

Dixville Capital, LLC
Burt Mills,
8 Airport Road
P.O. Box 547
Bethel, ME 04217

July 28, 2015

WATER QUALITY CERTIFICATION

In Fulfillment of

**Section 401 of the United States Clean Water Act (33 U.S.C 1341)
and NH RSA 485-A:12, III and NH RSA 485-A:12, IV**

WQC # 2014-404P-001

Activity Name	Water Withdrawal and Redevelopment of the Balsams Grand Resort Wilderness Ski Area
Activity Location	Errol, NH Colebrook, NH Dixville, NH Millsfield, NH
Affected Surface waters	Androscoggin River (AU#NHRIV400010602-03) and all other surface waters, including wetlands, referenced in section D-4 of this Certification.
Owner/Applicant	Dixville Capital, LLC 8 Airport Road P.O. Box 547 Bethel, ME 04217
Appurtenant State permit(s) (and any amendments):	All applicable permits and amendments issued by DES including, but not limited to, Wetlands and Alteration of Terrain permits.
Applicable Federal permit(s):	This Certification applies to the following federal licenses or permits: Clean Water Act (CWA) §404 Permit(s) for the discharge of dredged or fill material into navigable waters.

A. INTRODUCTION

Dixville Capital, LLC (Applicant) is proposing to redevelop the Balsams Grand Resort Wilderness Ski Area (Resort) located in Dixville, NH which includes withdrawal of water from the Androscoggin River in Errol, NH for snowmaking, for fire suppression, to fill fire cisterns and for the performance of periodic maintenance and pipe testing at the Resort (Activity). A more complete description of the Activity is provided in item D-1 of this Certification.

This 401 Water Quality Certification (401 WQC or Certification) documents laws, regulations, determinations and conditions related to the Activity for the attainment and maintenance of NH surface water quality standards, including the provisions of NH RSA 485-A:8 and NH Code of Administrative Rules Env-Wq 1700, for the support of designated uses identified in the standards.

B. 401 CERTIFICATION APPROVAL

Based on the facts, findings and conditions noted below, the New Hampshire Department of Environmental Services (DES) has determined that there is reasonable assurance that construction and operation of the Activity will not violate surface water quality standards. DES hereby issues this Certification, subject to the conditions in Section E of this Certification, in accordance with Section 401 of the United States Clean Water Act (33 U.S.C. 1341), RSA 485-A:12,III, RSA 485-A:12, IV and condition E-3 of WQC # 2012-404P-002 issued by DES on August 2, 2012 for the federal Clean Water Act § 404 Programmatic General Permit for New Hampshire (General Permit No: NAE-R-2012-00339) issued by the New England District of the U.S. Army Corps of Engineers.

C. STATEMENT OF FACTS AND LAW

- C-1. Section 401 of the United States Clean Water Act (33 U.S.C. 1341) states, in part: "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 or will originate...that any such discharge will comply with the applicable provisions of sections 301, 302, 303, 306, and 307 of this title.....No license or permit shall be granted until the certification required by this section has been obtained or has been waived...No license or permit shall be granted if certification has been denied by the State..."
- C-2. Section 401 further states, in part "Any certification provided under this section shall 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 any applicable effluent limitations and other

limitations...and shall become a condition on any Federal license or permit subject to the provisions of this section."

- C-3. §401(d) of the CWA provides that: "Any certification provided under this section [401] shall 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 [enumerated provisions of the CWA]...and with any other appropriate requirement of State law set forth in such certification."

According to EPA 401 Guidance¹, "Under § 401(d) the water quality concerns to consider and the range of potential conditions available to address those concerns, extend to any provision of state or tribal law relating to the aquatic resource. Considerations can be quite broad so long as they relate to water quality. The U.S. Supreme Court has stated that, once the threshold of a discharge is reached (necessary for § 401 certification to be applicable), the conditions and limitations in the certification may address the permitted activity as a whole."²

- C-4. NH RSA 485-A:12, III, states: "No activity, including construction and operation of facilities, that requires certification under section 401 of the Clean Water Act and that may result in a discharge, as that term is applied under section 401 of the Clean Water Act, to surface waters of the state may commence unless the department certifies that any such discharge complies with the state surface water quality standards applicable to the classification for the receiving surface water body. The department shall provide its response to a request for certification to the federal agency or authority responsible for issuing the license, permit, or registration that requires the certification under section 401 of the Clean Water Act. Certification shall include any conditions on, modifications to, or monitoring of the proposed activity necessary to provide assurance that the proposed discharge complies with applicable surface water quality standards. The department may enforce compliance with any such conditions, modifications, or monitoring requirements as provided in RSA 485-A:22."

- C-5. NH RSA 485-A: IV states: "No activity that involves surface water withdrawal or diversion of surface water that requires registration under RSA 488:3, that does not otherwise require the certification required under paragraph III, and which was not in active operation as of the effective date of this paragraph, may commence unless the department certifies that the surface water withdrawal or diversion of surface water complies with state surface water quality standards applicable to the classification for the surface water body. The certification shall include any conditions on, modifications to, or monitoring of the proposed

¹ *Clean Water Action Section 401 Water Quality Certification: A Water Quality Protection Tool for States and Tribes*. U.S. Environmental Protection Agency, Office of Wetlands, Oceans and Watersheds. 2010.

² *PUD No. 1 of Jefferson County v. Washington Department of Ecology*, 511 U.S. 700, 712 (1994).

activity necessary to provide reasonable assurance that the proposed activity complies with applicable surface water quality standards.”

- C-6. NH RSA 485-A:8 and Env-Wq 1700 (Surface Water Quality Regulations), together fulfill the requirements of Section 303 of the Clean Water Act that the State of New Hampshire adopt water quality standards consistent with the provisions of the Act.
- C-7. Env-Wq 1701.02, entitled “Applicability”, states that:
- “(a) These rules shall apply to all surface waters.
 - (b) These rules shall apply to any person who causes point or nonpoint source discharge(s) of pollutants to surface waters, or who undertakes hydrologic modifications, such as dam construction or water withdrawals, or who undertakes any other activity that affects the beneficial uses or the level of water quality of surface waters.”
- C-8. Env-Wq 1703.01 Water Use Classifications.
- (a) State surface waters shall be divided into class A and class B, pursuant to RSA 485-A:8, I, II and III. Each class shall identify the most sensitive use which it is intended to protect.
 - (b) All surface waters shall be restored to meet the water quality criteria for their designated classification including existing and designated uses, and to maintain the chemical, physical, and biological integrity of surface waters.
 - (c) All surface waters shall provide, wherever attainable, for the protection and propagation of fish, shellfish and wildlife, and for recreation in and on the surface waters.
 - (d) Unless the flows are caused by naturally occurring conditions, surface water quantity shall be maintained at levels adequate to protect existing and designated uses.
- C-9. Env-Wq 1702.46 defines surface waters as “surface waters of the state” as defined in NH RSA 485-A:2, XIV and waters of the United States as defined in 40 CFR 122.2.

NH RSA 485-A:2, XIV defines “surface waters of the state” as “perennial and seasonal streams, lakes, ponds and tidal waters within the jurisdiction of the state, including all streams, lakes, or ponds bordering on the state, marshes, water courses and other bodies of water, natural or artificial.”

40 CFR 122.2 defines ‘waters of the United States’ as

- (a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- (b) All interstate waters, including interstate “wetlands;”

(c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

(1) Which are or could be used by interstate or foreign travelers for recreational or other purposes;

(2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

(3) Which are used or could be used for industrial purposes by industries in interstate commerce;

(d) All impoundments of waters otherwise defined as waters of the United States under this definition;

(e) Tributaries of waters identified in paragraphs (a) through (d) of this definition;

(f) The territorial sea; and

(g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Wetlands are defined in 40 CFR 122.2 as "[t]hose areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. This definition is the same as the definition of jurisdictional wetlands used for State wetland permitting in NH RSA 482-A:2, X (see C-10). 40 CFR 122.2 further states that wetlands generally include swamps, marshes, bogs, and similar areas.

C-10. NH RSA 482-A:2, X. defines "Wetlands" as "[a]n area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal conditions does support, a prevalence of vegetation typically adapted for life in saturated soil conditions."

C-11. Env-Wq 1702.17 "Biological Integrity" means the ability of an aquatic ecosystem to support and maintain a balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of similar natural habitats of a region.

C-12. Env-Wq 1702.17 "Designated uses" means those uses specified in water quality standards for each water body or segment whether or not such uses are presently occurring.

C-13. Env-Wq 1702.18 defines a discharge as:

"a. The addition, introduction, leaking, spilling, or emitting of a pollutant to surface waters, either directly or indirectly through the groundwater, whether done intentionally, unintentionally, negligently, or otherwise; or

b. The placing of a pollutant in a location where the pollutant is likely to enter surface waters."

C-14. Env-Wq 1702.23 "Existing uses" means those uses, other than assimilation waste transport, which actually occurred in the water body on or after November 28, 1975, whether or not they are included in the water quality standards.

C-15. Env-Wq 1702.39 defines a pollutant as: "pollutant" as defined in 40 CFR 122.2. This means "dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water."

C-16. The term "discharge", as applied under section 401 of the Clean Water Act means the potential for a discharge. It does not need to be a certainty, only that it may occur should the federal license or permit be granted. Further, the discharge does not need to involve the addition of pollutants (such as water released from the tailrace of a dam). As the U.S. Supreme Court has stated "[w]hen it applies to water, 'discharge' commonly means a 'flowing or issuing out'" and an addition of a pollutant is not "fundamental to any discharge"³.

C-17. Env-Wq 1703.13 entitled "Temperature", states the following:

"(a) There shall be no change in temperature in class A waters, unless naturally occurring.

(b) Temperature in class B waters shall be in accordance with RSA 485-A:8, II, and VIII.

NH RSA-A:8,II states the following for Class B waters "[A]ny stream temperature increase associated with the discharge of treated sewage, waste or cooling water, water diversions, or releases shall not be such as to appreciably interfere with the uses assigned to this class."

NH RSA-A:8,VIII states the following: "In prescribing minimum treatment provisions for thermal wastes discharged to interstate waters, the department shall adhere to the water quality requirements and recommendations of the New Hampshire fish and game department, the New England Interstate Water Pollution Control Commission, or the United States Environmental Protection Agency, whichever requirements and recommendations provide the most effective level of thermal pollution control."

³ Information in this paragraph is from page 4 of the following guidance document: *Clean Water Action Section 401 Water Quality Certification: A Water Quality Protection Tool for States and Tribes*. U.S. Environmental Protection Agency, Office of Wetlands, Oceans and Watersheds. 2010. The Supreme Court case that is referred to is *S.D. Warren Co. v. Maine Board of Environmental Protection et al*, 547 U.S. 370, 126 S. Ct. 1853 (2006).

C-18. Env-Wq 1703.14, entitled "Nutrients", states that

- "a. Class A waters shall contain no phosphorous or nitrogen unless naturally occurring.
- b. Class B waters shall contain no phosphorous or nitrogen in such concentrations that would impair any existing or designated uses, unless naturally occurring.
- c. Existing discharges containing either phosphorous or nitrogen which encourage cultural eutrophication shall be treated to remove phosphorus or nitrogen to ensure attainment and maintenance of water quality standards.
- d. There shall be no new or increased discharge of phosphorous into lakes or ponds.
- e. There shall be no new or increased discharge(s) containing phosphorous or nitrogen to tributaries of lakes or ponds that would contribute to cultural eutrophication or growth of weeds or algae in such lakes and ponds."

C-19. Env-Wq 1703.19, entitled "Biological and Aquatic Community Integrity", states that

- "a. The surface waters shall support and maintain a balanced, integrated and adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of similar natural habitats of a region; and
- b. Differences from naturally occurring conditions shall be limited to non-detrimental differences in community structure and function."

C-20. Env-Wq 1703.21 (a)(1) states that "Unless naturally occurring or allowed under part Env-Wq 1707, all surface waters shall be free from toxic substances or chemical constituents in concentrations or combinations that injure or are inimical to plants, animals, humans or aquatic life."

C-21. Env-Wq 1703.07 through 1703.11 contain standards relative to dissolved oxygen, bacteria, benthic deposits, oil and grease, and turbidity.

C-22. Antidegradation provisions are included in Env-Wq 1702 and Env-Wq 1708.

- a. Env-Wq 1702.02 states that "Antidegradation" means a provision of the water quality standards that maintains and protects existing water quality and uses.
- b. Env-Wq 1708.02 states that "Antidegradation shall apply to: (a) Any proposed new or increased activity, including point source and nonpoint source discharges of pollutants, that would lower water quality or affect the existing or designated uses; (b) Any proposed increase in loadings to a waterbody when the proposal is associated with existing activities; (c) Any increase in flow alteration over an existing alteration; and (d) Any hydrologic modifications, such as dam construction and water withdrawals."

- c. Antidegradation applies to all parameters as evidenced by Env-Wq 1708.08 (a) (Assessing Waterbodies) which states " The applicant shall characterize the existing water quality and determine if there is remaining assimilative capacity for each parameter in question."
- d. According to Env-Wq 1708.04 (b), "A proposed discharge or activity shall not eliminate any existing uses or the water quality needed to maintain and protect those uses".
- e. Env-Wq 1702.03 states that "Assimilative capacity" means the amount of a pollutant or pollutants that can safely be released to a waterbody without causing violations of applicable water quality criteria or negatively impacting uses.
- f. Env-Wq 1708.08 describes the process for assessing waterbodies to determine if there is remaining assimilative capacity for each parameter in question.
- g. Env-Wq 1708.09 Significant or Insignificant Determination states :(a) Any discharge or activity that is projected to use 20% or more of the remaining assimilative capacity for a water quality parameter, in terms of either concentration or mass of pollutants, or volume or flow rate for water quantity, shall be considered a significant lowering of water quality. The department shall not approve such a discharge or activity unless the applicant demonstrates that the proposed lowering of water quality is necessary to achieve important economic or social development, in accordance with Env-Wq 1708.10, in the area where the waterbody is located.
- h. Env-Wq 1708.01 (b) states: "For significant changes in water quality, where the quality of the surface waters exceeds levels necessary to support propagation of fish, shellfish, and wildlife, and recreation in and on the water, that quality shall be maintained and protected unless the department finds, after full satisfaction of the intergovernmental coordination and public participation provisions that, in accordance with Env-Wq 1708.10, allowing lower water quality is necessary to accommodate important economic or social development in the area in which the surface waters are located. In allowing such degradation or lower water quality, the department shall assure water quality adequate to fully protect existing uses. Further, the department shall assure that the highest statutory and regulatory requirements shall be achieved for all new and existing point sources and that all cost effective and reasonable best management practices for nonpoint source control shall be implemented".
- i. Env-Wq 1708.01 (c) states: "For insignificant changes in water quality, where the quality of the surface waters exceeds levels necessary to support propagation of fish, shellfish, and wildlife, and recreation in and on the water, that quality shall be maintained and protected. In allowing such degradation or lower water quality, the department shall assure water quality adequate to protect existing uses fully. Further, the department shall assure that the highest statutory and regulatory requirements shall be achieved for all new and existing point sources and that all cost effective and reasonable best management practices for nonpoint source control shall be implemented".

C-23. Env-Wq 1708.05 - Protection of Water Quality in ORW.

- (a) Surface waters of national forests and surface waters designated as natural under NH RSA 483:7-a, I, shall be considered outstanding resource waters (ORW).
- (b) Water quality shall be maintained and protected in surface waters that constitute ORW, except that some limited point and nonpoint source discharges may be allowed providing that they are of limited activity which results in no more than temporary and short-term changes in water quality. "Temporary and short term" means that degradation is limited to the shortest possible time. Such activities shall not permanently degrade water quality or result at any time in water quality lower than that necessary to protect the existing and designated uses in the ORW. Such temporary and short term degradation shall only be allowed after all practical means of minimizing such degradation are implemented.

C-24. Env-Wq 1708.07 Protection of Water Quality in High Quality Waters.

- (a) Subject to (b) below, high quality waters shall be maintained and protected, except that insignificant changes in water quality, as determined by the department in accordance with Env-Wq 1708.09, shall be allowed.
- (b) Degradation of significant increments of water quality, as determined in accordance with Env-Wq 1708.09, in high quality waters shall be allowed only if it can be demonstrated to the department, in accordance with Env-Wq 1708.10, that allowing the water quality degradation is necessary to accommodate important economic or social development in the area in which the receiving waters are located.
- (c) Economic/social benefits demonstration and alternatives analysis shall not be required for authorization of an insignificant lowering of water quality. However, in allowing a lowering of water quality, significant or insignificant, all reasonable measures to minimize degradation shall be used.
- (d) If the water body is Class A Water, the requirements of Env-Wq 1708.06 shall also apply.

C-25. Env-Wq 1708.12 entitled "Transfer of Water" defines "transfer" as "[t]he intentional conveyance of water from one surface water to another surface water for the purpose of increasing the volume of water available for withdrawal from the receiving surface water. The term does not include the transfer of stormwater, for the purpose of managing stormwater during construction, between basins created or otherwise lawfully used for stormwater detention or treatment, or both, and does not include the discharge of stormwater from a detention or treatment basin to surface water."

C-26. Env-Wq 1702.06 states ""Best management practices" means those practices which are determined, after problem assessment and examination of all alternative practices and technological, economic and institutional considerations, to be the most effective practicable means of preventing or reducing the amount of pollution generated by point or nonpoint sources to a level compatible with water quality goals."

C-27. With regards to fertilizers, NH RSA 483:1, XXII defines turf as follows: "Turf" or "lawn" means non-agricultural land planted in closely mowed, managed grasses except golf courses, parks, athletic fields, and sod farms."

NH RSA 431:4-a Nitrogen Content of Fertilizer, states the following:

- I. No turf fertilizer sold at retail shall exceed 0.7 pounds per 1,000 square feet of soluble nitrogen per application when applied according to the instructions on the label.
- II. No turf fertilizer sold at retail shall exceed 0.9 pounds per 1,000 square feet of total nitrogen per application when applied according to the instructions on the label.
- III. No turf fertilizer shall exceed an annual application of 3.25 pounds per 1,000 square feet of total nitrogen when applied according to the instructions on the label.
- IV. No enhanced efficiency fertilizer shall exceed a single application rate of 2.5 lbs. per 1,000 square feet of total nitrogen and an annual application rate of 3.25 pounds per 1,000 square feet of total nitrogen nor release at greater than 0.7 pounds per 1,000 square feet per month when applied according to the instructions on the label."

NH RSA 431:4-b Phosphorus Content of Fertilizer, states the following:

- I. No fertilizer sold at retail that is intended for use on turf shall exceed a content level of 0.67% available phosphate unless specifically labeled for establishing new lawns, for repairing a lawn, for seeding, or for use when a soil test indicates a phosphorus deficiency.
- II. No fertilizer sold at retail that is intended for use on newly established or repaired lawns, or for lawns testing deficient in phosphorus shall exceed an application rate of one pound per 1,000 square feet annually of available phosphate.
- III. No natural organic turf fertilizer shall exceed a per application rate of one pound of available phosphate per 1,000 square feet when applied according to the instructions on the label."

C-28. NH RSA 483:4 defines "interbasin transfer" and "river drainage basin":

- XII. "Interbasin transfer" means any transfer of water for use from one river drainage basin to another.

XIX. "River drainage basin" means the Androscoggin, Coastal, Connecticut, Merrimack, Piscataqua, and Saco river basins as delineated on a map compiled by the department.

C-29. NH RSA 483:9 Natural Rivers Protection (at 9-a, 9-aa, and 9-b) states that no interbasin transfers from designated rural, rural-community, or community rivers or their segments shall be permitted.

C-30. NH RSA 488:3 regarding registration of withdrawals and discharges states the following:

- I. No person shall withdraw or discharge a cumulative amount of more than 20,000 gallons of water per day, averaged over any 7-day period, or more than 600,000 gallons of water over any 30-day period, at a single real property or place of business without registering the withdrawal or discharge with the department. Transfers of such volume of water shall also be registered. Registration shall be in addition to any required permits.
- II. No registration shall be transferred to another person without written notification to the commissioner.

C-31. NH RSA 485:61 regarding Rules for Water Conservation, states the following:

- I. The department shall adopt rules, pursuant to RSA 541-A, for water conservation practices for water users. These rules shall strike a reasonable balance between environmental, energy, and economic impacts and be consistent with current industry standards and practices for different types of water users.
- II. The water conservation rules in paragraph I of this section shall apply to all new permit applicants and applications for water withdrawals subject to the provisions of RSA 485:3, RSA 485:48, RSA 485-C:21 and section 401 of the Clean Water Act.
- III. Water conservation rules shall be consistent with applicable state or federal rules and regulations. Water Conservation Rules were adopted May 14, 2005 codified as Env-Wq 2101.

C-32. Env-Wq 2101.24 entitled Water Conservation Plan Required, states that

"(a) The applicants for approval of a source that would be a conservation source shall submit a water conservation plan that demonstrates compliance with the applicable provisions of Env-Wq 2101.05 through Env-Wq 2101.22 in accordance with the following:"

"(5) For a new withdrawal from a surface water associated with a project requiring a 401 Water Quality Certification, the water conservation plan shall be submitted prior to or in conjunction with

the application for a 401 Water Quality Certification pursuant to Section 401 of the federal Clean Water Act;

(6) For a new withdrawal from a surface water that requires water quality certification pursuant to RSA 485-A:12, IV, the water conservation plan shall be submitted prior to or in conjunction with the certification request”.

Env-Wq 2101.23, entitled Waivers, allows DES to grant waivers of certain provisions in Env-Wq 2101 provided the person requesting the waiver submits a written request to DES that includes the information specified in Env-Wq 2101.23(d). On May 11, 2015, the Applicant submitted a written request to waive the deadline for submittal of a water conservation plan (WCP) in Env-Wq 2101.24. On May 12, 2015, DES approved the waiver request with the condition that the Applicant submit a WCP for each phase of the project and receive written approval of the WCP from DES prior to construction of that phase.

C-33. In 2010, DES published guidance (hereinafter called the 2010 instream flow guidance or 2010 ISF guidance) for estimating instream flow requirements for the protection of aquatic life for situations. The guidance is available at: <http://des.nh.gov/organization/commissioner/pip/publications/wd/documents/wd-11-3.pdf>.

C-34. Section 303(d) of the Clean Water Act (33 U.S.C. 1313(d)) and the regulations promulgated thereunder (40 C.F.R. 130.0 – 40 C.F.R. 130.11) require states to identify and list surface waters that are violating state water quality standards (i.e., Section 303(d) List) that do not have an approved TMDL. For these water quality-impaired waters, states must establish Total Maximum Daily Loads (TMDLs) for the pollutants causing the impairments and submit the list of impaired surface waters and TMDLs to EPA for approval. TMDLs include source identification, determination of the allowable load and pollutant reductions (by source) necessary to meet the allowable load. Once a TMDL is conducted, the pollutant/surface water is transferred to the list of impaired waters with approved TMDLs (known as Category 4A waters). The Section 303(d) List is, therefore, a subset of all impaired waters. The most recent Section 303(d) list of impaired waters is the 2012 Section 303(d) List. A list of all impaired waters is available at <http://www.des.state.nh.us/organization/divisions/water/wmb/swqa/2010/index.htm>

C-35. On December 20, 2007, EPA approved the Northeast Regional Mercury TMDL⁴ which addressed mercury impairments in all New Hampshire fresh surface waters.

⁴ Northeast Regional Mercury Total Maximum Daily Load. Connecticut Department of Environmental Protection, Maine Department of Environmental Protection, Massachusetts Department of Environmental Protection, New Hampshire Department of Environmental Services, New York State Department of Environmental Conservation, Rhode Island Department of Environmental Management, Vermont Department of Environmental Conservation, New England Interstate Water Pollution Control Commission. October 24, 2007.

C-36. When a surface water does not meet water quality standards (i.e., when it is impaired), the addition of pollutants causing or contributing to impairment is prohibited in accordance with the following:

Env-Wq 1703.03 (a) states that "The presence of pollutants in the surface waters shall not justify further introduction of pollutants from point or nonpoint sources, alone or in any combination".

NH RSA 485-A:12 (I) (Enforcement of Classification) states that "After adoption of a given classification for a stream, lake, pond, tidal water, or section of such water, the department shall enforce such classification by appropriate action in the courts of the state, and it shall be unlawful for any person or persons to dispose of any sewage, industrial, or other wastes, either alone or in conjunction with any other person or persons, in such a manner as will lower the quality of the waters of the stream, lake, pond, tidal water, or section of such water below the minimum requirements of the adopted classification".

C-37. NH Division of Pesticides regulations (Pes 1001.01-Restrictions on Pesticide Use by Residential Property Owners, Private Applicators and Commercial Applicators) states that "[N]o residential property owner, private applicator, or commercial applicator shall apply pesticides within the following distances of the reference line⁵:

- (a) Within 25 feet as it pertains to surface waters; and
- (b) Beyond 25 feet in such a manner or by such methods that would result in the presence of pesticides within 25 feet of the reference line of any lake, pond, river or coastal water."

According to Pes 1001.02 (Pesticide Applications Within 25 Feet of the Reference Line): "[T]he restrictions in Pes 1001.01 shall not apply to the following:

- (a) Pesticide applications inside structures provided there is no soil contact or soil incorporation;
- (b) Pesticide applications to control termites provided the applicator is in possession of a special permit issued by the division in accordance with the provisions of Pes 502.04;
- (c) Pesticide applications which are subject to prior approval of the division through issuance of a special permit where distances from surface water are determined on a case by case basis; and
- (d) Pesticide applications to control vegetation along the embankments of sewage lagoons of wastewater treatment facilities."

⁵ Reference line is defined in Pes 101.28.

- C-38. NH RSA 482-A (Fill and Dredge in Wetlands) requires any person who excavates, removes, fills, dredges or constructs any structures in or on any bank, flat, marsh, or swamp in and adjacent to any waters of the state to obtain a wetlands permit from DES [NH RSA 482-A:3 I (a)].

On February 25, 2015, the Applicant submitted an application for a DES Wetlands Permit which was assigned the following file number (2015-00425).

- C-39. Section 404 of the Clean Water Act requires a U.S. Army Corps of Engineers (USACOE) permit for the discharge of dredged or fill material into navigable waters.

On August 3, 2012, the New England District of the U.S. Army Corps of Engineers reissued the federal Programmatic General Permit for New Hampshire (General Permit No: NAE-R-2012-00339). The expiration date of the NH Programmatic General Permit (PGP) is August 3, 2017. The PGP expedites review of minimal impact work in coastal and inland waters and wetlands within the State of New Hampshire. Subject to certain exclusions and conditions, the PGP eliminates the need to apply for separate approval from the Corps for most minor, non-controversial work in New Hampshire when that work is authorized by the DES Wetlands Bureau. The PGP covers the following:

Work and structures that are located in, or that affect, navigable waters of the United States (U.S.) [33 CFR 328.4(c)] (regulated by the Corps under Section 10 of the Rivers and Harbors Act of 1899);

The discharge of dredged or fill material into waters of the U.S. (regulated by the Corps under Section 404 of the Clean Water Act) and;

The transportation of dredged material for the purpose of disposal in the ocean (regulated by the Corps under Section 103 of the Marine Protection, Research and Sanctuaries Act). The term "discharge of dredged or fill material" also includes certain discharges resulting from excavation. Applicants should contact the Corps to determine if a particular excavation discharge occurring within waters or wetlands is a regulated activity.

- C-40. In accordance with the Clean Water Act (CWA) Section 401 and NH statute RSA 485-A:12, III, the New Hampshire Department of Environmental Services (DES) issued a 401 Water Quality Certification (WQC # 2012-404P-002) for the current PGP on August 2, 2012. Conditions E-1 through E-6 of WQC # 2012-404P-002 state the following:

E-1. Construction or operation of all projects included under the PGP shall meet NH surface water quality standards.

E-2. Applications for projects included under the PGP shall be subject to DES review to determine whether additional conditions or an individual 401

Certification application is necessary to ensure compliance with surface water quality standards.

- E-3. If DES determines that surface water quality standards are being violated by the specific project or there is reasonable potential to expect that water quality standards will be violated if more project specific conditions are not included in the 401 Certification, DES may modify this 401 Certification for the specific project to include additional conditions to ensure compliance with surface water quality standards.
- E-4. Construction on any specific project permitted under the PGP shall not commence until all other applicable permits and approvals have been granted, including those permits issued through DES Wetlands Bureau and, if necessary, DES Alteration of Terrain Program.
- E-5. All applicable conditions in the NH PGP shall be followed.
- E-6. DES reserves the right to inspect any project permitted under the PGP and the effects of the project on affected surface waters at any time to monitor compliance with the NH surface water quality standards.

C-41. The Applicant submitted an application for 401 Water Quality Certification to DES on December 17, 2014 which included project information. Additional information was received on February 5, 2015 and February 9, 2015.

C-42. DES issued a draft certification for public comment from March 4, 2015 to April 3, 2015.

D. FINDINGS

D-1. The Applicant proposes to withdraw water from the Androscoggin River in Errol, NH for snowmaking, for fire suppression, to fill fire cisterns and for the performance of periodic maintenance and pipe testing related to the redevelopment of the Balsams Grand Resort Wilderness Ski Area in Dixville, New Hampshire (Resort). The Activity includes construction and operation of a water withdrawal intake and pump station that will withdraw a maximum of 34 cubic feet per second (21.98 million gallons per day) from the Androscoggin River and the construction and operation of an approximate 9 mile pipeline to convey water from Errol, NH to the Resort. The Activity also includes redevelopment of the Resort including, but not limited to, construction and operation of new features and rehabilitation of some existing features that include, but are not limited to, ski trails, chair lifts, residential and commercial buildings, parking areas, drives, roadways, golf course, other amenities and associated infrastructure.

Plans and information for the withdrawal from the Androscoggin River and pipeline to the Resort were included with the current application for certification. Plans and information for future phases of the Activity will be submitted at a later date.

D-2. The Applicant is responsible for the Activity, including construction and operation.

D-3. Surface waters are navigable waters for the purposes of certification under Section 401 of the Clean Water Act. Surface waters are jurisdictional wetlands for the purposes of wetlands permitting under RSA 482-A.

D-4. The named and unnamed fresh water rivers and streams, lakes and ponds, and wetlands in NH affected by the Activity, are surface waters under Env-Wq 1702.46. DES has assigned Assessment Unit (AU) identification numbers to many, but not all surface waters. Surface waters that do not have an AU number are still considered surface waters of the State in accordance with Env-Wq 1702.46 (see C-9). Surface waters that could be potentially affected by the Activity and their associated AU numbers (where available) include, but are not limited to the following:

Assessment Unit ID	Description
NHLAK801010401-01	ABENIKI LAKE
NHIMP801010401-01	MOHAWK RIVER - LAKE GLORINETTE
NHIMP801010401-02	UNNAMED BROOK
NHRIV400010501-05	MILLSFIELD POND BROOK
NHRIV400010502-01	CLEAR STREAM - FLUME BROOK - UNNAMED BROOK - CASCADE BROOK
NHRIV400010502-02	WEST BRANCH CLEAR STREAM
NHRIV400010502-03	WELCH BROOK
NHRIV400010502-04	CLEAR STREAM
NHRIV400010502-05	CLEAR STREAM
NHRIV400010502-06	CORSER BROOK - UNNAMED BROOK
NHRIV400010502-10	GREENOUGH BROOK
NHRIV400010502-13	UNNAMED BROOK
NHRIV400010502-16	UNNAMED BROOK
NHRIV400010502-17	UNNAMED BROOK
NHRIV400010602-03	ANDROSCOGGIN RIVER
NHRIV801010401-01	MOHAWK RIVER
NHRIV801010401-02	EAST BRANCH MOHAWK RIVER - UNNAMED BROOK
NHRIV801010401-03	MOHAWK RIVER - UNNAMED BROOK - MOOSE BROOK
NHRIV801010401-04-02	MOHAWK RIVER - UNNAMED BROOK - WEST BRANCH MOHAWK RIVER - ROARING BROOK
NHRIV801010401-07	MOOSE BROOK - UNNAMED BROOK
	Wetlands and other unnamed surface waters in the vicinity without an AUID number

D-5. The potentially affected surface waters are Class B waterbodies; therefore Class B New Hampshire surface water quality standards apply to the Activity. Class B waterways are considered suitable for aquatic life, primary and secondary contact recreation, fish consumption, wildlife, and, after adequate treatment, as a water supply⁶.

6. 2012 Section 305(b) and 303(d) Consolidated Assessment and Listing Methodology. July, 2013. NH Department of Environmental Services. NHDES-R-WD-12-2.

- D-6. Many of the potentially affected surface waters are considered cold water fisheries by the NH Fish and Game Department.
- D-7. According to the 2014 list of impaired waters (see C-34), the following surface waters in the vicinity of the proposed Activity are listed as impaired. All impairments, with the exception of those highlighted in bold (which have approved TMDLs), are on the Section 303(d) List:

Assessment Unit (AU)	Waterbody Name	Cause of Impairment (Designated Use Impaired)
	All freshwaters in NH	Mercury(FC)
<p>Notes: AL = Aquatic Life, PCR = Primary Recreation, SCR = Secondary Recreation, FC = Fish Consumption, SFC = Shellfish Consumption</p> <p>Impairments highlighted in bold have approved TMDLs. All other impairments are on the Section 303(d) List. All fresh surface waters are impaired mercury due to elevated levels of mercury in fish tissue which has resulted in statewide fish consumption advisory.</p>		

As stated in section C-36 of this Certification, when a surface water does not meet water quality standards (i.e., when it is impaired), the addition of pollutants causing or contributing to impairment is prohibited. As noted above, all fresh surface water in NH are impaired for mercury due to concentrations found in fish tissue which have resulted in a statewide fish consumption advisory. On December 20, 2007, EPA approved the Northeast Regional Mercury TMDL which addressed mercury impairments in all New Hampshire fresh surface waters (see C-35). The primary source of mercury is atmospheric deposition from in-state and out-of-state emissions. The proposed Activity is not expected to have a significant impact on mercury levels in fish tissue.

- D-8. Storm water runoff, including snowmelt, and groundwater flow to surface waters from within the area affected by the Activity during warm and cold-weather conditions are discharges under the definitions of Env-Wq 1702.18.
- D-9. The Activity will result in a discharge and, if not properly controlled, may cause the permanent alteration of, or temporary impacts to surface waters.
- D-10. The Activity includes dredge and fill of jurisdictional wetlands in New Hampshire and therefore requires a DES Wetlands Permit (or permits) under NH RSA 482-A. This 401 Certification decision relies, in part, on an approved permit (or permits) from the DES Wetlands Bureau for the potential impacts to jurisdictional wetlands. Through its processing and issuance, DES wetlands permits issued for the Activity will address the dredge and fill impacts to jurisdictional wetlands. On February 25, 2015, the Applicant submitted an

application for a DES Wetlands Permit which was assigned the file number 2015-00425.

- D-11. The Activity is likely to involve alteration of terrain that will require a DES Alteration of Terrain (AoT) permit issued according to RSA 485-A:17. When AoT permits are required for the Activity, this 401 Certification decision relies, in part, on an approved permit (or permits) from the DES Alteration of Terrain Bureau for the potential construction and/or operation-related impacts of stormwater on surface waters. Through its processing and issuance, DES AoT permits issued for the Activity will address many of the potential impacts of stormwater from the Activity on receiving surface waters.
- D-12. Based on the information submitted with the Application, it is DES' understanding that New England District of the U.S. Army Corps of Engineers (Corps or USACOE) has determined that Activity requires a Clean Water Act § 404 permit for the discharge of dredge or fill materials into waters of the U.S. and that the § 404 NH Programmatic General Permit (PGP) satisfies this requirement (see C-39).
- D-13. Condition E-3 of the 401 Water Quality Certification (WQC # 2012-404P-002) issued by DES for the current PGP allows DES to modify the 401 Certification issued for the PGP to include additional conditions to ensure compliance with the surface water quality standards (see C-40). DES has determined that additional conditions are necessary to ensure the Activity complies with surface water quality standards.
- D-14. Since the Activity could include new discharges of pollutants and increases in flow alteration (i.e., due to increased impervious cover and withdrawals from the Androscoggin River), the antidegradation provisions of Env-Wq 1708 apply (see section C-22).
- D-15. If not properly controlled, the Activity could potentially result in increased flow and volume of stormwater runoff and reductions in groundwater recharge due to increases in impervious surfaces, which could trigger antidegradation provisions of the state surface water quality regulations (see D-14). Future phases of the Activity will likely require permits from the DES Alteration of Terrain Bureau. The Alteration of Terrain regulations (Env-Wq 1500) include provisions to help prevent degradation associated with hydrologic alterations. In specific, Env-Wq 1507.05 and Env-Wq 1507.06 address stormwater flow and Env-Wq 1507.04 addresses groundwater recharge. Requiring the Applicant to comply with any AoT permit issued for the Activity is expected to address these potential concerns.
- D-16. Without proper controls, construction of the Activity could potentially result in water quality violations due to such things as erosion and deposition of settleable and suspended solids associated with stormwater flowing over disturbed areas that have not been stabilized and discharge of construction dewatering activities to surface waters. These concerns can be addressed by

preparing and implementing appropriate stormwater pollution prevention measures during construction.

Future phases of the Activity will likely require DES Alteration of Terrain (AoT) permits and/or be required to comply with conditions in the federal National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP)⁷.

CGPs are typically reissued by the U.S. Environmental Protection Agency (EPA) every 5 years. The most recent CGP was issued in 2012. Activities must comply with the CGP if they "[d]isturb 1 or more acres of land, or will disturb less than 1 acre of land but is part of a common plan of development or sale that will ultimately disturb 1 or more acres of land". The CGP covers construction related stormwater discharges (including stormwater runoff, snowmelt runoff and surface runoff and drainage) as well other discharges, including but not limited to, construction dewatering that has been treated by an appropriate control. The CGP requires development of a Stormwater Pollution Prevention Plan (SWPPP) that describes how the Activity will meet the requirements of the CGP. This includes identification of the stormwater team, a description of the nature of construction activities, emergency-related projects, identification of other site operators, the sequence and estimated dates of construction activities, a site map, identification of construction site pollutants and non-stormwater discharges, buffer documentation, a description of stormwater control measures, pollution prevention procedures, procedures for inspection, maintenance and corrective action, staff training, documentation of compliance with other federal requirements, SWPPP Certification and Post-Authorization Additions to the SWPPP. According to the CGP the SWPPP must be made available to DES upon request. If there are any contaminated discharges resulting from the construction activity, the applicant must comply with the NPDES Remediation General Permit⁸.

In accordance with Env-Wq 1502.51(b), DES AoT permits are required for earth moving activities that result in a temporary or permanent disturbance of:

- (1) An area that:
 - a. Is more than 2,500 square feet in size;
 - b. Is within 50 feet of any surface water; and
 - c. Has a flow path 50 feet or longer disturbing a grade of 25% or greater, measured at 2-foot intervals; or

⁷ The 2012 Construction General Permit is available at http://water.epa.gov/polwaste/npdes/stormwater/upload/cgp2012_finalpermit.pdf

⁸ The 2010 Remediation General Permit is available at http://www.epa.gov/region1/npdes/remediation/RGP2010_FinalPermit.pdf.

(2) An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area, or 50,000 square feet or more of contiguous area if any portion of the disturbance is within the protected shoreland as defined in RSA 483-B.

DES AoT permits address many of the items required in the CGP. In most cases, implementation of stormwater pollution prevention measures required as part of the CGP and/or AoT permit should prevent water quality violations due to construction related runoff. However as discussed below, additional measures may be appropriate in some cases.

The project is located in the headwaters of Clear Stream and the Mohawk River. In light of the sensitive resources within the project area and scale of the proposed Activity, the following additional construction related stormwater pollution prevention requirements should be considered when determining appropriate measures for each phase of the Activity.

- a. A Certified Professional in Erosion and Sediment Control or a Professional Engineer licensed in New Hampshire ("Monitor"), shall be employed to regularly inspect the site.
- b. The Monitor shall inspect the site at least once a week and as specified elsewhere in this section.
- c. The Monitor shall regularly provide technical assistance to the Contractor on appropriate Best Management Practices for Erosion and Sediment Control requirements.
- d. **Weekly Erosion Control Meeting:** The Applicant's prime Contractor for the Activity (prime Contractor) shall hold weekly erosion control meetings with the Monitor. Minutes of the meeting shall be kept on file and made available to DES upon request.
- e. **Inspection Frequency**
 1. *Daily Inspections:* The prime Contractor shall inspect all erosion control measures every day that work is conducted from the time construction commences and earth is disturbed until construction is complete.
 2. *Weekly Inspections:* After construction has commenced and earth has been disturbed, the Monitor shall conduct weekly erosion control site inspections to verify all erosion control measures are maintained properly to protect surface waters and wetlands. The Monitor shall document and report its findings, including recommendations for maintenance of BMPs or the addition of new control measures to the prime Contractor.

3. *Pre-storm inspections:* The Monitor shall print the 5-day forecast once daily (7-9 am) for the duration of the project. All forecasts shall be clearly marked with the date and time, kept on file, provided to the prime Contractor. In addition, the 5-day forecast on the day of the weekly meeting shall be attached to the weekly meeting minutes distributed by the Monitor. Inspection shall occur within 24 hours prior to the start of any rain event of 0.5 inches or more in a 24-hour period that is predicted to occur during the workweek. A normal workweek is Monday through Friday. Holidays and weekends are included as part of the normal workweek when work is anticipated to occur on those days. If the predicted event occurs outside of the normal workweek, the inspection shall occur on the normal workday just before any scheduled days off, such as holidays and weekends. Unless otherwise approved by DES, the Accuweather website (<http://home.accuweather.com/index.asp?partner=accuweather>) shall be used for the purpose of predicting future precipitation amounts. Future precipitation amounts on the Accuweather web site may be determined by typing in the location of the project (city, state and/or zip code), clicking on the link for Days 1-5 forecasts and then clicking on the day(s) of interest.

f. *Emergency Inspections During Storm Events:* Inspections shall occur during the daylight hours (Monday through Sunday, including holidays) during storm events whenever plumes are visible or if turbidity sampling indicates water quality standards are exceeded due to turbid stormwater from the construction site. Inspections and corrective action shall be implemented during the daylight hours (Monday through Sunday, including holidays) until turbidity water quality standards are met.

g. *Post Storm Inspections:* Inspections shall occur on the first workday following storms of greater than 0.5 inches in a 24-hour period. Precipitation amounts shall be based on precipitation recorded at a rain gauge installed at the construction site or other approved method. Inspections and corrective action shall be implemented during the daylight hours (Monday through Sunday, including holidays) until turbidity water quality standards are met.

h. *Winter Shutdown Inspections:* Inspections during winter shut down shall occur as specified in the NPDES General Permit for Stormwater Discharges from Construction Activities (commonly known as the Construction General Permit or CGP).

i. *Requests to Reduce or Cease Inspections:* Requests to reduce or cease inspections may be submitted to DES for review and approval. Requests shall demonstrate compliance with section 4.1.4 of the CGP (if applicable) or Env-Wq 1505.02 (d) of the Alteration of Terrain (AoT) Permit (if

applicable). If both the AoT and CGP permits are applicable for a particular phase, the permit with the more stringent requirements shall apply. If neither a CGP or AoT permit is applicable, the request shall demonstrate compliance with Env-Wq 1505.02 (d). If turbidity monitoring has been required for the area where inspections are requested to be reduced or stopped, the request shall also demonstrate compliance with turbidity water quality criteria (Env-Wq 1703.11).

j. Provisions for Handling Emergencies: Contact information shall be provided to DES for at least two people that DES can contact at any time regarding construction related stormwater concerns. The Applicant shall prepare an Emergency Procedures Plan describing procedures to address and correct emergency, construction related stormwater issues in an expeditious manner. The plan shall include the responsibilities of key individuals, the availability of equipment, and the availability of erosion control and BMP supplies. All emergency erosion control and BMP supplies must be kept on-site.

k. Inspection and Maintenance Plans and Reports: Written inspection and maintenance reports shall include the items stipulated in the EPA NPDES General Permit for Stormwater Discharges from Construction Activities, as well as the predicted 24-hour rainfall for pre-storm inspection reports, measured rainfall amounts for post-inspection reports. The reports shall also indicate if erosion control measures "pass" or "fail". Unless otherwise authorized by DES, the reports shall be submitted to DES by electronic mail (email) within 24 hours of each inspection.

l. Weather Station Specifications: Unless otherwise authorized by DES, the Applicant shall be responsible for maintaining a weather station that can measure rainfall to an accuracy of 0.01 inches, monitor temperature to an accuracy of 1 degree Fahrenheit or Celsius, and has hourly data storage and download capabilities.

m. Precipitation Notification Plan: The Applicant shall specify how the Monitor, and others, will be notified when precipitation has occurred that will trigger the need for inspections and/or turbidity sampling. Automatic notification is preferred. If considered necessary and feasible by DES, the weather station shall be equipped to send automatic email notifications to notify the Monitor when construction BMP inspections and/or turbidity sampling is necessary. Should automated email notification be considered necessary, it shall be capable of the following: Start of rain event: Once 0.25 inches of rain or rain-mix precipitation has been measured an automated email notification will be sent to the prime Contractor, the Monitor, and any other interested parties. The email shall provide hourly rainfall, and time of rainfall for the previous 24 hours. End of rain event: Once six hours without rain or rain-mix precipitation has passed an automated email notification will be sent to the prime Contractor, the

Monitor and DES. The email shall provide hourly rainfall and time of rainfall from the start of the rain event to the end of the rain event, including the six hour "dry" period.

n. *Turbidity Monitoring*: To confirm that construction best management practices (BMPs) for controlling erosion are performing as intended, turbidity monitoring is needed. Unless otherwise authorized by DES, the Applicant shall submit a Turbidity Sampling Plan that includes the turbidity monitoring elements specified in the February 2, 2009 DES Inter-Department Communication entitled "Amendment of the November 16, 2006 Guidance for BMP Inspection and Maintenance and Turbidity Sampling and Analysis Plans for I-93 Expansion Project Water Quality Certification". This document includes guidance regarding sampling station number and locations, sampling frequency, sampling duration, size of storms that need to be sampled, how soon after the start of precipitation sampling should begin, quality assurance quality control provisions, and turbidity meter specifications.

D-17. Wastewater from the Activity will either be treated via DES approved subsurface disposal systems that comply with Subdivision and Individual Sewage Disposal System Design Rules (Env-Wq 1000) or via restoration of the existing wastewater treatment plant (WWTP) which was issued a DES Groundwater Permit (# GWP-198401040-D-003) on January 23, 2012. The permit allows the discharge of up to 225,000 gpd of treated wastewater via an unlined aerated lagoon and rapid infiltration basins. The discharge area is located approximately 2000 feet west of the existing hotel facility at the Resort. Although the treatment facility is currently inactive, the groundwater permit is still valid Compliance with DES Subdivision and Individual Sewage Disposal System Design Rules (Env-Wq 1000) and/or Groundwater Permit for the WWTF is expected to prevent surface water quality violations due to the discharge of treated wastewater.

D-18. As stated in section C-36 of this Certification, when a surface water does not meet water quality standards (i.e., when it is impaired), the addition of pollutants causing or contributing to impairment is prohibited. That is, existing loadings must be held. Further, as stated in C-34 of this Certification, TMDLs must eventually be conducted for any surface water listed on the Section 303(d) List. The TMDL includes source identification, determination of the allowable load and reductions (by source) necessary to meet the allowable load. For waters with an approved TMDL, pollutant reductions per the TMDL are required. For pollutants causing an impairment without a TMDL, loadings of the pollutant causing impairment must be held such that there are no increased loadings until such time as a TMDL is prepared.

For all other pollutants (i.e., those not known to be causing impairment) which are likely to be discharged from the Activity, Applicants can either hold existing

loadings (i.e., no degradation), or request to degrade the water in accordance with the antidegradation provisions of Env-Wq 1708.

To demonstrate no additional loading for pollutants which can be removed by structural BMPs, DES allows Applicant's to submit loading analyses in accordance with the Simple Method guidance and spreadsheet included on the DES website⁹. The guidance allows use of the "Simple Method" for calculating loads before and after construction of the proposed Activity. At this time, DES uses total suspended solids (TSS), total nitrogen (TN) and total phosphorus (TP) as surrogates for all other parameters which can be removed by structural BMPs. That is, if the loadings for TSS, TN and TP are held to pre-construction levels¹⁰, it is assumed that loadings of all other parameters which can be removed by structural BMPs, are held as well. The pollutant loading guidance also assumes that all permanent stormwater practices (i.e., best management practices or BMPs) referenced in the loading analysis are designed and maintained in accordance with current Alteration of Terrain regulations (Env-Wq 1500).

DES approval of a pollutant loading analysis demonstrating no additional loading of pollutants from pre-construction levels is considered adequate to satisfy pollutant related antidegradation requirements for high quality waters and surface waters impaired by pollutants that do not have approved TMDLs as discussed above, as well as requirements for Outstanding Resource Waters (ORWs) which prohibit permanent degradation to surface waters (see C-23).

D-19. If not properly controlled, projects involving alteration of terrain can result in discharges to surface waters of nutrients such as phosphorus and nitrogen that can lead to excessive aquatic plant growth and impairment of aquatic life and contact recreational uses such as swimming or wading. Application of fertilizers can be a primary source of nutrients. NH RSA 431:4-a and 431:4-b (see C-27), which became effective January 1, 2014, limits the nitrogen and phosphorus content of fertilizers sold at retail and intended for use on home lawns (i.e., turf). Among other things, these statutes include annual application rates for nitrogen and phosphorus. Other examples of state fertilizer statutes include NH RSA 483-B:9 (d) of the Shoreland Water Quality Protection Act which states the following: "No fertilizer shall be applied to vegetation or soils located within 25 feet of the reference line of any public water. Beyond 25 feet, slow or controlled release fertilizer, as defined by rules adopted by department, may be used."

Submittal of a Fertilizer Minimization plan and implementation of the approved plan, can help address potential nutrient concerns associated with fertilizers. As a minimum, the plan should require the following:

⁹ The Simple Method guidance and spreadsheet are available at <http://des.nh.gov/organization/divisions/water/wmb/section401/index.htm>.

¹⁰ Pre-construction levels includes uses at the Resort just prior to the gradual curtailment of operations such as the hotel, biomass plant, golf courses, ski area, etc.

a. Soil testing before seeding a new lawn and at least once every three years following establishment¹¹ to determine appropriate application rates and use of fertilizers with slow release nitrogen and little to no phosphorus as soils in New Hampshire most likely have sufficient phosphorus. Results of soil tests should be maintained and submitted to DES within 30 days of receiving a request.

b. For areas that meet the definition of turf under RSA 483:1, XXII (see C-27) a description of how the annual application rates under RSA 431:4-a and 431:4-b (see C-27) will be ensured.

c. A prohibition of fertilizer to vegetation or soils located within 25 feet of surface waters.

d. A description of how pesticides in fertilizers used on turf (as defined above) will be minimized.

e. For areas that do not meet the definition of turf under RSA 483:1, XXII (see C-27) (i.e., such as golf courses, parks, athletic fields, and sod farms), the plan should provide a description of the fertilizer used (including the percent of nitrogen and phosphorus), annual application rates and loadings of nitrogen and phosphorus, and recommendations for minimizing the amount of fertilizer applied each year. Records should be maintained and if requested by DES, submitted to DES within 30 days of receiving a request.

D-20. If not properly controlled, projects involving alteration of terrain can result in water temperature increases due to removal of vegetation adjacent to surface waters that provide natural shading, and stormwater discharges from impervious surfaces (such as pavement and rooftops) and stormwater best management practices such as detention ponds. Significant temperature increases can adversely impact the Biological and Aquatic Community Integrity (Env-Wq 1703.19) of surface waters especially in temperature sensitive cold water fisheries. As mentioned in D-6, many of the potentially impacted surface waters are considered cold water fisheries by the NH Fish and Game Department. Temperature concerns can be addressed by requiring the Applicant to submit and implement a DES approved Water Temperature Impact Plan that addresses how the Activity will avoid causing increases in surface water temperatures that could adversely impact local fisheries.

D-21. Operation of the Activity during the winter will likely include application of deicing chemicals to roads and other impervious surfaces that contain chloride

¹¹ From "New Hampshire's Turf Fertilizer Law – What You Should Know". Agriculture Fact Sheet. Spring 2014. University of New Hampshire Cooperative Extension. Available at http://extension.unh.edu/resources/files/Resource004116_Rep5835.pdf

(i.e. rock salt). Chlorides are conservative substances that persist in the environment and are not treatable by structural BMPs. Frequent application of road salt can result in levels of chloride in surface waters that are harmful to aquatic life. Application of road salt can be minimized by requiring applicators to be properly trained.

Training can be accomplished by requiring applicators to be certified in accordance with the UNH T2 Green SnowPro program (see <http://t2.unh.edu/green-snowpro-training-and-certification>). Establishment of a certification program was authorized under NH RSA 489-C. The goal of the program is to improve efficiency in salt use, such that the least amount of salt is used to ensure safe conditions for pedestrians and vehicles. Under the new law certified salt applicators (and property owners who hire them) who follow best management practices and keep basic records, are provided with limited liability for damages arising from hazards caused by snow or ice. Certification expires every June.

In addition to maintaining certification, obligations of certified salt applicators also include record keeping and annual reporting of the amount of salt used, the town it was applied, the number of acres of paved surface maintained and the type and amount of each salt alternative used. This information can be reported in the web-based tracking system available at <http://www.roadsalt.unh.edu/Salt/>.

D-22. Section C-22 h and C-22 i of this Certification includes excerpts from Env-Wq 1708.01 regarding antidegradation which state that "the department shall assure that the highest statutory and regulatory requirements shall be achieved for all new and existing point sources and that all cost effective and reasonable best management practices for nonpoint source control shall be implemented". In addition to being cost effective and reasonable, best management practices must be selected to ensure attainment of water quality standards in receiving waters as evidenced by the following:

- a. As stated in section C-26 of this Certification, "Best Management Practices" (BMPs) are defined in Env-Wq 1702.06 as "those practices which are determined, after problem assessment and examination of all alternative practices and technological, economic and institutional considerations, to be the most effective practicable means of preventing or reducing the amount of pollution generated by point or nonpoint sources to a level *compatible with water quality goals*" (italics added).
- b. Env-Wq 1708.01 (b) and (c) (see C-22 h and C-22 i) which states "In allowing such degradation or lower water quality, the department shall assure water quality adequate to fully protect existing uses".

Best management practices that are designed, operated and maintained in accordance with the DES Alteration of Terrain regulations (Env-Wq 1500) are

considered to be cost effective and reasonable best management practices for nonpoint sources.

- D-23. To help ensure that best management practices (BMPs) will always function as intended, development and implementation of a BMP inspection and maintenance plan, in accordance with current Alteration of Terrain regulations (Env-Wq 1500), can be required.
- D-24. Untreated stormwater from galvanized roofs can contain elevated levels of zinc which can be toxic to aquatic life. If galvanized roofs are used, appropriate precautions should be taken to prevent violations of surface water quality standards due to zinc.
- D-25. Operation of the Activity could result in application of pesticides such as herbicides and insecticides. Improper application of pesticides can harm aquatic life and result in surface water quality violations. In New Hampshire, pesticides are regulated by the Department of Agriculture Pesticide Division. As stated in Pes 1001.01(see C-37), and unless otherwise allowed per Pes 1001.02 (see C-37), no residential property owners, private applicator, or commercial applicator shall apply pesticides within the 25 feet of the reference line of surface waters or beyond 25 feet in such a manner or by such methods that would result in the presence of pesticides within 25 feet of any lake, pond, river or coastal water. The NH Pesticide regulations also require licensing or permitting of all commercial and private pesticide applicators as well as pesticide dealers. Through this process, only persons demonstrating satisfactory competence in the safe and legal use of pesticides within New Hampshire may apply pesticides. Compliance with the NH Pesticide Division regulations regarding the application of pesticides is expected to prevent water quality standard violations due to pesticides.
- D-26. From October 15 through March 15, the Applicant proposes to withdraw up to a maximum of 34 cubic feet per second (cfs) [i.e., approximately 22 million gallons per day (mgd)] from the Androscoggin River for snowmaking at the Balsams Grand Resort Wilderness Ski Area (Resort). The Resort will include a total of approximately 1200 acres of ski terrain consisting of approximately 138 acres of existing terrain and approximately 1062 acres of proposed ski terrain. All of the withdrawn water will used for snowmaking on the 1062 +/- acres of proposed ski terrain and on the 73 +/- acres (of the approximate 138 acres) of existing ski terrain. The remaining 65 +/- acres of existing terrain will not have snowmaking due to narrow trail width.

Water withdrawn from the Androscoggin River will be hard piped directly to the snowmaking system and there are no plans for intermediate storage for snowmaking. The amount of water used will depend on weather conditions, exposure, skier traffic and other variables.

The Applicant also proposes to use water withdrawn from the Androscoggin River for fire suppression, to fill fire cisterns and for the performance of periodic

maintenance and pipe testing related to the redevelopment of the Resort. Withdrawals for these purposes would be on an as-needed basis throughout the year and are not expected to occur very frequently.

The withdrawal will be located approximately 1700 feet downstream of the Errol dam on the Androscoggin River in Errol, NH [Federal Energy Regulatory Commission (FERC) hydropower project #3133). Preliminary plans call for two 36 inch diameter intake pipes located approximately 30 feet easterly of the west bank of the river. The top of the pipes will be a minimum of four feet below normal water. A pump station will be constructed on the west bank of the river. Final design plans for the intake and pump station will be submitted to DES prior to construction.

- D-27. The Applicant proposes to only withdraw water when flows in the Androscoggin River immediately downstream of the proposed withdrawal intake structure are above 523 cfs. For example, to withdraw the maximum proposed flow of 34 cfs and ensure that at least 523 cfs remains downstream of the withdrawal, flow upstream of the withdrawal must be at least 557 cfs (523 + 34). Similarly, if the upstream river flow is 530 cfs, the Applicant proposes to withdraw a maximum of 7 cfs (530-523). If the upstream river flow is 523 cfs or less, the Applicant will not withdraw any water. This is based on the following:

As previously mentioned, the Errol Dam is located a short distance (approximately 1700 feet) upstream of the proposed withdrawal. Article 28 of the FERC license issued for the Errol Dam (FERC # 3133) in 1983 requires the dam to pass "[a] continuous minimum flow of 522 cubic feet per second or the inflow to the reservoir, whichever is less, for the purpose of protecting and enhancing aquatic resources in the Androscoggin River." The FERC license expires in 2023.

The minimum flow of 522 cfs was recommended by the United States Fish and Wildlife Service (USFWS) and is based on the New England Aquatic Flow Policy developed by the USFWS in 1980. The policy states that for rivers where inadequate flow records exist or for rivers regulated by dams or upstream diversions, a minimum flow (referred to as the Aquatic Base Flow or ABF) based on a yield of 0.5 cubic feet per second per square mile (cfs/m) multiplied by the drainage area shall be recommended unless superseded by spawning and incubation flow recommendations¹². Multiplying 0.5 cfs/m by the drainage area to the Errol Dam (approximately 1045 square miles) results in a minimum flow of 522 cfs. This flow is an approximation of the historical (unregulated) median August flow, a discharge the USFWS believed, at the time, would adequately protect fish and wildlife resources below the project area.

The United States Geological Survey (USGS) maintains a gaging station (#01053500) at essentially the same location as the proposed intake

¹² The 1980 USFWS New England Aquatic Flow Policy recommends flow releases of 1.0 cfs/m in the fall/winter and 4.0 cfs/m in the spring for the entire applicable spawning and incubation periods.

(approximately 1700 feet downstream of the dam). The gage has a drainage area of 1,046 square miles and a period of record of January 1, 1905 through the present. Multiplying 0.5 cfs/m by 1046 square miles results in a minimum flow at the gage of 523 cfs. Therefore, to maintain minimum downstream flows consistent with the methodology used to establish minimum flows in the 1983 FERC license for the Errol Dam, the Applicant proposes to only withdraw water (up to a maximum of 34 cfs) from the Androscoggin River when river flow immediately downstream of the proposed intake is greater than 523 cfs.

Although the minimum flow for the Errol Dam is 522 cfs, the 1983 FERC license notes that discharges rarely fall below 1000 cfs. This is supported by an analysis conducted by the Applicant for the period of record at the gage (January 1, 1905 through the present) which showed that daily mean flows exceeded 1080 cfs at the USGS gage 92.8% of the time and during the fall and winter months, 88.7% and 94.5% of the time respectively. The Applicant conducted a similar analysis assuming a minimum flow at the gage of 557 cfs. Results indicated that flows exceeded 557 cfs at the gage 99.4% of the time and during the fall and winter months, 99.0% and 94.5% of the time respectively.

To estimate the impact the withdrawal may have on water levels in the river, the Applicant provided a copy of the elevation/discharge relationship used by the USGS to determine flows at gage #01053500. According to the USGS elevation/discharge relationship, the water level is predicted to drop approximately 3/4 inches when river flow decreases from 557 cfs to 523 cfs (due to withdrawal of 34 cfs). The change in water surface elevation is even less at higher river flows.

D-28. Env-Wq 1708.02 (d) states that antidegradation shall apply to "Any hydrologic modifications, such as dam construction and water withdrawals." Per Env-Wq 1708.09(b), if the Activity causes an insignificant impact, it is not necessary to demonstrate compliance with the antidegradation provisions. The Activity will be considered to have an insignificant impact if less than 20% of the remaining assimilative capacity is used, unless otherwise determined by DES pursuant to Env-Wq 1708.09(d). To determine if a hydrologic modification is insignificant, DES has used the following approach for determining the remaining assimilative capacity which may be applied to the proposed withdrawal from the Androscoggin River.

For the purposes of this analysis, the remaining assimilative capacity will be calculated from the following approaches.

a. Compare the total volume of flow through the affected reach of the Androscoggin River over a 25+ year period of record both with and without the Activity operating. The impact will be considered "insignificant" if the annual average volume of flow through the affected reach would change by less than 20% from the existing condition.

This condition is satisfied for the following reasons. As mentioned in D-27, the 1983 FERC license for the Errol Dam requires the dam to pass a minimum of 522 cfs. This translates to 523 cfs at the USGS gage located just downstream which is at approximately the same location as the proposed intake. The Applicant proposes to withdraw water from the Androscoggin River when flows in the Androscoggin River immediately downstream of the proposed withdrawal intake structure greater than 523 cfs. Therefore to withdraw a maximum of 34 cfs, the flow upstream of the proposed intake must be at least 557 cfs (523 + 34 cfs). A withdrawal of 34 cfs represents 6.5% of the total flow when the river is at 557 cfs. This percentage decreases as river flows increase. If one conservatively assumes a withdrawal of 34 cfs (approximately 22 mgd) each day from October 15 through March 15 (153 days) and a year-round river flow of 557 cfs (360 mgd), the withdrawal represents approximately 2.6% $[(22 \times 153) / (360 \times 365)]$ of the annual volume. As discussed above, river flows have historically exceeded 557 cfs over 99% of the time. Further, it is unlikely a withdrawal of 34 cfs will ever occur continuously for the entire snowmaking period. Consequently it can be concluded that the withdrawal will represent well less than 2.6% of the annual average volume of flow in the Androscoggin River. Since this is less than 20%, the impact is considered insignificant based on this criteria.

b. Calculate the percent of days in a 25+ year period for which the Activity would change the flow rate by 20% or more. The impact will be considered "insignificant" if less than 20% of the days in a 25+ period of record would have flows altered by 20% or more.

As discussed in a. above, a withdrawal of 34 cfs represents 6.5% of the total flow when the river is at 557 cfs. This percentage decreases as river flows increase. As discussed above, river flows have historically exceeded 557 cfs over 99% of the time. Since flows in the river will be altered by less than 20% at all times, the percent of days that flows would be altered by 20% or more is 0%. Since this is less than 20%, the withdrawal is considered insignificant based on this criteria.

c. Calculate the percent of time over a 25+ year period that flows would be less than or equal to the minimum flows with the Activity operating. The impact will be considered "insignificant" if the percent of time with flows less than or equal to the minimum flows changes by less than 20% from the existing condition.

As discussed in a. above, the Applicant does not propose to withdraw water from the Androscoggin River that would result in flows in the river being less than the minimum discharged from the Errol Dam per the 1983 FERC license. Since the percent of time with flows less than or equal to

the minimum flows changes by less than 20% from the existing condition, the withdrawal is considered insignificant based on this criteria.

d. DES will consider the weight-of-evidence of these three analyses and any other analyses deemed relevant and make a determination as to whether the proposed Activity insignificantly alters flows in the affected reach per Env-Wq 1708.09. If DES determines that the flow alteration to be insignificant, then an alternatives analysis per Env-Wq 1708.10 would not be required. If DES determines that the flow alteration is significant then an alternatives analysis would be required.

Based on response to a through c above, the withdrawal is considered insignificant. Consequently an alternatives analysis is not required.

D-29. Of the approximately 1200 total acres of ski terrain, approximately 227 acres are in the Connecticut River basin and the remainder (approximately 973 acres) are in the Androscoggin River basin. Of the approximate 227 acres in the Connecticut River basin, approximately 65 acres of the existing ski terrain will not have snowmaking due to narrow trail width. Of the approximate 1135 acres that will have snowmaking (1200-65), and assuming that all terrain receives an equal amount of snowmaking, approximately 14.3%¹³ of the water withdrawn from the Androscoggin River will be discharged in the Connecticut River basin and the remaining 85.7% of the withdrawn water will stay within the Androscoggin River basin.

D-30. Assuming a continuous withdrawal rate of 34 cfs from October 15 through March 15 (which is conservative and quite unlikely to occur), approximately 3362 million gallons¹⁴ would be withdrawn during the snow making season. Of that, 14.3% (see D-29) or approximately 480 million gallons would be diverted to the Connecticut River basin. In terms of annual precipitation, this represents only 0.065% of the total annual precipitation in the Androscoggin River watershed at the confluence with the Clear Stream, which is where most of the withdrawn water is expected to be returned to the Androscoggin River¹⁵.

D-31. Since the Applicant proposes to hard pipe the water withdrawn from the Androscoggin River directly to the snowmaking system (as opposed to discharging the withdrawn water into another surface water for the purpose of increasing the volume of water from the receiving surface water), the provisions of Env-Wq 1708.12 regarding the "Transfer of Water" do not apply to the proposed withdrawal (see C-25).

D-32. Each time the snowmaking pumps are shutoff, water from the snowmaking pipe network must drain to prevent damage to the pipes due to freezing. Depending

¹³ (227 acres – 65 acres)/1135 total acres that receive snowmaking = 14.3%.

¹⁴ 34 cfs x 0.6463 million gallons per day / cfs x 153 days = 3362 million gallons.

¹⁵ 1110 square miles x (5,280)² ft²/square mile x 38 inches x ft/12 inches x 7.481 gallons/cubic feet x million gallons/1,000,000 gal = 733,082.5 million gallons. 480 million gallons/733,082.5 million gallons = 0.065%.

on the type and layout of the system, this water (called drainback) can cause significant erosion, contain potential contaminants (i.e., oil and grease) and have relatively high temperature compared to the receiving surface water. To relieve concerns associated with drainback water, the Applicant can be required to demonstrate how the drainback water system will be designed and operated to prevent surface water quality violations. If necessary monitoring can also be required to collect data on the parameters of potential concern. In addition, a condition can be added that requires the location of drainback outlets to be located a considerable distance away from any surface water.

- D-33. If not properly designed, the withdrawal intake system could cause fish and other aquatic life to be impinged or entrained. To minimize the potential for impingement and/or entrainment of aquatic life, the design of the intake structure should be subject to approval by the New Hampshire Fish and Game Department (NHFGD).
- D-34. If not properly designed, the withdrawal intake system could interfere with navigation on the Androscoggin River. To ensure the withdrawal intake system does not adversely interfere with navigation, the design of the withdrawal intake structure should be subject to approval by the NH Department of Safety, Marine Patrol Division.
- D-35. Since the Androscoggin River is not a designated river, the RSAs for natural, rural, and rural community rivers (see C-28 and C-29) related to interbasin transfers would not be violated by the proposed withdrawal.
- D-36. Confirmation that operation of the Activity does not cause or contribute to surface water quality violations can be determined by development and implementation of a surface water monitoring plan with appropriate quality assurance/ quality control provisions.

E. WATER QUALITY CERTIFICATION CONDITIONS

Unless otherwise authorized by DES, the following conditions shall apply:

- E-1. **Compliance with Water Quality Standards:** The Activity shall not cause or contribute to a violation of surface water quality standards. DES may modify this 401 Certification to include additional conditions to ensure the Activity complies with surface water quality standards, when authorized by law, and after notice and opportunity for hearing.
- E-2. **Inspections:** In accordance with applicable laws, the Applicant shall allow DES to inspect the Activity and affected surface waters to monitor compliance with the conditions of this 401 Certification.
- E-3. **Proposed Modifications to the Activity:** The Applicant shall consult with DES regarding any proposed modifications to the Activity, including construction or

operation, to determine whether this 401 Certification requires modification in the future.

- E-4. **Transfer of Certification:** Should this Certification be transferred to a new owner, contact information for the new owner (including name, address, phone number and email) shall be provided to DES within 30 days of the transfer.
- E-5. **Applicability of Certification and Submittals for Future Phases:** This certification is intended to cover all phases of the Activity. Prior to construction of each phase the Applicant shall provide DES with plans and information necessary to determine the potential impact of the Activity on surface water quality and quantity and submit information demonstrating how the phase will comply with each of the applicable conditions of this Certification. The Applicant shall allow at least 60 days for DES review of all submittals. DES reserves the right to include additional conditions, which shall become conditions of this Certification, should they be necessary to ensure water quality standards will be met.
- E-6. **Compliance with Wetland and Alteration of Terrain Permits:** The Applicant shall comply with conditions in all DES Wetlands permits and all DES Alteration of Terrain permits issued for the Activity including any amendments. The conditions shall become conditions of this 401 Certification. Should any conditions conflict, the certification or permit with the more stringent condition shall apply.
- E-7. **Construction Stormwater Pollution Prevention Plan (CSWPPP):** Prior to construction of each phase of the Activity, the Applicant shall prepare and submit a CSWPPP that addresses the elements required in SWPPPs prepared for the NPDES Construction General Permit (CGP) (see D-16). The CSWPPP shall include the additional elements specified in D-16 a. through n. or an explanation as to why the Applicant believes that water quality standards can be met without requiring one or more of the additional elements. The Applicant shall then implement the approved CSWPPP.
- E-8. **NPDES Construction General Permit and NPDES Remediation Permit.** When applicable, the Applicant shall comply with requirements of the NPDES Construction General Permit and the NPDES Remediation General Permits (see D-16).
- E-9. **Stormwater Best Management Practices (BMPs).** Temporary and permanent stormwater BMPs shall be designed and constructed in accordance with the DES Alteration of Terrain regulations (Env-Wq 1500).
- E-10. **Water Withdrawals from the Androscoggin River:** Withdrawals from the Androscoggin River shall be in accordance with the following conditions:
- a. *Purpose and Timeframe of Withdrawals:* Water withdrawals shall only be for snowmaking , fire suppression, to fill fire cisterns and for the performance of

periodic maintenance and pipe testing related to the redevelopment of the Resort. Withdrawals for any other purpose shall not be conducted without prior approval from DES.

Withdrawals for snowmaking purposes shall only occur from October 15 through March 15. Withdrawals for fire suppression, to fill fire cisterns and for the performance of periodic maintenance and pipe testing, may occur on an as-needed basis at any time of the year.

b. *Maximum Withdrawal Rate:* Withdrawals shall not exceed 34 cubic feet per second (cfs).

c. *Location of Withdrawal:* The location of the withdrawal intake structure is anticipated to be approximately 1700 feet downstream of the Errol Dam. The exact location shall be in accordance with the final design plans approved by DES in accordance with condition E-10.f of this Certification.

d. *Androscoggin River Flow Restrictions:* The Applicant shall not withdraw any water from the Androscoggin River when the instantaneous river flow upstream of the withdrawal is less than or equal to 523 cfs. When the instantaneous river flow immediately upstream of the withdrawal exceeds 523 cfs, the withdrawal shall not cause the river flow immediately downstream of the withdrawal to be less than 523 cfs at any time.

e. *Water Conservation Plan:* See condition E-13 of this Certification.

f. *Intake Structure Approval by NHDOS and DES:* The withdrawal intake structure (intake) shall not adversely impact navigation in the Androscoggin River. Final plans demonstrating compliance with this condition shall be submitted to DES and the NH Department of Safety (NHDOS) Marine Patrol for approval at least 30 days prior to when construction of the intake is proposed to commence. The plans shall include the depth of water over the intake structure when the river is flowing at 500 cfs. Construction of the intake shall be in accordance with the plans approved by NHDOS and DES. Written evidence of NHDOS approval shall be provided to DES prior to withdrawing any water from the river.

g. *Intake Structure Approval by NHFGD:* The withdrawal intake structure (intake) shall be designed and operated to minimize (to the maximum extent practicable), the entrainment and impingement of fish and other aquatic life. Final plans and calculations demonstrating compliance with this condition shall be submitted to the NH Fish and Game Department (NHFGD) for approval at least 30 days prior to when construction of the intake is proposed to commence. Construction of the intake shall be in accordance with the plans approved by the NHFGD. Written evidence of NHFGD approval shall be provided to DES prior to withdrawing any water from the river.

h. *Monitoring and Recording:* On days that withdrawals occur, the Applicant shall monitor and record the pumping rate and the river flow in the Androscoggin River (as measured by USGS gage #01053500 or other method approved by DES) at least every hour. Such records shall be maintained by the Applicant and submitted to DES within 30 days of receiving a request.

i. *Violation Notification:* The Applicant shall notify DES in writing (which includes email) within 48 hours of any deviation from withdrawal conditions specified above. The notification shall include the reason for noncompliance and corrective actions that have or will be implemented to prevent the noncompliance from occurring again.

j. *Annual Compliance Report:* Unless otherwise directed by DES, the Applicant shall submit a compliance report by May 1 of each year for the period April 1 through March 31 that includes

- 1) the maximum instantaneous and average daily pumping rates and corresponding instantaneous and average daily flow in the river and the dates these conditions occurred,
- 2) the minimum instantaneous and average daily flow in the river and the corresponding instantaneous and average daily pumping rate and date these conditions occurred,
- 3) the total number of days and the total volume of withdrawals for snowmaking,
- 4) the total number of days and the total volume of withdrawals for purposes other than snowmaking, including a description of the other purposes, and
- 5) any periods of non-compliance, reasons for non-compliance and corrective actions taken to get back into compliance.

Submittals shall include all data in electronic MS Excel spreadsheet with appropriate tables and charts to facilitate analysis.

k. *Operations Plan:* Prior to withdrawing any water from the Androscoggin River, the Applicant shall submit an Operations Plan to DES for approval. The Applicant shall then implement the approved plan. The Operations Plan shall describe how compliance with the withdrawal conditions of this Certification will be measured, recorded, reported and maintained, a description of the equipment (including accuracy) that will be used, how it will be maintained and notification requirements. To the maximum extent feasible, measurement and recording of withdrawal and river flows shall be automated.

E-11. **Drainback Water from Snowmaking System:** Prior to construction of any future phase regarding the construction and operation of a proposed

snowmaking piping system at the ski area, the Applicant shall submit information to DES that demonstrates that drainback water from the snowmaking system will not violate surface water quality standards. Drainback outlets shall be located as far as reasonably practicable from surface waters and preferably at least 100 feet away. If requested by DES the Applicant shall prepare and implement a DES approved monitoring plan to confirm that standards are met. The plan may include (but is not limited to) requirements to estimate the volume of drainback water and possible testing for parameters that may cause water quality violations. The Applicant shall then implement the approved plan.

E-12. Other Surface Water Withdrawals: Prior to construction of any phase of the Activity involving earth disturbance (excluding the Androscoggin River withdrawal intake, pump station and piping to the ski area) the Applicant shall provide a description of all other existing and proposed surface water withdrawals associated with each phase. This includes withdrawals from surface waters other than the Androscoggin River for purposes including, but not limited to snowmaking and irrigation. Unless otherwise authorized by DES, information shall include, but not be limited to, an overall description of the withdrawals, a map showing the location of all surface water withdrawals, the drainage area upstream of all points of surface water withdrawals, when water is withdrawn, the maximum rate that water is withdrawn, the maximum volume of water that is withdrawn, how much river flow is left in the source water for the protection of designated uses such as aquatic life, stream statistics at the point of withdrawal based on the USGS StreamStats website¹⁶, where the withdrawn water is discharged, average and maximum fluctuations in any surface water lakes, ponds or impoundments used as the source water for withdrawals, how long the system has been in operation and when it was last operated. For the golf course (which is currently closed to golfing), the above information is required prior to re-opening the course for golfing. DES will then review the information to determine if additional information and/or conditions are necessary to meet surface water quality standards. If conditions are deemed necessary they shall become conditions of this Certification and shall be implemented by the Applicant.

E-13. Water Conservation Plan: Prior to construction of any phase of the Activity, the Applicant shall consult with the DES Water Conservation Program to determine if a water conservation plan is required for that phase in accordance with Env-Wq 2101 (see C-32). If required, the Applicant shall submit a water conservation plan for that phase that meets the requirements of Env-Wq 2101 and receive DES approval of the plan by the time specified by the DES Water Conservation Program. The Applicant shall then implement the approved plan.

E-14. DES Water Use Registration and Reporting: The Applicant shall register, measure, and report all withdrawals and discharges with the DES Water Use

¹⁶ The USGS StreamStats website is at http://water.usgs.gov/osw/streamstats/new_hampshire.html

Registration and Reporting program in accordance with RSA 488:3 and its supporting regulations, Env-Wq 2102. Prior to construction of any phase of the Activity, the Applicant shall consult with the DES Water Use Registration and Reporting program to determine specific monitoring requirements for the Activity. The Applicant shall then implement the DES approved measuring and reporting requirements.

- E-15. **Galvanized Roofs:** No building shall be constructed with galvanized roofs that could cause or contribute to zinc violations in surface waters. Prior to construction of any phase of the Activity (excluding the withdrawal intake, pump station and piping to the ski area), the Applicant shall advise DES if galvanized roofs are proposed. If galvanized roofs are proposed, the Applicant shall, prior to construction of that phase, provide documentation as to how precipitation coming in contact with the galvanized roofs will be prevented from causing zinc violations in the receiving surface waters and how compliance will be determined. The Applicant shall then implement the DES approved plan.
- E-16. **Pesticides (Insecticides and Herbicides):** The Applicant shall minimize use of all pesticides to the maximum extent practicable and shall comply with all applicable state, federal and local laws and regulations regarding application of pesticides, including, but not limited to, Pes 1001.01 and 1001.02 (see C-37). If requested by DES, the applicant shall provide DES with a list of pesticides applied, the name of the applicator and their NH pesticide license or permit number within 30 days of receiving the request.
- E-17. **Certification of Road Salt Applicators and Tracking of Road Salt:** All applicators of road salt containing chloride that are retained to de-ice impervious surfaces associated with the Activity shall be certified per the Green SnowPro program (see <http://t2.unh.edu/green-snowpro-training-and-certification>) within two years of the issuance date of this Certification and shall maintain records of road salt use on the web-based tracking system available at <http://www.roadsalt.unh.edu/Salt/>. If requested by DES the Applicant shall provide the names of all road salt applicators and proof they are certified within 30 days of receiving a request.
- E-18. **Pollutant Loading Analysis for Stormwater Pollutants:** Prior to construction of any phase of the Activity (excluding the withdrawal intake, pump station and piping to the ski area) the Applicant shall consult with DES to determine if a Pollutant Loading Analysis (PLA) is necessary for that phase which demonstrates, with reasonable assurance, no additional loading of pollutants due to stormwater runoff. If directed by DES, the Applicant shall submit a PLA for review and approval prior to construction of that phase. Unless otherwise authorized by DES, the PLA shall be conducted in accordance with the Simple Method guidance and spreadsheet developed by DES (see D-18). All permanent stormwater best management practices (BMPs) referenced in the PLA shall be designed in accordance with the Alteration of Terrain regulations (Env-Wq 1500)

and maintained in accordance with condition E-21 of this Certification. The Applicant shall then implement the approved plan.

- E-19. **Water Temperature Impact Plan:** Prior to construction of any phase of the Activity (excluding the withdrawal intake, pump station and piping to the ski area) the Applicant shall consult with DES to determine if a Water Temperature Impact Plan is necessary. If directed by DES, the Applicant shall, prior to construction of that phase, submit information to DES for approval that demonstrates, with reasonable assurance, how that phase will prevent increases in surface water temperatures that could adversely impact local fisheries. Unless otherwise directed by DES, this may be accomplished by providing a plan showing minimal change in shading provided by existing vegetation (i.e. maintenance of vegetated buffers) and by addressing how stormwater runoff from the Activity will be prevented from causing adverse temperature increases in receiving surface waters. The Applicant shall then implement the approved plan.
- E-20. **Fertilizer Minimization Plan:** Prior to construction of any phase of the Activity (excluding the withdrawal intake, pump station and piping to the ski area), the Applicant shall consult with DES to determine if a Fertilizer Minimization Plan is necessary. If directed by DES, the Applicant shall submit and receive DES approval of a Fertilizer Minimization Plan prior to construction of that phase. As a minimum, the plan shall address the items in section D-19 of this Certification. The Applicant shall then implement the approved plan.
- E-21. **Permanent BMP Inspection and Maintenance Plan:** In order to ensure the long-term effectiveness of approved permanent stormwater practices, the Applicant shall develop an Inspection and Maintenance (I & M) plan for permanent BMPs approved by DES. Unless otherwise authorized by DES, the I & M plan shall comply with the requirements of the Alteration of Terrain regulations (Env-Wq 1507.08 Long Term Maintenance). Prior to construction, the Applicant shall submit the I & M plan to DES for approval and then implement the approved plan. The Applicant shall maintain records of BMP inspection and maintenance and submit such records to DES within 30 days of receiving a request from DES.
- E-22. **Wastewater:** Wastewater shall be treated in accordance with DES approved individual subsurface sewage disposal systems permits and/or via all DES Groundwater Permit(s) issued for the treatment and discharge of wastewater from the Activity.
- E-23. **Pre and Post-Construction Water Quality Monitoring Plan:** Prior to construction of any phase of the Activity (excluding the withdrawal intake, pump station and piping to the ski area), the Applicant shall consult with DES to determine if a Pre and Post-Construction Water Quality Monitoring Plan (WQMP) is necessary for that phase. If directed by DES, the Applicant shall submit a

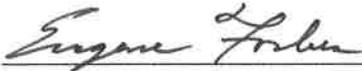
WQMP for review and approval prior to construction of that phase. The Applicant shall then implement the approved plan.

F. APPEAL

Any person aggrieved by this decision may appeal to the N.H. Water Council ("Council") by filing an appeal that meets the requirements specified in RSA 21-O:14 and the rules adopted by the Council, Env-WC 100-200. The appeal must be filed directly with the Council within 30 days of the date of this decision and must set forth fully every ground upon which it is claimed that the decision complained of is unlawful or unreasonable. Only those grounds set forth in the notice of appeal can be considered by the Council.

Information about the Council, including a link to the Council's rules, is available at <http://nhec.nh.gov/> (or more directly at <http://nhec.nh.gov/water/index.htm>). Copies of the rules also are available from the DES Public Information Center at (603) 271-2975.

If you have questions regarding this Certification, please contact Owen David at (603) 271-0699 or Owen.David@des.nh.gov



Eugene J. Forbes, P.E.
Director, DES Water Division

cc:

David Keddell, U.S. Army Corps of Engineers
Michael Hicks, U.S. Army Corps of Engineers
Carol Henderson, NH Fish and Game Dept.
Town of Errol Board of Selectmen
Town of Colebrook Board of Selectmen
Town of Columbia Board of Selectmen
Coos County Commissioners
Coos County Planning Board

