

**ROANOKE RAPIDS AND GASTON
FERC PROJECT NUMBER 2009
ARTICLE 424 WHITEWATER BOATING PLAN
2006 ANNUAL REPORT**

Introduction

Article 424 of the Roanoke Rapids and Gaston Hydropower License as amended on March 4, 2005 by the Federal Energy Regulatory Commission (Commission) 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.

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 and (c) USGS Halifax gage readings for the nine weekends at 9:00 AM, 12 Noon and 3:00 PM. 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 to be submitted to the North Carolina Department of Environment and Natural Resources (NCDENR), 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

In order for desired whitewater conditions to occur, Dominion targets flows to be between 2000 cfs and 3500 cfs and have 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.

Statistical Summary

1. Whitewater flow releases

The whitewater flow period covered 42 potential required whitewater flow days. Of those days, whitewater flow was provided 31 days (71%). Flows were not provided on the following days for the reasons noted.

2. Available paddler days.

Out of 42 potential paddler days, paddler flows were provided for 31 days (71%). Days when paddler flows were not provided were because the weekly declaration was too high.

3. Days when whitewater releases did not occur.

a. July 8, 9. The weekly declaration was 7100 cfs. This was a short-termed planned weekend, so any declaration above 6000 cfs does not require whitewater releases.

b. July 15, 16, 21, 22. During these weekends the USACE had the lower Roanoke River in flood control. During this time the declarations varied between 15,000 cfs and 8,000 cfs.

c. October 8. The weekly declaration was 4200. For declarations between 4,000 and 6,000 on a short term planned weekend, only one day of whitewater releases are required which occurred on Saturday October 7.

d. October 14, 15, 21, 22. During these weekends the USACE had the lower Roanoke River in flood control. During this time the declarations varied between 20,000 and 8,000 cfs.

4. Halifax / Weldon Rapids stage.

a. Halifax stage < 20'.

At 9:00 AM, 19 times out of 31 days (61%).

At 12:00 Noon, 21 times out of 31 days (68%).

At 3:00 PM, 22 times out of 31 days (71%).

b. Halifax stage < 20' when Roanoke Rapids peaked the previous day.

At 9:00 AM, 6 times out of 12 days (50%).

At 12:00 Noon, 6 times out of 12 days (50%).

At 3:00 PM, 7 times out of 12 days (58%).

c. Average Halifax stage for 31 days:

At 9:00 AM: 20.13'.

At 12:00 Noon: 19.96'.

At 3:00 PM: 19.84

d. Average Halifax stage when Roanoke Rapids peaked the previous day:

At 9:00 AM: 20.59

At 12:00 Noon: 20.27

At 3:00 PM: 20.04

e. Average Halifax stage difference between 9 AM and 3 PM when Roanoke Rapids peaked the previous day: 0.55'.

Advanced Planned Releases

In early March, Dominion posted on its paddler web page that the following weekends would be Advanced Planned releases: July 1, 2, 4, July 22, 23, August 5, 6 and September 2 - 4. Since the USACE had the lower Roanoke River in flood control on July 22 and 23, Dominion posted at that time that the advanced planned release would be for the following weekend, July 29 and 30.

Data

The plan requires recording and reporting of data from 9 paddler flow weekends. Data from the entire paddler season is included as Appendix 1.

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 ROANOKE RAPIDS WHITEWATER FLOW DATA - APPENDIX 1
 2006

ID	Date	Weekly Dec	Date Peaking Ceased	Time Peaking Ceased	RRFlow 9am	RRFlow 12pm	RRFlow 3pm	Halifax Stage 9am	Halifax Stage 12pm	Halifax Stage 3pm	Change 9am to 3pm
1	6/17/06	2700	NA	N/A	3085	3085	3085	21.41	21.24	21.10	
2	6/18/06	2700	NA	N/A	3050	3085	3032	20.41	20.33	20.26	
3	6/24/06	2700	6/22/06	1800	3014	3014	2996	19.87	19.84	19.81	
4	6/25/06	2700	6/22/06	1800	2996	3014	3014	19.73	19.76	19.79	
5	7/1/06	4500	6/30/06	1700	3122	3050	3050	20.87	20.62	20.43	0.44
6	7/2/06	4500	6/30/06	1700	3140	3158	3122	20.04	19.98	19.97	
7	7/4/06	4500	7/3/06	1800	2961	2961	2979	22.51	21.82	21.29	1.22
8	7/29/06	3300	7/28/06	1700	3103	3103	2961	21.18	20.92	20.75	0.43
9	7/30/06	3300	7/28/06	1700	3014	2961	2943	20.16	20.12	20.10	
10	8/5/06	3300	8/4/06	1600	2805	2805	2822	19.80	19.75	19.75	0.05
11	8/6/06	3300	8/4/06	1600	2788	2788	2771	19.80	19.75	19.75	
12	8/12/06	3300	8/11/06	1600	2839	2909	2891	19.94	19.87	19.85	0.09
13	8/13/06	3300	8/11/06	1600	2805	2805	2805	19.91	19.80	19.73	
14	8/19/06	3300	8/18/06	1700	2653	2604	2522	19.93	19.82	19.65	0.28
15	8/20/06	3300	8/18/06	1700	2604	2637	2555	19.19	19.18	19.17	
16	8/26/06	3300	8/25/06	1600	2442	2426	2426	18.92	18.95	18.93	-0.01
17	8/27/06	3300	8/25/06	1600	2571	2571	2571	18.92	18.95	19.03	
18	9/2/06	3300	8/31/06	2100	2943	3176	2979	22.93	22.86	22.94	
19	9/3/06	3300	8/31/06	2100	2210	2210	2225	20.24	20.00	19.80	
20	9/4/06	3300	8/31/06	2100	2474	2474	2490	19.33	19.29	19.24	
21	9/9/06	3300	9/8/06	2100	2703	2670	2555	21.75	21.10	20.66	1.09
22	9/10/06	3300	9/8/06	2100	2539	2555	2539	19.24	19.16	19.11	
23	9/16/06	3300	9/15/06	1800	2286	2286	2241	20.54	20.10	19.82	0.72
24	9/17/06	3300	9/15/06	1800	2687	2703	2720	19.15	19.16	19.09	
25	9/23/06	3300	9/22/06	1600	2333	2317	2333	19.02	18.80	18.68	0.34
26	9/24/06	3400	9/22/06	1600	2286	2333	2271	18.37	18.35	18.35	
27	9/30/06	3700	9/29/06	1400	2333	2364	2348	19.79	19.44	19.17	0.62
28	10/1/06	3700	9/29/06	1400	2364	2364	2364	18.51	18.57	18.44	
29	10/7/06	4300	10/6/06	7:00	3050	3971	4725				
30	10/28/06	3300	10/27/06	2000	2286	2286	2241	22.86	22.09	21.47	1.39
31	10/29/06	3300	10/27/06	2000	2225	2210	2210	19.43	19.23	18.99	
Average stage								20.13	19.96	19.84	0.555
Yellow blocks indicate advanced planned release weekends Green blocks indicate 0900 stage when Roanoke Rapids peaked the previous day											