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January 25, 2024

The Honorable Debbie-Anne A. Reese, Acting Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

ROANOKE RAPIDS AND GASTON, FERC PROJECT NO. 2009 NC AND VA
ARTICLE 424 WHITEWATER BOATING PLAN
2023 ANNUAL REPORT

Dear Secretary Reese:

In accordance with the license order issued March 31, 2004, Virginia Electric and Power Company, doing business as Dominion Energy North Carolina (Dominion), submits the above referenced report.

The report (and appendix) has been posted on Dominion's whitewater web page and distributed to the US Army Corps of Engineers and members of the Cooperative Management Team as noted below.

If you have any questions related to the report, please contact Mr. Corey Chamberlain at (804) 837-5587 or corwin.d.chamberlain@dominionenergy.com.

Sincerely,

Robert W. Sauer

Attachments (Report and Appendix 1)

cc: Mr. Fred Tarver (NCDEQ)
Mr. Chris Wicker
Mr. Mike Watson
Mr. Greg Lawson (Roanoke Canal)
Ms. Christina Wells (Halifax County, NC)
Mr. Shane Brown (Carolina Canoe Club)
Mr. Tony Young (USACE)
Mr. Dave Blodget (Lake Gaston Outfitters)

ROANOKE RAPIDS AND GASTON
FERC PROJECT NUMBER 2009
ARTICLE 424 WHITEWATER BOATING PLAN
2023 – EIGHTEENTH ANNUAL REPORT

Introduction

Article 424 of the Roanoke Rapids and Gaston Hydropower License as amended on March 4, 2005 (110 FERC ¶61,214) required the development of a Whitewater Boating Plan (Plan). The Plan was submitted to the Commission on December 9, 2004 and approved by the Commission on December 13, 2005 (113 FERC ¶62,198). A revised Plan (Revision 1) was submitted on September 21, 2011 and approved by the Commission on February 27, 2012 (138 FERC ¶62,166).

Requirements

The Plan requires an annual report for the whitewater releases from the Roanoke Rapids dam to support paddler recreation. The report is to cover nine weekends of whitewater releases, inclusive of the four advanced planned release weekends, and quantify (a) the weekly USACE Kerr declaration, (b) time and date peaking ceased prior to the whitewater flow day (c) USGS Halifax gage readings for the nine weekends at 9:00 AM, 12 Noon and 3:00 PM and (d) an indication of daily compliance with posting by 10:00 AM the daily update of predicted load following conditions for the next two days. The whitewater flow period is from the end of the anadromous fish spawning flows (June 16) through the end of October. The Plan further requires the report submittal to the North Carolina Department of Environmental Quality (NCDEQ), the US Army Corps of Engineers (USACE), the Carolina Canoe Club, the City of Roanoke Rapids and the County of Halifax, NC; and be posted on Dominion's paddler web page.

Target Whitewater Conditions

For desired whitewater conditions to occur, Dominion target flows are between 1,500 cfs and 2,800 cfs with the river stage at the Halifax USGS gage at 20' or less. In order to accomplish this, Dominion ceases peaking the evening before the planned whitewater flow day. Please note, in revision 1 to the Plan, the stakeholders changed the target flows from 2,000 – 3,300 cfs to 1,500 – 2,800 cfs. Between June 16 and July 1, minimum release flow from Roanoke Rapids is 2,800 cfs. Due to this, it is recognized that target whitewater flows will likely not be met during this period.

Statistical Summary

1. Whitewater flow releases.
   The whitewater flow period covered 30 potential whitewater flow days when declarations met requirements. Of those days, whitewater flow was provided 27 days (90%). A total of 29 whitewater flow days were provided during the whitewater season including days when declarations exceeded requirements. Beginning September 9 and continuing through October 31, the Roanoke Rapids

Power Station was in a maintenance outage and flows could only be controlled with the use of the spillway gates. Flows from the spillway gates are harder to control and vary more due to lake level changes and the complexity of the channels in the bypassed reach. Also, Article 407 of the License requires stepdown procedures when reducing flows into the bypassed reach which limits the ability of the station to vary flows into the river. Declarations were within the range to provide paddler flows during the outage period and while control of flows was limited, the low summer flows and lack of peaking resulted in gage levels, at the Halifax gage, at or below 20 feet for most of the period which created favorable whitewater conditions at Weldon even with higher river flows. There were three days during the outage when the Weldon gage was above 20 feet. This occurred when there had been heavy local rains in the lake basin that caused flows through the system to increase and the gates were opened to control lake level in accordance with Article 406.

2. Days when whitewater releases did not occur.
   For the 30 days noted above, whitewater flows were targeted each weekend day with the upper 2,800 cfs target being exceeded for some period on 10 days, one of which was the day of the Expert Paddler Wave. Of the days when 2,800 cfs at the Roanoke Rapids gage was exceeded, the Halifax gage only exceeded 20 ft four days.

3. Halifax stage.
   NOTE: This analysis is for the period July 2 – October 29, which covers the 29 days that paddler flows were provided. [1]
   a. Halifax stage was at or below 20 feet:
      At 9:00 AM: 27 times out of 29 days (93%)
      At 12:00 Noon: 27 times out of 29 days (93%)
      At 3:00 PM: 29 times out of 29 days (100%).
   b. Halifax stage was at or below 20 feet when Roanoke Rapids peaked the previous day:
      At 9:00 AM: 1 time out of 4 days (25%)
      At 12:00 Noon: 2 times out of 4 days (50%)
      At 3:00 PM: 2 times out of 4 days (50%).
   c. Average Halifax stage (feet) for 29 days:
      At 9:00 AM: 19.0
      At 12:00 Noon: 18.9
      At 3:00 PM: 18.8.
   d. Average Halifax stage (feet) when Roanoke Rapids peaked the previous day, on days that paddler flows were provided:
      At 9:00 AM: 21.6
      At 12:00 Noon: 21.0
      At 3:00 PM: 20.6

e. Average Halifax stage difference (feet) between 9 AM and 3 PM when Roanoke Rapids peaked the previous day: - 1.0.

[1] The station is required to attempt paddler flows only one weekend day when the USACE Weekly declaration exceeds 4,000 cfs and no days when the declaration exceeds 6,000 cfs. While not required, the station provided two days of paddler flows the weekends of July 29/30 when declaration flows exceeded 6,000 cfs and on August 12/13, when declaration flows exceeded 4,000 cfs.

Advanced Planned Releases

In late March, Dominion posted on its paddler web page Advance Planned Recreational Releases that the following weekends would be Advanced Planned releases: July 1/2; July 8/9; August 5/6; and September 2/3. The "Expert Paddler Wave" was scheduled for and occurred on August 6.

Data

The plan requires recording and reporting of data from niine paddler flow weekends. Data from the entire paddler season is included as Appendix 1.

Daily Web Page Posting of Anticipated Flow

During the paddler season, the web page was updated 99% of the 135-day paddler flow season. Per the Plan, the entry is to be made by 10:00 AM daily. On days that entries were made; the entries were entered by 10:00 AM 98% of the time and by 11:00 AM 99% of the time.

Roanoke River 2023 Whitewater Report, FERC Project # 2009, NC & VA								
Appendix 1, Whitewater Flow Data Dates and times whitewater flow required by license								
	WEEKLY DEC (cfs)	DATE/TIME PEAKING CEASED ON FRIDAY	RRFLOW (cfs)	RRFLOW (cfs)	RRFLOW (cfs)	Halifax GAUGE	Halifax GAUGE	Halifax GAUGE
Date[1]			9:00	12:00	15:00	9:00	12:00	15:00
Saturday, June 17, 2023	3,500	6/16/23 20:00	3040	3040	3040	23	22	21
Sunday, June 18, 2023	3,500		3040	3050	3040	20	20	20
Saturday, June 24, 2023	9,910		5860	6020	6100	22	22	22
Sunday, June 25, 2023	9,910		6130	6130	6160	23	23	23
Saturday, July 1, 2023	6,000		6130	6080	6100	27	26	25
Sunday, July 2, 2023	6,000		6080	6080	5990	24	24	24
Saturday, July 8, 2023	4,000	7/7/23 20:00	2420	2420	2570	21	21	20
Sunday, July 9, 2023	4,000		2590	2590	2570	20	19	19
Saturday, July 15, 2023	4,000	7/14/23 20:00	2520	2480	2480	20	19	19
Sunday, July 16, 2023	4,000		2520	2520	2500	19	19	19
Saturday, July 22, 2023	7,000	7/21/23 17:15	6240	6240	6270	26	25	25
Sunday, July 23, 2023	7,000		6270	6270	6290	24	24	24
Saturday, July 29, 2023	7,000	7/28/23 19:00	2420	2420	2350	23	22	22
Sunday, July 30, 2023	7,000		2290	2270	2270	19	19	19
Saturday, August 5, 2023	3,250		2320	2300	2320	19	19	19
Sunday, August 6, 2023	3,250		2300	6920	10000	19	19	20
Saturday, August 12, 2023	4,500		2290	2290	2270	18	18	18
Sunday, August 13, 2023	4,500		2620	2600	2600	19	19	19
Saturday, August 19, 2023	3,250		2300	2300	2300	19	19	19
Sunday, August 20, 2023	3,250		2320	2340	2340	18	18	18
Saturday, August 26, 2023	3,250		2300	2300	2300	18	18	18
Sunday, August 27, 2023	3,250		2350	2350	2370	18	18	18
Saturday, September 2, 2023	3,200		2350	2350	2350	19	19	19
Sunday, September 3, 2023	3,200		2350	2370	2370	18	18	18
Saturday, September 9, 2023	3,240	9/8/23 20:00	3380	3210	3170	22	22	21
Sunday, September 10, 2023	3,240	Rain	3170	3150	3190	20	20	20
Saturday, September 16, 2023	3,240		3240	3230	3210	20	20	20
Sunday, September 17, 2023	3,240		3230	3230	3190	19	19	19
Saturday, September 23, 2023	3,240	Rain	5070	5190	5760	21	22	23
Sunday, September 24, 2023	3,240	Rain	3300	3280	3240	22	22	22
Saturday, September 30, 2023	2,200		2600	2550	2430	19	19	19
Sunday, October 1, 2023	2,200		2270	2250	2240	18	18	18
Saturday, October 7, 2023	2,200		2290	2250	2240	18	18	18
Sunday, October 8, 2023	2,200		2220	2210	2190	18	18	18
Saturday, October 14, 2023	2,240		2550	2570	3620	18	18	18
Sunday, October 15, 2023	2,240	Rain	3850	3400	3000	21	21	20
Saturday, October 21, 2023	2,250		2540	2480	2520	18	18	18
Sunday, October 22, 2023	2,250		2320	2300	2250	18	18	18
Saturday, October 28, 2023	2,250		2520	2500	2470	18	18	18
Sunday, October 29, 2023	2,250		2500	2520	2540	18	18	18
Average Halifax Stage on Saturdays when peaking occurred on Friday						21.6	21.0	20.6
Average Halifax Stage for all paddler days						19.0	18.9	18.8

Note 1: Minimum flow requirement June 16 - 30 = 2,800 cfs

Yellow highlighted blocks indicate Advanced Planned Paddler Flow days.

Red highlighed block is Expert Paddler Wave which occurred Aug. 14.

Orange highlighted blocks indicate Weekly declaration over 6000 cfs. Paddler flows not required.

Blue highlighted blocks indicate Weekly declaration over 6000 cfs. Paddler flows not required but paddler flows provided both days

Brown highlighted blocks indicate Weekly declaration between 4000 and 6000 cfs. One day of paddler flows required but paddler flows provided both days.

Green highlighted blocks indicate Weekly declaration between 4000 and 6000 cfs. One day of paddler flows required but no paddler flow days provided due to station outage.

Pink highlighted blocks indicate indicate period when station was in outage and control of flows was limited