GREEN MOUNTAIN POWER
Generating Possibilities Together

2152 Post Road
Rutland, VT 05701

July 13, 2015

Low Impact Hydropower Institute
PO Box 194
Harrington Park, New Jersey, 07640

Re: LIHI Application for Certification
Otter Creek Hydroelectric Project
FERC No. P-2558-VT

To Whom It May Concern:

As part of our application for Low Impact Hydropower Institute (LIHI) certification, I hereby attest the following:

The material presented in the application is true and complete. I acknowledge the Institute may suspend or revoke the certification should the impacts of the project cause non-compliance with the certification criteria.

I understand the primary goal of LIHI's certification program is public benefit. The Governing Board and its agents are not responsible for financial or other private consequences of its certification decisions. The undersigned Applicant agrees to hold LIHI, the Governing Board, and its agents harmless for any decision rendered on this or other applications or on any other action pursuant to the Low Impact Hydropower Institute's certification program.

Thank you, and please contact me at Michael.Scarzello@greenmountainpower.com or at 802-770-3244 with any questions.

Sincerely,

Michael Scarzello

LOW IMPACT HYDROPOWER INSTITUTE
APPENDIX B – QUESTIONNAIRE
APRIL 2014 REVISION

Background Information	
1) Name of the Facility as used in the FERC license/exemption.	Otter Creek Hydroelectric Project (FERC No. 2558)
2) Applicant's complete contact information (please use Appendix D, Project Contact Form)	Green Mountain Power Corporation 2152 Post Road Rutland, Vermont 05701 Please see Appendix A for the Project Contact Information Form.
3) Location of Facility including (a) the state in which Facility is located; (b) the river on which Facility is located; (c) the river-mile location of the Facility dam; (d) the river's drainage area in square miles at the Facility intake; (e) the location of other dams on the same river upstream and downstream of the Facility; and (f) the exact latitude and longitude of the Facility dam.	a) The Project includes three developments comprised of Proctor, Beldens, and Huntington Falls located within Addison and Rutland Counties and near the communities of Proctor, New Haven, and Weybridge, Vermont. b) The Project is located on Otter Creek. c) The Proctor Development is located at river mile (RM) 64.2, Beldens Development at RM 23, and Huntington Falls Development at RM 21. d) The Proctor Development has a 395 square mile drainage basin upstream of the dam, Beldens Development has drainage area of 632.5 square miles upstream of the dam, and Huntington Falls Development has a drainage area of 752 square miles upstream of the dam. e) Six additional dams operate on Otter Creek. Upstream of the Proctor Development the Emerald Lake Dam is located at RM 100, Ripley Mills Dam is located at RM 72, and the Center Rutland Project (FERC No. 2445) is located at RM 71. In between the Proctor and Beldens Developments, the Middlebury Lower Hydroelectric Project (FERC No. 2737) is located at RM 24. Downstream of the Huntington Falls Development, the Weybridge Dam (FERC No. 2731) is located at RM 19.5 and the Vergennes Project (FERC No. 2674) is located at RM 7.6. The Center Rutland Dam, Middlebury Lower Dam, Weybridge Dam, and Vergennes Dam are additionally owned and operated by Green Mountain Power Corporation.

	f) Proctor Dam: 43°39'44.97"N 73°02'01.37"W Beldens Dam: 44°03'07.48"N 73°10'37.85"W Huntington Falls Dam: 44°04'14.32"N 73°11'43.41"W Please see Appendix B for a Project location map.
4) Installed Capacity	The Project has an authorized installed capacity of 22.807 MW.
5) Average annual generation.	The Project's average annual generation output was 67,258 MWh from 1998 to 2008. However, the Proctor Development's power and hydraulic capacity was increased in 2015 as Units 2, 3, and 4 were replaced with new turbine-generators. In 2016/2017 GMP will additionally replace Units 1 and 2 at the Huntington Falls Development with new turbine-generators that will also increase capacity. With increases to overall Project capacity, it is anticipated that the total estimated annual generation at the Otter Creek Project will be increased to approximately 88,591 MWh/year (see Appendix C for email dated December 10, 2015).
6) Regulatory status.	The original license for the Otter Creek Hydroelectric Project (FERC No. 2558) was issued on February 23, 1976, with an effective date of April 1, 1962, and terminating December 31, 1993. On October 15, 1981 the Commission extended the license term by 18 years. The Project license expired on March 31, 2012 and the Licensee applied for annual licenses in 2012 and 2013. On October 23, 2014, the Otter Creek Hydroelectric Project was issued a new 40-year FERC License. A copy of the 2014 FERC License is included in Appendix D. On November 10, 2015 the FERC issued a letter requesting GMP to file a temporary license amendment for the Project to address interim bypass conservation flows at the Huntington Falls Development (Appendix D). GMP submitted to FERC an Application for Temporary Amendment of License on December 15, 2015 to address this interim flow.

	The Project has not experienced any compliance issues since relicensing.
7) Reservoir volume and surface area measured at the normal maximum operating level.	• Proctor Development impounds a reservoir with a surface area of 95 acres and a useable storage capacity of 274 acre-feet at normal maximum water surface elevation of 469.5 feet above mean sea level (msl). • Beldens Development impounds a reservoir with a surface area of 22 acres and a useable storage capacity of 253 acre-feet at a normal maximum water surface elevation of 283 feet msl. • Huntington Falls Development impounds a reservoir with a surface area of 23 acres with a storage capacity of 234 acre-feet at a normal maximum water surface elevation of 217.8 feet msl.
8) Area occupied by non-reservoir facilities (e.g., dam, penstocks, powerhouse).	The Project's primary features include three dams, five intake structures, five powerhouses, seven penstocks, three tailraces, and four bypassed reaches. The Project boundary occupied by primary Project features, not including reservoirs is 10.4 acres (5.4 acres Proctor Development; 2.0 acres Beldens Development; 3.0 acres Huntington Falls Development).
9) Number of acres inundated by the Facility.	At normal maximum surface elevation the Project has a total surface area of 140 acres (95 acres Proctor Development; 22 acres Beldens Development; 23 acres Huntington Falls Development).
10) Number of acres contained in a 200-foot zone extending around entire reservoir.	A total of approximately 900 acres are included within the 200 ft zone extending around the three Project impoundments (509 acres Proctor impoundment; 221 acres Beldens impoundment; 170 acres Huntington Falls impoundment).
11) Contacts for Resource Agencies and non-governmental organizations	Please find included in Appendix E, a list of contacts from the relevant resource agencies and non-governmental organizations that have been involved in proceedings involving the operations of the Project either during the relicensing process or thereafter.
12) Description of the Facility, its mode of operation (i.e., peaking/run	Please find included in Appendix F, a description of the Otter Creek Hydroelectric Project, its mode of operation, photographs. Project plans and maps are additionally included in Appendix F.

of river) and photographs, maps and diagrams.	
Questions for "New" Facilities Only: If the Facility you are applying for is "new" (i.e., an existing dam that added or increased power generation capacity after August of 1998) please answer the following questions to determine eligibility for the program.	
13) When was the dam associated with the Facility completed?	The original Proctor Dam construction was completed in 1905, Beldens Dam in 1913, and Huntington Falls Dam in 1910.
14) When did the added or increased generation first generate electricity? If the added or increased generation is not yet operational, please answer question 18 as well.	The 2014 FERC License approved generation capacity enhancements at both the Proctor Development and Huntington Falls Development. At Proctor Development, Units 2, 3, and 4 were replaced with new turbine-generators; the Unit 1 turbine runner was replaced and its generator was rewound/uprated in a project redevelopment that increased station nameplate capacity from 6,930 kW to 10,233 kW. This also increases the maximum hydraulic capacity from 325 cfs to 1,188 cfs. Proctor Units 2 - 4 were commissioned on May 14, 2015 and Unit 1 was commissioned on June 10, 2015. In 2016/2017 Green Mountain Power Corporation (GMP) will replace Units 1 and 2 of the Huntington Falls Development with new turbine-generators that will increase Project nameplate capacity from 5,500 kW to 6,725kW. This increases the maximum hydraulic capacity from 2,010 cfs to 2,250 cfs.
15) Did the added or increased power generation capacity require or include	No new dam or diversion structures were included in the capacity enhancements.

any new dam or other diversion structure?	
16) Did the added or increased capacity include or require a change in water flow through the facility that worsened conditions for fish, wildlife, or water quality (for example, did operations change from run-of-river to peaking)?	No. • ***Proctor Development –*** Though the added generation has increased hydraulic capacity from 325 cfs to 1,188 cfs, the Proctor Development continues to be operated in a modified run-of-river mode as required under the 2014 License. The previous license authorized the Proctor Development to periodically draw down the Proctor impoundment up to 4 ft, if such drawdowns were needed to perform maintenance activities or repairs, create additional reservoir storage in anticipation of high flows, or to supply additional water to the powerhouse to meet Independent System Operator (ISO)-New England or local power demands. On average, 4 ft drawdowns of the Proctor impoundment occurred infrequently (once or twice annually), while 1 ft drawdowns occurred more frequently (approximately 10 times annually). Typically, the average duration of these drawdowns was approximately 24 hours. Under the 2014 License, GMP has eliminated the existing 4 ft drawdown of the Proctor impoundment (except during infrequent emergency operations and maintenance activities) and limits peaking operations to a 1.5 ft drawdown/refill cycle subject to operational constraints. GMP operates the development in a true run-of-river mode from July 1 through April 30, when inflow is less than 200 cfs, and from May 1 through June 30, when inflow is less than 400 cfs, which coincides with the critical spawning months of many warmwater fish species present within Otter Creek, thereby ensuring stable reservoir levels and downstream flows during spawning activities. At all other times, GMP could operate the Proctor Development in a 1.5 ft drawdown/refill cycle (i.e., peaking mode). During peaking operations, GMP regulates powerhouse discharges and a minimum flow of 60 cfs to the bypassed reach to protect aquatic habitat within Otter Creek. The new peaking operations could result in a less substantial but more frequent peaking mode at the Proctor Development than under the previous license. Because the Proctor shoreline is forested with vegetated buffers, the impoundment is dominated by bedrock geology, and the

	1.5 ft peaking mode results in impoundment fluctuations that are within the range of the previous 4 ft reservoir drawdown line, the Project's Environmental Assessment published July 26, 2013 concluded that it is unlikely that new operations at the Proctor Development lead to any substantial increases in erosion (FERC 2013). ***Huntington Falls Development –*** Under the previous Project license, Huntington Falls Development operated in a run-of-river mode where a continuous flow of 15 cfs or inflow to the reservoir (whichever is less) was provided to the bypassed reach for the protection of aquatic resources. Under the 2014 License, Huntington Falls Development continues to be operated in a true run-of-river mode and an increased bypass conservation flow of 66 cfs was approved. Before the facility is able to provide a bypass flow of 66 cfs, physical modifications to the site are needed in order to provide increased flows. Modifications are planned for 2016/2017 and in the interim, a bypass conservation flow of 48 cfs is voluntarily released at all times from two locations at the dam. Although the Huntington Falls Development cannot efficiently release the required 66 cfs at this time, the Vermont DEC supports the interim flow as it responds to all of the Agency's recommendations (April 13, 2015 email included in Appendix G). Though the future installation of new turbine generator units at the Huntington Falls Development will increase the maximum hydraulic capacity from 2,010 cfs to 2,250 cfs, the Development will continue to be operated in a run-of-river mode to protect aquatic resources as required under the 2014 License. Additionally, the increased minimum flows to 66 cfs provided at the Development under the 2014 License have an overall net benefit to aquatic resources located in the vicinity of the project. • ***Beldens Development*** - The Beldens Development will continue to operate in run-of-river mode with a bypass conservation flow of 35 cfs, with 10 cfs spilled over the east dam and 25 cfs over the west dam. At this time no upgrades or modifications are planned for this development that would affect aquatic habitat or water quality.
17 (a) Was the existing dam recommended for removal or	During the relicensing process, none of the three operating facilities that make up the Otter Creek Hydroelectric Project were recommended for removal or decommissioning.

decommissioning by resource agencies, or recommended for removal or decommissioning by a broad representation of interested persons and organizations in the local and/or regional community prior to the added or increased capacity? (b) If you answered "yes" to question 17(a), the Facility is not eligible for certification, unless you can show that the added or increased capacity resulted in specific measures to improve fish, wildlife, or water quality protection at the existing dam. If such measures were a result, please explain.	
18 (a) If the added or increased generation is not yet operational, has the increased or added generation received regulatory authorization (e.g., approval by the Federal Energy Regulatory Commission)? If not, the	a) Yes, the increased generation plans for the Huntington Falls Development are authorized under the 2014 FERC License. b) There are no pending appeals or litigation regarding increased generation authorization at the Huntington Falls Development.

facility is not eligible for consideration; and (b) Are there any pending appeals or litigation regarding that authorization? If so, the facility is not eligible for consideration.	

A. Flows	PASS	FAIL
1) Is the Facility in Compliance with Resource Agency Recommendations issued after December 31, 1986 regarding flow conditions for fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations) for both the reach below the tailrace and all bypassed reaches?	Yes, the May 30, 2014 Water Quality Certificate issued by the Vermont Department of Environmental Conservation (Vermont DEC) and incorporated within the 2014 FERC License includes conditions for each of the Project's developments (Appendix D). • Condition B of the Water Quality Certificate prescribes the Proctor Development to operate in a modified run-of-river mode. When operating in run-of-river mode, the impoundment target elevation is 469.5 ft msl. GMP operates the development in a true run-of-river mode from July 1 through April 30, when inflow is less than 200 cfs, and from May 1 through June 30, when inflow is less than 400 cfs. At all other times, GMP operates the Proctor Development in a 1.5 ft drawdown/refill cycle (i.e., peaking mode). During peaking operations, the impoundment is operated between elevations 469.5 ft msl and 468.0 ft msl. A bypass conservation flow of 60 cfs is additionally released at the dam at all times. • Condition B of the Water Quality Certificate prescribes the Beldens Development to operate in a run-of-river mode with instantaneous inflows to the impoundment at all times. A bypass conservation flow of 35 cfs, with 10 cfs spilled over the east dam and 25 cfs over the west dam, is released at all times. The impoundment target elevation is 283.0 ft msl.	NO = Fail

	• Condition B of the Water Quality Certificate prescribes the Huntington Falls Development to operate in a run-of-river mode with instantaneous inflows to the impoundment at all times. Until final site improvements are completed, an interim bypass conservation flow of 48 cfs is voluntarily released at all times at two locations at the dam. Per FERC's November 10, 2015 letter recommending the need for a temporary amendment of Project license to address this interim flow release (Appendix D), GMP filed an Application for Temporary Amendment of License with the FERC on December 15, 2015. The interim flow of 48 cfs has been reviewed and approved by the Vermont DEC (April 13, 2015 email included in Appendix G). The impoundment target level is 217.8 ft msl. GMP has operated the Project in compliance with the terms of the 2014 Water Quality Certificate conditions. No non-compliance issues have been reported since the Water Quality Certificate was issued on May 30, 2014. Additionally, Project compliance is monitored and enforced with the implementation of a Flow Management and Monitoring Plan as recommended in Condition D of the Water Quality Certificate. The Project's Flow Management and Monitoring Plan (Appendix G) was submitted to the FERC on July 21, 2015 and is currently awaiting approval.	
2) If there is no flow condition recommended by any Resource Agency for the Facility, or if the recommendation was issued prior to January 1, 1987, is the Facility in Compliance with a flow release schedule, both below the tailrace and in all bypassed reaches, that at a minimum meets	N/A	

Aquatic Base Flow standards or "good" habitat flow standards calculated using the Montana-Tennant method?		
3) If the Facility is unable to meet the flow standards in A.2., has the Applicant demonstrated, and obtained a letter from the relevant Resource Agency confirming that demonstration, that the flow conditions at the Facility are appropriately protective of fish, wildlife, and water quality?	N/A	NO = Fail
B. Water Quality	PASS	FAIL

1) Is the Facility either: a) In Compliance with all conditions issued pursuant to a Clean Water Act Section 401 water quality certification issued for the Facility after December 31, 1986? Or b) In Compliance with the quantitative water quality standards established by the state that support designated uses pursuant to the federal Clean Water Act in the Facility area and in the downstream reach?	a) Yes, the Otter Creek Hydroelectric Project is in compliance with Section 401 of the Clean Water Act as it complies with the Vermont DEC Water Quality Certificate issued on May 30, 2014 (Appendix D). The Vermont DEC certifies that the operation and maintenance of the Otter Creek Hydroelectric Project will not cause a violation of Vermont Water Quality Standards and is in compliance with sections 301, 302, 303, 306, and 307 of the Federal Clean Water Act, 33 U.S.C. § 1251 et seq., as amended, and other appropriate requirements of state law. b) As identified by Vermont DEC, Otter Creek is classified as a Class B waterway (Vermont DEC 2014a). Class B waters are managed for high quality but may have minimal, minor, or moderate change to aquatic biota or habitat. Designated uses for Vermont Class B waters include: aquatic biota, wildlife and aquatic habitat; swimming and other primary contact recreation; boating, fishing, and other recreation uses; water supplies; agricultural uses. The Otter Creek Project operates in compliance with its 2014 Water Quality Certificate conditions which include requirements for maximum powerhouse discharges, run-of-river operation, target impoundment elevations, minimum flows, impoundment refill procedures, a flow management and water level plan, future upstream or downstream fish passage facilities if needed, a debris management plan, and a recreation plan.	NO = Fail

2) Is the Facility area or the downstream reach currently identified by the state as not meeting water quality standards (including narrative and numeric criteria and designated uses) pursuant to Section 303(d) of the Clean Water Act?	Yes, per the State of Vermont's 2014 List of Impaired Waters, three sections of Otter Creek have been identified as not meeting water quality standards pursuant to Section 303(d) of the Clean Water Act. Downstream of the Otter Creek Project in the Otter Creek – Lake Champlain section in Ferrisburgh, Otter Creek is classified as impaired due to elevated levels of PCBs in lake trout. In lower Otter Creek below the Vergennes Wastewater Treatment Facility and downstream of the Otter Creek Project, Otter Creek is classified as impaired because of E. Coli presence. The reach of Otter Creek in the vicinity of the Rutland Wastewater Treatment Facility and upstream of the Otter Creek Project is listed as impaired water because of E. Coli presence (Vermont DEC 2014b). Please see Appendix H for a list of applicable websites depicting water quality ratings.	
3) If the answer to question B.2 is yes, has there been a determination that the Facility does not cause, or contribute to, the violation?	Yes, the Otter Creek Hydroelectric Project does not contribute to the impaired waters occurring within Otter Creek. The Vermont DEC has concluded that the presence of E.Coli is caused by periodic and reoccurring overflows at wastewater treatment plant pump stations located in Vergennes and Rutland and the presence of PCBs in lake trout is caused by atmospheric deposition (Vermont DEC 2014b).	NO = Fail
C. Fish Passage and Protection	PASS	FAIL
1) Are anadromous and/or catadromous fish present in the Facility area or are they know to have been present historically?	No, natural populations of anadromous or catadromous fish have not historically occurred within Otter Creek.	
2) Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream and downstream passage of anadromous and	N/A	NO = Fail

catadromous fish issued by Resource Agencies after December 31, 1986?		
3) Are there historic records of anadromous and/or catadromous fish movement through the Facility area, but anadromous and/or catadromous fish do not presently move through the Facility area (e.g., because passage is blocked at a downstream dam or the fish no longer have a migratory run)? a) If the fish are extinct or extirpated from the Facility area or downstream reach, has the Applicant demonstrated that the extinction or extirpation was not due in whole or part to the Facility? b) If a Resource Agency Recommended adoption of upstream and/or downstream fish passage measures at a specific future date, or when a	N/A	NO = Fail NO = Fail

triggering event occurs (such as completion of passage through a downstream obstruction or the completion of a specified process), has the Facility owner/operator made a legally enforceable commitment to provide such passage?		
4) If, since December 31, 1986: a) Resource Agencies have had the opportunity to issue, and considered issuing, a Mandatory Fish Passage Prescription for upstream and/or downstream passage of anadromous or catadromous fish (including delayed installation as described in C.3.a above), and b) The Resource Agencies declined to issue a Mandatory Fish Passage Prescription,	N/A	YES = Fail

c) Was a reason for the Resource Agencies' declining to issue a Mandatory Fish Passage Prescription one of the following: (1) the technological infeasibility of passage, (2) the absence of habitat upstream of the Facility due at least in part to inundation by the Facility impoundment, or (3) the anadromous or catadromous fish are no longer present in the Facility area and/or downstream reach due in whole or part to the presence of the Facility?		
5) If C4 was not applicable: a) Are upstream and downstream fish passage survival rates for anadromous and catadromous fish at the dam each documented at greater than 95% over 80% of the run using a generally accepted monitoring methodology? Or	N/A	NO = Fail

b) If the Facility is unable to meet the fish passage standards in 5.a, has the Applicant either i) demonstrated, and obtained a letter from the U.S. Fish and Wildlife Service or National Marine Fisheries Service confirming that demonstration, that the upstream and downstream fish passage measures (if any) at the Facility are appropriately protective of the fishery resource, or ii) committed to the provision of fish passage measures in the future and obtained a letter from the U.S. Fish and Wildlife Service or the National Marine Fisheries Service indicating that passage measures are not currently warranted?		
6) Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream and/or downstream passage of Riverine fish?	N/A, no fishway prescriptions or reservations of authority were filed under Section 18 of the FPA in the 2014 License. However, Vermont DEC's Water Quality Certificate Condition E *Fish Passage* requires the Licensee to provide upstream or downstream fish passage facilities in the event that the status of Otter Creek fish populations or fishery management objectives change. A copy of Vermont DEC's certification is included in Appendix D.	NO = Fail

7) Is the Facility in Compliance with Resource Agency Recommendations for Riverine, anadromous and catadromous fish entrainment protection, such as tailrace barriers?	Yes, the Otter Creek Project is in compliance with resource agency recommendations for fish entrainment protection. Project structures are designed to discourage fish entrainment. The intake at the Proctor Development is equipped with a 57 ft-wide by 13.5 ft-high full-depth trashrack situated at a 45 degree angle to river flow with 1-inch clear spacing. There are two sets of trashracks at the Beldens Development: one approximately 40 ft-long and 13-ft high with vertical bars (3-inch clear spacing); the other trashrack is approximately 26 ft-wide by 13 ft-high with vertical bars with 1 1/8-inch clear opening. The Huntington Falls Development currently has two intakes and two sets of trashracks. The first trashrack is approximately 30 ft-wide and 16 ft-high with 2-inch clear spaced bars positioned 45 degrees to river flow. The second trashrack structure is approximately 26 ft-wide and 13 ft-high with 1 1/8-inch clear spaced bars. As approved within the 2014 License Article 403 *Trashrack Design* (Appendix D), the Licensee will replace the existing trashracks at the Huntington Falls Development with trashracks containing a 2-inch clear bar spacing, a maximum approach velocity of 2 ft per second, and an orientation parallel to river flow. FERC staff has concluded that the new trashracks will adequately protect fish from entrainment and impingement at the Huntington Falls Development. This Project modification is scheduled for 2016/2017.	NO = Fail
D. Watershed Protection	PASS	FAIL
1) Is there a buffer zone dedicated for conservation purposes (to protect fish and wildlife habitat, water quality, aesthetics and/or low-impact recreation) extending 200 feet from the average annual high water line for at least 50% of the shoreline, including	No	

all of the undeveloped shoreline?		
2) Has the Facility owner/operator established an approved watershed enhancement fund that: 1) could achieve within the project's watershed the ecological and recreational equivalent of land protection in D.1,and 2) has the agreement of appropriate stakeholders and state and federal resource agencies?	No	
3) Has the Facility owner/operator established through a settlement agreement with appropriate stakeholders, with state and federal resource agencies agreement, an appropriate shoreland buffer or equivalent watershed land protection plan for conservation purposes (to protect fish and wildlife habitat, water quality, aesthetics and/or low impact recreation)?	No shoreland buffer or watershed land protection plans have been established through settlement agreements with stakeholders for the Otter Creek Hydroelectric Project.	

4) Is the facility in compliance with both state and federal resource agencies recommendations in a license approved shoreland management plan regarding protection, mitigation or enhancement of shorelands surrounding the project?	N/A – A shoreland management plan was never recommended for the Otter Creek Hydroelectric Project. Please refer to the 2014 License included in Appendix D. For construction purposes, this Project is in compliance with the 2014 License Article 404 *Terrestrial Monitoring and Management Plan*. The purpose of this plan is to re-vegetate areas disturbed by construction activities authorized by the License, prevent the spread of invasive plants, and protect federally-protected wildlife species and their representative habitats within the Project area. In FERC Order dated February 5, 2015 (Appendix I), the Commission granted a waiver of Article 404's requirement to file a terrestrial monitoring and management plan for the approved redevelopment of the Proctor Development. The Licensee was working on the redevelopment of the Proctor Development prior to the issuance of the 2014 Project License (under May 10, 2012 Order Amending License and the June 20, 2013 Order Amending License and Revising Annual Charges). The Licensee consulted with the Vermont DEC and the U.S. Fish and Wildlife Service (USFWS) to evaluate potential terrestrial resource issues associated with the Proctor redevelopment. By emails dated January 5, 2015 (see Attachment D of the January 9, 2015 letter included in Appendix I), the USFWS and Vermont DEC agreed that the consultation for the Proctor redevelopment conducted prior to the issuance of the 2014 Project License was sufficient to address Article 404 requirements. Pursuant to Article 404, though, the Licensee will develop a Terrestrial Monitoring and Maintenance Plan prior to the commencement of any future improvements that may occur at the Beldens Development and Huntington Falls Development.	No = Fail
E. Threatened and Endangered Species Protection	PASS	FAIL
1) Are threatened or endangered species listed under state or federal Endangered Species Acts	Yes, there are four state-listed freshwater mussel species known to occur in the Project vicinity (FERC 2013). Three species are classified as state endangered species: fluted-shell (*Lasmigona costata*), pink heelsplitter (*Potamilus alatus*), black	

present in the Facility area and/or downstream reach?	sandshell (*Ligumia recta*). One species is classified as a state threatened species: giant floater (*Pyganodon grandis*) (VTFWD 2008) (Appendix J). The fluted-shell and the giant floater are reported in the Project vicinity between Weybridge and Middlebury, and thus may occur in the Project area of the Beldens Development and Huntington Falls Development (Fichtel and Smith, 1995, Steve Fiske, Aquatic Biologist, VTDEC, December 21, 2006). Black sandshell mussels and pink heelsplitters are reported for Otter Creek, but only in the lower watershed, below the first set of barrier falls and have not been reported in the vicinity of the Project (Fichtel and Smith, 1995). A federally endangered species, the Indiana bat (*Myotis sodalis*), and a federally threatened species, the northern long-eared bat (*Myotis septentrionalis*), may occur within the Project vicinity (Appendix J). Indiana bats were not observed at the Project during rare, threatened, and endangered species surveys conducted by Vermont Marble Power Division of Omya, Inc (VMPD) in 2008, but suitable floodplain and upland forest habitat, attractive to the Indiana bat, occurs adjacent to Otter Creek (VMPD 2009). The recently listed northern long-eared bat has not been observed within the Project vicinity. Though there is the possibility that both bat species may feed within the Project boundary, the boundary does not contain critical habitat for either species (Appendix J). The continued operation of the Project is not anticipated to negatively affect Indiana or northern long-eared bats that may utilize the area.	
2) If a recovery plan has been adopted for the threatened or endangered species pursuant to Section 4(f) of the Endangered Species Act or similar state provision, is the Facility in Compliance with all	In 2007 the "Indiana Bat (*Myotis sodalist*) Draft Recovery Plan: First Revision" was developed by the USFWS (USFWS 2007). To reclassify the Indiana bat to threatened status, the Plan outlines the following objectives: • Permanent protection of 80 percent of Priority 1 hibernacula; • A minimum overall population number equal to the 2005 estimate (457,000);	NO = Fail

recommendations in the plan relevant to the Facility?	• Documentation of a positive population growth rate over five sequential survey periods. The Project operates as a modified run-of-river facility and provides adequate conditions for any bats that may utilize the area for feeding purposes. The Project area does not have any classified critical habitat for the Indiana bat. GMP is in compliance with the current goals for the strategic plan and will continue to comply with resource agency recommendations.	
3) If the Facility has received authorization to incidentally Take a listed species through: (i) Having a relevant agency complete consultation pursuant to ESA Section 7 resulting in a biological opinion, a habitat recovery plan, and/or (if needed) an incidental Take statement; (ii) Obtaining an incidental Take permit pursuant to ESA Section 10; or (iii) For species listed by a state and not by the federal government, obtaining authorization pursuant to similar state procedures; is the Facility in Compliance with conditions pursuant to that authorization?	N/A	NO = Fail
4) If a biological opinion applicable to the	N/A	NO = Fail

Facility for the threatened or endangered species has been issued, can the Applicant demonstrate that: a) The biological opinion was accompanied by a FERC license or exemption or a habitat conservation plan? Or b) The biological opinion was issued pursuant to or consistent with a recovery plan for the endangered or threatened species? Or c) There is no recovery plan for the threatened or endangered species under active development by the relevant Resource Agency? Or d) The recovery plan under active development will have no material effect on the Facility's operations?		

5) If E.2 and E.3 are not applicable, has the Applicant demonstrated that the Facility and Facility operations do not negatively affect listed species?	Yes, the Project area and operations do not negatively affect federally listed or state listed endangered and threatened species. There is potential for temporary indirect effects due to planned future construction activities at the Huntington Falls Development. This will likely include noise and activity disturbance that may affect wildlife species sensitive to such disturbance. However, even if sensitive species are in the project areas during construction activities, any effects will be minimal and temporary. Per License Article 404 a Terrestrial Monitoring and Management Plan will be set in place prior to the start of construction in order to protect federally protected wildlife species and their respective wildlife habitats within the Project area as well as re-vegetate disturbed areas and prevent the spread of invasive plants. In the 2013 EA, FERC staff determined that with its recommended measures of the Terrestrial Monitoring and Management Plan, relicensing the Project is not likely to adversely affect federally listed species or their habitats. Given the modified run-of-river nature of Project operation, normal Project operations have minimal effects on local habitat of state-listed mussels. Under License Article 401 and Water Quality Certificate Condition D, the minimal effects of the modified run-of-river operation will be enforced with a Flow Management and Monitoring Plan. The Flow Management and Monitoring Plan (Appendix G) was submitted to the FERC on July 21, 2015 and is currently awaiting approval. Planned construction activities do have the potential to temporarily affect water quality. However, construction effects will be mitigated through the implementation of erosion and sediment control measures.	NO = Fail
F. Cultural Resource Protection	PASS	FAIL
1) If FERC-regulated, is the Facility in Compliance with all requirements regarding	Yes, per License Article 406 *Programmatic Agreement and Historic Properties Management Plan*, GMP implements the "Programmatic Agreement Between the Federal Energy Regulatory Commission and the Vermont State Historic	NO = Fail

Cultural Resource protection, mitigation or enhancement included in the FERC license or exemption?	Preservation Officer for Managing Historic Properties that May be Affected by Issuance of a License to Green Mountain Power Corporation for the Continued Operation of the Otter Creek Hydroelectric Project in Addison and Rutland Counties, Vermont" executed on December 30, 2013, which includes the Historic Properties Management Plan for the Project (Appendix K).	
2) If not FERC-regulated, does the Facility owner/operator have in place (and is in Compliance with) a plan for the protection, mitigation or enhancement of impacts to Cultural Resources approved by the relevant state or federal agency or Native American Tribe, or a letter from a senior officer of the relevant agency or Tribe that no plan is needed because Cultural Resources are not negatively affected by the Facility?	N/A	NO = Fail
G. Recreation	PASS	FAIL
1) If FERC-regulated, is the Facility in Compliance with the recreational access, accommodation (including recreational flow releases)	Yes, the Otter Creek Hydroelectric Project is in compliance with the 2014 FERC License Article 405 *Recreation Plan* and Water Quality Certificate Condition H *Recreational Facilities*.	NO = Fail

and facilities conditions in its FERC license or exemption?	The recreational facilities currently associated with the Otter Creek Hydroelectric Project primarily provide shoreline angling access, canoe and kayak access, parking and picnic facilities, and opportunities for sightseeing at all three developments. Six sites provide water access (generally the ingress and egress of canoe portages around the project dams), while two are exclusively used for picnicking. Each development provides parking and formal sites also have support facilities such as signage. • The Proctor Development has no formal public recreation facilities affiliated with it. The impoundment can be accessed informally at the St. Dominic's Catholic Church parking lot, which serves as the egress for hand-carry, non-motorized watercraft. Access to the Proctor tailrace is available via an unpaved road adjacent to the former Proctor town wastewater treatment facility site. Sutherland Falls, which is the Proctor bypassed reach, can be viewed from the downstream access area. The downstream access area also provides opportunities for shoreline angling and hand-carry access for non-motorized watercraft. The top of Sutherland Falls and Proctor dam are visible from behind the parking area that serves the Marble Museum. There also is a park/picnic area adjacent to the entrance to the Marble Museum that is unrelated to the development. • The Beldens Development offers formal public recreation opportunities for boating, angling, picnicking, hiking, biking, and sightseeing. Downstream of the dam, GMP provides a portage trail, put-in, and viewing platform, which provides access to the tailrace and Otter Creek Gorge, and offers views of Otter Creek, the Project works, and the bypassed reach. The site provides a staircase and wooden platform for sightseeing and a trail for downstream hand-carry boating and shoreline angling access. The portage trail launch is placed just above the boat barrier. A trail around Middlebury traverses the impoundment across the Don and Peggy Arnold Swinging Bridge from the Otter Creek Gorge Preserve, which connects to the island separating the two sections of Beldens Dam. The bridge offers trail connection and views of the impoundment, Beldens Dam, the Project works, bypassed reach, and	

	tailrace. Hiking and biking trails criss-cross the two sections of the Otter Creek Gorge Preserve on both sides of the project impoundment and are accessible from a parking area adjacent to the Beldens development. The Beldens development additionally has a picnic area which provides grills and concrete picnic tables that are ADA compliant. The picnic area provides parking for approximately 6 vehicles. • The Huntington Falls Development provides both formal and informal public access opportunities for boating, angling, and picnicking. The Huntington Falls impoundment access is a canoe take-out located upstream of the Morgan Horse Farm Road adjacent to the bridge. This informal site provides a small trail/hand-carry boat launch path to the impoundment and informal road-side parking. This site serves as the egress for the canoe portage trail which wraps around the project facilities providing access to the tailrace. The trail follows the dam access road and terminates at a hand carry launch just downstream of the powerhouse. Shoreline angling is also available at the downstream access. The Huntington Falls Development also includes an overlook/picnic area. The picnic area provides several concrete picnic tables and parking for approximately three vehicles. Maps depicting the current location of Project recreation sites are included within Appendix L. Per License Article 405 and Water Quality Certificate Condition H (Appendix D) GMP is currently developing a Recreation Plan that will be submitted to the Commission on February 20, 2015. The plan will describe the following recreation improvements/additions: 1) installation of a gravel parking area for two to three vehicles at the Proctor Development's tailwater access site; 2) installation of directional signage at the Proctor and Beldens developments; 3) installation of interpretative signage at the Proctor Development's tailrace access area.	
2) If not FERC-regulated, does the Facility	N/A	NO = Fail

provide recreational access, accommodation (including recreational flow releases) and facilities, as Recommended by Resource Agencies or other agencies responsible for recreation?		
3) Does the Facility allow access to the reservoir and downstream reaches without fees or charges?	Yes, the Otter Creek Hydroelectric Project provides free access to the reservoirs and downstream reaches. All Project recreation sites are free to the public. An in-depth description of the available water access provided by the Project is included in G-1 above.	NO = Fail
H. Facilities Recommended for Removal	PASS	FAIL
1) Is there a Resource Agency Recommendation for removal of the dam associated with the Facility?	No, the Project is operating under a 2014 FERC License and has not been recommended for removal.	YES = Fail

REFERENCES

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Vermont Fish and Wildlife Department (VTFWD). 2008. Rare and Uncommon Animals of Vermont - Nongame and Natural Heritage Program. February 3, 2008. [Online] URL: http://www.vtfishandwildlife.com/library/Reports_and_Documents/NonGame_and_Natural_Heritage/Rare_Threatened_and_Endangered_Species%20%20---%20lists/Rare_and_Uncommon_Animals_of_Vermont.pdf [Accessed March 5, 2010].

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APPENDIX A

PROJECT CONTACT INFORMATION FORM

PROJECT CONTACT FORM

Project Name: **Otter Creek Hydroelectric Project** FERC No. **P-2558**

Project Owner/Operator:

Name and Title **Josh Castonguay, Director, Generation and Renewable Innovation**

Company **Green Mountain Power Corporation**

Phone **(802) 655-8754**

Email address **Josh.Castonguay@greenmountainpower.com**

Please include this email address in LIHI e-newsletter distribution _____

Mailing Address **163 Acorn Lane, Colchester, Vermont 05446**

Consulting firm that manages LIHI program participation (if applicable):

Name **Andrew Qua, Senior Regulatory Coordinator**

Company **Kleinschmidt Associates+**

Phone **(207) 416-1246**

Email address **Andy.Qua@KleinschmidtGroup.com**

Please include this email address in LIHI e-newsletter distribution _____

Mailing Address **P.O. Box 650, 141 Main Street, Pittsfield, Maine 04967**

Party responsible for compliance with LIHI certification requirements:

Name and Title **Mike Scarzello, Compliance Manager**

Phone **(802) 770-3244**

Email address **Michael.Scarzello@greenmountainpower.com**

Please include this email address in LIHI e-newsletter distribution _____

Mailing Address **2152 Post Road, Rutland, Vermont 05701**

Party responsible for accounts payable:

Name and Title **Jason Lisai, Generation Manager**

Phone **(802) 655-872**

Email address **FIP@greenmountainpower.com; lisai@greenmountainpower.com**

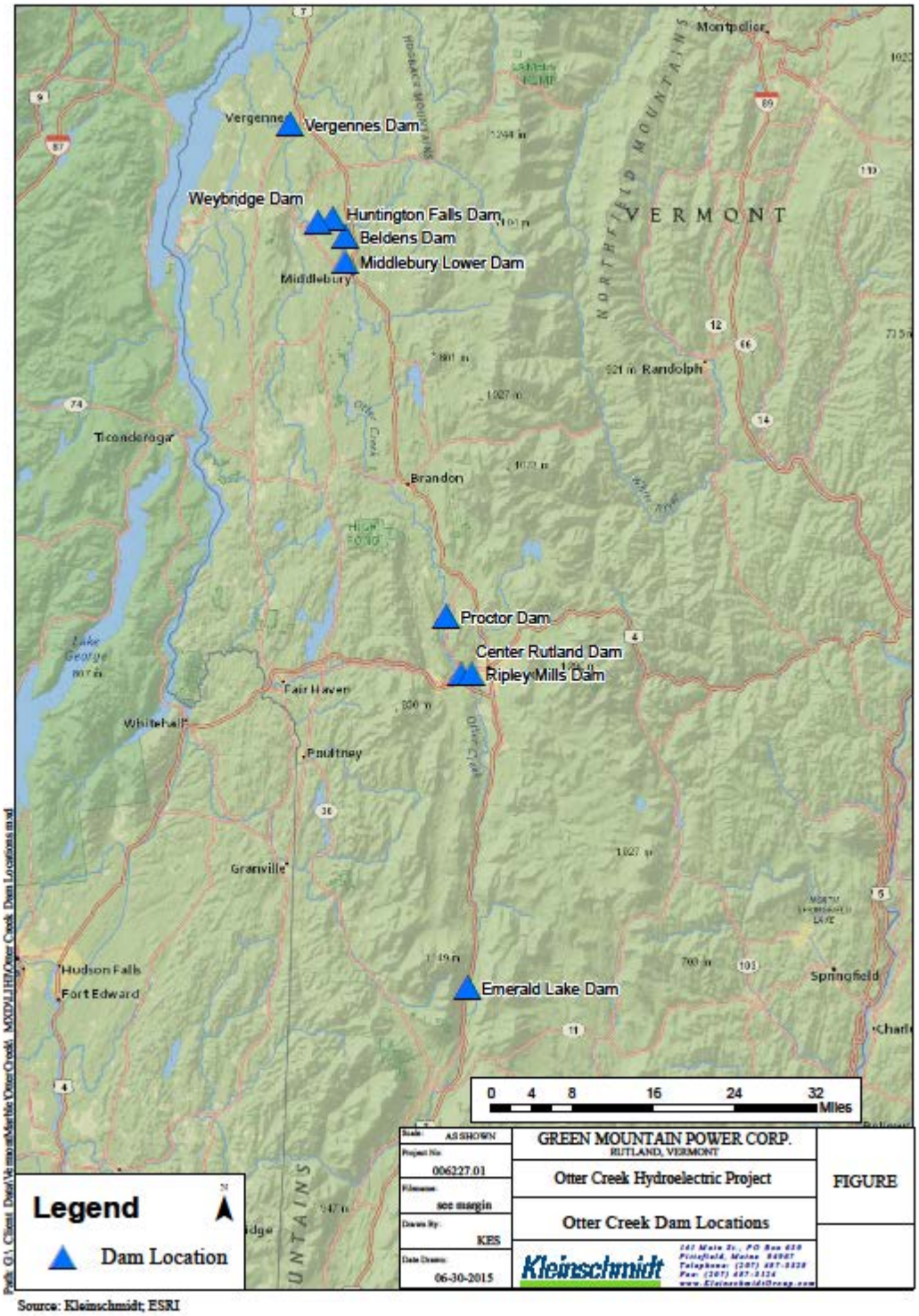
Mailing Address **Accounts Payable Processor, 2152 Post Road, Rutland, Vermont, 05701**

_____ 7/14/15

Project Owner/Operator Signature Date

APPENDIX B

PROJECT LOCATION MAP


Vergennes Dam
Weybridge Dam
Huntington Falls Dam
Beldens Dam
Middlebury Lower Dam
Middlebury
Montpelier
VERMONT
Randolph
Ticonderoga
Brandon
Proctor Dam
Center Rutland Dam
Ripley Mills Dam
Fair Haven
Whitehall
Poultney
Granville
Hudson Falls
Fort Edward
Emerald Lake Dam
Springfield
0 4 8 16 24 32 Miles
Legend
Dam Location
GREEN MOUNTAIN POWER CORP.
RUTLAND, VERMONT
Otter Creek Hydroelectric Project
Otter Creek Dam Locations
FIGURE
AS SHOWN
006227.01
see margin
KES
06-30-2015
Kleinschmidt
Source: Kleinschmidt; ESRI

APPENDIX C

ESTIMATED ANNUAL GENERATION

From:	Scarzello, Michael
To:	Andy Qua
Cc:	Katie Sellers
Subject:	RE: Otter Creek LIHI Certification Information
Date:	Thursday, December 10, 2015 12:54:08 PM

Confirmed, thanks mjs.

From: Andy Qua [mailto:Andy.Qua@KleinschmidtGroup.com]
Sent: Wednesday, December 09, 2015 3:39 PM
To: Scarzello, Michael
Cc: Katie Sellers
Subject: Otter Creek LIHI Certification Information

Hi Mike –

As discussed, one of the information requests from the LIHI intake review is states the expected total average annual generation output anticipated for the Otter Creek Project after construction at the Huntington Falls Development is completed.

Based on the FERC approval for Production Tax Credit certification (Order issued by FERC on 8/13/2015), the redeveloped Proctor site has an estimated annual generation of 39,390 MWH.

Based on the FERC approval for Production Tax Credit certification (Order issued by FERC on 8/13/2015), the Beldens site has an estimated annual generation of 23,701 MWH.

Based on unit specifications provided by the vender for two new Norcan/TES Units 1 & 2 (1,314 KW each) and the existing Unit 2 (4,100 KW), the preliminary estimate of annual generation is 25,500 MWH.

That results in a total Project estimated annual generation of 88,591 MWH.

If you can confirm these values, we will incorporate into the final LIHI application package and note that the Huntington Falls value may need to be adjusted post-construction.

Thank you,
Andy

Andrew D. Qua
Regulatory Team Leader
Kleinschmidt
Office: 207.416.1246
www.KleinschmidtGroup.com

APPENDIX D

2014 FERC LICENSE & AMENDMENT REQUEST

149 FERC ¶ 62,048
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Green Mountain Power Corporation Project No. 2558-029

ORDER ISSUING NEW LICENSE

(Issued October 23, 2014)

INTRODUCTION

1. On March 31, 2010, Vermont Marble Power, Division of Omya, Inc. (Vermont Marble) filed, pursuant to sections 4(e) and 15 of the Federal Power Act (FPA),[1] an application for a new license to continue operation and maintenance of the Otter Creek Hydroelectric Project No. 2558 (Otter Creek Project or project). On November 23, 2010, the Commission issued an order approving the transfer of the license and substitution of applicant for the project from Vermont Marble to Central Vermont Public Service Corporation (Central Vermont).[2] On September 13, 2012, the Commission issued an order approving the transfer of the license and substitution of applicant for the project from Central Vermont to Green Mountain Power Corporation (Green Mountain).[3] Because transferees step into the shoes of the prior licensee, the filings of the previous licensees are referred to as filings by the licensee or Green Mountain.

2. The project has three developments located on Otter Creek in Addison and Rutland counties, Vermont. The project does not occupy federal land.[4]

3. As discussed below, this order issues a new license to Green Mountain for the Otter Creek Project. As previously licensed, the project's authorized installed capacity

[1] 16 U.S.C. §§ 797(e) and 808 (2012).

[2] 133 FERC ¶ 62,171 (2010).

[3] 140 FERC ¶ 62,191 (2012).

[4] The three project developments are located on Otter Creek at river miles 64.2, 23, and 21, which is within a stretch of Otter Creek that the Commission found to be a navigable waterway of the United States. *See Vermont Marble Company*, 34 F.P.C. 541 (1965). Therefore, the project is required to be licensed pursuant to section 23(b) of the FPA. *See* 16 U.S.C. § 817 (2012).

was 14.349 megawatts (MW). The project's installed capacity authorized under this new license is 22.807 MW.

BACKGROUND

4. The Commission issued the original license for the project on February 23, 1976, with an effective date of April 1, 1962, and terminating December 31, 1993.[5] On October 15, 1981, the Commission extended the license term by 18 years.[6] The license for the project expired on March 31, 2012, and since then, the project has operated under annual licenses pending the disposition of the new license application.[7]

5. On May 2, 2011, the Commission issued a public notice that was published in the *Federal Register* accepting the relicense application for filing, soliciting motions to intervene and protests, indicating the application was ready for environmental analysis, and soliciting comments, recommendations, preliminary terms and conditions, and preliminary fishway prescriptions.[8] The notice set August 30, 2011, as the deadline for filing motions to intervene, protests, comments, recommendation, terms and conditions, and prescriptions. The Vermont Agency of Natural Resources (Vermont ANR) filed a timely motion to intervene.[9] Vermont ANR does not oppose the project.

6. On August 1, 2011, the licensee amended the pending relicense application, proposing physical improvements and operational changes to the project. The proposed changes included, among other things, realignment of the intake at the Proctor

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[5] *See Vermont Marble Company*, 55 F.P.C 762 (1976). Pursuant to Commission policy, the license was backdated to 1962, because the project was operating but unlicensed, and backdating the license allowed the Commission to recoup a portion of the annual charges that the licensee should have been paying during the time that the project was not, but should have been, licensed.

[6] 17 FERC ¶ 62,044 (1981).

[7] 16 U.S.C. § 808(a)1 (2012).

[8] 76 *Fed. Reg*. 26280 (May 6, 2011).

[9] Timely, unopposed motions to intervene are granted by operation of Rule 214(c)(1) of the Commission's Rules of Practice and Procedure. 18 C.F.R. § 385.214(c)(2014).

Development and removal of inoperable generating equipment from the Proctor powerhouse.[10]

7. On May 14, 2012, the Commission issued a public notice of the amended relicense application that was published in the *Federal Register* soliciting motions to intervene and protests, indicating the application was ready for environmental analysis, and soliciting comments, recommendations, preliminary terms and conditions, and preliminary fishway prescriptions.[11] No comments or motions to intervene were filed.

8. Rather than waiting for authorization under a relicense, in March 2013, Green Mountain asked for authorization under its annual license to undertake some of the work it had proposed in its August 2011 amendment application, including the realignment of the intake at the Proctor Development and removal of inoperable generating equipment from the Proctor powerhouse. On June 20, 2013, Commission staff issued an order approving Green Mountain's request.[12]

9. A draft Environmental Assessment (EA) was prepared by Commission staff and issued on December 21, 2012, analyzing the impacts of the proposed project and alternatives to it. Vermont ANR, Green Mountain, and the Vermont State Historic Preservation Officer (Vermont SHPO) filed comments on the draft EA. On July 26, 2013, Commission staff issued a final EA, on which no comments were filed. References and citations in this order are to the final EA, unless otherwise noted.

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[10] The August 2011 application included a proposal to construct a permanent access bridge at the Proctor Development to improve station access for operation, maintenance, repair, and safety. In April 2012, the licensee asked for authorization to construct the bridge under its annual license, which Commission staff approved on May 10, 2012. 139 FERC ¶ 62,113 (2012). The bridge was completed in 2012.

[11] 77 *Fed. Reg.* 29625 (May 18, 2012).

[12] 143 FERC ¶ 62,207 (2013). The order authorized: (1) the removal of inoperable generating equipment from the Proctor powerhouse, including the unit 1 runner (1,680 kilowatts (kW)), generating units 2 through 4 (750 kW each), and associated control and electrical equipment; (2) the widening, deepening, and smoothing of the forebay; (3) demolition of the existing headgates and southern retaining wall; (4) demolition and reorientation of the eastern training wall; (5) construction of a new wall on the west side at the trashrack; (6) demolition and reorientation of the trashrack (the existing 1-inch clear bar spacing would be retained); (7) a new minimum flow structure and sluice gate; and (8) provisions for a future fish passage gate.

10. The intervention and comments have been fully considered in determining whether, and under what conditions, to issue this license.

PROJECT DESCRIPTION AND OPERATION

A. Project Area

11. The Otter Creek Project is located on Otter Creek in west-central Vermont within Addison and Rutland counties, near the communities of Proctor, New Haven, and Weybridge. Otter Creek is approximately 100 miles long and flows northeasterly from the headwaters of Emerald Lake to its confluence with Lake Champlain. The Otter Creek watershed drains an area of 1,106 square miles and is located in the Champlain Valley, which is a sub-unit of the larger Lake Champlain Basin.

B. Project Facilities

12. The Otter Creek Project consists of three developments: Proctor, Beldens, and Huntington Falls (listed from upstream to downstream). The hydroelectric facilities at each development were developed in the early twentieth century to provide power to the marble mills in Proctor, Middlebury, and Weybridge, Vermont. 1 In the early twentieth century, the Vermont Marble Company expanded production capacity and converted from hydro-mechanical power to hydroelectric generation at each of the three project developments.

Proctor Development

13. The Proctor Development consists of a 128-foot-long, 13-foot-high masonry, concrete-capped dam with a 3-foot-high inflatable flashboard system. The dam is located at river mile (RM) 64.2 and impounds a reservoir with a surface area of 95 acres and a usable storage capacity of 275 acre-feet at a normal maximum water surface elevation of 469.5 feet above mean sea level (msl).

14. Inflow from the reservoir passes through a 17-foot-deep by 45-foot-wide by 115-foot-long gated forebay-intake structure that contains trashracks with 1-inch clear bar spacing. Two steel penstocks convey water from the forebay to the powerhouse: (1) a 9-foot-diameter penstock that extends 354 feet from the dam to a surge tank and continues as an 8-foot-diameter penstock for an additional 96 feet from the surge tank to the powerhouse; and (2) a 7-foot-diameter, 500-foot-long penstock that extends directly from the dam to the powerhouse. The 33-foot by 100-foot concrete masonry powerhouse has an attached 28-foot by 48-foot steel structure that contains one vertical Francis turbine-

generator unit with an authorized capacity of 3,000 kilowatts (kW). The Proctor Development also includes a 1,200-foot-long access road and a 265-foot-long access bridge that is used to access the powerhouse.

15. The Proctor Development creates a 680-foot-long bypassed reach (i.e., Sutherland Falls), which drops approximately 100 feet in elevation from the base of the Proctor dam to the tailrace. There are no project recreation facilities at this development; however, there are two informal recreation sites that provide access to the Proctor impoundment and tailrace. The informal impoundment access site, which can be accessed via the Main Street Marble Bridge located less than one mile upstream of the Proctor dam provides opportunities for bank fishing, an access site for canoes and kayaks, and a pull-off that can accommodate two vehicles. The informal tailrace access site, which is accessible via the Proctor Development's access road, provides opportunities for bank fishing, an access site for canoes and kayaks, sightseeing opportunities (of Sutherland Falls and the powerhouse), and an informal pull-off area that can accommodate two vehicles.

Beldens Development

16. The Beldens Development consists of a concrete dam with 2.5-foot-high wooden flashboards. The dam comprises two sections on either side of a bedrock island: a 15-foot-high, 56-foot-long section on the west side (Beldens west dam) and a 24-foot-high, 57-foot-long section on the east side (Beldens east dam). The dam is located at RM 23 and impounds a reservoir with a surface area of 22 acres and a usable storage capacity of 253 acre-feet at a normal maximum water surface elevation of 283 feet msl.

17. Inflow from the reservoir passes through two intakes: (1) a 20-foot-high by 35 foot-wide intake with 13-foot-high by 26-foot-wide trashracks with bar spacing of 1.125 inches on center; and (2) a 34.5-foot-high by 40-foot-wide intake with 13-foot-high by 40-foot-wide trashracks with 3-inch clear bar spacing. Water is conveyed to the powerhouses through two penstocks: (1) a 12-foot-diameter steel penstock that bifurcates into two 10 foot-diameter, 30 foot-long sections, each leading to a 40-foot by 44-foot concrete and masonry powerhouse containing two horizontal Francis turbine-generator units with a combined authorized capacity of 1,749 kW; and (2) a 12-foot-diameter, 45-foot-long concrete penstock that leads to a 40-foot by 75-foot concrete powerhouse containing one horizontal Kaplan turbine-generator unit with an authorized capacity of 4,100 kW.

18. The Beldens Development has two separate bypassed reaches: (1) a 150-foot-long bypassed reach extending from the base of the Beldens east dam to the tailrace;[13] and

[13] The bypassed reach below the Beldens east dam contains an area known as

(2) a 450-foot-long bypassed reach extending from the base of the Beldens west dam to the tailrace. Existing project recreation facilities at this development include a: (1) canoe/kayak put-in and take-out; (2) canoe/kayak portage; (3) viewing platform; and (4) picnic area.

Huntington Falls Development

19. The Huntington Falls Development consists of a 31-foot-high, 187-foot-long concrete dam with a 2.5-foot-high inflatable flashboard system. The dam is located at RM 21 and impounds a reservoir with a surface area of 23 acres with a storage capacity of 234 acre-feet at a normal maximum water surface elevation of 217.8 feet msl.

20. Inflow from the reservoir passes through two intakes, including: (1) a 20-foot-high by 40-foot-wide intake with 13-foot-high by 26-foot-wide trashracks with bar spacing of 1.125 inches on center; and (2) a 38-foot-high by 40-foot-wide intake with 16-foot-high by 30-foot-wide trashracks with 2-inch clear bar spacing. Water is conveyed to the powerhouses through three penstocks: (1) two, 10-foot-diameter, 30-foot-long steel penstocks that lead to a 42-foot by 60-foot concrete and masonry powerhouse containing two horizontal Francis turbine-generator units with a combined authorized capacity of 1,400 kW; and (2) a 12-foot-diameter, 75-foot-long concrete penstock that leads to a 40-foot by 75-foot concrete powerhouse containing one horizontal Kaplan turbine-generator unit with an authorized capacity of 4,100 kW.

21. The Huntington Falls Development creates a 215-foot-long bypassed reach. Existing project recreation facilities at this development include a: (1) canoe/kayak put-in and take-out; (2) canoe/kayak portage; and (3) picnic/overlook area.

22. A more detailed project description is contained in Ordering Paragraph (B)(2).

C. Project Boundary

23. The existing project boundary for the Proctor Development encompasses the Proctor impoundment, following the floodplain contour elevation of 482.1 feet msl, and extends approximately 6 miles upstream of the dam. The project boundary also extends downstream from the Proctor dam to include the bypassed reach, 240 feet of Otter Creek downstream of the powerhouse, and all project facilities, including the dam, penstocks, powerhouse, a 265-foot-long bridge located 760 feet downstream of the Proctor dam that is used to access the Proctor powerhouse, and a 1,200-foot-long access road. A total of approximately 608 acres of lands and waters, including those lands surrounding project

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Beldens Falls.

structures and the impoundment shoreline, are currently included within the project boundary.

24. The existing project boundary for the Beldens Development encompasses the Beldens impoundment, following a contour elevation of 286.5 feet msl, and extends approximately 1.8 miles upstream of the dam. The project boundary also extends approximately 550 feet downstream of the dam, enclosing all project structures and recreation facilities, encompassing a total of approximately 82 acres.

25. The existing project boundary for the Huntington Falls Development encompasses the Huntington Falls impoundment, following a contour elevation of 230 feet msl, and extends approximately 1.3 miles upstream of the dam. The project boundary also continues for approximately 500 feet downstream of the powerhouse, enclosing all project structures and recreation facilities, except for a section of the portage trail from the canoe/kayak take-out to its intersection with Morgan Horse Farm Road as discussed later in this order. The Huntington Falls Development project boundary encompasses a total of approximately 74 acres.

D. Current Project Operation

Proctor

26. The Proctor Development operates in what Green Mountain refers to as a "modified run-of-river mode." During normal operation, Green Mountain maintains the impoundment water surface elevation at or near the top of the inflatable flashboards (469.5 feet msl). Inflow to this development is either released through the powerhouse or passed over the dam. The current license authorizes Green Mountain to periodically draw down the Proctor impoundment up to 4 feet (i.e., to an elevation of 465.5 feet msl), if such drawdowns are needed to perform maintenance activities or repairs, create additional reservoir storage in anticipation of high flows, or to supply additional water to the powerhouse to meet Independent System Operator (ISO)-New England or local power demands. On average, 4-foot drawdowns of the Proctor impoundment occur infrequently (once or twice annually), while 1-foot drawdowns occur more frequently (approximately 10 times annually). Typically, the average duration of these drawdowns is approximately 24 hours.

27. River flows between 70 and 325 cfs are used for power generation. Flows less than 70 cfs and in excess of 325 cfs are spilled over the dam crest and into the bypassed reach.

28. The current project license requires that Green Mountain provide 50 percent of project inflow downstream of the Proctor powerhouse during the months of April and May, and the first two weeks of June, and 100 cfs, or inflow (whichever is less), at all other times to protect fishery and aquatic resources.

Beldens

29. The Beldens Development operates in a run-of-river mode. During normal operation, Green Mountain maintains the impoundment water surface elevation at or near the top of the wooden flashboards (283 feet msl). Inflow from the Beldens Development is either released through the powerhouse or passed over the spillway. The current project license requires that Green Mountain provide a continuous flow of 5 cfs, or inflow to the reservoir (whichever is less), to the Belden's bypassed reach to protect fishery and aquatic resources.[14]

30. River flows between 80 and 2,000 cfs are used for power generation. Flows less than 80 cfs and in excess of 2,000 cfs are spilled over the dam crest and into the bypassed reaches.

Huntington Falls

31. The Huntington Falls Development operates in a run-of-river mode. During normal operation, Green Mountain maintains the impoundment water surface elevation at or near the top of the inflatable flashboards (217.8 feet msl). Inflow from the Huntington Falls Development is either released through the powerhouse or passed over the spillway. The current project license requires that Green Mountain provide a continuous flow of 15 cfs, or inflow to the reservoir (whichever is less), to the Huntington Fall's bypassed reach to protect fishery and aquatic resources.

32. River flows between 100 cfs and 2,010 cfs are used for power generation. Flows less than 100 cfs and in excess of 2,010 cfs are spilled over the dam crest and into the bypassed reach.

E. Proposed Project Facilities

33. At the Proctor Development, Green Mountain proposes to: (1) install a new runner at turbine-generator unit 1 and install new turbine-generator units 2 through 4, resulting in an increase in the development's authorized capacity from 3,000 to

[14] The existing 5-cfs minimum flow requirement for the Beldens development is released from the Beldens west dam.

10,233 kW and an increase in the maximum hydraulic capacity from 325 to 1,188 cfs; and (2) install new electrical switchgear, breakers, controls, and relays.

34. At the Huntington Falls Development, Green Mountain proposes to: (1) install new turbine-generator units 1 and 2, resulting in an increase in the development's authorized capacity from 5,500 to 6,725 kW and an increase in the maximum hydraulic capacity from 2,010 to 2,250 cfs; (2) install new switchgear, breakers, control, and relays; and (3) construct a new minimum flow gate at the southern end of the Huntington Falls dam.

F. Proposed Project Operation

35. At the Proctor Development, Green Mountain proposes to eliminate the existing 4-foot drawdown of the Proctor reservoir (except during infrequent emergency operations and maintenance activities) and operate the development in a run-of-river mode from July 1 through April 30, when inflow is less than 200 cfs, and from May 1 through June 30, when inflow is less than 400 cfs. At all other times, Green Mountain proposes to operate the Proctor Development in a 1.5-foot drawdown/refill cycle (i.e., peaking mode). During peaking operations, Green Mountain proposes to implement the following maximum powerhouse discharges to protect aquatic resources within Otter Creek:

- ☐ from May 1 through June 30, 1.5 times inflow when inflow is equal to or greater than 400 cfs;
- ☐ from July 1 through July 15, 1.5 times inflow when inflow is between 200 and 400 cfs, and 2 times inflow when inflow is equal to or greater than 400 cfs;
- ☐ from July 16 through December 15, 2.5 times inflow when inflow is between 200 and 400 cfs, and 3 times inflow when inflow is equal to or greater than 400 cfs;
- ☐ from December 16 through March 15, 2.5 times inflow when inflow is between 200 and 400 cfs, and 3 times inflow when inflow is equal to or greater than 400 cfs; and
- ☐ from March 16 through April 30, 2.5 times inflow when inflow is between 200 and 400 cfs, and 3 times inflow when inflow is greater than or equal to 400 cfs.

36. Green Mountain proposes to continue to operate the Beldens and Huntington Falls developments in a run-of-river mode.

G. Proposed Environmental Measures

37. In addition to the project design and operational measures discussed above, Green Mountain proposes the following.

38. To minimize soil erosion and sedimentation into Otter Creek, Green Mountain proposes to implement erosion and sediment control measures during construction of the proposed recreational enhancements at the Proctor and Beldens developments.

39. To prevent the introduction of hazardous materials into project waters, Green Mountain proposes to file a spill prevention control and countermeasures plan for Commission approval.

40. To reduce debris loading and ice buildup, Green Mountain proposes to replace the existing turbine-generator unit 3 trashracks at the Huntington Falls Development with trashracks that have 2-inch clear-spaced bars, a maximum approach velocity of 2 feet per second, and an orientation parallel to river flow.

41. To improve aesthetics and habitat conditions for aquatic species, Green Mountain proposes to provide a continuous minimum flow of: (1) 60 cfs to the Proctor bypassed reach; (2) 25 cfs to the Beldens west bypassed reach; (3) 10 cfs to the Beldens east bypassed reach; and (4) 66 cfs to the Huntington Falls bypassed reach.

42. To improve accessibility to the tailrace access site at the Proctor Development, Green Mountain propose to: (1) construct a gravel parking lot for two to three vehicles; and (2) install directional signage.

43. To improve boater safety, Green Mountain proposes to add signage and clear brush at the Beldens Development's canoe/kayak take-out and portage, and modify the location of the boat barrier at the Huntington Falls Development.

44. To protect historic properties, Green Mountain proposes to implement the Historic Properties Management Plan (HPMP), filed on March 18, 2013.

SUMMARY OF LICENSE REQUIREMENTS

45. As summarized below, this license, which authorizes 22.807 MW of renewable energy, requires a number of measures to protect and enhance aquatic, terrestrial, recreation, cultural, and aesthetic resources at the project.

46. To protect geology and soils, aquatic resources, and recreation, the license requires the conditions of the Vermont Department of Environmental Conservation (Vermont DEC) water quality certification (discussed further below).

47. The license requires Green Mountain to develop its proposed spill prevention control and countermeasures plan with site-specific provisions to minimize the potential for hazardous material spills and procedures to minimize the extent and adverse effects of spills that may occur.

48. The license requires Green Mountain to replace the existing turbine-generator unit 3 trashracks at the Huntington Falls development with its proposed trashracks.

49. To protect terrestrial resources, the license requires Green Mountain to develop a terrestrial monitoring and management plan with provisions to prevent the spread of invasive plants, revegetate disturbed areas, and ensure the protection of federally-protected wildlife species during project construction activities.

50. To enhance recreation and improve boater safety, the license requires Green Mountain to develop a recreation plan that includes the recreation enhancements and safety measures proposed by Green Mountain, with additional provisions to: (1) ensure recreationists' safety during construction activities at the Proctor Development; and (2) develop interpretive signage at the Proctor Development.

51. To protect cultural resources, the license requires Green Mountain to implement a programmatic agreement (PA) that requires the HPMP, filed on March 18, 2013, to be revised to include emergency procedures that will be implemented if an emergency occurs and properties eligible for or listed on the National Register of Historic Places (historic properties) are affected.

WATER QUALITY CERTIFICATION

52. Under section 401(a)(1) of the Clean Water Act (CWA),[15] the Commission may not issue a license authorizing the construction or operation of a hydroelectric project unless the state water quality certifying agency either has issued water quality certification (certification) for the project or has waived certification by failing to act on a request for certification within a reasonable period of time, not to exceed one year.

[15] 33 U.S.C. § 1341(a)(1) (2012).

Section 401(d) of the CWA provides that the certification shall become a condition of any federal license that authorizes construction or operation of the project.[16]

53. The licensee originally applied to Vermont DEC for certification for the Otter Creek Project on August 26, 2011, which Vermont DEC received on August 27, 2011. Upon filing its amended relicense application on August 1, 2011, the licensee filed an amended certification application with Vermont DEC on September 7, 2011, which was received by Vermont DEC on September 8, 2011, and subsequently withdrawn and refiled by the licensee on June 6, 2012. Green Mountain withdrew and resubmitted requests for certification for the project on March 22, 2013, and January 23, 2014, respectively, which were received by Vermont DEC on March 26, 2013, and January 24, 2014, respectively. On May 30, 2014, Vermont DEC issued certification for the project that includes conditions, which are set forth in Appendix A of this order and incorporated into the license by Ordering Paragraph (D).

54. The certification includes requirements for the maximum powerhouse discharges proposed by Green Mountain at the Proctor Development, run-of-river operation at the Beldens and Huntington Falls developments, target impoundment elevations, minimum flows, impoundment refill procedures, a flow management and water level plan, future upstream or downstream fish passage facilities if determined to be needed by U.S. Fish and Wildlife Service (FWS) or Vermont Fish and Wildlife Department, a debris management plan, and a recreation plan.

55. In Appendix A, there are certain certification conditions that either: (1) do not require the licensee to file plans with the Commission for approval; (2) do not require the licensee to file some reports with the Commission that are needed to demonstrate compliance with license requirements; (3) require agency, but not Commission, notification of emergencies and other activities; or (4) contemplate unspecified long-term changes to project operations or facilities for the purpose of mitigating environmental impacts. Therefore, Article 401 requires the licensee to: (1) consult with other agencies during plan development and file the plans with the Commission for approval; (2) file reports with the Commission; (3) notify the Commission of emergencies and other activities; and (4) file any amendment application(s), as appropriate.

SECTION 18 FISHWAY PRESCRIPTIONS

56. Section 18 of the FPA[17] provides that the Commission shall require the construction, maintenance, and operation by a licensee of such fishways as may be

[16] 33 U.S.C. § 1341(d) (2012).

prescribed by the Secretary of the Interior or the Secretary of Commerce, as appropriate. No fishway prescriptions or reservations of authority were filed under section 18 of the FPA.

THREATENED AND ENDANGERED SPECIES

57. Section 7(a)(2) of the Endangered Species Act[18] requires federal agencies to ensure their actions are not likely to jeopardize the continued existence of federally listed threatened and endangered species, or result in the destruction or adverse modification of their designated critical habitat.

58. The endangered Indiana bat (*Myotis sodalis*) is the only federally listed species with the potential to occur in the project area. Indiana bats are known to occur in both Rutland and Addison counties, though there is no information in the project record indicating that Indiana bats exist in the immediate project vicinity.

59. In the EA,[19] staff determined that with its recommended measures, relicensing the project is not likely to adversely affect the Indiana bat or its habitat. FWS concurred with this finding by letter filed on February 21, 2013. Article 404 includes staff's recommended measures.

NATIONAL HISTORIC PRESERVATION ACT

60. Under section 106 of the National Historic Preservation Act and its implementing regulations, federal agencies must take into account the effect of any proposed undertaking on properties listed or eligible for listing in the National Register (defined as historic properties) and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking. This generally requires the Commission to consult with the State Historic Preservation Officer (SHPO) to determine whether and how a proposed action may affect historic properties, and to seek ways to avoid or minimize any adverse effects.

61. To satisfy these responsibilities, the Commission executed a PA with the Vermont SHPO, and Green Mountain concurred with the stipulations of the PA. The PA requires

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[17] 16 U.S.C. § 811 (2012).

[18] 16 U.S.C. § 1536(a) (2012).

[19] *See* EA at 10, and 83-85.

Green Mountain to implement the HPMP, filed on March 18, 2013, along with a modification that requires Green Mountain to implement emergency procedures if an emergency occurs and historic properties are affected. Execution of the PA demonstrates the Commission's compliance with section 106 of the NHPA. Article 406 requires Green Mountain to implement the PA.

RECOMMENDATIONS OF FEDERAL AND STATE FISH AND WILDLIFE AGENCIES PURSUANT TO SECTION 10(j) OF THE FPA

62. Section 10(j) of the FPA[20] requires the Commission, when issuing a license, to include conditions based on recommendations submitted by federal and state fish and wildlife agencies pursuant to the Fish and Wildlife Coordination Act,[21] to "adequately and equitably protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat)" affected by the project.

63. No agency filed section 10(j) recommendations for the Otter Creek Project.

SECTION 10(a)(1) OF THE FPA

64. Section 10(a)(1) of the FPA[22] requires that any project for which the Commission issues a license be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce; for the improvement and utilization of waterpower development; for the adequate protection, mitigation, and enhancement of fish and wildlife; and for other beneficial public uses, including irrigation, flood control, water supply, recreation, and other purposes.

A. Spill Prevention Control and Countermeasures Plan

65. Green Mountain proposes to file, for Commission approval, a spill prevention control and countermeasures plan to prevent the introduction of hazardous materials into project waters during construction related to upgrades of the turbine-generator units and enhancement of recreation facilities, and operation and maintenance of the project. In the EA,[23] staff concluded that Green Mountain's proposed construction activities, and

[20] 16 U.S.C. § 803(j)(1) (2012).

[21] 16 U.S.C. § 661 *et seq.* (2012).

[22] 16 U.S.C. § 803(a)(1) (2012).

[23] *See* EA at 54 and 55.

operation and maintenance of the project, could result in hazardous material spills, which could degrade water quality and negatively affect aquatic resources. Because Green Mountain did not provide any details regarding the spill prevention control and countermeasures plan, staff recommended the plan include site-specific measures to minimize the potential for hazardous material spills and procedures to minimize the extent and adverse effects of spills that may occur. Article 402 requires this plan.

B. Fish Entrainment at the Huntington Falls Development

66. The existing trashracks for turbine-generator unit 3 at the Huntington Falls Development have 2-inch clear bar spacing and are oriented 45 degrees to river flow. To reduce debris loading and ice buildup, Green Mountain proposes to replace these trashracks with trashracks that have 2-inch clear bar spacing, a maximum approach velocity of 2 feet per second, and an orientation parallel to river flow.

67. In the EA,[24] Commission staff determined that orienting the new turbine-generator unit 3 trashracks parallel to inflow could subject a greater number of fish to entrainment in comparison to the existing trashracks that are angled to inflow at 45 degrees, which may help some fish avoid entering the project intakes. However, with a maximum approach velocity of 2 feet per second, staff concluded that the escape speeds of most adult game fish present within the Huntington Falls impoundment would allow them to avoid impingement and entrainment at the turbine-generator unit 3 trashracks. In addition, staff concluded that smaller fish, which would have a higher likelihood of entrainment at the Huntington Falls Development due to their slower swimming speed, have been shown to exhibit a high rate of survival (90 percent) when passing through Kaplan turbines. Due to these findings, staff concluded that the proposed trashrack with 2-inch clear bar spacing, a maximum approach velocity of 2 feet per second, and an orientation parallel to flow would adequately protect fish from entrainment and impingement at the Huntington Falls Development. Therefore, Article 403 requires the licensee to file with the Commission for approval, design drawings for a trashrack that meets these specifications.

C. Terrestrial Monitoring and Management Plan

68. Green Mountain's proposal to install new turbine-generator units and enhance recreation facilities would require the use of heavy equipment. The use of heavy equipment could temporarily disturb wildlife in and around project lands, including

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[24] *See* EA at 73-77.

Indiana bats and bald eagles. Ground-disturbing activities related to proposed recreational facility upgrades could also allow invasive plant species to become established. Further, although likely to be an infrequent occurrence during the license term, the removal of trees within the project area for safety or project access purposes could negatively affect Indiana bats which require roosting trees for breeding and shelter outside of the hibernation period. In the EA,[25] staff recommended that Green Mountain develop and implement a terrestrial monitoring and management plan with specific provisions to re-vegetate areas disturbed by construction activities authorized under this license, prevent the spread of invasive plants, and protect federally-protected wildlife species and their respective habitats within the project area. Therefore, Article 404 of this license requires Green Mountain to file, for Commission approval, a terrestrial monitoring and management plan that contains the staff-recommended provisions.

D. Recreation Plan

69. Green Mountain proposes to formalize the tailrace access site by adding a parking lot at the Proctor Development and improve boater safety by installing signage that clearly identifies the location of the existing canoe/kayak take-out and portage at the Beldens development and modifying the location of the boat barrier at the Huntington Falls development; however, Green Mountain did not provide details on the lot design or its proposed measures for improving boater safety. Also, the installation of the turbines at the Proctor Development would adversely affect recreationists at the tailrace because the tailrace access road would be used during the installation and portions of the tailrace site would be closed to recreational use during construction.

70. In the EA,[26] staff recommended that Green Mountain develop a recreation plan that contains conceptual drawings of the parking lot, a schedule for installing signage and moving the boat barrier to improve boater safety, and measures to ensure recreationists' safety during installation of the turbines at the Proctor Development. Staff also recommended that the recreation plan contain a provision to install interpretive signage at the Proctor Development to provide information on how the project was integral in the development of the marble industry in the Otter Creek Valley. Certification condition H requires a recreation plan for the construction and maintenance of recreational facilities at the project, and Article 405 expands the required plan to include the staff-recommended provisions discussed above.

[25] *See* EA at 130 and 131.

[26] *See* EA at 131 and 132.

ADMINISTRATIVE CONDITIONS

A. Annual Charges

71. The Commission collects annual charges from licensees for administration of the FPA. Article 201 provides for the collection of funds for administration of the FPA.

B. Exhibit F and G Drawings

72. The Exhibit F drawings filed on August 1, 2011 (sheets 2 through 13) and March 29, 2013 (sheet 1), are approved and made part of the license (ordering paragraph (C)). The Commission requires licensees to file sets of approved project drawings in electronic file format. Article 202 requires the filing of these drawings.

73. The Exhibit G drawings filed on May 11, 2012, are not approved. The Huntington Falls Development's existing portage trail from the take-out to the Morgan Horse Farm Road, which is a project-related recreation facility and needed for project purposes, is not included within the project boundary. Moreover, the Commission's regulations require that a project boundary generally be no more than 200 feet from the exterior margin of a reservoir, unless additional lands are "necessary for project purposes, such as recreation, shoreline control, or protection of environmental resources."[27] However, in certain locations the project boundary for the Proctor Development is upwards of approximately 2,000 feet from the exterior margin of the Proctor impoundment. Article 203 requires Green Mountain to file revised Exhibit G drawings to include the portion of the portage trail described above within the project boundary for the Huntington Falls Development. Article 203 also requires Green Mountain to specify the project purposes that are served by the lands in the current project boundary along the shoreline of the Proctor impoundment, specify whether any lands currently in the project boundary are not serving a project purpose, and revise the Exhibit G drawings accordingly.

C. Amortization Reserve

74. The Commission requires that for new major licenses, non-municipal licensees must set up and maintain an amortization reserve account upon license issuance. Article 204 requires the establishment of the account.

[27] 18 C.F.R. § 4.41(h)(2)(i)(B) (2006).

D. Headwater Benefits

75. Some projects directly benefit from headwater improvements that were constructed by other licensees, the United States, or permittees. Article 205 requires the licensee to reimburse such entities for these benefits if they were not previously assessed and reimbursed.

E. Use and Occupancy of Project Lands and Waters

76. Requiring a licensee to obtain prior Commission approval for every use or occupancy of project lands or waters would be unduly burdensome. Therefore, Article 407 allows the licensee to grant permission, without prior Commission approval, for the use and occupancy of project lands and waters for such minor activities as landscape planting. Such uses must be consistent with the purposes of protecting and enhancing the scenic, recreational, and environmental values of the project.

F. Review of Final Plans and Specifications

77. Article 301 requires the licensee to provide the Commission's Division of Dam Safety and Inspection's New York Regional Office (D2SI-NYRO) with licensee-approved cofferdam and deep excavation construction drawings, should construction require cofferdams or deep excavations.

78. Because the new license will modify project operation at the Proctor Development, Article 302 requires the licensee to assess the effects of modifying project operation on flood routing and the project's flashboard system, and to develop a plan, if necessary, to ensure the continued safe operation of the project during high flows.

79. Article 303 requires the licensee to submit one copy of its plans and specifications and supporting design document to the Commission's D2SI–NYRO for review and approval. The submittal must also include: a Quality Control and Inspection Program, a Temporary Construction Emergency Action Plan, and Soil Erosion and Sediment Control Plan.

80. Where new construction or modifications to the project are involved, the Commission requires licensees to file revised drawings of project features as-built. Article 304 provides for the filing of these drawings.

81. Article 305 requires the licensee to coordinate any modifications that would affect project works or operation resulting from environmental requirements with the Commission's D2SI-New York Regional Office.

STATE AND FEDERAL COMPREHENSIVE PLANS

82. Section 10(a)(2)(A) of the FPA,[28] requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project.[29] Under section 10(a)(2)(A), federal and state agencies filed 39 comprehensive plans that address various resources in Vermont. Of these, staff identified and reviewed 11 comprehensive plans that are relevant to this project.[30] No conflicts were found.

APPLICANT'S PLANS AND CAPABILITIES

83. In accordance with sections 10(a)(2)(C) and 15(a) of the FPA,[31] Commission staff evaluated Green Mountain's record as a licensee for these areas: (A) conservation efforts; (B) compliance history and ability to comply with the new license; (C) safe management, operation, and maintenance of the project; (D) ability to provide efficient and reliable electric service; (E) need for power; (F) transmission services; (G) cost effectiveness of plans; and (H) actions affecting the public. This order adopts staff's analysis and conclusions.

A. Conservation Efforts

84. Section 10(a)(2)(C)[32] of the FPA requires the Commission to consider the electricity consumption improvement program of the applicant, including its plans, performance, and capabilities for encouraging or assisting its customers to conserve electricity cost-effectively, taking into account the published policies, restrictions, and

[28] 16 U.S.C. § 803(a)(2)(A) (2012).

[29] Comprehensive plans for this purpose are defined at 18 C.F.R. § 2.19 (2014).

[30] The list of applicable plans can be found in section 5.5 of the EA for the project.

[31] 16 U.S.C. §§ 803(a)(2)(C) and 808(a) (2012).

[32] 16 U.S.C. § 803(a)(2)(C) (2012).

requirements of state regulatory authorities. The Otter Creek Project will become a component of the resource portfolio of Green Mountain and continue providing hydroelectric generation to meet part of Vermont's power requirements, resource diversity, and capacity needs. The Otter Creek Project is located within the jurisdiction of the New England Independent System Operator (ISO-New England), which is a subregion of the Northeast Power Coordinating Council Inc., a region of the North American Electric Reliability Council (NERC). ISO-New England is a regional transmission organization that coordinates the movement of wholesale electricity in the New England states, and provides opportunities for end-use customers to realize the value for reducing their demand for electricity.

85. Staff concludes that, given the limits of their ability to influence users of the electricity generated by the project, Green Mountain will comply with section 10(a)(2)(C) of the FPA.

B. Compliance History and Ability to Comply with the New License

86. Because the project was only recently transferred to Green Mountain, the licensee's compliance history at the project is limited. Green Mountain, as a licensee at its other hydroelectric projects, has an overall record of making timely filings and compliance with its licenses is satisfactory.[33] Because the licensee has a satisfactory record of compliance at its other projects and has filed with the Commission adequate plans and schedules to comply with the new Otter Creek license, staff believes that Green Mountain can satisfy the conditions of a new license.

C. Safe Management, Operation, and Maintenance of the Project

87. Staff has reviewed Green Mountain's plans for management, operation, and maintenance of the project in its license application. The project is subject to the requirements of 18 C.F.R. Part 12 and evaluated according to the criteria provided in the Commission's Engineering Guidelines. Staff concludes that there is no reason to believe that Green Mountain cannot safely manage, operate, and maintain the dam and other project works in accordance with the Commission's standards and oversight.

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[33] Green Mountain is also a licensee for the following hydroelectric projects: Waterbury (P-2090); Bolton Falls (P-2879), Center Rutland (P-2445), Taftsville (P-2490), Cavendish (P-2489), Gage (P-2397), Arnold Falls (P-2399), Pierce Mills (P-2396), Passumpsic (P-2400), Exxex No. 19 (P-2513), Vergennes (P-2674), Weybridge (P-2731), Middlebury Lower (P-2737), P-Lamoille (P-2205), Clay Hill Road Line 66 Transmission (P-12766), Carver Falls (P-11475), and Silver Lake (P-11478).

D. Ability to Provide Efficient and Reliable Electric Service

88. Staff has reviewed Green Mountain's plans and its ability to operate and maintain the project in a manner most likely to provide efficient and reliable electric service. Staff's review indicates that Green Mountain plans to regularly inspect the project turbine-generator units to ensure they continue to perform in an optimal manner, schedule maintenance to minimize effects on energy production, and undertake the necessary initiatives to ensure the project is able to operate reliably into the future. Staff concludes that Green Mountain is capable of operating the project to provide efficient and reliable electric service in the future.

E. Need for Power

89. To assess the need for power, staff looked at the needs in the operating region in which the project is located. The Otter Creek Project is a component of the resource portfolio of Green Mountain and will continue providing hydroelectric generation to meet part of Vermont's power requirements, resource diversity, and capacity needs. The project currently produces about 52,800,000 (kilowatt-hours) kWh per year. Green Mountain is proposing to increase the generating capacity of the existing project by 8.458 MW and generate about 69,000,000 kWh per year. The NERC annually forecasts electricity supply and demand nationally and regionally for a 10-year period.

90. The ISO-New England is a summer-peaking region, and the winter peaks are normally less than those experienced in the summer. According to NERC's 2011 forecast, summer peak demand requirements for the ISO-New England region are projected to grow at a compound annual growth rate of 0.84 percent from 2014 through 2023. The capacity margins are forecasted to decrease from about 13.85 percent in 2014 to about 12.07 percent in 2023 (NERC, 2013). Staff concludes that power from the Otter Creek Project would help meet a need for power in the ISO-New England region in both the short- and long-term.

F. Transmission Services

91. The Otter Creek Project is an existing facility that is already integrated into Green Mountain's electrical system. The system features numerous interconnections along its length, which are used to deliver energy to other systems or directly to power consumers. Power from the Proctor Development is transmitted to a 46-kV step-up transformer before being distributed to the Green Mountain transmission and distribution systems. At the Beldens and Huntington Falls developments, power is transmitted to 46-kV step-up transformers before going to the Green Mountain transmission system. Green Mountain

considers these transformers to be the point of interconnection of the hydroelectric developments with the Green Mountain grid system.

G. Cost Effectiveness of Plans

92. Green Mountain plans to make a number of facility and operational modifications to both improve project generating capability and enhance environmental resources affected by the project. Based on Green Mountain's record as an existing licensee at its other hydroelectric projects, staff concludes that these plans are likely to be carried out in a cost-effective manner.

H. Actions Affecting the Public

93. Green Mountain provided extensive opportunity for public involvement in the development of its applications for other licenses. Green Mountain anticipates using the project to help meet local power needs, provide employment opportunity, and provide recreational opportunities.

PROJECT ECONOMICS

94. In determining whether to issue a new license for an existing hydroelectric project, the Commission considers a number of public interest factors, including the economic benefits of project power. Under the Commission's approach to evaluating the economics of hydropower projects, as articulated in *Mead Corp.*,[34] the Commission uses current costs to compare the costs of the project and likely alternative power with no forecasts concerning potential future inflation, escalation, or deflation beyond the license issuance date. The basic purpose of the Commission's economic analysis is to provide a general estimate of the potential power benefits and the costs of a project, and of reasonable alternatives to project power. The estimate helps to support an informed decision concerning what is in the public interest with respect to a proposed license.

95. In applying this analysis to the Otter Creek Project, staff has considered three options: the no-action alternative, Green Mountain's proposal, and the project as licensed herein. Under the no-action alternative, the project would continue to operate as it does now. The project has an installed capacity of 14.349 MW and generates an average of 52,800 MWh[35] of electricity annually. The average annual project cost is about

[34] 72 FERC ¶ 61,027 (1995).

[35] Commission staff estimated this value.

$3,630,528, or $68.76/MWh. When staff multiplied its estimate of average generation by the alternative power cost of $31.32/MWh,[36] staff gets a total value of the project's power of $1,653,696 in 2013 dollars. To determine whether the proposed project is currently economically beneficial, staff subtracted the project's cost from the value of the project's power.[37] Therefore, the project costs $1,976,832, or $37.44/MWh, more to produce power than the likely alternative cost of power.

96. As proposed by Green Mountain, the levelized annual cost of operating the Otter Creek Project is $5,585,550, or $80.95/MWh. The proposed project would have an installed capacity of 22.807 MW, and generate an estimated average of 69,000 MWh of energy annually. When staff multiplied its estimate of average generation by the alternative power cost of $31.32/MWh, staff gets a total value of the project's power of $2,161,080 in 2013 dollars. To determine whether the proposed project is economically beneficial, staff subtracted the proposed project's cost from the total value of the alternative power. Therefore, in the first year of operation, the project would cost $3,424,470, or $49.63/MWh, more than the likely alternative cost of power.

97. As licensed herein, the levelized annual cost of operating the proposed project (as modified by staff) would be about $5,589,690 or about $81.01/MWh. The proposed project would generate an estimated average of 69,000 MWh of energy annually. When staff multiplied its estimate of average generation by the alternative power cost of $31.32/MWh, staff gets a total value of the project's power of $2,161,080 in 2013 dollars. To determine whether the proposed project is economically beneficial, staff subtracted the proposed project's cost from the total value of the alternative power. Therefore, in the first year of operation, project power would cost $3,428,610 or $49.69/MWh more than the likely alternative cost of power.

98. In considering public interest factors, the Commission takes into account that hydroelectric projects offer unique operational benefits to the electric utility system (ancillary service benefits). These benefits include the ability to help maintain the stability of a power system, such as by quickly adjusting power output to respond to rapid

[36] The alternative power cost of $31.32 per MWh is based on information obtained from a sales contract, U.S. Energy Information Administration (EIA) fuel cost data, and regional bid prices for year 2013.

[37] Details of staff's economic analysis for the project as licensed herein and for various alternatives are included in the EA issued on July 26, 2013. This analysis was revised to reflect Green Mountain's revised generating capacity for the Proctor Development and EIA's 2013 fuel cost data.

changes in system load; and to respond rapidly to a major utility system or regional blackout by providing a source of power to help restart fossil-fuel based generating stations and put them back on line.

99. Although staff's analysis shows that the project as licensed herein would cost more to operate than the estimated cost of alternative power, it is the applicant who must decide whether to accept this license and any financial risk that it entails.

100. Although staff does not explicitly account for the effects inflation may have on the future cost of electricity, the fact that hydropower generation is relatively insensitive to inflation compared to fossil-fueled generators is an important economic consideration for power producers and the consumers they serve. This is one reason project economics is only one of the many public interest factors the Commission considers in determining whether or not, and under what conditions, to issue a license.

COMPREHENSIVE DEVELOPMENT

101. Sections 4(e) and 10(a)(1) of the FPA[38] require the Commission to give equal consideration to the power development purposes and to the purposes of energy conservation; the protection, mitigation of damage to, and enhancement of fish and wildlife; the protection of recreational opportunities; and the preservation of other aspects of environmental quality. Any license issued shall be such as in the Commission's judgment will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for all beneficial public uses. The decision to license this project, and the terms and conditions included herein, reflect such consideration.

102. The EA for the project contains background information, analysis of effects, and support for related license articles. Based on the record of this proceeding, including the EA and comments thereon, issuing a new license for the Otter Creek Project as described in this order will not constitute a major federal action significantly affecting the quality of the human environment. The project will be safe if operated and maintained in accordance with the requirements of the license.

103. Based on an independent review and evaluation of the Otter Creek Project, recommendations from the resource agencies and other stakeholders, and the no-action alternative, as documented in the EA, the proposed Otter Creek Project, as licensed herein, is selected and found to be best adapted to a comprehensive plan for improving or developing Otter Creek.

[38] 16 U.S.C. §§ 797(e) and 803(a)(1) (2012).

104. This alternative was selected because: (1) issuance of a new license will serve to maintain a beneficial and dependable source of electrical energy; (2) the required environmental measures will protect and enhance fish and wildlife resources, water quality, terrestrial resources, recreational resources, and historic properties; and (3) the 22.807 MW of authorized electric capacity comes from a renewable resources that does not contribute to atmospheric pollution.

LICENSE TERM

105. Section 15(e) of the FPA[39] provides that any new license issued shall be for a term that the Commission determines to be in the public interest, but not less than 30 years or more than 50 years. The Commission's general policy is to establish 30-year terms for projects with little or no redevelopment, new construction, new capacity, or environmental mitigation and enhancement measures; 40-year terms for projects with a moderate amount of such activities; and 50-year terms for projects with extensive measures.[40]

106. This license requires a moderate amount of new construction and environmental measures, including installation of a new runner (turbine-generator unit 1) and three new turbine-generator units (2 through 4) at the Proctor Development to increase generating capacity from 3.0 to 10.233 MW; installation of two new turbine-generator units (1 and 2) at the Huntington Falls Development to increase generating capacity from 5.5 to 6.725 MW; enhanced minimum flows to improve aesthetics and habitat conditions for aquatic species; and various resource protection plans. Consequently, a 40-year license for the Otter Creek Project is appropriate.

The Director orders:

(A) This license is issued to Green Mountain Power Corporation (licensee), for a period of 40 years, effective the first day of the month in which this order is issued, to operate and maintain the Otter Creek Hydropower Project. This license is subject to the terms and conditions of the Federal Power Act (FPA), which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the FPA.

(B) The project consists of:

[39] 16 U.S.C. § 808(e) (2012).

[40] *See Consumers Power Co.*, 68 FERC ¶ 61,077 at 61,383-84 (1994).

(1) All lands, to the extent of the licensee's interests in these lands, described in the project description and the project boundary discussion of this order.

(2) Project works that include the following three hydropower developments:

The Proctor Development consisting of: (1) a 13-foot-high, 128-foot-long masonry, concrete-capped dam with a 3-foot-high inflatable flashboard system; (2) a 95-acre reservoir with a usable storage capacity of 275 acre-feet at a normal maximum water surface elevation of 469.5 feet above mean sea level (msl); (3) a 100-foot-long by 17-foot-high by 45-foot-wide gated-forebay intake structure that contains trashracks with 1-inch clear bar spacing; (4) two penstocks, including (a) a 9-foot-diameter, riveted steel penstock which extends 345 feet from the dam to a surge tank and decreases to 8 feet in diameter for an additional 96 feet beyond a surge tank; and (b) a 7-foot-diameter, 500-foot-long spiral welded steel penstock; (5) a 33-foot by 100-foot concrete and brick masonry powerhouse containing four vertical Francis turbine-generator units rated at 2,245 kW (kilowatts), 1,715 kW, 1,719 kW, and 1,714 kW, respectively, and an attached 28-foot by 48-foot steel structure containing one 2,840-kW vertical Francis turbine-generator unit for a total authorized installed capacity of 10,233 kW; (6) generator leads; (7) three banks of 0.48/2.4-kilovolt (kV) single-phase transformers; (8) a 0.48/46-kV step-up transformer; (9) a 265-foot-long, 14-foot-wide bridge located 760 feet downstream of the Proctor dam that is used to access the Proctor powerhouse; (10) a 1,200-foot-long access road; and (11) appurtenant facilities.

The Beldens Development consisting of: (1) a concrete dam with 2.5-foot-high wooden flashboards, including (a) a 15-foot-high, 56-foot-long dam section (Beldens west dam); and (b) a 24-foot-high, 57-foot-long dam section (Beldens east dam); (2) a 22-acre reservoir with a usable storage capacity of 253 acre-feet at a normal maximum water surface elevation of 283 feet msl; (3) two intakes, including (a) a 20-foot-high by 35-foot-wide intake with 13-foot-high by 26-foot-wide trashracks with bar spacing of 1.125 inches on center; and (b) a 34.5-foot-high by 40-foot-wide intake with 13-foot-high by 40-foot-wide trashracks with 3-inch clear bar spacing; (4) two penstocks, including (a) a 12-foot-diameter steel penstock that bifurcates into two 10-foot-diameter, 30-foot-long sections, each leading to a 40-foot by 44-foot concrete and masonry powerhouse containing a 800-kW horizontal Francis turbine-generator unit and a 949-kW horizontal Francis turbine-generator unit; and (b) a 12-foot-diameter, 45-foot-long concrete penstock that leads to a 40-foot by 75-foot concrete powerhouse containing one 4,100-kW horizontal Kaplan turbine-generator unit for a total authorized installed capacity of 5,849 kW; (5) generator leads; (6) a 2.4/46-kV step-up transformer bank; and (7) appurtenant facilities.

The Huntington Falls Development consisting of: (1) a 31-foot-high, 187-foot-long concrete dam with a 2.5-foot-high inflatable flashboard system; (2) a 23-acre reservoir with a storage capacity of 234 acre-feet at a normal maximum water surface elevation of 217.8 feet msl; (3) two intakes, including (a) a 20-foot-high by 40-foot-wide intake with 13-foot-high by 26-foot-wide trashracks with bar spacing of 1.125 inches on center; and (b) a 38-foot-high by 40-foot-wide intake with 16-foot-high by 30-foot-wide trashracks with 2-inch clear bar spacing; (4) two, 10-foot-diameter, 30-foot-long steel penstocks leading to a 42-foot by 60-foot concrete and masonry powerhouse containing two horizontal Francis turbine-generator units with a combined installed capacity of 2,625 kW; (5) a 12-foot-diameter, 75-foot-long concrete penstock leading to a 40-foot by 75-foot concrete powerhouse containing one 4,100-kW horizontal Kaplan turbine-generator unit for a total authorized installed capacity of 6,725 kW; (6) generator leads; (7) a 2.4/46-kV step-up transformer bank; and (8) appurtenant facilities.

The project works generally described above are more specifically shown and described by those portions of Exhibits A and F shown below:

Exhibit A: The following sections of exhibit A filed on August 1, 2011, April 11, 2012, and April 28, 2014:

Exhibit A, filed on August 1, 2011, including Section 2.0, pages A-3 through A-10, entitled “Project Structures;” Section 3.0, page A-11, entitled “Impoundment Data;” Section 4.0, pages A-12 through A-13, entitled “Transmission Lines;” and Section 5.0, page 14, entitled “Additional Equipment.”

Pages 1 through 5, entitled “Exhibit A,” filed on April 11, 2012, except for the subsections entitled “Proctor Unit Upgrades,” and “Huntington Falls Unit Upgrades” on pages 3 and 4.

Attachment 1, entitled “Proctor Redevelopment-Turbine and Generator Specifications,” filed on April 28, 2014, superseding the August 1, 2011 capacities of the turbines and generator units at the Proctor Development.

Exhibit F: The following Exhibit F-2 through F-13 drawings filed on August 1, 2011, and Exhibit F-1 drawing filed on March 29, 2013:

Exhibit F Drawing	FERC No. 2558-	Description
Sheet F-1	1001	Site Plan & Profile

Sheet F-2	1002	Proctor - Plan, Section, & Elevation of Powerhouse
Sheet F-3	1003	Proctor - Plan, Elevation, and Section of Dam
Sheet F-4	1004	Beldens – Site Plan
Sheet F-5	1005	Beldens - Unit #3 Powerhouse and Intake Plan and Profile
Sheet F-6	1006	Beldens - Plan and Sections of Units #1 and #2 Powerhouse
Sheet F-7	1007	Beldens - Plan, Elevation, and Section of East and West Dams
Sheet F-8	1008	Huntington Falls - Site Plan
Sheet F-9	1009	Huntington Falls - Unit #3 Powerhouse and Intake Plan and Profile
Sheet F-10	1010	Huntington Falls - Plan, Elevation & Section of Units #1 and #2 Powerhouse
Sheet F-11	1011	Huntington Falls - Plan, Elevation & Section of Dam
Sheet F-12	1012	Proctor - Permanent Access Bridge Option - Site & Plan Profile
Sheet F-13	1013	Proctor - Temporary Access Road Option and Plan Section

(3) All of the structures, fixtures, equipment or facilities used to operate or maintain the project, all portable property that may be employed in connection with the project, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) The Exhibits A and F as described above are approved and made part of this license. The revised Exhibit G drawings filed on May 11, 2012, do not conform to Commission regulations and are not approved.

(D) This license is subject to the conditions submitted by the Vermont Department of Environmental Conservation under section 401(a)(1) of the Clean Water Act, 33 U.S.C. § 1341(a)(1) (2012), as those conditions are set forth in Appendix A to this order.

(E) This license is also subject to the articles set forth in Form L-3 (Oct. 1975), entitled, "Terms and Conditions of License for Constructed Major Project Affecting Navigable Waters of the United States" (*see* 54 F.P.C. 1792 *et seq*.), as set forth in this order, and the following additional articles:

Article 201. *Administrative Annual Charges*. The licensee must pay the United States annual charges, effective the first day of the month in which the license is issued, and as determined in accordance with the provisions of the Commission's regulations in effect from time to time, for the purpose of reimbursing the United States for the cost of administration of Part I of the Federal Power Act. The authorized installed capacity for that purpose is as follows:

(a) 14,349 kilowatts (kW) based on the authorized and currently existing capacity; and

(b) 22,807 kW upon commencement of construction of the additional capacity authorized in this order.

The licensee must file a report stating the date of commencement of construction of the additional authorized capacity, within 90 days of such date. Such commencement date will be the effective date for the annual charges under Article 201(b).

Article 202. *Exhibit F Drawings*. Within 45 days of the date of issuance of this license, as directed below, the licensee must file the approved Exhibit F drawings in electronic file format on CDs.

Digital images of the approved exhibit drawings must be prepared in electronic format. Prior to preparing each digital image, the FERC Project-Drawing Number (i.e., P-2558-1001 through P-2558-1013) must be shown in the margin below the title block of the approved drawing. Exhibit F drawings must be identified as (CEII) material under 18 CFR §388.113(c). Each drawing must be a separate electronic file, and the file name must include: FERC Project-Drawing Number, FERC Exhibit, Drawing Title, date of this license, and file extension in the following format [P-2558-####, F-1, Drawing Title, MM-DD-YYYY.TIF]. All digital images of the exhibit drawings shall meet the following format specification:

IMAGERY - black & white raster file
FILE TYPE – Tagged Image File Format, (TIFF) CCITT Group 4
RESOLUTION – 300 dpi desired, (200 dpi min)
DRAWING SIZE FORMAT – 24" x 36" (min), 28" x 40" (max)
FILE SIZE – less than 1 MB desired

Article 203. *Exhibit G Drawings*. Within 90 days of license issuance, the licensee must file, for Commission approval, revised Exhibit G drawings enclosing within the project boundary all project works and facilities necessary for operation and maintenance of the project, including the Huntington Falls Development's existing portage trail from the canoe/kayak take-out to the Morgan Horse Farm Road. The licensee must also describe the project purposes that are served by the lands in the current project boundary along the shoreline of the Proctor impoundment, describe any lands not currently serving a project purpose, and remove any lands within the project boundary at the Proctor Development that are not serving a project purpose. The Exhibit G drawings must comply with the Commission's regulations at 18 C.F.R §§ 4.39 and 4.41 (2014).

Article 204. *Amortization Reserve*. Pursuant to section 10(d) of the Federal Power Act, a specified reasonable rate of return upon the net investment in the project must be used for determining surplus earnings of the project for the establishment and maintenance of amortization reserves. The licensee must set aside, in a project amortization reserve account at the end of each fiscal year, one-half of the project surplus earnings, if any, in excess of the specified rate of return per annum on the net investment. To the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year, the licensee must deduct the amount of that deficiency from the amount of any surplus earnings subsequently accumulated, until absorbed. The licensee must set aside one-half of the remaining surplus earnings, if any, cumulatively computed, in the project amortization reserve account. The licensee must maintain the amounts established in the project amortization reserve account until further order of the Commission.

The specified reasonable rate of return used in computing amortization reserves must be calculated annually based on current capital ratios developed from an average of 13 monthly balances of amounts properly included in the licensee's long-term debt and proprietary capital accounts as listed in the Commission's Uniform System of Accounts. The cost rate for such ratios must be the weighted average cost of long-term debt and preferred stock for the year, and the cost of common equity must be the interest rate on 10-year government bonds (reported as the Treasury Department's 10-year constant maturity series) computed on the monthly average for the year in question plus four percentage points (400 basis points).

Article 205. *Headwater Benefits.* If the licensee's project was directly benefited by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement during the term of the original license (including extensions of that term by annual licenses), and if those headwater benefits were not previously assessed and reimbursed to the owner of the headwater improvement,

the licensee must reimburse the owner of the headwater improvement for those benefits, at such time as they are assessed, in the same manner as for benefits received during the term of this license. The benefits will be assessed in accordance with Part 11, Subpart B, of the Commission's regulations.

Article 301. *Cofferdam and Deep Excavation Construction Drawings.* Should construction require cofferdams or deep excavations, the licensee must: (1) review and approve the design of contractor-designed cofferdams and deep excavations prior to the start of construction; and (2) must ensure that construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days before starting construction of any cofferdams or deep excavations, the licensee must submit one copy to the Commission's Division of Dam Safety and Inspections (D2SI)-New York Regional Engineer and two copies to the Commission (one of these copies must be a courtesy copy to the Commission's Director, D2SI), of the approved cofferdam and deep excavation construction drawings and specifications, and the letters of approval.

Article 302. *Dam Safety and Spillway Adequacy Report*. Within 60 days of the date of this license, the licensee must submit one copy to the Division of Dam Safety and Inspections (D2SI)-New York Regional Engineer and two copies to the Commission (one of these must be a courtesy copy to the Director, D2SI), of a report on the Proctor Development describing the effects of the target reservoir levels required by this license on upstream and downstream flooding and the project's spillway adequacy. At a minimum, the report must: (1) include a flood routing study that evaluates the ability of the project to safely pass flows up to the Inflow Design Flood; (2) assess if there would be an increased likelihood of low-lying structures being flooded under the new operating scenario; (3) assess any impacts to the currently operating flashboard systems; and (4) if necessary, include a plan and schedule for performing any remedial measures necessary to ensure the continued safe operation of the developments during high flows. The licensee must not implement the water level requirements of this license until the D2SI-New York Regional Engineer determines that the altered project operations have no adverse impact on dam safety and issues a letter indicating such.

Article 303. *Contract Plans and Specifications*. At least 60 days prior to start of construction, the licensee must submit one copy of its final contract plans and specifications and supporting design report to the Commission's Division of Dam Safety and Inspections (D2SI)-New York Regional Engineer, and two copies to the Commission (one of these must be a courtesy copy to the Director, D2SI). The submittal must also include as part of preconstruction requirements: a Quality Control and Inspection Program, Temporary Construction Emergency Action Plan, and a Soil Erosion and Sediment Control Plan. The licensee may not begin construction until the D2SI-New York Regional Engineer has reviewed and commented on the plans and specifications,

determined that all preconstruction requirements have been satisfied, and authorized the start of construction.

Article 304. *As–Built Drawings*. Within 90 days of completion of construction of the facilities authorized by this license, the licensee must file for Commission approval, revised Exhibits A, F, and G, as applicable, to describe and show those project facilities as built. A courtesy copy must be filed with the Commission's Division of Dam Safety and Inspections (D2SI)-New York Regional Engineer; the Director, D2SI; and the Director, Division of Hydropower Administration and Compliance.

Article 305. *Project Modification Resulting from Environmental Requirements*. If environmental requirements under this license require modification that may affect the project works or operations, the licensee must consult with the Commission's Division of Dam Safety and Inspections (D2SI)-New York Regional Engineer. Consultation must allow sufficient review time for the Commission to ensure that the proposed work does not adversely affect the project works, dam safety, or project operation.

Article 401. *Commission Approval, Notification, and Filing of Amendments.*

(a) Requirement to File Plans for Commission Approval

Various conditions of this license found in the Vermont Department of Environmental Conservation's (Vermont DEC) section 401 water quality certification (certification) conditions (Appendix A) require the licensee to prepare plans in consultation with other entities for approval by Vermont DEC for submittal to the Commission, and implement specific measures without Commission approval. Each such plan must also be submitted to the Commission for approval.

The following table indicates the agencies that the licensee must consult with before preparing plans and the deadline for filing the plans with the Commission for approval.

Vermont DEC Certification Condition	Plan Name	Consulting Agencies	Date Due to Commission
D	Flow Management and Monitoring Plan	Vermont DEC and the U.S. Fish and Wildlife Service (FWS)	Within 6 months of license issuance.
H	Recreation Plan	Vermont DEC	Within 1 year of

			license issuance and updated every 10 years thereafter.
I	Debris Disposal Plan	Vermont DEC	Within 6 months of license issuance.

The licensee must include with each plan filed with the Commission documentation that the licensee developed the plan in consultation with the above specified agencies and has received approval from the Vermont DEC, as appropriate. The Commission reserves the right to make changes to any plan submitted. Upon Commission approval, the plan becomes a requirement of the license, and the licensee must implement the plan or changes in project operations or facilities, including any changes required by the Commission.

(b) Requirement to File Reports

Vermont DEC certification condition D in Appendix A requires the licensee to file reports with Vermont DEC that describe deviations from the certification's operating conditions. These reports will document compliance with requirements of this license and may have bearing on future actions. Each such report must also be submitted to the Commission within 10 days of a deviation.

(c) Requirement to Notify the Commission of Planned and Unplanned Deviations from License Requirements

Certain conditions of Vermont DEC's certification in Appendix A would allow the licensee to temporarily modify project operations under certain conditions. The Commission must be notified prior to implementing such modifications, if possible, or in the event of an emergency, as soon as possible, but no later than 10 days after each such incident.

Vermont DEC Certification Condition	**License Requirement**
B	Impoundment drawdowns below the operating levels specified in certification condition B.
G	Any proposed limitations of access to State waters imposed by the licensee must first be subject to written approval by Vermont DEC. In cases where an immediate threat to public safety exists, access may be restricted without prior approval; the licensee must so notify Vermont DEC and must file a request for

	approval, if the restriction is to be permanent or long term, within 14 days of the restriction of access.
J	Any proposals for project maintenance or repair work, including drawdowns below the fixed dam crest to facilitate repair/maintenance work, must be filed with Vermont DEC for prior review and approval, if said work may have a material adverse effect on water quality or cause less-than full support of an existing use or a beneficial value or use of State waters.

(d) Requirement to File Amendment Applications.

Certain conditions of Vermont DEC's certification in Appendix A contemplate unspecified long-term changes to project operations or facilities for the purpose of mitigating environmental impacts. For example, condition E requires Green Mountain to provide upstream or downstream fish passage facilities, upon a request from the Vermont Department of Fish and Wildlife, if the status of Otter Creek fish populations or fishery management objectives change. Such changes may not be implemented without prior Commission authorization granted after the filing of an application to amend the license.

Article 402. *Spill Prevention Control and Countermeasures Plan*. Within six months of license issuance or at least 90 days before the start of any land-disturbing, land-clearing, or project facility upgrade activities, whichever occurs first, the licensee must file with the Commission for approval, a spill prevention control and countermeasures plan. The purpose of this plan is to minimize the potential for hazardous material spills and ensure that procedures are in place to minimize the extent and adverse effects of hazardous materials spills that occur during construction related to upgrades of the turbine-generator units and enhancement of recreation facilities, and operation and maintenance of the project.

The plan must include, but not necessarily be limited to, the following: (1) a description of how oil, fuels, lubricant products, and other hazardous liquid substances will be transported, stored, handled, and disposed of in a safe and environmentally acceptable manner; (2) a description of the equipment and procedures that will be used in the event of a spill to ensure the proper containment and cleanup of any hazardous substances to minimize adverse effects to water quality and aquatic resources in the project area; (3) a provision to notify the Commission and Vermont Department of Environmental Conservation (Vermont DEC) as soon as possible but no later than 24 hours after discovering a hazardous substances spill; and (4) a provision to file a report with the Commission within 10 days of a hazardous substance spill that identifies: (a) the location of the spill; (b) the type and quantity of hazardous material spilled; (c) any

corrective actions that have been undertaken to clean up the spill; and (d) any measures taken to ensure similar spills do not occur in the future.

The plan must be developed after consultation with the Vermont DEC. The licensee must include documentation of consultation, copies of recommendations on the completed plan after it has been prepared and provided to Vermont DEC, and specific descriptions of how Vermont DEC's comments are accommodated by the plan. The licensee must allow a minimum of 30 days for Vermont DEC to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing must include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. No land-disturbing activities, land-clearing activities, or project facility upgrades shall begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee must implement the plan, including any changes required by the Commission.

Article 403. *Trashrack Design*. At least 90 days before the start of any project facility upgrades at the Huntington Falls Development, the licensee must file with the Commission for approval, detailed design drawings of the licensee's proposed trashrack to reduce debris loading and ice buildup at the Huntington Falls Development's turbine-generator unit 3 intake.

This filing must include, but not necessarily be limited to, the following: (1) specifications of the size of the openings between the trashrack bars (not to exceed a bar spacing of 2 inches); (2) specifications for the maximum approach velocity (not to exceed 2 feet per second); and (3) a description of the methods and a schedule for installing the trashrack.

The licensee must prepare the drawings and schedule after consultation with U.S. Fish and Wildlife Service and the Vermont Fish and Wildlife Department. The licensee must include with the drawings and schedule documentation of consultation, copies of agency comments and recommendations on the drawings and schedule after they have been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the licensee's drawings. The licensee must allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the drawings and schedule with the Commission. If the licensee does not adapt a recommendation, the filing must include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the drawings and schedule. Project facility upgrades at the Huntington Falls Development must not begin until the license is notified by the Commission that the filing is approved. Upon Commission approval, the licensee must implement the proposal, including any changes required by the Commission.

Article 404. *Terrestrial Monitoring and Management Plan.* At least 90 days before the start of any land-disturbing, land-clearing, or project facility upgrade activities, the licensee must file with the Commission for approval, a terrestrial monitoring and management plan. The purposes of this plan are to re-vegetate areas disturbed by construction activities authorized under this license, prevent the spread of invasive plants, and protect federally-protected wildlife species and their respective habitats within the project area.

The plan must include, but not be limited to, the following:

(1) measures to ensure the protection of federally-listed wildlife species, to include at a minimum: (a) a provision to survey proposed construction areas for evidence of bald eagle and Indiana bat use, and potential habitat; (b) a provision to file a report with the Commission, U.S. Fish and Wildlife Service (FWS), and Vermont Agency of Natural Resources (Vermont ANR), documenting the survey results, and detailing any proposed protection/avoidance measures as necessary, at least 90 days before the start of any land-disturbing, land-clearing, or project facility upgrade activities; and (c) an implementation schedule; and

(2) measures to ensure the protection of botanical resources during construction-related activities, to include at a minimum: (a) a provision to avoid areas with known populations of invasive plant species; (b) a detailed description of any measures in addition to item (2)(a) that will be implemented to prevent the proliferation of these species (e.g., washing construction equipment, training personnel, etc.); (c) a provision to limit lay down equipment to a small footprint; (d) a provision to re-vegetate areas disturbed by construction activities authorized under this license with native species once ground-disturbing activities are completed; (e) a description of how revegetated areas would be monitored to ensure the success of the plantings; and (f) an implementation schedule.

The licensee must prepare the plan after consultation with FWS and Vermont ANR. The licensee must include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee must allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the

Commission. If the licensee does not adopt a recommendation, the filing must include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan, including any associated reports. No land-disturbing activities, land-clearing activities, or project facility upgrades shall begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee must implement the plan, including any changes required by the Commission.

Article 405. *Recreation Plan*. The recreation plan required by Vermont Department of Environmental Conservation (Vermont DEC) water quality certification (certification) condition H (Appendix A) must include the additional following provisions: (1) install a gravel parking area for two to three vehicles at the Proctor Development's tailwater access site; (2) final design drawings for the Proctor Development's tailrace gravel parking lot; (3) install directional signage at the Proctor and Beldens developments; (4) install interpretative signage at the Proctor Development's tailrace access area that provides information about the Otter Creek Project and how it affected the marble industry in the Otter Creek Valley; (5) a schedule for (a) implementing signage and brush clearing at the Beldens Development; (b) installing directional and interpretive signage and constructing the parking lot at the Proctor Development; and (c) modifying the location of the boat barrier at the Huntington Falls Development; (6) ensure recreationists' safety during the installation of the turbines at the Proctor Development, including signage that will inform the public when recreation use restrictions will occur; (7) operate and maintain over the term of the license (a) the Proctor Development's parking lot; (b) the Beldens Development's canoe/kayak put-in, take-out, portage, viewing platform, picnic area, and parking lot; and (c) the Huntington Falls Development's overlook/picnic area, parking lot, canoe put-in, take-out, and the portage trail from the take-out to Morgan Horse Farm Road, excluding Morgan Horse Farm Road, and from Morgan Horse Farm Road to the put-in; and (8) a discussion of how the needs of the disabled were considered in developing the plan.

The licensee must prepare the plan after consultation with the Vermont DEC, as required by certification condition H, and the additional following entities: (1) Vermont Agency of Natural Resources (Vermont ANR); and (2) the Middlebury Area Land Trust (Middlebury Trust). The licensee must include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the Vermont DEC, Vermont ANR, and the Middlebury Trust, and specific descriptions of how the entities' comments are accommodated by the plan.

The Proctor Development's tailrace parking lot, built in accordance with this plan, must be shown on the as-built drawings filed pursuant to Article 304.

Article 406. *Programmatic Agreement and Historic Properties Management Plan*. The licensee must implement the "Programmatic Agreement Between the Federal Energy Regulatory Commission and the Vermont State Historic Preservation Officer for Managing Historic Properties that May be Affected by Issuance of a License to Green Mountain Power Corporation for the Continued Operation of the Otter Creek Hydroelectric Project in Addison and Rutland Counties, Vermont," executed on December 30, 2013, and including but not limited to the Historic Properties Management Plan (HPMP) for the project. In the event that the Programmatic Agreement is terminated, the licensee must continue to implement the provisions of its approved HPMP. The Commission reserves the authority to require changes to the HPMP at any time during the term of the license.

Article 407. *Use and Occupancy*. (a) In accordance with the provisions of this article, the licensee must have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee must also have continuing responsibility to supervise and control the use and occupancy for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee must take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The type of use and occupancy of project lands and waters for which the licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 water craft at a time and where said facility is intended to serve single-family type dwellings; (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline; and (4) food plots and other wildlife enhancement. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the

licensee must require multiple use and occupancy of facilities for access to project lands or waters. The licensee must also ensure, to the satisfaction of the Commission's authorized representative, that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licensee must: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap will be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and will not change the basic contour of the impoundment shoreline. To implement this paragraph (b), the licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The licensee may convey easements or rights-of-way across, or leases of project lands for: (1) replacement, expansion, realignment, or maintenance of bridges or roads where all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project impoundment. No later than January 31 of each year, the licensee must file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certification or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 water craft at a time and are located at least one-half mile (measured over project waters) from any other private or public marina; (6) recreational development consistent with an approved report on

recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from project waters at normal surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 60 days before conveying any interest in project lands under this paragraph (d), the licensee must file a letter with the Commission, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked Exhibit G map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Commission's authorized representative, within 45 days from the filing date, requires the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraph (c) or (d) of this article:

(1) Before conveying the interest, the licensee must consult with federal and state fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer.

(2) Before conveying the interest, the licensee must determine that the proposed use of the lands to be conveyed is not inconsistent with any approved report on recreational resources of an Exhibit E; or, if the project does not have an approved report on recreational resources, that the lands to be conveyed do not have recreational value.

(3) The instrument of conveyance must include the following covenants running with the land: (i) the use of the lands conveyed must not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; (ii) the grantee must take all reasonable precautions to ensure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project; and (iii) the grantee must not unduly restrict public access to project waters.

(4) The Commission reserves the right to require the licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude

land conveyed under this article only upon approval of revised Exhibit G drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project must be consolidated for consideration when revised Exhibit G drawings would be filed for approval for other purposes.

(g) The authority granted to the licensee under this article must not apply to any part of the public lands and reservations of the United States included within the project boundary.

(F) The licensee must serve copies of any Commission filing required by this order on any entity specified in the order to be consulted on matters relating to that filing. Proof of service on these entities must accompany the filing with the Commission.

(G) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the FPA, 16 U.S.C. § 825*l* (2012), and section 385.713 of the Commission's regulations, 18 C.F.R. § 385.713 (2014). The filing of a request for rehearing does not operate as a stay of the effective date of this license or of any date specified in this order. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

Jeff C. Wright
Director
Office of Energy Projects

Form L-3 (October, 1975)

FEDERAL ENERGY REGULATORY COMMISSION

TERMS AND CONDITIONS OF LICENSE FOR CONSTRUCTED MAJOR PROJECT AFFECTING NAVIGABLE WATERS OF THE UNITED STATES

Article 1. The entire project, as described in this order of the Commission, shall be subject to all of the provisions, terms, and conditions of the license.

Article 2. No substantial change shall be made in the maps, plans, specifications, and statements described and designated as exhibits and approved by the Commission in its order as a part of the license until such change shall have been approved by the Commission: Provided, however, That if the Licensee or the Commission deems it necessary or desirable that said approved exhibits, or any of them, be changed, there shall be submitted to the Commission for approval a revised, or additional exhibit or exhibits covering the proposed changes which, upon approval by the Commission, shall become a part of the license and shall supersede, in whole or in part, such exhibit or exhibits theretofore made a part of the license as may be specified by the Commission.

Article 3. The project area and project works shall be in substantial conformity with the approved exhibits referred to in Article 2 herein or as changed in accordance with the provisions of said article. Except when emergency shall require for the protection of navigation, life, health, or property, there shall not be made without prior approval of the Commission any substantial alteration or addition not in conformity with the approved plans to any dam or other project works under the license or any substantial use of project lands and waters not authorized herein; and any emergency alteration, addition, or use so made shall thereafter be subject to such modification and change as the Commission may direct. Minor changes in project works, or in uses of project lands and waters, or divergence from such approved exhibits may be made if such changes will not result in a decrease in efficiency, in a material increase in cost, in an adverse environmental impact, or in impairment of the general scheme of development; but any of such minor changes made without the prior approval of the Commission, which in its judgment have produced or will produce any of such results, shall be subject to such alteration as the Commission may direct.

Article 4. The project, including its operation and maintenance and any work incidental to additions or alterations authorized by the Commission, whether or not conducted upon lands of the United States, shall be subject to the inspection and

supervision of the Regional Engineer, Federal Energy Regulatory Commission, in the region wherein the project is located, or of such other officer or agent as the Commission may designate, who shall be the authorized representative of the Commission for such purposes. The Licensee shall cooperate fully with said representative and shall furnish him such information as he may require concerning the operation and maintenance of the project, and any such alterations thereto, and shall notify him of the date upon which work with respect to any alteration will begin, as far in advance thereof as said representative may reasonably specify, and shall notify him promptly in writing of any suspension of work for a period of more than one week, and of its resumption and completion. The Licensee shall submit to said representative a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of any such alterations to the project. Construction of said alterations or any feature thereof shall not be initiated until the program of inspection for the alterations or any feature thereof has been approved by said representative. The Licensee shall allow said representative and other officers or employees of the United States, showing proper credentials, free and unrestricted access to, through, and across the project lands and project works in the performance of their official duties. The Licensee shall comply with such rules and regulations of general or special applicability as the Commission may prescribe from time to time for the protection of life, health, or property.

Article 5. The Licensee, within five years from the date of issuance of the license, shall acquire title in fee or the right to use in perpetuity all lands, other than lands of the United States, necessary or appropriate for the construction maintenance, and operation of the project. The Licensee or its successors and assigns shall, during the period of the license, retain the possession of all project property covered by the license as issued or as later amended, including the project area, the project works, and all franchises, easements, water rights, and rights or occupancy and use; and none of such properties shall be voluntarily sold, leased, transferred, abandoned, or otherwise disposed of without the prior written approval of the Commission, except that the Licensee may lease or otherwise dispose of interests in project lands or property without specific written approval of the Commission pursuant to the then current regulations of the Commission. The provisions of this article are not intended to prevent the abandonment or the retirement from service of structures, equipment, or other project works in connection with replacements thereof when they become obsolete, inadequate, or inefficient for further service due to wear and tear; and mortgage or trust deeds or judicial sales made thereunder, or tax sales, shall not be deemed voluntary transfers within the meaning of this article.

Article 6. In the event the project is taken over by the United States upon the termination of the license as provided in Section 14 of the Federal Power Act, or is transferred to a new licensee or to a nonpower licensee under the provisions of Section 15

of said Act, the Licensee, its successors and assigns shall be responsible for, and shall make good any defect of title to, or of right of occupancy and use in, any of such project property that is necessary or appropriate or valuable and serviceable in the maintenance and operation of the project, and shall pay and discharge, or shall assume responsibility for payment and discharge of, all liens or encumbrances upon the project or project property created by the Licensee or created or incurred after the issuance of the license: Provided, That the provisions of this article are not intended to require the Licensee, for the purpose of transferring the project to the United States or to a new licensee, to acquire any different title to, or right of occupancy and use in, any of such project property than was necessary to acquire for its own purposes as the Licensee.

Article 7. The actual legitimate original cost of the project, and of any addition thereto or betterment thereof, shall be determined by the Commission in accordance with the Federal Power Act and the Commission's Rules and Regulations thereunder.

Article 8. The Licensee shall install and thereafter maintain gages and stream-gaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative. The Commission reserves the right, after notice and opportunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may mutually agreed upon. The Licensee shall keep accurate and sufficient records of the foregoing determinations to the satisfaction of the Commission, and shall make return of such records annually at such time and in such form as the Commission may prescribe.

Article 9. The Licensee shall, after notice and opportunity for hearing, install additional capacity or make other changes in the project as directed by the Commission, to the extent that it is economically sound and in the public interest to do so.

Article 10. The Licensee shall, after notice and opportunity for hearing, coordinate

the operation of the project, electrically and hydraulically, with such other projects or power systems and in such manner as the Commission any direct in the interest of power and other beneficial public uses of water resources, and on such conditions concerning the equitable sharing of benefits by the Licensee as the Commission may order.

Article 11. Whenever the Licensee is directly benefited by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement, the Licensee shall reimburse the owner of the headwater improvement for such part of the annual charges for interest, maintenance, and depreciation thereof as the Commission shall determine to be equitable, and shall pay to the United States the cost of making such determination as fixed by the Commission. For benefits provided by a storage reservoir or other headwater improvement of the United States, the Licensee shall pay to the Commission the amounts for which it is billed from time to time for such headwater benefits and for the cost of making the determinations pursuant to the then current regulations of the Commission under the Federal Power Act.

Article 12. The United States specifically retains and safeguards the right to use water in such amount, to be determined by the Secretary of the Army, as may be necessary for the purposes of navigation on the navigable waterway affected; and the operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be controlled by such reasonable rules and regulations as the Secretary of the Army may prescribe in the interest of navigation, and as the Commission may prescribe for the protection of life, health, and property, and in the interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes, and the Licensee shall release water from the project reservoir at such rate in cubic feet per second, or such volume in acre-feet per specified period of time, as the Secretary of the Army may prescribe in the interest of navigation, or as the Commission may prescribe for the other purposes hereinbefore mentioned.

Article 13. On the application of any person, association, corporation, Federal agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and opportunity for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement

between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

Article 14. In the construction or maintenance of the project works, the Licensee shall place and maintain suitable structures and devices to reduce to a reasonable degree the liability of contact between its transmission lines and telegraph, telephone and other signal wires or power transmission lines constructed prior to its transmission lines and not owned by the Licensee, and shall also place and maintain suitable structures and devices to reduce to a reasonable degree the liability of any structures or wires falling or obstructing traffic or endangering life. None of the provisions of this article are intended to relieve the Licensee from any responsibility or requirement which may be imposed by any other lawful authority for avoiding or eliminating inductive interference.

Article 15. The Licensee shall, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities, and comply with such reasonable modifications of the project structures and operation, as may be ordered by the Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the fish and wildlife agency or agencies of any State in which the project or a part thereof is located, after notice and opportunity for hearing.

Article 16. Whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the Licensee shall permit the United States or its designated agency to use, free of cost, such of the Licensee's lands and interests in lands, reservoirs, waterways and project works as may be reasonably required to complete such facilities or such improvements thereof. In addition, after notice and opportunity for hearing, the Licensee shall modify the project operation as may be reasonably prescribed by the Commission in order to permit the maintenance and operation of the fish and wildlife facilities constructed or improved by the United States under the provisions of this article. This article shall not be interpreted to place any obligation on the United States to construct or improve fish and wildlife facilities or to relieve the Licensee of any obligation under this license.

Article 17. The Licensee shall construct, maintain, and operate, or shall arrange for the construction, maintenance, and operation of such reasonable recreational facilities,

including modifications thereto, such as access roads, wharves, launching ramps, beaches, picnic and camping areas, sanitary facilities, and utilities, giving consideration to the needs of the physically handicapped, and shall comply with such reasonable modifications of the project, as may be prescribed hereafter by the Commission during the term of this license upon its own motion or upon the recommendation of the Secretary of the Interior or other interested Federal or State agencies, after notice and opportunity for hearing.

Article 18. So far as is consistent with proper operation of the project, the Licensee shall allow the public free access, to a reasonable extent, to project waters and adjacent project lands owned by the Licensee for the purpose of full public utilization of such lands and waters for navigation and for outdoor recreational purposes, including fishing and hunting: Provided, That the Licensee may reserve from public access such portions of the project waters, adjacent lands, and project facilities as may be necessary for the protection of life, health, and property.

Article 19. In the construction, maintenance, or operation of the project, the Licensee shall be responsible for, and shall take reasonable measures to prevent, soil erosion on lands adjacent to streams or other waters, stream sedimentation, and any form of water or air pollution. The Commission, upon request or upon its own motion, may order the Licensee to take such measures as the Commission finds to be necessary for these purposes, after notice and opportunity for hearing.

Article 20. The Licensee shall clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. All clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

Article 21. Material may be dredged or excavated from, or placed as fill in, project lands and/or waters only in the prosecution of work specifically authorized under the license; in the maintenance of the project; or after obtaining Commission approval, as appropriate. Any such material shall be removed and/or deposited in such manner as to reasonably preserve the environmental values of the project and so as not to interfere with traffic on land or water. Dredging and filling in a navigable water of the United States shall also be done to the satisfaction of the District Engineer, Department of the Army, in charge of the locality.

Article 22. Whenever the United States shall desire to construct, complete, or improve navigation facilities in connection with the project, the Licensee shall convey to the United States, free of cost, such of its lands and rights-of-way and such rights of passage through its dams or other structures, and shall permit such control of its pools, as may be required to complete and maintain such navigation facilities.

Article 23. The operation of any navigation facilities which may be constructed as a part of, or in connection with, any dam or diversion structure constituting a part of the project works shall at all times be controlled by such reasonable rules and regulations in the interest of navigation, including control of the level of the pool caused by such dam or diversion structure, as may be made from time to time by the Secretary of the Army.

Article 24. The Licensee shall furnish power free of cost to the United States for the operation and maintenance of navigation facilities in the vicinity of the project at the voltage and frequency required by such facilities and at a point adjacent thereto, whether said facilities are constructed by the Licensee or by the United States.

Article 25. The Licensee shall construct, maintain, and operate at its own expense such lights and other signals for the protection of navigation as may be directed by the Secretary of the Department in which the Coast Guard is operating.

Article 26. If the Licensee shall cause or suffer essential project property to be removed or destroyed or to become unfit for use, without adequate replacement, or shall abandon or discontinue good faith operation of the project or refuse or neglect to comply with the terms of the license and the lawful orders of the Commission mailed to the record address of the Licensee or its agent, the Commission will deem it to be the intent of the Licensee to surrender the license. The Commission, after notice and opportunity for hearing, may require the Licensee to remove any or all structures, equipment and power lines within the project boundary and to take any such other action necessary to restore the project waters, lands, and facilities remaining within the project boundary to a condition satisfactory to the United States agency having jurisdiction over its lands or the Commission's authorized representative, as appropriate, or to provide for the continued operation and maintenance of nonpower facilities and fulfill such other obligations under the license as the Commission may prescribe. In addition, the Commission in its discretion, after notice and opportunity for hearing, may also agree to the surrender of the license when the Commission, for the reasons recited herein, deems it to be the intent of the Licensee to surrender the license.

Article 27. The right of the Licensee and of its successors and assigns to use or occupy waters over which the United States has jurisdiction, or lands of the United States

under the license, for the purpose of maintaining the project works or otherwise, shall absolutely cease at the end of the license period, unless the Licensee has obtained a new license pursuant to the then existing laws and regulations, or an annual license under the terms and conditions of this license.

Article 28. The terms and conditions expressly set forth in the license shall not be construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.

APPENDIX A

WATER QUALITY CERTIFICATION

Issued May 30, 2014, by the Vermont Department of Environmental Conservation (Vermont DEC) for the Otter Creek Project.

Decision and Certification

The Department has examined the project application and bases its decision in this Certification upon an evaluation of the information contained therein that is relevant to the Department's responsibilities under Section 401 of the Federal Clean Water Act and has examined other pertinent information deemed relevant by the Department, sufficient to permit the Department to certify that there is reasonable assurance that operation and maintenance of the Otter Creek 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 will be in compliance with sections 301, 302, 303, 306, and 307 of the Federal Clean Water Act, 33 U.S.C. §1251 et seq., as amended, and other appropriate requirements of state law.

A. Compliance with Conditions. The Applicant shall provide notice to the Department of any proposed change to the project that would have a significant or material effect on the findings, conclusions or conditions of this Certification, including any changes to operation of the project. The Applicant shall not make any such change without approval of the Department.

B. Flow and Water Level Management. Project facilities shall be operated in accordance with the flow and water level management prescriptions described below. Bypass conservation flows shall be released on a continuous basis and not interrupted; conservation flows are the values listed below, or instantaneous inflow, if less, unless otherwise noted. True run-of-river operations, or r-o-r, where referenced, means no utilization of impoundment storage and that outflow from the facility is equal to inflow to the impoundment on an instantaneous basis, as further described in Footnote 2, page 6. When a facility is not operating, all flows shall be spilled at the dam.

Impoundments shall not be drawn below the fixed dam crests unless special approval is granted by the Department under Condition J below, or for a safety-related emergency. In the latter case, the Department shall be notified within 24 hours.

Proctor: When operating in run-of-river mode, the impoundment target elevation shall be 469.5 ft. msl. During peaking operations, the impoundment shall be operated between elevations 469.5 ft. msl and 468.0 feet msl. Peaking operations shall be subject to the operational constraints described in the tables below. A bypass conservation flow of 60 cfs shall be released at the dam at all times.

May 1 through June 30[41]	
River Inflow (cfs)[42]	**Description of Operations**
<400	Operate in true run-of-river mode with outflows equaling inflows on an instantaneous basis.
≥ 400	Operate in peaking mode with total turbine discharge no more than 1.5 times inflow over 24 hours.

Julv 1 through Julv 15	
River Inflow (cfs)	**Description of Operations**
<200	Operate in true run-of-river mode with outflows equaling inflows on an instantaneous basis.

[41] All dates are inclusive.

[42] River inflows shall be defined by using the U.S. Geological Survey gage (Otter Creek at Center Rutland, Vermont, Gage No. 04282000) to determine the daily minimum flow for the calendar day prorated to the Proctor Station to select correct peaking mode operation.

200-399	Operate in peaking mode with total turbine discharge no more than 1.5 times inflow over 24 hours.
≥ 400	Operate in peaking mode with total turbine discharge no more than 2.0 times inflow over 24 hours.

July 16 through April 30	
River Inflow (cfs)	**Description of Operations**
<200	Operate in true run-of-river mode with outflows equaling inflows on an instantaneous basis.
200-399	Operate in peaking mode with total turbine discharge no more than 2.5 times inflow over 24 hours.
≥ 400	Operate in peaking mode with total turbine discharge no more than 3.0 times inflow over 24 hours.

Beldens: The facility shall be operated in a true run-of-river mode where instantaneous inflows to the impoundment at all times. A bypass conservation flow of 35 cfs, with 10 cfs spilled over the east dam and 25 cfs over the west dam, shall be released at all times. The impoundment target elevation shall be 283.0 feet msl.

Huntington Falls: The facility shall be operated in a true run-of-river mode where instantaneous inflows to the impoundment at all times. A bypass conservation flow of 66 cfs shall be released at all times through a gate located at the dam. The impoundment target elevation shall be 217.8 feet msl.

C. Flow Management During Impoundment Refill. During refilling of a project impoundment following a drawdown associated with peaking operations at Proctor

Station or for maintenance purposes, up to 10 percent of instantaneous inflow may be placed in storage in order to restore the water level without significantly reducing downstream flows.

D. Flow Management and Monitoring Plan. The Applicant shall develop and file with the Department a flow management and monitoring plan detailing how each development within the project will be operated to achieve compliance with the flow and water level management limitations described above. The plan shall include provisions for record keeping to demonstrate compliance. At a minimum, the records shall include hourly turbine flows, hourly impoundment elevations, hourly gate releases and gate and flashboard/inflatable dam status.

The plan shall include a detailed procedure about the operation of Proctor Station that addresses the ramping rate during peaking operations including the up ramp and down ramp. The plan shall include details on the sequence the units will be brought on/off line in order to be in compliance with agreed upon ramping rates. The plan shall include a provision for the inclusion of contemporaneous records from the U.S. Geological Survey gage (Otter Creek at Center Rutland, Vermont, Gage No. 04282000) associated with operation of Proctor Station and for funding the State portion for operation of the gage under the Joint Funding Agreement with the USGS.

The plan shall include the design and location of the gate at the dam that will be used to release the bypass conservation flow at Huntington Falls Station.

The plan shall include procedures for reporting to the Department deviations from prescribed operating conditions. In reporting deviations, the applicant shall include an explanation of the cause; propose steps to be taken to prevent a recurrence; and revise the plan if requested to do so by the Department.

The plan shall be developed in consultation with the Department and the U.S. Fish and Wildlife Service, and the plan shall be submitted to the Department for review within 60 days of the issuance of a federal license. The plan shall be subject to Department approval. The Department reserves the right of review and approval of any material changes made to the plan at any time and the right to request revisions to the plan if necessary to assure compliance. Compliance records shall be kept permanently and provided to the Department on request in a format specified by the Department.

E. Fish Passage. In the event that the status of Otter Creek fish populations or fishery management objectives change, and upon a request of the Department of Fish and Wildlife, the Department may require the applicant to provide upstream or

downstream fish passage facilities.

F. Turbine Rating Curves. The Applicant shall provide the Department with a copy of the turbine rating curves, accurately depicting the flow/production relationship, for the record within one year of the issuance of a federal license.

G. Public Access. The Applicant shall allow public access to project lands for utilization of public resources, subject to reasonable safety and liability limitations. Such access should be prominently and permanently posted so that its availability is made known to the public. Any proposed limitations of access to State waters to be imposed by the Applicant shall first be subject to written approval by the Department. Access may be restricted without prior approval when an immediate threat to public safety exists. In those cases, the Applicant shall so notify the Department and shall file a request for approval, if the restriction is to be permanent or long term, within 14 days of the restriction of access.

H. Recreational Facilities. Recreational facilities shall be constructed and maintained consistent with a recreation plan approved by the Department. The issues addressed in the plan shall include provision of portages and sanitation at recreation sites for the three facilities. The plan shall be filed with the Department within one year of license issuance and shall include an implementation schedule. Where appropriate, the recreation plan shall include details on erosion control. The plan shall be updated at intervals not exceeding ten years or a written statement provided that indicates the basis for there being no need to upgrade the facilities or otherwise modify the plan. Modifications to the recreation plan shall also be subject to Department approval over the term of the license. The Department approved recreation plan and all amendments thereto as approved by the Department shall be incorporated by reference as conditions of this Certification.

I. Debris Disposal. The Applicant shall develop a plan for proper disposal of debris associated with project operation, including trashrack debris. The plan shall be developed in consultation with the Department, and a draft shall be submitted to the Department within 90 days of license issuance. The final plan shall be subject to Department approval. The Department reserves the right of review and approval of any material changes made to the plan at any time.

J. Maintenance and Repair Work. Any proposals for project maintenance or repair work, including drawdowns below the fixed dam crests to facilitate repair/maintenance work, shall be filed with the Department for prior review and approval, if said work may have a material adverse effect on water quality or cause less-than-full support of a designated use of State waters.

K. Record Drawings. The Applicant shall provide the Department with a digital set of as-built plans for the record within one year of the completion of construction of project modifications at Proctor and Huntington Falls.

L. Compliance Inspection by Department. The Applicant shall allow the Department to inspect the project area at any time to monitor compliance with Certification conditions.

M. Posting of Certification. A copy of this Certification shall be prominently posted within the powerhouses at the three developments.

N. Approval of Project Changes. Any change to the project that would have a significant or material effect on the findings, conclusions, or conditions of this Certification, including project operation, must be submitted to the Department for prior review and written approval where appropriate and authorized by law and only as related to the change proposed.

O. Reopening of License. The Department may request, at any time, that FERC reopen the license to consider modifications to the license as necessary to assure compliance with the Standards.

P. Continuing Jurisdiction. The Department reserves the right to alter or amend this Certification over the life of the project when such action is necessary to assure compliance with the Standards and to respond to any changes in classification or management objectives for the affected waters.

Q. Reopening of Certification. The Agency may reopen and alter or amend the conditions of this Certification over the life of the Project when such action is necessary to assure compliance with the Vermont Water Quality Standards and to respond to any changes in the classification or management objectives for the affected waters. Any amendment that results in a change of conditions for the Project shall be subject to Paragraph H (Public Notice) and Paragraph I (Public Hearing) of the Section 401 Water Quality Certification Procedure, dated April 2, 2012.

FEDERAL ENERGY REGULATORY COMMISSION
Washington, D. C. 20426

OFFICE OF ENERGY PROJECTS

Project No. 2558-042 — Vermont
Otter Creek Project
Green Mountain Power Corporation

Mr. Steve Costello
Vice President
Green Mountain Power Corporation
77 Grove St.
Rutland, VT 05701

November 10, 2014

Subject: Interim Flow Releases and Need for Temporary Amendment of License.

Dear Mr. Costello:

This letter is in response to your Operations Compliance Plan (Plan) filed on July 21, 2015. You were required to file the Plan pursuant to Article 401 of your license and condition D of the Vermont Department of Environmental Conservations' (Vermont DEC) water quality certification (WQC) for the Otter Creek Project No. 2558.[1]

In the Plan, you are required to describe how you would comply with the flow and elevation requirements of your license. Condition B of the WQC requires you to release a bypass conservation flow at the Huntington Falls development of 66 cubic feet per second (cfs) at all times through a gate located at the dam. You have not yet constructed this gate and you explain, in your Plan, that it would be impractical to use the existing inflatable flashboard system at the Huntington Falls dam to consistently release 66 cfs. Therefore, you intend to release an interim flow of 48 cfs through two existing release facilities. You state the interim flow would be in effect until the new gate is completed, which is scheduled for the end of 2016. Additionally, the Vermont DEC stated that your final Plan, including the interim bypass flow, responded to all of the agency's recommendations.

Although your Huntington Falls development cannot efficiently release the required 66 cfs conservation flow at this time, and the Vermont DEC supports the interim flow, your license provides no provisions for deviating from the full, required bypass flow specified in the WQC. Therefore, to accommodate this difference between the

[1] *Green Mountain Power Corporation*, 149 FERC ¶ 62,048 (2014).

license requirement and your intended operation, you must file an application to temporarily amend the license to release 48 cfs from the Huntington Falls development until the new gate is operational. Your application should include an Exhibit E describing the environmental effects of the interim flow. Furthermore, as the Vermont DEC accommodated the interim flow through its acceptance of the Plan, and the U.S. Fish and Wildlife Service deferred its review to the Vermont DEC, you do not need to develop the application in consultation with the resource agencies.

Please file the amendment application within 45 days of the date of this letter. The Commission strongly encourages electronic filing. Please file the amendment application using the Commission's eFiling system at http://www.ferc.gov/docs-filing/efiling.asp. For assistance, please contact FERC Online Support at FERCOnlineSupport@ferc.gov, (866) 208-3676 (toll free), or (202) 502-8659 (TTY). In lieu of electronic filing, please send a paper copy to: Secretary, Federal Energy Regulatory Commission, 888 First Street NE, Washington, D.C. 20426. The first page of any filing should include docket number P-2558.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Steven Sachs by telephone at 202-502-8666 or by email at Steven.Sachs@ferc.gov.

Sincerely,

Kelly Houff
Chief, Engineering Resources Branch
Division of Hydropower Administration
and Compliance

cc: Mr. Andrew Qua
Senior Regulatory Coordinator
Kleinschmidt Associates
141 Main Street, P.O. Box 650
Pittsfield, ME 04967

Document Content(s)

APPENDIX E

RESOURCE AGENCY CONTACTS

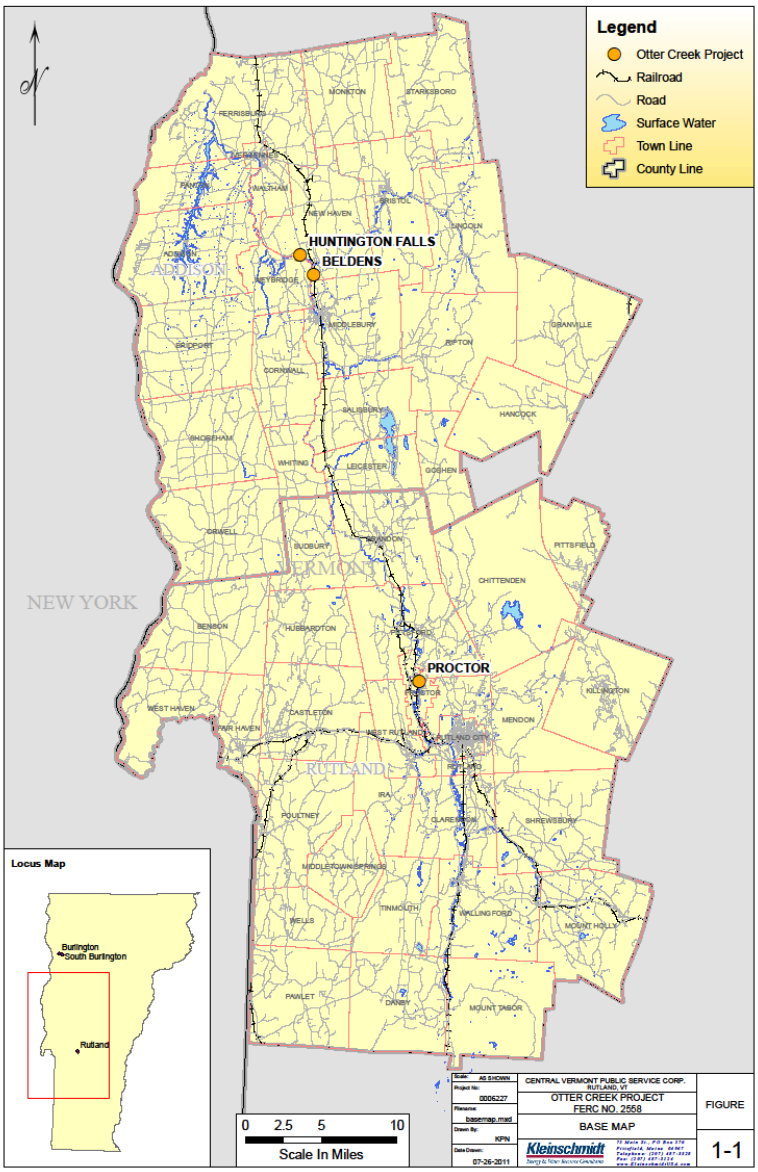
Contact Name	Organization	Position	Street Address	Street Address 2	Town	State	Zipcode	Phone	Email	Last Date of Contact	Nature of Discussion	Assessment of Ongoing Working Relationships
Jeffrey Crocker	Vermont Department of Environmental Conservation	River Ecologist	1 National Life Drive	Main 2	Montpelier	Vermont	05620	802-490-6151	jeff.crocker@state.vt.us	7/21/2015	Proctor Ramping Protocol Review	Good ongoing relationship.
Scott Dillon	Vermont Division of Historic Preservation	Survey Archeologist	National Life North Building	1 National Life Drive, 6th Floor	Montpelier	Vermont	5620	802-828-3048	scott.dillon@state.vt.us	12/6/2013	Proposal to add additional language to the draft Programmatic Agreement	Good ongoing relationship.
Laura Trieschmann	State Historic Preservation Officer	Vermont Division For Historic Preservation	1 National Life Building	6th Floor, Drawer 20	Montpelier	Vermont	5620	802-828-3222	laura.trieschmann@vermont.gov	11/6/2013	Concurrence with Proposed Modifications to Proctor Development	Good ongoing relationship.
Melissa Grader	U.S. Fish and Wildlife Service - New England Field Office	Fish and Wildlife Biologist	103 East Plumtree Road		Sunderland	Massachusetts	01375	413-548-8002	melissa_grader@fws.gov	5/30/2013	Endangered Species Review for proposed intake at Proctor Development	Good ongoing relationship.
Giovanna Peebles	Vermont Division of Historic Preservation	Vermont State Historic Preservation Officer	National Life North Building	1 National Life Drive, 6th Floor	Montpelier	Vermont	5620	802-828-3050	giovanna.peebles@state.vt.us	5/16/2013	Memorandum of agreement between the Federal Energy Regulatory Commission and the Vermont State Historic Preservation Officer, regarding the removal of powerhouse equipment and rehabilitation of the intake structure at the Proctor Development.	Good ongoing relationship.
Thomas Chapman	U.S. Fish and Wildlife Service - New England Field Office	Supervisor	70 Commercial Street	Suite 300	Concord	New Hampshire	03301	603-223-2541	Tom_Chapman@fws.gov	4/26/2013	Comments on non-capacity amendment to License	Good ongoing relationship.
Scott Darling	Vermont Fish and Wildlife Department	Wildlife Management Program Director	271 North Main Street	Suite 215	Rutland	Vermont	5701	802-786-3862	scott.darling@state.vt.us	1/30/2013	EA review regarding Indiana bat issues	Good ongoing relationship.
Brian Fitzgerald	Vermont Department of Environmental Conservation	Streamflow Protection Coordinator	1 National Life Drive	Main 2	Montpelier	Vermont	05620	802-490-6153	brian.fitzgerald@state.vt.us	1/22/2013	Comments on Draft Environmental Assessment	Good ongoing relationship.
Andrew Raddant	U.S. Department of the Interior - Office of Environmental Policy and Compliance	Regional Environmental Officer	400 Atlantic Avenue	Room 142	Boston	Massachusetts	2110	617-223-8565	Andrew_Raddant@ios.doi.gov	7/11/2012	Comments on Environmental Analysis	Good ongoing relationship.

APPENDIX F

OTTER CREEK HYDROELECTRIC PROJECT DESCRIPTION

DESCRIPTION OF FACILITY AND MODE OF OPERATION

The 22, 807 kilowatt (kW) (22.807 megawatts (MW)) Otter Creek Project (FERC No. 2558) is located on Otter Creek in west-central Vermont within Addison and Rutland counties, near the communities of Proctor, Middlebury, and Weybridge, Vermont. The Project includes three developments comprised of Proctor, Beldens, and Huntington Falls, and generates an average annual energy output of 67,258 MWh. The location of the Project developments is provided in the figure below.



Proctor Development

The Proctor Development is comprised of a masonry, concrete-capped dam constructed atop Southerland Falls (Photo 1). The dam is 13 ft-high by 128 ft-long and topped with a 3ft-high inflatable flashboard system. The development has a 100 ft-long by 17 ft-high by 45 ft-wide gated forebay-intake structure that contains trashracks with 1-inch clear bar spacing (Photo 2 and Photo 3). Two penstocks: a 9 ft-diameter, riveted steel penstock (decreasing to 8 ft-diameter beyond the surge tank foundation) that extends 345 ft from the dam to a former surge tank and decreases to 8 ft in diameter for an additional 96 ft beyond the surge tank foundation; and a 7 ft-diameter spiral welded steel penstock extending 500 ft to the powerhouse (Photo 4). The concrete and brick masonry powerhouse (Photo 5) is 33 ft by 100 ft and contains four Francis turbine-generator units rated at 2,245 kW, 1,715 kW, 1,719 kW, and 1,714 kW, respectively (Photo 6). An attached 28 ft by 48 ft steel structure contains an additional 2,840-kW vertical Francis turbine-generator unit. The development has a total hydraulic capacity of 1188 cfs and a total authorized installed capacity of 10,233 kW. The development is also comprised of generator leads, two banks of 0.48/4.16 kV single-phase transformers and a 0.48/43.8 kV, three-winding transformer, and appurtenant facilities.

The 95 acre impoundment has a usable storage capacity of 275 acre-feet at a normal maximum water surface elevation of 469.5 feet msl. The reservoir has an average weighted depth of 6.6 feet and 12.2 miles of shoreline. The substrate of the impoundment is generally comprised of silt substrate with little to no vegetation.

The Proctor development operates in a modified run-of-river mode. When operating in run-of-river mode, the impoundment target elevation is 469.5 ft msl. GMP operates the development in a true run-of-river mode from July 1 through April 30, when inflow is less than 200 cfs, and from May 1 through June 30, when inflow is less than 400 cfs. At all other times, GMP operates the Proctor Development in a 1.5 ft drawdown/refill cycle (i.e., peaking mode). During peaking operations, the impoundment is operated between elevations 469.5 ft msl and 468.0 ft msl. A bypass conservation flow of 60 cfs is additionally released at the dam at all times (Photo 7 and Photo 8).

PHOTO 1 PROCTOR DAM

PHOTO 2 PROCTOR INTAKE

PHOTO 3 PROCTOR INTAKE

PHOTO 4 PROCTOR PENSTOCKS

PHOTO 5 PROCTOR POWERHOUSE

PHOTO 6 PROCTOR GENERATING UNITS

PHOTO 7 PROCTOR BYPASSED REACH

PHOTO 8 UPSTREAM VIEW OF PROCTOR DEVELOPMENT

Beldens Development

Beldens Dam is located on Otter Creek and consists of a concrete dam in two sections on either side of a ledge/bedrock island. The east dam is about 24 ft-high by 57 ft-long and has an excavated tailrace extending from the powerhouse about 120 ft downstream (Photos 9 and 10). The west dam is approximately 15 ft-high and 56 ft-long and discharges to the bypassed reach (Photos 11 and 12). The dam is equipped with 2.5 ft wooden flashboards. There are two intake structures at the development: one approximately 79 ft-long with a section of trash racks spaced 2 inches on center; the other approximately 35 ft-long with a section of trash racks spaced 1 1/8 inches on center.

There are two penstocks at the Project (Photo 13). The first penstock begins as a single 12 ft diameter steel penstock that bifurcates into two 10 ft-diameter sections about 30 ft-long each leading to the original powerhouse (Powerhouse No. 1). A second 12 ft-diameter by 45 ft-long concrete penstock connects to a newer powerhouse (Powerhouse No. 2). Powerhouse No. 1 is a 40 ft by 44 ft concrete and masonry structure housing two horizontal Francis turbine generator units, one rated at 800 kW and one at 949 kW (Photo 14). Powerhouse No. 2 is 40 ft by 75 ft concrete structure housing a 4,100 kW horizontal Kaplan turbine generator unit (Photo 15). The development has a total hydraulic capacity of 2,000 cfs and total authorized installed capacity of 5,849 kW. The development also includes generator leads, a 2.4/46 kV step-up transformer bank, and appurtenant facilities, such as a jib crane for moving equipment.

The 22 acre impoundment has a usable storage capacity of 253 acre-ft at a normal maximum water surface elevation of 283 ft msl (Photo 16). The impoundment has approximately 4.2 miles of shoreline and the substrate of the impoundment is generally comprised of silt with little vegetation.

The Development operates in a run-of-river mode with instantaneous inflows to the impoundment at all times. A bypass conservation flow of 35 cfs, with 10 cfs spilled over the east dam and 25 cfs over the west dam, is released at all times (Photo 17). The impoundment target elevation is 283.0 ft msl.

PHOTO 9 BELDENS EAST DAM

PHOTO 10 BELDENS TAILRACE

PHOTO 11 BELDENS WEST DAM

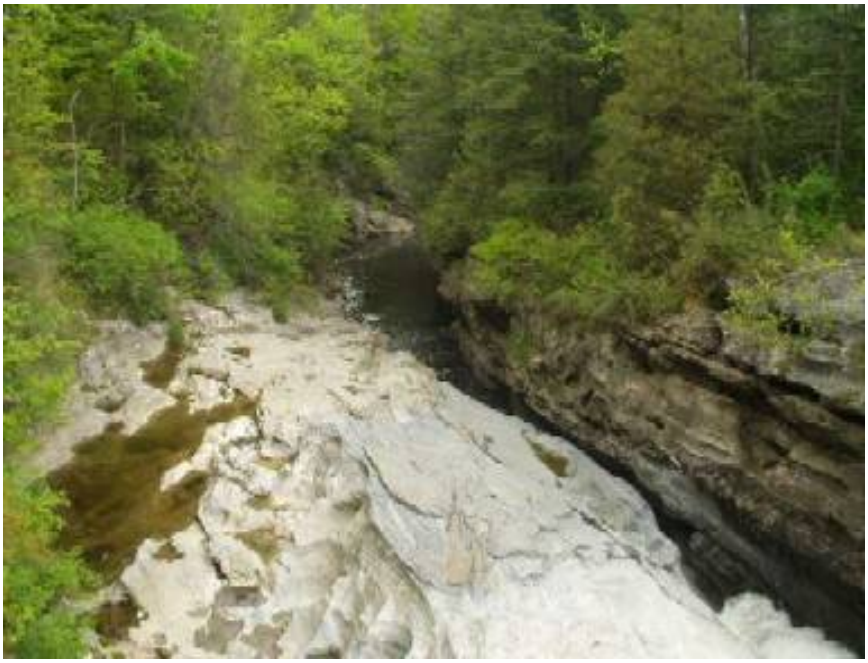


PHOTO 12 BELDENS BYPASS

PHOTO 13 BIFURCATED PENSTOCK TO POWERHOUSE NO. 1

PHOTO 14 BELDENS POWERHOUSE NO. 1

PHOTO 15 BELDENS POWERHOUSE NO. 2

PHOTO 16 BELDENS IMPOUNDMENT

PHOTO 17 BELDENS TAILRACE WITH BYPASS OUTFLOW

Huntington Falls Development

The dam at the Huntington Falls Development is 187 ft-long with a maximum height of about 31 ft, topped with a 2.5 ft inflatable flashboard system (Photo 18). The development tailrace continues from Powerhouse No. 1 for 120 ft downstream. The Development has a 40 ft-wide by 20 ft-high intake with 13 ft-high by 26 ft-wide trashracks with bar spacing of 1.125 inches. The second intake structure is 38 ft-high by 40 ft-wide with 16 ft high by 30 ft-wide trashracks with 2 inch clear bar spacing. The Development has three penstocks. Two are 10 ft-diameter steel penstocks, each approximately 30 ft-long, leading to the original powerhouse (Powerhouse No. 1). A third penstock, 12 ft diameter by 75 ft-long, leads to the newer powerhouse (Powerhouse No. 2). Powerhouse No. 1 is brick masonry, measuring 42 ft by 60 ft, and houses two horizontal Francis turbine generating units, with a combined installed capacity of 2,625 kW (Photo 19). Powerhouse No. 2 measures 40 ft by 75 ft, and houses a 4,100 kW horizontal Kaplan turbine generator (Photo 20). The development has a total hydraulic capacity of 2,250 cfs and a total authorized installed capacity of 6,725 kW. In addition, the development has generator leads, a 2.4/46 kV step-up transformer bank, and appurtenant facilities.

The 23 acre impoundment has a usable storage capacity of 234.16 acre-ft at a normal maximum water surface elevation of 217.8 ft msl (Photo 21). The impoundment has approximately 1.2 miles of shoreline and the substrate of the impoundment is generally comprised of silt with little to no vegetation.

The facility is operated in a run-of-river mode with instantaneous inflows to the impoundment at all times. Under the 2014 License an increased bypass conservation flow of 66 cfs was approved. Before the facility is able to provide a bypass flow of 66 cfs, physical modifications to the site are needed in order to provide increased flows. Modifications are planned for 2016/2017 and in the interim a bypass conservation flow of 48 cfs is voluntarily released at all times at two locations at the dam (Photo 22). The impoundment target level is 217.8 ft msl.

PHOTO 18 HUNTINGTON FALLS DAM AND BYPASSED REACH

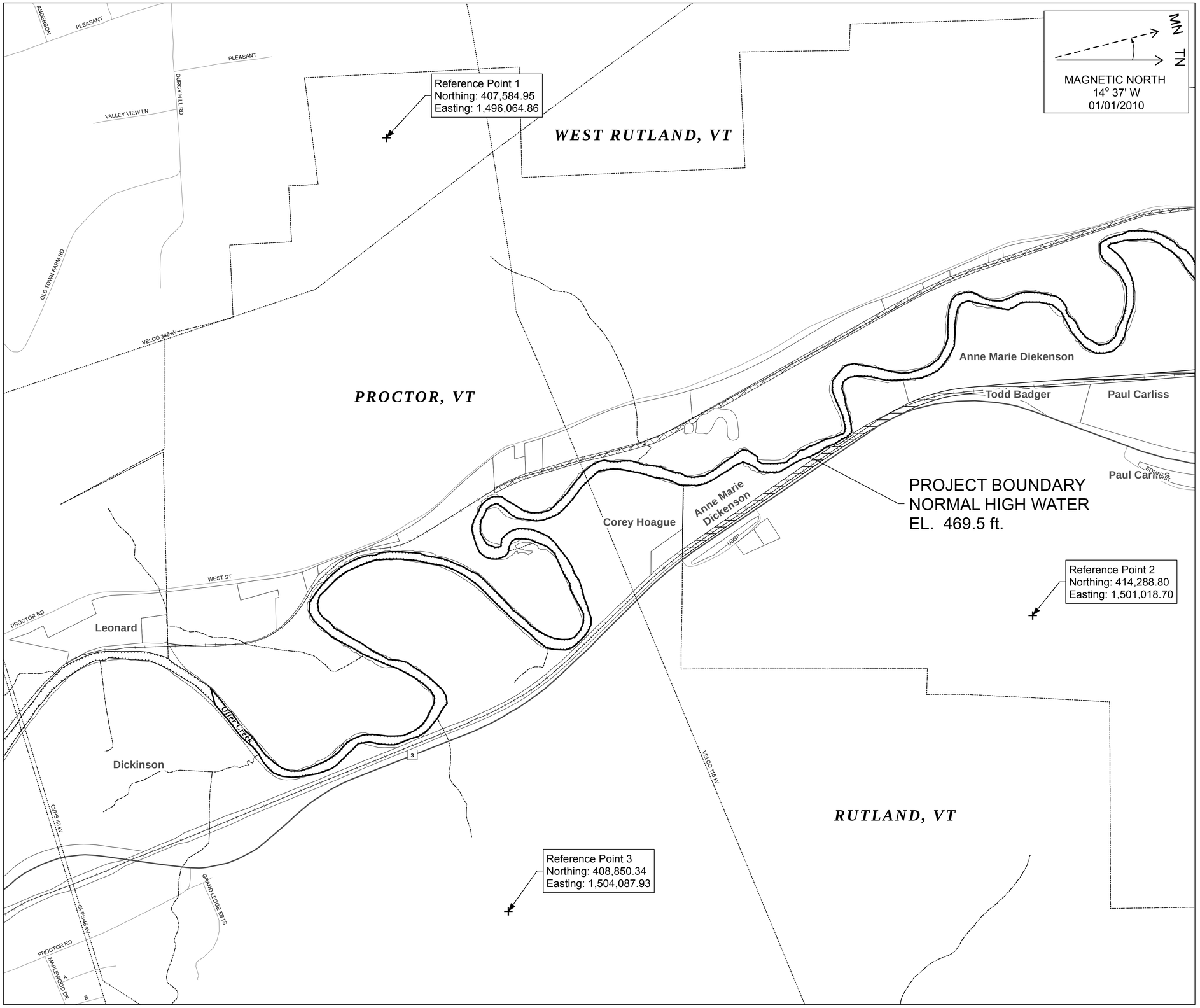
PHOTO 19 HUNTINGTON FALLS POWERHOUSE NO. 1

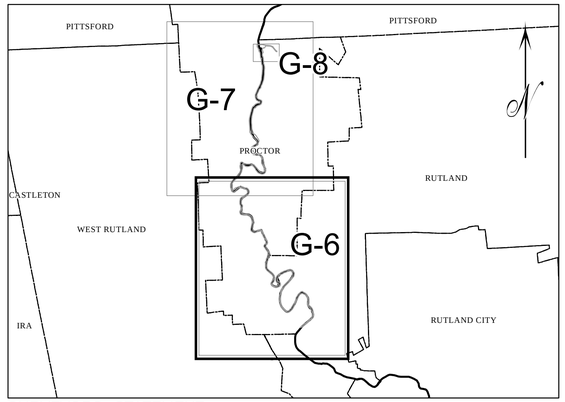
PHOTO 20 HUNTINGTON FALLS POWERHOUSE NO. 2

PHOTO 21 HUNTINGTON FALLS IMPOUNDMENT

PHOTO 22 HUNTINGTON FALLS DAM, BYPASSED REACH, POWERHOUSE NO. 1, AND TAILRACE

FACILITY PLANS AND DIAGRAMS





SURVEYORS STATEMENT

I HEREBY CERTIFY TO THE FEDERAL ENERGY REGULATORY COMMISSION (FERC) THAT THIS PLAN MEETS THE CONDITIONS SET FORTH BY FERC FOR ITS EXPRESSED PURPOSE. THE PURPOSE OF THIS MAP IS TO PROVIDE A GEOREFERENCED VISUAL DEPICTION OF THE LOCATION OF PROJECT FEATURES AND BOUNDARIES BASED ON THE BEST AVAILABLE HISTORICAL DRAWINGS AND DIGITAL REFERENCE SOURCES INCORPORATED INTO THE GEOGRAPHIC INFORMATION SYSTEM (GIS). LOCATIONS HAVE NOT BEEN VERIFIED BY PHYSICAL FIELD SURVEYS AND THIS DRAWING SHOULD NOT BE USED FOR PURPOSES OF DEVELOPING PROPERTY BOUNDARY DESCRIPTIONS.

STATE OF MAINE
STEPHEN W. EVERETT
2161
PROFESSIONAL
LAND SURVEYOR

Map notes and project boundary sources:
The Proctor Development is located in Rutland County, in the State of Vermont.

Reference point coordinates are shown in the Vermont State Plane Coordinate System, NAD 83, feet.

Elevations shown are referenced to the National Geodetic Vertical Datum of 1929. (NGVD29).

“Exhibit K, Sheet 5 of 5, Proctor-Beldens- Huntington Falls Project, Proctor Station Redevelopment, Project Area Detail Map, Vermont Marble Company, Proctor, Vermont” dated 11/13/80.

“Exhibit K, Sheet 1 of 4, General and Detail Map, Sutherland Falls, Vermont Marble Co., Proctor, Vt.” dated 6/27/77” (FERC No. 2558-8).

Kleinschmidt Associates. Proctor Station Redevelopment: Powerhouse Access Bridge Proposed Site Conditions. Dated 12/16/11.

VT True-color Orthos accessed through Bing.com at as scale of 1”=2,000’, February 2010.

EXHIBIT G SHEET 6 OF 8

OTTER CREEK HYDROELECTRIC PROJECT
FERC NO. 2558

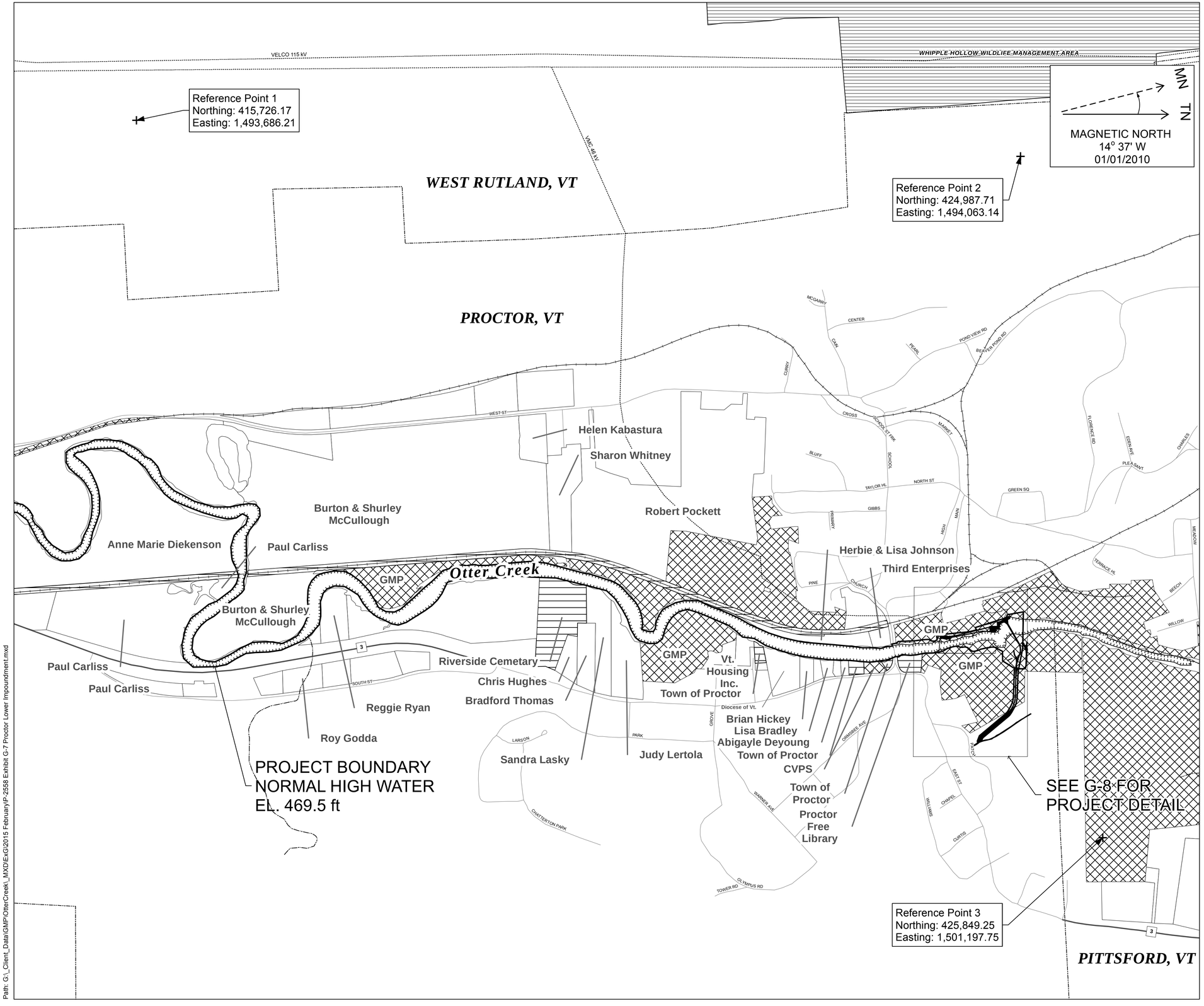
PROCTOR DEVELOPMENT UPPER IMPOUNDMENT

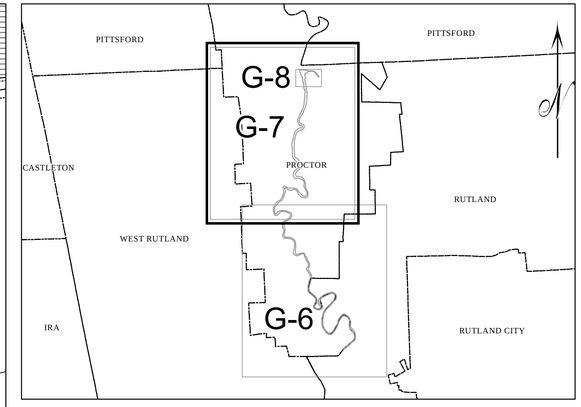
GREEN MOUNTAIN POWER, CORP.

0 500 1,000 1,500 2,000 FEET

1 IN = 500 FEET

Path: G:_Client_Data\GMP\OtterCreek_MXD\ExG\2015 February\P-2558 Exhibit G-6 Proctor Upper Impoundment.mxd





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LAND SURVEYOR

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Kleinschmidt Associates. Proctor Station Redevelopment: Powerhouse Access Bridge Proposed Site Conditions. Dated 12/16/11.

VT True-color Orthos accessed through Bing.com at as scale of 1”=2,000’, February 2010.

EXHIBIT G — SHEET 7 OF 8

OTTER CREEK HYDROELECTRIC PROJECT
FERC NO. 2558

PROCTOR DEVELOPMENT LOWER IMPOUNDMENT

GREEN MOUNTAIN POWER CORP.

0 500 1,000 1,500 2,000 FEET

1 IN = 500 FEET

Path: G:_Client_Data\GMP\OtterCreek_MXD\ExG\2015 February\P-2558 Exhibit G-7 Proctor Lower Impoundment.mxd

MN TN
MAGNETIC NORTH
14° 37' W
01/01/2010

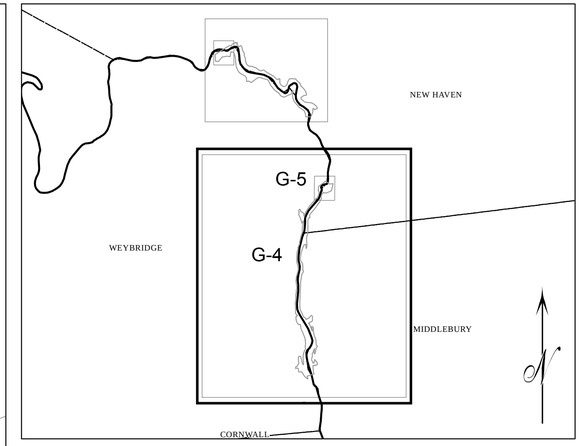
Reference Point 1
Northing: 558,494.26
Easting: 1,457,258.79

WEYBRIDGE RD
CVPS 46 KV
SHEEP FARM RD
HAMILTON RD
TERRACE HTS
MEADOW LN
WEYBRIDGE, VT
MORGAN HORSE FARM RD
BENNINGTON WAY
UVM MORGAN HORSE FARM
PRIVATE OWNERSHIP
Otter Creek
GMP
OTTER CREEK HOUSING LP DBA PINE MEADOW
PROJECT BOUNDARY
EL. 286.5 ft
MIDDLEBURY LAND TRUST
GMP
MIDDLEBURY COLLEGE
JACKSON LN
INDUSTRIAL AVE
POND LN
MAINELLI RD
EXCHANGE
SEE G-5 FOR PROJECT DETAILS
BELDEN FALLS RD
MAYAPPLE LN
MIDDLEBURY, VT
NEW HAVEN, VT
RIVER RD
VMC 46 kV
7

Reference Point 2
Northing: 566,247.85
Easting: 1,464,975.20

Reference Point 3
Northing: 558,531.44
Easting: 1,465,774.73

Path: G:_Client_Data\GMP\OtterCreek_MXD\ExG\2015 February\P-2558 Exhibit G-4 Beldens Impoundment.mxd



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STATE OF MAINE
STEPHEN W. EVERETT
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PROFESSIONAL
LAND SURVEYOR

Map notes and project boundary sources:
The Huntington Falls and Beldens Developments are located in Addison County, in the State of Vermont.

Reference point coordinates are shown in the Vermont State Plane Coordinate System, NAD 83, feet.

Elevations shown are referenced to the National Geodetic Vertical Datum of 1929. (NGVD29).

“Exhibit K, Sheet 2 of 4, General and Detail Map, Beldens Falls, Vermont Marble Co., Proctor, Vt.” dated 6/27/77” (FERC No. 2558-9).

“Vermont Marble Company-Beldens Hydroelectric Project-Site Plan” (Sheets 1 and 2 of 2) dated 8/1/84 by Morrison-Knudsen Engineers, Inc.

USGS. Middlebury quadrangle, Vermont. Photorevised 1972. 1:24,000. 7.5 Minute Series.

EXHIBIT G — SHEET 4 OF 8

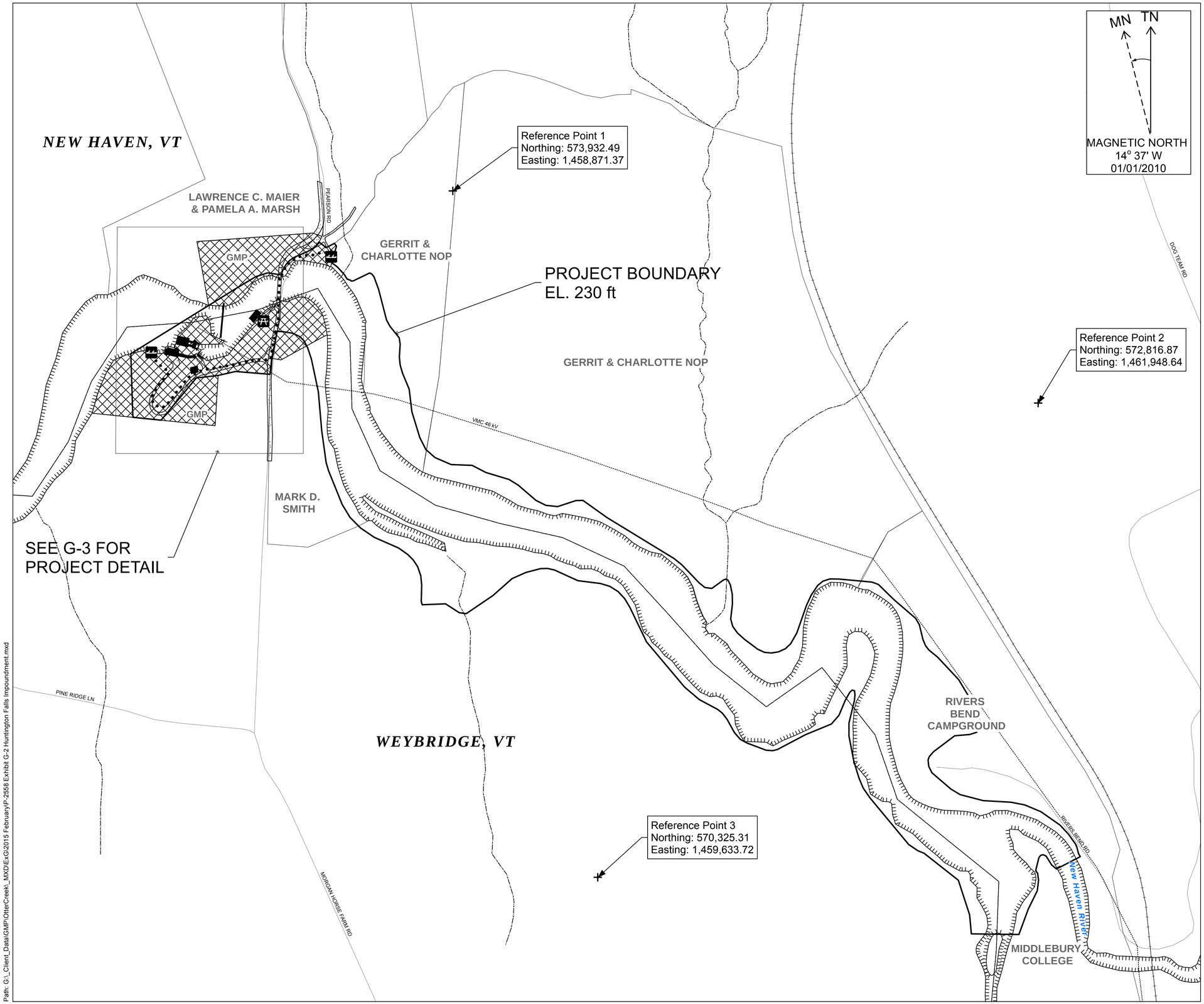
OTTER CREEK HYDROELECTRIC PROJECT
FERC NO. 2558

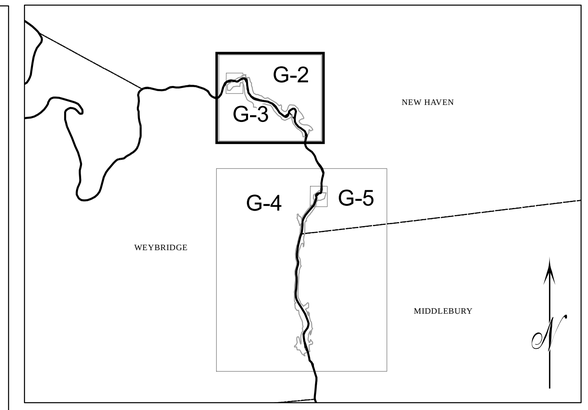
BELDENS DEVELOPMENT IMPOUNDMENT

GREEN MOUNTAIN POWER CORP.

0 500 1,000 1,500 2,000 FEET

1 IN = 500 FEET





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Elevations shown are referenced to the National Geodetic Vertical Datum of 1929. (NGVD29).

“Exhibit G-1 – Huntington Falls Hydroelectric Station – Project Location & Boundaries” (Undated).

“Plat of Survey For Central Vermont Public Service Corporation-Huntington Falls Generating Station” dated 10/26/2011 by R.F. Lunna Associates, P.C.

USGS. Middlebury quadrangle, Vermont. 2012. 1:24,000 7.5 Minute Series.

EXHIBIT G SHEET 2 OF 8

OTTER CREEK HYDROELECTRIC PROJECT
FERC NO. 2558

HUNTINGTON FALLS
DEVELOPMENT IMPOUNDMENT

GREEN MOUNTAIN POWER CORP.

0 125 250 500 750 1,000 Feet

1 IN = 250 FT

Path: G:_Client_Data\GMP\OterCreek_MXD\ExG\2015 February\P-2558 Exhibit G-2 Huntington Falls Impoundment.mxd

APPENDIX G

FLOW MANAGEMENT

Kleinschmidt

July 21, 2015

VIA E-FILING

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
ATTN: OEP/DHAC
888 First Street, NE
Washington, DC 20426

Otter Creek Hydroelectric Project, FERC No. P-2558
Article 401 – Flow Management and Monitoring Plan

Dear Secretary Bose:

The Commission issued an Order Issuing New License on October 23, 2014 (149 FERC ¶ 62,048) for Green Mountain Power Corporation's (GMP) Otter Creek Project. Article 401and water quality certification (WQC) Condition D, require development of a flow management and monitoring plan (Flow Plan) for the Project. The Flow Plan was required to be filed with the Commission by April 22, 2015. A draft Flow Plan was provided to Vermont Agency of Natural Resource (VANR)[1] for a minimum 30 day review on December 22, 2014. VANR provided written comments on January 26, 2015. Due to subsequent consultation efforts needed between GMP and VANR to resolve issues with the draft Flow Plan, GMP requested and received from the Commission, an extension of time to file the Flow Plan until July 21, 2015. Resolution of the last outstanding issues has been resolved between GMP and VANR and agreed up on provisions have been incorporated into the attached Flow Plan.

If there are any questions or comments regarding this request, please contact me at (207) 416-1246 or by email at Andy.Qua@KleinschmidtGroup.com.

Sincerely,

KLEINSCHMIDT ASSOCIATES

Andrew D. Qua
Senior Regulatory Coordinator

ADQ:TMJ
cc: Mike Scarzello – GMP
\\kleinschmidtusa.com\Condor\Jobs\006\227\Docs\Compliance\Operating Plan\003 Flow Plan FERC Transmittal.docx

[1] The WQC and license conditions identify Vermont Department of Environmental Conservation's (Vermont DEC) as the consulting agency. VANR is the division of DEC that reviews compliance plans under the WQC and FERC licensing process.

OPERATIONS COMPLIANCE PLAN

OTTER CREEK HYDROELECTRIC PROJECT
FERC NO. 2558

Prepared for:

Green Mountain Power Corporation
Rutland, Vermont

Prepared by:

Kleinschmidt

Pittsfield, Maine
www.KleinschmidtGroup.com

July 2015

OPERATIONS COMPLIANCE PLAN

OTTER CREEK HYDROELECTRIC PROJECT

FERC NO. 2558

Prepared for:

Green Mountain Power Corporation
Rutland, Vermont

Prepared by:

Pittsfield, Maine
www.KleinschmidtGroup.com

July 2015

OPERATIONS COMPLIANCE PLAN

OTTER CREEK HYDROELECTRIC PROJECT
FERC NO. 2558

GREEN MOUNTAIN POWER CORPORATION

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OPERATIONS COMPLIANCE PLAN

OTTER CREEK HYDROELECTRIC PROJECT
FERC NO. 2558

GREEN MOUNTAIN POWER CORPORATION

1.0 INTRODUCTION

The Otter Creek Hydroelectric Project (Project), located on Otter Creek in the counties of Addison and Rutland, Vermont, was issued a new license by the Federal Energy Regulatory Commission (FERC) on October 23, 2014. The Project (FERC No. 2558) is owned and operated Green Mountain Power Corporation (GMP). The new license and associated water quality certificate (issued by the State of Vermont on May 30, 2014) contain several items related to operations of the project and flow and water level management.

GMP prepared this Operations Compliance Plan (Plan) to serve as a comprehensive compliance plan addressing GMP's obligations related to operating the Project consistent with the flow and water level constraints contained in the water quality certificate and the FERC license.

1.1 PROJECT DESCRIPTION

The Otter Creek Project is located on Otter Creek in west-central Vermont within Addison and Rutland counties, near the communities of Proctor, New Haven, and Weybridge. Otter Creek is approximately 100 miles long and flows northeasterly from the headwaters of Emerald Lake to its confluence with Lake Champlain. The Otter Creek watershed drains an area of 1,106 square miles and is located in the Champlain Valley, which is a sub-unit of the larger Lake Champlain Basin. The Otter Creek Project consists of three developments: Proctor, Beldens, and Huntington Falls (listed from upstream to downstream).

1.2 LICENSE COMPLIANCE PLAN OVERVIEW

The FERC license for the Otter Creek Project incorporates by reference the conditions set forth in the Vermont Water Quality Certification (WQC). Three conditions in the WQC relate to flow management and monitoring.

Condition B of the WQC requires that GMP operate the Project in accordance with flow and water level management schedules as described later in this document. The bypass conservation flows shall be released on a continuous basis and not interrupted. Condition C of the WQC allows GMP to place up to 10 percent of instantaneous inflow in storage during refilling of the Proctor impoundment following a drawdown associated with peaking operations. Lastly, Condition D of the WQC requires GMP to develop a flow management and monitoring plan detailing how each development within the project will be operated to achieve compliance with the flow and water level management limitations described above.

This plan is intended to meet the requirements set forth under Condition D of the WQC and Article 401 of the FERC license. As such, the plan addresses the following items:

- ramping rates during peaking operations including the upramping and downramping associated with peaking operations at Proctor;
- the sequence the Proctor units will be brought on/off line in order to be in compliance with agreed upon ramping rates;
- provision for the inclusion of contemporaneous records from the USGS gage associated with operation of Proctor Station and for funding the State portion for operation of the gage under the Joint Funding Agreement with the USGS;
- design and location of the gate at the dam that will be used to release the bypass conservation flow at Huntington Falls Station; and
- procedures for reporting to the Vermont Department of Environmental Conservation (VDEC) and FERC deviations from prescribed operating conditions.

The intent of this plan is to serve as a comprehensive compliance plan addressing GMP's obligations related to operating the Project consistent with the flow and water level constraints contained in the WQC and the FERC license.

FIGURE 1 OTTER CREEK HYDROELECTRIC PROJECT

2.0 PROCTOR DEVELOPMENT

2.1 DESCRIPTION OF PROJECT WORKS

The Proctor Development consists of a 128-foot-long, 13-foot-high masonry, concrete-capped dam with a 3-foot-high inflatable flashboard system. The dam is located at river mile (RM) 64.2 and impounds a reservoir with a surface area of 95 acres and a usable storage capacity of 275 acre-feet at a normal maximum water surface elevation of 469.5 feet above mean sea level (msl).

Inflow from the reservoir passes through a 17-foot-deep by 45-foot-wide by 115-foot-long gated forebay-intake structure that contains trashracks with 1-inch clear bar spacing. Two steel penstocks convey water from the forebay to the powerhouse: (1) a 9-foot-diameter penstock that extends 354 feet from the dam to a former surge tank foundation and continues as an 8-foot-diameter penstock for an additional 96 feet from the surge tank to the powerhouse; and (2) a 7-foot-diameter, 500-foot-long penstock that extends directly from the dam to the powerhouse.

The original powerhouse at the Proctor Development is a concrete and masonry structure measuring 100 feet long by 33 feet wide and 50 feet high, housing the four generating units. The powerhouse has an attached 28-foot by 48-foot steel structure that contains one vertical Francis turbine-generator unit. The Proctor Development also includes a 1,200-foot-long access road and a 265-foot-long access bridge that is used to access the powerhouse.

The Proctor Development creates a 680-foot-long bypassed reach (i.e., Sutherland Falls), which drops approximately 100 feet in elevation from the base of the Proctor dam to the tailrace.

2.2 LICENSE REQUIREMENTS

When operating in run-of-river mode, the impoundment target elevation is 469.5 ft. msl. During peaking operations, the impoundment is operated between elevations 469.5 ft. msl and 468.0 feet msl. Peaking operations are subject to the operational constraints described in the tables below. A bypass conservation flow of 60 cfs will be released at the dam at all times. Seasonal operational conditions are governed by river flow as follows:

MAY 1 THROUGH JUNE 30[1]	
RIVER INFLOW (CFS)	**DESCRIPTION OF OPERATIONS**
<400	Operate in true run-of-river mode with outflows equaling inflows on an instantaneous basis.
≥ 400	Operate in peaking mode with total turbine discharge no more than 1.5 times inflow over 24 hours.

JULY 1 THROUGH JULY 15	
RIVER INFLOW (CFS)	**DESCRIPTION OF OPERATIONS**
<200	Operate in true run-of-river mode with outflows equaling inflows on an instantaneous basis.
200-399	Operate in peaking mode with total turbine discharge no more than 1.5 times inflow over 24 hours.
≥ 400	Operate in peaking mode with total turbine discharge no more than 2.0 times inflow over 24 hours.

JULY 16 THROUGH APRIL 30	
RIVER INFLOW (CFS)	**DESCRIPTION OF OPERATIONS**
<200	Operate in true run-of-river mode with outflows equaling inflows on an instantaneous basis.
200-399	Operate in peaking mode with total turbine discharge no more than 2.5 times inflow over 24 hours.
≥ 400	Operate in peaking mode with total turbine discharge no more than 3.0 times inflow over 24 hours.

[1] All dates are inclusive.

River inflows shall be defined by using the U.S. Geological Survey gage (Otter Creek at Center Rutland, Vermont, Gage No. 04282000) to determine the daily minimum flow for the calendar day prorated to the Proctor Station to select correct peaking mode operation.

2.3 RAMPING RATES AND UNIT SEQUENCE ASSOCIATED WITH PEAKING OPERATIONS

In addition to the required operational parameters identified above, GMP will also utilize upramping and downramping protocols to transition between peaking and run-of-river operational modes.

2.3.1 UPRAMPING

MAY THROUGH SEPTEMBER

During the period of May through September when base river flow is sufficient for GMP to operate in peaking mode, up to five units may be utilized depending on base inflow and maximum allowable discharge as defined in Section 2.2. GMP may initiate peaking mode by operating some combination of the two of the five units utilize inflows between 200 and 340 cfs. The two units will then be ramped up to maximum capacity over a 15 minute period. The third unit will be brought online and ramped to maximum capacity over the next 15 minutes. As inflow conditions/peaking parameters allow, the fourth and fifth units will be brought online sequentially with a 30 minute ramp time per each unit.

OCTOBER THROUGH APRIL

During the period of October through April when base river flow is sufficient for GMP to operate in peaking mode, up to five units may be utilized depending on base inflow and maximum allowable discharge as defined in Section 2.2(seasonal run-of-river vs. peaking parameters). GMP may initiate peaking mode by operating some combination of the two of the five units utilize inflows between 200 and 340 cfs. The two units will then be ramped up to maximum capacity over a 15 minute period. The third unit will be brought online and ramped to maximum capacity over the next 15 minutes. As inflow conditions/peaking parameters allow, the fourth and fifth units will be brought online sequentially with a 15 minute ramp time per each unit.

2.3.2 DOWNRAMPING

When transitioning from peaking to refill operations (see Section 2.5), the Proctor development will be downramped from up to five operating units to one operating unit or brought off line following the reverse sequence defined by the seasonal upramping protocols defined in Section 2.3.1.

2.4 BYPASS FLOW MANAGEMENT

As noted above, a bypass conservation flow of 60 cfs will be released at the dam at all times. This flow is provided by an automated 36 inch diameter gate valve adjacent to the spillway abutment and intake, constructed below the spillway elevation such that flows are continuously maintained during peaking and run-of-river operating conditions. Depending on the impoundment elevation, the valve is designed to automatically adjust to a pre-determined gate position to maintain the 60 cfs conservation bypass flow. GMP will begin implementation of the bypass conservation flow upon FERC approval of this Operations Compliance Plan.

2.5 IMPOUNDMENT LEVEL MANAGEMENT

When an impoundment drawdown is required for maintenance or emergencies, bypass flows will be maintained through the bypass conservation flow gate valve and flow through the turbine(s) will be maintained by adjusting generation in order to draw the impoundment below the crest of the dam.

During impoundment refill, turbine discharge will be manually adjusted to maintain 90 percent of inflow below the Proctor development, retaining 10 percent in storage until the impoundment is refilled. The 60cfs required minimum bypass flow will be maintained through the automated gate valve. Upon completion of refill, run-of-river operations will commence until the next peaking operation occurs.

3.0 BELDENS DEVELOPMENT

3.1 DESCRIPTION OF PROJECT WORKS

The Beldens Development consists of a concrete dam with 2.5-foot-high wooden flashboards. The dam comprises two sections on either side of a bedrock island: a 15-foot-high, 56-foot-long section on the west side (Beldens west dam) and a 24-foot-high, 57-foot-long section on the east side (Beldens east dam). The dam is located at RM 23 and impounds a reservoir with a surface area of 22 acres and a usable storage capacity of 253 acre-feet at a normal maximum water surface elevation of 283 feet msl.

Inflow from the reservoir passes through two intakes: (1) a 20-foot-high by 35 foot-wide intake with 13-foot-high by 26-foot-wide trashracks with bar spacing of 1.125 inches on center; and (2) a 34.5-foot-high by 40-foot-wide intake with 13-foot-high by 40-foot-wide trashracks with 3-inch clear bar spacing. Water is conveyed to the powerhouses through two penstocks: (1) a 12-foot-diameter steel penstock that bifurcates into two 10 foot-diameter, 30 foot-long sections, each leading to a 40-foot by 44-foot concrete and masonry powerhouse containing two horizontal Francis turbine-generator units with a combined authorized capacity of 1,749 kW; and (2) a 12-foot-diameter, 45-foot-long concrete penstock that leads to a 40-foot by 75-foot concrete powerhouse containing one horizontal Kaplan turbine-generator unit with an authorized capacity of 4,100 kW.

The Beldens Development has two separate bypassed reaches: (1) a 150-foot-long bypassed reach extending from the base of the Beldens east dam to the tailrace;[2] and (2) a 450-foot-long bypassed reach extending from the base of the Beldens west dam to the tailrace.

3.2 LICENSE REQUIREMENTS

The facility shall be operated in a true run-of-river mode where instantaneous inflows to the impoundment at all times. A bypass conservation flow of 35 cfs, with 10 cfs spilled over the east dam and 25 cfs over the west dam, shall be released at all times. The impoundment target elevation shall be 283.0 feet msl.

[2] The bypassed reach below the Beldens east dam contains an area known as Beldens Falls.

3.3 BYPASS FLOW MANAGEMENT

As noted above, bypass conservation flow of 35 cfs, or instantaneous inflow if less, will be maintained with 10 cfs past at the east dam and 25 cfs at the west dam, at all times. Bypass conservation flows are provided via spill over the east dam (2 inches above the top of the flashboards to pass 10 cfs) and a combination of 2 inches of spill and passing flow through either a 18-inch by 31-inch weir cutout in top of the flashboards or a 12 inch by 32 inch cutout (orifice) lower in the flashboard section at the west dam. Appendix B provides hydraulic calculations used to determine the necessary level of spillage and size of the cutout.

GMP will begin implementation of the bypass conservation flow upon FERC approval of this Operations Compliance Plan. Until that time, GMP will continue to provide the existing bypass conservation flow through the cutout in the west dam flashboards to maintain the existing bypass conservation flow of 5 cfs.

3.4 FLASHBOARD AND IMPOUNDMENT LEVEL MANAGEMENT

When the flashboards are not in place, GMP will draw the impoundment level down to just below the dam crest in order to provide safe working conditions for maintenance staff. GMP will consult with VANR regarding timing and duration of such drawdowns in order to minimize interruption of conservation flows to the extent practicable. During periods when flashboards are not in place, GMP will maintain a minimum impoundment level of 3.25 inches above the crest of both dams, which will ensure a minimum conservation flow of 25 cfs in bypass below the west dam.

4.0 HUNTINGTON FALLS DEVELOPMENT

4.1 DESCRIPTION OF PROJECT WORKS

The Huntington Falls Development consists of a 31-foot-high, 187-foot-long concrete dam with a 2.5-foot-high inflatable flashboard system. The dam is located at RM 21 and impounds a reservoir with a surface area of 23 acres with a storage capacity of 234 acre-feet at a normal maximum water surface elevation of 217.8 feet msl.

Inflow from the reservoir passes through two intakes, including: (1) a 20-foot-high by 40-foot-wide intake with 13-foot-high by 26-foot-wide trashracks with bar spacing of 1.125 inches on center; and (2) a 38-foot-high by 40-foot-wide intake with 16-foot-high by 30-foot-wide trashracks with 2-inch clear bar spacing. Water is conveyed to the powerhouses through three penstocks: (1) two, 10-foot-diameter, 30-foot-long steel penstocks that lead to a 42-foot by 60-foot concrete and masonry powerhouse containing two horizontal Francis turbine-generator units with a combined authorized capacity of 1,400 kW; and (2) a 12-foot-diameter, 75-foot-long concrete penstock that leads to a 40-foot by 75-foot concrete powerhouse containing one horizontal Kaplan turbine-generator unit with an authorized capacity of 4,100 kW. The Huntington Falls Development creates a 215-foot-long bypassed reach.

At the Huntington Falls Development, GMP will: (1) install new turbine-generator Units 1 and 2, resulting in an increase in the development's authorized capacity from 5,500 to 6,725 kW and an increase in the maximum hydraulic capacity from 2,010 to 2,250 cfs; (2) install new switchgear, breakers, control, and relays; and (3) construct a new bypass conservation flow gate at the southerly side of the dam/canal. It is anticipated that this work will be completed in 2016.

4.2 LICENSE REQUIREMENTS

The facility shall be operated in a true run-of-river mode where instantaneous inflows to the impoundment at all times. A bypass conservation flow of 66 cfs shall be released at all times through a gate. The impoundment target elevation shall be 217.8 feet msl.

4.3 BYPASS FLOW MANAGEMENT

Upon completion of construction of the new gate, anticipated by the end of 2016, GMP will commence providing the 66 cfs bypass conservation flow, or instantaneous inflow if less. Until that time, based upon consultation with VANR and results of a site visit with agency representatives on July 10, 2015, GMP will utilize the existing bypass conservation flow orifice at the right abutment of the dam and the waste gate adjacent to the Unit 1 and 2 intake to provide an interim bypass conservation flow of 48 cfs (33 cfs through the waste gate and 15 cfs through the orifice).

4.4 IMPOUNDMENT LEVEL MANAGEMENT

When an impoundment drawdown is required for maintenance or emergencies, bypass flows will be maintained through the bypass conservation flow gate and flow through the turbine(s) will be decreased by adjusting generation in order to draw the impoundment down below the crest of the dam.

5.0 MONITORING AND REPORTING

5.1 MONITORING PLAN

GMP monitors Project operational data such as real-time elevations, generation output, and flows at its Control Center. Values are determined for the following parameters at the Project:

Head Level Elevation (ft): A programmable logic controller (PLC) system will measure this value using pressure transducers located in stilling wells at the intake structure. There are two head water level transducers (primary & backup) at each of the three Project dams. The head level value will be scaled in feet based on USGS elevations. An alarm system is also integrated to alert GMP of low water levels in the impoundments. There are two low pond level alarms at each development: a low level alarm and a low level trip. These values are offset from the pond level set point.

Bypass Conservation Flow Gate Position (ft):

At the Proctor Development, the bypass conservation flow will be provided by an automated 36 inch diameter gate valve adjacent to the spillway abutment and intake, constructed below the spillway elevation such that flows are continuously maintained during peaking and run-of-river operating conditions. Based on the incoming impoundment elevation value, the PLC will adjust the valve opening to a pre-determined position to maintain the 60 cfs conservation bypass flow. The PLC system will monitor the impoundment elevation on a continuous basis and adjust the valve opening position as necessary to provide the required conservation flow.

At the Beldens Development, the bypass conservation flow of 35 cfs, or instantaneous inflow if less, with 10 cfs spilled over the east dam and 25 cfs over the west dam, will be released through a combination of spill and modification of the flashboards, therefore, a bypass conservation flow gate position is not applicable for this arrangement.

At the Huntington Falls Development the bypass conservation flow will be provided by an automated gate adjacent to the intake. Based on the incoming impoundment elevation value, the PLC will adjust the gate opening to a pre-determined position to maintain the 66 cfs bypass conservation flow. The PLC system will monitor the impoundment elevation on a

continuous basis and adjust the gate opening position as necessary to provide the required bypass conservation flow.

Turbine Output (kw): The PLC will receive generator kW measurements from station metering equipment.

Turbine Discharge (cfs): The PLC calculates turbine water discharge based on the turbine's real-time kW output. The rating curves showing the discharge rates across the range of turbine output is used for these calculations. For each unit, actual kW as read by the unit metering is used to select the two closest cfs values; linear interpolation is then used to calculate flow at specific kW values.

Total Discharge (cfs): The PLC will calculate total station discharge using the following formula:

Total Discharge = Bypass Discharge + Turbine Discharge

USGS Gage No. 04282000 at Center Rutland : The USGS Gage at Center Rutland will be incorporated into the Proctor Station PLC operating system as the Otter Creek inflow data (cfs) set and used as an input variable during peaking operations.

5.2 REPORTING

All of the parameters referenced above are logged once per hour (on the hour) by the station HMI. Data will be stored in a "Group Log" table in the HMI's database. An HMI screen will be provided to allow operators to view, print, and export this data for the past 365 days.

All of the above data points will also be made available to GMP's SCADA system for monitoring and recording by the GMP Control Center. The data is saved to the database, which makes exporting and formatting of data for reporting more convenient.

In addition to the logged data, operators maintain daily logs on-site which are used to record flashboard status, and other operational notes.

GMP will allow inspection of the Project, including relevant records, upon reasonable notice by VANR or other authorized agents to determine compliance with license and WQC requirements. This plan will remain on display at the Project along with the FERC license and the WQC.

GMP will operate the project in a run-of-river mode and release bypass conservation flows as specified in this plan. GMP's plant operations maintain continuous checks on flow conditions through impoundment level control. Under normal operations, one turbine will be operated at a base load and remaining turbines are throttled as necessary to maintain prescribed impoundment elevations, with the exception of Proctor when operated in peaking mode.

If GMP determines that flows through the project deviate from license requirements, then GMP will self report to FERC, VANR, and USFWS within 10 days of the date the data becomes available regarding the incident in accordance with license Article 401. The report shall, to the extent possible, identify the cause, severity, and duration of the incident, and any observed or reported adverse environmental impacts resulting from the incident. The report shall also include: 1) operational data necessary to determine compliance with operational requirements of the project license; 2) a description of any corrective measures implemented at the time of occurrence and the measures implemented or proposed to ensure that similar incidents do not recur; and 3) comments or correspondence, if any received from the resource agencies regarding the incident.

6.0 AGENCY CONSULTATION

Article 401and water quality certification (WQC) Condition D, require development of a flow management and monitoring plan (flow plan) for the Project. A draft flow plan was provided to Vermont Agency of Natural Resource (VANR)[3] for a minimum 30 day review on December 22, 2014. VANR provided written comments on January 26, 2015. Since that time, GMP and VANR have held additional discussions and shared follow-up information in an effort to resolve issues of providing interim conservation flows at the Huntington Falls development and ramping protocols for peaking operations at the Proctor development. Both issues have been resolved and are addressed in this plan. Associated correspondence is provided in Appendix A.

[3] The WQC and license conditions identify Vermont Department of Environmental Conservation's (Vermont DEC) as the consulting agency. VANR is the division of DEC that reviews compliance plans under the WQC and FERC licensing process.

APPENDIX A

AGENCY CONSULTATION

Andy Qua

From: Crocker, Jeff [Jeff.Crocker@state.vt.us]
Sent: Tuesday, July 21, 2015 3:03 PM
To: Scarzello, Michael
Cc: Wentworth, Rod; Davis, Eric; Andy Qua; Brandon Kulik; Tyler Braun
Subject: RE: Proctor Ramping Review

Mike,

Thank you for the chance to review the Proctor ramping protocol. The protocol reflects what we discussed and the Agency recommend for the October to April period during our conference call on July 17. Agency has no further comments.

Thank you,

Jeff

Jeff Crocker, *River Ecologist*
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Montpelier, VT 05620-3522
802-490-6151 / Jeff.Crocker@state.vt.us
www.watershedmanagement.vt.gov

VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WATERSHED MANAGEMENT DIVISION
RIVERS PROGRAM

From: Scarzello, Michael [mailto:Michael.Scarzello@greenmountainpower.com]
Sent: Tuesday, July 21, 2015 1:54 PM
To: Crocker, Jeff
Cc: Wentworth, Rod; Davis, Eric; Andy Qua; Brandon Kulik; Tyler Braun
Subject: RE: Proctor Ramping Review

Jeff – Pursuant to the seasonal ramping protocols as discussed with ANR on July 17, we have internally reviewed the plan at GMP and determined it will meet our operational objectives. We have incorporated revised language into the operations plan and would appreciate your review and confirmation of the seasonal approach we discussed.

May through September

During the period of May through September when base river flow is sufficient for GMP to operate in peaking mode, up to five units may be utilized depending on base inflow and maximum allowable discharge as defined in Section 2.2 (seasonal run-of-river vs. peaking parameters). GMP may initiate peaking mode by operating some combination of two of the five units to utilize inflows between 200 and 340 cfs. The two units will then be ramped up to maximum capacity over a 15 minute period. The third unit will be brought online and ramped to maximum capacity over the next 15 minutes. As inflow conditions/peaking parameters allow, the fourth and fifth units will be brought online sequentially with a 30 minute ramp time per unit.

October through April

During the period of October through April when base river flow is sufficient for GMP to operate in peaking mode, up to five units may be utilized depending on base inflow and maximum allowable discharge as defined in Section 2.2 (seasonal run-of-river vs. peaking parameters). GMP may initiate peaking mode by operating some combination of two of the five units to utilize inflows between 200 and 340 cfs. The two units will then be ramped up to maximum capacity over a 15 minute period. The third unit will be brought online and ramped to maximum capacity over the next 15 minutes. As inflow conditions/peaking parameters allow, the fourth and fifth units will be brought online sequentially with a 15 minute ramp time per unit.

Thank you for the Agency's time to work through a mutually agreeable operating plan with us.

From: Scarzello, Michael
Sent: Wednesday, July 15, 2015 10:39 AM
To: Crocker, Jeff; Davis, Eric; Wentworth, Rod
Cc: Andy Qua; Brandon Kulik; Tyler Braun
Subject: RE: Proctor Ramping Review

All - We have reviewed the ANR's April 13 recommended revisions to GMP's March 23 Proctor ramping proposal. Our goal is to balance the biological aspects of the Otter Creek while meeting local, state and federal operating rules for the project. On the biological side, we believe that there are two potential bio-periods: mid spring-summer (water temperatures are generally greater than 10C). During this time fish are spawning, fry and YOY are using riverine habitat shallows as nursery and feeding grounds. On Otter Creek, this corresponds to May thru September. During fall thru early spring (October - April) adult and juvenile fish are not likely to heavily utilize the riverine reach directly below Proctor, and have primarily retreated to deeper slow pool refugia, further downstream, such as the ~20 mile backwatered reach downstream to Middlebury. At this time they are dwelling in areas not hydraulically influenced by short-term changes in flow at Proctor and thus not vulnerable to ramping effects. These two periods roughly conform to two project operation periods relevant to ISO certification requirements for Summer and Winter System Claimed Capability (SCC).

We believe that the VANR proposal for summer season ramping is reasonably protective of aquatic habitat for fish life stages dwelling in the downstream reach at that time of year. We also believe that in the winter bio-period, there is little potential for adverse biological effects on fish during the winter months because fish have relocated further downstream in pool and deep areas where they are less subject to the effects of ramping at Proctor and thus a higher csm/hr rate of change can be justified.

We would like to discuss the potential for a blended seasonal approach to varying the ramping rate, as we have for the peaking ratios by following ANR's ramping proposal in the summer (i.e., May - Sept) and GMP's ramping proposal for winter season (i.e., October – April).

Please advise with any questions or clarifications, thanks mjs.

From: Crocker, Jeff [mailto:Jeff.Crocker@state.vt.us]
Sent: Monday, July 13, 2015 11:45 AM
To: Scarzello, Michael; Davis, Eric; Wentworth, Rod
Cc: Andy Qua; Brandon Kulik
Subject: RE: Proctor Ramping Review

Hi Mike,

What is the timeline for getting us materials to review for the call? We potentially have some time on Friday or Monday for a conference call, but would need some time to review any new materials in regards to Proctor ramping procedure. Please let me know when you expect to send what I assume will be comments on my April 13 email.

Thanks,

Jeff

From: Scarzello, Michael [mailto:Michael.Scarzello@greenmountainpower.com]
Sent: Friday, July 10, 2015 3:55 PM
To: Crocker, Jeff; Davis, Eric; Wentworth, Rod
Cc: Andy Qua; Brandon Kulik
Subject: Proctor Ramping Review

Thank you everyone for taking the time to be on site today to complete the Huntington Falls bypass inspection. Would like to pick back up where we left off on the Proctor ramping review, per the attached correspondence. All of this work comes under the Otter Creek Flow Management and Monitoring Plan, which is due for submission to FERC on Tue, July 21. I would like to request that we set up a review call next week (1 hr max) to discuss Proctor. I know this a busy time for all and greatly appreciate your flexibility. At your earliest convenience, can you please take a look at your calendar, circulate available dates/times, and GMP will arrange a conference call, thanks mjs.

_____
Michael Scarzello
Green Mountain Power
2152 Post Road, Rutland, VT 05701
Michael.Scarzello@greenmountainpower.com
802.770.0130

Andy Qua

From: Crocker, Jeff [Jeff.Crocker@state.vt.us]
Sent: Monday, July 13, 2015 3:36 PM
To: Scarzello, Michael; Davis, Eric; Wentworth, Rod
Cc: Andy Qua; Brandon Kulik
Subject: RE: Proctor Ramping Review

Hi Mike,

Let's plan on having the conference call on Friday, July 17 at 11 pm. Please try to get us any additional information for the call by Wednesday morning so that we will have adequate time to review.

Thanks,

Jeff

From: Scarzello, Michael [mailto:Michael.Scarzello@greenmountainpower.com]
Sent: Monday, July 13, 2015 12:10 PM
To: Crocker, Jeff; Davis, Eric; Wentworth, Rod
Cc: Andy Qua; Brandon Kulik
Subject: RE: Proctor Ramping Review

We will follow-up Jeff. Can you please confirm availability for a call 11 am, Jul 17, thanks mjs.

From: Crocker, Jeff [mailto:Jeff.Crocker@state.vt.us]
Sent: Monday, July 13, 2015 11:45 AM
To: Scarzello, Michael; Davis, Eric; Wentworth, Rod
Cc: Andy Qua; Brandon Kulik
Subject: RE: Proctor Ramping Review

Hi Mike,

What is the timeline for getting us materials to review for the call? We potentially have some time on Friday or Monday for a conference call, but would need some time to review any new materials in regards to Proctor ramping procedure. Please let me know when you expect to send what I assume will be comments on my April 13 email.

Thanks,

Jeff

From: Scarzello, Michael [mailto:Michael.Scarzello@greenmountainpower.com]
Sent: Friday, July 10, 2015 3:55 PM
To: Crocker, Jeff; Davis, Eric; Wentworth, Rod
Cc: Andy Qua; Brandon Kulik
Subject: Proctor Ramping Review

Thank you everyone for taking the time to be on site today to complete the Huntington Falls bypass inspection. Would like to pick back up where we left off on the Proctor ramping review, per the attached correspondence. All of this work comes under the Otter Creek Flow Management and Monitoring Plan, which is due for submission to FERC on Tue, July 21. I would like to request that we set up a review call next week (1 hr max) to discuss Proctor. I know this a busy time

for all and greatly appreciate your flexibility. At your earliest convenience, can you please take a look at your calendar, circulate available dates/times, and GMP will arrange a conference call, thanks mjs.

_____
Michael Scarzello
Green Mountain Power
2152 Post Road, Rutland, VT 05701
Michael.Scarzello@greenmountainpower.com
802.770.0130

Andy Qua

From: Crocker, Jeff [Jeff.Crocker@state.vt.us]
Sent: Monday, April 13, 2015 4:18 PM
To: Andy Qua
Cc: Scarzello, Michael; Brandon Kulik; Davis, Eric; Wentworth, Rod
Subject: RE: Revised memo

Andy,

In our conference call last week we indicated that we would get back to you regarding two items relating to the Operations Plan for the Otter Creek Hydroelectric Project. The first item was the proposal for ramping at the Proctor development during peaking operations, and second the Huntington Falls bypass conservation flow.

Proctor ramping proposal

Currently GMP is proposing to use 2 of the 5 units to maintain the base discharge of 340 cfs (plus bypass flow of 60 cfs) when inflows and time of year are such to allow for peaking operations. During the next 15 minutes, the two units being used to maintain base discharge would be ramped up to their maximum capacity and a third unit would be ramped up to the its maximum capacity. A fourth unit would be ramped up in the next fifteen minutes. Then fifth unit would be brought online, similarly be ramped up to maximum capacity in fifteen minutes. The down ramping procedure would be the same as the up ramping but in reverse order.

The Agency has reviewed the ramping proposal would recommend the proposal be revised as follows:

- That only the two units operating to maintain the discharge of 340 cfs be ramped up to maximum capacity in the first fifteen minutes
- The next fifteen minutes the third unit can be brought online and ramped up to its maximum capacity.
- The fourth unit is brought online and ramped up to its maximum capacity over the next 30 minutes.
- After the fourth unit is at its maximum capacity, the fifth unit would be brought online and ramped up to its maximum capacity over the next 30 minutes.
- The down ramping will be the same except in reverse.

These adjustments to the ramping proposal will extent the time that the facility reaches the maximum capacity from 45 minutes to 90 minutes. These adjustment will decrease the rate of change from 3.14 csm/hr to 1.57 csm/hr.

Huntington Falls bypass flows

The second item was the Huntington Falls bypass flow at the Huntington Falls facility. Currently GMP has proposed to provide a bypass flow discharge of 48 cfs until the new bypass flow gate is installed in 2016 at which time it will increase to the required 66 cfs. The interim bypass flows will be done using the using the waste gate near the intake providing 33 cfs and the current minimum bypass flow discharge on the right side of the dam providing 15 cfs. The Agency agrees that the bypass conservation flow of 48 cfs can be released on an interim bases until 2016. As conditioned by the water quality certification GMP needs to consult with the Agency on the location and design of the new bypass flow gate to be installed at the dam. If GMP is considering moving the location of the bypass flow gate from the left side of the dam to the waste gate location, GMP should set up a time with the Agency for a site visit to identify any potential issues before entering the design phase of the project.

Please let me know if you have any questions or would like to discuss further.

Thank you,

Jeff

Jeff Crocker, *River Ecologist*
1 National Life Drive, Main 2
Montpelier, VT 05620-3522
802-490-6151 / Jeff.Crocker@state.vt.us
www.watershedmanagement.vt.gov

From: Andy Qua [mailto:Andy.Qua@KleinschmidtGroup.com]
Sent: Wednesday, April 08, 2015 11:29 AM
To: Crocker, Jeff; Wentworth, Rod
Cc: Scarzello, Michael; Brandon Kulik
Subject: Revised memo

Hi guys –

I picked a couple more pictures from Google earth and added them and a bit more discussion to the memo. Please let us know if you have any questions or additional thoughts.

Thanks very much for your time this morning.
Best,
Andy

MEMORANDUM

TO: Mike Scarzello

FROM: Brandon Kulik and Andy Qua

DATE: March 23, 2015

RE: Vermont Agency of Natural Resources (VANR) Comments on the Draft Operating Compliance Plan for the Otter Creek Project

The purpose of this memo is to provide information in response to VANR comments on the Operating Compliance Plan (Plan) received on January 26, 2015.

PROCTOR RAMPING PROPOSAL

The licensee completed a hydraulic study of the Otter Creek between the Proctor Project down to Middlebury, VT in 2013. This study showed that hydraulic effects from the project attenuated rapidly within the first mile downstream from the powerhouse[1]. Within this upper reach it was possible to see changes in water elevation and velocity associated with project operation.

The goal of this ramping proposal is to provide a plan for peaking operations so that the project discharge incrementally increases so that aquatic organisms inhabiting the tailwater reach downstream from the project can have time to adjust to dynamic change, and reduce the risk of becoming displaced during upramping or stranded during downramping.

The project's peak capacity is 1,193 cfs. During periods when inflow to the project is below approximately 107 cfs (60 cfs bypass flow plus the lowest unit minimum capacity of 47 cfs), the project cannot operate. ANR provided comments specific to the period when the project may be operated in a peaking mode and when the project may be operated at maximum capacity (3.0 times project inflow). Under these conditions, the peaking cycle would start at a base in flow of about 400 cfs. The project would achieve this through a combination of operating 2 of the 5 units to meet inflow and maintain a base discharge of 340 cfs (minimum 400 cfs peak inflow minus 60 cfs conservation flow to the bypass reach) as an acclimation flow.

A 15 minute acclimation period would be observed before bringing the next unit on line[2]. After 15 minutes (per unit[3]), the licensee would increase the powerhouse discharge capacity up to a maximum of 3 times the base acclimation flow (depending on available flow) by operating the remaining unit(s) until station capacity is reached.

It is our understanding that GMP will not have a set sequence of bringing units online but a case by case determination of unit sequence will be determined by dispatch staff. Therefore the following description of a ramping scenario under maximum capacity is explained herein to provide an example of how units could be sequenced as it relates to flow increases and decreases over time. Based upon turbine manufacturer data, minimum and maximum unit hydraulic capacities are provided below.

	Min.	Max.	Net Change Between Min. and Max.
Unit	**cfs**	**cfs**	**cfs**
1	66	274	208
2	47	198	151
3	47	198	151
4	47	198	151
5	130	325	195
TOTAL	**337**	**1193**	

As proposed, when peaking operations are initiated, GMP would operate two units at an estimated discharge of 340 cfs. During the next fifteen minutes, peaking operations would then ramp up to increase the discharge of the current operating units to their maximum hydraulic capacity and then energize a third unit and ramp it to its maximum hydraulic capacity. Similarly, during the next fifteen minutes, a fourth unit would be energized and ramped to its maximum hydraulic capacity. The fifth unit would be ramped in a similar fashion over the next fifteen minute period until maximum station generating capacity is reached. In this case, the maximum change in downstream flow that could occur between 15 minute intervals would be an increase of 208 cfs by bringing Unit 1 from minimum (66 cfs) to maximum hydraulic capacity (274 cfs). The remaining four incremental flow increases for the other four units would be less than 200 cfs each.

GMP proposes a downramping procedure that is essentially a reverse of the upramping procedure. Therefore the maximum decrease in downstream flow that could occur between 15 minute intervals is 208 cfs by bringing Unit 1 from maximum to minimum hydraulic capacity.

The stream reach below the Project powerhouse consists of steeply sloped channel banks that would not trap fish during down ramping and therefore cause stranding issues in the flow ranges resulting from GMP's downramping proposal. This approach to ramping the project during periods of peaking operations will be better for aquatic organisms that may occupy the downstream reach because it creates a gradual change in river flow as the project enters and exits peaking mode. As noted above, this protocol is modeled after that utilized by GMP at the Essex 19, which was developed in consultation with agencies.

[1] Kleinschmidt conducted an evaluation of water velocities at peak flows of 1,000 and 1,200 cfs. The velocity data collected showed that there were limited differences in measured water velocities at near-peak river flows of 1,000 and 1,200 cfs, a change of river flow of 200 cfs. While the magnitude of velocities at lower flow ranges (i.e. between 340 and 540 cfs) may be lower, it follows that there would likely also be limited differences in water velocities between approximately 200 cfs incremental changes (increase or decrease) in river flow. Thus fish displacement is unlikely at such flow changes. Further, as noted in the 2013 water velocity report, the low gradient river reach below Proctor generally responds to flow changes by gaining [or losing] depth more rapidly than velocity.

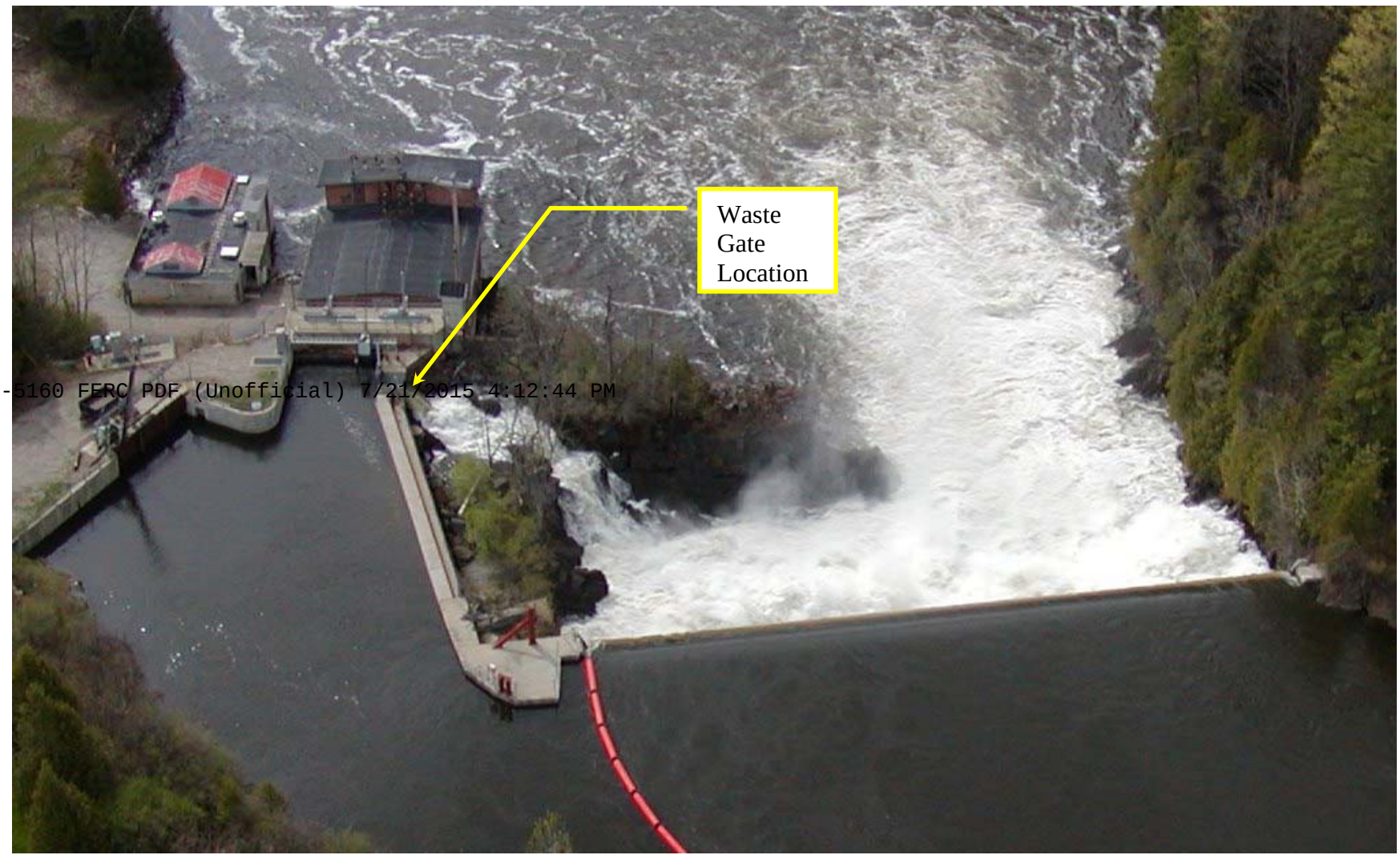
[2] Based on the approach approved by ANR for a similar ramping procedure adopted for GMP's Essex 19 Project.

[3] It should be clarified with ANR that the fifteen minute holds for the proposed upramping and downramping procedures would be applied to each unit that will be brought online. Thus the increase of up to 800 cfs would occur over the course of one hour to an hour and fifteen minutes depending on unit sequencing.

Relative to ANR's comment about unit sequencing under the different seasonal peaking constraints, the above discussion is specific to the maximum allowed range of peaking at 3.0 times base flow. All other scenarios are less (i.e. 1.5x, 2.0x and 2.5 times) and would have the same or less incremental increase or decrease in discharge between 15 minute holds during upramping or downramping.

HUNTINGTON FALLS BYPASS CONSERVATION FLOWS

ANR requests an explanation why the minimum bypass conservation flow of 66 cfs cannot be provided via spill as an interim measure until a new gate is installed in 2016. Because the spillway is outfitted with an inflatable flashboard system it would be operationally complicated and impractical to partially deflate the flashboard and/or manipulate pond levels to maintain a continuous bypass flow of 66 cfs. There is currently a waste gate on the intake canal, adjacent to the bypass reach that could be used in the interim to supplement the existing 15 cfs provided by the minimum flow orifice on the eastern end of the dam. Kleinschmidt has calculated that at full pond (217.8) the gate has a discharge capacity of approximately 33 cfs. If GMP utilized that gate in conjunction with the existing orifice, an interim conservation flow of about 48 cfs could be provided. The photo below shows the gate location and outflow which generally flows easterly into the main bypass reach pool.



VERMONT

Vermont Department of Environmental Conservation *Agency of Natural Resources*
Watershed Management Division
1 National Life Drive, Main 2 [phone] 802-490-6151
Montpelier, VT 05620-3522
www.watershedmanagement.vt.gov

DISTRIBUTED ELECTRONICALLY

January 26, 2015

Andrew D. Qua
Kleinschmidt Associates
141 Main Street, PO Box 650
Pittsfield, Maine 04967

RE: Otter Creek Hydroelectric Project – FERC Project No. 2558
Draft Operations Compliance Plan

Dear Mr. Qua:

The Agency of Natural Resources (Agency) has reviewed the draft Operations Compliance Plan for the Otter Creek Hydroelectric Project as required by Condition D of the Water Quality Certification, submitted electronically on December 22, 2014. The Otter Creek Hydroelectric Project includes Proctor, Beldens, and Huntington Falls developments. Our comments follow, referenced by each of the three developments.

Comments:

2.0 Proctor Development

Condition B of the Water Quality Certification details the limits on hydropeaking at the Proctor development. The conditions include circumstances when run-of-river operation is required and other times when maximum generation discharge allowed to relative inflow is permitted. Condition D states the flow management and monitoring plan shall include a detailed procedure about the operations of Proctor development that addresses the up ramping and down ramping, and include the sequence the units will be brought on/off line.

The draft Operations Compliance Plan, Green Mountain Power (GMP) ramping proposal calls for maintaining discharge at 340 cfs through the units with 60 cfs in the bypass for 15-minutes. After holding discharge through the turbines at 340 cfs, GMP will operate the remaining units to increase the powerhouse capacity depending on inflows, calendar period, and the multiplier. Under the current proposal the change in flow that can occur during a 15-minute up ramp can be as much as 800 cfs (when inflow = 400 cfs with 3x peaking multiplier). This represents a tripling of the river flow which is a large and rapid change. Since the magnitude of flow change during peaking operations is dependent on the calendar period and inflow, the Agency recommends that the rate of change (ramping) under different calendar periods and inflow for peaking operations should as well.

For down ramping, the draft Operations and Compliance Plan proposal is that during the down ramping sequence, approximately fifteen minute holds will be applied as reach turbine is shutdown till the Station is back to inflows. However, without information on how the units will be sequentially deployed, it is difficult to determine what rates of change in flow might occur under different down ramping conditions.

Additionally, the draft Operations and Compliance Plan does not include sufficient detail about ramping that was required as part of the Condition D. It does not indicate how the units will be deployed and sequenced under the different seasonal peaking constraints. The concern with the current draft ramping proposals is the rapid rate of change in flow that will result from peaking operations potentially impacting aquatic organism.

An appropriate ramping rates is dependent on river characteristics (channel size, shape and gradient), aquatic organisms present, time of year, and flow changes (magnitude, frequency, duration, and rate of change). All of which were considered and evaluated in developing the peaking operations rules for the Proctor development.

The Agency request that GMP revises the up ramping and down ramping proposals for the Proctor development giving consideration as described in Condition D. The revised ramping proposal should give consideration to the peaking limits and suggest a ramping proposal that is consistent with them, especially the rate of change.

3.0 Beldens Development

Condition B of the water quality certification requires the development to be operated in true run-of-river mode with a continuous conservation flow of 10 cfs past the east dam and 25 cfs past the west dam. GMP draft Operations and Compliance Plan provides adequate details to how flows will be continuously provided during times with and without flashboards in place. The Agency has no comments on this section of the plan.

4.0 Huntington Falls Development

Condition D of the water quality certification requires GMP to include design and location of the gate at the Huntington Falls dam that will be used to release the continuous conservation flow 66 cfs. The draft Operations and Compliance Plan currently does not contain information on the design or the location as required in the certification.

Additionally, GMP is proposing to maintain the current bypass flow to 15 cfs till the new gate is completed at which time it will begin releasing the 66 cfs. The gate is anticipated by the end of 2016. The Agency needs information as to why conservation flows cannot be increased till the new gate is completed. Specifically, GMP should provide details explaining why releasing water temporarily over the dam is not feasible till the new gate is constructed.

5.0 Monitoring and Reporting

The bypass conservation flow gate position section of the draft Operations and Compliance Plan indicates that the bypass conservation flow at Huntington Falls development is 60 cfs. It should be corrected to 66 cfs.

Please contact me should you have any questions.

Very truly yours,

Jeffrey B. Crocker
Streamflow Protection Coordinator

Attachment

c: Rod Wentworth, VDFW
Chet Mackenzie, VDFW
Michael Scarzello, GMP

APPENDIX B

BELDENS BYPASS CONSERVATION FLOW CUTOUT CALCULATIONS

Kleinschmidt
Phone: (207) 487-3328
Fax: (207) 487-3124
www.KleinschmidtUSA.com

Project No.: 006227.01

Project: Operations Compliance Plan - Beldens Development

By: MPH Date: 12/18/2014

Subject: Required Headpond Elevation for Minimum Flow Requirements

Checked: Date:

Analysis Description

The goal of this analysis is to determine the required headpond elevation at the Beldens project to ensure that minimum flow requirements are met by spilling over two sets of flashboards and through a flashboard notch or orifice. The Beldens project has an East dam and a West dam, both with 2.5 foot high flashboards. The headpond elevation of interest is that which will allow 10 cfs to flow over the East dam's flashboards and 25 cfs over the West Dam's flashboards and through the flashboard notch or orifice.

The headpond elevation needed to ensure 25 cfs discharges over the West Dam, with no flashboards, is also calculated.

Assumptions

1 - Discharge over the flashboards and through the flashboard notch is calculated using the weir equation.
2 - Discharge through the flashboard is calculated using the orifice equation.
3 - The center of the orifice is assumed to be in the middle flashboards (1.25 feet from the top of the boards).
4 - The orifice is assumed to be rectangular in shape.

Parameters

East Dam

Dam Length (ft) = 57
Dam Crest El. (ft) = 280.5
Top of Boards El. (ft) = 283.0
Number of Contractions, N = 2
Contraction Loss Coefficient, K = 0.1
Weir Discharge Equation, Cd = 3.3

West Dam

Dam Length (ft) = 56
Dam Crest El. (ft) = 280.5
Top of Boards El. (ft) = 283.0
Number of Contractions, N = 2
Contraction Loss Coefficient, K = 0.1
Weir Discharge Equation, Cd = 3.3

Notch Parameters

Notch Depth (ft) = 1.5
Top of Notch Section El (ft) = 281.5
Number of Contractions, N = 2
Contraction Loss Coefficient, K = 0.1
Weir Discharge Equation, Cd = 3.3

Orifice Parameters

Orifice Centerline El (ft) = 281.75
Orifice Discharge Coefficient, Cd = 0.6
Acceleration due to Gravity, g (ft/s2) = 32.2

Kleinschmidt
Phone: (207) 487-3328
Fax: (207) 487-3124
www.KleinschmidtUSA.com

Project No.: 006227.01

Project: Operations Compliance Plan - Beldens Development

By: MPH Date: 12/18/2014

Subject: Required Headpond Elevation for Minimum Flow Requirements

Checked: Date:

Analysis

East Dam

Flow: $Q = C_d * L_e * H^{3/2}$

Effective Spillway Length (ft): $L_e = L - K*N*H$

Flow over Flashboards

Headpond Elevation (ft) = 283.14 <-- **This value is iterated until Discharge is 10 cfs**

Head over Boards, H (ft) = 0.14

Effective Length, L_e (ft) = 57.0

Discharge over Boards, Q (cfs) = 10.1

West Dam

Flow: $Q = C_d * L_e * H^{3/2}$

Effective Spillway Length (ft): $L_e = L - K*N*H$

Flow over Flashboards

Headpond Elevation (ft) = 283.14

Head over Boards, H (ft) = 0.14

Effective Length, L_e (ft) = 53.4

Discharge over Boards (cfs) = 9.4

Flow over Flashboard Notch

Head over Notch, H (ft) = 1.64

Length of Notch (ft) = 2.60 <--**This value is iterated until the total West Dam Flow is 25 cfs**

Eff. Length of Notch, L_e (ft) = 2.3

Discharge over Notch (cfs) = 15.8

Total West Dam Flow (cfs) = 25.2

Flow over Flashboards

Headpond Elevation (ft) = 283.14

Head over Boards, H (ft) = 0.14

Effective Length, Le (ft) = 56.0

Discharge over Boards (cfs) = 9.9

Flow through Flashboard Orifice

Orifice Flow: $Q = Cd*A*\sqrt{(2*g*H_c)}$

Orifice Length (ft) = 2.7 <--**This value is iterated until the total West Dam Flow is 25 cfs**

Orifice Height (ft) = 1.0 <--**This value is iterated until the total West Dam Flow is 25 cfs**

Orifice Area (ft^2) = 2.7

I to Centerline of Orifice, H_c (ft) = 1.39

Orifice Discharge, Q (cfs) = 15.3

Total West Dam Flow (cfs) = 25.2

Kleinschmidt
Phone: (207) 487-3328
Fax: (207) 487-3124
www.KleinschmidtUSA.com

Project No.: 006227.01

Project: Operations Compliance Plan - Beldens Development

By: MPH Date: 12/18/2014

Subject: Required Headpond Elevation for Minimum Flow Requirements

Checked: Date:

West Dam

Required Headpond Elevation when no Flashboards are in place

Headpond Elevation (ft) =	280.77	<--**This value is iterated until the total West Dam Flow is 25 cfs**
Head above Dam Crest (ft) =	0.27	
Effective Length of Dam, L_e (ft) =	55.8	
Discharge over Dam, Q (cfs) =	**25.83**	

Results

Required Headpond Elevation to Pass 10 cfs over East Dam

Elevation (ft) = 283.14

Head above Flashboards (in) = 2.00

Notch Parameters to Pass 25 cfs over West Dam

Notch Depth (ft) = 1.5

Notch length (ft) = 2.60

Flashboard Cutout Orifice to Pass 25 cfs over West Dam

Orifice Length (ft) = 2.7

Orifice Height (ft) = 1.0

Required Headpond Elevation to Pass 25 cfs over West Dam with no Flashboards in Place

Elevation (ft) = 280.77

Head above Flashboards (in) = 3.24

Document Content(s)

APPENDIX H

WATER QUALITY

LIST OF APPLICABLE WEBSITES:

http://watersgeo.epa.gov/mwm/

http://www.vtwaterquality.org/mapp/docs/mapp_303d_2014.pdf

http://www.vtwaterquality.org/mapp/docs/305b/mp_305b-2012.pdf

http://www.vtwaterquality.org/mapp/docs/305b/mp_305b-2014.pdf

APPENDIX I

TERRESTRIAL MONITORING AND MANAGEMENT PLAN

150 FERC ¶ 62,093
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Green Mountain Power Corporation Project No. 2558-034 & -035

ORDER MODIFYING AND APPROVING SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN PURSUANT TO ARTICLE 402 AND GRANTING A TEMPORARY WAIVER OF THE TERRESTRIAL MONITORING PLAN REQUIRED BY ARTICLE 404

(Issued February 5, 2015)

1. On January 9, 2015, and supplemented on January 12, 2015, Green Mountain Power Corporation (licensee) filed a spill prevention control and countermeasure plan pursuant to Article 402, and a temporary waiver request for the terrestrial monitoring plan required by Article 404, of the project license for the Otter Creek Hydroelectric Project.[1] The Otter Creek Project is located on Otter Creek, in Addison and Rutland Counties, Vermont. The project has no federal lands.

BACKGROUND

2. The licensee has been working on the redevelopment of the project's Proctor Development over the past several years. Prior to the issuance of the new license for the project, on October 23, 2014, the licensee obtained two license amendments[2] to enable the redevelopment work to move forward while the Commission processed the application for the new license. Therefore, the proposed plans for Articles 402 and 404 only address the work at the Proctor Development. The licensee is deferring the development of the plans, specific to future construction activities at the project's Beldens and Huntington Falls Developments, to a later date.

[1] Order Issuing New License, issued October 23, 2014 (149 FERC ¶ 62,048).

[2] Order Amending License, issued May 10, 2012 (139 FERC ¶ 62,113) and Order Amending License and Revising Annual Charges, issued June 20, 2013 (143 FERC ¶ 62,207)

3. Article 402 requires the licensee to file, within six months of license issuance or at least 90 days before the start of any land-disturbing, land-clearing, or project facility upgrade activities, whichever occurs first, for Commission approval, a spill prevention control and countermeasures plan. The purpose of this plan is to minimize the potential for hazardous material spills and ensure that procedures are in place to minimize the extent and adverse effects of hazardous materials spills that occur during construction related to upgrades of the turbine-generator units, enhancement of recreation facilities, and operation and maintenance of the project. The plan is required to include a provision to notify the Commission and Vermont Department of Environmental Conservation (Vermont DEC) as soon as possible but no later than 24 hours after discovering a hazardous substances spill; and a provision to file a report with the Commission within 10 days of a hazardous substance spill. The plan is required to be prepared in consultation with the Vermont DEC.

4. Article 404 requires the licensee to file, at least 90 days before the start of any land-disturbing, land-clearing, or project facility upgrade activities, for Commission approval, a terrestrial monitoring and management plan, prior to the start of construction. The purposes of this plan are to ensure re-vegetation of areas disturbed by construction activities authorized under the license, prevent the spread of invasive plants, and protect federally-protected wildlife species and their respective habitats within the project area. This plan is required to be prepared in consultation with the U.S. Fish and Wildlife Service (FWS) and the Vermont Agency of Natural Resources (Vermont ANR).

LICENSEE'S PLANS

Article 402

5. In its filed plan the licensee included a description of how oil, fuels, lubricant products, and other hazardous liquid substances will be transported, stored, handled, and disposed of in a safe and environmentally acceptable manner, and a description of the equipment and procedures that will be used in the event of a spill to ensure the proper containment and cleanup of any hazardous substances to minimize adverse effects to water quality and aquatic resources in the project area. The plan includes provisions to notify the Vermont ANR, the National Response Center, and appropriate state and federal agencies.

6. The licensee consulted with the Vermont DEC who recommended that the licensee consult with the U.S. Environmental Protection Agency (EPA). The EPA reported no problems with the plan in a letter dated December 24, 2014; however, they required that the licensee update the plan within 6 months of the work at the Proctor Development. The Vermont DEC accepted the conclusions of the EPA in an email dated January 5, 2015.

7. Although the licensee's plan includes provisions for notifying state and federal agencies in the event that a spill occurs at the Proctor redevelopment, it does not include the specific notification requirements listed in Article 402. Therefore, we are amending the plan to require that the licensee notify the Commission and Vermont DEC no later than 24 hours after occurrence of any a hazardous substances spill, and then file a report with the Commission within 10 days of the spill. The report should identify: (a) the location of the spill; (b) the type and quantity of hazardous material spilled; (c) any corrective actions that have been undertaken to clean up the spill; and (d) any measures taken to ensure similar spills do not occur in the future.

8. The licensee is also reminded that this plan only addresses the approved redevelopment of the project's Proctor Development. The licensee must file a revised spill prevention control and countermeasures plan, pursuant to Article 402, prior to commencing any ground disturbing projects at the remaining developments. This revised plan must comply with the requirements of Article 402.

Article 404

9. The licensee is requesting a temporary waiver of Article 404, requiring a terrestrial monitoring and management plan, for the approved work at the Proctor Development. The licensee consulted with the Vermont DEC[3] and the FWS to evaluate potential terrestrial resource issues associated with the Procotor redevelopment. By emails dated January 5, 2015, the FWS and the Vermont DEC agreed that the consultation conducted prior to the issuance of the two orders amending license, were sufficient to address the requirements of Article 404 relative to the installation of new generating equipment and re-commencement of operation at the Proctor Development. However, the agencies agree that the licensee needs to develop a terrestrial monitoring plan, pursuant to Article 404, prior to the commencement of improvements at the project's Beldens and Huntington Falls developments.

CONCLUSIONS

10. The licensee's Article 402 spill prevention control and countermeasures plan, as amended above, should minimize the potential for any hazardous material spills and ensure that procedures are in place to minimize the extent and adverse effects of hazardous materials spills that might occur at the project's Proctor Development. The spill prevention control and countermeasures plan filed pursuant to Article 402 for the Proctor redevelopment, as amended, should be approved.

[3] The Vermont DEC is part of the Vermont ANR.

11. In addition, the work that has been approved for the Proctor redevelopment should not result in any terrestrial impacts that were not contemplated or mitigated as part of the two Commission orders authorizing the action. The licensee's requested temporary waiver of the terrestrial monitoring and management plan required by Article 404, should be granted.

The Director orders:

(A) Green Mountain Power Corporation's (licensee) spill prevention control and countermeasures plan for the redevelopment of the Proctor Development, filed on January 9, 2015 and supplemented on January 12, 2015, pursuant to Article 402 of the license for the Otter Creek Hydroelectric Project, as amended by paragraph (B), is approved.

(B) The licensee must notify the Commission and Vermont Department of Environmental Conservation as soon as possible but no later than 24 hours after any hazardous substances spill. The licensee must then file a report with the Commission within 10 days of the spill that identifies: (a) the location of the spill; (b) the type and quantity of hazardous material spilled; (c) any corrective actions that have been undertaken to clean up the spill; and (d) any measures taken to ensure similar spills do not occur in the future.

(C) The licensee is granted a waiver of Article 404's requirement to file a terrestrial monitoring and management plan for the approved redevelopment of the Otter Creek Project's Proctor Development.

(D) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the Federal Power Act, 16 U.S.C. § 825*l* (2012), and the Commission's regulations at 18 C.F.R. § 385.713 (2014). The filing of a request for rehearing does not operate as a stay of the effective date of this order, or of any other date specified in this order. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

Steve Hocking
Chief, Environmental Review Branch
Division of Hydropower Administration
and Compliance

Document Content(s)

Kleinschmidt

January 9, 2015

VIA E-FILING

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
ATTN: OEP/DHAC
888 First Street, NE
Washington, DC 20426

Otter Creek Hydroelectric Project, FERC No. P-2558
Article 402 – Spill Prevention Control and Countermeasure Plan
Article 404 – Terrestrial Monitoring Plan

Dear Secretary Bose:

The Commission's October 23, 2014 Order Issuing New License (149 FERC ¶ 62,048) for Green Mountain Power Corporation's (GMP) Otter Creek Hydroelectric Project (Project) contains Article 402 that requires the filing of a Spill Prevention and Control Countermeasure Plan (SPCC) and Article 404 that requires the filing of a Terrestrial Monitoring Plan. Both articles encompass the entire Project (i.e., Proctor, Beldens and Huntington Falls developments).

GMP has been working on the redevelopment project at the Proctor Station over the past several years. As part of the process to amend the prior FERC license in support of the redevelopment, GMP consulted with resource agencies and FERC to obtain two license amendments to enable the Proctor redevelopment to move forward while FERC processed the application for new license. Thus far, efforts have included construction of a permanent access bridge, expansion of the intake/headworks infrastructure, replacement of worn penstock and removal of four of the five turbine/generator units in the powerhouse. Installation of the new generating equipment at Proctor was approved under the new license which also requires filing plans under Articles 402 and 404. Therefore, GMP is addressing the requirements of Articles 402 and 404 specific to Proctor at this time and deferring development of the Plans specific to future construction activities at Beldens (i.e., recreational access improvements) and Huntington Falls (i.e., recreational access improvements, trashrack replacement, aquatic habitat bypass flow gate, and station upgrade improvements) to a later date, as identified below.

The following is a summary of consultation efforts and agency conclusions relative to Articles 402 and 404 specific to the remaining phase of construction for the Proctor redevelopment project.

Article 402

On November 18, 2014 GMP, submitted SPCC related documents for ongoing work at Proctor Station Vermont Department of Environmental Conservation (VTDEC) (see Attachment A). VTDEC indicated that it considers approval of SPCC plans to be outside of the agency's jurisdiction and deferred to the U.S. Environmental Protection Agency (USEPA). Based upon discussion with USEPA regional staff and FERC Division of Hydropower Administration and Compliance (DHAC) staff (via conference call held on November 21, 2014), USEPA concluded that it would review the SPCC Plan specific to the Proctor redevelopment and conduct a site visit. By letter dated December 24, 2014 (see Attachment B) USEPA concluded its review of GMP's SPCC Plan for Proctor and concluded that no deficiencies were found during the agencies December 2014 site visit. VTDEC further concluded by email dated January 5, 2015 (see Attachment C) that the agency needs no additional information regarding Article 402 for the redevelopment of the Proctor Station. GMP proposes to file the SPCC Plan associated with improvements at Beldens and Huntington Falls, as appropriate, by January 1, 2016 for FERC review and approval.

Article 404

As noted above, GMP consulted with resource agencies part of the process to amend the prior FERC license in support of the redevelopment, including evaluation of potential terrestrial resource issues. As part of these efforts, USFWS and VTDEC concluded that the proposed construction activities would not likely have effects on any threatened, endangered or invasive species. By emails dated January 5, 2015 (see Attachment D) USFWS and VTDEC concluded that the prior consultation was sufficient to address the requirements of Article 404 relative to installation of new generating equipment at Proctor Station. The agencies expressed concurrence with a proposal by GMP to request that FERC waive the requirements of Article 404 relative to the installation of generating equipment and re-commencement of operation of the Proctor Station. This concurrence is based on an understanding that GMP will need to develop a Terrestrial Monitoring Plan in the future for the proposed recreation improvements at Beldens and Huntington Falls and station improvements planned at Huntington Falls. Because commencement of these improvements is not anticipated to occur until the 2016 construction season, GMP proposes to file the Terrestrial Monitoring Plan by January 1, 2016 for review and approval. This will allow GMP to develop construction design specifications and identify any permitting requirements in consultation with agencies during 2015.

Based on the above information, GMP considers the requirements of Article 402 for the installation of new generating equipment and re-commencement of operations at the Proctor Station to be met. Further, GMP requests a waiver of the requirements of Article 404 for the Proctor Station redevelopment and approval of the proposed schedule for submitting an SPCC plan and Terrestrial Monitoring Plan for Beldens and Huntington Falls construction activities approved under the new FERC license. Due to the current contractor construction schedule to bring the new generating equipment online this coming spring, GMP respectfully requests an expedited review of this filing.

If there are any questions or comments regarding this application, please contact me at (207) 416-1246 or by email at Andy.Qua@KleinschmidtGroup.com.

Sincerely,

KLEINSCHMIDT ASSOCIATES

Andrew D. Qua
Senior Regulatory Coordinator

ADQ:TMJ
Attachments
cc: Steve Hocking, Rebecca Martin – FERC DHAC
Mike Scarzello – GMP

ATTACHMENT A

From: Scarzello, Michael [Michael.Scarzello@greenmountainpower.com]
Sent: Monday, November 10, 2014 4:25 PM
To: Crocker, Jeff; Melissa Grader
Cc: tim.cropley@state.vt.us; Andy Qua; Greenan, John; Eliason, Beth
Subject: Otter Creek Project, FERC No. 2558 License Articles 402 and 404
Attachments: Article 402 Specific 01 Middlebury Spill Plan 10 Nov 14.pdf; Article 402 Specific GMP Environmental Manual 10 Nov 14.pdf; Article 402 Specific Draft Proctor SPCC Plan 10 Nov 14.pdf; Article 402 Speciifc 2014 HW Spill&Awareness Training 10 Nov 14.pdf; Article 402 Specific 2014 GMP SPCC Training Powerpoint 10 Nov 14.pdf; Bancroft Spill Prevention Plan for GMP Proctor 10 Nov 14.pdf

Good afternoon Jeff and Melissa:

As you are aware, Green Mountain Power has been working on a redevelopment project at the Proctor Station in Proctor, VT over the past several years. We have consulted with your agencies to obtain two license amendments to enable the project to move forward while FERC processed an application for new license. Thus far, efforts have included building a permanent access bridge, constructing a new intake, replacing a penstock and demolition and removal of three of the five turbine/generator units in the powerhouse. As part of the amendment process, issues of protected species (Indiana bat and bald eagle), wetlands protection, and protection of disturbed land against invasive botanical species were addressed with your agencies.

On October 23, FERC issued the new license order for the Otter Creek Project that includes approval of the installation of new generating equipment in the Proctor powerhouse, various recreational access improvements at the Proctor, Beldens and Huntington Falls sites, and station improvements at Huntington Falls. Despite ongoing construction at Proctor Station, the license contains two preconstruction filing requirements. Article 402 requires the filing of a Spill Prevention and Control Countermeasures Plan (SPCC) and Article 404 requires the filing of a Terrestrial Monitoring Plan to address the same protected species and invasive species issues identified above.

Article 402
GMP has regional SPCC Plans covering all three stations as part of GMPs comprehensive SPCC and Oil Spill Response program that was previously developed to comply with the requirements of 40 CFR Part 112. To expediently meet the specific requirements of Article 402, and proceed with the installation of new equipment in the Proctor Station, GMP has modified certain SPCC related documents and integrated its SPCC training program with that of Bancroft Contracting Corporation (BCC) for ongoing work at Proctor Station. The applicable plans and training documents are attached for your review.. GMP believes its environmental programs, training and collaboration with BCC combine to exceed all Article 402 requirements and as such, we request your review and concurrence. Please let us know as soon as possible if you have questions or comments.
The following SPCC related documents are attached and demonstrate that GMP meets the spirit and intent of Article 402:

- Draft GMP SPCC Plan Proctor Hydroelectric Station, November 2014 (note this draft plan replaces the existing plan in consideration of the ongoing work),
- GMP SPCC Plan The Middlebury District Plan which includes Beldens & Huntington Hydroelectric Stations, July 2012,
- GMP Environmental Guidance Manual, August 2012,
- GMP Computer Based Training for SPCC, 2014,

- GMP Computer Based Training for Spill Response and Hazardous Waste Handling Procedures October 2014;
- Bancroft Contracting Corporation SPCC Plan for GMP Proctor Hydroelectric Station, November 2014.

Article 404
Given the fact that terrestrial issues were previously addressed at Proctor, and the next phase of construction to install new generating equipment will be limited to work within and immediately surrounding the powerhouse, GMP is seeking a waiver of the requirements of 404 specific to the remainder of the Proctor Redevelopment Project. GMP will need to prepare a Terrestrial Monitoring Plan in consultation with your agencies for the recreation improvements at Proctor as well as for Huntington Falls station improvements.

To facilitate immediate commencement of equipment installation at Proctor, GMP respectfully requests your support via email response, approval of the SPCC documents and a waiver of Article 404 for site work related to the Proctor Station Redevelopment Project. If you have any questions or would like to discuss this matter, please feel free to contact me at 802-770-0130. Thank you for your time and consideration.

_____

Michael Scarzello
Green Mountain Power
2152 Post Road, Rutland, VT 05701
Michael.Scarzello@greenmountainpower.com
802.770.0130

ATTACHMENT B

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912

December 24, 2014

Mr. John Greenan, Environmental Engineer
Green Mountain Power
Environmental Department
2152 Post Road
Rutland, Vermont 05701

Re: SPCC Plan for the Proctor Hydroelectric Station - Compliance with the Requirements of 40 C.F.R. Part 112

Dear Mr. Greenan:

An existing Spill Prevention, Control, and Countermeasure (SPCC) Plan was recently updated by Green Mountain Power (GMP) for their hydroelectric facility located on the Otter Creek in Proctor, VT. This version of the plan, dated December, 2104 was produced by GMP to fulfill the requirements of the Oil Pollution Prevention Regulations at 40 C.F.R. Part 112, promulgated under Section 311 of the Clean Water Act, 33 U.S.C. 1321 and submitted to the State of Vermont as part of a Federal Energy Regulatory Commission (FERC) re-licensing procedure. The Vermont DEC forwarded the plan review request to the US EPA due to the State's unfamiliarity with SPCC requirements.

On December 2, 2014, I conducted an inspection of the facility with you and Ms. Berth Eliason of your staff. Based on the December 2014 Plan and its implementation at the facility noted during my inspection, no deficiencies were observed.

Nevertheless, EPA reserves its right to take further enforcement action pursuant to the Clean Water Act, and other applicable laws, including the right to seek penalties, for any past, current or future violations detected at the above-referenced facility. EPA is aware that GMP is updating this particular hydro station and there will be additional oil storage to consider in the near future. An amendment to the SPCC Plan must be prepared within six months of the completed upgrade, and implemented as soon as possible, but not later than six months following preparation of the amendment.

Thank you for your cooperation throughout the inspection process. For any further assistance or coordination on this matter, please do not hesitate to contact me at (617) 918-1274.

Sincerely,

Gary Lipson
On-Scene Coordinator

cc: EPRB Oil Program Correspondence file
Cosmo Caterino, EPA Region 1 Oil Program Coordinator
Tim Cropley, VT DEC

ATTACHMENT C

Andy Qua

From: Crocker, Jeff [Jeff.Crocker@state.vt.us]
Sent: Monday, January 05, 2015 2:13 PM
To: Andy Qua
Cc: Scarzello, Michael; Greenan, John; Eliason, Beth
Subject: RE: SPCC compliance letter

Good afternoon Andy,

Thank you for forwarding the letter from the EPA indicating they have reviewed GMP's SPCC plan for the Proctor development and compliance with the requirements as requested by the Department of Environmental Conservation. I have reviewed the letter and do not need any additional information regarding Article 402. SPCC plan.

Thank you,

Jeff

Jeff Crocker, *River Ecologist*
1 National Life Drive, Main 2
Montpelier, VT 05620-3522
802-490-6151 / Jeff.Crocker@state.vt.us
www.watershedmanagement.vt.gov

VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WATERSHED MANAGEMENT DIVISION
RIVERS PROGRAM

From: Andy Qua [mailto:Andy.Qua@KleinschmidtGroup.com]
Sent: Monday, January 05, 2015 11:28 AM
To: Crocker, Jeff
Cc: Scarzello, Michael; Greenan, John; Eliason, Beth
Subject: FW: SPCC compliance letter

Good morning Jeff –

Attached is a letter from EPA concluding their review of GMP's SPCC Plan for Proctor and a conclusion that no deficiencies were found during Gary Lipson's site visit last month. I did not include the checklist he mentions because the file is 7 MB, but can forward that if you would like.

Given that Tim Cropley indicated that EPA would have primacy of the State of VT relative to SPCC plans, do you need anything additional to address the FERC license requirement for Article 402? If not and you can indicate so, we will file your concurrence and the EPA letter with FERC. If you do need additional information, please let us know and we provide it as soon as possible.

Thanks very much,
Andy

Andrew D. Qua
Regulatory Team Leader
Kleinschmidt
Office: 207.416.1246
www.KleinschmidtGroup.com

Begin forwarded message:

From: "Lipson, Gary" <Lipson.Gary@epa.gov>
To: "Eliason, Beth" <Beth.Eliason@greenmountainpower.com>, "Greenan, John" <John.Greenan@greenmountainpower.com>
Subject: SPCC compliance letter

Good day John and Beth,

Please find attached the compliance letter and checklist from my recent inspection of the Proctor facility. I am also putting a hard copy in the mail.
Do not hesitate to give me a call or e-mail with any questions or concerns.

Thank you and Happy Holidays

Gary Lipson, OSC
US EPA Region 1
Emergency Planning and Response Branch
(617) 918-1274
cell: (617) 694-7055
Fax: (617) 918-0274

ATTACHMENT D

Andy Qua

From: Grader, Melissa [melissa_grader@fws.gov]
Sent: Monday, January 05, 2015 2:05 PM
To: Andy Qua
Cc: Scarzello, Michael; Crocker, Jeff
Subject: Re: Proctor Article 404

The FWS also has no objection to GMP waiving Article 404 for the installation of generating equipment at the Proctor development.

Melissa Grader
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service - New England Field Office
103 East Plumtree Road
Sunderland, MA 01375
413-548-8002 x124
melissa_grader@fws.gov

On Mon, Jan 5, 2015 at 1:43 PM, Crocker, Jeff <Jeff.Crocker@state.vt.us> wrote:

Good afternoon Andy,

The Department is supportive of GMP's request to waive the Article 404 requirement specific to installing the new generating equipment at the Proctor development.

Thank you,

Jeff

Jeff Crocker, *River Ecologist*

1 National Life Drive, Main 2

Montpelier, VT 05620-3522

802-490-6151 / Jeff.Crocker@state.vt.us

www.watershedmanagement.vt.gov

VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WATERSHED MANAGEMENT DIVISION
RIVERS PROGRAM

From: Andy Qua [mailto:Andy.Qua@KleinschmidtGroup.com]
Sent: Monday, January 05, 2015 11:10 AM
To: Melissa Grader; Crocker, Jeff
Cc: Scarzello, Michael
Subject: Proctor Article 404

Good morning Jeff and Melissa -

I hope you both had a nice holiday season. Looks like we are in for a cold start to the new year.

I am pulling together the filing to FERC regarding the Proctor redevelopment and the terrestrial monitoring plan requirement under Article 404 of the FERC license. It occurred to me that it may be helpful for you to send some of the prior correspondence for the earlier phases of construction. This included communication with Sarah Nystrom about bald eagles and her concurrence that construction activities leading up to installing new equipment would not likely have any effects. As I noted GMP would like to request FERC waive the Article 404 requirement specific installing the new generating equipment, assuming you are not opposed to that approach based on prior consultation. GMP would still need to develop a terrestrial plan prior to doing recreation improvements at Beldens and Huntington Falls in the future so we would need to provide you with a plan for that effort at a later time.

Please let us know if you have any questions or concerns about this approach. Jeff, I will be sending you some follow up information by separate email regarding the SPCC plan consultation with EPA.

Thank you both for your time on this.

Andy

Document Content(s)

APPENDIX J

THREATENED AND ENDANGERED SPECIES

Otter Creek Project; FERC #2558
Pre-Application Document Information Questionnaire for FERC Relicensing
Supplemental Response
Rod Wentworth, Vermont Department of Fish and Wildlife
December 13, 2006

FISHERIES

Otter Creek is highly productive and supports a large variety of fishes, including both coldwater and warmwater species. Trout and trout fisheries exist downstream of each of the dams and near the mouths of the cold water tributaries. Smallmouth bass, northern pike and yellow perch are found throughout the section of Otter Creek encompassing the projects.

Downstream of the Proctor dam, Otter Creek supports rainbow and brown trout, northern pike and a variety of other warmwater fish. Furnace Brook and Neshobe River are major tributaries that support trout fisheries.

Below the Beldens project, there are fisheries for brown and rainbow trout and smallmouth bass. The New Haven River is a major tributary found just downstream of the dam, and also supports a trout fishery. This reach of Otter Creek is known for smallmouth bass fishing in the summer and the trout fishing just downstream of the dam in late summer.

Fisheries survey work in Otter Creek has been very limited. In 1977, the following species were captured in a boat electrofishing survey of Otter Creek, upstream from Vergennes to the Middlebury/Salisbury town line: smallmouth bass, northern pike, yellow perch, pumpkinseed, bluegill, bullhead [species not cited], brown trout, mirror carp, spottail shiner, common shiner, white sucker, fallfish, banded killifish, and golden shiner.

Fisheries issues that will warrant discussion early in the relicensing process include

1. Flow regime in project bypasses and downstream of the powerhouses.
2. Dissolved oxygen.
3. Impoundment water level management.
4. Fish Passage.
5. Public access for angling and boating.

For issues #1-3 and 5, Department recommendations addressing each issue will be determined after site visits can be conducted in 2007. These recommendations will include study requests where applicable.

As part of the project to increase generating capacity at the Beldens and Huntington Falls in the 1980s, downstream fish passage facilities were installed at the Huntington Falls project. At the time, the Department intended to stock migratory salmonids (steelhead rainbow trout and/or landlocked Atlantic salmon) in the Otter Creek drainage as part of a plan for the development of salmonid fisheries in Lake Champlain. Downstream fish

passage at the Beldens project was envisioned as a possible future need, contingent upon expansion of the Lake Champlain salmonid program. At this time, the Department is not planning to expand the migratory salmonid program into the Otter Creek watershed. While fish passage facilities can benefit many riverine fish species, the Department is not requesting the construction or operation of downstream fish passage facilities at this time, at the three subject projects. However, the Department will recommend a reservation of authority to require the construction and operation of such facilities at a future date, should the need arise.

RARE, THREATENED AND ENDANGERED SPECIES

Everett Marshall, Biologist/Information Manager for the Department's Nongame & Natural Heritage Program, reviewed the Department's database for records of rare, threatened and endangered species and significant natural communities within vicinity of three dams. The search revealed the following:

Beldens: see attached list of rare species and natural communities and a key to rank and status.

Huntington: no records.

Proctor: no records, however, the rare freshwater mussel, Creek Heelsplitter, is found in towns above and below the project area in Otter Creek.

Nongame and Natural Heritage Program
Vermont Fish and Wildlife Department
December 13, 2006

SURVEY SITE Scientific Name Comments	Common Name	Global Rank	Federal Status	State Rank	State Status	Last Seen
BATTELL GORGE						
Mesic Maple-Ash-Hickory-Oak Forest Located below the falls on the east side of the river		GNR		S3		6/23/1994
BELDENS FALLS						
Carex aquatilis Historical record - wetlands	Water Sedge	G5		S2		1878-07-05
Carex laxiculmis Historic– rich woods	Loose Sedge	G5		S2		1897-06-20
Gentianella quinquefolia Historic– calcareous outcrops	Stiff Gentian	G5		S1	T	8/24/1903
Potamogeton filiformis var. borealis Historic record – pool below falls	Slender Pondweed	G5T5		S1		1899-08-18
Sporobolus neglectus Scattered in parking area and rocks of island	Small Dropseed	G5		S1		11/15/1983
OTTER CREEK-MIDDLEBURY						
Lasmigona costata Was located above the Dam in Middlebury by the Main St. bridge	Fluted-shell	G5		S2	E	11/4/1978
OTTER CREEK-MOUNT TABOR TO MIDDLEBURY						
Lasmigona compressa Records for Clarendon, Middlebury, Mount Tabor	Creek Heelsplitter	G5		S2		11/4/1978

Explanation of Legal Status and Information Ranks

State Rank - Value that best characterizes the relative rarity (abundance) or endangerment of a native taxon within Vermont's geographic boundary.

Global Rank - Value that best characterizes the relative rarity (abundance) or endangerment of a native taxon throughout its range.

1 - Very rare (Critically imperiled): At very high risk of extinction or extirpation due to extreme rarity (often 5 or fewer populations or occurrences), very steep declines, or other factors

2 - Rare (Imperiled): At high risk of extinction or extirpation due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors

3 - Uncommon (Vulnerable): At moderate risk of extinction or extirpation due to restricted range, relatively few populations or occurrences (often 80 or fewer), recent and widespread declines, or other factors

4 - Common to uncommon (Apparently secure): locally common or widely scattered to uncommon, but not rare; some cause for long-term concern due to declines or other factors; or stable over many decades and not threatened but of restricted distribution or other factors

5 - Common (Secure): widespread and abundant

H - Possibly extinct/extirpated: Missing; known from only historical occurrences but still some hope of rediscovery

X - Presumed extinct/extirpated: Not located despite intensive searches and virtually no likelihood of rediscovery

U = Unrankable: Currently unrankable due to lack of information or due to substantially conflicting information about status or trends

NR = Not ranked: Not yet assessed

NA = Not applicable. Element is not a suitable target for conservation for one of the following reasons: Hybrid, Exotic Origin, Accidental/Nonregular, Not Confidently Present, No Definable Occurrences

An indicator of uncertainty about the rank, either in the form of a range rank (e.g. S1S3) or a ? qualifier, may follow a numeric rank.

For global ranks only, an appended T-rank indicates an infraspecies.

For global ranks only, a qualifier after the rank in the form of a Q indicates questionable taxonomy.

State Status - Legal protection under Vermont Endangered Species Law (10 V.S.A. Chap. 123)
E = Endangered: in immediate danger of becoming extirpated in the state
T = Threatened: with high possibility of becoming endangered in the near future

or informational category only- not established by law
SC = Special Concern: rare; status should be watched

Federal Status - Legal protection under the federal Endangered Species Act, U.S. Fish & Wildlife Service
LE = Listed Endangered
LT = Listed Threatened

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 03301
PHONE: (603)223-2541 FAX: (603)223-0104
URL: www.fws.gov/newengland

Consultation Code: 05E1NE00-2016-SLI-0496 December 10, 2015
Event Code: 05E1NE00-2016-E-00698
Project Name: Proctor Development

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

Official Species List

Provided by:

New England Ecological Services Field Office
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 03301
(603) 223-2541
http://www.fws.gov/newengland

Consultation Code: 05E1NE00-2016-SLI-0496
Event Code: 05E1NE00-2016-E-00698

Project Type: DAM

Project Name: Proctor Development

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.

Project Location Map:

Project Coordinates: The coordinates are too numerous to display here.

Project Counties: Rutland, VT

Endangered Species Act Species List

There are a total of 1 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Mammals	Status	Has Critical Habitat	Condition(s)
Northern long-eared Bat *(Myotis septentrionalis)*	Threatened		

Critical habitats that lie within your project area

There are no critical habitats within your project area.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 03301
PHONE: (603)223-2541 FAX: (603)223-0104
URL: www.fws.gov/newengland

Consultation Code: 05E1NE00-2016-SLI-0494 December 10, 2015
Event Code: 05E1NE00-2016-E-00696
Project Name: Beldens Development

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: Beldens Development

Official Species List

Provided by:

New England Ecological Services Field Office
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 03301
(603) 223-2541
http://www.fws.gov/newengland

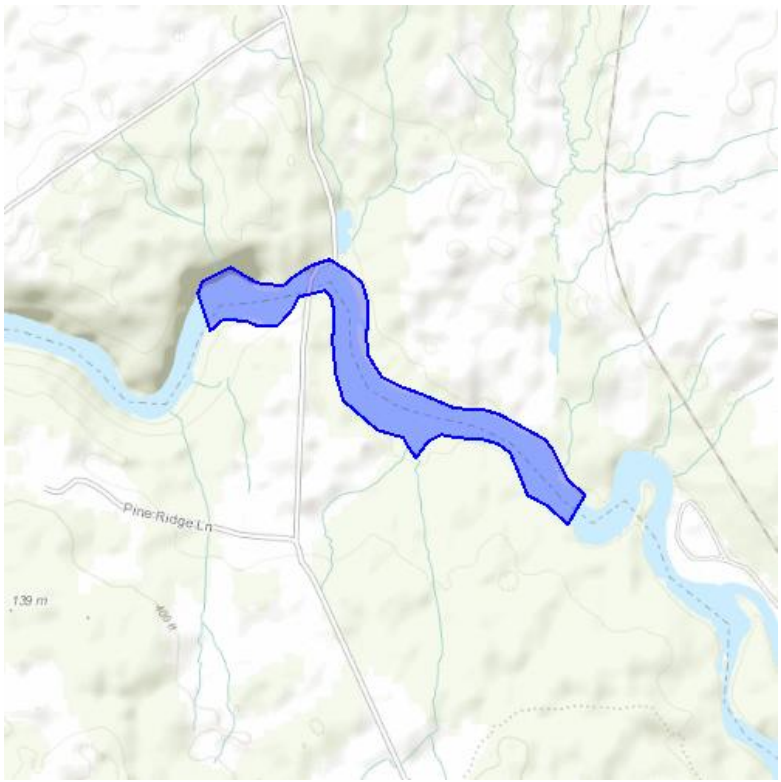
Consultation Code: 05E1NE00-2016-SLI-0494
Event Code: 05E1NE00-2016-E-00696

Project Type: DAM

Project Name: Beldens Development

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.

Project Location Map:



Project Coordinates: The coordinates are too numerous to display here.

Project Counties: Addison, VT

Endangered Species Act Species List

There are a total of 2 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Mammals	**Status**	**Has Critical Habitat**	**Condition(s)**
Indiana bat *(Myotis sodalis)* Population: Entire	Endangered		
Northern long-eared Bat *(Myotis septentrionalis)*	Threatened		

Critical habitats that lie within your project area

There are no critical habitats within your project area.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 03301
PHONE: (603)223-2541 FAX: (603)223-0104
URL: www.fws.gov/newengland

Consultation Code: 05E1NE00-2016-SLI-0491 December 10, 2015
Event Code: 05E1NE00-2016-E-00693
Project Name: Huntington Falls Development

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

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We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: Huntington Falls Development

Official Species List

Provided by:

New England Ecological Services Field Office
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 03301
(603) 223-2541
http://www.fws.gov/newengland

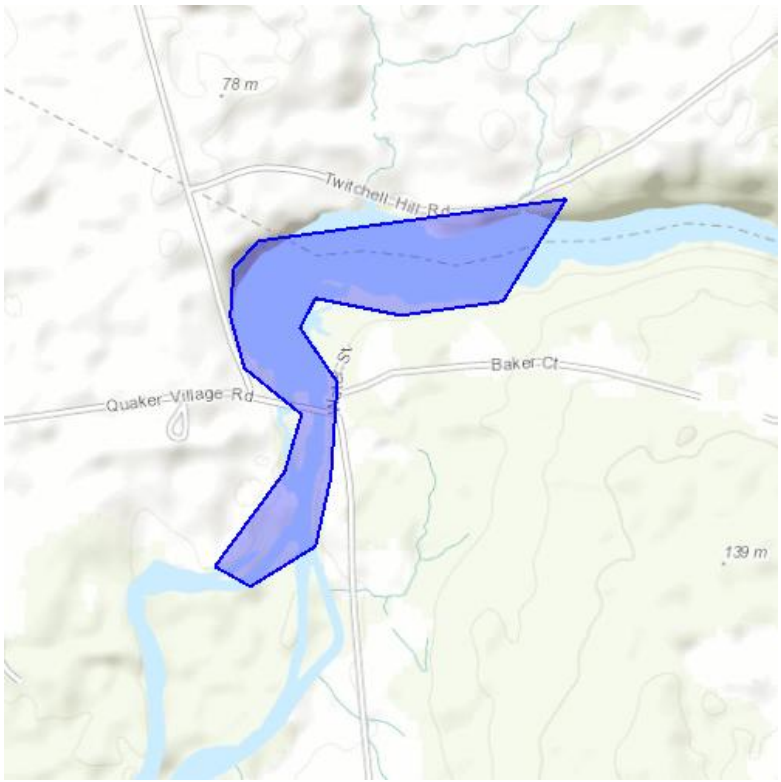
Consultation Code: 05E1NE00-2016-SLI-0491
Event Code: 05E1NE00-2016-E-00693

Project Type: DAM

Project Name: Huntington Falls Development

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-73.20895958051551 44.07052395396782, -73.21077919215895 44.068402536824884, -73.21373176731868 44.06813118720488, -73.21613502659602 44.06847654130744, -73.21658134460449 44.06785983681143, -73.21551704459125 44.06674975252652, -73.21572303771973 44.064800887161816, -73.21616935834754 44.06337003423506, -73.2180233017425 44.06255591290424, -73.21901893563336 44.0629753104247, -73.21702766523231 44.06489956578861, -73.21654701285296 44.06608369177455, -73.21819496311946 44.067045776755755, -73.21857261762489 44.06810651938089, -73.2185039515025 44.0690932389075, -73.21778297424316 44.06966059573976, -73.20895958051551 44.07052395396782)))

Project Counties: Addison, VT

Endangered Species Act Species List

There are a total of 2 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Mammals	**Status**	**Has Critical Habitat**	**Condition(s)**
Indiana bat *(Myotis sodalis)* Population: Entire	Endangered		
Northern long-eared Bat *(Myotis septentrionalis)*	Threatened		

Critical habitats that lie within your project area

There are no critical habitats within your project area.

APPENDIX K

PROGRAMMATIC AGREEMENT

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426
June 12, 2014

OFFICE OF ENERGY PROJECTS

Project No. 2558-029 - Vermont
Otter Creek Hydroelectric Project
Green Mountain Power
Corporation

TO THE PARTIES ADDRESSED:

Reference: Transmittal of the Executed Programmatic Agreement for the Otter Creek Hydroelectric Project, FERC Project No. 2558-029

Enclosed is the Programmatic Agreement for Green Mountain Power Corporation's Otter Creek Hydroelectric Project No. 2558, fully executed as of December 30, 2013, the date it was signed by the Vermont State Historic Preservation Officer.

If you have questions please contact Janet Hutzel at 202-502-8675, or by e-mail at janet.hutzel@ferc.gov.

Sincerely,

Timothy Konnert, Chief
Midwest Branch
Division of Hydropower Licensing

Enclosure: Final Programmatic Agreement

Addresses:

John Eddins
Advisory Council on Historic Preservation
The Old Post Office Building, Suite 803
1100 Pennsylvania Avenue, NW
Washington, D.C. 20004

R. Scott Dillon
State of Vermont, Division for Historic Preservation
One National Life Drive, Floor 6
Montpelier, VT 05620-0501

Michael Scarzello
Green Mountain Power Corporation
77 Grove St
Rutland, VT 05701

PROGRAMMATIC AGREEMENT
BETWEEN
THE FEDERAL ENERGY REGULATORY COMMISSION
AND
THE VERMONT STATE HISTORIC PRESERVATION OFFICER FOR MANAGING HISTORIC PROPERTIES THAT MAY BE AFFECTED BY ISSUING A NEW LICENSE TO GREEN MOUNTAIN POWER CORPORATION FOR THE CONTINUED OPERATION OF THE OTTER CREEK HYDROELECTRIC PROJECT IN ADDISON AND RUTLAND COUNTIES, VERMONT

WHEREAS, the Federal Energy Regulatory Commission or its staff (hereinafter, "Commission") proposes to issue a new license to Green Mountain Power Corporation (hereinafter, "Licensee") for the continued operation of the Otter Creek Hydroelectric Project No. 2558 (hereinafter, "Project") as authorized by Part I of the Federal Power Act, 16 U.S.C. sections 791(a) through 825(r), *as amended*; and

WHEREAS, the Commission has determined that issuing such a license may affect properties included in or eligible for inclusion in the National Register of Historic Places (hereinafter, "historic properties"); and

WHEREAS, the associated *Otter Creek Hydroelectric Project FERC No. 2558 Historic Properties Management Plan* (hereinafter, "HPMP"), dated March 2013 provides a description of the Project, historic properties identified as of the date of this Programmatic Agreement, and anticipated effects; and

WHEREAS, the area of potential effect for the project is the project boundary (see Appendix B of the HPMP);

WHEREAS, the Commission has consulted with the state of Vermont, Division for Historic Preservation (hereinafter, "Vermont SHPO") pursuant to 36 C.F.R. section 800.14(b) of the Advisory Council on Historic Preservation's (hereinafter, "Advisory Council") regulations (36 C.F.R. Part 800) implementing section 106 of the National Historic Preservation Act (16 U.S.C. 470f; hereinafter, "section 106"); and

WHEREAS, the Licensee has participated in the consultation and has been invited to concur in this Programmatic Agreement; and

WHEREAS, the Commission will require the Licensee to implement the provisions of this Programmatic Agreement as a condition of issuing a new license for the Project; and

NOW THEREFORE, the Commission and the Vermont SHPO agree that the Project will be administered in accordance with the following stipulations in order to satisfy the Commission's section 106 responsibilities during the term of the Project's license.

STIPULATIONS

The Commission will ensure that, upon issuing a license for this Project, the Licensee implements the following stipulations. All stipulations that apply to the Licensee will similarly apply to any and all of the Licensee's successors. Compliance with any of the following stipulations does not relieve the Licensee of any other obligations it has under the Federal Power Act, the Commission's regulations, or its license.

I. HISTORIC PROPERTIES MANAGEMENT PLAN

A. Upon issuing a license for this project, the Licensee will implement the HPMP.

B. The Monitoring Plan developed as part of the HPMP implementation will include stipulations to address and mitigate any adverse effects identified to historic properties not already subject to specific Mitigation Plans, or to adverse effects identified to archaeologically sensitive areas within the project. Recommended actions must include procedures to implement additional site identification, evaluation, and development of Mitigation Plans as appropriate to address the identified adverse effects.

C. The Licensee will incorporate section 5.8, *Emergency Procedure* into the HPMP. The text for section 8, *Emergency Procedures*, is the following: In the event that an immediate threat to life or property requires action by GMP that could threaten the historic properties within the APE, GMP will notify FERC and the SHPO of the emergency situation as soon as possible, but no later than 10 days after any emergency. If an historic property is damaged during an emergency situation, GMP shall, after consultation with the SHPO and the FERC, conduct an assessment of the damage. GMP shall also consult with the SHPO and the FERC to identify any measures to implement to lessen or mitigate for any adverse effects to an historic property damaged during an emergency situation.

II. DISPUTE RESOLUTION

If at any time during implementation of this Programmatic Agreement and the HPMP, the Licensee or Vermont SHPO objects to any action or any failure to act pursuant to this Programmatic Agreement or the HPMP, they may file written objections with the Commission.

A. In the event a written objection is filed with the Commission, the Commission will follow the steps listed below.

1. The Commission will consult with the objecting party, and with other parties as appropriate, to resolve the objection.

2. The Commission may initiate on its own such consultation to remove any of its objections.

B. If the Commission determines that the objection cannot be resolved, the Commission will forward all documentation relevant to the dispute to the Advisory Council and request that the Advisory Council comment. Within 30 days after receiving all pertinent documentation, the Advisory Council will either:

1. provide the Commission with recommendations, which the Commission will take into account in reaching a final decision regarding the dispute; or

2. notify the Commission that it will comment pursuant to 36 C.F.R. sections 800.7(c)(1) through (c)(3) of the National Historic Preservation Act, and proceed to comment.

C. The Commission will take into account any Advisory Council comment provided in response to such a request, with reference to the subject of the dispute, and will issue a decision on the matter. The Commission's responsibility to carry out all actions under this Programmatic Agreement that are not the subject of dispute will remain unchanged.

III. AMENDMENT AND TERMINATION OF THIS PROGRAMMATIC AGREEMENT

A. The Commission, Licensee, or Vermont SHPO may request that this Programmatic Agreement be amended, whereupon these parties will consult in accordance with 36 C.F.R. § 800.14(b) to consider such amendment.

B. The Commission or Vermont SHPO may terminate this Programmatic Agreement by providing 30 days written notice to the other parties, provided that the Commission, Licensee, and Vermont SHPO consult during the 30-day notice period in order to seek agreement on amendments or other actions that would avoid termination. In the event of termination, the Commission will comply with 36 C.F.R. sections 800.3 through 800.7(c)(3), with regard to individual actions covered by this Programmatic Agreement.

Execution of this Programmatic Agreement, and its subsequent implementation, is evidence that the Commission has satisfied its responsibilities pursuant to section 106 of the National Historic Preservation Act, *as amended*, for all individual actions carried out under the license. Provided, however, that unless and until the Commission issues a license for the Project and this Programmatic Agreement is incorporated by reference therein, this Programmatic Agreement has no independent legal effect for any specific license applicant or Project.

FEDERAL ENERGY REGULATORY COMMISSION

By: _____ for VY Date: 12-23-2013
Vince Yearick, Director
Division of Hydropower Licensing

VERMONT STATE HISTORIC PRESERVATION OFFICE

By: Laura Trieschmann **Date:** 12/30/13
Laura Trieschmann
State Historic Preservation Officer

CONCUR: GREEN MOUNTAIN POWER CORPORATION

By: _____ **Date:** _____
Steve Costello
Vice President, Generation and Energy Innovation

CONCUR: GREEN MOUNTAIN POWER CORPORATION

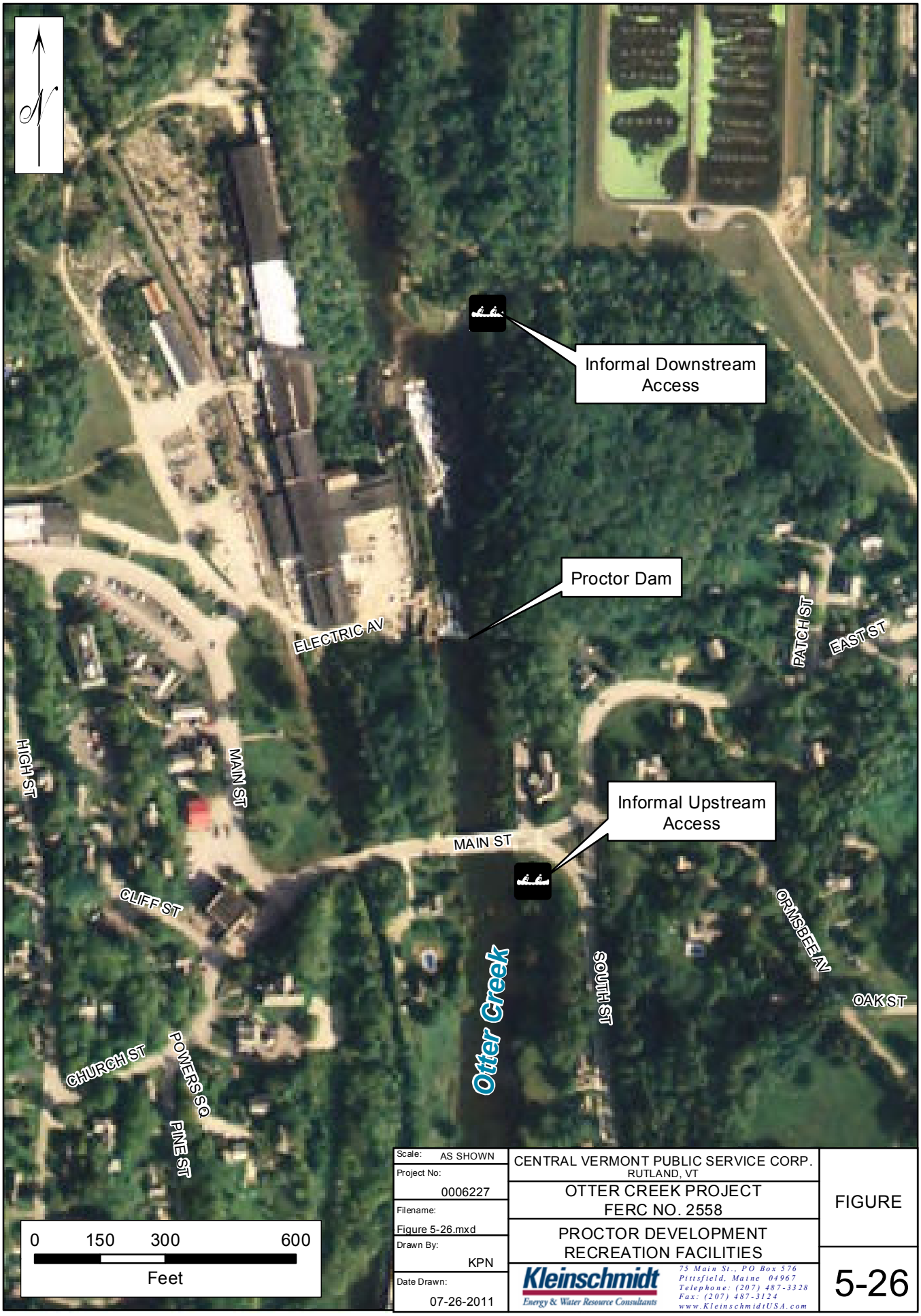
By: _____ **Date:** 1/21/14

~~Steve Costello~~ Josh Castonguay
~~Vice President~~, Generation and Energy Innovation
Director,

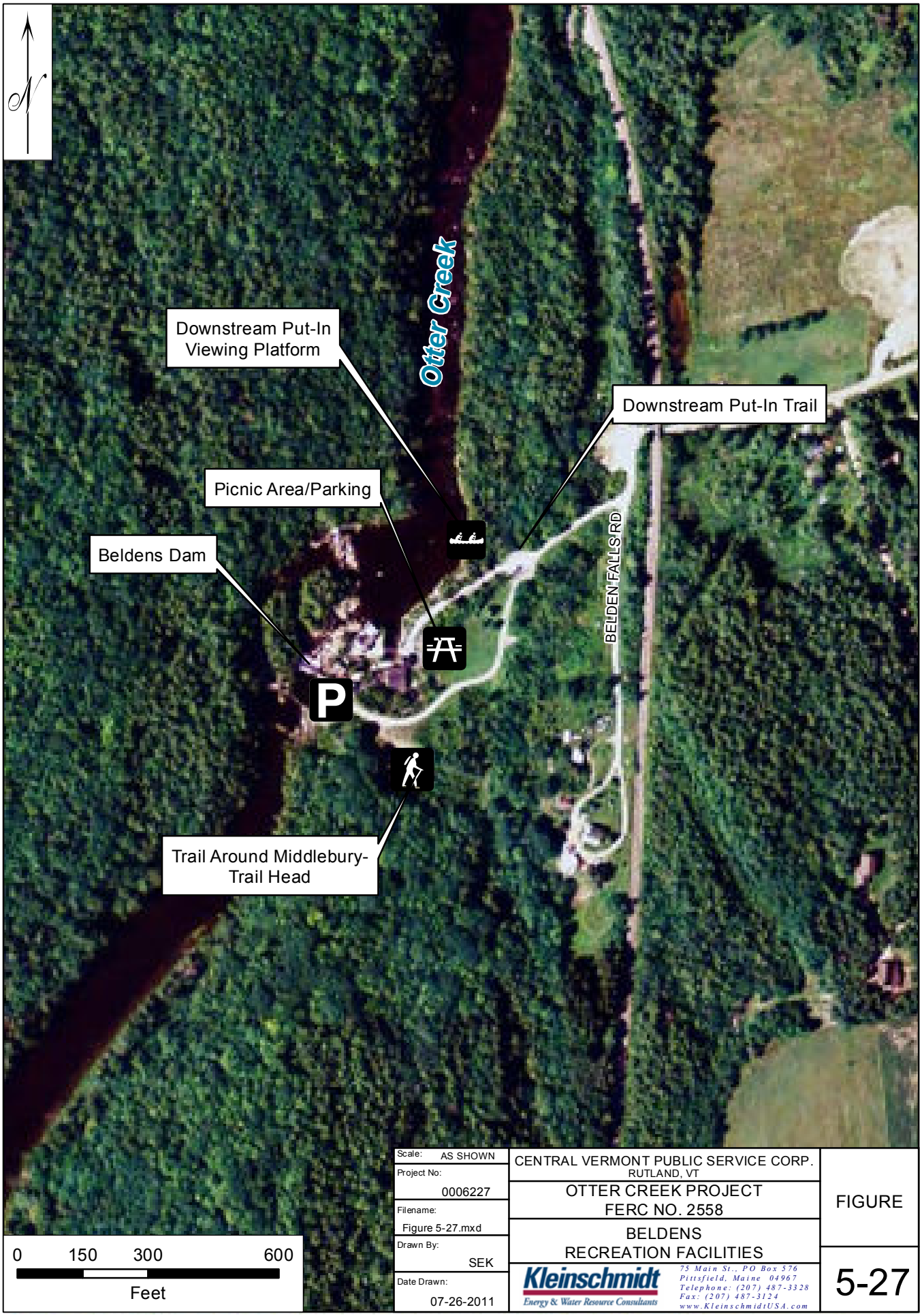
Document Content(s)

APPENDIX L

PROJECT RECREATION SITES



Scale: AS SHOWN	CENTRAL VERMONT PUBLIC SERVICE CORP. RUTLAND, VT	FIGURE
Project No: 0006227	OTTER CREEK PROJECT FERC NO. 2558	
Filename: Figure 5-26.mxd	PROCTOR DEVELOPMENT RECREATION FACILITIES	
Drawn By: KPN		
Date Drawn: 07-26-2011	Kleinschmidt Energy & Water Resource Consultants 75 Main St., PO Box 576 Pittsfield, Maine 04967 Telephone: (207) 487-3328 Fax: (207) 487-3124 www.KleinschmidtUSA.com	5-26

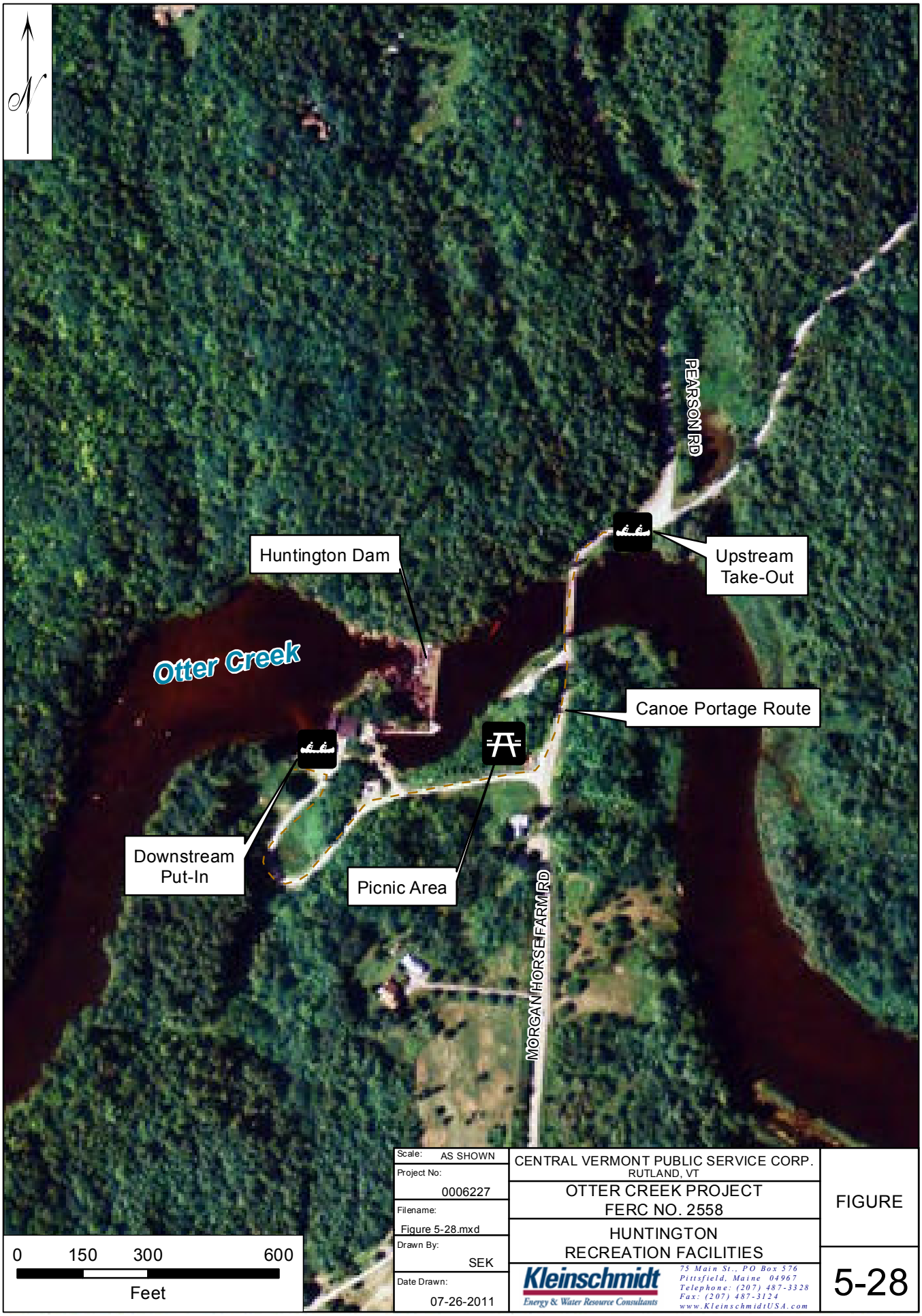


Scale: AS SHOWN	CENTRAL VERMONT PUBLIC SERVICE CORP. RUTLAND, VT
Project No: 0006227	OTTER CREEK PROJECT FERC NO. 2558
Filename: Figure 5-27.mxd	BELDENS RECREATION FACILITIES
Drawn By: SEK	
Date Drawn: 07-26-2011	

Kleinschmidt Energy & Water Resource Consultants
75 Main St., PO Box 576
Pittsfield, Maine 04967
Telephone: (207) 487-3328
Fax: (207) 487-3124
www.KleinschmidtUSA.com

FIGURE

5-27



Scale: AS SHOWN	CENTRAL VERMONT PUBLIC SERVICE CORP. RUTLAND, VT
Project No: 0006227	OTTER CREEK PROJECT FERC NO. 2558
Filename: Figure 5-28.mxd	HUNTINGTON RECREATION FACILITIES
Drawn By: SEK	
Date Drawn: 07-26-2011	

Kleinschmidt Energy & Water Resource Consultants
75 Main St., PO Box 576
Pittsfield, Maine 04967
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FIGURE

5-28