

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Morrisville Water & Light  
Morrisville Project  
Green River Development

FERC No. P-2629

AMERICAN WHITEWATER AND VERMONT PADDLERS CLUB  
MOTION TO INTERVENE AND COMMENTS FILED ON MORRISVILLE WATER  
& LIGHT HYDROELECTRIC APPLICATION (FERC PROJECT NO. P-2629)

American Whitewater and Vermont Paddlers Club hereby move to intervene in this proceeding pursuant to 18 C.F.R. § 385.210 and § 385.214. Service of process electronically and other Communications should be made to:

Robert Nasdor  
Northeast Stewardship Director  
American Whitewater  
65 Blueberry Hill Lane  
Sudbury, MA 01776  
bob@americanwhitewater.org

**I. Introduction**

American Whitewater and Vermont Paddlers Club are participants in this relicensing process due to our longstanding interest in the unique and highly valued recreational opportunities on the Green River in Morrisville, VT.

American Whitewater is a national non-profit 501(c)3 river conservation and recreation organization founded in 1954. We have approximately 6,000 members and 100 affiliate organizations, representing tens of thousands of whitewater paddlers across the nation. American Whitewater's mission is to protect and restore our nation's whitewater resources and to enhance opportunities to enjoy them safely. As a conservation-oriented paddling organization, American Whitewater has an interest in the Green River. A significant percentage of American Whitewater members reside a short driving distance from this river. Federal actions that affect flow, access to the river and navigation may potentially have an adverse impact on opportunities for American Whitewater members to utilize the Green River.

The Vermont Paddlers Club was established in 1970 and currently has over 100 members. In addition, the Vermont Paddlers Club is an American Whitewater affiliate club and is an American Canoe Association Paddle America Club. The mission of the club is to facilitate the enjoyment of recreational paddlesports. To this end, the Vermont Paddlers Club organizes whitewater and flatwater canoe and kayak trips, promotes safe

and enjoyable paddling through education and other activities, maintains an awareness of river resources and conservation issues, and takes action when appropriate to help protect paddling resources. Given the club's mission and the fact that the vast majority of its members reside within a short driving distance of the Green River, the Vermont Paddlers Club has a significant interest in the outcome of this process.

As conservation-oriented paddling organizations, American Whitewater and Vermont Paddlers Club have a strong interest in the hydroelectric license application filed by Morrisville Water & Light. Power generation activities by the Licensee affect the flow and access to the Green River and adversely impact opportunities for American Whitewater's members, Vermont Paddlers Club, and other whitewater enthusiasts to utilize the river resource in Morrisville and downriver from the project area.

## **II. Grounds for Intervention**

Intervention by American Whitewater and Vermont Paddlers Club is in the public interest as required by 18 C.F.R. §385.214(b)(2)(iii). American Whitewater and Vermont Paddlers Club have a significant undeniable interest in the recreational use of the Green River between the Green River Reservoir Development and the convergence of the Green with Lamoille River 4.3 miles downriver.

American Whitewater and Vermont Paddlers Club seek intervenor status in this licensing proceeding in order to advocate that the Licensee operate in a manner that will have a positive impact on the recreational boating opportunities in an environmentally beneficial and/or sustainable manner, both within the project boundary and downriver. No other party to the proceeding will be able to adequately represent those interests. American Whitewater and Vermont Paddlers Club have a direct and substantial interest in the outcome of this process.

## **III. General Comments**

The Green River drops about 400 feet over 2.75 miles from Garfield Road to Route 15 and into the Lamoille River. This stretch of the river is one of exceptional aesthetic beauty and contains several gorges, falls and drops before converging with the Lamoille River. In conjunction with American Whitewater and the Vermont Paddlers Club, the Licensee performed a whitewater controlled flow study in October of 2011 to assess the quality of the Green River as a whitewater paddling resource. The Licensee did a good job on the flow study and we enjoyed working with them. Based on the results of the controlled flow study, this stretch of the Green River contains numerous, high quality Class III, Class IV, and Class V rapids that can provide whitewater paddlers with a regionally unique and challenging paddling experience.

The Licensee acknowledges that, based on the flow study, "the normal generation of the Green River Hydro appears to provide opportunities to boat on the river at an acceptable flow." Exhibit E – Environmental Report, 4.4.7.2. The Licensee further acknowledges that providing whitewater boating opportunities will have a beneficial

impact on river related recreational opportunities in the area. Exhibit E – Environmental Report, 4.4.10.2. Given the inherent compatibility between power generation and recreational paddling on the Green River, and the likely foreclosure of significant natural paddling opportunities by the project, we believe that the provision of a significant number of recreational releases in concert with the coordination proposed by the Licensee forms the basis of a reasonable mitigation plan.

In addition, numerous studies have shown that whitewater boating has a positive economic impact on communities where such boating opportunities are available. In the case of the Town of Morrisville, the potential exists for whitewater releases to contribute to the local economy, as a significant number of paddlers would likely travel to the region for a scheduled, multi-day release of sufficient flow. The Licensee acknowledges that proposed whitewater flows below the Green River Reservoir may have a beneficial impact to the socioeconomic resources associated with existing Project operations.

The Licensee proposes to schedule two annual six (6) hour releases between July 1 and October 31 in order to provide whitewater boating flows on the Green River. American Whitewater and Vermont Paddling Club request that the Licensee schedule between eight and ten annual releases in order to accommodate our members' strong interest in paddling this section of the Green River. Our request is supported by the data compiled by the Green River Whitewater Study for the Morrisville Project conducted by the Licensee in October 2011. Vol. III, Ex 7. The study demonstrates the quality of whitewater boating on the Green River at various flows. Our request is further supported by the studies conducted elsewhere, including on the West River in Jamaica, Vermont, that show the positive economic impact on the community that would result from supporting recreational use of the river.

While American Whitewater and Vermont Paddling Club appreciate the Licensee's willingness to schedule some whitewater releases, its proposal to schedule only two annual releases is insufficient given that the Licensee generated power at boatable flows during 216 hours over 15 days in 2011. The Licensee has not demonstrated that scheduling additional releases would be highly impractical, result in unreasonable costs to the Licensee, or result in unresolvable conflicts with other uses based on its studies.

The Licensee's proposal of two scheduled releases fails to adequately take advantage of the compatibility between recreation and the other unscheduled flows they will release for power generation. Accordingly, FERC should direct the Licensee to provide the maximum number releases that it can reasonably provide consistent with other uses. By providing releases with more notice, and in some cases at a higher flow and/or shorter duration, both the power generation and recreational boating interests can be met.

#### **IV. Specific Comments**

##### **1. Flow Calculations**

In its application, the Licensee proposes releases based on its power generation or cfs calculations rather than on the river stage gage. The Licensee states that the acceptable flow for boating occurs when the generation level at the Green River Reservoir Development is approximately 800 kW, or 126 cfs for a minimum flow, 1290 kW, or a calculated flow of 222 cfs for a standard run, and a generation level of 1790 kW or 280 cfs for a high-challenge run. The Licensee, however, does not specify the flow for the two proposed releases or provide any assurance that the flow will be sufficient to provide whitewater boaters with the opportunity for a minimum, standard or high challenge paddling opportunity as identified in the Green River Whitewater Study. Based on the Study, a reading of 2'5" on the stage gage signifies that the river is navigable at a minimum flow; a reading of 2'8"-2'10" on the stage gage signifies an optimal flow; and, a reading between 3'0" and 3'5" or higher on the stage gage signifies a high-challenge flow.

We request that FERC require the Licensee, within the limits of its ability to control flows and subject to other license conditions, provide a series of optimal or high-challenge boating opportunities and coordinate release levels and scheduling with American Whitewater and Vermont Paddlers Club. FERC should further require that the Licensee base its releases on the stage gage rather than its generation, calculated cfs, or tube releases to determine the actual flows on the river, taking into account recent precipitation beyond the actual generation levels.

The Licensee's proposal of two annual whitewater releases does not take advantage of existing regulated river flows that could offer boating opportunities. These regulated flows over 126 cfs closely resemble the natural flow regime. Historic Green River flow data is available from 1915-1932.<sup>1</sup> Excluding data from the water years of 1920-1923 when only partial data is available, the 14-year record shows that the frequency of daily average natural flows above the minimum threshold for whitewater boating is around 18 per year, well in excess of the two annual releases proposed by the Licensee.

Rather than using historic flow data from the Green River at Garfield, VT, USGS Gage No. 04291000, the Licensee calculates flow using the Lamoille River Gage at Johnson, VT, USGS Gage No. 04292000. The Licensee's calculation of median monthly inflows fails to recognize that actual inflows vary considerably from hour to hour over the course of the month on the Green River. The Licensee's calculations underestimate the natural fluctuations that occur on tributaries like the Green where levels can change rapidly following significant rainfall.

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<sup>1</sup> Available at: [http://waterdata.usgs.gov/nwis/dv?cb\\_00060=on&format=html&period=&begin\\_date=1915-01-01&end\\_date=1932-0630&site\\_no=04291000&referred\\_module=sw](http://waterdata.usgs.gov/nwis/dv?cb_00060=on&format=html&period=&begin_date=1915-01-01&end_date=1932-0630&site_no=04291000&referred_module=sw)

Table 1  
Historic Number Boatable Flows Days (1915-1932)  
Green River at Garfield, VT, USGS Gage No. 04291000

<b>Flow Threshold (cfs)</b>	126	160	222	280	285
<b>Total Days in 14 yr Record</b>	258	162	74	39	33
<b>Average Days of Threshold Excedence/Year</b>	18.4	11.6	5.3	2.8	2.4

The historic Green River flow data shows that under the historic natural flow regime, there are an average of 18.4 days annually in which flows exceed 126 cfs, a level that the licensee has identified as sufficient to provide whitewater boating opportunities.

Likewise, the Licensee's Whitewater Boating Study shows that the Licensee generated power in excess of 800 kW, which it identified as the minimum flow for boating, during 15 days in 2011.

Table 2  
Whitewater Boating Study  
Summary of Generation over 800 KW During 2011 Operation (roughly 131 cfs)  
compared with the average days per month over 131 cfs in the historic gage record for the  
Green River.

<b>Month</b>	<b>Days Generating over 131 cfs in 2011</b>	<b>Average Days per Month over 131 cfs in historic record (1915-1932)</b>
January	1	0.21
February	0	0.14
March	0	1.5
April	4	8.43
May	4	2.7
June	1	0.71
July	0	0.29
August	0	0
September	0	0.35
October	3	0.71
November	1	1.36
December	1	0.42
Total	15	16.82

This comparison of the Licensee's generation to the historic flow data on the Green River demonstrates that the Licensee's generation closely mimics the natural flow regime.

Even using the Licensee's coarse methods for calculating flows on the Green River, it is clear that there are natural fluctuations that would provide sufficient flows for whitewater boating under natural conditions. The Licensee calculates that the Green River drainage is 14.6 sq. mi. of the total drainage area of 310 sq. mi. on the Lamoille River Gage. Correcting by a factor of .047 to reflect the percentage of the Green River to the total drainage area, the chart below shows the number of days per month during 2013 on which flows exceed 126 cfs, 222 cfs, and 280 cfs according to calculated USGS 15-minute flow data. These are levels that the Whitewater Boating Study identified as sufficient to provide minimum, standard and high-challenge boating opportunities, respectively. While the actual flows on the Green are likely significantly higher, the calculated flow data supports our contention that the releases proposed by American Whitewater and Vermont Paddling Club fall well within the current regulated flow regime and the historic unregulated flow regime on the Green River. Our proposal of 8-10 scheduled whitewater releases (see below) will more closely approximate the natural fluctuations than the 2 scheduled releases proposed by the Licensee.

The following chart shows the number of days monthly on which calculated flows (4.7 percent of the total flow) exceeded specified boatable flows based on the 15-minute flows on the Lamoille Gage at Johnson, VT USGS Gage No. 04292000:

Table 3  
Calculated Number Boatable Flow Days (2013)  
Lamoille Gage at Johnson, VT, USGS Gage No. 04292000

<b>Month</b>	<b>Minimum &gt;126 cfs</b>	<b>Standard &gt;222 cfs</b>	<b>High Challenge &gt;280 cfs</b>
Jan	0	0	0
Feb	0	0	0
Mar	1	1	1
Apr	2	1	0
May	3	2	1
Jun	2	0	0
Jul	0	0	0
Aug	0	0	0
Sep	0	0	0
Oct	0	0	0
Nov	0	0	0
Dec	2	0	0
<b>Total</b>	<b>10</b>	<b>4</b>	<b>2</b>

## 2. Spring Releases

Although the Licensee states that “the Green River Reservoir Development is typically operated to refill the reservoir in order to meet the one-foot maximum drawdown allowable by May 1st,” the Whitewater Study shows that the Licensee generated between 800-1199 kW during 85 hours in April of 2011, a level sufficient to provide scheduled whitewater boating opportunities during the spring runoff. Exhibit B, Existing Operation Mode 1.1.3. The Licensee had the capability to generate power at its maximum generation capability of 283 cfs for at least 40 hours in April 2011, which is more than enough to provide a scheduled release of six hours on each of two consecutive weekend days. The Licensee calculates that a release at its maximum generating capacity of 283 cfs will lower the reservoir level above the dam by 0.5 inches each hour, and as such, a 6-hour scheduled release will lower the reservoir by three inches, assuming no additional rainfall. The maximum amount that a consecutive two-day release in April would lower the reservoir would be six inches, but it is likely the amount would be significantly less due to the rainfall and snow melt that is typical during this period. Morristown typically receives an average of 8.35 inches of rain between January 1 – April 30, providing the Licensee with ample rainfall and snow melt to schedule at least one, and possibly two, two-day releases in April, depending on the precipitation during the winter and spring months.

The Licensee states that its proposed whitewater releases are consistent with its commitment to support the Vermont Center for Ecostudies’ (VCE) Vermont Loon Recovery Program. Under this program, the Licensee limits its power generation operations from May 1 - August 1 in order to maintain reservoir levels within a one-foot maximum drawdown during the Loon nesting period. Prior to this time period, the maximum drawdown of ten feet is allowed, although the reservoir is typically lowered by six feet during the winter months.

A six-hour release during the Loon nesting period running from May 1 – August 1 would lower the reservoirs by three inches, assuming no additional rainfall. This amount is well below the one-foot maximum drawdown over a 28-day period that the Licensee cites to as a level that would impact on Loon nesting. *See, Exhibit E, Rare, Threatened and Endangered Species, 4.4.6.3.* Given that the Licensee generated power between 800-1199 kW for 72 hours during May of 2011, nearly as much as it had during the prior month, the Licensee has the ability to schedule two one-day releases during May or June.

## 3. Capability Test

The Licensee proposes that one of two scheduled whitewater releases coincide with its summer capability test that it is required to perform between July 1 – September 15, extending the test to 6 hours in order to provide a whitewater boating opportunity. The Licensee’s proposal is a retreat from its Preliminary Licensing Proposal, which stated that it would consider extending its capability tests *in addition* to its two proposed releases, not *in lieu* of those releases. The Licensee has not identified any basis for its reduction in the number of whitewater paddling opportunities proposed in its Preliminary

Licensing Proposal, which was itself insufficient. Although the Licensee states that it may also consider other options for releases, consideration of additional releases should not be left to the discretion of the Licensee. Rather, additional releases should be required by FERC and done in consultation with American Whitewater and Vermont Paddlers Club.

On August 20, 2013, the Licensee performed a two-hour capability test, releasing water at a boatable level of 2'5" or higher. The Licensee states in its license application that it has the ability to extend the summer capability test from two to six hours. Regrettably, the Licensee did not inform American Whitewater or Vermont Paddling Club of its summer capability test in advance, schedule the test on the weekend, or extend the capability test from two to six hours, depriving the boating community of the opportunity to use and enjoy the river during this time.

#### 4. Fall Releases

According to the Whitewater Study, the Licensee generated at a level sufficient to provide an optimal or high-challenge boating opportunity for 11 hours, and in addition generated at a level sufficient to provide a minimum boatable flow during 26 additional hours, over four days during the months of October and November 2011, likely due to higher rainfalls in the fall. The Licensee has the ability to provide additional boating opportunities during the fall months based on its current generating practices, taking advantage of both additional rainfall in the fall and lowering the reservoir to its winter pool level of six feet below crest. The Licensee should be required to provide a six-hour release on two consecutive weekend days in the fall, taking advantage of the additional rainfall, and in addition, should schedule its late fall pool drawdown to provide one additional high-challenge boating opportunity.

#### 5. Release Notification

We appreciate the Licensee's agreement to provide advance notification to American Whitewater of release dates. Advance notification should also be provided to Vermont Paddlers Club, as a great many boaters who paddle the Green River are associated with that Club. The Licensee has also agreed to provide short-term notification by posting information on its web site when releases from the Green River Reservoir above the identified minimum flow requirement (160 cfs) are expected. According to the Whitewater Study, however, **the minimum boatable flow is 128 cfs, not 160 cfs.** Further, the use of cfs, tubes or kWh as a measure of flow is inaccurate and the Licensee should be required to provide notification when the flow is expected to be above 2'5" on the stage gage.

The Whitewater Study showed that the Licensee generated power at 800 kW or above, which it identified as the minimum boatable flow, on 15 days in 2011. Inasmuch as the Licensee has the capability to schedule between eight and ten boatable releases annually, providing short-term notification to American Whitewater and Vermont Paddlers Club when the flows are expected to be above 128 cfs would not be unduly



burdensome on the Licensee. Merely providing short-term notification on the Licensee's website is insufficient to notify the paddling community when releases are expected to be at a boatable level, and would require boaters to check the Licensee's website daily. Furthermore, to the extent that the Licensee has the ability to time-shift these opportunistic releases to the weekend so that the boating community can take advantage of these flows, it should be required to do so, providing that doing so will not be an undue burden on the Licensee or conflict with other uses documented in its studies.

## **V. Release Proposal**

The Whitewater Boating Study demonstrates that the Licensee has the ability, at a minimum, to schedule at least one, and possibly two, two-day weekend releases in April, two one-day releases in May, extend its summer capability test in August to six hours, schedule a two-day release in October, and schedule a release when it lowers the pool height for the winter. In sum, the Licensee has the capability to provide a minimum of eight and a maximum of ten scheduled releases at a sufficient flow to provide optimal or high-challenge boating opportunities. Instead, the Licensee proposes to provide only two such opportunities annually. We request that FERC include a provision in the license requiring the Licensee to provide between eight and ten scheduled annual releases in coordination with American Whitewater and Vermont Paddlers Club.

## **VI. Conclusion**

Granting intervener status to American Whitewater and Vermont Paddlers Club will not delay this proceeding. No other party represents American Whitewater's and Vermont Paddlers Club's interests in this proceeding. For these reasons, the Commission should accept this motion to intervene in this proceeding.

Respectfully submitted this 2nd day of January, 2014.

/s/ Robert A Nasdor

Robert A. Nasdor  
Northeast Stewardship Director  
American Whitewater  
65 Blueberry Hill Lane  
Sudbury, MA 01776

/s/ William Hildreth

William Hildreth  
Vermont Paddlers Club  
PO Box 6  
Montgomery Center, VT 05471

**UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION**

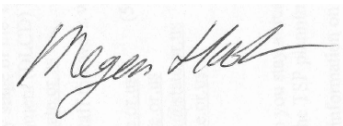
**Morrisville Water and Light  
Morrisville Project  
Green River Development**

**Project No. 2629**

**CERTIFICATE OF SERVICE**

Pursuant to Rule 2010 of the Commission's Rules of Practice and Procedure, I hereby certify that I have this day caused the foregoing **American Whitewater and Vermont Paddler Club's Motion to Intervene and Comments Filed on Morrisville Water and Light Hydroelectric Application (P-2629)** to be served upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated this 2nd day of January 2014.

A handwritten signature in cursive script, appearing to read "Megan Hooker", is written over a faint, repeating background pattern of the words "FEDERAL ENERGY REGULATORY COMMISSION".

Megan Hooker  
American Whitewater