

STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 6828

Investigation into Possible Alterations at)	Hearing at
Green Mountain Power Corporation's West)	Danville, Vermont
Danville Dam)	August 27, 2003

Order entered: 9/9/2003

PRESENT: Peter B. Meyer, Esq., Hearing Officer

APPEARANCES: Sarah Hofmann, Esq.
for the Vermont Department of Public Service

Warren T. Coleman, Esq.
for the Vermont Agency of Natural Resources

Gary McQuesten, Esq.
Valsangiacomo, Detora & McQuesten, P.C.
for Joe's Pond Association

Bartlett F. Leber, Esq.
Sheehey Furlong & Behm P.C.
for Green Mountain Power Corporation

I. INTRODUCTION

This Docket concerns a petition by Green Mountain Power Corporation ("GMP") seeking a certificate of public good ("CPG") from the Public Service Board ("PSB") for alterations to the West Danville Dam ("Dam"), pursuant to 10 V.S.A. §§ 1081, 1083 -1086. GMP has proposed these alterations in part to restore the Dam's spillway capacity. The spillway capacity had been reduced as a result of modifications to the Dam that GMP had performed, by GMP's own admission, without the necessary approval, in 1995. Local residents, speaking through the Joe's Pond Association ("Association"), have been requesting a restoration of the spillway capacity for some time. In today's Order, we approve GMP's current proposal which, as discussed below, is

necessitated by GMP's longstanding failure to rectify the situation caused by its unauthorized alterations to the Dam in 1995. Further, in the event that this specific proposal is not implemented, we hereby order GMP to develop and propose for implementation an alternative mechanism for restoring spillway capacity in time to ensure implementation prior to November 15, 2004. Furthermore, because construction does not appear feasible this year, we also require GMP to post a one-half million dollar bond to ensure payment to property owners for damages, if any, resulting from the continued operation of the Dam currently in place.¹

The Dam is located in the Town of Danville, Vermont. It was first built in 1916 and acquired by GMP in 1927. The Dam, which impounds Joe's Pond, has a penstock approximately 2/3 of a mile in length leading to the generating station. The configuration of the Dam, until 1995, had two angled legs making up the spillway. Under that historic configuration, the height of the spillway was increased past the concrete crest by the use of wooden flashboards. These flashboards were removed before the spring runoff each year. From 1926 to 1998, GMP (and its predecessor) had operated the Dam under an agreement with the Association whereby GMP would draw down the pond annually in the spring to prevent flooding and ice damage and again in the fall to allow shoreline owners to perform maintenance work on docks and retaining walls.²

In 1995, GMP replaced the wooden flashboards with a rubber bladder. This was intended to eliminate the need for removing the flashboards each year, as the bladder can be inflated and deflated to provide flood management. In order to install the rubber bladder, GMP straightened the spillway, which consequently lost approximately ten feet of length. GMP did not seek a CPG for its 1995 modifications as required under the relevant statutes. GMP did notify the Board that work had been performed on the Dam, but characterized this work as a maintenance effort that did not require a permit.³

1. In light of *Trybulski v. Bellows Falls Hydro-Electric Corp.*, 112 Vt. 1 (1941) and *Green Mountain Power Corporation v. Sprint Communications*, 172 Vt. 416 (2001), it appears that, absent an agreement with GMP, any such damages would have to be sought in a court of competent jurisdiction.

2. Mishalanie pf. at 5-6.

3. Under 10 V.S.A. § 1082, "[n]o person shall construct, enlarge, raise, lower, remodel, reconstruct, or otherwise alter any dam . . ." without a permit. An investigation to determine the appropriate penalties, if any, that GMP should incur due to failure to obtain a permit from the Board pursuant to this statute will be conducted in Docket No.

In 1998, the Agency of Natural Resources ("ANR") directed GMP to discontinue the historical practice of the spring and fall drawdowns in order to protect a large expanse of wetlands in the pond. Without the spring drawdown, and because of the reduced size of the spillway, flooding and ice build-up has caused property damage to shoreline landowners' property.

In June of 2002, the Association asked the Board whether a CPG had been granted for the modifications that GMP made to the Dam in 1995. In August of 2002, the Board opened an investigation (Docket No. 6743) to determine whether the modifications required Board approval. During the course of that investigation, GMP acknowledged that a permit from the Board was needed to make the 1995 alterations to the Dam⁴ and subsequently petitioned the Board for approval to make further alterations to the Dam to better manage water levels in the pond.⁵ It is that petition, and the accompanying proposal for alterations to the Dam, that is the subject of this Order.

The reconstruction project that GMP has petitioned the Board to approve will increase the discharge capacity of the dam and will use more sophisticated technology than is currently in use to prevent spring flooding in all cases up to a 100-year flood. This should substantially decrease the likelihood of spring flooding while also protecting the wetlands adjacent to the pond.

Under 10 V.S.A. § 1086(b) we are required to consider thirteen factors in determining whether a CPG should be granted for GMP's proposed modifications to the Dam. (These thirteen factors are set out below.) All parties to this Docket, except the Vermont Department of Public Service ("Department"), have explicitly agreed that the Dam alterations proposed by GMP satisfy the thirteen criteria of 10 V.S.A. § 1086(a), and the Department has given no indication that it does not believe that the proposed alterations satisfy that statute.⁶ The Department has also filed a letter from Department Commissioner O'Brien to GMP president Dutton, indicating that the

6743 after the resolution of this Docket.

4. Tr. 8/27/03 at 10 (Leber).

5. Petition of GMP to make alterations to the West Danville Dam, filed February 18, 2003.

6. Shepard pf. at 2-8; Mishalanie pf. at 2, 11-14; tr. 8/27/03 at 18 (Coleman); tr. 8/27/03 at 7 (McQuesten).

Department wants to see the problems fixed as soon as possible and "recommends that GMP do everything in its power to prevent possible spring flooding."⁷ Given the parties' concurrence that the statutory criteria are satisfied, and to issue today's Order as expeditiously as possible, we do not report detailed findings on these thirteen requirements. These detailed findings will be forthcoming in a supplemental Order.

Additionally, 10 V.S.A. § 1086(b) states "[t]he order shall include conditions for minimum stream flow to protect fish and instream aquatic life, as determined by the agency of natural resources [ANR]. . . ." ANR prefers to establish site-specific minimum stream flow standards.⁸ In the absence of site-specific studies, ANR has established default minimum stream flow standards.⁹ Until the end of August, 2003, GMP had elected not to conduct the stream flow studies necessary to justify to the ANR any minimum stream flows other than ANR's default standards.¹⁰

At the hearing held on August 27, 2003, GMP represented that it did not intend to begin construction on the Dam until the fall of 2004.¹¹ GMP contended that it would be imprudent to begin construction on the Dam until it knew what the ANR would determine to be an appropriate minimum stream flow.¹² GMP claims that it would be uneconomical to operate the Dam for hydroelectric purposes if the minimum stream flow were to be set at the ANR's default standards. Although GMP recognizes that the flooding problems still must be resolved even if the project is

7. Letter of September 3, 2003, from Department Commissioner David O'Brien to GMP President Christopher Dutton.

8. For an explanation of the policies and procedures which the ANR uses to determine minimum stream flows, see *Agency Procedure for Determining Acceptable Minimum Stream Flows*, July 14, 1993.

9. Cueto pf. at 11.

10. The ANR's default minimum stream flow requirements that satisfy the Vermont Water Quality Standards require flows of .5 cubic feet per second per square mile of watershed area from April 1 - September 30 and 1.0 cubic feet per second per square mile of watershed area from October 1 - March 31. See Wentworth pf. at 7-8.

11. Tr. 8/27/03 at 15 (Leber).

12. The Department has taken the position that the question of prudence is irrelevant. In response to GMP's position on the timing of construction, the Department has stated: "The Department has always assumed that the current modifications to the dam and attendant costs of those modifications would not be paid for by ratepayers." Letter of September 4, 2003, from Sarah Hofmann to Susan Hudson, Clerk of the Board.

uneconomical, GMP contends that a different, and less expensive, design could be utilized to mitigate the flooding and meet minimum stream flow requirements in the event that the Board adopts the ANR's proposed default minimum stream flow standards.¹³

At the hearing, and through a follow-up procedural order, the Hearing Officer requested that parties file comments on GMP's statement that it did not intend to begin construction until the fall of 2004. In response to the Hearing Officer's request, GMP filed a statement by its contractor stating that the contractor would not be able to perform the construction work this fall for safety reasons. The Association filed comments recommending that the Board require GMP to reconstruct the Dam this fall. The Department and the ANR submitted comments indicating that they reluctantly accept GMP's contention that construction cannot begin this fall; the Department and the ANR suggest that the Board instead set a schedule to ensure that construction is completed by next fall. The Department and the ANR also recommend that the Board impose certain conditions on GMP.

The property owners along Joe's Pond have been subject to several years of increased flooding risk as a result of GMP's unauthorized construction project in 1995. In those years, GMP has had ample opportunity to conduct minimum stream flow studies and propose alternative designs for the remedial construction, if the ANR's minimum stream flow standards should interfere with the economics of the hydroelectric project at the site. Another year of the status quo will allow GMP to continue to receive economic benefits from an unlawfully modified Dam while causing homeowners continued exposure to property damage and substantial inconvenience.

To provide the most expeditious decision to all parties, and, in particular to ensure that a bond is posted promptly to help ensure payment of any damages that result from the delay in reconstructing the Dam, we (the members of the Public Service Board) have decided to read the record and issue this Order ourselves, rather than wait for a proposal for decision by the Hearing Officer to be circulated and the parties to present comments and arguments thereon. *See* 3 V.S.A. § 811. Based on this record, we have determined that we should issue a CPG for the project GMP proposed in its February, 2003 petition. Because GMP indicates that it cannot

13. Tr. 8/27/03 at 27 (Leber).

complete construction this fall, we also order GMP to post a bond in the amount of \$500,000 to be used to secure payment of damages that property owners might incur as a result of the increased flooding due to GMP's unauthorized alterations to the Dam in 1995.¹⁴

II. PROCEDURAL HISTORY

On June 25, 2002, the Association sent a letter to the Board asking if the Board had issued a CPG for the modifications made to the West Danville Dam by GMP in 1995. The Board opened an investigation on August 7, 2002, to determine whether the 1995 modifications required Board approval. That investigation is ongoing, in Docket No. 6743.

On February 18, 2003, GMP petitioned the Board for approval to make further alterations to the Dam to decrease the likelihood of flooding. In the petition, GMP proposed to begin construction in September of 2003. GMP's petition is under review in the current Docket.

A prehearing conference was held on April 14, 2003. A schedule for prefiled testimony was established. A technical hearing was originally scheduled for July 10, 2003, at the Hearing Room of the Public Service Board in Montpelier, Vermont. However, under 10 V.S.A. § 1085, a hearing on the petition must be held in a municipality near where the project is located. In order to reschedule the hearing for a proper venue, which was complicated by scheduling conflicts among the parties, this hearing was held on August 27, 2003 in the Danville, Vermont, Town Hall.

On August, 29, 2003, the Hearing Officer issued a Procedural Order. The Procedural Order requested that all parties file comments with the Board on several issues that were raised at the hearing. On September 3, 2003, GMP, ANR, and the Association filed their comments, with the Department filing its comments on September 4, 2003.

Pursuant to 10 V.S.A. § 1087, the Board's engineering consultant, Stephen C. Knight, Jr., P.E., submitted his report on this matter to the Board on September 8, 2003.

14. See footnote 1, above.

III. FINDINGS

1. Green Mountain Power Corporation ("GMP") is a Vermont corporation, subject to the jurisdiction of the Public Service Board ("Board"), and with a principal place of business at 163 Acorn Lane, Colchester, Vermont. Pet. at 1.
2. GMP is the owner of the West Danville Dam ("Dam"), a hydroelectric project located in the Town of Danville, Vermont. Pet. at 1.
3. The Dam, which forms the impoundment for Joe's Pond, is a concrete gravity structure comprised of a spillway, a right non-overflow section and an intake/forebay structure. Mishalanie pf. at 3.
4. The Dam was constructed in 1915-1916 and purchased by GMP in 1927. Pet. at 1.
5. Pursuant to an Order dated May 23, 1979, the Federal Energy Regulatory Commission ("FERC") does not require the Dam to be licensed under the Federal Power Act. Pet. at 1.
6. The right non-overflow section adjoining the spillway is approximately 20 feet long with a maximum height of about 12.5 feet above the bedrock foundation. The intake/forebay structure is a concrete gravity flume-type structure with a manually operated headgate, trashracks and a low-level drain gate. The intake water passage measures approximately 8 feet wide by 12 feet deep. The intake/forebay provides flow to the penstock and hydroelectric unit. The full-gate discharge of the single Francis-type hydroelectric unit is approximately 127-130 cfs. Mishalanie pf. at 4.
7. Prior to 1995, the spillway configuration was angled with two legs and the crest fitted with approximately two-foot high removable timber flashboards, supported by steel pins embedded in the spillway crest. The total length of the spillway was approximately 36 feet, comprised of the two legs of 12.5 feet and 23.5 feet. Mishalanie pf. at 4.
8. To provide flood control, the spillway flashboard configuration was designed to fail when high flows overtopped the wooden flashboards. In practice, the flashboards were usually removed each year before the onset of high flows from the spring runoff, and then replaced after the spring runoff. Mishalanie pf. at 4.
9. From 1926 to 1998, GMP (and its predecessor) had operated the Dam under an agreement with the Joe's Pond Association ("Association") under which GMP would draw down

the pond each spring to prevent flooding and ice damage and again each fall to allow shoreline owners to perform maintenance work on docks and retaining walls. Mishalanie pf. at 5-6.

10. In 1995, GMP straightened the angled spillway to allow for the installation of a Bridgestone Rubber Dam to replace the wooden flashboard configuration. The resulting spillway length was reduced to approximately 26.1 feet at the crest and 31 feet at the top of the abutments. The elevation of the concrete spillway was unchanged. Mishalanie pf. at 4-5.

11. In 1998, the ANR initiated changes to water- level management at the Dam. Mishalanie pf. at 7.

12. To allow GMP to operate the Dam in accordance with the ANR guidelines, GMP has installed automation technology to improve control of the existing rubber dam. GMP is now proposing to modify the existing spillway to install a larger rubber dam to replace the existing rubber dam. Mishalanie pf. at 7-8.

13. The proposed spillway modification will result in a spillway with a crest approximately 3.25 feet lower than the existing spillway crest. As with the existing spillway, the proposed new spillway will consist of a broad crested weir with a rubber dam mounted on top of it. Mishalanie pf. at 8.

14. The proposed new spillway will have a length of 28 feet at the crest and 33 feet at the top of the abutments. The height of the proposed new rubber dam bladder in the fully inflated position will be 5.35 feet (as opposed to the inflated height of approximately 2 feet for the existing rubber bladder). Mishalanie pf. at 8.

15. The proposed alteration of the dam will increase its spillway discharge capacity to levels greater than those which existed prior to the 1995 modification. The proposed dam alteration, in combination with the larger rubber dam and the installation of automatic controls, is designed to allow GMP to operate the dam in accordance with the current pond-level management guidelines prescribed by the ANR, thus avoiding the need to draw down the pond in anticipation of high water levels caused by spring thaws. Mishalanie pf. at 8-9.

16. The proposed dam modification will provide for a spillway that will pass the 100-year storm event without overtopping the abutments. Mishalanie pf. at 9.

17. The proposed dam modifications are designed to allow GMP to manage water levels in accordance with the goals of the ANR, satisfy the property and recreational interests of the shoreline owners and continue to operate its hydroelectric project. Mishalanie pf. at 9.

IV. DISCUSSION RE: STATUTORY CRITERIA AND MINIMUM STREAM FLOWS

All parties, except the Department, have explicitly agreed that the alterations to the West Danville Dam proposed by GMP in its February, 2003 petition promote the public good,¹⁵ and the Department has given no indication that they do not agree that the proposed alterations promote the public good and have expressly pressed for prompt alleviation of property owners' concerns. Upon consideration of the thirteen factors listed in 10 V.S.A. § 1086, we agree and hereby issue a CPG, with conditions, for the proposed alterations to the Dam.

GMP's contention that ANR's default minimum stream flow makes the proposed Dam alterations uneconomical does not alter our decision in this case. Any economic loss that GMP might incur as a result of the Dam modifications is caused by GMP's own actions and does not outweigh the benefits to the public that will result from the Dam alterations being made as soon as possible.

There is some dispute between GMP and the ANR as to whether the Board must incorporate the ANR's determination of an appropriate minimum stream flow into the CPG issued for construction. We need not decide this issue at this time. Whatever the merits of GMP's argument, we see no basis on this record to override the ANR's determination. Despite having had ample opportunity, GMP still has not produced a site-specific study of minimum stream flows. Thus, we find that the default minimum stream flow standards are reasonable in this case, until such time as instream studies may show that some lower flow would satisfy the minimum stream flow requirements.

15. Shepard pf. at 2-8; Mishalanie pf. at 2, 11-14; tr. 8/27/03 at 18 (Coleman); tr. 8/27/03 at 7 (McQuesten).

V. CONCLUSION

Based upon the above findings and the evidence of record, the proposed West Danville Dam repairs will serve the public good, having given due consideration to, among other things, the effect the proposed project will have on:

- (1) the quantity, kind and extent of cultivated agricultural land that may be rendered unfit for use by the project, including both the immediate and long range agricultural land use impacts;
- (2) scenic and recreational values;
- (3) fish and wildlife;
- (4) forests and forest programs;
- (5) the need for a minimum water discharge flow rate schedule to protect the natural rate of flow and the water quality of the affected waters;
- (6) the existing uses of the waters by the public for boating, fishing, swimming and other recreational uses;
- (7) the creation of any hazard to navigation, fishing, swimming or other public uses;
- (8) the need for cutting clean and removal of all timber or tree growth from all or part of the flowage area;
- (9) the creation of any public benefits;
- (10) the classification, if any, of the affected waters under Chapter 47 of Title 10;
- (11) any applicable state, regional or municipal plans;
- (12) municipal grand lists and revenues; and
- (13) public safety.

The record in this Docket clearly indicates that the operation of the Dam currently in place has placed landowners along Joe's Pond at increased risk of property damage. GMP has recognized this problem and has stated, through its representative:

the number one goal that we have in this proposal [referring to GMP's February 18, 2003 petition] is to fix the problem at the Dam that Joe's Pond Association has experienced since there have been changes in both the structure and the water level management at Joe's Pond. That's the number one goal.¹⁶

16. Tr. 8/27/03 at 9 (Leber).

This goal of mitigating the flooding along Joe's Pond is one that all parties share and one that can be achieved by reconstructing the Dam as proposed by GMP in its February 18, 2003, petition. It is for this reason that we issue a CPG to authorize GMP to begin construction as soon as possible and address its "number one goal."

GMP has represented that it is unable to complete construction this fall. This project is time-critical only as a result of the increased flooding risk from GMP's unlawful 1995 alterations to the Dam, and because GMP's failure to perform a site-specific stream flow study has delayed the final resolution of this Docket. Consequently, we are requiring GMP to post a one-half million dollar bond to secure payment to property owners who may suffer flooding damage, until the Dam modifications are complete.

VI. ORDER

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the Public Service Board of the State of Vermont that:

1. The alteration of the West Danville Dam ("Dam") in West Danville, Vermont, by Green Mountain Power Corporation ("GMP"), in accordance with the evidence and plans submitted in this proceeding, will serve the public good, in accordance with 10 V.S.A. § 1086.
2. GMP shall, as soon as possible but no later than November 15, 2004, complete the reconstruction of the Dam.
3. Because GMP is unable to complete the alteration of the Dam during the Fall of 2003, GMP shall, within 30 days of this Order, post a performance bond ("Bond") in the amount of \$500,000 with this Board, on behalf of the members of the Joe's Pond Association, as the designated beneficiary, all in a form satisfactory to the Board. Funds may be released from the Bond, from time to time, (a) upon agreement of GMP and the beneficiaries based on damages to the beneficiaries' property because of high water caused by inadequate discharge capacity of the Dam as currently configured, as approved by the Board, or (b) as determined by an order from a court of competent jurisdiction.
4. GMP shall either accept the Agency of Natural Resource's ("ANR") proposed default minimum stream flows or, as agreed to at the hearing and in GMP's correspondence of

September 2, 2003, proceed with Instream Flow Incremental Methodology studies of the bypass and tailrace sections of Joe's Brook during the fall of 2003. Final results of these studies shall be provided to the Board and all parties before December 20, 2003.

5. GMP shall file, on or before February 1, 2004, a status report on the resolution of the determination of minimum stream flows with the ANR, and, if no resolution is imminent, the Board will schedule a hearing date and briefing schedule for parties to present their findings and recommendations to the Board in April of 2004.

6. If GMP and the ANR have not reached an agreement on minimum stream flows by February 1, 2004, GMP shall be required to implement interim minimum stream flows of 14 cfs (7 cfs in the bypass reach and 6-7 cfs in the stream below the powerhouse) at that time until such time as the Board issues an order containing permanent minimum stream flows for the project.

7. GMP shall investigate any alternative modifications to the Dam that would be proposed in the event that the required minimum stream flows render, in GMP's opinion, the hydroelectric facility uneconomic to continue operation. Such alternative modifications to the Dam shall be filed with the Board and all parties by May 1, 2004.

8. No later than October 10, 2003, GMP shall file with the Board and all parties proposed detailed plans for monitoring and operating the Dam to minimize flooding until the dam has been reconstructed. The proposed plans shall be subject to Board approval; any party may file comments on the proposed plans by October 24, 2003.

DATED at Montpelier, Vermont, this 9th day of September, 2003.

<u>s/Michael H. Dworkin</u>)	
)	PUBLIC SERVICE
)	
<u>s/David C. Coen</u>)	BOARD
)	
)	OF VERMONT
<u>s/John D. Burke</u>)	

OFFICE OF THE CLERK

FILED: September 9, 2003

ATTEST: s/Susan M. Hudson

Clerk of the Board

NOTICE TO READERS: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: Clerk@psb.state.vt.us)

Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Board within thirty days. Appeal will not stay the effect of this Order, absent further Order by this Board or appropriate action by the Supreme Court of Vermont. Motions for reconsideration or stay, if any, must be filed with the Clerk of the Board within ten days of the date of this decision and order.