

**WATERBURY HYDROELECTRIC PROJECT  
FERC PROJECT NO. 2090**

**PUBLIC COMMENTS ON DRAFT CERTIFICATION  
DECEMBER 8, 2014**

Green Mountain Power

Robert Finucane

Central Vermont Trout Unlimited

Friends of the Winooski

Friends of the Waterbury Reservoir

Tony Lolli

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VIA EMAIL

December 5, 2014

Jeff Crocker, Supervising River Ecologist  
Streamflow Protection Program  
Vermont Agency of Natural Resources  
Department of Environmental Conservation  
1 National Life Drive, Main 2  
Montpelier, VT 05620-3522

Re: Green Mountain Power Corporation's Comments on ANR's Draft Clean Water Act  
Section 401 Water Quality Certification

Dear Jeff,

As part of the Waterbury Hydroelectric Project's 401 Water Quality Certificate (WQC) process, Green Mountain Power's (GMP) Waterbury FERC licensing team has reviewed the draft 401 document that ANR provided to GMP and placed on public notice on November 5, 2014. GMP appreciates the opportunity to comment on the draft 401 document and looks forward to working with ANR as the FERC licensing and WQC process comes to a close. The purpose of this letter is to provide ANR with the GMP team's comments on the draft 401 document. The ANR team has done a commendable job pulling together a large pool of information. The GMP team would like to offer some comments regarding the Project layout and feasibility to implement some of the draft 401 terms and conditions.

**Finding #7:** We believe the language regarding the 48" bypass pipe should be modified for clarity, as it could currently be interpreted as saying that the 48" bypass pipe taps from the 79" penstock instead of from the broome gate's conduit. We suggest modifying the following language: "In addition, there is a submerged outlet structure and conduit controlled by a Broome gate; the inlet invert elevation is at elevation 500 feet. The conduit transitions to two 54-inch-diameter steel penstocks that direct water to a valve house where they merge and supply a 79-inch-diameter penstock for the Project turbine and a 48-inch-diameter bypass pipe controlled by a Howell-Bunger valve..." to instead read as follows: "In addition, there is a submerged outlet structure and conduit controlled by a Broome gate; the inlet invert elevation is at elevation 500 feet. The conduit transitions to two 54-inch-diameter steel penstocks and a 48-inch-diameter bypass pipe. The two 54-inch-diameter steel penstocks merge and supply a 79-inch-diameter penstock for the Project turbine. The 48-inch-diameter bypass pipe passes through the valve house as well, and is controlled by a Howell-Bunger valve."

**Finding #12 and footnote #6 (referenced in finding #23):** A previous test conducted in 2009 had characterized the minimum operating flow as 266 cfs. Following the results of a 2012 test by

GMP, the unit's minimum operating capacity is now considered to be approximately 300 cfs due to cavitation issues, as indicated in an April 29, 2014 memo to ANR.

**Finding #20:** The current FERC license allows fall/winter drawdowns as described. In practice, however GMP has only drawn the reservoir below elevation 570 feet once since the reservoir was refilled in 2006 following completion of the major dam structural repairs. The one instance of GMP drawing water levels down below elevation 570 feet (to about elevation 550 feet) in winter 2008 was immediately following the major turbine runner replacement in fall 2007. Historic Waterbury Reservoir water levels from 2006 through 2013 are shown in Figure 1.

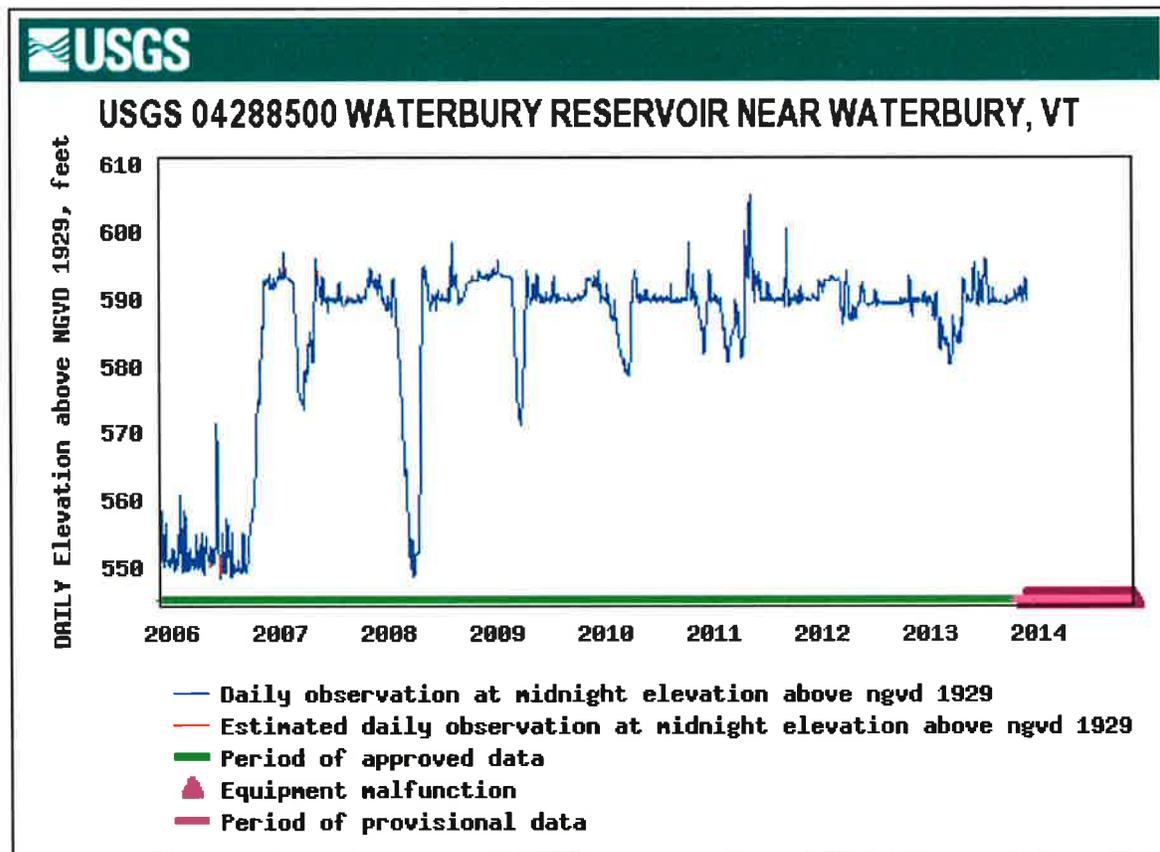


Figure 1: Daily water level observations at Waterbury Reservoir since 2006. Source: USGS gage #04288500 ([http://waterdata.usgs.gov/vt/nwis/uv?site\\_no=04288500](http://waterdata.usgs.gov/vt/nwis/uv?site_no=04288500)).

**Finding #23:** Due to additional feasibility work GMP has conducted since 2012, some of the technical details outlined in GMP's 2012 settlement proposal have changed. Specifically:

- The 24" bypass that GMP has proposed will be a newly-installed 24" pipe and valve that will tap from the 79" penstock upstream of a planned new penstock butterfly valve (installed for turbine isolation purposes and runaway protection).
- The existing 24" pipe will be left for its current purpose, as a penstock drain.

- c) The new 24" pipe will be designed for a maximum flow of 108 cfs.
- d) The current unit's minimum operating flow is approximately 300 cfs due to cavitation issues (see response to finding #12).

**Finding #39:** GMP anticipates designing the new bypass pipe for a maximum flow of 108 cfs, which is the highest conservation flow the new license will require.

**Condition B:** GMP has two concerns with the conditions regarding the Stage I operations. They are:

- a) GMP cannot guarantee a continuous minimum flow of 30 cfs (or anything above greater than leakage) until the automated bypass system is fully constructed. As communicated in an email dated 11/6/2014 to ANR staff, GMP has successfully tested an 8" pipe that is typically reserved for maintenance drainage purposes and draws from the unit's cooling system. The 8" pipe appeared to pass approximately 24 cfs under full pond conditions according to a review of USGS gage data. The pipe's output may theoretically drop to 15-20 cfs during the winter drawdown period.

GMP will be inspecting the pipe and its gate valve later this month to ensure it is in good working condition, and is willing to conduct re-plumbing to ensure the pipe continues to provide a consistent minimum flow. GMP has a high level of confidence that this pipe will successfully operate until the broome gate is closed for construction. That being said, GMP wants to emphasize that the existing infrastructure is not designed to pass a continuous minimum flow greater than leakage, and even though GMP is willing to provide flows through the 8" pipe on a voluntary basis, GMP cannot promise there will not be future issues with the 8" pipe setup that could preclude passing a conservation flow until the automated bypass system is fully operational. This is particularly true since the 8" pipe may potentially impact the function of the unit's cooling system under hot weather conditions in the summer.

- b) Condition B states that upramping procedures of 60 cfs per 30-minute period and downramping procedures of 30 cfs per 30-minute period must be used during both interim stages (Stage I and Stage II). While this will be feasible during Stage II after the automated bypass system is operational, the existing infrastructure will not allow for the implementation of any ramping between the voluntary conservation flow and the turbine's minimum operating flow (300 cfs).

In recent years, GMP has implemented a voluntary two-step ramping procedure to slow the rate of water level and flow increase within the Little River during unit start-up. The procedure involves switching the turbine wicket gates from 0% open to  $\pm 50\%$  open, and then from  $\pm 50\%$  open to generation flows over two 15-minute steps, with an activation of an audible and visual alarm five minutes prior to the wicket gates partially opening. The alarm remains active for approximately three minutes upon activation.

**Condition C:** ANR indicates that final design must begin within 30 days of a FERC license being issued or August 1, 2015, whichever is earlier. Additionally, ANR has included a set of hard deadlines for various milestones in the turbine and bypass pipe construction process based on GMP's previously provided schedule, but there is no provision for delays if the FERC license is not issued by July 1, 2015 or to account for the other variables described below with respect to Condition D. In particular, GMP is concerned with a deadline that requires it to incur considerable costs before the FERC license is issued. GMP cannot commit to ordering equipment and signing construction contracts without knowing what additional terms may be imposed by the FERC operating license. GMP recommends ANR use a construction schedule that is tied to FERC license issuance rather than specific dates, and GMP would be pleased to collaborate with ANR to develop a workable schedule.

**Condition D:** GMP has concerns about meeting the 18-month timeframe within license issuance if the FERC license is issued earlier or later than July 1, 2015. For example, if FERC issues a license on October 1, 2015, GMP might not be able to begin construction until September 2017 because there may not be enough time to complete final design and procure the necessary equipment by September 2016. That would lead to completion in December 2017 – 26 months after issuance of a FERC license. Conversely, if FERC issues a license on April 1, 2015, it would be 20 months between license issuance and completion of the new bypass, even if GMP completes everything as the previous schedule indicated. Because of the tight construction timeframe (September-December) that minimizes recreation impacts and high flow event risks, GMP anticipates the entire design and construction phase will be complete within 17 to 28 months of a FERC license issuance, depending on what month of the year FERC issues a license. GMP recommends ANR uses a construction schedule that is tied to FERC license issuance rather than specific dates.

**Condition H:** GMP understands that ANR's recent practice is to include the language of Condition H in all certifications whereby it *may* require an applicant to install fish passage facilities. GMP has significant concerns about the feasibility, practicality, and costs associated with any requirement to install fish passage facilities at the Waterbury Dam.

Thank you very much for the opportunity to comment on the draft 401 document. GMP looks forward to working with ANR further. Please contact me with any questions.

Sincerely,



Jason Lisai  
Green Mountain Power Corporation  
Generation Manager

To;

**Jeff Crocker**, *River Ecologist*

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Montpelier, VT 05620-3522

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From;

Robert B. Finucane, P.E., F, ASCE

December 4, 2014

Subject; Review of the Draft 401 for Waterbury Dam, Waterbury, VT

I have reviewed the Draft 401 and have the following comments which I hope will be useful to you in your review.

1. Finding 6 states that, "The primary purpose of the dam is flood control, which was its sole use up until the hydroelectric facility first started operations in 1953." This is mistaken as a matter of fact. Reservoir level operations to store and release water to increase generation have been a normal use of dam and reservoir since the completion of construction. Typical of multi-purpose reservoir projects, storage above elevation 592 has the primary purpose of flood control. Storage below that elevation had the sole purpose of storage for hydroelectric generation until recreation was added as a purpose in 1966.
2. Finding 8 is mistaken in that in addition to repair projects listed, the dam was raised, widened, and modified with an additional spillway bay in 1958.
3. Finding 9. It might be well to note that the gate reconstruction project would be under the jurisdiction of the Public Service Board. Also, powerhouse modifications may be under PSB purview affecting the ability to comply with the construction schedule set forth in Decision and Certification C.
4. Finding 10 should be modified to reflect that the Agency intends to ensure that operating a year-round high winter pool will not unduly increase the risk of death, injury, and property damage downstream as noted in Decision and Certification C.

The unintended consequences of a year-round full pool include issues besides dam safety. These should be addressed.

1. It will cost more to operate and maintain the dam, to maintain adequate surveillance under snow cover and limited access. It is expected that erosion in the spillway channel will increase

due to more frequent discharge. Larger amounts of seepage will have to be pumped. In what ways have the additional costs to the state been evaluated and considered?

2. Under this proposal, clean, cheap, renewable hydroelectric energy production will be reduced and replaced by burning fossil fuels. The ability of the electric system to respond to rapid changes in load will be impaired. Providing replacement energy for system stability will also result in an increase in fossil fuel use and air pollution. In what ways has the extent and environmental impact of replacement energy been evaluated and considered?
3. Lost generation will result in lost revenue for Waterbury and municipalities downstream. In what ways have these costs been estimated and considered?
4. Establishment of plant and animal aquatic nuisances in the reservoir are prevented by the seasonal drawdown. Has the risk of infestation in the reservoir with a year-round stable pool been evaluated? Is there a contingency plan to provide for a renewal of the drawdowns in the event invasive species are detected in the reservoir?
5. Waterbury Dam is unusual in that Green Mountain Power contributed land and money to the original construction to buy from the State of Vermont the right to use the reservoir for seasonal storage for power. Has the Agency considered whether compensation is due to Green Mountain Power for taking of the right use the reservoir for storage?
6. Green Mountain Power operates and maintains the gates of the dam, and provides Vermont with free electric power under an agreement with the State dating back to 1936 and premised on the assumption that the reservoir will be operated to provide hydropower storage. Under the run of river operation required by the draft 401, has it been determined that GMP could be required continue to provide that service and, if not, how expensive it would be for the State to provide it?

Thank you for the opportunity to comment on these issues. I look forward to your response.



December 6, 2014

Mr. Jeff Crocker  
Streamflow Protection Coordinator  
Watershed Management Division  
Vermont Dept. of Environmental Conservation  
1 National Life Drive, Main 2  
Montpelier, VT 05620-3522

Dear Mr. Crocker,

The Central Vermont Chapter of Vermont Trout Unlimited (CVTU) appreciates the opportunity to comment on the Vermont Agency of Natural Resources Draft Water Quality Certification (“Draft Certification”) on the Application for the Green Mountain Power (GMP) Waterbury Hydroelectric Project, FERC Project No. 2090.

This is an important issue for CVTU as it is our mission to conserve, protect, and restore coldwater fisheries and their watershed habitats. CVTU has over 450 members residing in central and northern Vermont. As we represent Vermont’s largest TU Chapter, the flows and water quality of the Little River and the ultimate effect on the Winooski River from its confluence in Waterbury all the way to Lake Champlain is of great concern to our membership. Our concern is shared with other Trout Unlimited members who recreate on the Winooski River, the Little River, and on the Waterbury Reservoir, all of which are impacted by the operation of the Waterbury Hydroelectric facility.

The Vermont Department of Environmental Conservation (DEC) Draft Certification is an important step towards preservation of the Little River and the Waterbury Reservoir ecosystem. For the first time in decades, there appears to be a path forward in the restoration and protection of this resource and its habitat. It is important to note that this is the first time in the fifty-year term of the Project license that the public has had the opportunity to comment on, and hopefully influence, the impacts this private power generation facility imposes on this precious public resource. It is also noteworthy that this opportunity will not present itself again for 50 years. With that in mind, it is incumbent upon all decision making parties to be forward thinking and ensure that decisions and actions are taken now to properly protect and conserve the Little River and Waterbury Reservoir.

CVTU applauds DEC on the goals proposed in the Waterbury Hydroelectric Project Draft Certification. We are particularly pleased that the proposal encompasses the entire Little River watershed and Waterbury Reservoir, because without improving the Reservoir ecosystem and habitat, the river realizes only marginal improvement, even with improved flows. According to the proposal, there will be immediate increases in conservation flows, reduced generation peaking with a gradual ramp up to peak flow and then back down, improved aeration and finally run-of-river flows for the Little River and year-round full pool for the Waterbury Reservoir once the tainter gates are replaced.

However, CVTU feels it is questionable whether the goals of the Draft Certification will be fulfilled, because from a programmatic standpoint the plan is fraught with risk. The Draft Certification is segmented into several Stages to arrive at the end goal of run-of-river for the Little River and full year-round pool for the Waterbury Reservoir. The difficulty and major risk to fulfilling the final goal lies in the fact that the funding and installation of the replacement tainter gates, which is crucial to obtaining run of the river flows and full pool, is beyond the responsibility and authority of GMP. The State of Vermont owns the reservoir and the dam, and as part of the certification the State is obligating itself to obtain the funding required to replace the gates. It is relatively easy for the State to monitor the progress of GMP and enforce any violation of the certification, but will the State hold itself to the same standards? It will be incumbent on the DEC to be resolute in working with the State Legislature and our Congressional Delegation to obtain funding and follow through with replacement of the tainter gates.

There are two areas of concern in the Draft Certification for CVTU:

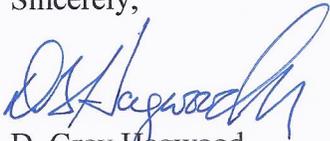
(1) Deadlines, and penalties for missing deadlines, should be included in the certification for all Stages to ensure completion. The relicensing of this facility has a history of delays. There is little reason to think such delays will not continue without firm deadlines and subsequent penalties. Without deadlines enforced by penalties, the Certification goals will slip or be missed entirely. For replacement of the turbine and bypass pipe specific deadlines are included for completion of design work, contractor selection and completion of construction itself, with an overall deadline of December 31, 2016, but there are no penalties for missing these deadlines. With no means of enforcement, these deadlines will not be realized. Only mandatory penalties will ensure the deadlines are met. CVTU recommends language be included in the Certification that levies fines on GMP for delays in the implementation of the new turbine and automated bypass flow pipe on a per day basis. DEC has discretionary authority to issue penalties of up to \$10,000 per violation for the duration of the offense, and in this case each day late is a deadline missed. (10 V.S.A. §1025(a)). It is essential that the State make this discretionary authority mandatory, in that the state 'shall' issue a penalty, rather than 'may.' If not mandatory, political ramifications dictate it is unlikely the penalty will be enforced. There is a range of penalties available to the Agency, but mandatory monetary penalties are the most effective deterrent.

(2) If funding is not obtained to replace the tainter gates then the reservoir cannot maintain full pool year round and the shoreline habitat of the reservoir and overall water quality of the reservoir and river will continue to be degraded. While the Little River habitat may be marginally improved with increased conservation flows due to replacement of the turbine and bypass flow pipe, habitat quality will still be significantly less than what it is projected to be once the tainter gates are replaced, and run of the river flows and year round full pool are obtained.

Since obtaining the funding to replace the gates is a Government responsibility, it is incumbent on the DEC to be resolute and aggressive in its efforts to obtain both Federal and State funds to complete the replacement.

In conclusion, CVTU is supportive of the conditions of the Draft Certification, but we are concerned that all the stages will not be completed in a timely manner and the final goals will not be attained. CVTU urges the DEC to include mandatory penalties for missing turbine and bypass pipe implementation deadlines to help ensure the project progresses as proposed. Furthermore, CVTU encourages the DEC to be transparent in its plan to engage the Federal and State Governments to obtain the funding required to replace the tainter gates in order to obtain run of the river flows and improved water quality for both the river and reservoir. If there is anything that CVTU can do to assist DEC in its efforts, please do not hesitate to contact me.

Sincerely,



D. Grey Hagwood

President

Central Vermont Trout Unlimited



**Friends of the Winooski River**

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December 6, 2014

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Re: *Comments by the Friends of the Winooski River on the Vermont Dept. of Environmental Conservation Draft Certification for the Waterbury Hydroelectric Project (P-2090)*

Dear Jeff:

The Friends of the Winooski River (“the Friends”) appreciates the opportunity to comment on the Vermont Agency of Natural Resources Draft Water Quality Certification (“Draft Certification”) on the Application for the Green Mountain Power (GMP) Waterbury Hydroelectric Project, FERC Project No. 2090.

The Friends of the Winooski River is dedicated to the protection and restoration of the Winooski River watershed. The Friends has approximately 150 dues paying members, engages hundreds more each year through volunteer activities, and reaches nearly 1400 people through our newsletters and social media. This is a critically important issue to the Friends. The Little River is one of the seven major tributaries to the Winooski River. Its drainage constitutes approximately 10 percent of the total Winooski River watershed. The Waterbury Dam defines the ecological character of the Little River valley and impacts the water quality and habitat of the Winooski River downstream. This certification is a once in a generation opportunity to improve the health of the Little River and the Waterbury Reservoir. Since removal of the Dam and its power generation facility is not an option, this Certification must ensure that the best possible conditions to improve the health of both the river and the reservoir are defined and implemented.

## **General Comments**

Overall, the Friends commend the Vermont Department of Environmental Conservation (DEC) on the goals of the Waterbury Hydroelectric Project Draft Certification. The DEC Draft Certification is an important step towards preservation of the Little River below the Waterbury Hydroelectric Project and the Waterbury Reservoir above it. Our mission is the protection and restoration of the Winooski River and its tributaries, and we agree that this will assist in that goal. This is also the first time in the fifty-year history of the initial license for hydropower generation at the facility that the public has been able to comment on and influence the protection of this important habitat and resource.

There will be immediate benefits from healthier conservation flows, which will gradually increase as new equipment is installed in the Dam. Further, the peaking used for power production will be modified through reduced generation flows and gradual ramping to lessen impacts on habitat. The final goal of the Draft Certification is full year-round pool for the Waterbury Reservoir and run-of-river flows in which all inflows into the Reservoir equal the outflows into the Little River.

However, the Friends have serious concerns whether these goals will be reached. The re-licensing of the Waterbury Hydroelectric Project has a history of delays that could continue under the new operating conditions of the Draft Certification. This includes replacement of equipment that must occur before conservation flows can be increased. As some equipment replacement and repairs are currently without funding sources, this could derail the entire environmental restoration process. If the Stages established in the Certification are not met, the impacted waters will remain out of compliance with the Vermont Water Quality Standards.

There are two areas of concern in the Draft Certification:

(1) Deadlines and penalties must be established for all Stages to ensure completion. Without deadlines enforced by penalties, the Stages of the Certification could be delayed or derailed entirely.

(2) If these Stages are missed, environmental harm to these public resources will continue and operation of the Waterbury Hydroelectric Project will fail to comply with Vermont Water Quality Standards.

## **Brief Overview**

The Draft Certification contains two Stages of operation that must be completed to reach the third and final Stage of run-of-river for the Little River and full year-round pool for the Waterbury Reservoir, thereby complying with Vermont Water Quality Standards. The DEC maintains "... there is reasonable assurance that operation and maintenance of the Waterbury Hydroelectric Project as proposed by the applicant and in accordance with the following conditions will not cause a violation of Vermont Water Quality Standards and ... the Federal Clean Water Act...." (pg. 24) Only full and timely compliance with all Stages will benefit the River, Reservoir, as well as the Winooski River itself.

However, if any of these Stages are not completed, the overall plan established in the Draft Certification will fail. In Stage I and Stage II, or the “Interim Operations,” equipment must be replaced or repaired in order to advance. (pg. 24) During Stage I, the turbine runner will be replaced and a bypass pipe / valve added, allowing for operation at Stage II conditions. (pg. 26) During Stage II, the spillway and tainter gates will be replaced and repaired accordingly, allowing for final Stage III operations. (pg. 26)

The Little River will see gradual benefits to its habitat during all Stages of the Certification. Currently, conservation flows are 3 cfs and the daily generation ramping to over 600 cfs is instantaneous. During Stage I, while the turbine is replaced, conservation flows will be established at 30 cfs and generation ramping will be incremental instead of instantaneous, with a maximum generation release of 300 cfs. (pg. 25) During Stage II, while the spillway and gates are being replaced / repaired, conservation flows will be 60 cfs, with a spring increase to 108 cfs for April to mid-May. (pg. 25)

By contrast, the Waterbury Reservoir only realizes environmental restoration benefits if all Stages are complete. During these initial Stages, the Reservoir itself will continue current operational conditions with a significant winter drawdown. This will be an annual disruption of 550 feet in the winter drawdown and 589.5 feet in the summer, a significant forty-foot change that will continue until the gate repairs are complete. (pg. 5) So, while the River is gradually improved during the process, the Reservoir habitat only improves after Stage III gate replacement is complete. (pg. 24)

The Winooski River will see benefits from the increased conservation flows of the Little River. The Little River is a tributary of the Winooski River in Waterbury, and it is roughly five miles from the Waterbury Dam to Bolton Falls in Duxbury. Currently, during daily generation release of 600 cfs from the Dam, this section of the Winooski River sees a marked decrease in water temperature for these few hours, resulting in dramatic changes during the summer months. However, the gradual increase of conservation flows in the Little River will result in more consistently cooler water temperatures in the Winooski, providing an overall benefit to habitat.<sup>1</sup>

### **Specific Concerns in Depth**

*(1) To ensure completion of all Stages, enforceable deadlines must be included with penalties for failure to meet these deadlines.*

The Friends have waited for years for restoration of the Little River and the Reservoir. But, we are skeptical that GMP will complete the Stages necessary in a timely manner. Firm deadlines and penalties for missing those deadlines will provide markers for progress and ensure Stages are completed.

The Waterbury Hydroelectric Project re-licensing has a history of delays and the facility has been in operation under “annual license extensions” since September 2001. (pg. 2 No. 4) By

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<sup>1</sup> *Comments, Recommendation, Terms and Conditions on the Federal Energy Regulatory Commission Notice of Application Ready for Environmental Analysis*, DEC Water Quality Division, Nov 25, 2002, pg. 16.

statute, this process cannot take more than one year.<sup>2</sup> The initial request for certification was made on August 31, 1999,<sup>3</sup> yet, since this initial request, GMP annually withdrew and reapplied for certification sixteen times.<sup>4</sup> After sixteen years of inaction, it is time to ensure that restoration occurs on a set and enforceable schedule. Therefore, only deadlines and penalties for missing those deadlines will ensure completion.

Only mandatory penalties will ensure these deadlines are met. It appears DEC has discretionary authority to issue penalties of up to \$10,000 per day for the duration of the offense, in this case each day a deadline is missed.<sup>5</sup> These penalties must be mandatory, not discretionary, as the latter is often susceptible to outside influences. While agencies in other states have used their broad discretion to establish other specific penalties, mandatory monetary penalties are the most effective deterrent.

For Stage I, the Friends are pleased that specific deadlines are included for each step in installation of an updated turbine and bypass pipe and valve. The overall deadline is December 31, 2016. (pg. 26) But regrettably no penalties were included with these deadlines. A deadline without a penalty lacks weight and is largely unenforceable.

Stage II spillway replacement and gate repair are a separate concern. There is no indication in the Draft Certification as to when or how this Stage will be completed. This is in stark contrast to the specificity of the schedule for turbine replacement established in Stage I. Also, there is only a vague mention as to the source of the funding. Securing federal funding is difficult, at best. It is not difficult to see how state environmental projects could compete for federal, and state, dollars, and have funding for this project get delayed in favor of another project.

Further, GMP as the licensee must be held accountable for completion of Stage II. GMP will profit from the project, so it is appropriate it bears some accountability for Stage II completion. Instead, GMP relies on DEC to secure funding for its project from the federal government and then the State Legislature, before it can proceed with equipment replacement. But, under conditions of a 401 Certification and the subsequent federal license, it is the licensee that must fulfill the conditions established therein. This is a switch of responsibility that should be corrected and deadlines imposed to ensure the gate repair and spillway replacement are completed and the ecological benefits realized. A deadline and penalties for Stage II would provide a target for completion and a means of holding all parties accountable.

Finally, before spillway replacement and gate repair begin, the emergency drawdown protocol should be developed. (pg. 26) This provision, seemingly to prevent catastrophic gate failure, must be significantly narrowed. If this is indeed the intention of this condition, the language is unnecessarily vague. The provisions should be tailored to this specific emergency defined by a very narrow set of factors and criteria, rather than the overly broad “public health, safety, and welfare.” Further, the protocol to allow an emergency drawdown must be based on specific

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<sup>2</sup> CWA §401(a)(1).

<sup>3</sup> Letter from King & King Law Firm to Peter LaFlamme, Director, Watershed Management Division, DEC, Re: Green Mountain Power Corporation Waterbury Hydroelectric Project, FERC No. 2090, Dec. 11, 2013, *hereafter* King Letter.

<sup>4</sup> King Letter.

<sup>5</sup> 10 V.S.A. §1025(a).

quantitative measures. DEC must ensure that the testing equipment and processes are in place to generate this data. This process should be open, transparent and occur before gate repair begins in case this protocol must somehow be incorporated into the design and operating plan of the gates and sluiceway. This would mean the protocol should be complete by the end of Stage I on December 31, 2016.

In conclusion, deadlines and penalties must be included with each Stage to ensure each is completed and the final goal of run-of-river operation is realized. It is imperative that deadlines be included for completion of Stage II to ensure the final conditions are met, even if the proposed plan itself is so uncertain.

*(2) Without deadlines, there is no assurance the Waterbury Reservoir, Little River, and Winooski River will benefit fully from the conditions set in the Certification. If these deadlines are not met, the Certification will fall short in its goal of meeting Vermont Water Quality Standards.*

As the Waterbury Hydroelectric Project is in the relicensing process, the Little River and the Waterbury Reservoir must now be protected under Vermont Water Quality Standards. This includes providing adequate flows and water levels to protect habitat, as well as minimizing the effects of power generation peaking on the Little River.

The Little River and Waterbury Reservoir are designated Class B waters for high quality habitat. Under Class B criterion: “Biological integrity is maintained and all expected functional groups are present in a high quality habitat. All life-cycle functions including overwintering and reproductive requirements are maintained and protected.” (pg. 7, No. 32) The Winooski River will also realize benefits from the relicensing process, as steadier conservation flows from the Dam to the Little River will alleviate high water temperatures in summer. But without full implementation of the conditions in the Draft Certification, biological integrity will not be maintained and all life-cycle functions, such as spawning and hibernation, will not be protected.

The health of the habitat of the Waterbury Reservoir is a major concern. Unlike the Little River, there is no incremental increase during the Stages to restore shoreline habitat. The annual winter drawdown is tremendously damaging for habitat and wildlife, particularly for overwintering and for spawning, and the drawdown causes “a major, annual disturbance” for shoreland areas. (pg. 12, No. 52) Further, about 450 acres is exposed to erosion due to the annual drawdown, affecting the water quality of both the Reservoir and the Little River. (pg. 9, No. 42). “Stabilizing the reservoir at the current summer normal pool is the only alternative that would restore and protect water quality and comply with the Standards.” (pg. 19, No. 92) The Stage II operating conditions for the Reservoir are inconsistent with Vermont Water Quality Standards, but will continue until the gates are replaced and the pool becomes full year-round.

On the Little River, the Friends are concerned that Stage III run-of-river will not be implemented. If this does not occur, the interim flows of Stage II will become the permanent flows by default. In the Little River, it is questionable whether the interim flows are adequate to achieve high quality habitat. While certainly an improvement over current flows, the conservation flows may well fall short of what is needed for Class B waters. The limited studies appear to indicate that the interim flows of 60 cfs (or inflows during some time periods) will be adequate for some species, but the April to mid-May flow of 108 cfs may be inadequate. (pg. 14,

No. 61, 62) DEC may need to conduct further studies in case these interim flows become more permanent and adjust the flows accordingly.

Generation peaking in the Little River is another real concern. Again, new flows for peaking under Stage II will be less harmful to habitat than the current peaking of 620 cfs. (pg. 4, No. 19) However, peaking in any form is harmful. “Peaking dramatically reduced the amount of habitat in the river compared to steady-state flow conditions at the proposed minimum flows.” (pg. 15, No. 64) The gradual ramp up under Stage II is a step in the right direction, but there are questions about the maximum generation peaking, as the application has proposed 391 cfs (pg. 15, No. 64), DEC prefers 300 cfs during certain inflow conditions (pg. 25), and generation flows under other conditions appear undefined. Some of these flows may be too much for high quality habitat under Class B.

The equipment replacement and successive Stages are important for the health of the Winooski River, as well. Currently, Waterbury Dam provides a once-daily benefit to the Winooski River due to the sudden slug of water during power generation. This provides an immediate and sometimes dramatic cooling effect on the water temperature of the Winooski River directly downstream from the mouth of the Little River. But, increased conservation flows from the Waterbury Dam to the Little River through the progression of the Stages will provide a steadier benefit to these water temperatures and the habitat of the Winooski River. “If the same amount of water discharged over a 24-hour period under the peaking regime were instead released at a constant rate throughout the same period, a more intermediate but constant temperature improvement would result.”<sup>6</sup> In other words, the cooling benefit would be spread out over the course of the day, rather than just the brief time of the generation release. This would have a real benefit to the habitat of the Winooski River segment downstream from the mouth of the Little River.

## Conclusion

In conclusion, while the Friends are generally supportive of the conditions of the Draft Certification, we are concerned that all the Stages will not be completed and these conditions will not be met. Deadlines and mandatory penalties for missing these deadlines will ensure these conditions occur and that Vermont Water Quality Standards for the Little River and the Waterbury Reservoir are met.

Sincerely,



Colin McCaffrey  
President  
Friends of the Winooski River

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<sup>6</sup> *Comments*, DEC Water Quality Division, pg. 17.

Dear VT Dept of Environmental Conservation:

Please accept this email as the Friends of Waterbury Reservoir's official position and public comment on your Department's decision related to Green Mountain Power's Water Quality Certification for their operation of the hydro-electric facility at the Waterbury Dam and the maintenance of year-round water levels in the Reservoir.

Consistent with the Friends of Waterbury Reservoir's Mission, Vision, and Core Values, and after considerable research and consultation with experts, we support the maintenance of the Reservoir's average year-round water level at so-called 'summertime level' of an average of 589.5 feet, with adjustments made as required and appropriate as determined by the agencies and officers who are responsible for making decisions regarding flood prevention and mitigation.

Background:

It is our understanding that Green Mountain Power has applied to renew its license from the Federal Energy Regulatory Commission to generate power at the Little River Hydro-Electric Facility located at the Waterbury Dam. Under the federal Clean Water Act, the Agency of Natural Resources must certify that the hydro operation will meet Vermont's state water quality standards. The current operation does not meet those standards for either the Reservoir itself or the Little River below the dam as river levels vary widely and rapidly, which negatively impacts habitat for fish and other wildlife and degrading water quality in both the Waterbury Reservoir and the Little River. The Reservoir's water level is currently drawn down from about 40 feet during the winter, which prevents the establishment of healthy littoral or shoreline vegetation and habitat.

We understand the State's proposed solution to be:

1. The method of power generation must be changed so it allows for a more natural flow in the Little River. For these flows to become a reality, Green Mountain Power must make turbine upgrades.
2. The Reservoir would be maintained at the summer level year round. However, this cannot happen until the dam's aging flood gates are replaced which is unlikely to occur until 2019 or later. A combination of Federal and State funding to total approximately \$40 million will be required.

The Friends of Waterbury Reservoir is publicly and assertively encouraging the Reservoir community to continue to be informed on this issue, and to actively participate in this public process including submission of written or verbal comments on or before December 4, 2014, as required.

The Friends of Waterbury Reservoir is a Vermont non-profit organization committed to protecting, improving and enhancing the ecological, recreational, and community values of the Waterbury Reservoir. We accomplish this through stewardship, research, community involvement, collaboration with all stakeholders, and connecting people and place.

Comments of Tony Lolli

Dear Jeff,

The Little River dam re-certification is a rare opportunity to restore a lost fishery and there's no need to remove the dam to do so. A minimum flow, sufficient to restore the fishery will bring the *people's* resource back to pre-dam days and improve biota all the way into the main stem of the Winooski even through the summer's high temperatures. BUT only if compliance with regulations is insured by penalties for noncompliance. For this reason, fines should be imposed, as permitted under state statutes, if dam improvement deadlines are not met.

Tony Lolli

Cabot, VT

## Comments of Dan Beideck

The Little River is a valuable resource for whitewater paddlers in the region under the current release conditions described in item 84 of the draft water quality certification for the Waterbury hydroelectric project. The result is such that the Little River is unique in that it has very accessible class I whitewater during times of the year when there is nothing else in the region that is suitable for whitewater paddling due to low water levels. Having beginner friendly whitewater available during warmer months is a unique and important resource to the paddling community.

I am supportive of the majority of the proposed changes outlined. The environment is more important than recreation opportunities. However, I believe it is still possible to include some recreation releases that have slow ramp up and down times that preserve the opportunity for whitewater paddling during times when it would actually be used and still maintain the environmental improvements from the draft plan. The current draft plan of pure run of the river flows would occasionally result in suitable paddling levels. However, those times would happen only during times when multiple rivers in the region are also at suitable paddling levels. History has shown that when this happens, the Little River is seldom paddled. The principle benefit of the Little River to whitewater paddlers has been that it runs when nothing else is.

I propose that the draft be modified in order to allow a few recreational releases that are advertised and scheduled well in advance for times of the year when other regional rivers are typically too low for whitewater paddling, e.g. the Summer and Fall. This would allow the Little River to continue to be a valued resource to whitewater paddlers who are looking for something to paddle during times of year when they typically have to travel out of state. If releases are advertised and scheduled well in advance, this may actually increase the number of paddling trips on the Little River. Currently, there are a great number of releases in theory, but in practice they are not well advertised and are unreliable. Paddlers are unable to take advantage of them since they can't count on them being there when they arrive at the river. A new plan with even a few properly scheduled releases could increase the use of this resource while still getting the environmental improvements desired.

Sincerely,

Dan Beideck  
505 Farr Road  
Waterbury, VT 05676  
[dan.beideck@vtmednet.org](mailto:dan.beideck@vtmednet.org)

Comments of Bernard Moore

Dear Mr. Crocker:

I will keep this short because you must be getting swamped with mail.

Since GMP is a corporation their goal is to make money, or in another way, saving money. In my opinion they do not want to spend it unless forced to by the state.

This is evident by one simple fact, no additional warning sirens or signs have been installed along the Little River since a man drown two years ago. This is shameful.

There must be very large monetary fines levied and strictly enforced if they fail to meet any deadline for the completion of the stages.

It is a long and complicated project but it is overdue and should not be able to be delayed.

Sincerely,  
Bernard Moore  
Bolton VT

Comments of Clark Amadon

Dear Jeff,

I'm sending along my comments as an angler and conservationist and a member of the MadDog Chapter of Trout Unlimited.

I applaud the wording in 401 Certificate for the Waterbury Hydro Project. The waters of the State of Vermont belong to the people of the State of Vermont. The use for the waters flowing from the Waterbury Dam to produce electricity is a public good but a public good that has abused a river system for over 60 years. The water flowing through this system has created little more than a sluiceway out of the Little River. This little river has suffered long and hard enough as has the entire Winooski River from the Little's confluence to Lake Champlain. The 401 draft for this project that establishes a reasonable conservation flows and ramping rates however run-of-river flow is, I'd think you agree, is years perhaps decades away. The tainter gate replacement will demand considerable political will and powerful persuasion. I also encourage the State to write into the certificate significant financial penalties to be initiated onto Green Mountain Power if they fail to install the new turbine runner and control valve within 18 months of issuing the 401 certificate. I argue for a penalty of \$10,000.00 per day if the the turbine runner and bypass valve are not installed and operating as designed by 12/31/2016.

The position of the MadDog TU Chapter is clear and personally I'm making a plea that The State of Vermont show some significant muscle in this case. Its time to support the values of conservation and protection that are the foundation of the law that created this process and that made it a necessity to have a 401 certification in the first place. The duties of the State have been abandoned long enough and the tacit support for business-as-usual for a powerful Vermont company needs to end abruptly and clearly. These waters are not the sole resource for a power company but a legacy for all Vermonters and as one I demand an end to 60 years of neglect and abuse.

Send a clear message! This project must be reined in and penalties severely assessed if the new turbine runner and control valve are not in place in 18 months so that genuine conservation flows can be established for this project!

Thanks for taking this point of view into consideration!

Clark Amadon

[clark@amadononline.net](mailto:clark@amadononline.net)

## Comments of Janie McKenzie

Dear Jeff,

I'm sending along my comments as an angler, a conservationist, and a member of Central Vermont Trout Unlimited.

I am in agreement with many of the ideas set forth in 401 Certificate for the Waterbury Hydro Project. The waters of the State of Vermont DOES belong to the people of the State of Vermont. The use for the waters flowing from the Waterbury Dam to produce electricity is a public good but a public good that has abused this river system for over 60 years. The water flowing through this system has created little more than unsustainable ebbs and flows out of the Little River. This little river has suffered since the dam was completed in 1935, as has the entire Winooski River watershed from the Little's confluence to Lake Champlain.

The 401 draft for this project looks to establish a reasonable conservation flow and ramping rates. The tainter gate replacement will demand considerable political will and powerful persuasion. I also encourage the State to write into the certificate significant financial penalties to hold Green Mountain Power to their agreement should they fail to install the new turbine runner and control valve within 18 months of issuing the 401 certificate. I would recommend for a penalty of at least \$10,000.00 per day if the turbine runner and bypass valve are not installed and operating as designed by 12/31/2016. It is my belief that the State of Vermont needs to flex their conservation muscle in this case, and not just be a conservation mouthpiece. We are beyond the point where we can look at this as a "nice to have" rather than a "need to have". If history has taught us anything over the last 6 decades, it is that natural resources do not replenish themselves and will not survive when there is ongoing human interference with no restrictions in place. The window of opportunity for us to put into place viable protective conservation measures is quickly closing. We cannot continue to think that there will be time in the future to fix it, in another administration, or at the next re licensing deadline... the time is now! I am expecting that the State of Vermont to support the values of conservation and protection that are the foundation of the law that created this process and that made it a necessity to have a 401 certification. The protective duties of the State have been lax for long enough and the implied support for business-as-usual for a powerful Vermont company is getting old! These waters are not the sole resource for a power company but a legacy for all Vermonters and as one Vermonter, I urge you to put an end to 60 years of neglect and abuse.

Send a clear message! This project must have defined deadlines and penalties severely assessed if the new turbine runner and control valve are not in place in 18 months so that genuine conservation flows can be established for this project!

Thank you for an opportunity to express my opinion and for your consideration of my viewpoint.

Janie Merola McKenzie

Central Vermont Trout Unlimited Member



December 6, 2014

Mr. Jeff Crocker  
Supervising River Ecologist  
Streamflow Protection Program  
Vermont Agency of Natural Resources  
Dept. of Environmental Conservation  
1 National Life Drive, Main 2  
Montpelier, VT 05620-3522

Re: *Comments by the MadDog Chapter of Vermont Trout Unlimited on the Vermont Department of Environmental Conservation Draft Certification for the Waterbury Hydroelectric Project (P-2090)*

Dear Jeff:

The MadDog Chapter of Vermont Trout Unlimited (MDTU) appreciates the opportunity to comment on the Vermont Agency of Natural Resources Draft Water Quality Certification (“Draft Certification”) on the Application for the Green Mountain Power (GMP) Waterbury Hydroelectric Project, FERC Project No. 2090.

This is an important issue for MDTU. Trout Unlimited is a nationwide nonprofit organization whose mission is to conserve, protect, and restore North America’s coldwater fisheries and their watershed habitats. The MadDog Chapter has close to 250 members overall and members residing in Lamoille and Washington Counties. It generally represents the upper Winooski River watershed. Statewide, the organization has nearly 1,400 members, and the national organization has 150,000 members. Trout Unlimited members, including members from other Chapters that visit as part of Vermont’s expansive tourist economy, recreate in the area, on the Winooski River, on the Little River, and on the Waterbury Reservoir, all of which are impacted by the operation of the Waterbury Hydroelectric facility.

## **General Comments**

The Vermont Department of Environmental Conservation (DEC) Draft Certification is an important step towards preservation of the Little River below the Waterbury Hydroelectric Project and the Waterbury Reservoir above it. For the first time in decades, there is a path forward toward the protection and restoration of this resource and its habitat. It is important to note at the outset that this is also the first time in the fifty-year term of the Project license that the public can comment on and influence the impacts of this private power generation company on this public resource.

Overall, MDTU applauds DEC on the goals of the Waterbury Hydroelectric Project Draft Certification, but doubts exist about whether these goals will be reached. Frankly, other than removal of the Dam itself, the end goals of this Certification may be the best possible result. There are immediately increases in conservation flows, including reduced generation peaking and an accompanying gradual ramp up, with the final goal of run-of-river flows for the Little River and full year-round pool for the Waterbury Reservoir. If fulfilled, these conditions will restore fisheries habitat for the first time in generations.

However, it is questionable whether the Draft Certification will fulfill its goals or fall short. The Draft Certification contains several Stages that must be completed to get to the end goal of run-of-river for the Little River and full year-round pool for the Waterbury Reservoir. These Stages rely on the installation of new equipment, and a party not the licensee securing public funding for repairs or the installation of new equipment. If the Stages are not met, the process stalls and the Vermont Water Quality Standards will not be met.

Specifically, there are two interrelated areas of concern in the Draft Certification:

(1) Deadlines and penalties for missing these deadlines are needed for all Stages to ensure completion. The relicensing of this facility has a history of delays, which could continue without firm deadlines and subsequent penalties. Without deadlines enforced by penalties, the goals of the Certification could slip or be missed entirely.

(2) If these deadlines are missed and the Stages not completed, then the Little River and Waterbury Reservoir will not meet Vermont Water Quality Standards. The purpose of a Certification is to ensure clean water, restored habitat, and its protected use, and this Certification would fall short of this purpose.

## **Brief Overview of Equipment and Operational Changes**

It is important to highlight the Stages in which Project operation will occur. The overall goal is to ensure that the Waterbury Hydroelectric Project complies with the goals established by the Vermont Water Quality Standards. The DEC asserts "... there is reasonable assurance that operation and maintenance of the Waterbury Hydroelectric Project as proposed by the applicant and in accordance with the following conditions will not cause a violation of Vermont Water Quality Standards and ... the Federal Clean Water Act...." (pg. 24)

To achieve this, DEC has proposed Stages, based on installation of updated equipment that, in turn, will allow for operation of the facility with increased conservation flows. The end goal, Stage III, is run-of-river operation of the facility for the benefit of the Little River, where inflows into the Reservoir equal outflows from the Dam into the River. (pg 24) Further, the end goal for the Reservoir itself in Stage III is year-round full pool, instead of the current annual winter drawdown. (pg 24)

However, each of these Stages presents an opportunity for delay or derailment of the overall plan established in the Draft Certification. In Stage I and Stage II, or the “Interim Operations,” other equipment replacement must first occur (pg 24). During Stage I, the turbine runner will be replaced and a bypass pipe / valve added, allowing for operation at Stage II conditions. (pg 26) During Stage II, the spillway and tainter gates will be replaced and repaired accordingly, allowing for Stage III operations. (pg. 26)

Each Stage establishes a more robust conservation flow for the Little River. So, as each Stage is completed, the River habitat gets a little healthier. Currently, conservation flows are 3 cfs and the daily generation ramping to over 600 cfs is instantaneous. During Stage I, while the turbine is replaced, conservation flows will be established at 30 cfs and generation ramping will be incremental instead of instantaneous. (pg. 25) During Stage II, while the spillway and gates are being repaired / replaced, conservation flows will be 60 cfs, with a spring increase to 108 cfs for April to mid-May. (pg. 25)

However, unlike the Little River, the habitat of the Waterbury Reservoir is not gradually protected as the Stages progress. During these Stages, the Reservoir itself will continue current operational conditions with a significant winter drawdown. This is an annual disruption of 550 feet in the winter drawdown and 589.5 feet in the summer, a significant forty-foot change that will continue until the gate repairs are complete. (pg. 5) So, while the River is gradually improved during the process, the Reservoir habitat only improves at the end of the process in Stage III when the Reservoir is finally operated at full-pool year-round. (pg. 24)

## **Specific Comments**

*(1) For all Stages, there must be deadlines and penalties for failure to meet these deadlines.*

The relicensing process for the Waterbury Hydroelectric Facility has a history of long and inexplicable delays. Our membership, and likely many others whom have waited years for restoration of the Little River and the Reservoir, have little faith the Stages will be completed on time, if at all. Firm deadlines and penalties for missing those deadlines will provide markers for progress and ensure Stages are completed. Bluntly, ‘trust us’ is not enough.

The operating license was first issued in 1954 and expired in September 2001, with the facility in operation under “annual license extensions” since that time. (pg. 2, No. 4) There have been

repeated delays. The initial request for certification was made on August 31, 1999.<sup>1</sup> By statute, the certification process cannot take more than one year.<sup>2</sup> However, since this initial request, GMP annually withdrew and reapplied for certification sixteen times.<sup>3</sup> After sixteen years of inaction, it is not hard to see why the faith of our membership is shaken.

Only mandatory penalties will ensure these deadlines are met. DEC appears to have discretionary authority to issue penalties of up to \$10,000 per day for the duration of the offense, in this case each day a deadline is missed.<sup>4</sup> A key would be to make this discretionary authority mandatory, in that the state ‘shall’ issue a penalty, rather than ‘may.’ If not mandatory, this discretion can be susceptible to outside influences. Further, agencies in other states have used the broad discretion state agencies are provided to establish other, specific penalties. Penalties could include modification or revocation of the 401 Certification, specific performance, or a petition to FERC to enforce the license. But mandatory monetary penalties are the most effective deterrent.

In Stage I, specific deadlines are included for completion of design work, contractor selection, and completion of construction itself, with an overall deadline of December 31, 2016. (pg. 26) But there are no penalties for missing these deadlines. With no means of enforcement, these deadlines may slip.

Stage II equipment replacement and repair is a separate concern. Only after completion of Stage II can Stage III run-of-river flows begin. (pg. 26). But, the Draft Certification is thin on details as to how Stage II will be completed, particularly for such an important component of the Certification, as “[t]he project has not yet been designed and funded.” (pg. 3, No. 9) The cost estimate is \$40,000,000, in which, “[t]ypically, the federal government covers approximately 65% of the project costs.” (Pg 3, No. 9) The remainder of the funding must be secured from the State Legislature. It was noted at the initial public meeting on Oct. 7, 2014, that the state would request the federal funding through the Water Resources Development Act (WRDA). However, of late, WRDA is passed every seven years and was most recently enacted in May 2014.<sup>5</sup> With a timeframe of 2021 and later, questions must be raised as to whether this project will still be a priority for potential subsequent Commissioners and Administrations, whether political willpower will change, and a host of other questions.

Further, the basic premise of Stage II is faulty and seemingly unenforceable. While the state has wide latitude in imposing conditions in 401 Certifications to protect water quality standards, in this case, the licensee cannot comply with Stage II alone. GMP must rely on DEC to secure funding from the federal government and then the State Legislature, before it can proceed with equipment replacement. Here, the licensee has no control over fulfilling this condition of the Certification, but is still bound by those terms under the subsequent federal license.

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<sup>1</sup> Letter from King & King Law Firm to Peter LaFlamme, Director, Watershed Management Division, DEC, Re: Green Mountain Power Corporation Waterbury Hydroelectric Project, FERC No. 2090, Dec. 11, 2013, *hereafter* King Letter.

<sup>2</sup> Clean Water Act §401(a)(1).

<sup>3</sup> King Letter.

<sup>4</sup> 10 V.S.A. §1025(a).

<sup>5</sup> Press Release: Senators Boxer and Vitter Applaud Final Passage of Bipartisan, Bicameral Water Infrastructure Bill, U.S. Senate Committee on Environment and Public Works, May 22, 2014.

Overall, Stage II completion, and therefore full restoration of the Little River and Waterbury Reservoir, is rooted in too many unknowns. It is a project that has not been designed and an unknown funding source, to be secured at an unknown date by the state and federal governments, not the licensee who is responsible, but who ultimately must be held accountable. The question arises as to whether GMP as licensee would even be responsible for gate replacement under these circumstances. A deadline and penalties for Stage II would provide a target for completion and a means of holding all parties accountable.

In conclusion, deadlines and penalties must be included to ensure that each Stage is completed and run-of-river operation and year-round full-pool are achieved. It is imperative that deadlines be included for completion of Stage II to ensure the final conditions are met, even though the proposed plan is so uncertain.

*(2) If deadlines are not met, the conditions of the Certification will not be achieved, and the Little River and Waterbury Reservoir will not meet Vermont Water Quality Standards.*

The goal of this Certification is to minimize the impact of the Waterbury Hydroelectric Project on its surrounding environment. “The Project must be operated in a manner that fully supports designated uses for Class B waters as required by the Standards. Waterbury Reservoir and the Little River downstream are currently listed as priority waters not supporting designated uses.” (pg. 19, No. 89). As the Waterbury Project is being relicensed, the Little River and the Waterbury Reservoir must now be protected as Class B waters, including adequate flows and water levels to protect habitat, as well as minimizing the effects of peaking on the Little River.

The Little River and Waterbury Reservoir are designated Class B waters for high quality habitat. Under Class B criterion: “Biological integrity is maintained and all expected functional groups are present in a high quality habitat. All life-cycle functions including overwintering and reproductive requirements are maintained and protected.” (pg. 7, No. 32) But without full implementation of the conditions in the Draft Certification, biological integrity will not be maintained and all life-cycle functions, such as spawning and hibernation, will not be protected.

For our membership, a main concern is that these waters are protected as high quality fisheries habitat, which is a supported use of Class B waters. “All waters affected by the proposal under consideration are designated coldwater fish habitat for the protection and management of fisheries.” (pg. 7, No. 28) This specific designation applies to both the Waterbury Reservoir and the Little River.

However, it seems likely the interim flows of Stage II will become the permanent flows by default. If the federal and state funding is not secured for Stage II repairs, then the interim flows of Stage II will be in place for years, perhaps for the duration of the license. In the Little River, it is questionable whether the interim flows are adequate to achieve high quality habitat. While certainly an improvement over current flows, the Stage II conservation flows may fall short of what is needed for Class B waters. The limited studies appear to indicate that the interim flows of 60 cfs (or inflows during some time periods) will be adequate for some species, but the April to mid-May flow of 108 cfs may be inadequate. (pg. 14, Nos. 61, 62) DEC may need to conduct further studies in case these interim flows become permanent and adjust the flows accordingly.

Generation peaking in the Little River is another real concern. Again, new flows for peaking under Stage II will be less harmful to habitat than the current peaking of 620 cfs. (pg. 4, No. 19) However, peaking in any form is harmful. “Peaking dramatically reduced the amount of habitat in the river compared to steady-state flow conditions at the proposed minimum flows.” (pg. 15, No. 64) The gradual ramp up under Stage II is a step in the right direction, but there are questions about the maximum generation peaking, as the applicant has proposed 391 cfs (pg. 15, No. 64), DEC prefers 300 cfs during certain inflow conditions (pg. 25), and generation flows under other conditions appear undefined. Some of these flows may be too much for high quality habitat under Class B.

The health of the habitat of the Waterbury Reservoir is a more pointed issue. Unlike the River, there is no incremental increase during the Stages to restore shoreline habitat. If Stage II is never completed, then protection for the shoreline will not be extended. The annual winter drawdown is tremendously damaging for habitat and wildlife, particularly for overwintering and for spawning, and the drawdown causes “a major, annual disturbance” for shoreland areas. (pg. 12, No. 52) Further, about 450 acres is exposed to erosion due to the annual drawdown, affecting the water quality of both the Reservoir and the Little River. (pg. 9, No. 42). This drawdown will continue under Stage II conditions until the gates are repaired.

The Waterbury Reservoir will not meet the criteria of Class B waters for habitat and for coldwater fisheries under these conditions. “Stabilizing the reservoir at the current summer normal pool is the only alternative that would restore and protect water quality and comply with the Standards.” (pg. 19, No. 92) The operating conditions under Stage II are inconsistent with Vermont Water Quality Standards, but will continue until the gates are replaced and the pool becomes full year-round.

## **Conclusion**

In conclusion, while MDTU is supportive of the goals of the Draft Certification, we are concerned that all the Stages will not be completed and these goals will not be realized. Deadlines and mandatory penalties for missing these deadlines will ensure the Certification conditions occur and the Little River and the Waterbury Reservoir will meet Vermont Water Quality Standards.

Sincerely,



Clark Amadon  
President  
MadDog Chapter  
Vermont Trout Unlimited



December 5, 2014

Jeff Crocker, Supervising River Ecologist  
Streamflow Protection Program  
Vermont Agency of Natural Resources  
Department of Environmental Conservation  
1 National Life Drive, Main 2  
Montpelier, VT 05620-3522

*Sent via electronic mail to: [jeff.crocker@state.vt.us](mailto:jeff.crocker@state.vt.us)*

Dear Jeff:

The Vermont Natural Resources Council appreciates that a lot of time, thought and effort have gone into drafting the Draft Water Quality Certification ("Draft Certification") on the Application for the Green Mountain Power (GMP) Waterbury Hydroelectric Project, FERC Project No. 2090, known as the Waterbury Reservoir. We appreciate the unique variables that must be addressed and the difficulty in balancing these variables in a manner that meets the Vermont Water Quality Standards (VWQS). In general, the Department has done a tremendous job in drafting this certification.

VNRC has a long history with this project and its certification, including having filed a motion to intervene in the FERC process in 2002. The Draft Certification represents a creative solution that will eventually bring all the waters associated with the project into compliance with the VWQS. After its full implementation, the Certification will be a solid step forward towards restoring the health of the Little River and Waterbury Reservoir. However, we have a significant concern that the

Department's ability to assure full implementation in a reasonable timeframe is almost impossible. This, and our other comments, are outlined below.

**Findings #9 and #10 / Analysis #94**

As the Department is aware, issuance of a Water Quality Certification is contingent on being able to make a determination that the project will comply with the VWQS. Despite the marked improvements expected in the Little River as a result of this Draft Certification when it is implemented, the Draft Certification fails to meet the most the basic requirements of a Water Quality Certificate: it simply cannot assure compliance with VWQS for Waterbury Reservoir until some indeterminate time in the future.

This is our most significant concern: the draft lacks certainty as to when the State of Vermont (the dam owner) will secure the estimated \$40 million necessary to replace the Tainter gates, ensuring that the Waterbury Reservoir is in full compliance with VWQS. There is no timeline presented for securing this funding. Further, there is no certainty that the State of Vermont will be able to find even its portion (estimated at 35%) of the funding for the project. Beyond these possible derailments, there is the possibility that the funding may never become available, that the State's match will increase above the estimate, or that dam ownership may transfer to another entity such as the U.S. Army Corps of Engineers further delaying the replacement of the gates.

Further, the Draft Certification lacks a legal mechanism for the public to enforce the replacement of the Tainter gates that, again, are a pre-requisite for the project to meet VWQS. The public could be forced to accept a certification that indefinitely codifies a violation of the VWQS.

VNRC strongly suggests the Department include a supporting legal document that outlines a schedule of compliance for the State of Vermont for the replacement of the Tainter gates. Should the State of Vermont fail to meet the schedule the Department puts forth, there would then be a legally enforceable document that could compel the State of Vermont to fulfill its obligations.

### **Finding #23**

Many improvements are expected in the flow regime and water quality as a result of the ultimate design and operation envisioned in the Draft Certification. Because there are at least three layers of implementation and multiple stages to reach full implementation (and VWQS) VNRC believes that any *operational* changes required by Green Mountain Power in the Draft Certification be required to begin immediately. The timeframe and schedule of compliance for these operational changes should be included in the Draft Certification.

The Draft Certification could also make clearer the consequences of GMP failing to replace the turbines for any reason.

### **Anti-degradation**

The draft certification states that the project “will not result in any change in existing physical and water quality conditions *beyond those that have already taken place as a result of prior development at the site*” (italics added). VNRC does not believe that that is the standard for which a Draft Certification, or compliance with the anti-degradation policy of the VWQS, is measured. If it was, a Water Quality Certificate could simply accept the current impairments and use impaired waters as a baseline for determining whether a project will lower water quality.

While the Draft Certification will clearly result in an improvement in VWQS in the Little River within a short timeframe, that is not the case for the Waterbury Reservoir which, under the terms of the Draft Certification, may never result in attainment of VWQS in Waterbury Reservoir.

The Department should revisit the requirements of the anti-degradation provisions of the Clean Water Act and, absent a state rule, at least be consistent with federal requirements/guidance on the subject.

### **Condition C**

The Department has indicated that it will be developing a “protocol...that sets forth criteria and/or factors and a process to be utilized in determining whether the drawdown is necessary to protect the public health, safety and welfare”. There is no indication that this protocol would be open to a public process, there are no supporting findings or facts that lead to this decision, nor is there clear authority for such a protocol. The language is vague and subject to much interpretation as to what this protocol would seek to allow, and when.

Further, such a protocol seems ripe for abuse: rarely are there weeks of advance notice for storm events (the most likely trigger for an emergency drawdown) that would provide enough time for an “emergency” drawdown. Instead what is likely to develop is a scenario where the protocol codifies a regular drawdown year after year, just in case. Given the uncertainty as to when the VWQS will be complied with (i.e. after funding is secured and the Tainter gates are replaced) in the Waterbury Reservoir, this protocol is even more troubling. VNRC suggests that this protocol reaches far beyond the Department’s authority, as evidenced by the lack of supporting findings or facts within the Draft Certification. We suggest the inclusion of severe limitations and

on the circumstances under which such an equally severe impact of the drawdown would be allowed.

Thank you for your consideration of these comments and the effort that went into getting to this important and long-overdue point in time. We commend the work of all of the Agency's departments that has gone into drafting this document. Overall and eventually, it will result in a measurable improvement to Vermont's waters. Please be in touch if we can answer any questions about our comments.

Sincerely,

A handwritten signature in cursive script that reads "Kim L. Greenwood". The signature is written in black ink and is positioned below the word "Sincerely,".

Kim L. Greenwood, CPESC  
Water Program Director and Staff Scientist



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December 6, 2014

Jeff Crocker, Streamflow Protection Coordinator  
Vermont Department of Environmental Conservation  
Watershed Management Division  
1 National Life Drive, Main 2  
Montpelier VT 05620-3522

Dear Mr. Crocker:

American Whitewater, New England FLOW and Vermont Paddling Club submit these comments to Vermont Agency on Natural Resources in response to the Draft Water Quality Certification for the Green Mountain Power Waterbury Hydroelectric Project, FERC No. 2090-003. As conservation-oriented paddling organizations, we have a strong interest in the future of the Little River. Federal actions that affect flow and access to the river may potentially adversely impact opportunities for our members to utilize the river resource. Inasmuch as the Water Quality Certification by the Agency on Natural Resources will impact on the recreational opportunities on the Little River below the Waterbury Dam, we respectfully submit these comments for your consideration.

American Whitewater (AW) 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 clubs, 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. Our members are primarily conservation-oriented kayakers and canoeists, many of whom live and/or engage in recreational boating in the Waterbury, Vermont region.

New England Flow (FLOW) is a coalition of the major whitewater recreational groups and clubs in New England. The coalition was formed in 1989 to represent whitewater interests in the northeast and has successfully participated in numerous FERC relicensing proceedings including the Deerfield, the Rapid and Magalloway, the Kennebec and the Penobscot Rivers. FLOW represents over 2,000 whitewater boaters, canoeists, hikers and other outdoor enthusiasts throughout New England.

The Vermont Paddlers Club (VPC) 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 Little River, the Vermont Paddlers Club has a significant interest in the outcome of this process.

#### I. FERC Relicensing Process for the Waterbury Hydroelectric Project

The 1986 Electric Consumers Protection Act (ECPA) amended the Federal Power Act to require that FERC give "equal consideration to the purposes of energy conservation, the protection, mitigation of damage to, and enhancement of, fish and wildlife (including related spawning grounds and habitat), the protection of recreational opportunities, and the preservation of other aspects of environmental quality." The Act requires FERC to balance the Licensee's interest in generating power through the use of a public resource with the public interest in protecting natural resources, providing recreational opportunity, aesthetics, and other factors.

Relicensing of any hydroelectric project, and the Waterbury Project is no exception, is a costly and time consuming process that requires a Licensee to undertake numerous studies to determine whether the project is having an adverse impact on various resources including soils, aquatic and terrestrial life, and the ability of the public to use the river for recreational enjoyment. In the case of the Waterbury Project, Green Mountain Power studied all of the potential impacts, submitting detailed reports to FERC for use in preparing an Environmental Assessment for the Project. These studies involved the active participation of numerous NGO's and resource agencies including AW, FLOW, and VPC as well as the Vermont Agency on Natural Resources.

Our organizations have been deeply involved with the FERC relicensing of the Green Mountain Power Corporation, Waterbury Project. Green Mountain Power conducted a Boating Flow Study on October 20, 2000, in cooperation with AW and FLOW. As a result of this study, the boating community and GMP entered into settlement discussions during the month of April 2002 to resolve outstanding issues relative to developing a release schedule for recreational boating needs that would balance the public interest in boating on the Little River with other values.

A "*Whitewater Release Schedule*" and "*General Agreement*" between Green Mountain Power, AW and FLOW was reached in 2003 but was not formalized pending FERC staff analysis following the project Environmental Assessment. Proposed boating flows during weekdays were tied to periods of time when GMP is using water for generational purposes and there would be no additional spillage of water that would lower lake levels behind the reservoir. The proposed low number of boating flows during weekends (15) did not preclude GMP from using these same flows for generational purposes, albeit it was assumed at a somewhat reduced generational value for the utility. The weekend flows would, however, provide a significant economic benefit to the Towns of Stowe, Waterbury and others nearby in the form of lodging, restaurants, liveries, and ancillary

services.

Based on this data, FERC issued its Final Environmental Assessment on August 15, 2005 making the following recommendation:

*Whitewater and Boating*

Operating the project as run-of-river would limit the amount of boatable flows available to whitewater recreationists, and therefore whitewater boating would be adversely affected. Also, run-of-river could increase the flooding frequency of the recently built composting toilet and concession buildings. We recommend that GMP, in consultation with the Whitewater Parties, finalize the proposed whitewater boating release schedule. Currently, the Whitewater Parties and GMP have not decided when the prescheduled events would occur and which weekends would have the release of boatable flows. Also we recommend that GMP expand its existing flow phone system and improve the existing warning signage. Currently, the Waterbury Project is not part of GMP's flow phone system. The cost to include the Project in the system would be minimal, and its inclusion would provide recreationists with a reliable way to determine if boatable flows are currently available downstream of the Project. Downstream of the Project, boaters can experience hazards such as weir not visible from the last available take-out prior to the weir. With improved warning signage for boaters would be alerted to such hazards. See *Develop and implement a recreation management plan* for further discussion.

We recommend that GMP continue to work with the VDFPR and VDEC to develop the proposed take-out facility and parking area in the River Ford area, near the Little River Road. Because these proposed improvements consist of capital improvements and the sites are operated and maintained by the VDFPR or the VDEC, these enhancements would not be project related facilities and therefore do not need to be within the project boundary. However, since the proposed take-out facility/access point and parking area would be located outside of the project boundary, these recreational enhancements would not be included in any license. The state agencies should assume the responsibility of operation, maintenance, and supervision of the facilities.

AW and FLOW filed Comments with FERC on September 12, 2005 in support of FERC staff analysis following completion of the Environmental Assessment and release of FERC staff recommendations in 2005. AW, FLOW and VPC support the recommendations developed by FERC staff for the Waterbury Project. These recommendations were developed through a transparent process that relied on science and a careful balance of interests.

## II. Draft Water Quality Certification

### A. General Comments

The Vermont Department of Environmental Conservation (DEC) issued a Draft Water Quality Certification for the Waterbury Hydroelectric Project on November 5, 2014, nearly 10 years after FERC issued its Environmental Assessment. Although the Waterbury dam is a federally funded flood control dam, the draft WQC proposes that GMP operate the Waterbury Reservoir in a run-of-river mode of operation, eliminating the primary purpose of the Waterbury Dam for flood control and limiting power generation. DEC further proposes to eliminate the winter pool draw down that is used for flood control and power generation, significantly diminishing the dam's primary and federally funded purpose for existence (flood control). To make it possible to eliminate all flood control capabilities of the dam, DEC will seek \$40,000,000 in funding from federal and state taxpayers for a larger gate through which to pass floods once stored by the dam.

Under this proposed mode of operation, GMP would be prohibited from making any scheduled whitewater releases as provided in its agreement with the boating community, eliminating all whitewater boating opportunities on the Little River except during unscheduled high flow events. While the DEC proposal would maintain the reservoir for recreation and run-of-river power generation, the presence of the dam would continue to have an impact on water quality and prevent fish passage.

In issuing the draft WQC, DEC completely disregarded the FERC Environmental Assessment that was based on extensive studies, a multi-year public NEPA process, and careful consideration of the values of "energy conservation, the protection, mitigation of damage to, and enhancement of, fish and wildlife (including related spawning grounds and habitat), the protection of recreational opportunities, and the preservation of other aspects of environmental quality." In the case of the recreational values identified in the whitewater boating study, DEC completely disregards the whitewater boating study

and the FERC recommendations that GMP finalize its agreement with the boating community and develop a recreational plan to provide whitewater boating opportunities between the Waterbury Dam and the confluence with the Winooski River.

The draft WQC seeks to replace a FERC proposal to balance the social and environmental benefits and impacts of the project with a DEC proposal that maximizes environmental benefits while eliminating flood control and granting other interests like hydropower and recreation opportunistic use. In essence, the WQC seeks to manage the reservoir like a lake, thereby eliminating many of its societal benefits yet leaving the negative impacts of the reservoir in place. Given the costs of repair and retrofitting the dam, limited future benefits, and ongoing impacts, we question whether dam removal might be a better option.

As conservation oriented river enthusiasts, we share DEC's concern about water turbidity when the reservoir is drawn down to an elevation below 550 feet and then refilled. We are also sympathetic to its concern that daily peaking, very low minimum flows, and high ramping rates may have consequences for aquatic habitat, and we commend DEC for their interest in addressing these concerns. We believe, however, that DEC may go too far in its draft WQC with too little basis, and that the elimination of all scheduled whitewater boating opportunities is unsupported by any studies or science-based research on the Little River.

Short of dam removal and the restoration of "true" run-of-river conditions on the Little River, we believe that DEC should work to maximize aquatic habitat and provide for flood control, power generation and recreation opportunity by proscribing a modified run-of-river mode of operation. We believe that allowing periodic whitewater releases will have a negligible or non-existent impact on habitat, and in many cases provides benefits to both rivers and neighboring communities.

B. Specific Comments

- *Project and Civil Works*

DEC and GMP plan to seek federal and state funding for \$40 million in renovations to the tainter gates and spillway (Phase III) before the project will operate in run-of-river mode; however, prospects for securing this funding are uncertain. In the interim, the WQC would require GMP to limit the pool drawdown, increase minimum flows, and arbitrarily limit flows to levels that are marginal or unacceptable for boating. We request that interim management allow for the release of flows that are optimal for whitewater paddling.

- *River Hydrology and Reservoir Regulation*

GMP operates the Green Mountain Reservoir in a weekly peaking mode of operation in which it typically generates power Monday-Friday with flows fluctuating from 10 cfs to 620 cfs on almost a daily basis, generally refilling the reservoir during non-peak generation hours. The reservoir pool height drops by approximately 40 feet during the winter pool draw down to accommodate anticipated snow melt and provide additional power generation opportunities. GMP is required to provide minimum flows of 3 cfs, although non-generational flows are estimated at closer to 10 cfs due to leakage. DEC and GMP now propose to limit generational flows to a level below the level identified as optimal for whitewater boating as agreed to by GMP and the boating community in the preliminary settlement agreement.

We agree with DEC that the GMP weekly peaking operation substantially disrupts the natural flow regime on the Little River, and we share DEC's concern that daily extreme flow fluctuations coupled with miniscule base flows may have an impact on aquatic habitat. While DEC does not cite any studies on the Little River that address peaking impacts on native species, like DEC we presume that daily extreme peaking flows have an impact on the river. With this said, the nature, mechanisms,

and magnitude of that impact is unclear, nor is it clear if that impact could be mitigated, because it has not been studied.

DEC has reasonably shown through studies that modifying the reservoir drawdown should significantly improve water quality (turbidity study), and that a significantly increased base flow should significantly improve habitat conditions (PHABSIM study). However, DEC's argument against peaking is based on a very limited and dated literature review of studies on severe peaking rather than onsite studies of impacts occurring on the Little River. The dual flow use of IFIM is not an accurate or accepted means of comparing alternatives featuring flow variability, and regardless is focused on benefitting non-native recreational fish (e.g. fishing) rather than native fish restoration. (See 401 Cert, paragraph 91) This leaves DEC with an unfortunate and likely false binary choice of severe peaking vs. run-of-river, while ignoring the ample middle ground.

Run-of-river management is a safe bet ecologically as the highest ecological target of regulated river restoration, second only to dam removal. Less easy is determining if there is an alternative with negligible environmental effects that allows for additional hydropower generation, flood control, and scheduled recreational opportunities. The FERC process and its site-specific suite of studies are designed to explore and find that middle ground on regulated rivers, and to make hard choices.

Rivers are complicated and FERC-process site-specific studies routinely offer surprises. The cold and clean peaking reach of the Nantahala River produces so many fish it is a veritable trout farm. Faster ramping on the Bear River stranded fewer (very few) fish than slower ramping. Lower flows on the North Fork Feather created higher velocities at the substrate than higher flows. The list could go on. Site-specific studies highlight site-specific mechanisms of impact and site-specific mitigation strategies that allow for nuanced management of regulated rivers. Literature reviews can offer context as well as conclusions on extreme ends of the management spectrum, but not nuanced site-specific prescriptions.

DEC has illuminated and sought to fix two major ecological issues on the Little River (turbidity and base flow habitat). These two measures alone are likely to significantly improve the ecological integrity of the Little River. DEC then proposes to switch to a run-of-river operating regime, which is likely to have an additional incremental benefit, but so would switching to a modified run-of-river scenario that allowed for some amount of flexibility for providing releases for power generation and scheduled paddling opportunities. We question whether DEC has the scientific basis to find that their run-of-river alternative is preferable to a carefully designed modified run of river alternative that allows for scheduled paddling and power generation, given the societal benefits of the latter.

In terms of the impact of scheduled whitewater boating releases, neither GMP nor DEC has conducted any studies on the Little River that would justify the elimination of all scheduled whitewater boating / power generation releases on the Little River. While DEC cites to a few studies pertaining to the effect of severe peaking operations elsewhere, DEC ignores other studies including a more recent one on the Indian and Hudson rivers in New York that concludes that some more moderate release scenarios have a much more limited impact while allowing for significant energy and recreation benefits.<sup>1</sup>

We question whether the DEC proposed run-of-river operations are the best-adapted plan for the Little River, given the full suite of details in this relicensing.

- *Recreation*

The Little River below the Waterbury Reservoir offers whitewater boating opportunities to beginning and intermediate boaters in the Waterbury area with rapids ranging from Class I to Class III depending on flows. This section of the river contains eddies and play waves suitable for instruction, club outings and down river racing. The settlement agreement reached between the boating community

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<sup>1</sup>Effects of recreational flow releases on natural resources of the Indian and Hudson Rivers in the Central Adirondack Mountains, New York, 2004-06: USGS Scientific Investigations Report 2010-5223

and GMP is consistent with the FERC recommended alternative for the Little River and would provide for: 1) weekday afternoon/evening releases when GMP would likely be generating power; 2) weekend releases during the summer months; and, 3) two special releases in the spring for whitewater boating events. The releases would range from 415 to 525 cfs lasting 4-5 hours, resulting in less than 2-3 inches in reservoir level reductions assuming no inflow.

The releases proposed in the settlement agreement and the FERC recommended alternative would offer significant mitigation to the paddling community in the context of balanced and appropriate river management. Specifically, respective to our settlement agreement we feel that:

- An annual schedule of whitewater releases will greatly benefit the regional beginner and intermediate paddling community.
- The proposed enhanced flow information system will allow paddlers and other river users to better plan their visits to the Little River and facilitate additional use.
- The proposed take-out and additional put in would meet a need of the paddling community.
- The proposed trail enhancements would benefit the paddling community while also protecting the river from potential erosion.
- The proposed improved signs would help increase river safety for all river users.

The FERC staff recommended alternative would significantly enhance whitewater boating on the Little River, making it a highly valued resource for the paddling community. As a result, we believe that the Little River would become an even greater quality-of-life amenity of the region that could have significant positive economic benefits in the form of increased tourism. A study by Crane and Associates on the economic benefits of the very few releases on Vermont's Class II/III+ West River clearly showed the economic value of predictable boating opportunities in the state.<sup>2</sup> The FERC recommended alternative would not only benefit paddling on the Little River but will also enhance other forms of river recreation such as fishing, swimming, and sightseeing.

In rejecting the FERC recommended alternative and proposing run-of-river operations without

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<sup>2</sup> "The Economic Impacts of Whitewater Boating on the West River, Jamaica, Vermont" by Crane Associates. The study can be viewed at: <http://www.americanwhitewater.org/resources/repository/West%20River%20Economic%20Impact-Final%2004-20-05.pdf>

flow provisions for paddling, DEC eliminates valuable scheduled whitewater boating opportunities from the proposed and current operations of the Little River. DEC provides no analysis or discussion of the value of whitewater boating on the Little River, and provides no rationale for its conclusory statements that the proposed whitewater releases are incompatible with its goals for the Little River. Vermont's Anti-Degradation Policy, Section 1-03 of the Vermont Water Quality Standards, states that, "Existing uses of waters and the level of water quality necessary to protect those existing uses shall be maintained and protected regardless of the water's classification." The Policy specifically enumerates uses that the State is required to maintain, including "[t]he use of the waters for recreation or fishing."

The draft WQC states that, "The Secretary considered all of the factors listed above and, based on information supplied by the applicant and Agency staff field investigations, identified the following existing uses: aquatic biota, wildlife and aquatic habitat; aesthetics; swimming; *whitewater paddling* and fishing." [emphasis added] Having found that whitewater boating is an existing use, DEC is obligated to conduct a detailed analysis of the impact of whitewater boating as part of its Tier I review of the project under the Anti-Degradation Policy. It has not done so.

Instead, the draft WQC significantly diminishes and impacts an existing use of the Little River by limiting project outflows to a level that is marginal or unacceptable for whitewater boating during the interim management period, which has the effect of eliminating an existing use which is prohibited under the Anti-Degradation Policy. DEC takes this action without careful study or substantial justification. Subsequent proposed management will include converting the mode of operation to a run-of-river regime that does not include modifications that allow for scheduled paddling opportunities which has also not gone through an adequate review process. Conducting an adequate review of the impact of whitewater boating on the Little River may show that the ecological harm of providing recreational releases may outweigh the recreational benefits; however, such a result cannot be

presumed when other studies and anecdotal information shows that whitewater boating has a negligible impact on river systems elsewhere.

Conclusion

We respectfully request that the Agency on Natural Resources revise its Draft Water Quality Certification for the Waterbury Project in order to permit an appropriate number of whitewater boating releases consistent with its management goals for the Little River. We believe that a modified run-of-river mode of operation for the Waterbury Reservoir that includes modest scheduled paddling opportunities would both meet the Department's goals for the Waterbury Reservoir and allow for the continuation of an important recreational use of the Little River

Respectfully submitted,



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