

**Water Quality Certification
(33 U.S.C. § 1341)**

In the matter of: Village of Lyndonville Electric Department
 119 Park Avenue
 Lyndonville, Vermont 05851

APPLICATION FOR GREAT FALLS HYDROELECTRIC PROJECT

Section 401 of the federal Clean Water Act requires that any applicant for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates that any such discharge will comply with other substantive provisions of the Clean Water Act. 33 U.S.C. § 1341(a)(1). The certifying State may set forth any effluent limitations and other limitations, and monitoring requirements necessary to assure that any applicant for a Federal license or permit will comply with the Clean Water Act and with any other appropriate requirement of State law. 33 U.S.C. § 1341(d). In Vermont, the Agency of Natural Resources is the certifying agency of the State for purposes of Section 401 of the Clean Water Act. 10 V.S.A. § 1004. The Secretary of Natural Resources has delegated the authority to make certification determinations to the Department of Environmental Conservation (Department).

The Department has reviewed a water quality certification application dated January 9, 2019 and filed by the Lyndonville Electric Department (LED or the Applicant) for the Great Falls Hydroelectric Project (the project). The supporting documentation for the certification application includes the Applicant's Federal Energy Regulatory Commission (FERC) license application (FERC No. 2839) dated May 26, 2017 and other supporting documents filed by the Applicant in support of the application. The record for this decision includes the October 26, 2017 FERC Additional Information Request (AIR) responses; the FERC Environmental Assessment (EA) dated August 28, 2019; and many other documents related to the project and its relicensing filed through October 10, 2019.

The current application is subject to review under the Vermont Water Quality Standards promulgated by the Agency of Natural Resources and effective beginning January 15, 2017 (Environmental Protection Rule, Chapter 29A) (Standards). (Standards, Section 29A-101 Applicability).

The Department, based on the application and record before it, makes the following findings and conclusions.

Findings

Background and General Setting

1. The Great Falls Hydroelectric Project is an existing licensed project located on the Passumpsic River in Vermont. The Passumpsic River watershed drains portions of Essex, Caledonia, Orleans, and Washington Counties and extends from the Town of Newark in the north to the Town of Barnet in the south, where it drains into the Connecticut River.

2. The Passumpsic River is 34 miles long and has a total drainage area of 507 square miles. There are several major tributaries to the Passumpsic including the Moose River, Sleepers River, and the East and West branches of the Passumpsic River.
3. The Passumpsic River has been heavily developed for hydroelectric generation. There are a total of seven hydroelectric dams currently in service on the Passumpsic River. The only upstream facility is Vail, owned by the Village of Lyndonville Electric Department (LED). The remaining five are all located downstream of Great Falls and owned by Green Mountain Power Corporation.
4. The Great Falls Hydroelectric Project is owned and operated by LED. The project is located in the Town of Lyndon.
5. The project site was originally developed in 1876 as a pulp mill, and this building is now referred to as the old mill. In 1915, a hydroelectric plant, now referred to as the old powerhouse, was developed by LED. The old powerhouse contains two turbines, totaling 700 kW. At the time the old powerhouse was built, the old mill started to be used for storage. Another powerhouse, now referred to as the new powerhouse, was built in 1979 and contains one 1,350 kW turbine. Both the old and new powerhouses are used for electric generation.
6. This site was originally licensed by FERC in 1979 as Project No. 2839. The license order was amended in 1984 when FERC approved the redevelopment of two preexisting turbines in the old powerhouse. The project was issued a water quality certification in 1984 to operate as a run-of-river¹ facility.

Project and Civil Works

7. The dam is a curved concrete structure that is 32 feet high, and 160 feet long, with a crest elevation of 666.38 feet msl. The dam has 2-foot-high flashboards. This results in a normal full pond water level of 668.38 feet msl. The reservoir has a maximum storage of 135 acre-feet and extends nearly to the next upstream hydroelectric facility, the Vail Hydroelectric Project. The surface area of the impoundment is 15.7 acres at a normal pond elevation of 668.38 feet msl.
8. There is a headworks structure that controls the flow of water into the power canal. The headworks structure is 15 feet wide, 6 feet deep, and 28 feet high. The water enters a 282-foot long power canal, which is partially closed. The closed section is 70 feet long and 22 feet wide. The open portion of the power canal is 212 feet long and averages 22 feet wide.
9. The bypass at the project is approximately 750 feet long. There is a waste gate located in the center of the dam near the base. The waste gate has reportedly been used to provide conservation flows to the bypass during low flow events.
10. At the downstream end of the power canal, two sections of trashracks are located at the penstock intake. Each of these are 22 feet high and 15 feet wide with full depth vertical bars. The vertical bars were designed to have 1.5 inch spacing, but currently there are locations where there is 1.75

¹ A true run-of-river project is one which does not operate out of storage and, therefore, does not artificially regulate streamflow below the project's tailrace. Outflow from the project is equal to inflow to the project's impoundment on an instantaneous basis. The flow regime below the project is essentially the river's natural regime, except in special circumstances, such as following the reinstallation of flashboards and project shutdowns. Under those circumstances, a change in storage contents is necessary, and outflow is reduced below inflow for a period.

inch spacing. The penstock is 10 feet in diameter at the penstock intake. After 22.5 feet, the penstock reduces to a 165-foot long section that is 7.33 feet in diameter. The penstock then trifurcates into a 22-foot-long, 6-foot diameter section and two 9-foot-long, 3-foot-diameter sections that deliver water to each turbine.

11. The old powerhouse constructed in 1915 is a 40-foot by 40-foot square, concrete structure, and houses two horizontal 350-kW Francis turbines. Both turbines have a hydraulic range of 15 to 75 cfs. The new powerhouse was built in 1979 and measures 25 feet by 47 feet and contains a single vertical 1,350-kw Kaplan turbine with a hydraulic capacity of 90 to 300 cfs. The project's total combined hydraulic capacity is 15 to 450 cfs. The project generates approximately 3,960 megawatt-hours annually².
12. The generators are connected to the Lyndonville distribution system via two transmission lines. A 380-foot long, 2.4kV three-phase transmission line delivers power to the first substation, where a transformer steps up the voltage to 12.5 kV. A 1.75-mile, 12.5 kV transmission line then connects to a second substation.

River Hydrology

13. There is only one water gaging station located on the Passumpsic River. This gaging station, operated by U.S. Geological Survey (No. 01135500), has been in operation since October 1990. This station is roughly 9.5 miles southwest of the project and has a drainage area of 436 square miles.
14. There are three other surface water gaging stations located in the Passumpsic drainage basin. These include the East Branch of the Passumpsic (No. 01133000), the Moose River (No. 01134500) and the Sleepers River (No. 01135300).
15. Hydrologic information is tabulated below for the project. These statistics are derived from the data collected at USGS Passumpsic station (No. 01135500) located downstream of the study site and prorated for drainage size.

	Passumpsic River at Great Falls Hydro*
Drainage Area (sq. miles)	229
Annual Runoff (inches)**	26.4
10% Exceedance Flow (cfs)	892.9
50% Exceedance Flow (cfs)**	287.8
90% Exceedance Flow (cfs)**	114.5
7Q10 (cfs)**	49.2

*Prorated for drainage area from USGS streamflow gage Passumpsic River (No. 01135500) at Passumpsic, VT

**Calculated using the most recent 30 years of data due to Mann-Kendall test detection of a significant trend ($p < 0.01$) for annual statistic over period of record.

² From 2003 through 2013. Environmental Assessment for Hydropower License. Great Falls Hydroelectric Project. Federal Energy Regulatory Commission. August 2019.

Current License Conditions

16. Currently the Great Falls Hydroelectric Project is operated as a run-of-river facility, with a maximum hydraulic capacity of 450 cfs. The project releases a conservation flow of 10 cfs, or inflow if less, to the bypass reach during normal operations and 75 cfs, or inflow if less, below the powerhouse during shutdowns. When flows are above 450 cfs, the excess is spilled over the dam. The conservation flow is typically released into the bypass using a slot in the flashboards in the middle of the dam.
17. The project is operated 8 hours a day, but operators are on call 24 hours a day. Currently, the operator manually adjusts the turbine settings to maximize generation while ensuring run-of-river standards. Data is currently recorded manually by the operator on an hourly basis.

Applicant's Proposal

18. The Applicant proposes to operate the project in a true run-of-river mode. LED proposes to increase the conservation flow in the bypass reach to 62 cfs, or inflow, if less. The conservation flow will be released from the dam during normal operations. LED proposes to continue providing a minimum flow of 75 cfs or inflow, whichever is less below the powerhouse during shutdowns.
19. LED proposes to install automation equipment at the facility including a Programmable Logic Control system and pond level control improvements to better monitor impoundment fluctuations³. Additionally, LED proposes to develop a flow management and monitoring plan to provide details of how the project will operate in run-of-river mode while maintaining conservation flow in the bypass reach.
20. LED proposes to enhance the recreational resources in the project area, in addition to conducting a recreation inventory use and needs assessment. These improvements include: (1) construct a new carry-in boat access trail downstream of the tailrace on the west side of the river; (2) install directional signage along the downstream, carry-in boat access route; (3) install an informational kiosk about recreational activities and amenities available at the site; (4) install a designated parking area outside of the gate; and (5) designate a bank fishing area on the peninsula between the project tailrace and the bypass reach.
21. LED is not proposing to add capacity or to make any major modification to the project facilities.

Applicable Standards Designation

22. The Vermont Water Quality Standards (Environmental Protection Rule, Chapter 29A) (Standards) are promulgated by the Secretary of the Vermont Agency of Natural Resources pursuant to 10 V.S.A., Chapter 47, Water Pollution Control. Section 1252 of the Chapter provides for the classification of designated uses as either Class A(1), A(2), B(1) or B(2) and authorizes the adoption of standards of water quality to achieve the purpose of classification.
23. All waters of the State shall be managed to support their designated and existing uses. (Standards, § 29A-104(b)).

³ Operations and Automation Assessment Great Falls Hydroelectric Project (FERC No. 2839). Kleinschmidt Group. July 2017.

24. The designated uses are: aquatic biota and wildlife that may utilize or are present in the waters; aquatic habitat to support aquatic biota, wildlife, or plant life; the use of waters for swimming and other primary contact recreation; the use of waters for boating and related recreational uses; the use of waters for fishing and related recreational uses; the use of waters for the enjoyment of aesthetic conditions; the use of the water for public water source; and the use of water for irrigation of crops and other agricultural uses. (Standards, § 29A-104(d)).
25. The affected reaches of the Passumpsic River have been classified as Class B(2) for all uses.
26. The Antidegradation Policy in the Standards requires that “[a]ll waters shall be managed in accordance with [Standards] to protect, maintain, and improve water quality.” (Standards, Section 29A-105).
27. The Passumpsic River is designated as cold water fish habitat. (Standards, Section 29A-308).
28. In waters designated as cold water fish habitat, the dissolved oxygen (D.O.) standard is not less than 7mg/L and 75 percent saturation at all times, nor less than 95 percent saturation during late egg maturation and larval development of salmonids in waters that the Secretary determines are salmonid spawning or nursery areas important to the establishment or maintenance of the fishery resource. In all other waters designated as a cold water fish habitat, the standard is not less than 6 mg/L and 70 percent saturation at all times. (Standards, Section 29A-302(5)(A)).
29. The general temperature standard for waters is “[c]hange or rate of change in temperature, either upward or downward, shall be controlled to ensure full support of aquatic biota, wildlife, and aquatic habitat uses.” (Standards, Section 29A-302(1)(A)).
30. In waters designated as cold water fish habitat and classified as Class B(2) for the fishing use, the total increase from ambient temperature due to all discharges and activities shall not exceed 1.0° F. (Standards, Section 29A-302(1)(B)(iii)).
31. The turbidity standard as an annual average under dry weather base-flow conditions is 10 NTU for cold water fish habitat. (Standards, Section §29A-302(4)(A)).
32. The management objectives for waters classified as Class B(2) for aquatic biota and wildlife are “Waters shall be managed to achieve and maintain good biological integrity.” (Standards, Section 29A-306(a)(3)(A)). The Class B(2) criteria for aquatic biota and wildlife use, require “Change from the natural condition for aquatic macroinvertebrate and fish assemblages not exceeding moderate changes in the relative proportions of taxonomic, functional, tolerant, and intolerant aquatic organisms.” (Standards, Section 29A-306(a)(3)(B)).
33. The management objectives for waters classified as Class B(2) for aquatic habitat are “Waters shall be managed to achieve and maintain high quality aquatic habitat. The physical habitat structure, stream processes, and flow characteristics of rivers and streams and physical character and water level of lakes and ponds necessary to fully support all life-cycle functions of aquatic biota and wildlife, including overwintering and reproductive requirements, are maintained and protected.” (Standards, Section 29A-306(b)(3)(A)). The Class B(2) criteria for aquatic habitat use in rivers and streams are “Changes to flow characteristics, physical habitat structure, and stream processes limited to moderate differences from the natural condition and consistent with the full support of high quality aquatic habitat. (Standards, Section 29A-306(b)(3)(B)(i)).

Additionally, “waters shall comply with the Hydrology Criteria in Section 29A-304” of the Standards. (Standards, Section 29A-306(b)(3)(B)(iii)).

34. The Hydrology Policy in the Standards requires that “[t]he proper management of water resources now and for the future requires careful consideration of the interruption of the natural flow regime and the fluctuation of water levels resulting from the construction of new, and the operation of existing, dams, diversions, and other control structures.” (Standards, Section 29A-103(f)(1)).
35. To effectively implement the hydrology policy, hydrology criteria shall be achieved and maintained, where applicable. The hydrology criteria require for waters classified as Class B(2) for aquatic habitat that “[a]ny change from the natural flow regime shall provide for maintenance of flow characteristics that ensure the full support of uses and comply with the applicable water quality criteria.” The preferred method for ensuring compliance with this subsection is a site-flow study. In the absence of a site-specific study, the use of general hydrologic standards is also accepted. (Standards, Section 29A-304(b)(3)).
36. The management objectives for waters classified as Class B(2) for aesthetics are “Waters shall be managed to achieve and maintain good aesthetic quality.” (Standards, Section 29A-306(c)(3)(A)). The Class B(2) criteria for aesthetics use in rivers and streams are “Water character, flows, water level, bed and channel characteristics, and flowing and falling water of good aesthetic value.” (Standards, Section 29A-306(c)(3)(B)(i)).
37. The management objectives for waters classified as Class B(2) for boating are “Waters shall be managed to achieve and maintain a level of water quality compatible with good quality boating (Standards, Section 29A-306(d)(3)(A)). The Class B(2) criteria for boating use is “waters shall comply with the Hydrology Criteria in Section 29A-304 of these rules.” (Standards, Section 29A-306(d)(3)(B)).
38. The management objectives for waters classified as Class B(2) for swimming and other primary contact recreation are “Where sustained direct contact with the water occurs, waters shall be managed to achieve and maintain a level of water quality compatible with good quality swimming and other primary contact recreation with very little risk of illness or injury from conditions that are a result of human activities.” (Standards, Section 29A-306(f)(3)(A)).
39. The management objectives for waters classified as Class B(2) for fishing are “Waters shall be managed to achieve and maintain a level of water quality compatible with good quality fishing. (Standards, Section 29A-306(e)(3)(A)). The criteria for fishing are “measures of wild salmonid densities, biomass, and age composition indicative of good population levels” and compliance with the temperature criteria in Section 29A-302(B) of the Standards. ((Standards, Sections 29A-306(e)(3)(B)(i) and 29A-306(e)(3)(B)(ii)).

Current Status

40. In September 2018, the U.S. Environmental Protection Agency approved a list of waters considered to be impaired based on water quality monitoring efforts and in need of total maximum daily load (TMDL) development to address the pollution. The Department submitted the list under Section 303(d) of the federal Clean Water Act. According to the State of Vermont’s 2018 303(d) list of impaired surface waters in need of a TDML, there are no listed

waters within or near the project area (State of Vermont 2018 303(d) List of Waters, Part A – Impaired Surface Waters in Need of TMDL, September 2018).

41. The Department concurrently issued as a four-part list, List of Priority Surface Waters Outside the Scope of the Clean Water Act Section 303(d) in 2018. Part F lists those surface waters where aquatic habitat and/or other designated uses are not fully supported because designated uses have been altered by flow regulation. The Passumpsic River below Great Falls Dam, specifically the bypass reach, is listed on the 2018 List of Priority Surface Waters Part F.

Water Chemistry

42. There are two wastewater treatment facilities on the Passumpsic River. The Village of Lyndonville Wastewater Treatment Facility is located upstream of the project and has a permit to discharge neutralized chlorine solution into the Passumpsic River. The Town of St. Johnsbury Wastewater Treatment Facility is located downstream of the project and has a permit to discharge effluent not to exceed the discharge limitations set by the permit.
43. Weidman Electrical Technology, Inc. has a discharge permit for treated process wastewater from pressboard manufacturing. This facility is located downstream of the project in St. Johnsbury.
44. The Vail Hydroelectric Project (FERC No. 3090) is located upstream of Great Falls and collected dissolved oxygen and temperature data as part of its FERC relicensing process. Data was collected more or less weekly from August 8 to September 19, 1998 at five stations within the project area. Flows were estimated to range from 140 to 280 cfs over the sampling period. All sampled dissolved oxygen concentrations exceeded 7.5 mg/L and 80 percent saturation.
45. The Caledonia County Natural Resources Conservation District conducted a river assessment on Sheldon Brook in the summer of 2013. Sheldon Brook is a tributary to the Passumpsic River that feeds into the project impoundment. Using a rapid habitat assessment and a rapid geomorphic assessment all the monitoring stations were rated as in either fair or good condition.
46. The Department has periodically conducted water quality monitoring in the Passumpsic River Watershed. All monitoring stations were located downstream of the project near St. Johnsbury. In all years (2000, 2005, 2012), the assessment concluded water quality ranged from very good to excellent.
47. Water quality data was collected within the project as part of the relicensing process. Specifically, dissolved oxygen and temperature were collected in the upper impoundment, middle impoundment, near the intake, bypass reach, and tailrace, with the intent to collect data during the low flow, and high temperature period. There were no temperature issues found at the project site. Occasionally the dissolved oxygen fell below the 6 mg/L or 70 percent saturation standard, but that was likely due to debris or biofouling. When dissolved oxygen fell below the standard at the intake, the dissolved oxygen in the tailrace had returned to acceptable levels after passing through the powerhouse. Under the existing conditions, the data indicate that dissolved oxygen concentrations and water temperatures meet the Standards (Standards, Sections 29A-302(1)(B)(iii) and 29A-302(5)(A)).

Aquatic Biota

48. The Passumpsic River is classified by the State of Vermont as Class B(2) for the aquatic biota designated uses and is designated as a cold water fish habitat.
49. “Aquatic Biota” means all organisms that, as part of their natural life cycles, live in or on waters. (Standards, Section 29A-102(5)). Aquatic biota include, for example, fish, aquatic insects, amphibians, and some reptiles, such as turtles.
50. Limited site-specific fish survey work has been done in the area below Great Falls. The Upper Connecticut River system supports yellow perch (*Perca flavescens*), fallfish (*Semotilus corporalis*), and pumpkinseed (*Lepomis gibbosus*). The Passumpsic River supports rainbow trout (*Oncorhynchus mykiss*), brown trout (*Salmo trutta*), and brook trout (*Salvelinus fontinalis*). In addition, the fish communities in the project area may also include white sucker (*Catostomus commersonii*), slimy sculpin (*Cottus cognatus*), and longnose dace (*Rhinichthys cataractae*).
51. There are currently no diadromous fish that reach the project area.
52. The Vermont Fish and Wildlife Department stocks brown and rainbow trout in the Passumpsic River annually. It is assumed, however, that little to no reproduction occurs in the project area due to the limited extent of gravel.

Fish Passage and Protection Measures

53. Currently there are no fish passage facilities at the Great Falls Hydroelectric Project. As part of the Atlantic salmon restoration effort in 1995 the U.S. Fish and Wildlife Service requested Great Falls to provide downstream fish passage at the facility. The Applicant created conceptual designs and submitted a request for justification of investment. The Atlantic salmon restoration program was discontinued in 2012 and they are no longer stocked upstream of Great Falls. The downstream passage designs were never implemented.
54. There are no diadromous fish species or species completing extensive migrations in the Passumpsic River. Vermont Fish and Wildlife Department currently stocks rainbow and brown trout into the Passumpsic River. While downstream fish passage facilities at the project would benefit resident fish species, it is not deemed necessary at this time.
55. The current trashracks (22 feet wide by 15 feet deep) are full depth trashracks located in front of the intakes at the downstream end of the power canal. These trashracks have spacing ranging from 1.5 to 1.75 inches with 0.25-inch bar thickness. With a maximum turbine unit capacity of 450 cfs the through-rack velocity was estimated to be between 1.49 feet per second and 1.52 feet per second. While this is below the standard 2 feet per second velocity recommended by the U.S. Fish and Wildlife Service Fish Passage Engineering Design Criteria, the location and spacing may not be adequate for resident fish species.

Aquatic Habitat

56. The Passumpsic River is classified by the State of Vermont as Class B(2) for the aquatic habitat designated use.

57. Waters designated as Class B(2) for aquatic habitat use shall be managed to achieve and maintain high quality aquatic habitat, characterized by the physical habitat structure, stream processes, and flow characteristics of rivers and streams and the physical character and water level of lakes and ponds necessary to protect and support all life-cycle functions of aquatic biota and wildlife, including overwintering and reproductive requirements. (Standards, Section 29A-306(b)(3)(A)).
58. The surface area of the impoundment is 15.7 acres at normal pond elevation (668.38 msl), and varying in depth.
59. The bypass reach consists of six distinct habitat units (ordered from upstream to downstream), including a cascade (the falls), a large pool, a short riffle, a short run, a short cascade, and another pool (confluence with the tailrace). The bypass reach is a relatively narrow channel and the substrate is generally ledge.
60. The powerhouse discharges into a short channel before entering the Passumpsic River. Downstream of the point where the tailrace and bypass reach meet there is a channel island that bifurcates flow into an east and west channel before rejoining on the downstream end of the island. The eastern channel is primarily a flood chute and is only accessed during medium to high flow events. Both channels are characterized by run, riffle habitat units with sand and gravel substrate.

Flow Needs for the Protection of Aquatic Habitat

61. Flows below the tailrace of the development will essentially be unregulated except during impoundment refilling following flashboard installation or maintenance operations because the project is proposing to be a run-of-river facility.
62. The Great Falls Hydroelectric Project bypasses approximately 750 feet of the Passumpsic River. This channel consists mostly of ledge with some cascades, riffles, runs, and two pools, with limited fish refugia.
63. The Applicant conducted a hydraulic-habitat study in the bypass reach to determine a flow that would provide enough water to assure compliance with Class B(2) management objectives and criteria for the aquatic habitat designated use (Standards). The target species and life stages included in the study to determine suitable flow conditions were: (1) juvenile rainbow trout, (2) adult rainbow trout, (3) juvenile brook trout, (4) adult brook trout, (5) adult longnose dace, and (6) benthic macroinvertebrates.
64. The Applicant, the Department, and the Vermont Fish and Wildlife Department agreed to focus the survey and sampling efforts on flow-sensitive habitats only. A single transect was surveyed for the riffle, whereas two transects were selected for the run, due to heterogeneity in the substrate and topography in this unit. All three transects were surveyed on June 14, 2017 at three different discharges, 9 cfs, 60 cfs, and 114 cfs. Increasing flows in the bypass reach had rapid effects in the bypass reach due to the geomorphic character of the channel (dominated by narrow bedrock).
65. The modeling results suggest that 80 cfs optimized hydraulic habitat for the modeled species within the Great Falls bypass reach; flows of 62 cfs (80% threshold) and 71 cfs (90%) threshold offer reasonable protection for fish and habitat in the bypass reach; although the focus here is on

conservation flows, flows as high as 90-95 cfs (90% threshold) and 100-105 cfs (80% threshold) also offered acceptable habitat conditions.

Water Level Fluctuation in the Impoundment

66. The Great Falls Hydroelectric Project is currently a run-of-river operation and proposes to continue as such. A run-of-river operation will result in little water level fluctuations within the impoundment. Only maintenance drawdowns and flashboards replacement will affect impoundment water level fluctuations.
67. The Applicant proposes to install a pond level control system to automate and maintain the impoundment level within a tighter bound than a manual operating regime. The system will include a Programmable Logic Controller (PLC) system, and a proportional-integral-derivative (PID) controller which will open or close wicket gates to control impoundment levels. The Applicant will submit a post-license flow management and flow monitoring plan that will describe how this system will assure compliance with the terms of this certification.

Wildlife and Wetlands

68. Hydroelectric operations, namely water level fluctuations in impoundments, can affect wetland and shoreline vegetation.
69. There is one wetland within the project boundary as classified by the U.S. Fish and Wildlife Service under the National Wetlands Inventory. The wetland is the open water of the impoundment classified as a permanently flooded, lacustrine wetland with an unconsolidated bottom.
70. Additionally, there is a wetland classified as Class II and protected under 10 V.S.A. Chapter 37 and the Vermont Wetland Rules.
71. Due to the run-of-river operations there is likely to be limited project impacts on the wetland. Aquatic biota and wildlife in the wetland will likely only be affected for short durations during project maintenance or flashboard replacement.

Rare, Threatened, and Endangered Species

72. The dwarf wedgemussel (*Alasmidonta heterodon*) is a small freshwater mussel that is both federally and state-listed as endangered. This species is sedentary and utilizes benthic habitat throughout its entire life cycle. This species is known to occur in the Connecticut River watershed. However, none have been observed in the project area, nor is there any critical habitat that has been designated for the species.
73. Northern Long-eared bat (*Myotis septentrionalis*) is federally-listed as threatened and state-listed as endangered. This species winters in caves and cave-like structures, but summers in cavities, under bark or in hollows of live and dead trees.
74. Bald eagle (*Haliaeetus leucocephalus*) is state-listed as threatened in addition to being protected federally under the Bald and Golden Eagle Protection Act of 1940. The Applicant is not proposing any ground or vegetation disturbing activities.

75. Eastern small-footed bat (*Myotis leibii*) and Little brown bat (*Myotis leibii*) are state-listed as threatened and endangered respectively. Both species roost and hibernate in various locations. As the Applicant does not propose any ground disturbing activities, there will likely be little impact to either of these *Myotis* species.
76. Eastern pearlshell (*Margaritifera margaritifera*) is a mussel that is state-listed as threatened and potentially occurs within the project vicinity. Habitat preferences are small rivers with sand, fine gravel or a sand-gravel mix bottoms, and no individuals have been identified within the project boundary or in the downstream reach.
77. The state of Vermont lists 20 vascular plant species on its Threatened or Endangered list that could potentially occur in the project vicinity based on distribution and habitat requirements. None have been identified within the project boundary.

Shoreline Erosion

78. The K Factor, which refers to the susceptibility of soils to erosion, is primarily based on the percentage of silt, sand, and organic matter and the saturated hydraulic conductivity. The Factor K values associated with the project range from 0.17 to 0.28, indicating a generally low to moderate susceptibility to erosion.
79. In addition, because the Applicant proposes to operate the facility in a true run-of-river mode, there will likely be limited erosion over and above what might naturally occur as a result of project operations.

Recreation Use

80. The project has a canoe portage trail that was constructed in conjunction with Lyndon State College Recreation Department in 1995. The trail is 0.25 miles long, with the take-out within the impoundment and the put-in located at the beach below the dam. The trail is made of packed earth and log steps. LED also installs a boat barrier in the impoundment above the dam between May 1 and November 1.
81. The project has two informal recreation sites, used for non-motorized boating and angling. However, the project area is not easily accessible, as it is surrounded by private property, adjacent to railroad tracks, and has a gate that is locked after hours with no signage indicating when it is unlocked.
82. The project has received little recreational use because of limited access and because of recreational opportunities nearby that are more easily assessable. In 1991 FERC determined that the project was exempt from Form 80 Recreation Report filings.
83. Due to the lack of formal recreation sites, the Applicant is proposing to construct recreational improvements. These improvements include: (1) constructing a new carry-in boat access trail downstream of the tailrace on the west side of the river; (2) installing directional signage along the downstream, carry-in boat access route; (3) installing an informational kiosk about recreational activities and amenities available at the site; (4) installing a designated parking area outside of the gate; and (5) designating a bank fishing area on the peninsula between the project tailrace and the bypass reach. The Applicant proposes to complete these improvements no later than the first full construction season following the issuance of the new FERC license.

84. FERC's staff alternative included in its EA recommended three additional provisions be included in the license. These are: (1) operate and maintain the existing non-project canoe portage route as a project recreation feature; (2) install a parallel boat slide along the steep section of the portage route to enhance boater safety; and (3) install signage to indicate the location of the take-out and put-in for the canoe portage route.
85. The Applicant is proposing that the gate will remain in place and locked when there are no LED staff at the facility. The location of the parking area, and the gate remaining locked when no operator is on site, is for security concerns. However, signs will indicate that the area is open for recreational use and foot traffic. In addition, any "No Trespassing" signs will be removed.
86. Once the recreational improvements have been completed, LED will conduct a recreation inventory, use and needs assessment within one year of improvements.

Debris

87. The Applicant has not provided information on the handling and disposal of trashrack debris and other project-related debris. The depositing or emission of debris and other solids to state waters violates Vermont's solid waste laws and Standards, Section 29A-303(1) and Section 29A-303(2). Debris may also impair aesthetics and boating.

Aesthetics

88. The project has a concrete dam that is 160 feet long by 32 feet high, with an impoundment extending to Vail Dam upstream of the project. Just below the dam there is a small cascade followed by a series of pools, riffles, and a short run before meeting the tailrace.
89. The project is located in a minimally developed section of Caledonia County. The nearest public road to the facility is U.S. Route 5, which does not provide views of the dam. Currently there is no required aesthetic spill over the dam.
90. There currently is recreational access to the facility and there is going to be an increase in recreational opportunities with improvements. As a result, at least one inch of the 62 cfs, or inflow if less, will be required to spill over the dam crest.

State Comprehensive River Plans

91. Recreation plans as they relate to the project include the 2013-2017 Vermont Statewide Comprehensive Outdoor Recreation Plan. Goals that may be relevant to the project include: (1) to maintain public access to private lands for trails-related recreation through continued relationships with private landowners; and (2) to maintain aesthetic value of scenic overlooks along trails by discouraging development within viewable distance to scenic overlooks.
92. The Department's publication *Hydropower in Vermont, An Assessment of Environmental Problems and Opportunities* is a state comprehensive plan. The hydropower study, which was initiated in 1982, indicated that hydroelectric development has significant impact on Vermont streams. Artificial regulation of natural stream flows and the lack of adequate minimum flows at sites were found to have reduced to a large extent the success of the state's initiatives to restore

the beneficial values and uses for which waters are managed under the federal Clean Water Act and Vermont Law.

Analysis

93. A state's 401 certification determination shall include a statement from the state that "there is a reasonable assurance that the activity will be conducted in a manner which will not violate applicable water quality standards." 40 C.F.R. § 121.2(a)(3); Environmental Protection Rules, Chapter § 13.11(g). Accordingly, the Department may set forth limitations and other requirements necessary for it to find that there is reasonable assurance that the project will be operated in a manner which will not violate Vermont Water Quality Standards. The Passumpsic River from immediately below the Great Falls dam to the project tailrace is listed as a priority water on Vermont's List of Priority Surface Waters Outside the Scope of the Clean Water Act Section 303(d) Part F because it does not support all designated uses. Of particular concern are non-support of aquatic biota and wildlife, and aquatic habitat uses due to the current flow and water-level management practices (Finding 40). A goal of the Standards and the Clean Water Act is to restore the biological integrity of waters such that aquatic biota and wildlife are sustained by high quality habitat.

Water chemistry

94. Water quality sampling data gathered in the project vicinity as part of the relicensing process indicate that water quality standards for dissolved oxygen and temperature are being met at the project. Water quality samples collected at the development under existing conditions indicate that dissolved oxygen concentrations and water temperatures meet the Standards (Standards, Sections 29A-302(1)(B)(iii) and Section 29A-302(5)(A)).
95. The water quality study indicated that dissolved oxygen levels occasionally drop below the level required under the Vermont Water Quality Standards. This drop in dissolved oxygen was attributed to debris or equipment interference. When dissolved oxygen was lower than Standards permit at the intake, the levels within the tailrace met Standards, indicating the dissolved oxygen was suitable after passing through the powerhouse.
96. The Applicant is proposing to increase flow to the bypass reach of the project to 62 cfs, or inflow if less, which will improve existing water quality conditions.

Flow and Water Level Management

97. The Applicant proposes to operate the development in a true run-of-river mode and provide a conservation flow of 62 cfs to the bypass reach, and a minimum flow of 75 cfs below the tailrace, or inflow if less. Under true run-of-river operations inflows will be equal to outflows on a near instantaneous basis with the conservation flows released into the bypass reach first and remaining flows may then be used for generation. When the project is not operating all flows will be spilled at the dam into the bypass reach. Therefore, the proposed minimum flow below the tailrace appears to be unnecessary. True or instantaneous run-of-river operation will support aquatic habitat in the impoundment below the tailrace (Standards, Section 29A-306(b)(3)). This Certification is being conditioned such that the operating mode will be instantaneous run-of-river. (Condition B of this Certification).

98. A habitat flow study in the reach bypassed by the Great Falls Hydroelectric (Findings 63-65) showed that a continuous conservation flow of 62 cfs provides high quality aquatic habitat. The flow study modeling results indicated that 80 cfs provided the optimum amount of hydraulic habitat for the modeled species. However, flows as low as 62 cfs (80% of optimum amount) and 71 cfs (90% of optimum amount) also offer reasonable habitat protection. Overall, the study results indicated that increasing conservation flows to 62 cfs in the bypass reach will assure that the requirement for high quality aquatic habitat is met.
99. The Applicant proposes to release a conservation flow of 62 cfs through the bypass, or inflows if less. This increase in conservation flows will support high quality aquatic habitat below the facility (Standards, Section 29A-306(b)(3)(A)).
100. The continuous spilling of at least one-inch of the conservation flow of 62 cfs in the bypass, or inflow if less, over the dam will meet the Standards aesthetic designated use (Standards, Section 29A-306(c)(3)(A)) (Condition B of this Certification).
101. The Applicant is proposing a run-of-river operation and as a result there is little anticipated impact downstream of the facility because the natural flow regime's characteristics (timing, magnitude, duration, frequency) will be maintained during normal operations. In order to minimize the effects on downstream flows following maintenance or emergency operations, including lowering or replacement of flashboards, Condition B of this Certification requires that 90 percent in instantaneous inflow be released during impoundment refilling.

Fish Passage, Impingement, and Entrainment

102. Vermont Fish and Wildlife Department has determined that downstream fish passage is not warranted at the project facility at this time (Findings 53-55). By Condition D of this Certification, the Department reserves the ability to require development of passage in the future if the status of fish populations or fishery management objectives change.
103. Results of the fish impingement and entrainment study indicate that the existing trashracks, which range in spacing from 1.5 to 1.75 inches, and current turbine unit capabilities are expected to have through-rack velocities between 1.49 feet per second and 1.52 feet per second. This is expected to minimize impingement and entrainment of trout, however, this may not be adequately sized and located to prevent the impingement and entrainment of smaller species and life stages. Consideration should be given to using racks with one-inch clear spacing at a future time when the racks are in need of replacement. By Condition E of this Certification, the Applicant shall be required to consult the Fish and Wildlife Department at the time the trashracks for the facility are scheduled for replacement, and to obtain Department approval for the design.

Wetland and Wetland Habitat

104. Wetlands at Great Falls Hydroelectric Project are limited. Run-of-river operations at the facility are expected to avoid impacts to any wetlands that are located within the project vicinity.

Erosion

105. The erosion at the project impoundment is limited and does not appear to be affected by project operations.

Recreation

106. The Vermont Water Quality Standards require that waters achieve and maintain good quality that fully support boating, fishing, and other designated recreational uses. (Standards, Section 29A-306(d)(3)(A); Standards, Section 29A-306(e)(3)(A); and Standards, Section 29A-306(f)(3)(A)).
107. The Applicant is proposing to construct recreational improvements. These improvements include: (1) a new carry-in boat access trail downstream of the tailrace on the west side of the river; (2) directional signage along the downstream, carry-in boat access route; (3) an informational kiosk about recreational activities and amenities available at the site at the new parking area outside of the gate; (4) a designated parking area; and (5) designate a bank fishing area on the peninsula between the project tailrace and the bypass reach. These improvements will be completed no later than the first full construction season following the issuance of the new FERC license as required by Condition G of this Certification.
108. Once the recreational improvements have been completed, LED will conduct a recreation inventory, use and needs assessment within one year of improvements as required by Condition F of this Certification.
109. By Condition F of this Certification, after completion of the recreation inventory use and needs assessment the Applicant will be required to develop a recreation plan that will address any additional construction needs, maintenance, and continued management of the recreation facilities.

Debris Deposal

110. The Applicant has not provided information on the handling and disposal of trashrack debris and other project-related debris. The deposition or emission of debris and other solids to state waters violates Vermont's solid waste laws and the Standards (Standards, Section 29A-303(1) and Section 29A-303(2)). Debris may also impair aesthetics and boating. A debris disposal plan is required by Condition H of this Certification.

Antidegradation

111. Pursuant to the Antidegradation Policy set forth in Standards, Section 29A-105 and the Agency's 2010 Interim Anti-Degradation Implementation Procedure (Procedure), the Secretary must determine whether a proposed discharge or activities are consistent with the Policy by applying the Procedure during the review of applications for any permit for a new discharge if during the application review process compliance with the Standards is evaluated pursuant to applicable state or federal law. (Procedure III(A)). This includes water quality certifications required by Section 401 of the federal Clean Water Act for a federal license or permit for flow modifying activities. (Procedure III(B)(3)).
112. In making the determination that proposed activities are consistent with the Policy, the Secretary is required to use all credible and relevant information and the best professional judgment of Agency staff. (Procedure III(D)). Section VIII of the Procedure governs the Agency's review of Section 401 applications for flow modifying activities. (Procedure

VIII(A)(1)). The Secretary may have to review a single waterbody under multiple tiers of review depending on whether a waterbody is impaired or high quality for different parameters.

113. Tier 3 review is required if the project will discharge to an Outstanding Resource Water. (Procedure VIII(D)). This project does not affect any Outstanding Resource Waters and therefore does not trigger a Tier 3 review under Section VIII of the Procedure.
114. This project affects waters classified as B(2) for all designated uses, which are assumed to be high quality waters for certain parameters that trigger a Tier 2 review under Section VIII of the Procedure. (Procedure VIII(E)(1)(c)). Under Tier 2, the Secretary must determine whether the proposed discharge will result in a limited reduction in water quality in a high quality water by utilizing all credible and relevant information and the best professional judgment of Agency staff. (Procedure VIII(E)(2)(b)).
115. When conducting a Tier 2 review, the Secretary may consider, when appropriate, one or more of the following factors when determining if a proposed new discharge will result in a reduction in water quality: (i) the predicted change, if any, in ambient water quality criteria at the appropriate critical conditions; (ii) whether there is a change in total pollutant loadings; (iii) whether there is a reduction in available assimilative capacity; (iv) the nature, persistence and potential effects of the pollutant; (v) the ratio of stream flow to discharge flow (dilution ratio); (vi) the duration of discharge; (vii) whether there are impacts to aquatic biota or habitat that are capable of being detected in the applicable receiving water; (viii) the existing physical, chemical and biological data for the receiving water; (ix) degree of hydrologic or sediment regime modifications; and (x) any other flow modifications. (Procedure VIII(E)(2)(d)).
116. The Secretary considered the foregoing factors during the review of the project to determine if the project will result in a reduction of water quality. The principal impact of the project is its effect on good quality habitat within the bypass reach of the Passumpsic River. Discharge of pollutants is not an issue because the changes in project operation will not result in a discharge of additional pollutants. Other ambient water quality criteria will improve or remain unchanged. Furthermore, with the increase conservation flows within the bypass and the continuation of the project operating in a true run-of-river manner means the impacts to aquatic biota and habitat will be reduced.
117. This Certification does not authorize any activities that would result in a lowering of water quality for those parameters that are exceeding water quality standards.
118. For those parameters for which the Passumpsic River is not exceeding water quality standards, the Secretary must conduct a Tier 1 review. (Procedure VIII(F)).
119. Under Tier 1 review, the Secretary may identify existing uses and determine the conditions necessary to protect and maintain these uses. (Procedure VIII(F)). In determining the existing uses to be protected and maintained, the Secretary must consider the following factors: (a) aquatic biota and wildlife that utilize or are present in the waters; (b) habitat that supports existing aquatic biota, wildlife, or plant life; (c) the use of the waters for recreation or fishing; (d) the use of the water for water supply, or commercial activity that depends directly on the preservation of an existing high level of water quality; and (e) evidence of the uses' ecological significance in the functioning of the ecosystem or evidence of the uses' rarity. (Procedure VIII(F)(2)).

120. The Secretary considered all of the factors listed above and, based on information supplied by the Applicant and Agency staff field investigations, identified the following existing uses: aquatic biota, wildlife and aquatic habitat; aesthetics; and recreation.
121. The existing dam and impoundment have changed the natural condition of the river at the Great Falls Hydroelectric project. Currently, aquatic biota, wildlife and aquatic habitat, aesthetics and recreation are impacted in the bypass of the Great Falls Hydroelectric development by insufficient bypass flows. Current operations do not sustain existing uses due to insufficient flows in the bypass reach. However, the modifications to the project conditioned under this Certification will result in improvements to water quality and will protect and maintain existing uses, by assuring adequate conservation flows are passed consistently. These modifications include increased bypass flows at the Great Falls Hydroelectric development.
122. The Secretary finds that development and operation of the project as conditioned by this Certification will comply with the Vermont Water Quality Standards. Accordingly, the Secretary finds that the project, as conditioned, meets the requirements of the Policy and Procedure relating to the protection and maintenance of high quality waters.

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 Great Falls 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 conservation 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 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 1, page 2. When the facility is not operating, all flows shall be spilled at the dam, unless otherwise noted.

The development shall operate in a true run-of-river mode with outflows equaling inflows on an instantaneous basis. A conservation flow of 62 cfs, or inflow if less, with at least 1-inch spilling over the dam crest, shall be continuously passed into the bypass reach. When the dam is not operating, all flows shall be spilled over the dam crest into the bypass reach. The

impoundment target elevation shall be 668.38 feet msl plus one inch for aesthetic spill when the 2-foot flashboards are in place.

During refilling of a project impoundment following a drawdown associated with maintenance purposes or replacement of flashboards, up to 10 percent of instantaneous inflow may be placed in storage in order to restore the water level.

- C. **Flow Management and Monitoring Plan.** The Applicant shall develop and file a plan for continuous monitoring and reporting of flow releases at the project (conservation flows, spillage and turbine discharge), impoundment levels, and inflows within 180 days of license issuance. The plan shall include procedures for reporting deviations from prescribed operating conditions. The Applicant shall maintain continuous records of flows and impoundment levels and provide such records on a regular basis as per specifications of the Department. The plan shall be developed in consultation with the Department and shall be subject to Department review and approval. The Department reserves the right of review and approval of any material changes made to the plan.
- D. **Fish Passage.** In the event that the status of the Passumpsic River fish populations or fishery management objectives change, and upon a request of the Fish and Wildlife Department, the Department may require the Applicant to provide upstream or downstream fish passage facilities.
- E. **Trashracks.** Prior to the next replacement of the trashracks at the Project, the Applicant shall consult with the Fish and Wildlife Department with respect to the trashrack design and placement, to determine the appropriate bar clearance spacing and location. The Applicant shall file the trashrack design information with the Department of Environmental Conservation for approval prior to commencement of work.
- F. **Recreational Facilities**

Construction: The Applicant shall construct a new carry-in boat access trail downstream of the tailrace on the west side of the river. The Applicant shall install directional signage along the downstream, carry-in boat access route, and signage at the gate indicating hours the gate will be unlocked. The Applicant shall install a designated parking area. The Applicant shall install an information kiosk at the designated parking area outside of the gate informing recreational users of amenities available at the site. The Applicant shall designate a bank fishing area on the peninsula between the project tailrace and the bypass reach. The Applicant shall remove all “No Trespassing” signs. These improvements shall be completed no later than the first full construction season following license issuance.

Assessment: A recreation inventory, use, and needs assessment shall be completed within one year of the completion of improvements to the recreational facility. The study objectives shall include: (1) a survey recreational users and potential users to identify to what extent the existing recreational opportunities are being utilized by the public within the project area and why potential recreational users are or are not using the resource; (2) Identify any safety issues to recreational users from project facilities or operations, how project facilities or operations impact recreational users, and how the project facilities or operations could be modified to improve those recreational opportunities; and (3) Analyze the recreational facilities to identify potential projects that could improve the recreational resources and whether any improvements to existing recreational facilities are needed. A study plan shall

be submitted to the Department and other relevant stakeholders for review before implementation.

Management Plan: Recreational facilities shall be constructed and maintained consistent with a recreation plan approved by the Department. The plan shall be filed with the Department within one year after completion of the recreation inventory use and needs assessment and shall include any additional construction needs, maintenance, and continued management of the recreation facilities. Maintenance includes items such as repairs, painting, vegetation maintenance, replacement of minor parts and minor structural components. 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.

- G. **Public Access.** The Applicant shall allow public access to the 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 visible to the public. The Applicant shall not limit access to State waters without receiving written approval by the Department. In cases where an immediate threat to public safety exists, access may be restricted without prior approval. In such instances, 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. **Debris Disposal.** The Applicant shall develop a plan for proper disposal of debris associated with the 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 the effective date of the FERC license. 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.
- I. **Maintenance and Repair Work.** Any proposals for project maintenance or repair work, including drawdown below the normal operating range to facilitate repair or maintenance work, shall be filed with the Department for prior review and approval, if said work may have an adverse effect on water quality.
- J. **Compliance Inspection by Department.** The Applicant shall allow the Department to inspect the project area at any time to monitor compliance with Certification conditions.
- K. **Posting of Certification.** A copy of this Certification shall be prominently posted within the powerhouses at the development.
- L. **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.

- M. **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.
- N. **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.
- O. **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 IX (Public Notice and Comment; Public Hearing; Issuance of Decision) of the Section 401 Water Quality Certification Practice, dated October 22, 2014.

Effective Date and Expiration of Certification

This certification shall become effective on the date of issuance, and the condition of any certification shall become conditions of the federal permit (33 U.S.C. § 1341(d)). If the federal authority denies a permit, the certification becomes null and void. Otherwise, the certification runs for the terms of the federal license or permit.

Enforcement

Upon receipt of information that water quality standards are being violated as a consequence of the project's construction or operation or that one or more certification conditions has not been complied with, the Secretary, after consultation with the Applicant and notification of the appropriate federal permitting agency, may, after notice and opportunity for a public hearing, modify the Certification and provide a copy of such modification to the Applicant and the federal permitting agency.

Certification conditions are subject to enforcement mechanisms available to the federal agency issuing the license and to the state of Vermont. Other mechanisms under Vermont state law may also be used to correct or prevent adverse water quality impacts from construction or operation of activities for which certification has been issued.

Appeals

Pursuant to 10 V.S.A. Chapter 220, any appeal of this decision must be filed with the clerk of the Environmental Division of the Superior Court within 30 days of the date of the decision. The Notice of Appeal must specify the parties taking the appeal and the statutory provision under which each party claims party status; must designate the act or decision appealed from; must name the Environmental Division; and must be signed by the appellant or their attorney. In addition, the appeal must give the address or location and description of the property, project, or facility with which the appeal is concerned and the name of the Applicant or any permit involved in the appeal. The appellant must also serve a copy of the Notice of Appeal in accordance with Rule 5(b)(4)(B) of the Vermont Rules for Environmental Court Proceedings. For further information, see the Vermont Rules for Environmental Court Proceedings, available online at www.vermontjudiciary.org. The address for the Environmental Division is 32 Cherry Street, 2nd Floor, Suite 303; Burlington, VT 05401 (Tel. 802.951.1740).

Pursuant to 10 V.S.A. Chapter 220, an aggrieved person shall not appeal this decision unless the person submitted to the Secretary a written comment during the applicable public comment period or an oral comment at the public meeting conducted by the Secretary. Absent a determination of the Environmental judge to the contrary, an aggrieved person may only appeal issues related to the person's comments to the Secretary as prescribed by 10 V.S.A. § 8504(d)(2).

Dated at Montpelier, Vermont this
XXth day of XX, 2019

Emily Boedecker, Commissioner
Department of Environmental Conservation

By

Peter LaFlamme, Director
Watershed Management Division
Department of Environmental Conservation