

**Comments from the Town of Blenheim Long-Term Community Recovery
Committee (BLTCRC) regarding the New York Power Authority (NYPA) proposed
Study Plans pertaining to the Relicensing of the NYPA Blenheim-Gilboa Pumped
Storage Project**

FERC Docket Number: P-2685-026

Proposed Studies 2.0

2.1 Historic Structures Survey:

The NYPA proposed Historical Structures Survey is *fundamentally flawed* in that the Project Area of Potential Effects (APE) appears to be limited to NYPA BG site boundary(s).

The NYPA BG Facility operational impacts extend far beyond the actual site boundaries of the facility. Primarily, potential impacts are limited to NYPA operations as they pertain to effects of the facility operation downstream of the facility site. The impacts and effects are mostly concerned with, but not entirely, with the release and non-release of impounded water from the facility's upper and lower reservoirs. However, consideration must also be given to the potential of upper reservoir dam failure and any such associated impacts and effects downstream on historic structures not only directly adjacent to the Schoharie Creek but also further removed inland.

Any failure of the upper reservoir dam in a storm-related event or even during normal operation would potentially inundate historical structures further removed from the Schoharie Creek and potentially, even outside of the existing and documented flood plain(s) of not only the host communities, but along the entire reach of the Schoharie Creek through the County of Schoharie.

It is therefore recommended by the BLTCRC that any Historic Structures Survey include all such structures within one (1) mile of the Schoharie Creek and the associated flood plains. Such a study would have to include the Towns of Blenheim, Gilboa, Fulton, Middleburgh, Schoharie and Esperance, as a minimum.

While the proposed study refers to several specific agencies for guidance as to identification of such historic structures, the resource(s) for identifying and determining such structures should be expanded to include local guidance such as town historical societies, town historians, County historical and historian resources as well as other local and regional resources as yet to be identified. Outreach by NYPA to all and any such contributing resources should be undertaken well in advance of any commencement of any such studies. There is much to be gained from the inclusion of local historical resources that may not be identified nor listed by the named traditional and conventional agencies. Therefore, it is recommended that the studies include public outreach by NYPA to include local historical resources for additional information and consideration in the proposed study. NYPA's stated intention of relying on New York SHPO in determining the APE for such a study is wholly inadequate, dismissive and non-inclusive of the local cultural and historical resources available that should be considered in the geographic scope.

Finally, it is recommended that a specific study be undertaken by NYPA to explore the past and ongoing potential effects of the BG facility operations on the old Blenheim Bridge, a National Historic Landmark that was lost during flooding from Hurricane Irene and associated failures by NYPA during the event. Such a study is required since plans are underway to replicate the old Blenheim Bridge with associated mitigation efforts that must consider NYPA's upstream operations and potential hazards / impacts on any new replicated structure.

NYPA has maintained the BG Facility operations had no effect regarding the loss of the old Blenheim Bridge while providing no evidence their actions or lack thereof, especially during Hurricane Irene, prove such a position. Since the old Blenheim Bridge may have been the most significant historic structure located within the host community boundaries, special attention and consideration should now be given to the potential adverse effects the BG facility had on a National Historic Landmark and any replicated structure.

2.2 Phase 1A Archaeological Survey

The proposed NYPA Archaeological Study is flawed in that the APE is confined to NYPA BG site boundaries. It is recommended that the APE be expanded to include all towns located along the Schoharie Creek and its designated flood plains at very minimum as this area represents the potential impacted area from NYPA operations and / or flooding events presented by an upper reservoir dam failure. Such sites should be documented and explored prior to any such event that could prevent accurate exploration and archiving in the future.

It should be noted the above study should be expanded since no full EIS was conducted at the time of the construction of the facility. Therefore the opportunity now exists to conduct such a study to be conducted. Further, it is recommended that NYPA not rely upon New York SHPO records exclusively since NY SHPO is limited in its scope of operation with regard to archaeological site identification / evaluation. Recommendation for NYPA outreach to local agencies / communities as well as national agencies for proper, professional and sourced guidance.

2.3 Fish Entrainment / Protection Assessment Study Plan

The proposed NYPA Fish Entrainment / Protection Assessment Study Plan fails to address the impact of the BG Facility downstream of the APE. Again, NYPA's position of limiting the APE to the project geographic boundaries has such a negative impact on the study as to render it at least partially compromised for the purpose it should be intended to serve.

Recommendation is made the study include the Schoharie Creek through Schoharie County beyond the BG Facility taintor gates. This also includes the water quality conditions, temperature and dissolved oxygen as described in the NYPA proposed study, but not limited to the upper and lower reservoir as described.

While the entrainment and impingement analysis is pertinent, the proposed study falls short in that it does not extend beyond the project boundaries further downstream which may be as impacted as significantly as the upper and lower reservoirs.

2.4 Recreation Use / User Contact Study and Assessment of Effects the Project has on Recreation Use

The proposed NYPA Recreational Use Study fails to include lands and waters located outside the narrow boundaries of the NYPA BG Facility. The extremely narrow and small geographic study approach appears to be a recurring theme of the proposed NYPA studies. That is unfortunate as it devalues each study in its comprehensive scope and application while simultaneously diminishing and limiting each study's overall conclusions(s).

It is clear there are many recreational uses and opportunities located in the neighboring downstream (and upstream) communities that need to be considered as they are NYPA operationally sensitive. A prime example of such as opportunity is canoeing / kayaking opportunities. However, this opportunity is limited based on water releases by NYPA. Coordinated releases with the host communities would significantly promote such opportunity during times of both low and very high water.

As above, swimming and fishing within the Schoharie Creek as well as other future opportunities that include Creekside hiking trails, paths, bike routes, bird-watching opportunities (including Bald Eagles), etc., etc., are subject to rapidly rising and falling water levels based on NYPA's upstream operations. These all need to be considered both within and outside the BG Facility operations. They are affected by said operations and therefore should be included in any such study. NYPA understands this and should accept responsibility for the effects of their operations downstream of the actual facility boundary.

Policy changes should be explored that consider coordinated cooperation between NYPA and local communities to enhance the potential of additional recreational uses via water releases by NYPA. Local coordination and cooperation with NYPA on many issues is either very limited or in most cases, non-existent. Recreational use opportunities are only one area in which this lack of engagement on NYPA's part with local communities limits the most advantageous recreational use opportunities potentially available. This uncooperative culture on NYPA's part needs to change in order to achieve the utmost in realization of recreational opportunities not only within the project boundaries but downstream as well, where NYPA's operations have a very definitive impact. This potential is very attainable but only with NYPA's positive engagement and support.

2.5 Effect of Project Operations on Downstream Flooding Study

NYPA's proposed study on effects of the BG Facility on downstream flooding is welcome and very relevant. However, the proposed study plan states, in part, *"The Power Authority proposes to conduct a study to assess the effect of current Project operations on downstream flooding, if any."*

It should be noted that several months after Hurricane Irene and the catastrophic flooding that resulted in Schoharie County, and in particular, the Schoharie Valley, Towns of Blenheim, Middleburgh and Schoharie, NYPA organized a public information session to address the BG Facility's impact on flooding. In that presentation NYPA clearly acknowledged the facility has an

impact on downstream flooding. Further, NYPA acknowledged they had in fact, had a migrating effect on the severity of the flood by action(s) they took at the BG facility (copy of presentation attached). NYPA's Regional Director at the time, Mr. Lynn Hait explained, when providing the in-person voice-over of the presentation just how NYPA "shaved the peak" off the flood event by taking specific actions at the BG Facility. Accordingly, it is disturbing to read that now NYPA asserts there may be no impact on downstream flooding events. This statement, as contained in the PSP is at very least, contradictory to NYPA's previous assertions and public statements made in early 2012.

Not only does the BG Facility have impacts on most downstream conditions of the Schoharie Creek, including flooding events, but it possess the ability to have a significant mitigation effect on flooding events. Unfortunately, NYPA takes cover in that their FERC license may preclude them from such mitigation while continually asserting the BG Facility "is not a flood control facility". The simple fact the facility operates two (2) reservoirs and two (2) dams would seem to confirm there is at least some responsibility for flood control especially when considering the BG Facility controls specific water releases and upper reservoir water impoundments.

In view of the above, it is requested NYPA contract with an independent and qualified engineering firm agreeable to the County of Schoharie Relicensing Committee to conduct a comprehensive study and report investigating the effects of the NYPA BG Facility on downstream flooding. Further, such a study should also explore the aspect of flood mitigation and prevention by the BG Facility.

Any such study should be initiated as soon as possible as time is of the essence. The residents of the local and host communities live under threat of the NYPA dams as well as the threat of extreme weather. NYPA, as a State Authority which chose to locate the BG Facility in its present site has a responsibility to the citizens that all live downstream and under threat. It is NYPA's duty as well as obligation.

Finally, any such study should also address, with emphasis, a Probable Maximum Flood (PMF) Projection as an integral component of any such study.

2.6 Socioeconomics Study

First and foremost, NYPA has acknowledged in the PSP a need to analyze the impact of NYPA's BG Facility tax-exempt status on the local communities. This is the most important aspect of the study in terms of effect. Schoharie County as a whole and the host communities in particular are some of the poorest and economically challenged stakeholders in the State of New York. The Town of Blenheim in particular is severely challenged by the lack of any meaningful tax-revenue from an Authority facility that can easily be valued in the hundreds of millions of dollars. Over the 45 years the BG Facility has been in operation there has been virtually no meaningful compensation afforded the Town or County in lost and / or never-realized tax

income. So, in effect, the BG Facility has had a tax-free first 45 years of operation while having taken land and assets via eminent domain action(s) from the host communities and County.

Of particular concern is NYPA's stated intention (during the PSP public session) of evaluating the BG Facility's status as "vacant land". To suggest such a baseline methodology is nothing short of outrageous. The existing tax-exempt status had had a severely negative impact on the communities and County and to then assert the site is "vacant land" when exploring the effects of the tax-exempt status seems at very least, self-serving for NYPA. Further, such an approach undermines the intention of the proposed study to such a degree as to render it useless while sending an ominous message to the host communities and County.

Accordingly, it is recommended that NYPA contract an independent accounting firm to conduct an accurate and unbiased current and accurate assessment of the facility itself and all other ancillary functions of said facility inclusive of command and control functions as well as the value of the facility as a "cold start" power plant in the event of grid failure and the mitigating value such capacity provides for the City of New York and other metropolitan areas. Any accounting / assessment firm considered by NYPA should also be approved by the Schoharie County NYPA Relicensing Committee.

Consideration should be given to the scenario that any other operator of the facility, as a private corporate entity would be taxed as such and the benefits to the host communities and County would be enormous. Such a scenario could mean the difference between a poor disadvantaged community and a well-served financially healthy host community and County.

Finally, existing such studies conducted for other NYPA facilities such as the Niagara Project should be considered. County-wide impacts of the tax-exempt status must be considered in concert with the host community impacts.

In summation, one need only visit the Town of Blenheim and witness the lack of modern infrastructure (*little broadband capacity, no cell service, poor public facilities, etc., and other disadvantages as identified in the FEMA-sponsored Blenheim Long-Term Community Recovery Plan*) to ascertain the debilitating effect(s) of the tax-exempt status of the BG Facility. These negative effects are not limited the host community but instead, can be found County-wide. However, the most severe and visible impacts lie within the host and neighboring community boundaries.

Submitted on 12-19-2014 by:

Donald Airey – Chair: 518-294-6066 Email: don@descompany.com FERC ID#F241867

On behalf of the Town of Blenheim Long-Term Community Recovery Committee (BLTCRC)

1748 State Rt. 30

Blenheim, NY. 12131

Blenheim-Gilboa Pumped Storage Power Project Operations

Features, Functions, Storm Response

January 19, 2012

Lynn H. Hait

Regional Manager, Central NY

Overview

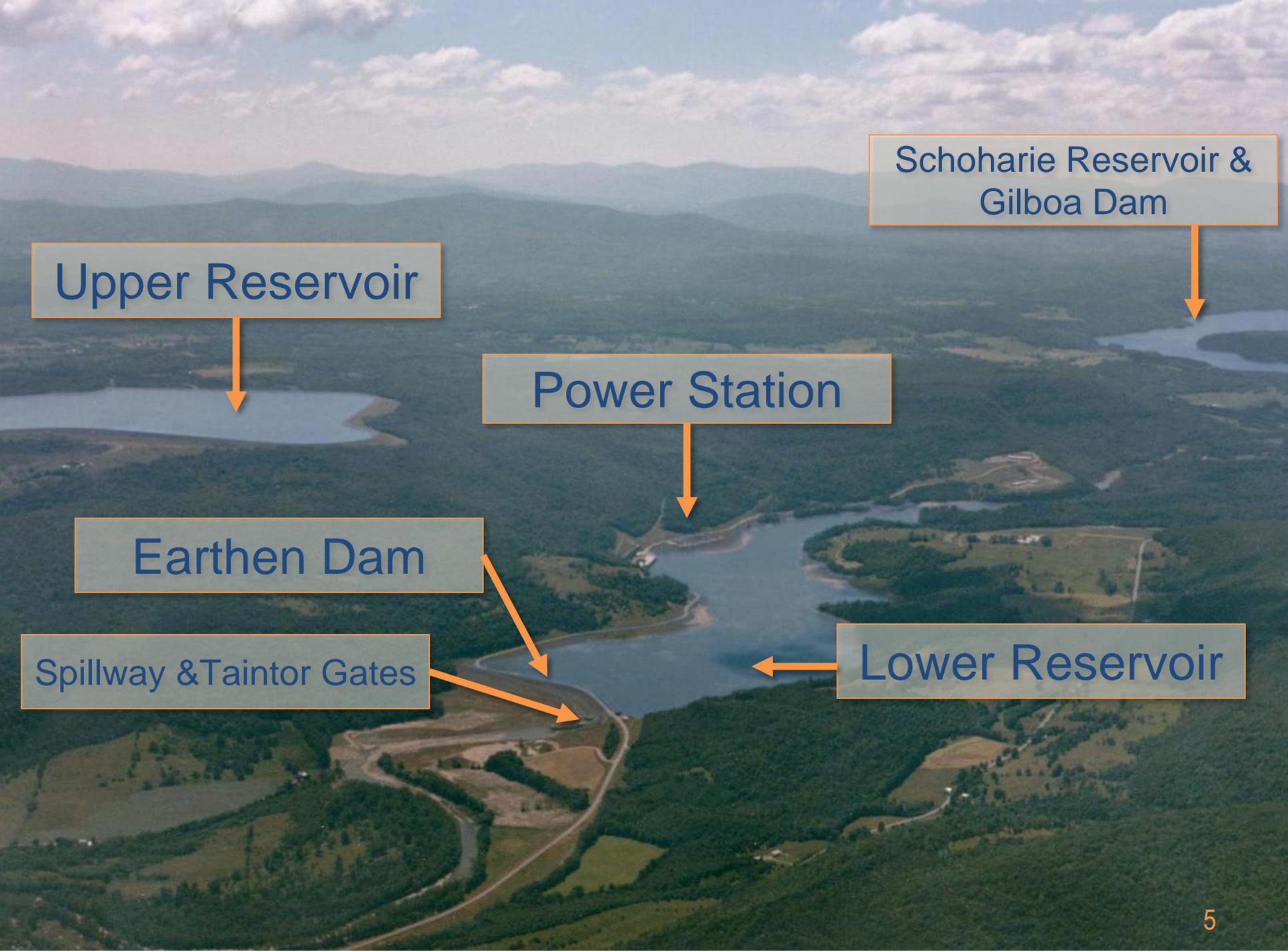
- Welcome
- Presentation Purpose
- Blenheim-Gilboa Power Project Description
- Water Flows and Flood Forecasting
- Tropical Storm Irene Timeline & NYPA response
- Questions from the Audience

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

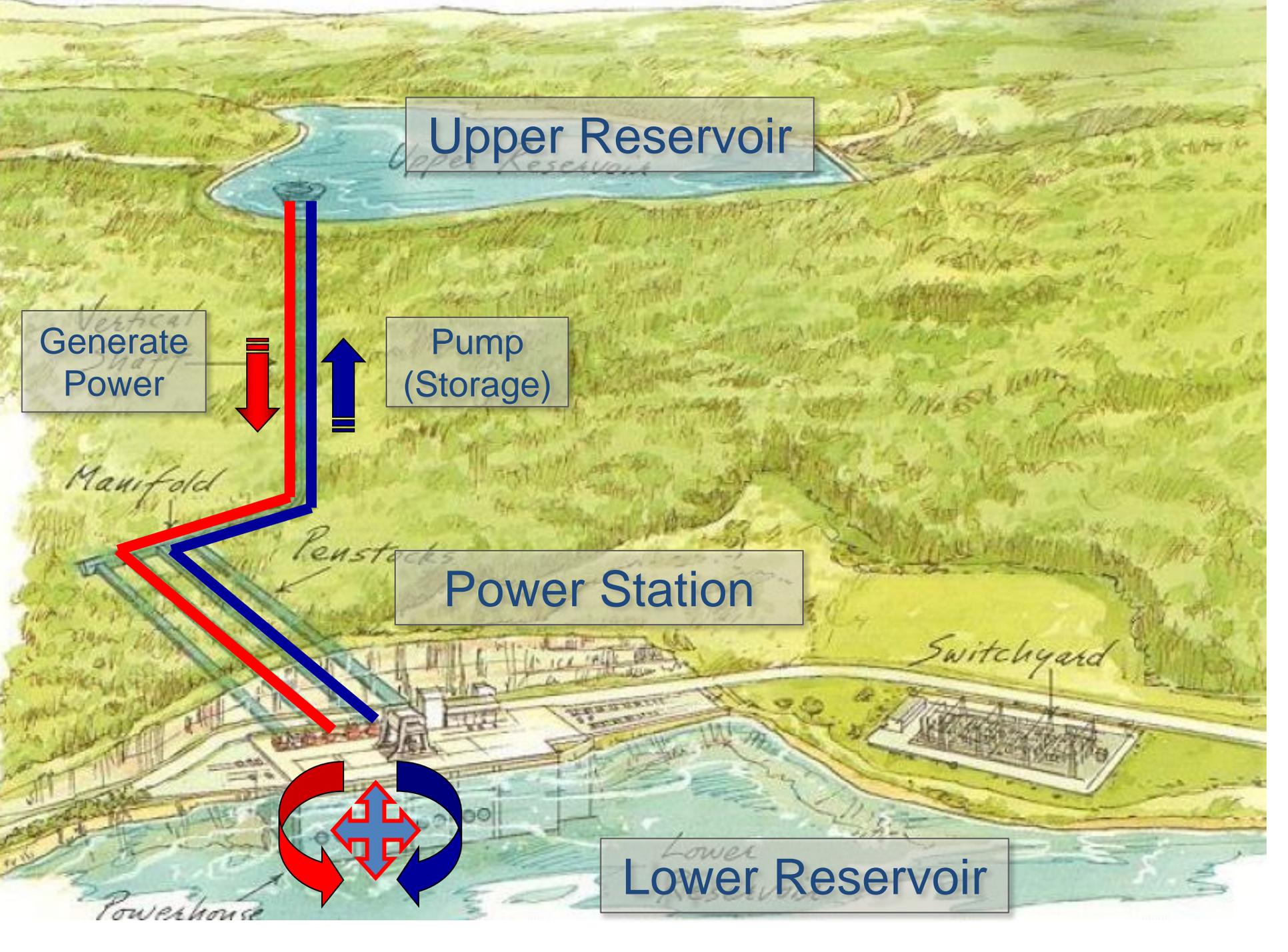
Upper Reservoir

Power Station

Earthen Dam

Spillway & Taintor Gates

Lower Reservoir



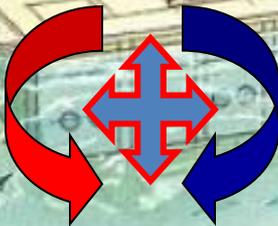
Upper Reservoir

Generate Power

Pump (Storage)

Power Station

Lower Reservoir



Closed System: 40 ft. Operating Range

Lower Reservoir
At high level (pool)



Lower Reservoir
At low level (pool)



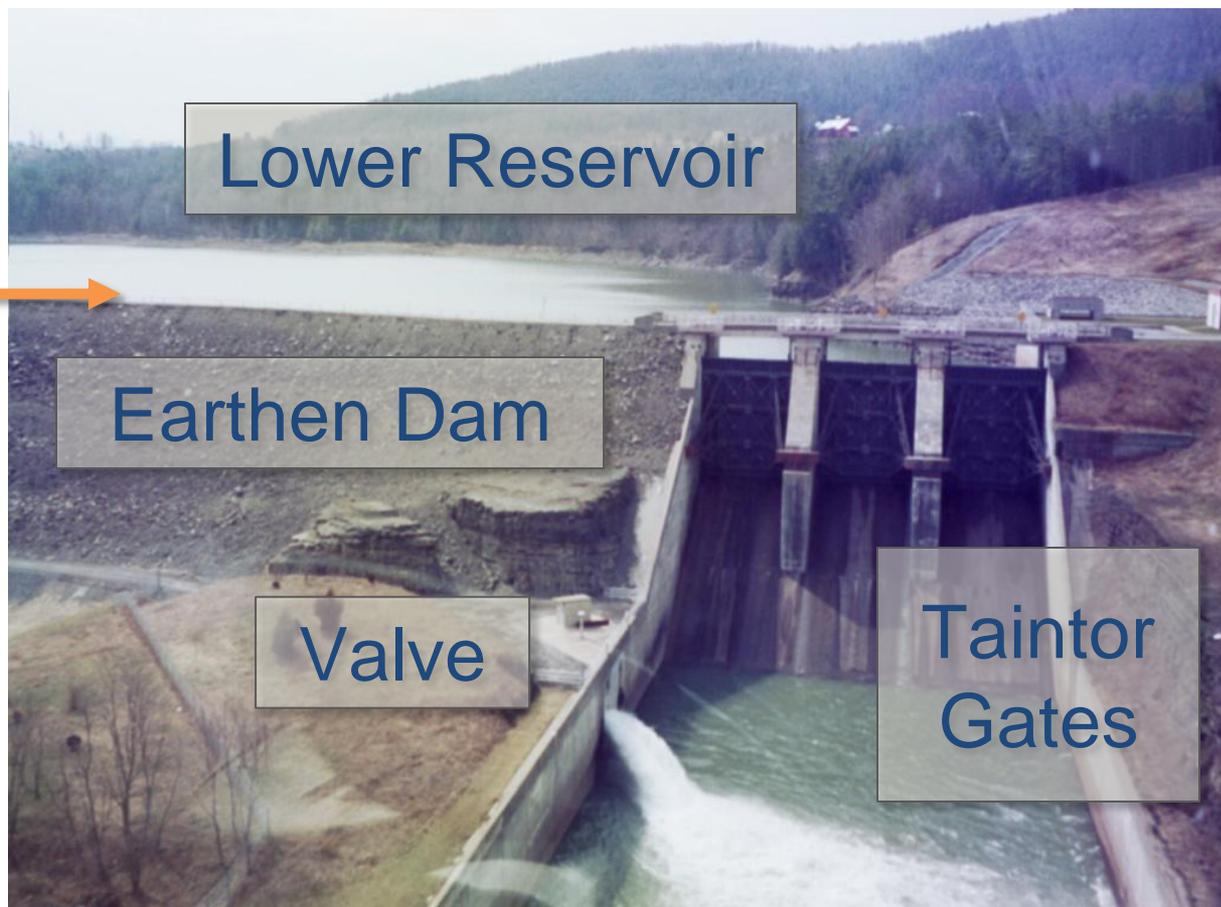
Earthen Dam Design

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

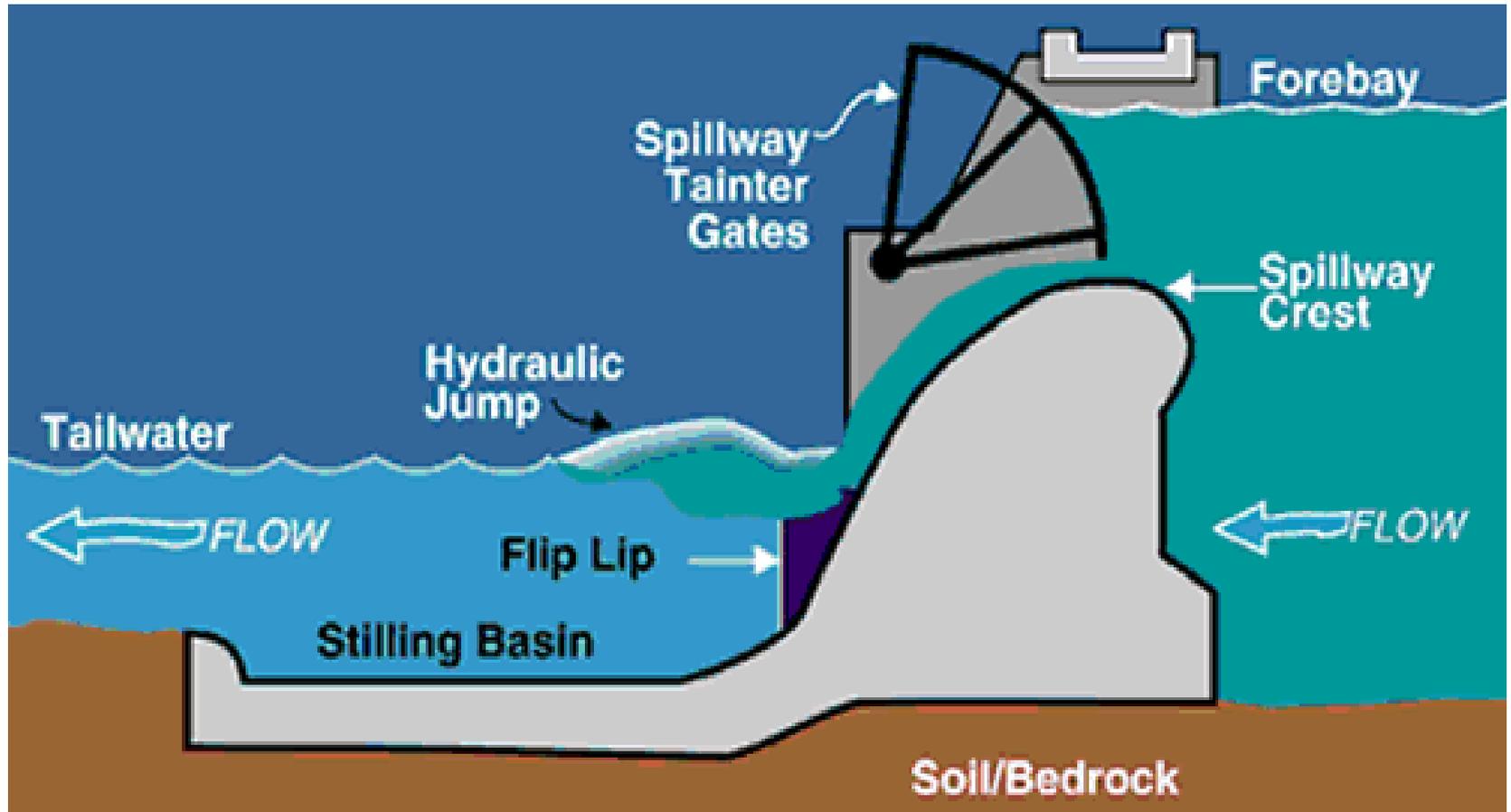
910 ft.
over top



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

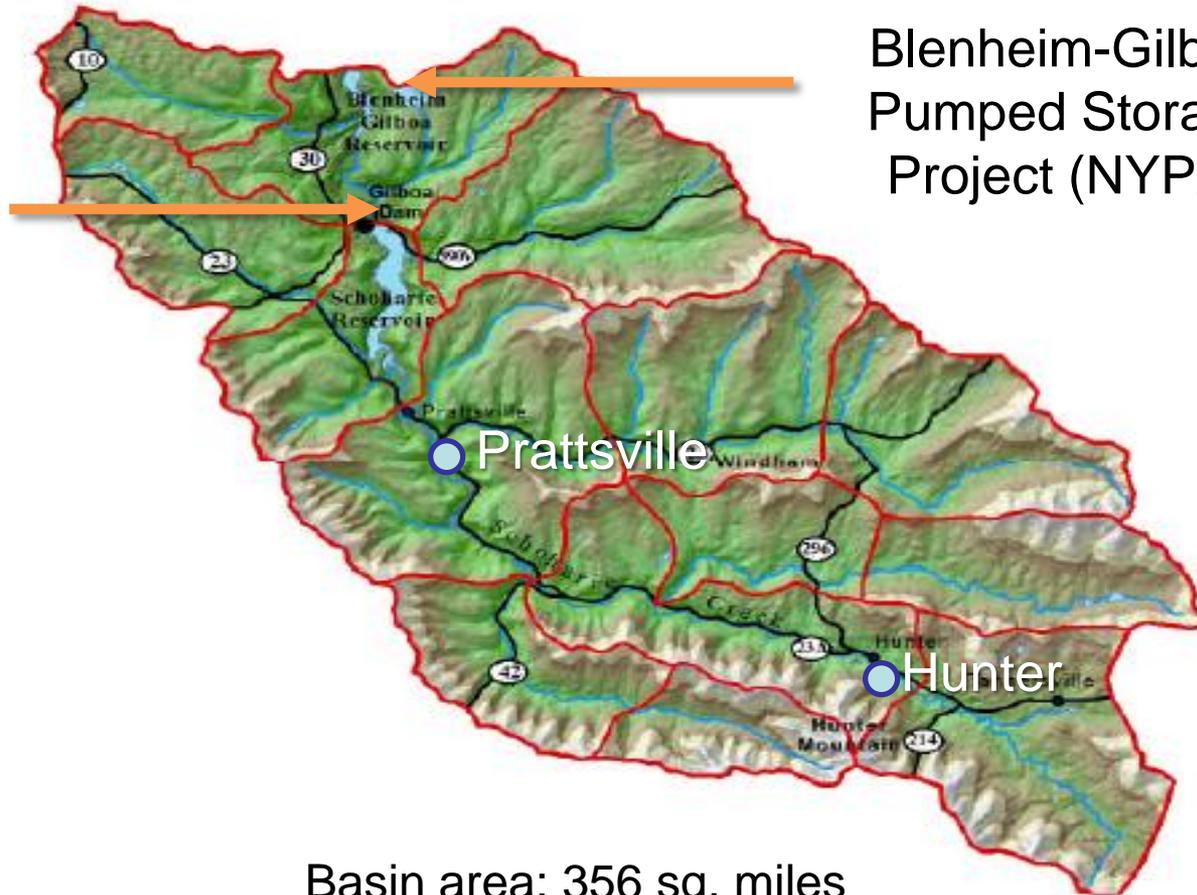


Blenheim Gilboa Drainage Basin

North



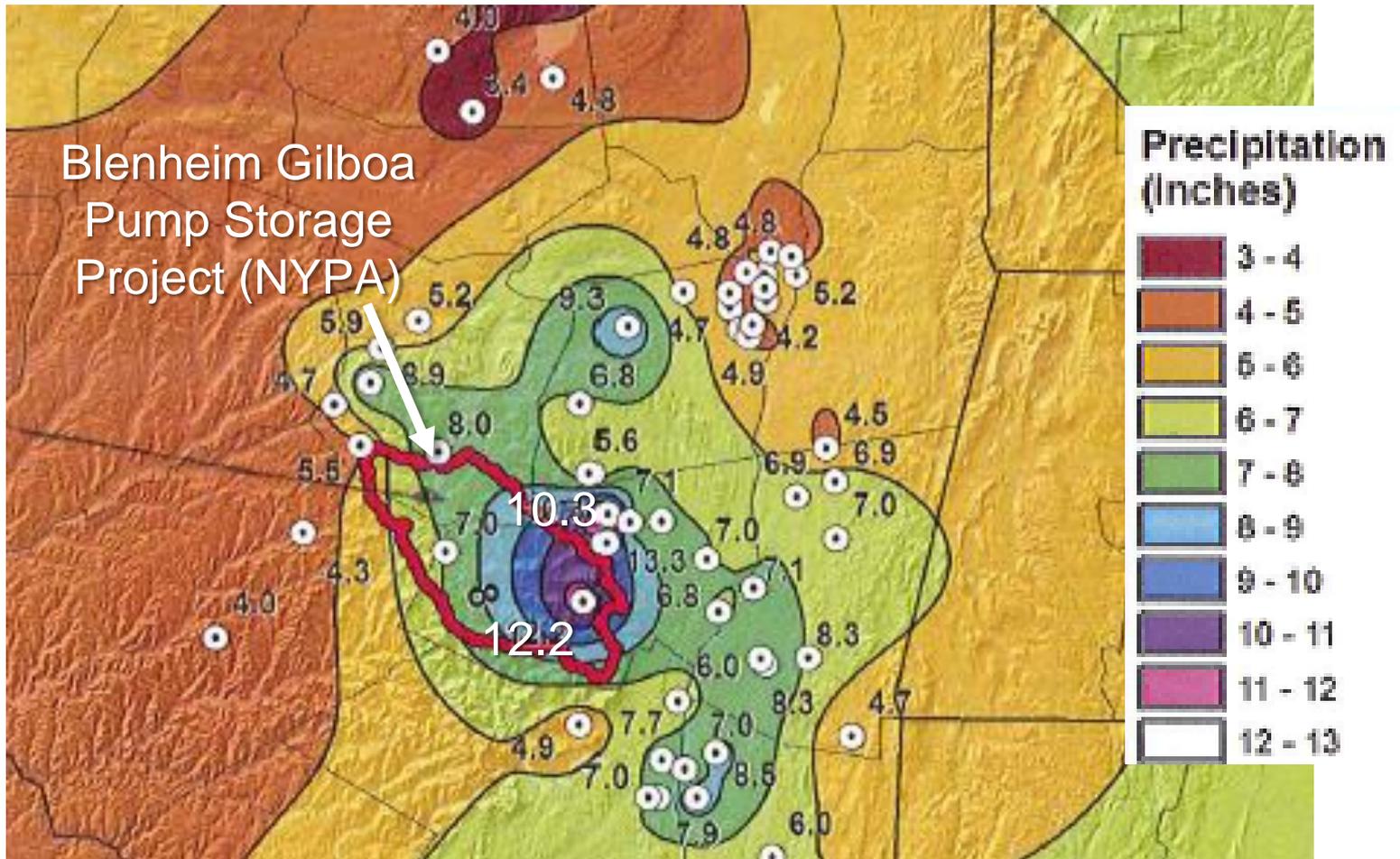
Gilboa Dam
(NYC DEP)



Blenheim-Gilboa
Pumped Storage
Project (NYPA)

Basin area: 356 sq. miles

Rainfall Totals: August 27-30, 2011



Operations During the Storm

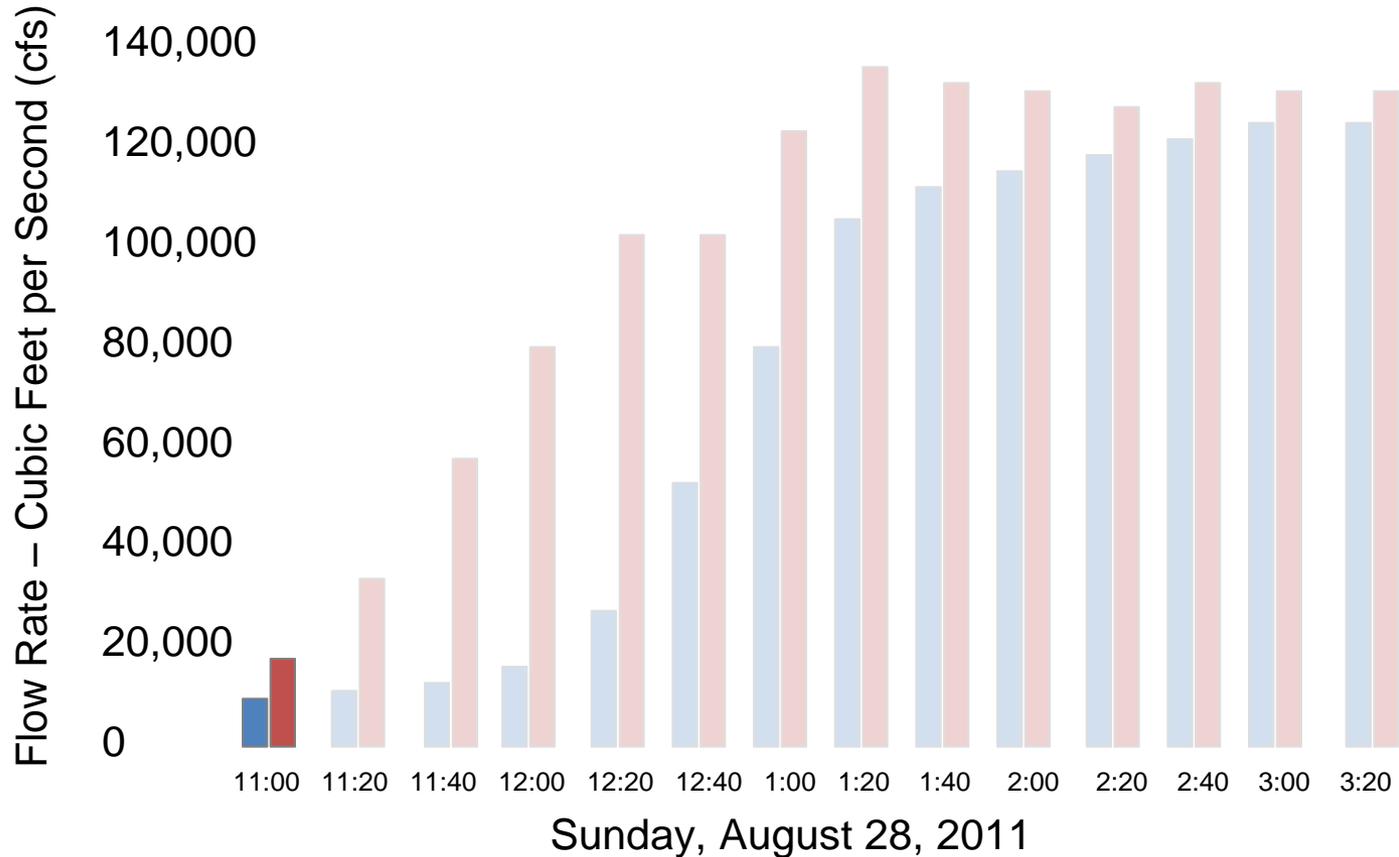
- Follow Emergency Action Plan (EAP) per training and procedures
- Tropical Storm Irene = 500 year flood event
- Manage record water inflows:
 - Focus on preventing over top of the earthen dam
 - Reduce outflow as much as possible within operating limits
- Manage operational challenges, requiring redundant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

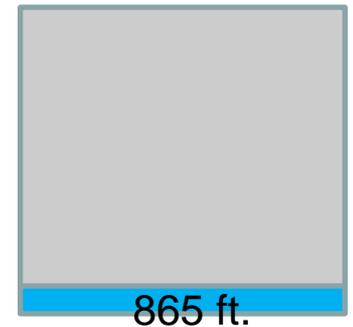


Outflows 
Inflows 

NYPA Lower Reservoir

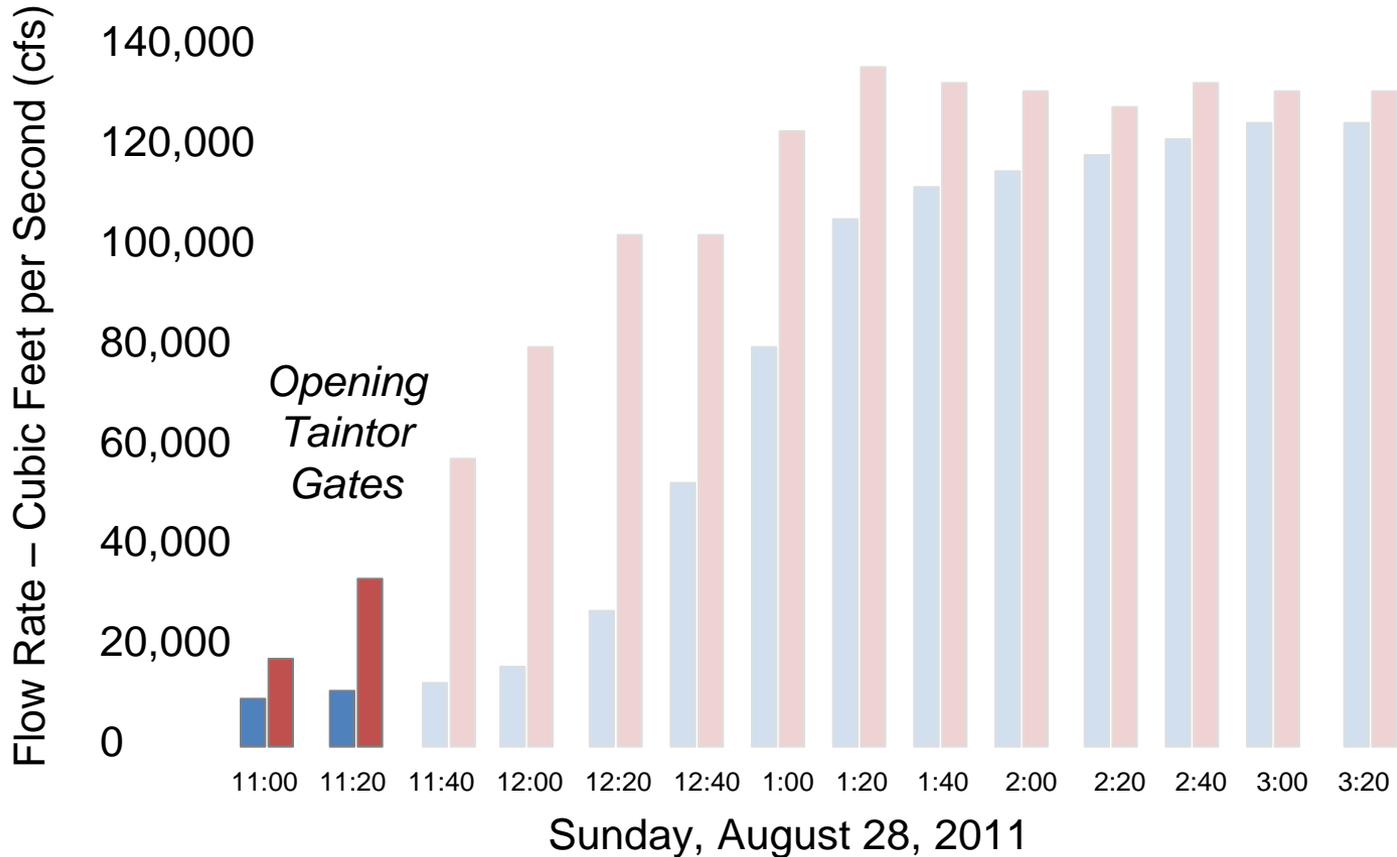
910 ft. overtop

900 ft. full



Tropical Storm Irene Response

Sunday, 11:20 a.m.



NYPA Lower Reservoir

910 ft. overtop

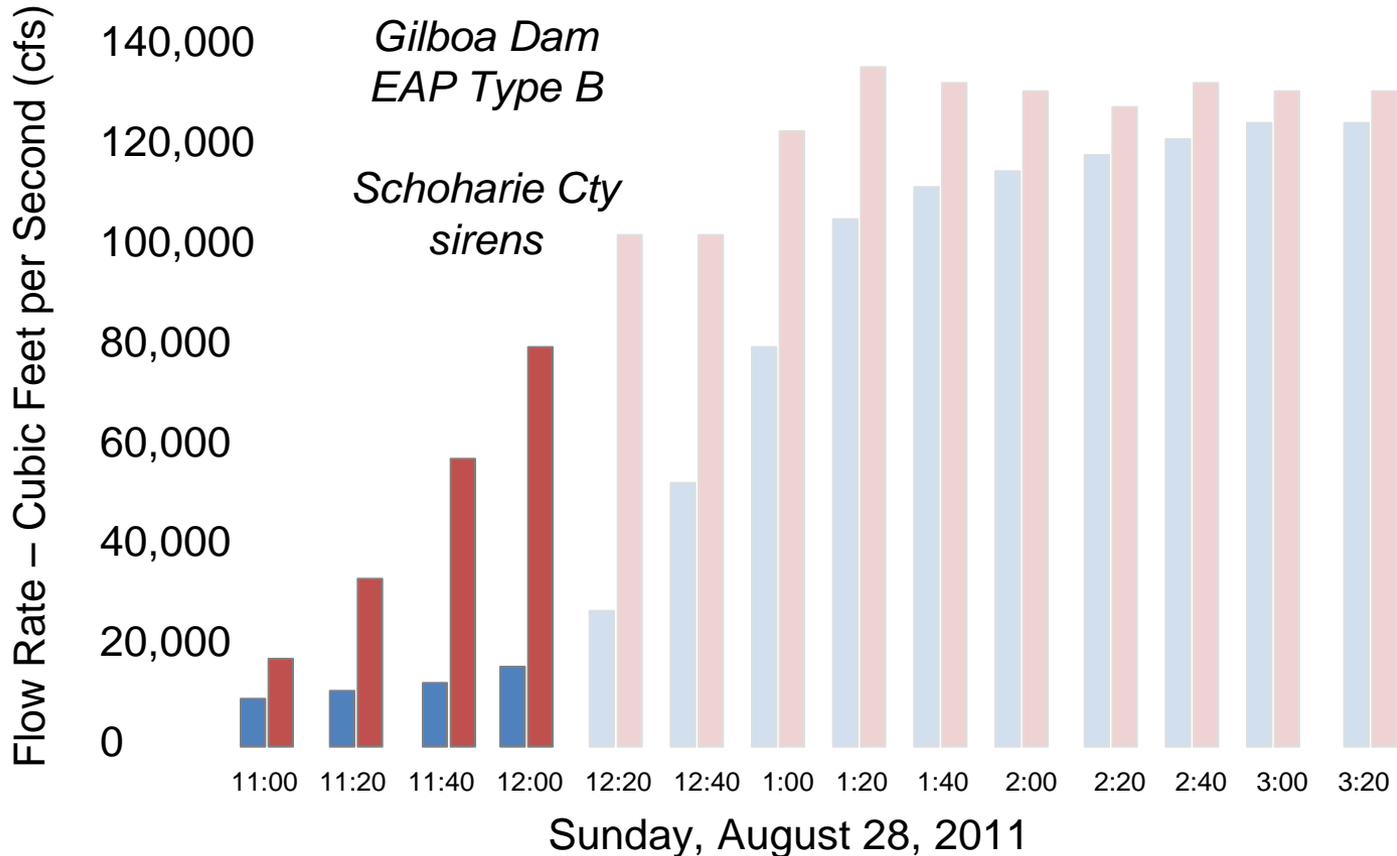
900 ft. full



Outflows 
Inflows 

Tropical Storm Irene Response

Sunday, 12:00 p.m.



NYPA Lower Reservoir

910 ft. overtop

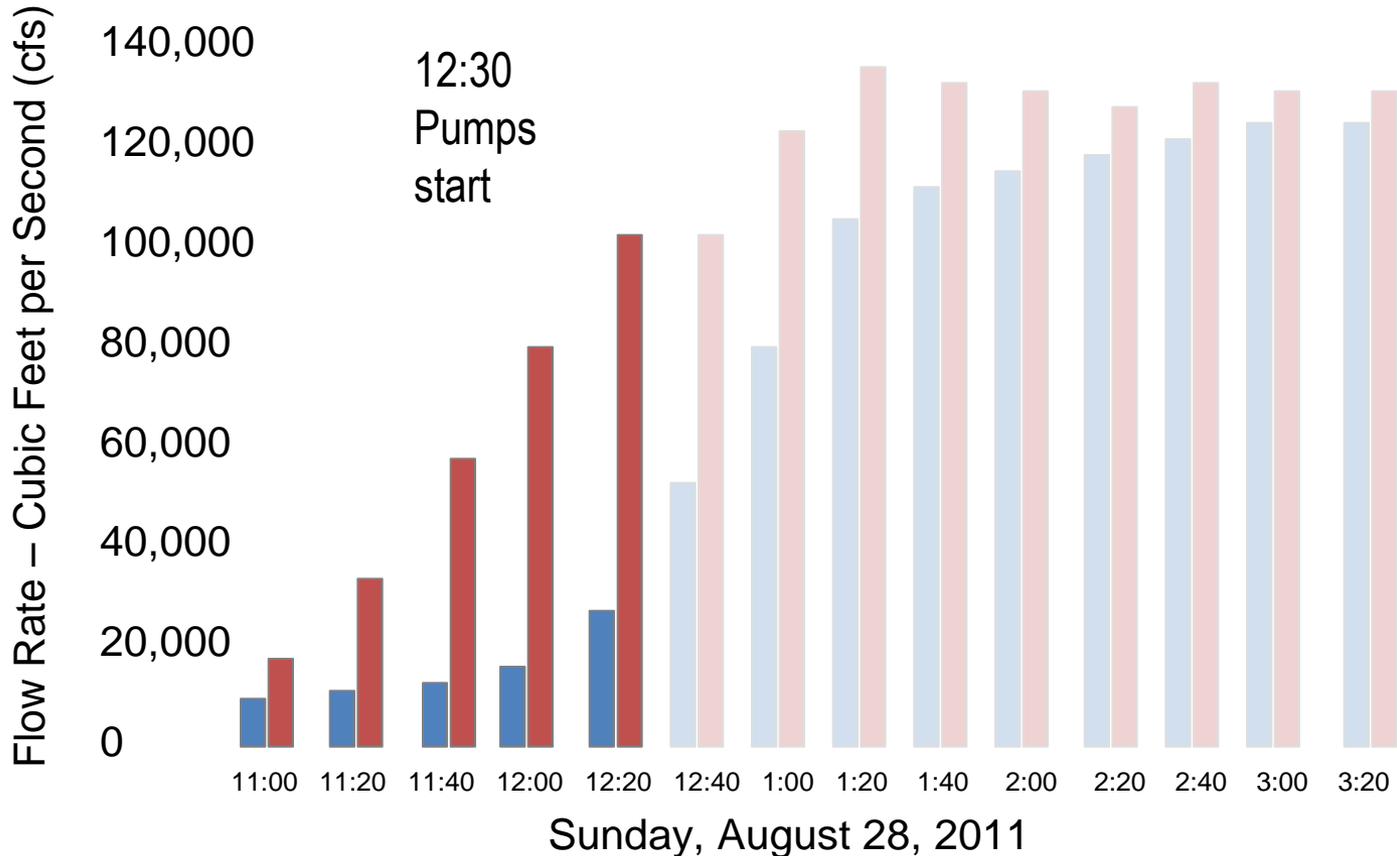
900 ft. full



Outflows 
Inflows 

Tropical Storm Irene Response

Sunday, 12:20 p.m.



Outflows 
Inflows 

NYPA Lower Reservoir

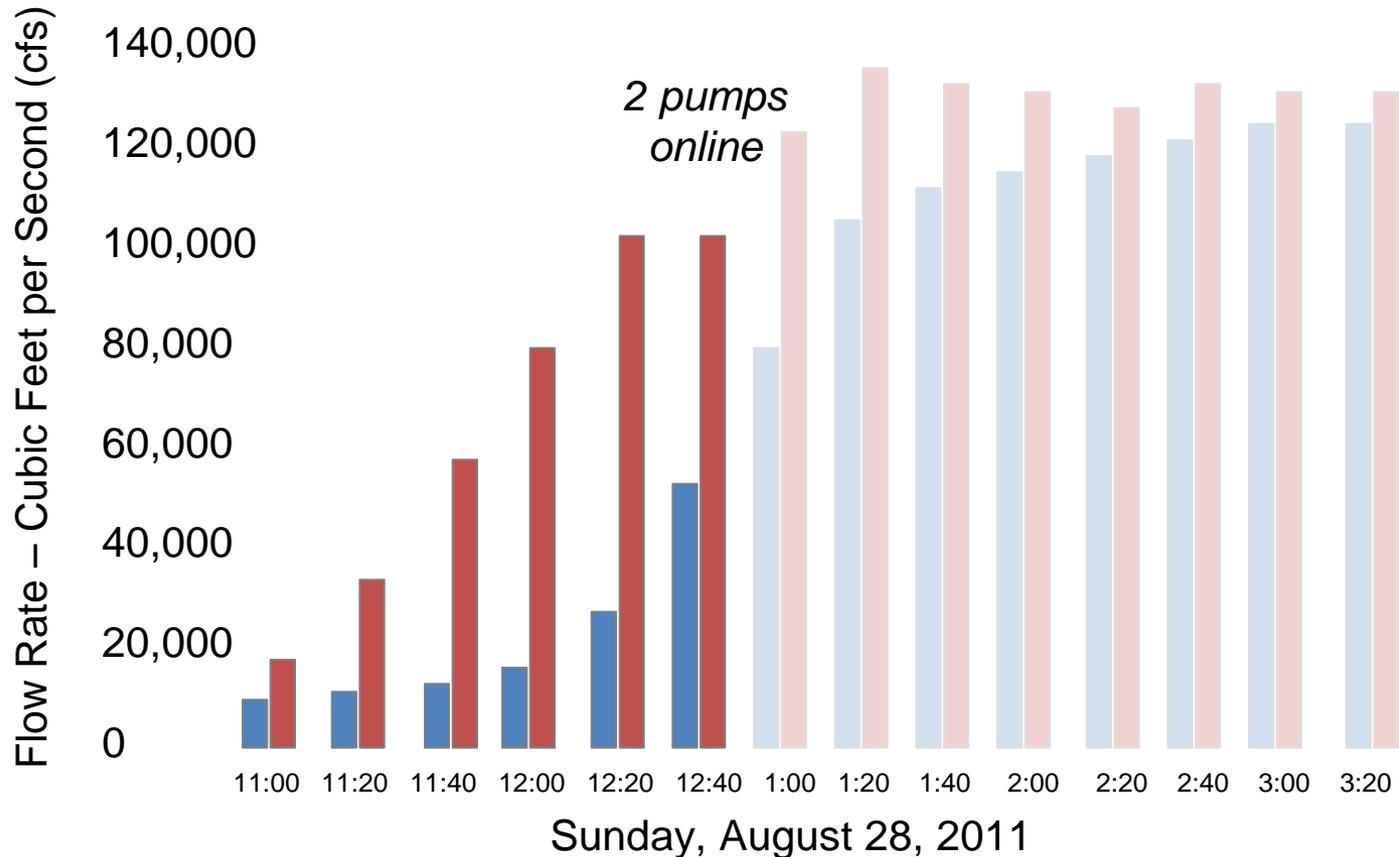
910 ft. overtop

900 ft. full



Tropical Storm Irene Response

Sunday, 12:40 p.m.



Outflows 
Inflows 

NYPA Lower Reservoir

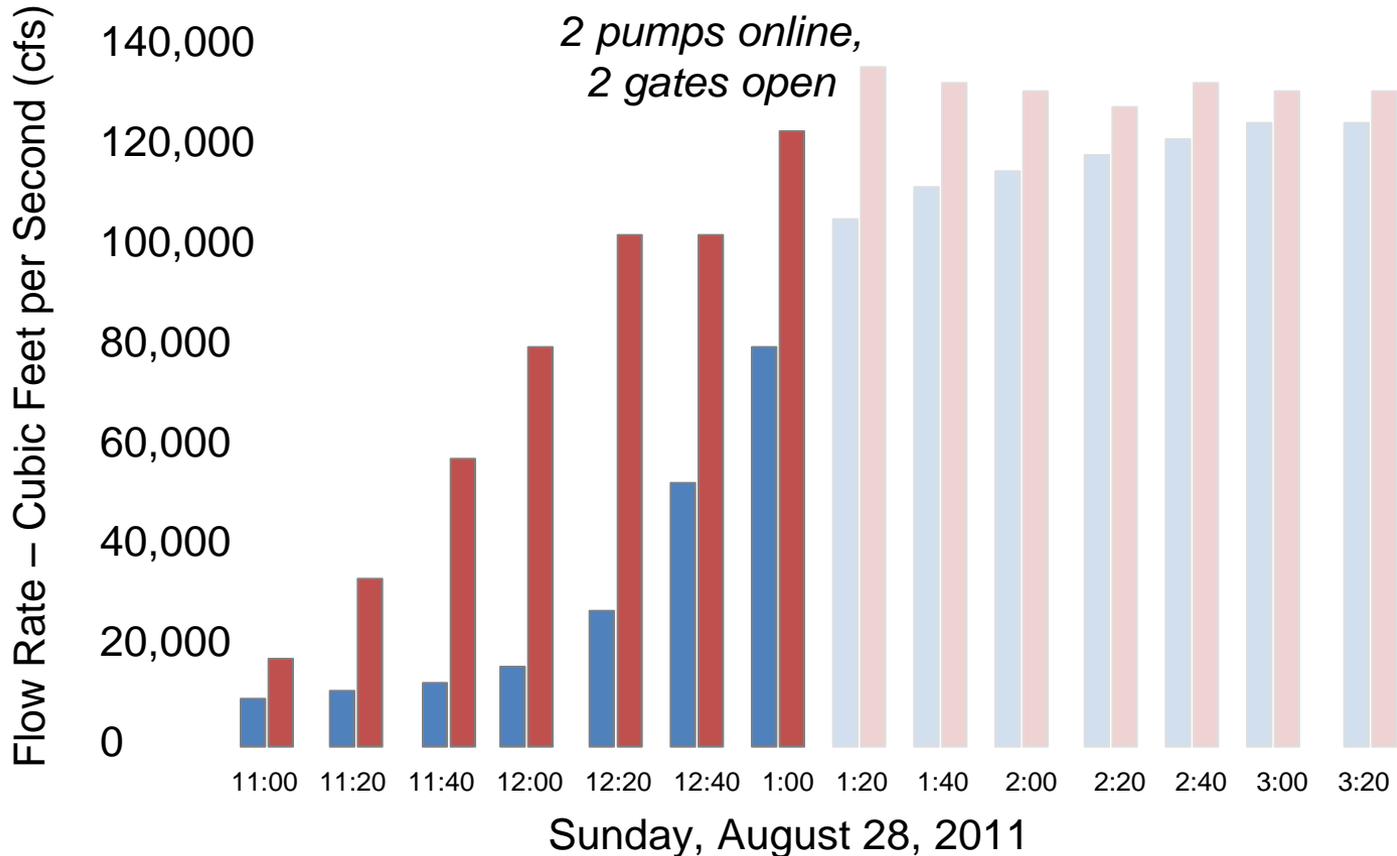
910 ft. overtop

900 ft. full



Tropical Storm Irene Response

Sunday, 1:00 p.m.



Outflows 
Inflows 

NYPA Lower Reservoir

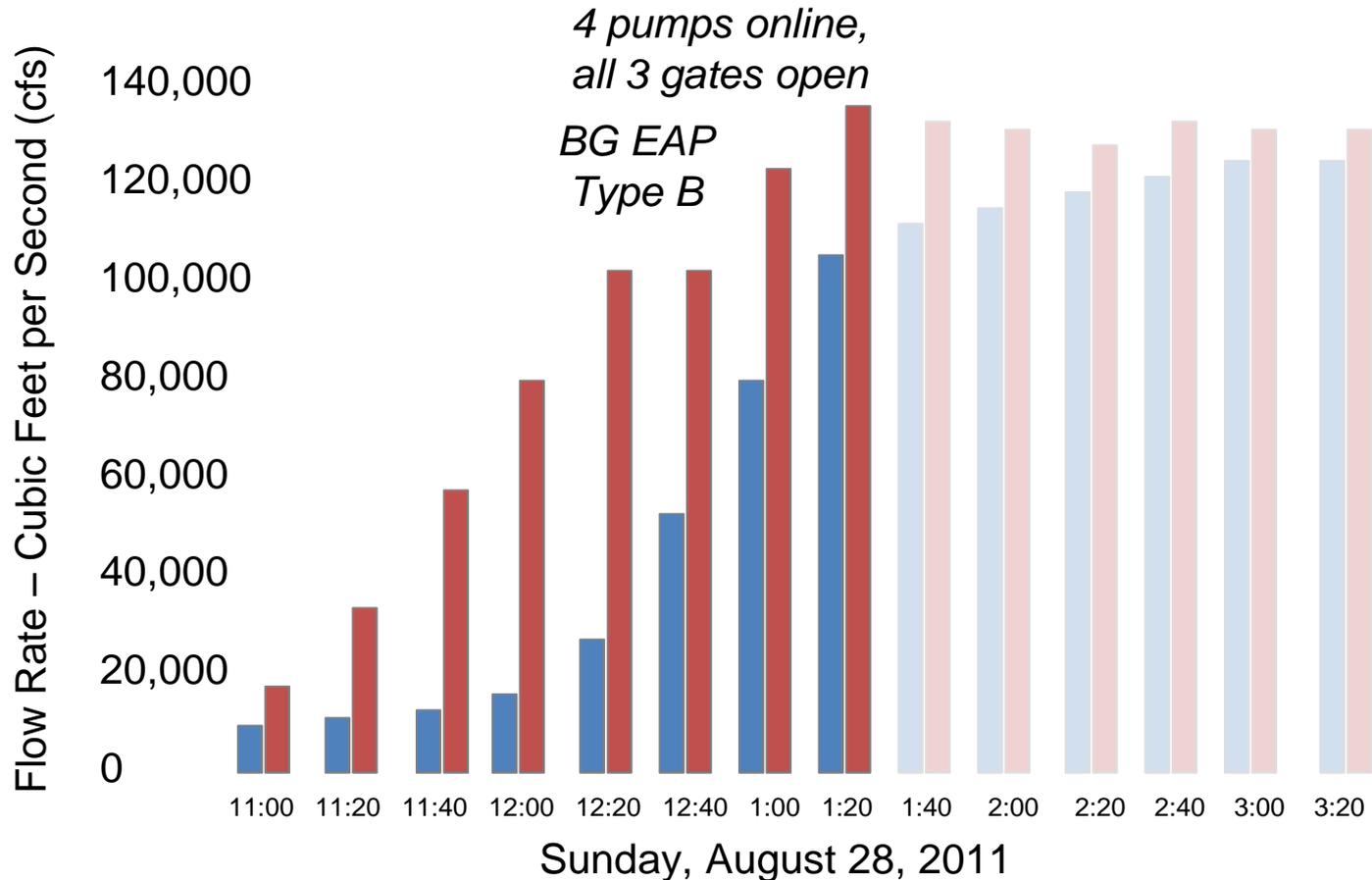
910 ft. overtop

900 ft. full



Tropical Storm Irene Response

Sunday, 1:20 p.m. – Peak Inflow



Outflows 
Inflows 

NYPA Lower Reservoir

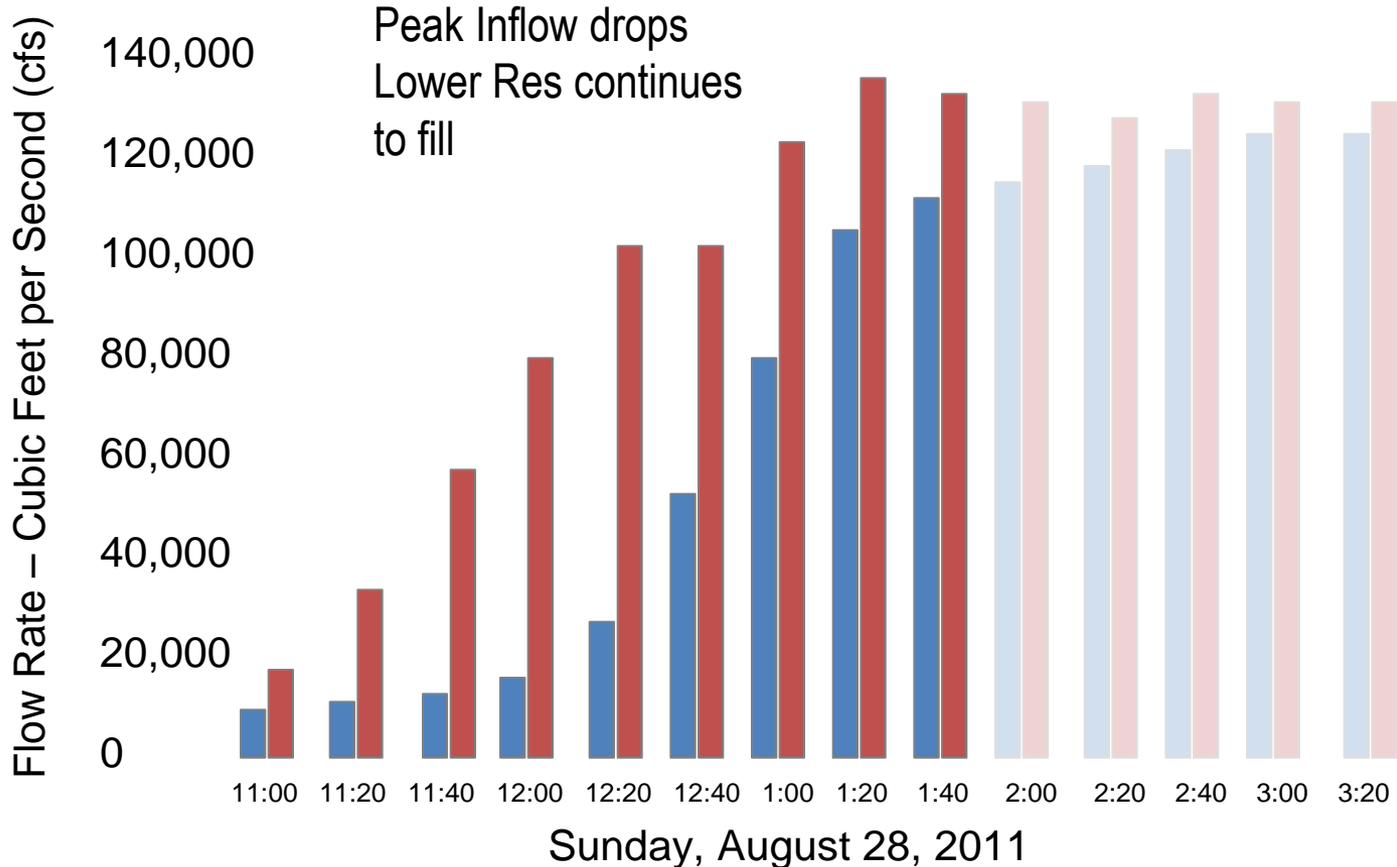
910 ft. overtop

900 ft. full



Tropical Storm Irene Response

Sunday, 1:40 p.m.



Outflows 
Inflows 

NYPA Lower Reservoir

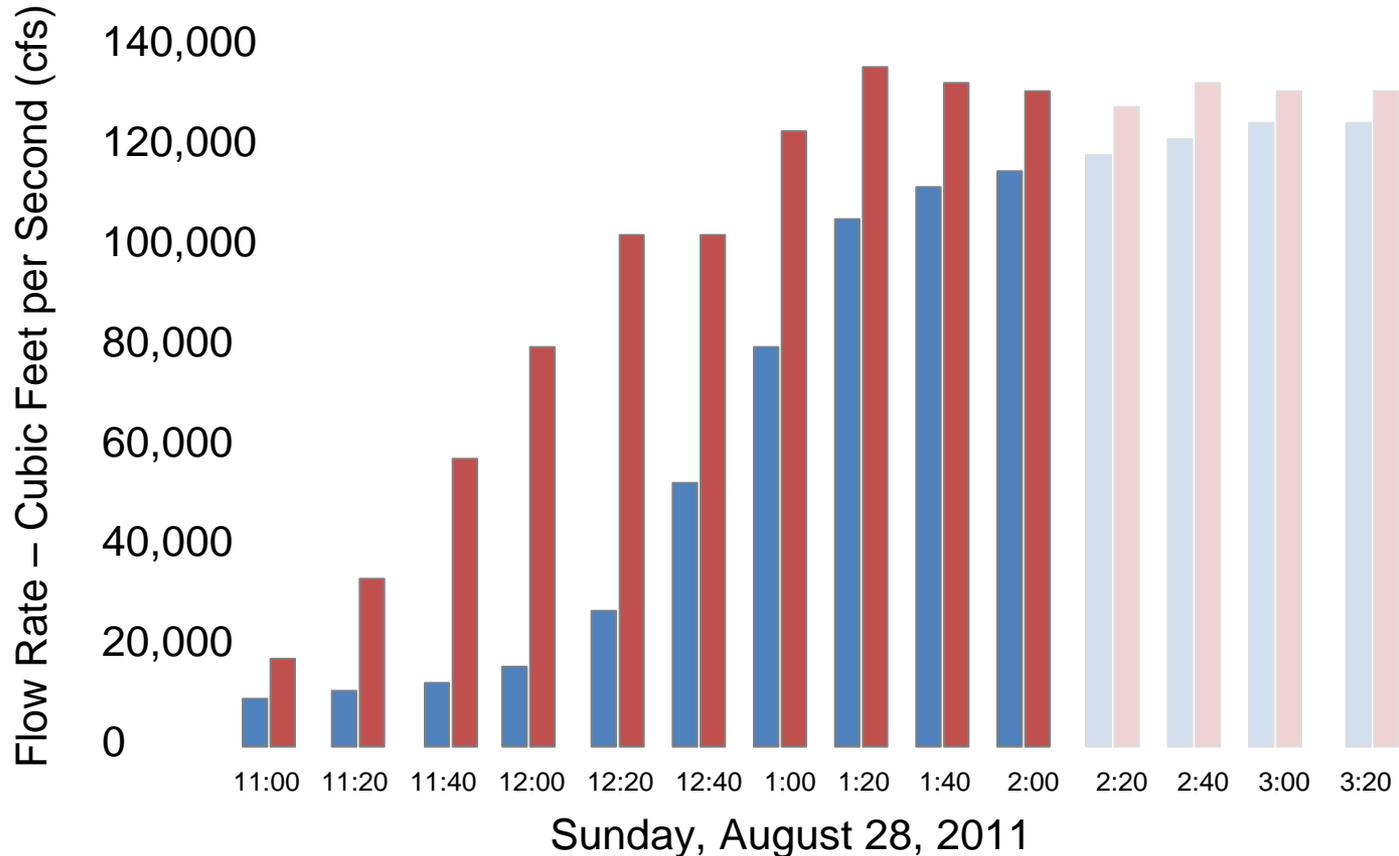
910 ft. overtop

900 ft. full



Tropical Storm Irene Response

Sunday, 2:00 p.m.



NYPA Lower Reservoir

910 ft. overtop

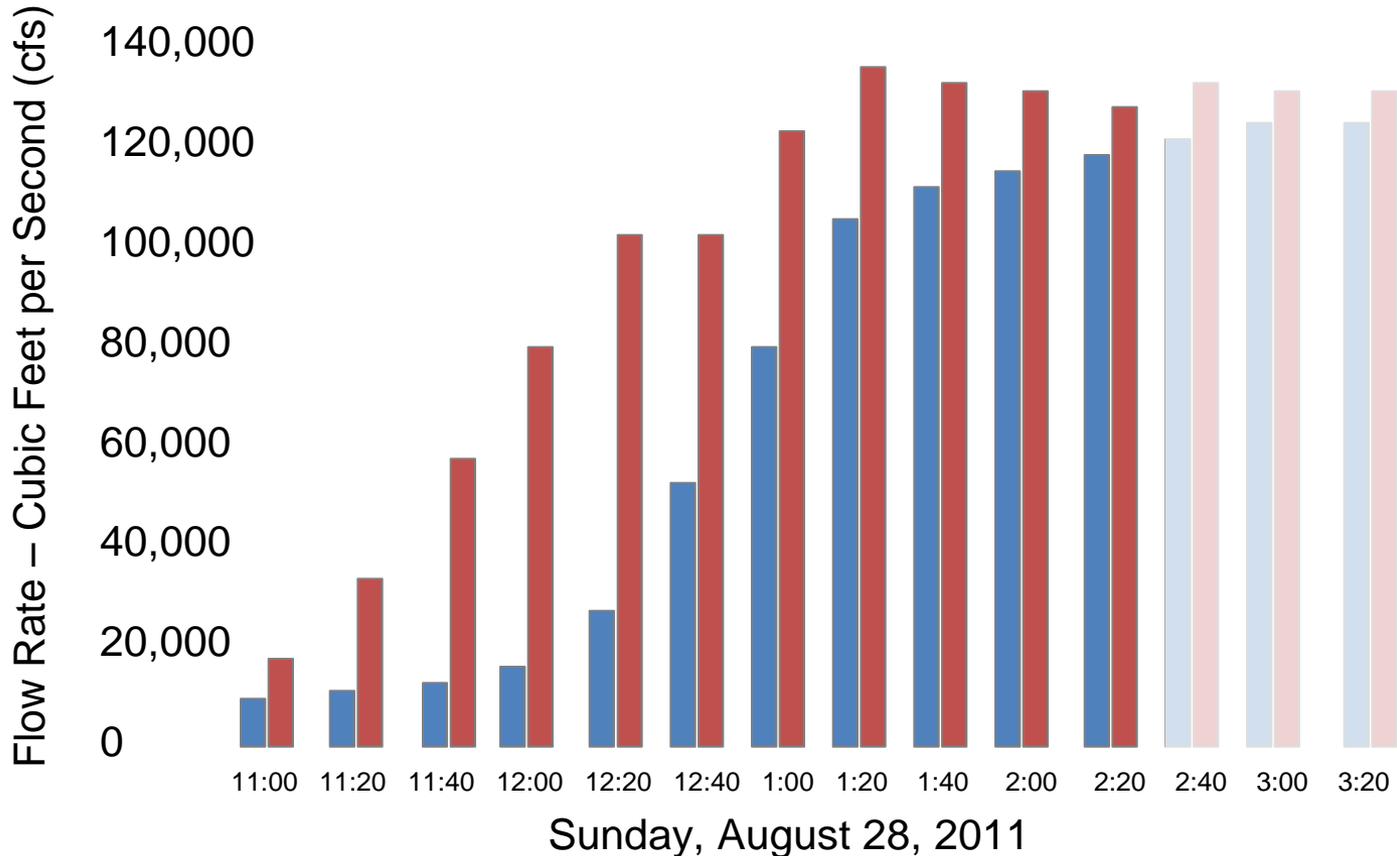
900 ft. full



Outflows 
Inflows 

Tropical Storm Irene Response

Sunday, 2:20 p.m.



NYPA Lower Reservoir

910 ft. overtop

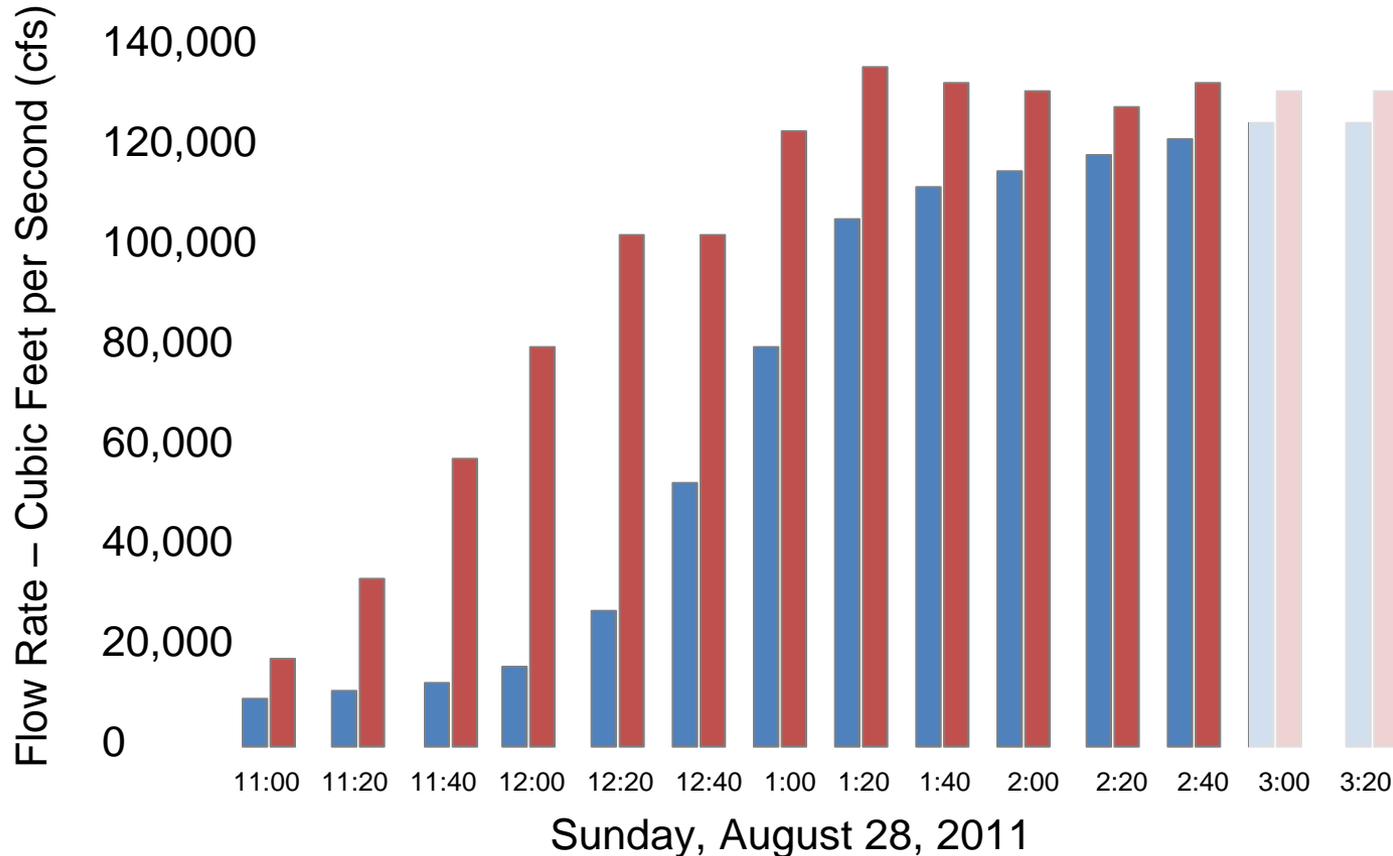
900 ft. full



Outflows 
Inflows 

Tropical Storm Irene Response

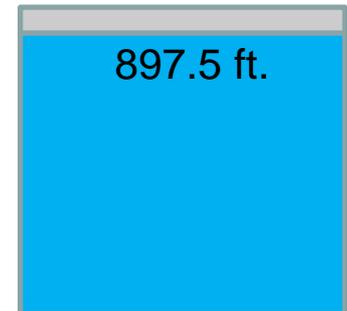
Sunday, 2:40 p.m.



NYPA Lower Reservoir

910 ft. overtop

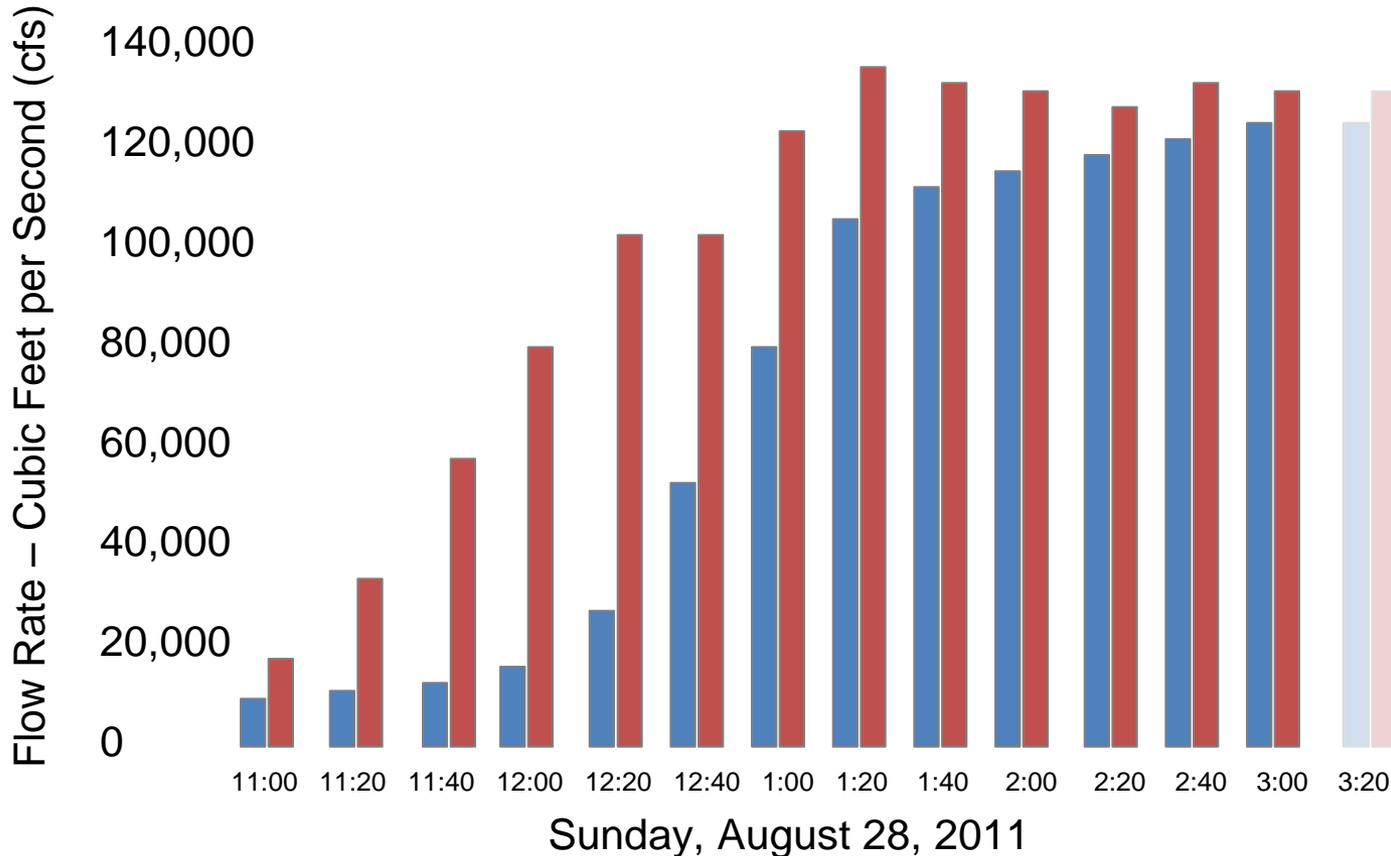
900 ft. full



Outflows 
Inflows 

Tropical Storm Irene Response

Sunday, 3:00 p.m.



NYPA Lower Reservoir

910 ft. overtop

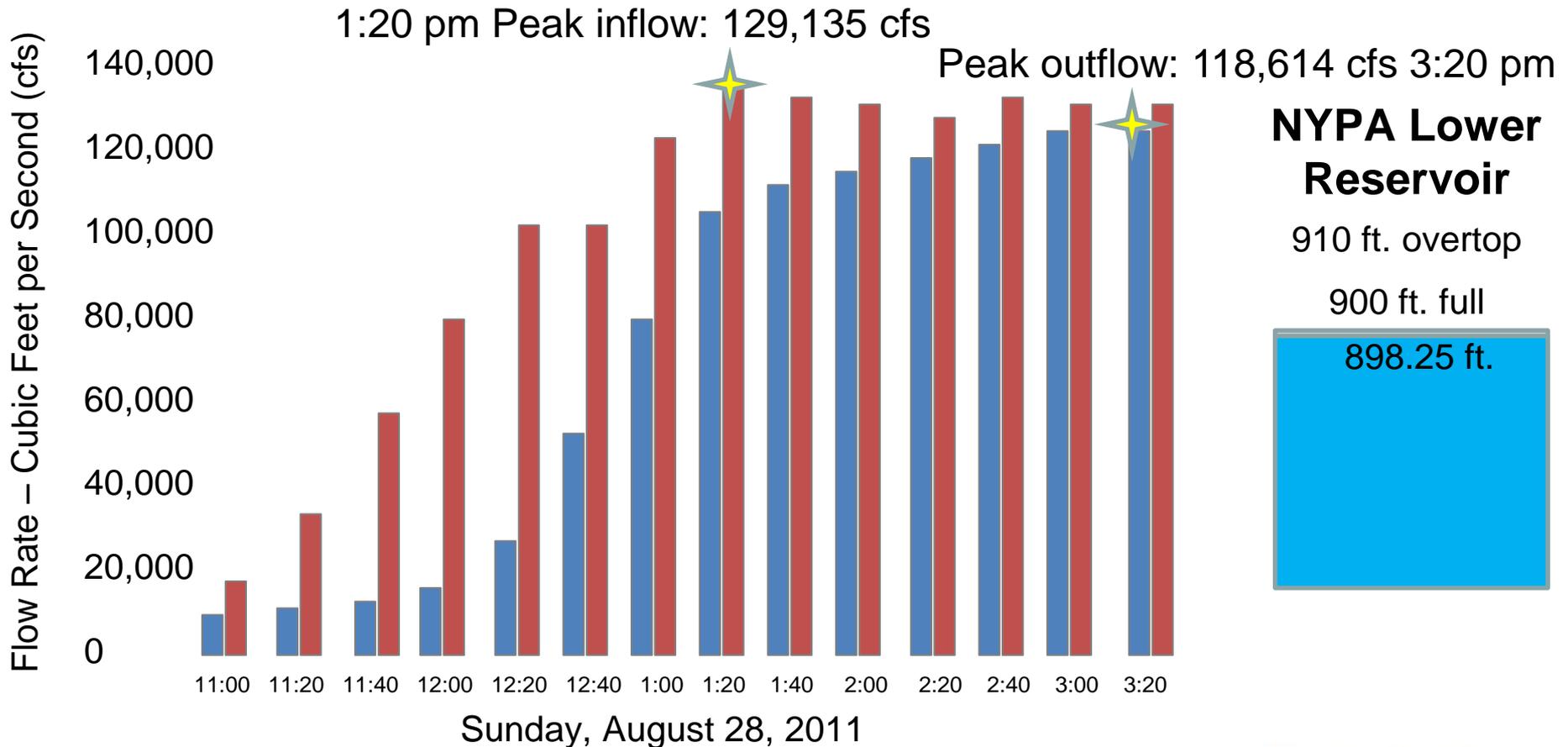
900 ft. full



Outflows 
Inflows 

Tropical Storm Irene Response

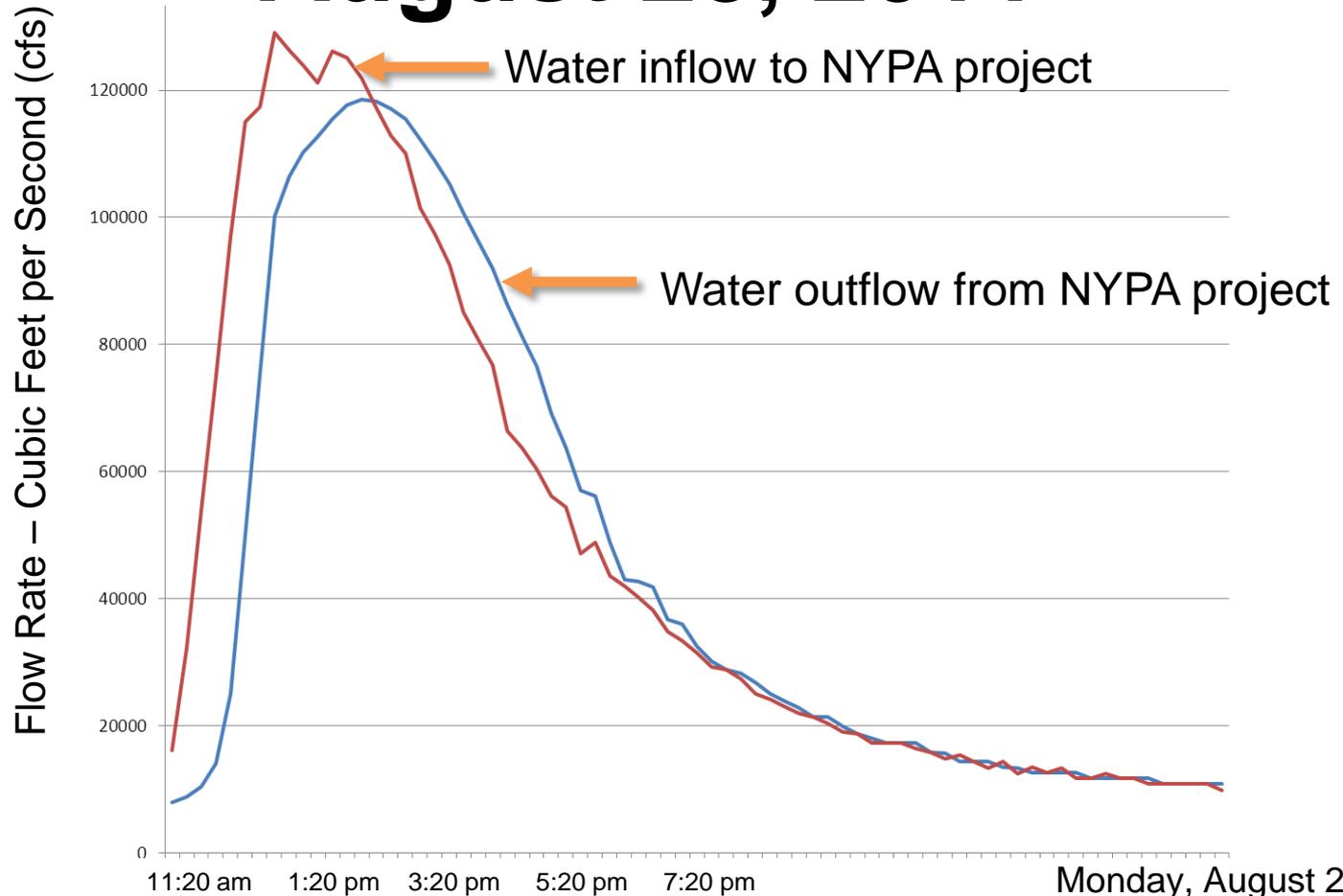
Sunday, 3:20 p.m.



Outflows 
 Inflows 

Water Flow Peak Shaved

August 28, 2011



Outflows 
Inflows 

Sunday, August 28, 2011

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 Study Plans P-2685-026 Dec 19 2014 (2).PDF.....1-7

BG Public Session - 19Jan12 FINALA.PDF.....8-43