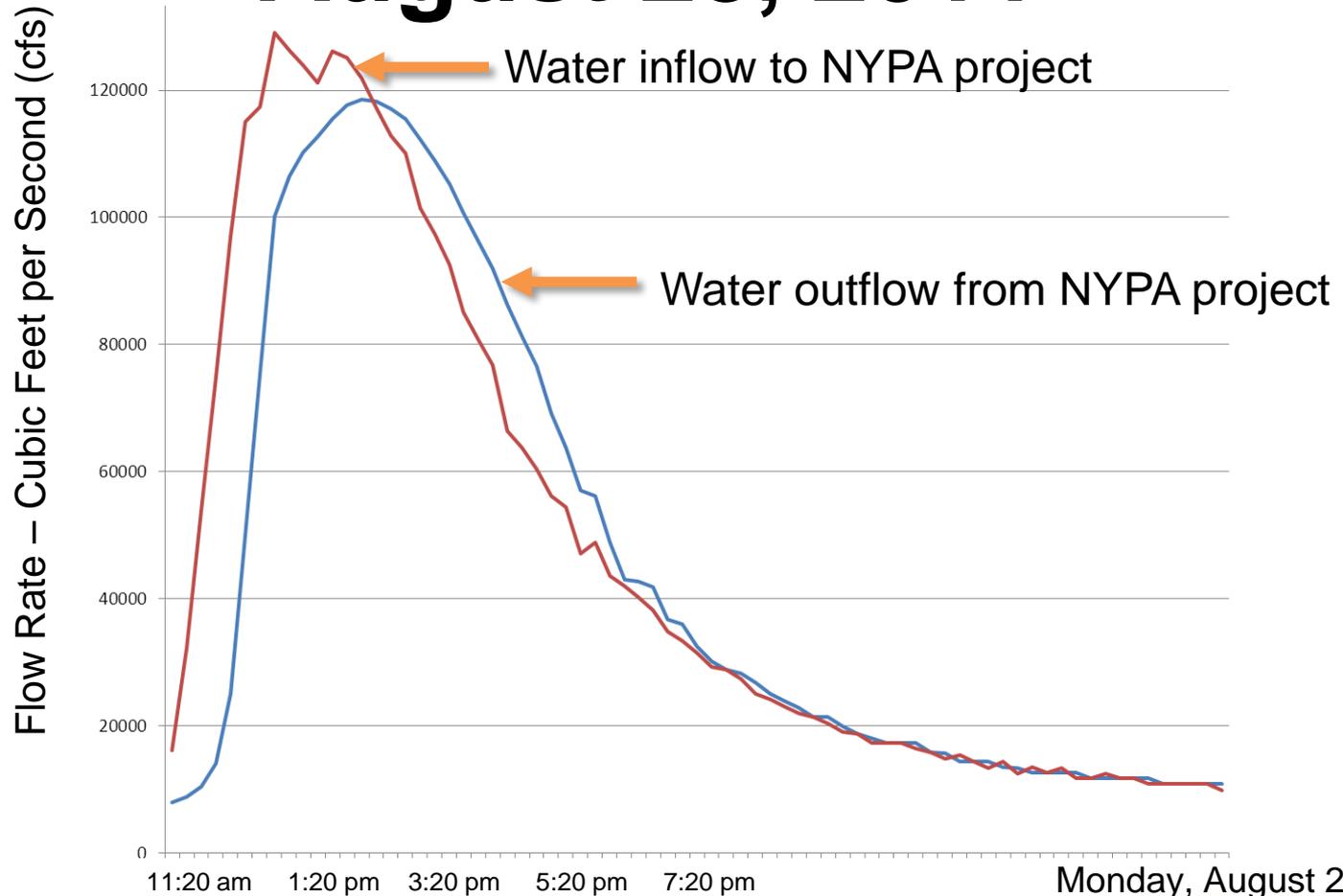
Tropical Storm Irene Response

Sunday, 3:20 p.m.



Water Flow Peak Shaved

August 28, 2011



Sunday, August 28, 2011

Outflows 
Inflows 

Storm Comparisons

Previous Flood of Record (1996)

- Heavy rain at 60°F, melted over 4 ft. snow pack
- January 1996
- Peak inflow: 82,899 cfs
- Peak outflow: 74,677 cfs

Tropical Storm Irene New Flood of Record (2011)

- Heavy rain at 1-inch per hr for 12 hours. 16-18-inches localized
- August 2011
- Peak inflow: 129,135 cfs
- Peak outflow: 118,614 cfs

After the Storm

- Gomez & Sullivan inspection
- Army Corp of Engineers inspection
- Bathymetric survey in December 2011
 - Conducted within normal operating parameter
- Provided community assistance
 - Assistance to NYS DOT Route 30 Bridge repair
 - Assistance to neighboring communities
- Evaluating communications infrastructure

QUESTIONS?

Document Content(s)

BLTCRC Comments Revised Study Plans 2-2-2015.DOCX.....1-5

BG Public Session - 19Jan12 FINALA.PDF.....6-41