

REPORT OF CHIEF ENGINEER
HUDSON RIVER - BLACK RIVER REGULATING DISTRICT
BOARD MEETING
APRIL 9, 2024 – MAYFIELD, NEW YORK

HUDSON RIVER AREA - MARCH SUMMARY

Reservoir Operation

Great Sacandaga Lake

The March average daily release from the Sacandaga Reservoir (Great Sacandaga Lake) was approximately 2,240 cubic feet per second (cfs). The Upper Hudson / Sacandaga River Offer of Settlement target elevation for March 31 is 749.12 feet (ft.). The release of water from Great Sacandaga Lake was consistent with the Upper Hudson/Sacandaga River Offer of Settlement.

Table 1.0 - *Great Sacandaga Lake Elevation and Release*

Date	Daily Average Elevation (ft,NAVD) ⁽⁴⁾	Deviation (ft) (1)		Release (cfs)	
		From Average	From Offer of Settlement	Conklingville Dam	E.J. West (2) Hydro Plant
Feb. 29	746.89	+13.90	+11.03	0	3,030
Mar. 31	767.9 (e)	+17.2 (e)	+18.8 (e)	0	3,500 (e)

- Notes: (1) Difference between current reservoir elevation and historic average or Level 3
(2) Release established by Regulating District
(3) "(e)" represents estimated value
(4) "NAVD" is North American Vertical Datum

Indian Lake Reservoir

The March average daily release from Indian Lake was approximately 200 cfs.

Table 2.0 - *Indian Lake Reservoir Elevation and Release*

Date	Daily Average Elevation (1) (ft, NAVD)	Deviation (ft)		Release (cfs)
		From Average	From Target	
Feb. 29	1,637.57	-2.45	-0.38	182
Mar. 31	1,645.0 (e)	+3.3 (e)	+7.9 (e)	205 (e)

- Notes: (1) Local datum = NAVD elevation + 1617.63ft; spillway crest = 1651.01ft (33.38ft)
(2) "(e)" represents estimated value

HUDSON RIVER AREA - MARCH SUMMARY- continued

River Flow

Hudson River flow, downstream of the confluence with the Sacandaga River, was approximately 8,800 cfs on March 24 and approximately 2,520 cfs above the historic average flow.

Table 3.0 - *Sacandaga, Indian, and Hudson River Flow*

River	Monthly Average Flow (cfs)	Historic Average Flow (2) (cfs)
Sacandaga at Hope	2,870 (e)	1,640
Sacandaga at Stewarts Bridge	2,240 (e)	2,030
Indian at Indian Lake Dam	202 (e)	280
Hudson at Hadley (1)	7,280 (e)	3,690

Notes: (1) Above confluence with Sacandaga River
 (2) Based on USGS records
 (3) "(e)" represents estimated value
 (4) Gauge unavailable due to ice

Precipitation

Monthly total precipitation measured 154%, 152%, and 172% historic average at Indian Lake, Mayfield, and Conklingville, respectively, as of March 25

Table 4.0 - *Hudson River Basin Precipitation - as of March 25*

Station	Monthly Total (inch)	Historic Average (inch)
Indian Lake	4.86	3.15
Mayfield	5.46	3.60
Conklingville	6.36	3.69

HUDSON RIVER AREA - MARCH SUMMARY- continued

Operation Overview

Operation Overview

Precipitation during the month of March was above average in the Great Sacandaga Lake watershed and above average in the Indian Lake watershed. The monthly inflow to Great Sacandaga Lake and Indian Lake reservoir was approximately 148% and 154% of historic average, respectively. Monthly release of water from Great Sacandaga Lake and Indian Lake measured 108% and 70% of historic average, respectively.

Great Sacandaga Lake Operation

Great Sacandaga Lake operation summary report for the period March 1, 2024 through March 24, 2024 is attached. This report includes projected and forecast values for dates after March 24, 2024.

Hudson River Area Staff Activities

Staff completed routine maintenance and operations activities during the month.

A summary of Regulating District staff activities and work projects at the dam facilities is attached in the Operations Manager's Report.

BLACK RIVER AREA – MARCH SUMMARY

Reservoir Operations

Stillwater Reservoir

The March average daily release from Stillwater Reservoir was approximately 290 cfs. The maximum discharge for the month was 600 cfs.

Table 1.0 - *Stillwater Reservoir Elevation and Release*

Date	Daily Average Elevation (ft, NAVD)	Deviation from Average Elevation (ft) (1)	Release (cfs)
Feb. 29	1,667.92	+1.66	600
Mar. 31	1,672.0 (e)	+3.9 (e)	250 (e)

Notes: (1) Difference between current reservoir elevation and historic average
 (2) "(e)" represents estimated value

Sixth Lake Reservoir

The March average daily release from Sixth Lake Reservoir was approximately 40 cfs.

Table 2.0 - *Sixth Lake Reservoir Elevation and Release*

Date	Elevation (1) (ft, NAVD)	Deviation from Average Elevation (2) (ft)	Release (cfs)
Feb. 29	1,780.49	-1.48	35
Mar. 31	1,782.4 (e)	+0.4 (e)	4 (e)

Notes: (1) Local datum = USGS datum
 (2) Difference between current reservoir elevation and historic average.
 (3) "(e)" represents estimated value

Old Forge Reservoir

The March average daily release from Old Forge Reservoir was approximately 70 cfs.

Table 3.0 - *Old Forge Reservoir Elevation and Release*

Date	Elevation (1) (ft, NAVD)	Deviation from Average Elevation (2) (ft)	Release (cfs)
Feb. 29	1,703.52	-0.19	98
Mar. 31	1,704.9 (e)	+0.9 (e)	7 (e)

Notes: (1) Local Datum = USGS elevation
 (2) Difference between current reservoir elevation and historic average.
 (3) "(e)" represents estimated value

BLACK RIVER AREA - MARCH SUMMARY - continued

River Flow

The average daily Black River flow, as measured at the Watertown gauge, was approximately 3,560 cfs on March 24.

Table 4.0 - *Moose, Independence, Beaver, and Black River Flow*

River	Monthly Average Flow (cfs)	Historic Average Flow (1) (cfs)
Moose at McKeever	1,780 (e)	1,166
Beaver at Croghan	620 (e)	728
Black at Watertown	6,500 (e)	6,200

Notes: (1) Based on USGS records
 (2) "(e)" represents estimated value
 (3) Stage and flow affected by ice in river

Precipitation

Monthly total precipitation measured 79%, 70%, 83% of historic average at Stillwater, Old Forge, and Sixth Lake, respectively, as of March 19.

Table 5.0 - *Black River Basin Precipitation - as of March 19*

Station	Monthly Total (inch)	Historic Average (inch)
Stillwater	2.65	3.34
Old Forge	2.48	3.56
Sixth Lake	2.69	3.25

BLACK RIVER AREA - MARCH SUMMARY - continued

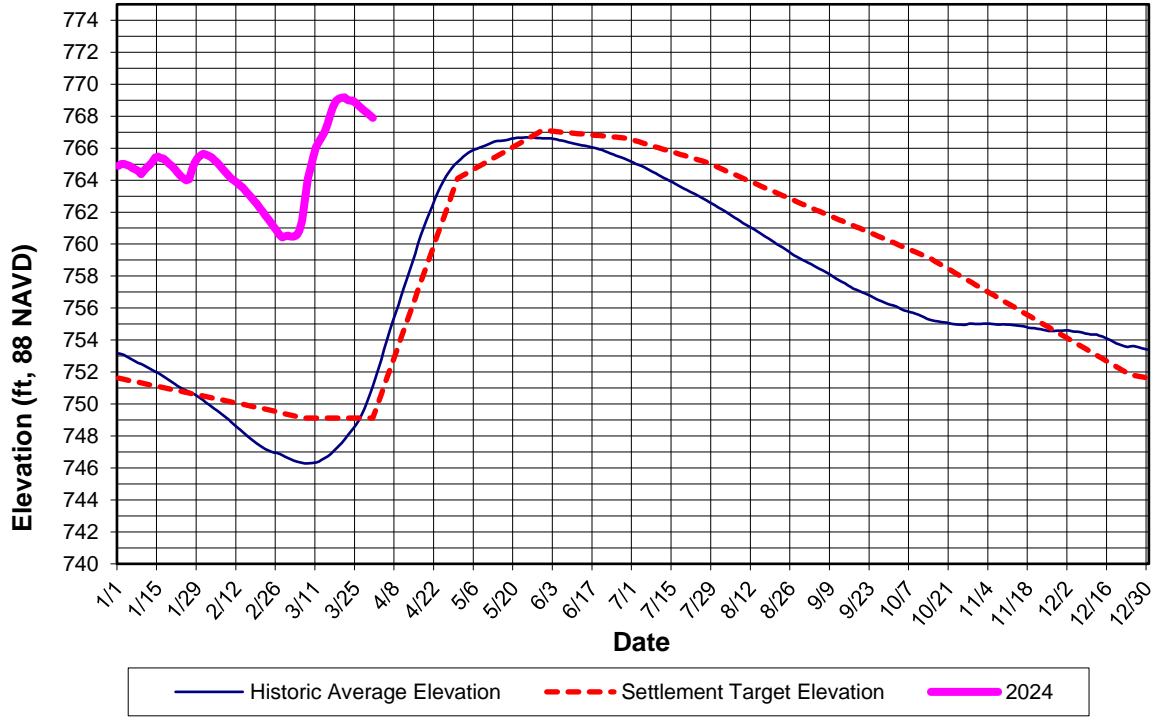
Operation Overview

Precipitation in the month of March was below average at Stillwater and below average at Sixth Lake and Old Forge Reservoir. The monthly inflow to Stillwater Reservoir was approximately 106% of historic average. The inflow to Sixth Lake and Old Forge Reservoir totaled 0.16 and 0.35 billion cubic feet, or 94% and 100% of historic average, respectively, in March. Release of water from Stillwater Reservoir provided 70% of historic monthly average discharge.

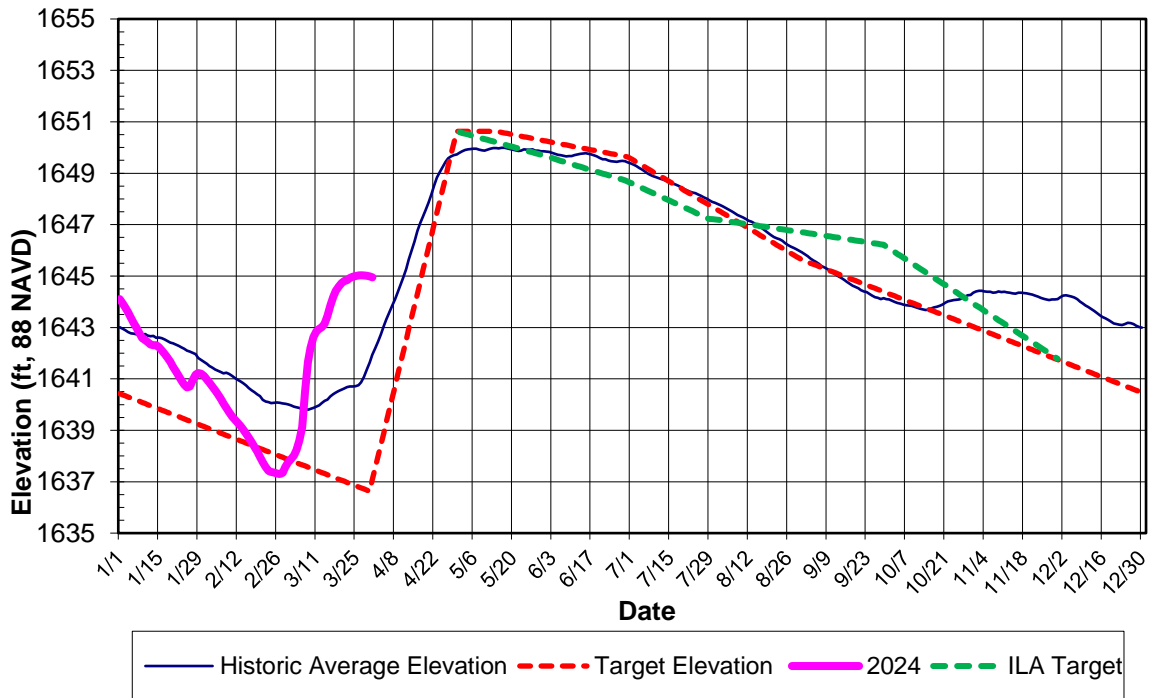
Black River Area Staff Activities

A summary of Regulating District staff activities and work projects at the dam facilities is attached in the Superintendent's Report.

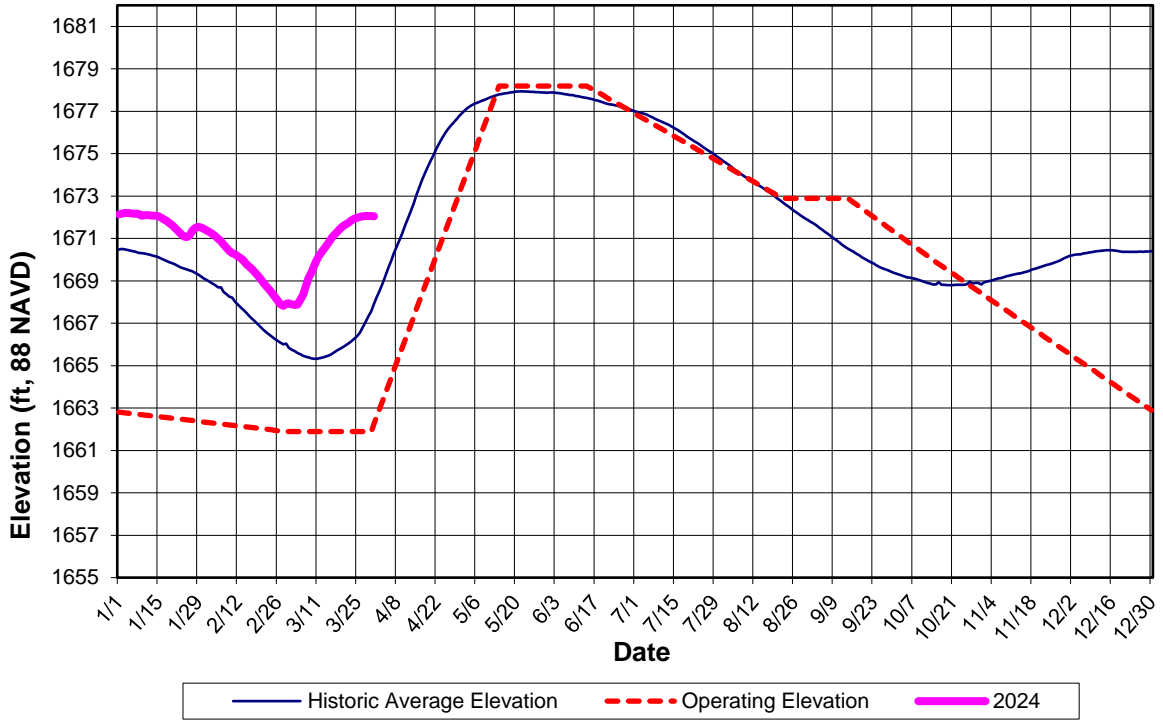
Great Sacandaga Lake 2024 Reservoir Elevation



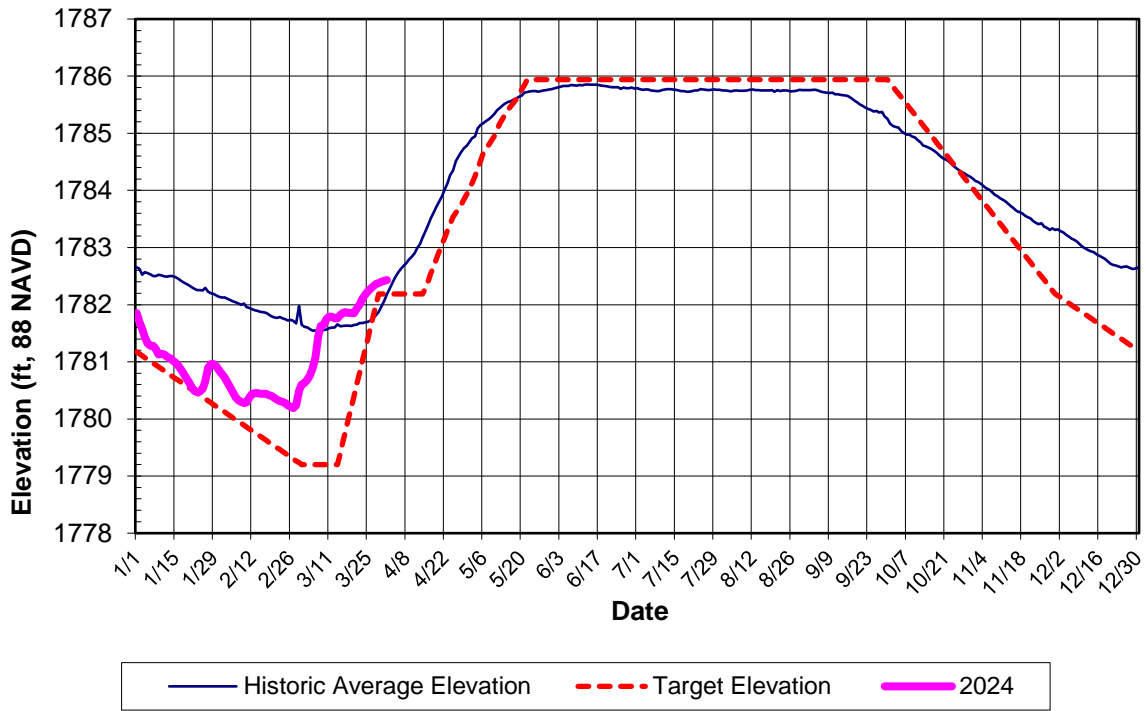
Indian Lake 2024 Reservoir Elevation



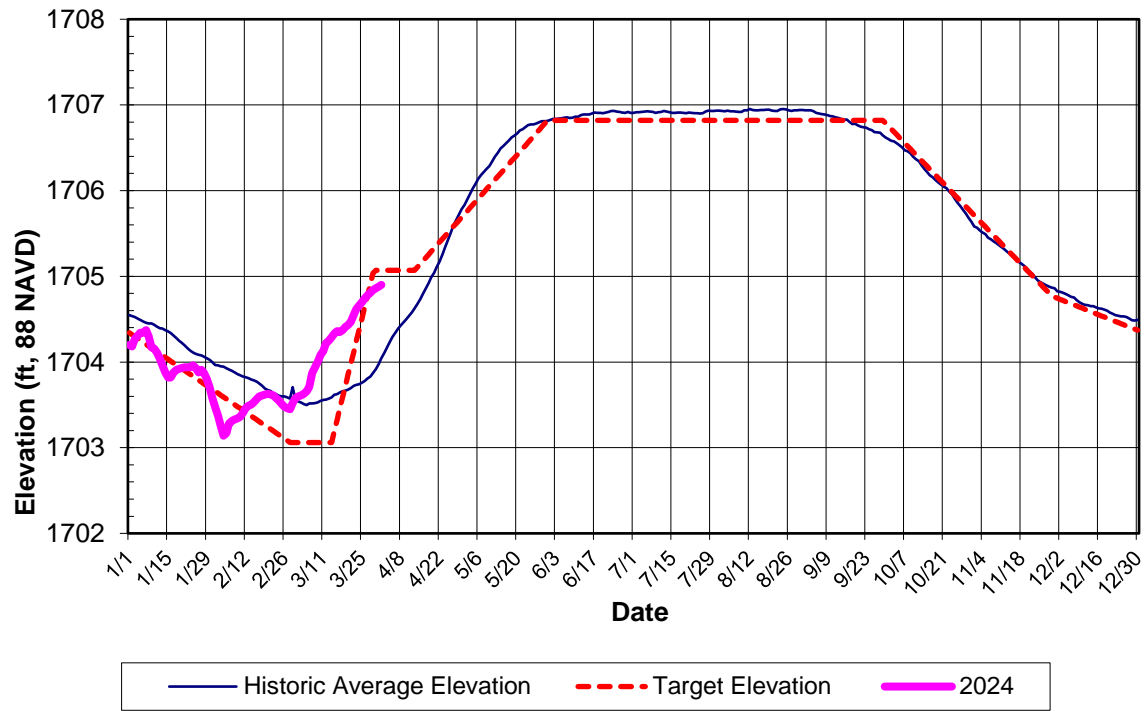
Stillwater Reservoir 2024 Reservoir Elevation



Sixth Lake 2024 Reservoir Elevation



Old Forge 2024 Reservoir Elevation



SACANDAGA RESERVOIR ELEVATION CALCULATOR

Datum:
1988 NAVD

Settlement Parameters	
Date	3/25/2024
Target Elevation	749.12
Actual "Level"	3.80
"Level 2.5 threshold"	
"Level 1.2 threshold"	740.42
Hudson River Target	Elevation Level
Maximum Flow (cfs)	9500 20500
Minimum Flow (cfs)	n/a 3600
Min. Rec/Rafting Hours (hrs)	#VALUE!

Rafting Release at Abanakee
North Crk T, Th, Sa., Su.
Hadley M, W, F, Su.

BROOKFIELD HYDRO CONTROL CENTER: 877-816-7466

Whitewater (hrs)	Daily Avg (cfs)
3	806
4	958
5	1110
6	1263
7	1415
8	1567

Daily Conditions	
Date	3/25/2024
Day of Year	6294
Starting Elevation (ft)	768.90
Average Elevation	768.82
Flow Below Hadley (cfs)	8600
Today's Release	4000
Tomorrow's Release	4000

Justin St.John 518-743-2004 (w)
315-396-8194 (cell)
Jonathan Norris 518-743-2094
Jane LaBombard 518-615-9353

Dan McCarty 744-2067 Eric Johnson 863-8791
768.82 Piezometers 518-696-5807

ACTUAL High Value
SCHEDULED Low Value
ESTIMATED Instant (min + rafting)
TO BE CHANGED
Spillway Crest 770.12 ft 88 NAVD

Starting Date 12:00 AM	Starting Elevation	Net Average Inflow	Sacandaga River Flow				Settlement Level	Hudson at Hadley	Hudson River Below Confluence	Hudson River Target Flow			Ending Elevation	Ending Date 12:00 AM	F. Elev. Flow	Daily Average Elevation	Settlement Target Elevation	Historic Daily Average Elev.
			E.J. West	Valves	Spillway	Average Release				Maximum (Table F - Elev.)	Minimum (Table C - Level)	Maximum (Table D - Elev.)						
3/1/2024	760.50	3200	3270	0	0	3270	4000	3.49	3930	7200	2980	8000	8480	760.49	3/2/2024	760.50	749.38	746.70
3/2/2024	760.49	3800	4040	0	0	4040	4000	3.49	3900	7940	2980	8000	8480	760.47	3/3/2024	760.48	749.34	746.62
3/3/2024	760.47	4500	4020	0	0	4020	4000	3.49	4120	8140	2980	8000	8480	760.50	3/4/2024	760.49	749.31	746.54
3/4/2024	760.50	5500	4000	0	0	4000	4000	3.51	4590	8590	3020	8000	8900	760.62	3/5/2024	760.56	749.27	746.47
3/5/2024	760.62	7900	2130	0	0	2130	4000	3.53	5710	7840	3060	8000	9700	761.09	3/6/2024	760.86	749.23	746.43
3/6/2024	761.09	10700	438	0	0	438	4000	3.54	7660	8098	3080	8000	10100	761.91	3/7/2024	761.50	749.19	746.40
3/7/2024	761.91	21900	449	0	0	449	4000	3.60	17700	18149	3200	8000	12500	763.62	3/8/2024	762.77	749.16	746.37
3/8/2024	763.62	11200	433	0	0	433	4000	3.65	17000	17433	3300	8000	14500	764.47	3/9/2024	764.05	749.12	746.36
3/9/2024	764.47	7900	435	0	0	435	4280	3.68	12500	12935	3360	8000	15700	765.05	3/10/2024	764.76	749.12	746.38
3/10/2024	765.05	10900	439	0	0	439	4607	3.71	11300	11739	3420	8000	16900	765.86	3/11/2024	765.46	749.12	746.39
3/11/2024	765.86	5700	433	0	0	433	4887	3.73	9940	10373	3460	8000	17700	766.26	3/12/2024	766.06	749.12	746.43
3/12/2024	766.26	4200	429	0	0	429	5027	3.75	8490	8919	3500	8000	18500	766.55	3/13/2024	766.41	749.12	746.49
3/13/2024	766.55	5000	563	0	0	563	5213	3.77	7780	8343	3540	8000	19300	766.89	3/14/2024	766.72	749.12	746.61
3/14/2024	766.89	5000	423	0	0	423	5353	3.79	7500	7923	3580	8000	20100	767.24	3/15/2024	767.07	749.12	746.73
3/15/2024	767.24	8800	426	0	0	426	5747	3.80	9000	9426	3600	8000	20500	767.87	3/16/2024	767.56	749.12	746.83
3/16/2024	767.87	6800	420	0	0	420	6180	3.83	9200	9620	3660	8000	21700	768.35	3/17/2024	768.11	749.12	746.96
3/17/2024	768.35	6600	419	0	0	419	6613	3.85	9100	9519	3700	8900	22500	768.81	3/18/2024	768.58	749.12	747.14
3/18/2024	768.81	4500	1500	0	0	1500	6960	3.86	8490	9990	3720	9600	22900	769.03	3/19/2024	768.92	749.12	747.31
3/19/2024	769.03	3600	2310	0	0	2310	7047	3.87	7620	9930	3740	9900	23300	769.12	3/20/2024	769.08	749.12	747.49
3/20/2024	769.12	4000	3250	0	0	3250	7133	3.87	6870	10120	3740	20000	23300	769.17	3/21/2024	769.15	749.12	747.67
3/21/2024	769.17	2000	3420	0	0	3420	7047	3.87	6170	9590	3740	10000	23300	769.06	3/22/2024	769.12	749.12	747.90
3/22/2024	769.06	1600	4080	0	0	4080	6960	3.87	5390	9470	3740	9600	23300	768.87	3/23/2024	768.97	749.12	748.14
3/23/2024	768.87	5200	2980	0	0	2980	6960	3.87	5140	8120	3740	9600	23300	769.03	3/24/2024	768.95	749.12	748.34
3/24/2024	769.03	2200	3910	0	0	3910	6960	3.86	4890	8800	3720	9600	22900	768.90	3/25/2024	768.97	749.12	748.56
3/25/2024	768.90	2000	4000	0	0	4000	6787	3.86	4600	8600	3720	9300	22900	768.74	3/26/2024	768.82	749.12	748.79
3/26/2024	768.74	1800	4000	0	0	4000	6700	3.85	4600	8600	3700	9000	22500	768.57	3/27/2024	768.66	749.12	749.07
3/27/2024	768.57	1700	3700	0	0	3700	6527	3.84	4700	8400	3680	8700	22100	768.41	3/28/2024	768.49	749.12	749.43
3/28/2024	768.41	1600	3300	0	0	3300	6440	3.84	4700	8000	3680	8400	22100	768.28	3/29/2024	768.35	749.12	749.81
3/29/2024	768.28	1500	3300	0	0	3300	6267	3.83	4600	7900	3660	8100	21700	768.14	3/30/2024	768.21	749.12	750.23
3/30/2024	768.14	1400	3400	0	0	3400	6180	3.82	4500	7900	3640	8000	21300	767.98	3/31/2024	768.06	749.12	750.70
3/31/2024	767.98	1300	3500	0	0	3500	6007	3.82	4400	7900	3640	8000	21300	767.81	4/1/2024	767.90	749.12	751.21
4/1/2024	767.81	1200	3600	0	0	3600	5920	3.82	4300	7900	3640	8000	21300	767.62	4/2/2024	767.81	749.62	751.77
6/6/2020	767.29	500	2000	0	0	2000	5487	3.00	2000	4000	2000	8000	7500	777.12	3/5/2019	#N/A	#N/A	#N/A

Signature: _____

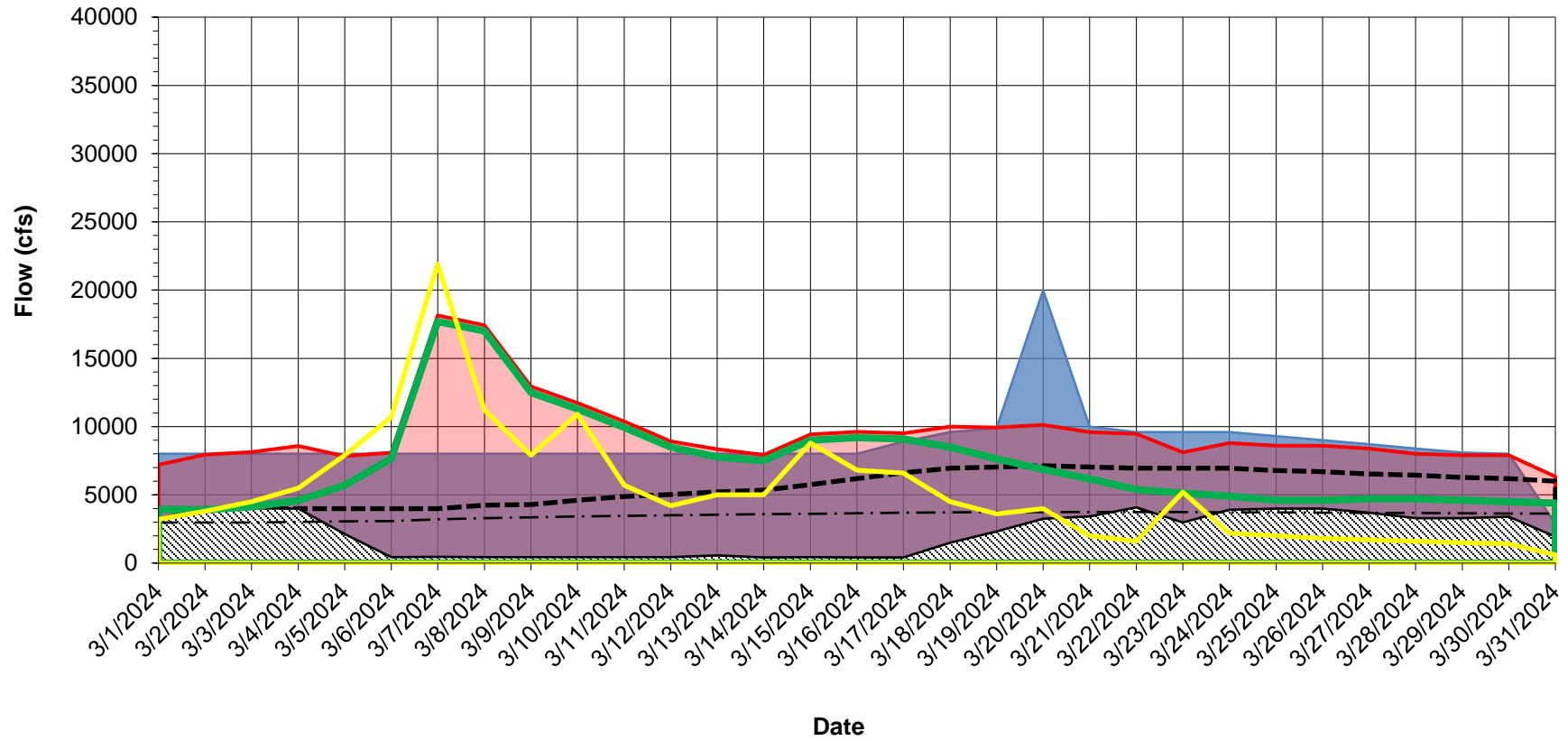
Date: _____

**GREAT SACANDAGA LAKE
RESERVOIR OPERATION SUMMARY**

Print Date: 3/25/2024
 Period of Record: 3/1/2024 to 3/29/2024

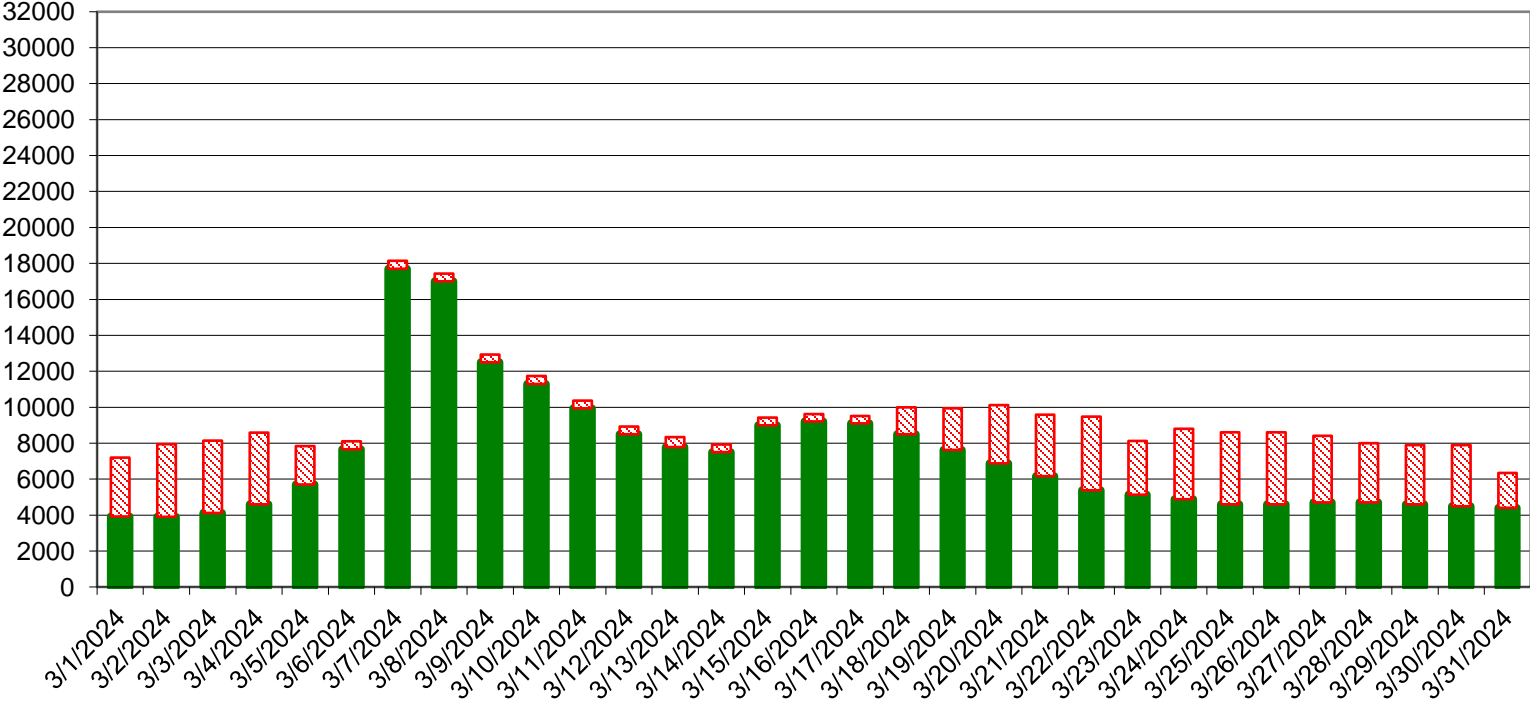
Starting Date 12:00 AM	Daily Avg. Elevation	Net Average Inflow	Sacandaga River Flow		Settlement Level	Hudson at Hadley	Hudson River Below Confluence	Hudson River Target Flow		Maximum Allowable Sacandaga
			Average Release	Maximum (Table F - Elev.)				Minimum (Table B - Level)	Maximum (Table D & E)	
3/1/2024	760.50	3200	3270	4000	3.49	3930	7200	2980	8000	4000
3/2/2024	760.48	3800	4040	4000	3.49	3900	7940	2980	8000	4000
3/3/2024	760.49	4500	4020	4000	3.49	4120	8140	2980	8000	4000
3/4/2024	760.56	5500	4000	4000	3.51	4590	8590	3020	8000	4000
3/5/2024	760.86	7900	2130	4000	3.53	5710	7840	3060	8000	4000
3/6/2024	761.50	10700	438	4000	3.54	7660	8098	3080	8000	4000
3/7/2024	762.77	21900	449	4000	3.60	17700	18149	3200	8000	4000
3/8/2024	764.67	11200	433	4233	3.65	17000	17433	3300	8000	4000
3/9/2024	764.76	7900	435	4280	3.68	12500	12935	3360	8000	4140
3/10/2024	765.46	10900	439	4607	3.71	11300	11739	3420	8000	4420
3/11/2024	766.06	5700	433	4887	3.73	9940	10373	3460	8000	4793
3/12/2024	766.41	4200	429	5027	3.75	8490	8919	3500	8000	4980
3/13/2024	766.72	5000	563	5213	3.77	7780	8343	3540	8000	5120
3/14/2024	767.07	5000	423	5353	3.79	7500	7923	3580	8000	5260
3/15/2024	767.56	8800	426	5747	3.80	9000	9426	3600	8000	5487
3/16/2024	768.11	6800	420	6180	3.83	9200	9620	3660	8000	6007
3/17/2024	768.58	6600	419	6613	3.85	9100	9519	3700	8900	6440
3/18/2024	768.92	4500	1500	6960	3.86	8490	9990	3720	9600	6787
3/19/2024	769.08	3600	2310	7047	3.87	7620	9930	3740	9900	7047
3/20/2024	769.15	4000	3250	7133	3.87	6870	10120	3740	20000	7133
3/21/2024	769.12	2000	3420	7047	3.87	6170	9590	3740	10000	7133
3/22/2024	768.97	1600	4080	6960	3.87	5390	9470	3740	9600	7047
3/23/2024	768.95	5200	2980	6960	3.87	5140	8120	3740	9600	6873
3/24/2024	768.97	2200	3910	6960	3.86	4890	8800	3720	9600	7047
3/25/2024	768.82	2000	4000	6787	3.86	4600	8600	3720	9300	6873
3/26/2024	768.66	1800	4000	6700	3.85	4600	8600	3700	9000	6787
3/27/2024	768.49	1700	3700	6527	3.84	4700	8400	3680	8700	6613
3/28/2024	768.35	1600	3300	6440	3.84	4700	8000	3680	8400	6440
3/29/2024	768.21	1500	3300	6267	3.83	4600	7900	3660	8100	6353
3/30/2024	768.06	1400	3400	6180	3.82	4500	7900	3640	8000	6267
3/31/2024	767.90	600	1940	6007	3.82	4400	6340	3640	2880	6093

Great Sacandaga Lake Actual and Maximum Allowable Hudson River Flow Below Confluence



Great Sacandaga Lake GSL Release and Natural Hudson River Flow

Total Flow Below Confluence (cfs)



Date



**Hudson River Area
Report of the Operations Manager
Sacandaga Field Office at Great Sacandaga Lake
April Board Meeting 2024**

Activity report for March 2024

SFO

- Cleaned offices and conference room weekly.
- Performed maintenance on vehicles and equipment.
- Conducted snow removal as needed.
- Processed hundreds of stakes and sign boards for 2024 permit dept usage.
- Welcomed new employees Kevin Wilson & Mark Rozniewski.

Indian Lake

- Nothing to report

Conklingville Dam

- Read and reported piezometer data including spillway and toe observations daily.
- Conducted snow removal as needed.
- Performed maintenance on vehicles and equipment.
- Removed old log boom from the GSL.
- Took delivery of the new Tuffboom system.
- Started repairing the washout on the canoe portage path/road.

Respectfully,

Matthew Ginter

Operations Manager

**Black River Area
Report of the Superintendent
Black River Field Office at the Stillwater Reservoir (BRFO)
March 2024**

- Road maintenance, plowing
- Vehicle/equipment maintenance
- Snow surveys
- Continued barn renovation project
- Inspected trashracks at Stillwater Dam
- Tested High water/Flood alarms manually (SW)
- Removed snow removal equipment from tractor
- Started cleaning and prepping booms for OF/SL
- Started spring cleanup
- Painted office (BRFO)
- SW staff gauges and Stevens recorder moved to 1988 NAVD (corrected)
- Monitoring continues: piezometers, weirs, profile surveys, seepage sites.
- Misc. gate changes at Stillwater, O.F. & S.L.
- Daily readings Stillwater, O.F. & S.L.

STATE OF NEW YORK
HUDSON RIVER-BLACK RIVER REGULATING DISTRICT
SACANDAGA RESERVOIR / HUDSON RIVER REGULATION

Monthly Report for: February 2024

Day	Sacandaga Reservoir Elevation Average Daily	Sacandaga Reservoir Elevation Midnight	Sacandaga River Near Hope cfs	Reservoir Inflow Hope x 2.0710 cfs	Sacandaga River at Stewarts Bridge cfs	Hudson River at Hadley cfs	Regulated Hudson River below confluence cfs
1	765.60	765.62	1580	3272	3810	4810	8620
2	765.51	765.38	1390	2879	3910	4410	8320
3	765.41	765.46	1120	2320	3680	4150	7830
4	765.26	765.37	1030	2133	4020	3870	7890
5	765.09	765.19	937	1941	4170	3600	7770
6	764.89	764.93	852	1764	4260	3390	7650
7	764.68	764.78	808	1673	4240	3240	7480
8	764.47	764.61	795	1646	4020	3170	7190
9	764.28	764.40	763	1580	4020	3040	7060
10	764.10	764.19	791	1638	4020	2990	7010
11	763.98	764.12	939	1945	4020	3270	7290
12	763.83	763.93	968	2005	4020	3530	7550
13	763.68	763.77	925	1916	4020	3470	7490
14	763.54	763.62	814	1686	4020	3310	7330
15	763.31	763.45	673	1394	4010	3010	7020
16	763.14	763.20	727	1506	4020	3050	7070
17	762.94	763.02	698	1446	4030	2960	6990
18	762.72	762.82	629	1303	4020	2800	6820
19	762.51	762.59	618	1280	4020	2770	6790
20	762.26	762.39	590	1222	4020	2540	6560
21	762.04	762.14	544	1127	3910	2560	6470
22	761.80	761.92	472	978	3880	2690	6570
23	761.57	761.70	529	1096	4190	2540	6730
24	761.33	761.44	539	1116	4180	2250	6430
25	761.07	761.22	490	1015	4190	1980	6170
26	760.82	760.93	516	1069	4080	2010	6090
27	760.56	760.68	581	1203	4070	2020	6090
28	760.42	760.42	1110	2299	4080	2420	6500
29	760.49	760.66	2270	4701	3030	3690	6720

AVERAGE			850	1760	4000	3090	7090
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CHANGE IN STORAGE DURING THE MONTH -5.38 B.C.F.

 CHIEF ENGINEER

STATE OF NEW YORK
HUDSON RIVER-BLACK RIVER REGULATING DISTRICT
INDIAN LAKE RESERVOIR REGULATION

Monthly Report for: February, 2024

Day	Reservoir Elevation Average Daily	Reservoir Elevation Midnight	Net Reservoir Inflow cfs	Indian River at Indian Lake cfs	Hudson River at Newcomb cfs	Regulated Hudson River at North Creek cfs
1	1640.98	1641.10	319	523	388	2210
2	1640.85	1640.98	263	522	346	2000
3	1640.71	1640.85	147	519	306	1890
4	1640.56	1640.64	241	519	271	1790
5	1640.39	1640.48	222	517	250	1750
6	1640.22	1640.31	200	513	229	1650
7	1640.04	1640.13	215	510	218	1600
8	1639.87	1639.96	194	507	210	1520
9	1639.70	1639.78	193	505	200	1450
10	1639.54	1639.61	295	503	197	1440
11	1639.42	1639.48	276	502	213	1540
12	1639.30	1639.36	309	500	235	1690
13	1639.17	1639.24	255	498	238	1710
14	1639.03	1639.11	198	458	230	1670
15	1638.86	1638.95	241	519	207	1530
16	1638.71	1638.79	241	519	214	1520
17	1638.54	1638.63	205	518	207	1510
18	1638.35	1638.45	203	516	192	1440
19	1638.16	1638.27	166	513	184	1400
20	1637.96	1638.07	147	512	172	1330
21	1637.76	1637.87	179	509	166	1300
22	1637.57	1637.67	158	505	162	1300
23	1637.42	1637.47	156	295	159	1250
24	1637.38	1637.39	110	179	157	970
25	1637.35	1637.36	162	179	146	879
26	1637.32	1637.34	127	179	146	873
27	1637.30	1637.31	161	178	144	871
28	1637.34	1637.30	477	182	162	983
29	1637.57	1637.47	547	182	259	1700

AVERAGE 228 434 214 1475

CHANGE IN STORAGE DURING THE MONTH -0.548 B.C.F

 CHIEF ENGINEER

**STATE OF NEW YORK
HUDSON RIVER-BLACK RIVER REGULATING DISTRICT
STILLWATER RESERVOIR / BLACK RIVER REGULATION**

Monthly Report for: February 2024

Day	Stillwater Reservoir Elevation Average Daily	Stillwater Reservoir Elevation Midnight	Stillwater Reservoir Net Inflow cfs	Stillwater Reservoir Release cfs	Black River at Boonville cfs	Beaver River at Croghan cfs	Regulated Black River at Watertown cfs
1	1671.38	1671.41	453	600	1110	954	9120
2	1671.30	1671.35	380	600	983	963	7800
3	1671.22	1671.26	356	600	902	931	6820
4	1671.11	1671.16	356	600	780	752	5960
5	1670.99	1671.06	289	600	705	794	5220
6	1670.86	1670.93	271	600	609	779	4550
7	1670.72	1670.79	247	600	579	780	3960
8	1670.57	1670.64	271	600	595	776	3720
9	1670.42	1670.50	247	600	598	753	3670
10	1670.31	1670.35	412	600	722	782	4310
11	1670.25	1670.27	482	600	891	1000	5880
12	1670.16	1670.22	341	600	878	960	5850
13	1670.06	1670.11	303	600	802	914	5500
14	1669.94	1669.98	390	600	747	893	5020
15	1669.80	1669.87	351	600	607	776	4290
16	1669.68	1669.74	370	600	686	716	3650
17	1669.55	1669.62	313	600	623	741	3670
18	1669.40	1669.47	313	600	533	787	3390
19	1669.25	1669.32	313	600	527	819	3010
20	1669.09	1669.17	275	600	460	749	3210
21	1668.91	1669.00	275	600	509	741	3200
22	1668.75	1668.83	313	600	515	729	3430
23	1668.60	1668.68	294	600	551	767	3350
24	1668.43	1668.52	275	600	550	789	3710
25	1668.25	1668.35	217	600	454	753	3300
26	1668.07	1668.15	236	600	495	759	3200
27	1667.89	1667.96	313	600	533	732	3320
28	1667.82	1667.81	715	600	997	860	4390
29	1667.92	1667.87	715	600	1690	1010	6480

AVERAGE 335 600 680 810 4520

CHANGE IN STORAGE DURING THE MONTH -0.64 B.C.F.

CHIEF ENGINEER

STATE OF NEW YORK
HUDSON RIVER-BLACK RIVER REGULATING DISTRICT
SIXTH LAKE RESERVOIR REGULATION

Monthly Report for: February, 2024

Day	Reservoir Elevation Average Daily	Reservoir Elevation Midnight	Net Reservoir Inflow cfs	Gate Opening (ft)		Reservoir Release (cfs)
				Gate A	Gate B	
1	1780.79	1780.82	55	1.17	1.17	76
2	1780.72	1780.76	47	1.17	1.17	75
3	1780.64	1780.68	51	1.17	1.17	75
4	1780.55	1780.61	43	1.17	1.17	74
5	1780.47	1780.52	42	1.17	1.17	73
6	1780.38	1780.43	41	1.17	1.17	72
7	1780.32	1780.34	46	0.50	0.50	53
8	1780.30	1780.32	24	0.50	0.50	34
9	1780.28	1780.29	27	0.50	0.50	34
10	1780.29	1780.27	58	0.50	0.50	34
11	1780.38	1780.34	59	0.50	0.50	35
12	1780.44	1780.41	49	0.50	0.50	35
13	1780.45	1780.45	32	0.50	0.50	35
14	1780.45	1780.44	38	0.50	0.50	35
15	1780.44	1780.45	32	0.50	0.50	35
16	1780.44	1780.44	35	0.50	0.50	35
17	1780.44	1780.44	32	0.50	0.50	35
18	1780.42	1780.43	32	0.50	0.50	35
19	1780.40	1780.42	21	0.50	0.50	35
20	1780.37	1780.38	25	0.50	0.50	35
21	1780.34	1780.35	25	0.50	0.50	35
22	1780.31	1780.32	32	0.50	0.50	35
23	1780.30	1780.31	27	0.50	0.50	34
24	1780.28	1780.29	24	0.50	0.50	34
25	1780.24	1780.26	20	0.50	0.50	34
26	1780.21	1780.22	24	0.50	0.50	34
27	1780.19	1780.19	34	0.50	0.50	34
28	1780.24	1780.19	86	0.50	0.50	34
29	1780.49	1780.34	115	0.50	0.50	35

AVERAGE 40 43

CHANGE IN STORAGE DURING THE MONTH -0.007 B.C.F

 CHIEF ENGINEER

STATE OF NEW YORK
HUDSON RIVER-BLACK RIVER REGULATING DISTRICT
OLD FORGE RESERVOIR REGULATION

Monthly Report for: February, 2024

Day	Reservoir Elevation Average Daily	Reservoir Elevation Midnight	Net Reservoir Inflow cfs	Gate Opening (ft)		Reservoir Release (cfs)
				Gate A	Gate B	
1	1703.47	1703.67	101	4.00	4.00	260
2	1703.37	1703.57	126	4.00	4.00	256
3	1703.26	1703.47	64	4.00	4.00	252
4	1703.14	1703.35	99	4.00	4.00	248
5	1703.17	1703.24	163	0.58	0.58	132
6	1703.28	1703.27	110	0.58	0.58	50
7	1703.31	1703.31	65	0.58	0.58	51
8	1703.33	1703.32	80	0.58	0.58	51
9	1703.34	1703.34	51	0.58	0.58	51
10	1703.36	1703.34	123	0.58	0.58	51
11	1703.41	1703.38	123	0.58	0.58	51
12	1703.46	1703.43	124	0.58	0.58	52
13	1703.49	1703.48	23	0.58	0.58	52
14	1703.50	1703.46	124	0.58	0.58	52
15	1703.53	1703.52	81	0.58	0.58	52
16	1703.57	1703.54	124	0.58	0.58	52
17	1703.60	1703.59	82	0.58	0.58	53
18	1703.61	1703.61	67	0.58	0.58	53
19	1703.62	1703.62	82	0.58	0.58	53
20	1703.63	1703.63	67	0.58	0.58	53
21	1703.62	1703.64	22	1.17	1.17	80
22	1703.61	1703.61	56	1.17	1.17	99
23	1703.58	1703.58	70	1.17	1.17	99
24	1703.55	1703.56	56	1.17	1.17	99
25	1703.51	1703.53	55	1.17	1.17	98
26	1703.48	1703.49	69	1.17	1.17	98
27	1703.46	1703.47	69	1.17	1.17	98
28	1703.45	1703.45	55	1.17	1.17	98
29	1703.52	1703.42	301	1.17	1.17	98

AVERAGE 91 96

CHANGE IN STORAGE DURING THE MONTH -0.031 B.C.F

CHIEF ENGINEER

STATE OF NEW YORK
HUDSON RIVER-BLACK RIVER REGULATING DISTRICT
SACANDAGA RESERVOIR OPERATION
FOR WEEK ENDING: March 2, 2024

DATE	SACANDAGA RESERVOIR			HUDSON RIVER FLOW		
	WATER SURFACE ELEV. 12 A.M.	TOTAL STORAGE B.C.F. ⁽¹⁾	PERIODS OF RELEASE	RELEASE AVG. DAILY C.F.S.*	HADLEY AVG. DAILY C.F.S.	SPIER FALLS AVG. DAILY C.F.S.
Saturday 24	761.44	28.05	12 AM - Mid	4,180	2,250	6,430
Sunday 25	761.22	27.81	12 AM - Mid	4,190	1,980	6,170
Monday 26	760.93	27.50	12 AM - Mid	4,080	2,010	6,090
Tuesday 27	760.68	27.24	12 AM - Mid	4,070	2,020	6,090
Wednesday 28	760.42	26.97	12 AM - Mid	4,080	2,420	6,500
Thursday 29	760.48	27.03	12 AM - Mid	3,030	3,690	6,720
Friday 1	760.50	27.05	12 AM - Mid	3,270	3,930	7,200
Saturday 2	760.49	27.04	12 AM - Mid	4,040	3,900	7,940
CHANGE IN STORAGE DURING THE WEEK		-1.00	* SACANDAGA RIVER AT STEWARTS BRIDGE INCLUDES 350 CFS MINIMUM CONTINUOUS RELEASE			

ELEVATIONS AND CAPACITIES ON THIS DATE FOR THE PAST TEN YEARS

NO.	YEAR	ELEV.	CAPACITY	NO.	YEAR	ELEV.	CAPACITY
1	2024	760.49	27.04	6	2022	754.51	20.99
2	2019	759.68	26.20	7	2016	754.45	20.93
3	2023	757.22	23.67	8	2020	753.61	20.12
4	2017	755.21	21.67	9	2021	749.60	16.38
5	2018	754.54	21.02	10	2015	748.31	15.22

CAPACITY AT SPILLWAY CREST (EL 770.12) 37.72 B.C.F.
CAPACITY AT LOW FLOW LINE (EL 734.12) 4.60 B.C.F.

(1) Includes dead storage below El. 734.12 ft.
Datum: NAVD 88

CHIEF ENGINEER

STATE OF NEW YORK
HUDSON RIVER-BLACK RIVER REGULATING DISTRICT
SACANDAGA RESERVOIR OPERATION
FOR WEEK ENDING: March 9, 2024

DATE	SACANDAGA RESERVOIR			HUDSON RIVER FLOW		
	WATER SURFACE ELEV. 12 A.M.	TOTAL STORAGE B.C.F. ⁽¹⁾	PERIODS OF RELEASE	RELEASE AVG. DAILY C.F.S.*	HADLEY AVG. DAILY C.F.S.	SPIER FALLS AVG. DAILY C.F.S.
Saturday 2	760.49	27.04	12 AM - Mid	4,040	3,900	7,940
Sunday 3	760.47	27.02	12 AM - Mid	4,020	4,120	8,140
Monday 4	760.50	27.05	12 AM - Mid	4,000	4,590	8,590
Tuesday 5	760.61	27.17	12 AM - Mid	2,130	5,710	7,840
Wednesday 6	761.09	27.67	12 AM - Mid	438	7,660	8,098
Thursday 7	761.85	28.49	12 AM - Mid	449	17,700	18,149
Friday 8	763.61	30.39	12 AM - Mid	433	17,000	17,433
Saturday 9	764.47	31.33	12 AM - Mid	435	12,500	12,935
CHANGE IN STORAGE DURING THE WEEK		4.29	* SACANDAGA RIVER AT STEWARTS BRIDGE INCLUDES 350 CFS MINIMUM CONTINUOUS RELEASE			

ELEVATIONS AND CAPACITIES ON THIS DATE FOR THE PAST TEN YEARS

NO.	YEAR	ELEV.	CAPACITY	NO.	YEAR	ELEV.	CAPACITY
1	2024	764.47	31.33	6	2018	754.44	20.92
2	2017	758.08	24.54	7	2016	753.64	20.15
3	2019	758.00	24.46	8	2020	753.44	19.96
4	2023	755.67	22.13	9	2021	749.41	16.21
5	2022	754.58	21.06	10	2015	747.73	14.71

CAPACITY AT SPILLWAY CREST (EL 770.12) 37.72 B.C.F.
CAPACITY AT LOW FLOW LINE (EL 734.12) 4.60 B.C.F.

(1) Includes dead storage below El. 734.12 ft.
Datum: NAVD 88

CHIEF ENGINEER

STATE OF NEW YORK
 HUDSON RIVER-BLACK RIVER REGULATING DISTRICT
SACANDAGA RESERVOIR OPERATION
 FOR WEEK ENDING: March 16, 2024

DATE	SACANDAGA RESERVOIR			HUDSON RIVER FLOW		
	WATER SURFACE ELEV. 12 A.M.	TOTAL STORAGE B.C.F. ⁽¹⁾	PERIODS OF RELEASE	RELEASE AVG. DAILY C.F.S.*	HADLEY AVG. DAILY C.F.S.	SPIER FALLS AVG. DAILY C.F.S.
Saturday 9	764.47	31.33	12 AM - Mid	435	12,500	12,935
Sunday 10	765.05	31.97	12 AM - Mid	439	11,300	11,739
Monday 11	765.85	32.86	12 AM - Mid	433	9,940	10,373
Tuesday 12	766.26	33.31	12 AM - Mid	429	8,490	8,919
Wednesday 13	766.54	33.63	12 AM - Mid	563	7,780	8,343
Thursday 14	766.84	33.96	12 AM - Mid	423	7,500	7,923
Friday 15	767.28	34.46	12 AM - Mid	426	8,540	8,966
Saturday 16	767.92	35.19	12 AM - Mid	420	9,340	9,760
CHANGE IN STORAGE DURING THE WEEK		3.86	* SACANDAGA RIVER AT STEWARTS BRIDGE INCLUDES 350 CFS MINIMUM CONTINUOUS RELEASE			

ELEVATIONS AND CAPACITIES ON THIS DATE FOR THE PAST TEN YEARS

NO.	YEAR	ELEV.	CAPACITY	NO.	YEAR	ELEV.	CAPACITY
1	2024	767.92	35.19	6	2023	754.15	20.64
2	2017	757.73	24.19	7	2022	754.10	20.59
3	2020	756.67	23.12	8	2018	753.25	19.78
4	2016	756.62	23.07	9	2021	750.08	16.82
5	2019	756.45	22.90	10	2015	747.31	14.34

CAPACITY AT SPILLWAY CREST (EL 770.12) 37.72 B.C.F.
 CAPACITY AT LOW FLOW LINE (EL 734.12) 4.60 B.C.F.

(1) Includes dead storage below El. 734.12 ft.
 Datum: NAVD 88

 CHIEF ENGINEER

STATE OF NEW YORK
HUDSON RIVER-BLACK RIVER REGULATING DISTRICT
SACANDAGA RESERVOIR OPERATION
FOR WEEK ENDING: March 23, 2024

DATE	SACANDAGA RESERVOIR			HUDSON RIVER FLOW		
	WATER SURFACE ELEV. 12 A.M.	TOTAL STORAGE B.C.F. ⁽¹⁾	PERIODS OF RELEASE	RELEASE AVG. DAILY C.F.S.*	HADLEY AVG. DAILY C.F.S.	SPIER FALLS AVG. DAILY C.F.S.
Saturday 16	767.92	35.19	12 AM - Mid	420	9,340	9,760
Sunday 17	768.33	35.66	12 AM - Mid	419	9,130	9,549
Monday 18	768.82	36.22	12 AM - Mid	1,500	8,490	9,990
Tuesday 19	769.02	36.45	12 AM - Mid	2,310	7,620	9,930
Wednesday 20	769.17	36.62	12 AM - Mid	3,250	6,870	10,120
Thursday 21	769.30	36.77	12 AM - Mid	3,420	6,170	9,590
Friday 22	769.11	36.55	12 AM - Mid	4,080	5,390	9,470
Saturday 23	768.87	36.28	12 AM - Mid	2,980	5,140	8,120
CHANGE IN STORAGE DURING THE WEEK		1.09	* SACANDAGA RIVER AT STEWARTS BRIDGE INCLUDES 350 CFS MINIMUM CONTINUOUS RELEASE			

ELEVATIONS AND CAPACITIES ON THIS DATE FOR THE PAST TEN YEARS

NO.	YEAR	ELEV.	CAPACITY	NO.	YEAR	ELEV.	CAPACITY
1	2024	768.87	36.28	6	2019	755.68	22.14
2	2022	758.80	25.28	7	2023	752.90	19.44
3	2020	758.75	25.23	8	2018	751.53	18.15
4	2016	758.49	24.97	9	2021	750.18	16.91
5	2017	756.15	22.60	10	2015	746.92	14.00

CAPACITY AT SPILLWAY CREST (EL 770.12) 37.72 B.C.F.
CAPACITY AT LOW FLOW LINE (EL 734.12) 4.60 B.C.F.

(1) Includes dead storage below El. 734.12 ft.
Datum: NAVD 88

CHIEF ENGINEER

STATE OF NEW YORK
HUDSON RIVER-BLACK RIVER REGULATING DISTRICT
INDIAN LAKE RESERVOIR OPERATION
FOR WEEK ENDING: March 2, 2024

DATE	INDIAN LAKE RESERVOIR			INDIAN RIVER	HUDSON RIVER	
	WATER SURFACE ELEV. 12 A.M.	AVAIL. STORAGE B.C.F.	PERIODS OF RELEASE	RELEASE AVG. DAILY C.F.S.*	NEWCOMB AVG. DAILY C.F.S.	NORTH CREEK AVG. DAILY C.F.S.
Saturday 24	1,637.39	1.41	12 AM - Mid	178	157	970
Sunday 25	1,637.36	1.41	12 AM - Mid	178	146	879
Monday 26	1,637.34	1.41	12 AM - Mid	177	146	873
Tuesday 27	1,637.31	1.40	12 AM - Mid	177	144	871
Wednesday 28	1,637.30	1.40	12 AM - Mid	178	162	983
Thursday 29	1,637.47	1.43	12 AM - Mid	178	259	1,700
Friday 1	1,637.68	1.46	12 AM - Mid	178	384	2,000
Saturday 2	1,637.82	1.48	12 AM - Mid	179	385	1,950

CHANGE IN STORAGE DURING THE WEEK	0.06	* INIDAN RIVER NEAR INDIAN LAKE
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ELEVATIONS AND CAPACITIES ON THIS DATE FOR THE PAST TEN YEARS

NO.	YEAR	ELEV.	CAPACITY	NO.	YEAR	ELEV.	CAPACITY
1	2017	1,645.32	2.67	6	2019	1,639.40	1.72
2	2018	1,643.93	2.43	7	2015	1,638.70	1.61
3	2016	1,643.28	2.32	8	2021	1,638.01	1.51
4	2022	1,642.88	2.26	9	2024	1,637.82	1.48
5	2023	1,639.42	1.72	10	2020	1,637.71	1.46

CAPACITY AT SPILLWAY CREST (EL 1651.01) 3.7 B.C.F.

Datum: NAVD 88

CHIEF ENGINEER

STATE OF NEW YORK
HUDSON RIVER-BLACK RIVER REGULATING DISTRICT
INDIAN LAKE RESERVOIR OPERATION
FOR WEEK ENDING: March 9, 2024

DATE	INDIAN LAKE RESERVOIR			INDIAN RIVER	HUDSON RIVER	
	WATER SURFACE ELEV. 12 A.M.	AVAIL. STORAGE B.C.F.	PERIODS OF RELEASE	RELEASE AVG. DAILY C.F.S.*	NEWCOMB AVG. DAILY C.F.S.	NORTH CREEK AVG. DAILY C.F.S.
Saturday 2	1,637.82	1.48	12 AM - Mid	179	385	1,950
Sunday 3	1,637.93	1.50	12 AM - Mid	179	355	1,860
Monday 4	1,638.09	1.52	12 AM - Mid	181	378	2,020
Tuesday 5	1,638.39	1.56	12 AM - Mid	183	543	2,870
Wednesday 6	1,638.82	1.63	12 AM - Mid	185	938	4,430
Thursday 7	1,639.67	1.76	12 AM - Mid	190	1,940	12,100
Friday 8	1,641.24	2.00	12 AM - Mid	192	2,460	9,950
Saturday 9	1,641.99	2.12	12 AM - Mid	194	1,810	6,710

CHANGE IN STORAGE DURING THE WEEK	0.64	* INIDAN RIVER NEAR INDIAN LAKE
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ELEVATIONS AND CAPACITIES ON THIS DATE FOR THE PAST TEN YEARS

NO.	YEAR	ELEV.	CAPACITY	NO.	YEAR	ELEV.	CAPACITY
1	2017	1,645.49	2.70	6	2015	1,638.65	1.60
2	2018	1,643.64	2.38	7	2023	1,638.34	1.56
3	2022	1,643.50	2.36	8	2019	1,638.26	1.54
4	2016	1,643.46	2.35	9	2020	1,637.93	1.50
5	2024	1,641.99	2.12	10	2021	1,637.25	1.39

CAPACITY AT SPILLWAY CREST (EL 1651.01) 3.7 B.C.F.

Datum: NAVD 88

CHIEF ENGINEER

STATE OF NEW YORK
HUDSON RIVER-BLACK RIVER REGULATING DISTRICT
INDIAN LAKE RESERVOIR OPERATION
FOR WEEK ENDING: March 16, 2024

DATE	INDIAN LAKE RESERVOIR			INDIAN RIVER	HUDSON RIVER	
	WATER SURFACE ELEV. 12 A.M.	AVAIL. STORAGE B.C.F.	PERIODS OF RELEASE	RELEASE AVG. DAILY C.F.S.*	NEWCOMB AVG. DAILY C.F.S.	NORTH CREEK AVG. DAILY C.F.S.
Saturday 9	1,641.99	2.12	12 AM - Mid	194	1,810	6,710
Sunday 10	1,642.44	2.19	12 AM - Mid	196	1,370	5,430
Monday 11	1,642.76	2.24	12 AM - Mid	198	1,080	4,020
Tuesday 12	1,642.92	2.27	12 AM - Mid	200	817	3,180
Wednesday 13	1,642.96	2.27	12 AM - Mid	200	674	2,830
Thursday 14	1,643.07	2.29	12 AM - Mid	200	598	2,730
Friday 15	1,643.27	2.32	12 AM - Mid	200	744	3,690
Saturday 16	1,643.67	2.39	12 AM - Mid	200	1,120	4,790

CHANGE IN STORAGE DURING THE WEEK	0.27	* INIDAN RIVER NEAR INDIAN LAKE
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ELEVATIONS AND CAPACITIES ON THIS DATE FOR THE PAST TEN YEARS

NO.	YEAR	ELEV.	CAPACITY	NO.	YEAR	ELEV.	CAPACITY
1	2016	1,646.49	2.87	6	2020	1,640.56	1.89
2	2017	1,644.42	2.51	7	2015	1,638.56	1.59
3	2022	1,643.90	2.43	8	2019	1,637.42	1.42
4	2024	1,643.67	2.39	9	2023	1,637.32	1.40
5	2018	1,642.93	2.27	10	2021	1,637.09	1.37

CAPACITY AT SPILLWAY CREST (EL 1651.01) 3.7 B.C.F.

Datum: NAVD 88

CHIEF ENGINEER

STATE OF NEW YORK
HUDSON RIVER-BLACK RIVER REGULATING DISTRICT
INDIAN LAKE RESERVOIR OPERATION
FOR WEEK ENDING: March 23, 2024

DATE	INDIAN LAKE RESERVOIR			INDIAN RIVER	HUDSON RIVER	
	WATER SURFACE ELEV. 12 A.M.	AVAIL. STORAGE B.C.F.	PERIODS OF RELEASE	RELEASE AVG. DAILY C.F.S.*	NEWCOMB AVG. DAILY C.F.S.	NORTH CREEK AVG. DAILY C.F.S.
Saturday 16	1,643.67	2.39	12 AM - Mid	200	1,120	4,790
Sunday 17	1,644.03	2.45	12 AM - Mid	200	1,140	4,700
Monday 18	1,644.31	2.50	12 AM - Mid	200	1,020	4,150
Tuesday 19	1,644.50	2.53	12 AM - Mid	201	834	3,490
Wednesday 20	1,644.65	2.55	12 AM - Mid	201	680	2,960
Thursday 21	1,644.75	2.57	12 AM - Mid	202	563	2,540
Friday 22	1,644.86	2.59	12 AM - Mid	202	446	2,090
Saturday 23	1,644.85	2.59	12 AM - Mid	203	413	1,910

CHANGE IN STORAGE DURING THE WEEK	0.20	* INIDAN RIVER NEAR INDIAN LAKE
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ELEVATIONS AND CAPACITIES ON THIS DATE FOR THE PAST TEN YEARS

NO.	YEAR	ELEV.	CAPACITY	NO.	YEAR	ELEV.	CAPACITY
1	2016	1,648.00	3.14	6	2018	1,641.99	2.12
2	2022	1,646.86	2.93	7	2015	1,638.48	1.58
3	2024	1,644.85	2.59	8	2021	1,637.30	1.40
4	2017	1,642.83	2.25	9	2019	1,636.97	1.35
5	2020	1,642.14	2.14	10	2023	1,636.52	1.28

CAPACITY AT SPILLWAY CREST (EL 1651.01) 3.7 B.C.F.

Datum: NAVD 88

CHIEF ENGINEER

STATE OF NEW YORK
HUDSON RIVER-BLACK RIVER REGULATING DISTRICT
STILLWATER RESERVOIR OPERATION
FOR WEEK ENDING: [March 2, 2024](#)

DATE	STILLWATER RESERVOIR			BEAVER RIVER		BLACK RIVER
	WATER SURFACE ELEV. 12 A.M.	AVAIL. STORAGE B.C.F.	PERIODS OF RELEASE	STILLWATER RELEASE AVG. DAILY C.F.S.	CROGHAN AVG. DAILY FLOW C.F.S.	WATERTOWN AVG. DAILY FLOW C.F.S.
Saturday 24	1,668.52	2.30	12 AM -Mid	600	789	3,710
Sunday 25	1,668.35	2.28	12 AM -Mid	600	753	3,300
Monday 26	1,668.15	2.24	12 AM -Mid	600	759	3,200
Tuesday 27	1,667.96	2.21	12 AM -Mid	600	732	3,320
Wednesday 28	1,667.81	2.19	12 AM -Mid	600	860	4,390
Thursday 29	1,667.87	2.20	12 AM -Mid	600	1,010	6,480
Friday 1	1,667.93	2.21	12 AM -Mid	600	1,120	6,810
Saturday 2	1,667.91	2.20	12 AM -Mid	600	1,000	7,160

CHANGE IN STORAGE DURING THE WEEK	-0.10	
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ELEVATIONS AND CAPACITIES ON THIS DATE FOR THE PAST TEN YEARS

NO.	YEAR	ELEV.	CAPACITY	NO.	YEAR	ELEV.	CAPACITY
1	2018	1,674.96	3.65	6	2022	1,667.44	2.13
2	2017	1,672.11	2.99	7	2023	1,664.16	1.58
3	2016	1,670.77	2.71	8	2020	1,663.65	1.50
4	2019	1,668.74	2.34	9	2021	1,663.31	1.44
5	2024	1,667.91	2.20	10	2015	1,661.12	1.08

CAPACITY AT SPILLWAY CREST (EL 1677.19) 4.213 B.C.F.
CAPACITY AT LOW FLOW LINE (EL 1650.69) 0.10 B.C.F.

Datum: NAVD 88

CHIEF ENGINEER

STATE OF NEW YORK
 HUDSON RIVER-BLACK RIVER REGULATING DISTRICT
STILLWATER RESERVOIR OPERATION
 FOR WEEK ENDING: [March 9, 2024](#)

DATE	STILLWATER RESERVOIR			BEAVER RIVER		BLACK RIVER
	WATER SURFACE ELEV. 12 A.M.	AVAIL. STORAGE B.C.F.	PERIODS OF RELEASE	STILLWATER RELEASE AVG. DAILY C.F.S.	CROGHAN AVG. DAILY FLOW C.F.S.	WATERTOWN AVG. DAILY FLOW C.F.S.
Saturday 2	1,667.91	2.20	12 AM -Mid	600	1,000	7,160
Sunday 3	1,667.86	2.19	12 AM -Mid	600	959	7,140
Monday 4	1,667.84	2.19	12 AM -Mid	396	801	7,090
Tuesday 5	1,667.96	2.21	12 AM -Mid	250	739	6,980
Wednesday 6	1,668.20	2.25	12 AM -Mid	250	837	7,220
Thursday 7	1,668.54	2.31	12 AM -Mid	250	889	8,310
Friday 8	1,668.97	2.38	12 AM -Mid	250	858	9,060
Saturday 9	1,669.26	2.43	12 AM -Mid	250	593	10,100

CHANGE IN STORAGE DURING THE WEEK	0.22	
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ELEVATIONS AND CAPACITIES ON THIS DATE FOR THE PAST TEN YEARS

NO.	YEAR	ELEV.	CAPACITY	NO.	YEAR	ELEV.	CAPACITY
1	2018	1,674.76	3.60	6	2019	1,667.41	2.12
2	2017	1,674.18	3.46	7	2023	1,664.07	1.57
3	2016	1,671.17	2.79	8	2020	1,662.75	1.35
4	2024	1,669.26	2.43	9	2021	1,661.71	1.18
5	2022	1,668.60	2.32	10	2015	1,660.18	0.93

CAPACITY AT SPILLWAY CREST (EL 1677.19) 4.213 B.C.F.
 CAPACITY AT LOW FLOW LINE (EL 1650.69) 0.10 B.C.F.

Datum: NAVD 88

 CHIEF ENGINEER

STATE OF NEW YORK
 HUDSON RIVER-BLACK RIVER REGULATING DISTRICT
STILLWATER RESERVOIR OPERATION
 FOR WEEK ENDING: March 16, 2024

DATE	STILLWATER RESERVOIR			BEAVER RIVER		BLACK RIVER
	WATER SURFACE ELEV. 12 A.M.	AVAIL. STORAGE B.C.F.	PERIODS OF RELEASE	STILLWATER RELEASE AVG. DAILY C.F.S.	CROGHAN AVG. DAILY FLOW C.F.S.	WATERTOWN AVG. DAILY FLOW C.F.S.
Saturday 9	1,669.26	2.43	12 AM -Mid	250	593	10,100
Sunday 10	1,669.54	2.47	12 AM -Mid	250	753	11,000
Monday 11	1,669.92	2.54	12 AM -Mid	250	827	11,100
Tuesday 12	1,670.16	2.59	12 AM -Mid	250	600	11,000
Wednesday 13	1,670.35	2.62	12 AM -Mid	250	543	10,200
Thursday 14	1,670.52	2.66	12 AM -Mid	250	588	8,850
Friday 15	1,670.74	2.70	12 AM -Mid	250	673	7,710
Saturday 16	1,670.92	2.74	12 AM -Mid	250	674	6,990

CHANGE IN STORAGE DURING THE WEEK	0.31	
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ELEVATIONS AND CAPACITIES ON THIS DATE FOR THE PAST TEN YEARS

NO.	YEAR	ELEV.	CAPACITY	NO.	YEAR	ELEV.	CAPACITY
1	2017	1,674.26	3.48	6	2019	1,666.35	1.95
2	2018	1,674.03	3.42	7	2020	1,664.98	1.72
3	2016	1,673.75	3.36	8	2023	1,663.82	1.53
4	2024	1,670.92	2.74	9	2021	1,661.99	1.23
5	2022	1,669.36	2.44	10	2015	1,659.25	0.82

CAPACITY AT SPILLWAY CREST (EL 1677.19) 4.213 B.C.F.
 CAPACITY AT LOW FLOW LINE (EL 1650.69) 0.10 B.C.F.

Datum: NAVD 88

 CHIEF ENGINEER

STATE OF NEW YORK
HUDSON RIVER-BLACK RIVER REGULATING DISTRICT
STILLWATER RESERVOIR OPERATION
FOR WEEK ENDING: March 23, 2024

DATE	STILLWATER RESERVOIR			BEAVER RIVER		BLACK RIVER
	WATER SURFACE ELEV. 12 A.M.	AVAIL. STORAGE B.C.F.	PERIODS OF RELEASE	STILLWATER RELEASE AVG. DAILY C.F.S.	CROGHAN AVG. DAILY FLOW C.F.S.	WATERTOWN AVG. DAILY FLOW C.F.S.
Saturday 16	1,670.92	2.74	12 AM -Mid	250	674	6,990
Sunday 17	1,671.11	2.78	12 AM -Mid	250	567	6,580
Monday 18	1,671.25	2.81	12 AM -Mid	250	486	6,160
Tuesday 19	1,671.40	2.84	12 AM -Mid	250	552	5,780
Wednesday 20	1,671.53	2.87	12 AM -Mid	250	544	5,490
Thursday 21	1,671.63	2.89	12 AM -Mid	250	458	5,000
Friday 22	1,671.71	2.91	12 AM -Mid	250	455	4,450
Saturday 23	1,671.79	2.92	12 AM -Mid	250	458	3,820

CHANGE IN STORAGE DURING THE WEEK	0.18	
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ELEVATIONS AND CAPACITIES ON THIS DATE FOR THE PAST TEN YEARS

NO.	YEAR	ELEV.	CAPACITY	NO.	YEAR	ELEV.	CAPACITY
1	2016	1,674.79	3.61	6	2020	1,666.88	2.03
2	2017	1,673.60	3.33	7	2019	1,665.57	1.82
3	2018	1,672.87	3.16	8	2023	1,664.01	1.56
4	2022	1,672.37	3.05	9	2021	1,662.68	1.34
5	2024	1,671.79	2.92	10	2015	1,658.32	0.74

CAPACITY AT SPILLWAY CREST (EL 1677.19) 4.213 B.C.F.
CAPACITY AT LOW FLOW LINE (EL 1650.69) 0.10 B.C.F.

Datum: NAVD 88

CHIEF ENGINEER

STATE OF NEW YORK
HUDSON RIVER-BLACK RIVER REGULATING DISTRICT
FULTON CHAIN RESERVOIR OPERATION

FOR WEEK ENDING: March 2, 2024

DATE	OLD FORGE RESERVOIR			SIXTH LAKE RESERVOIR		
	WATER SURFACE ELEV. 12 A.M.	AVAIL. STORAGE B.C.F.	RELEASE AVG. DAILY C.F.S.	WATER SURFACE ELEV. 12 A.M.	AVAIL. STORAGE B.C.F.	RELEASE AVG. DAILY C.F.S.
Saturday 24	1,703.56	0.474	99	1,780.29	0.125	34
Sunday 25	1,703.53	0.471	98	1,780.26	0.124	34
Monday 26	1,703.49	0.467	98	1,780.22	0.123	34
Tuesday 27	1,703.47	0.464	98	1,780.19	0.122	34
Wednesday 28	1,703.45	0.462	98	1,780.19	0.122	34
Thursday 29	1,703.42	0.458	98	1,780.34	0.126	35
Friday 1	1,703.57	0.476	99	1,780.57	0.133	36
Saturday 2	1,703.59	0.478	99	1,780.62	0.135	36
CHANGE IN STORAGE		0.004			0.010	

ELEVATIONS AND CAPACITIES ON THIS DATE FOR THE PAST FIVE YEARS

OLD FORGE RESERVOIR				SIXTH LAKE RESERVOIR			
NO.	YEAR	ELEV.	CAPACITY	NO.	YEAR	ELEV.	CAPACITY
1	2022	1,703.80	0.506	1	2022	1,780.78	0.140
2	2024	1,703.59	0.478	2	2023	1,780.65	0.136
3	2023	1,703.52	0.469	3	2024	1,780.62	0.135
4	2021	1,703.09	0.415	4	2021	1,780.21	0.123
5	2020	1,702.87	0.387	5	2020	1,779.24	0.094

OLD FORGE CAPACITY AT SPILLWAY CREST (EL 1706.99) 0.924 B.C.F.
SIXTH LAKE CAPACITY AT SPILLWAY CREST (EL 1785.83) 0.297 B.C.F.

Datum: NAVD 88

CHIEF ENGINEER

STATE OF NEW YORK
HUDSON RIVER-BLACK RIVER REGULATING DISTRICT
FULTON CHAIN RESERVOIR OPERATION

FOR WEEK ENDING: **March 9, 2024**

DATE	OLD FORGE RESERVOIR			SIXTH LAKE RESERVOIR		
	WATER SURFACE ELEV. 12 A.M.	AVAIL. STORAGE B.C.F.	RELEASE AVG. DAILY C.F.S.	WATER SURFACE ELEV. 12 A.M.	AVAIL. STORAGE B.C.F.	RELEASE AVG. DAILY C.F.S.
Saturday 2	1,703.59	0.478	99	1,780.62	0.135	36
Sunday 3	1,703.60	0.479	99	1,780.66	0.136	36
Monday 4	1,703.62	0.482	100	1,780.71	0.138	36
Tuesday 5	1,703.65	0.487	100	1,780.83	0.141	37
Wednesday 6	1,703.67	0.489	101	1,780.97	0.145	38
Thursday 7	1,703.81	0.506	102	1,781.24	0.153	39
Friday 8	1,703.91	0.519	103	1,781.59	0.164	59
Saturday 9	1,703.97	0.527	104	1,781.64	0.166	76
CHANGE IN STORAGE		0.049			0.031	

ELEVATIONS AND CAPACITIES ON THIS DATE FOR THE PAST FIVE YEARS

OLD FORGE RESERVOIR				SIXTH LAKE RESERVOIR			
NO.	YEAR	ELEV.	CAPACITY	NO.	YEAR	ELEV.	CAPACITY
1	2024	1,703.97	0.527	1	2024	1,781.64	0.166
2	2023	1,703.44	0.461	2	2023	1,780.47	0.130
3	2022	1,703.44	0.461	3	2022	1,780.46	0.130
4	2021	1,703.10	0.416	4	2021	1,780.12	0.120
5	2020	1,702.90	0.392	5	2020	1,779.30	0.095

OLD FORGE CAPACITY AT SPILLWAY CREST (EL 1706.99) 0.924 B.C.F.
SIXTH LAKE CAPACITY AT SPILLWAY CREST (EL 1785.83) 0.297 B.C.F.

Datum: NAVD 88

CHIEF ENGINEER

STATE OF NEW YORK
HUDSON RIVER-BLACK RIVER REGULATING DISTRICT
FULTON CHAIN RESERVOIR OPERATION

FOR WEEK ENDING: March 16, 2024

DATE	OLD FORGE RESERVOIR			SIXTH LAKE RESERVOIR		
	WATER SURFACE ELEV. 12 A.M.	AVAIL. STORAGE B.C.F.	RELEASE AVG. DAILY C.F.S.	WATER SURFACE ELEV. 12 A.M.	AVAIL. STORAGE B.C.F.	RELEASE AVG. DAILY C.F.S.
Saturday 9	1,703.97	0.527	104	1,781.64	0.166	76
Sunday 10	1,704.07	0.538	104	1,781.69	0.167	76
Monday 11	1,704.12	0.545	105	1,781.78	0.170	77
Tuesday 12	1,704.19	0.555	106	1,781.80	0.171	77
Wednesday 13	1,704.25	0.563	106	1,781.78	0.170	77
Thursday 14	1,704.26	0.564	106	1,781.76	0.169	77
Friday 15	1,704.31	0.569	107	1,781.78	0.170	77
Saturday 16	1,704.34	0.573	107	1,781.85	0.172	77
CHANGE IN STORAGE		0.046			0.006	

ELEVATIONS AND CAPACITIES ON THIS DATE FOR THE PAST FIVE YEARS

OLD FORGE RESERVOIR				SIXTH LAKE RESERVOIR			
NO.	YEAR	ELEV.	CAPACITY	NO.	YEAR	ELEV.	CAPACITY
1	2024	1,704.34	0.573	1	2024	1,781.85	0.172
2	2022	1,703.47	0.464	2	2021	1,780.46	0.130
3	2023	1,703.38	0.453	3	2023	1,780.32	0.126
4	2020	1,703.32	0.444	4	2020	1,780.30	0.125
5	2021	1,703.30	0.442	5	2022	1,780.16	0.121

OLD FORGE CAPACITY AT SPILLWAY CREST (EL 1706.99) 0.924 B.C.F.
SIXTH LAKE CAPACITY AT SPILLWAY CREST (EL 1785.83) 0.297 B.C.F.

Datum: NAVD 88

CHIEF ENGINEER

STATE OF NEW YORK
HUDSON RIVER-BLACK RIVER REGULATING DISTRICT
FULTON CHAIN RESERVOIR OPERATION

FOR WEEK ENDING: March 23, 2024

DATE	OLD FORGE RESERVOIR			SIXTH LAKE RESERVOIR		
	WATER SURFACE ELEV. 12 A.M.	AVAIL. STORAGE B.C.F.	RELEASE AVG. DAILY C.F.S.	WATER SURFACE ELEV. 12 A.M.	AVAIL. STORAGE B.C.F.	RELEASE AVG. DAILY C.F.S.
Saturday 16	1,704.34	0.573	107	1,781.85	0.172	77
Sunday 17	1,704.37	0.577	107	1,781.88	0.173	77
Monday 18	1,704.38	0.580	108	1,781.87	0.173	77
Tuesday 19	1,704.41	0.584	107	1,781.86	0.172	77
Wednesday 20	1,704.42	0.585	49	1,781.84	0.172	34
Thursday 21	1,704.46	0.590	8	1,781.91	0.174	4
Friday 22	1,704.53	0.598	8	1,781.97	0.176	4
Saturday 23	1,704.57	0.603	7	1,782.03	0.177	4
CHANGE IN STORAGE		0.030			0.005	

ELEVATIONS AND CAPACITIES ON THIS DATE FOR THE PAST FIVE YEARS

OLD FORGE RESERVOIR				SIXTH LAKE RESERVOIR			
NO.	YEAR	ELEV.	CAPACITY	NO.	YEAR	ELEV.	CAPACITY
1	2024	1,704.57	0.603	1	2024	1,782.03	0.177
2	2022	1,704.18	0.554	2	2022	1,781.49	0.161
3	2020	1,703.62	0.482	3	2020	1,780.84	0.141
4	2023	1,703.44	0.461	4	2021	1,780.54	0.132
5	2021	1,703.39	0.454	5	2023	1,780.50	0.131

OLD FORGE CAPACITY AT SPILLWAY CREST (EL 1706.99) 0.924 B.C.F.
SIXTH LAKE CAPACITY AT SPILLWAY CREST (EL 1785.83) 0.297 B.C.F.

Datum: NAVD 88

CHIEF ENGINEER



Engineering
& Design

**Indian River Lake Dam Rehabilitation Project (State ID#169-0758)
Construction Progress Report**

Report No: 05

Period: 02/17/24 through 03/15/24

Date: March 15, 2024

Prepared for: Donald E. Canestrari, John Smith
Bureau of Flood Protection and Dam Safety, Division of Water

Prepared by: Colliers Engineering & Design

On behalf of the Hudson River Black River Regulating District (HRBRRD), Colliers Engineering & Design has prepared this letter in accordance with the requirements of the Dam Safety Permit – Condition 9 – Construction Reports.

Contractor’s Progress Schedule, including revisions:

- The most recent construction schedule is dated February 20, and is attached to this progress report. Revision to this schedule is anticipated and updates will be provided once received.

Summary of major work completed during period:

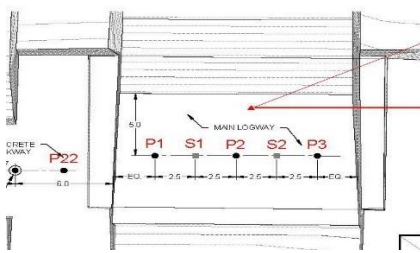
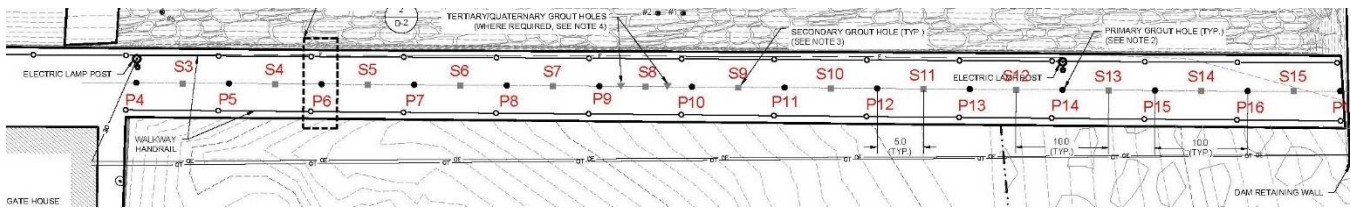
- SWPPP reports. – SWPPP Inspections conducted weekly, and reports located in binder onsite.
- Demolition – Removed walkway bridge over Main Logway. Removed the first course of stone in Main logway for new bridge seat concrete placement. Removed the first course of stone on spillway piers to allow for drilling of anchors and placement of anchor pads.
- Coring – Continued coring the first 3 feet of primary grout holes in advance of drilling and grouting operations. Completed primary hole 3 and secondary holes 1 and 2 in Main logway Sill. Cored to 20’ at primaries 10 and 11 on the non-overflow section of dam.
- Grouting – Grouted primary hole 3 and secondary holes 1 and 2 in Main logway Sill. Grouted 20’ at primaries 10 and 11 on the non-overflow section of dam.
- Forming – Began forming for concrete placement at Main logway bridge seat.

Summary of observations made by the on-site representative:

- Daily reports can be provided upon request.

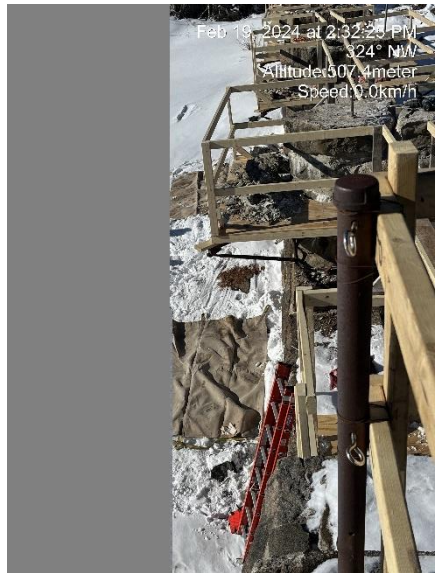
Summary of observations made by the construction engineer during his site inspections:

- During the water testing procedure in the Main logway, it was observed that in primary hole #3 and secondary #2 there was a large volume of water exfiltration for all three 5-minute iterations of the test. Conversely secondary #1 had a small volume of water exfiltration as well.
- Grouted Main logway primary hole #3 and secondary holes #1 and #2. During the grouting of secondary hole #1 it was found that within the top 1 foot of the hole there was a void located between two stone where the mortar seems to be eroded completely and the approved secondary mix would need to be used. The void was able to be filled and the remaining portion of primary #1 that was suspended was completed at that time. Grout operations moved to primary hole #3. No issues were observed with grouting. Secondary #2 was grouted and no issues arose during the process. Grouted primaries #10 and #11 on the non-overflow section of dam. Both primaries encountered issues with exfiltration on the upstream side of the dam. Once the leakage was spotted the grout mixture was changed along with stoppage methods being employed.
- No dam-safety specific visit has been made to the site yet, as the schedule progresses, and more work is performed site visits will be scheduled for priority activities and observations.

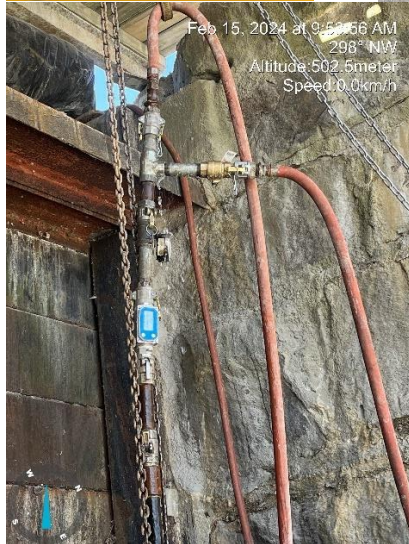


Construction photos:

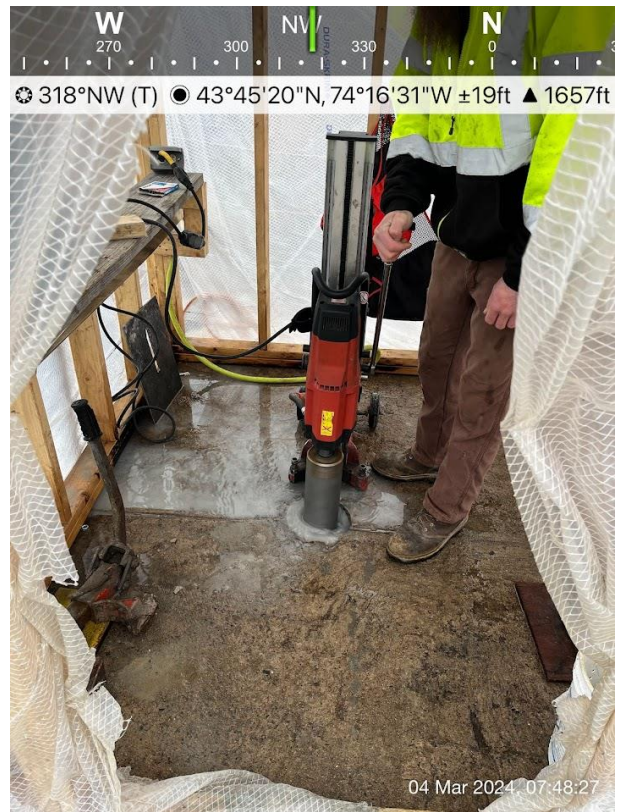
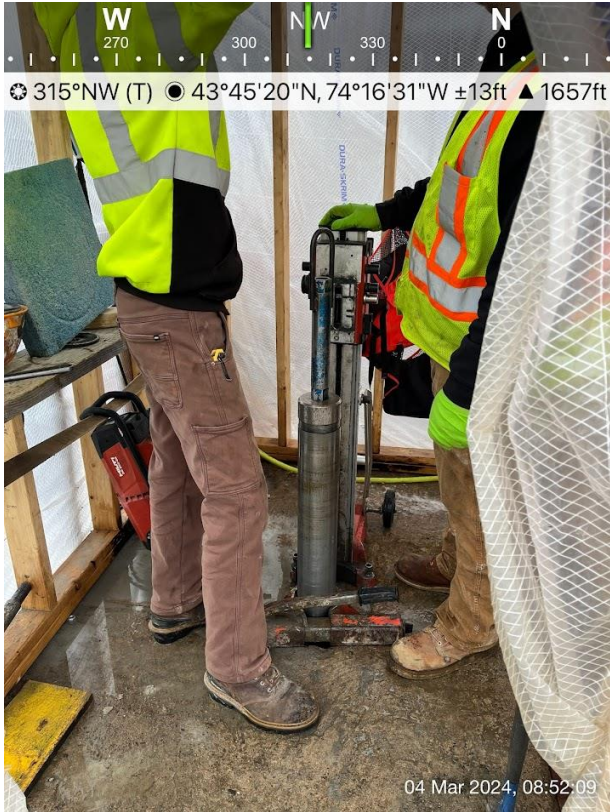
- Photo 1 (below): Removal of bridge deck at main logway.
- Photo 2 (below): Stone removal at bridge seat at main logway (side by gate house).
- Photo 3 (below): Stone removal at bridge seat at main logway (Side by spillway).
- Photo 4 (below): Debris lifting bags in place.
- Photo 5 (below): Debris removal Main logway.



- Photo 6 (below): Core drilling for primary grout hole #3 on main logway.
- Photo 7 (below): Core drilling for Main logway secondary #1
- Photo 8 (below): Water pressure test secondary #2 at main logway.
- Photo 9 (below): Injection grouting primary #3 main logway.



- Photo 10 (below): Corning at non-overflow section of dam primary 10.
- Photo 11 (below): Corning at non-overflow section of dam primary 11.



- Photo 13 (below) – Stone removal on spillway pier and work platform.
- Photo 14 (below) – Stone removal on spillway pier and work platform.
- Photo 15 (below) – Stacked stones removed from and location tagged from spillway piers.





Copies of all lab and field test results:
Grout Placement: Specific Gravity = 1.7

PRIMARY HOLE 3				WATER TEST PRIMARY 3			
Depth	Grout Vol.	Pressure	Ratio	Depth	Time/min	Pressure	Volume/gls
30'	0.82	10.00	1 to 1	30'	5	2 psi	34.5
25'	0.20	15.00	1 to 1	30'	5	2 psi	27.4
20'	1.43	6.00	1 to 1	30'	5	2 psi	27.4
15'	0.82	8.00	1 to 1	WATER TEST SECONDARY 1			
10'	2.05	10.00	1 to 1	Depth	Time/min	Pressure	Volume/gls
5'	7.18	5.00	1 to 1	20'	5	8 psi	0.16
1.5	4.50	TREMI	.65 to 1	20'	5	8 psi	0.16
				20'	5	8 psi	0.16
SECONDARY 1				WATER TEST SECONDARY 2			
Depth	Grout Vol.	Pressure	Ratio	Depth	Time/min	Pressure	Volume/gls
20'	1.23	20.00	1 to 1	22.5'	5	10 psi	15.2
15'	0.61	20.00	1 to 1	22.5'	5	10 psi	15.4
10'	5.12	20.00	1 to 1	22.5'	5	10 psi	15.3
5'	6.15	20.00	1 to 1				
5'	0.61	20.00	.65 to 1				
1.5'	0.51	TREMI	.65 to 1				
SECONDARY 2							
Depth	Grout Vol.	Pressure	Ratio				



22'	0.41	12.00	1 to 1				
17'	0.41	13.00	1 to 1				
12'	0.82	12.00	1 to 1				
7'	1.02	7.00	1 to 1				
1.5	1.64	TREMI	1 to 1				
PRIMARY 11							
Depth	Grout Vol.	Pressure	Ratio				
25'	0.82	18.00	1 to 1				
20'	1.23	10.00	.80 to 1				
20'	1.24	10.00	.65 to 1				
15'	1.23	10.00	.80 to 1				
15'	13.94	10.00	.65 to 1				
10'	5.74	5.00	1 to 1				
10'	2.46	5.00	.65 to 1				
5'	1.23	TREMI	.65 to 1				
PRIMARY 10							
Depth	Grout Vol.	Pressure	Ratio				
20'	3.08	2.00	1 to 1				
20'	1.44	5.00	.80 to 1				
20'	1.64	15.00	.65 to 1				
15'	0.21	10.00	1 to 1				
10'	0.41	5.00	1 to 1				
5'	1.03	TREMI	1 to 1				

Summary of work planned for the next two (2) weeks:

- Continue coring of primary and secondary grout holes in preparation for grouting operations.
- Continue grouting operations.
- Begin demolition of main logway sill.



Construction reports will continue to be generated and submitted throughout the duration of construction. Please do not hesitate to contact us at (315) 705-3894 should you have any questions or require additional information.

Sincerely,

Daniel J. Gildea, PMP
Bergmann Associates
Project Manager

Attachments:

1. Most recent construction schedule.

Table with columns: Activity ID, Activity Name, Orig. Dur., Total Float, Early Start, Early Finish, Late Finish, Calendar, and monthly activity bars for 2024 and 2025. Activities include Main Logway Reconstruction, Old Gate Restoration, Debris Boom, Main Spillway, Non-Overflow Dam, and Dam Embankment.

