

**New Hampshire Department of Environmental Services
WATER QUALITY CERTIFICATION
In Fulfillment of
RSA 485-A:12, III**

Certification Number	WQC 2022-404I-003
Activity Name	Dummer-Cambridge-Errol, 16304B – NH Rt. 16 Realignment in Cambridge
Activity Location	Cambridge, New Hampshire (Coös County)
Affected and Potentially Affected Surface Waters Near the Activity (other affected surface waters may exist)	Androscoggin River proximate to NH Rt 16 (NHRIV400010602-04); Unnamed Brook that flows under NH Rt 16 to the Androscoggin River via existing twin 18” pipes (“Stream L”; NHRIV400010602-28); Unnamed Brook that flows under NH Rt. 16 to the Androscoggin River via an existing 24” pipe (“Stream E”) Unnamed Brook that flows under Rt. 16 to the Androscoggin River via an existing culvert (“Stream J”; NHRIV400010602-29) Several palustrine wetlands Six vernal pools
Owner/Applicant	New Hampshire Department of Transportation
Agent Filing Application on Behalf of Owner/Applicant	Timothy Dunn, P.E., NH DOT Project Manager 7 Hazen Drive Concord, NH 03303
Applicable Federal License or Permit Requiring Section 401 Water Quality Certification	Section 404 of the Clean Water Act Federal Permit from the U.S. Army Corps of Engineers
Decision	Grant with Conditions
Date of Issuance	December 2, 2022

A. INTRODUCTION

The New Hampshire Department of Transportation (the Applicant) is proposing to realign, reconstruct, and operate an approximately 1.3-mile segment of New Hampshire Route 16 (NH Rt 16) in the town of Cambridge, Coös County, New Hampshire (the Activity). The Activity area begins approximately 1,000 feet east of the Dummer-Cambridge, NH town line, runs west and generally parallel to the Androscoggin River, and is approximately 17.5 miles north of Berlin, New Hampshire. The Activity would realign NH Rt 16 west and away from the Androscoggin River by from 15 feet to 385 feet; and result in 225,953 square feet of permanent impacts and 17,032 square feet of temporary impacts to wetlands and 568 linear feet of permanent and 225 linear feet of temporary impacts to stream channels. Additional description of the Activity is provided in Findings D-1 and D-2 of this water quality certification (WQC or certification).

Because proposed impacts of the Activity involve discharge of fill to Waters of the United States, the Applicant is required to obtain a permit from the U.S. Army Corps of Engineers (USACE) under section 404 of the federal Clean Water Act (CWA). Before USACE may issue a permit for the Activity, the Applicant is required under section 401 of the CWA to provide USACE with certification from the New Hampshire Department of Environmental Services (NHDES or the department) that the proposed discharges will comply with New Hampshire’s water quality standards. Under RSA 485-A:12, III, the Activity may not commence until NHDES

certifies that the proposed discharges of the Activity comply with the state surface water quality standards applicable to the classification for the receiving surface water body.

In accordance with the section 401 of the CWA and RSA 485-A:12, III, the Applicant has requested a certification from NHDES. The purpose of the certification is to provide assurance that discharges from construction and operation of the proposed Activity will comply with New Hampshire surface water quality standards that are specified under RSA 485-A:8 and NH Code of Administrative Rules Env-Wq 1700 (Surface Water Quality Standards). Additional details are provided herein.

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B. DECISION

Based on the facts, laws, findings, and conditions included herein, NHDES has determined that there is assurance that construction and operation of the proposed Activity will be conducted in a manner which will comply with New Hampshire Surface Water Quality Standards¹. NHDES hereby grants Water Quality Certification No. WQC 2022-404I-003 (the Certification) in accordance with RSA 485-A:12, III, subject to the conditions in Section E of the Certification.

C. FACTS AND LAWS

I. Federal Certification Laws and Regulations

- C-1. Section 401(a)(1) of the CWA 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(d) of the CWA states in part: “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, and shall become a condition on any Federal license or permit subject to the provisions of this section.”
- C-3. Federal regulations regarding Section 401 water quality certification may be found in the Code of Federal Regulations (CFR), Title 40, PART 121 (40 CFR 121) titled “State Certification of Activities Requiring a Federal License or Permit”. On July 13, 2020, the U.S. Environmental Protection Agency (EPA) published final revisions to these regulations in the Federal Register (Vol. 85, No. 134, pages 42210 to 42287), which became effective on September 11, 2020.²
- C-4. 40 CFR § 121.1(f) defines “discharge” as “a discharge from a point source into a water of the United States.”
- C-5. The term “discharge,” as applied under section 401 of the CWA 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: “When 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

¹ Federal CWA Section 401 regulations (40 CFR § 121.7(c)), which is applicable to water quality certification requests submitted on or after September 11, 2020, requires States to include a statement in the certification that the discharge from the proposed project “will comply” with water quality requirements as defined in 40 CFR § 121.1(n). See Fact C-3.

² Federal Regulations at 40 CFR 121 can be downloaded from the following website that is maintained by the U.S. National Archives and Records Administration: <https://www.govinfo.gov/content/pkg/CFR-2021-title40-vol24/pdf/CFR-2021-title40-vol24-part121.pdf>.

³ 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-6. 40 CFR § 121.7(d) states: “Any grant of certification with conditions shall be in writing and shall for each condition include, at a minimum:
- (1) For certification conditions on an individual license or permit,
 - (i) A statement explaining why the condition is necessary to assure that the discharge from the proposed project will comply with water quality requirements; and
 - (ii) A citation to federal, state, or tribal law that authorizes the condition.
- C-7. 40 CFR § 121.10, titled “Incorporation of certification conditions into a license or permit”, states:
“(a) All certification conditions that satisfy the requirements of § 121.7(d) shall be incorporated into the license or permit.
(b) The license or permit must clearly identify any certification conditions.”
- C-8. The CWA Section 502(7) (33 U.S.C. §1362(7)) defines “navigable waters,” as “waters of the United States”.
- C-9. Waters of the United States are defined in 40 CFR §122.2.

II. State Certification Law

- C-10. 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-11. NHDES’ authority under RSA 485-A:12, III is not limited by any federal law or regulation, except for the following:
- Certification must be required under section 401 of the federal Clean Water Act (CWA) to trigger the certification requirement under RSA 485-A:12, III;
 - The term “discharge” as applied in RSA 485-A:12, III and an associated certification must be the same as it is applied under section 401 of the CWA (see Facts C-4 and C-5); and
 - NHDES is required to 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 CWA.

When compared to the scope of certification conditions that NHDES is required to include under RSA 485-A:12, III, section 401 of the CWA and 40 CFR 121 limit the scope of certification conditions that are incorporated into a federal license or permit in the following ways (see Fact C-3):

- Certification conditions expire with expiration of the federal license or permit;

- Certification conditions cannot be modified by NHDES or by any other state authority (e.g., modified by the New Hampshire Water Council upon appeal of a certification; see H. APPEAL PROCESS) after a reasonable period of time or after certification conditions have been incorporated into a federal license or permit; and
- Enforcement of certification conditions incorporated into a federal license or permit is only the responsibility of the federal agency.

Since certification conditions required under RSA 485-A:12, III are not limited by section 401 of the CWA and 40 CFR 121 except in the aforementioned ways, when NHDES grants a certification with conditions, a certification may contain conditions required under RSA 485-A:12, III in addition those required by federal authority. Such conditions should be considered “state-only” conditions that would be independent of any federal law or regulation and, therefore, may not be incorporated into to a federal license or permit.

If necessary to provide assurance that a potential discharge from an activity complies with Surface Water Quality Standards, conditions of a certification that are considered “state-only” may be effective and applicable to an applicant for certification before the effective date and after the expiration date of the associated federal license or permit; may be modified by NHDES in accordance with state law if an applicant proposes modifications to an activity that would have a material effect on the findings or conditions of a certification; may be be modified by the New Hampshire Water Council of New Hampshire Supreme Court if a certification is appealed under RSA 21-O:14; and may be enforced by NHDES.

III. State Surface Water Quality Standards ⁴

- C-12. The Surface Water Quality Standards under RSA 485-A:8 and Env-Wq 1700 together fulfill the requirement of section 303 of the CWA that the State of New Hampshire adopt water quality standards consistent with the provisions of the CWA. Further, RSA 485-A:8, I and II, establish two classes of surface waters in New Hampshire for the purposes of adopting Surface Water Quality Standards for each classification: Class A and Class B.
- C-13. Env-Wq 1701.01, titled “Purpose”, states: “The purpose of these rules is to establish water quality standards for the state’s surface water uses as set forth in RSA 485-A:8, I, II, III and V. These standards are intended to protect public health and welfare, enhance the quality of water and serve the purposes of the federal Clean Water Act, 33 U.S.C. 1251 et seq., and RSA 485-A. These standards provide for the protection and propagation of fish, shellfish, and wildlife, and provide for such uses as recreational activities in and on the surface waters, public water supplies, agricultural and industrial uses, and navigation in accord with RSA 485-A:8, I and II.”
- C-14. Env-Wq 1701.02, titled “Applicability”, states: “These rules shall apply to:
- (a) All surface waters; and
 - (b) Any person who:
 - (1) Causes any point or nonpoint source discharge of any pollutant to surface waters;
 - (2) Undertakes hydrologic modifications, such as dam construction or water withdrawals; or
 - (3) Undertakes any other activity that affects the beneficial uses or the water quality of

⁴ All New Hampshire Surface Water Quality Standards apply to the Activity. The standards specifically called out in the certification should not be interpreted as the only standards that may apply.

surface waters.”

- C-15. Env-Wq 1702.44 defines “surface waters” as “‘surface waters of the state’ as defined in RSA 485-A:2, XIV and waters of the United States as defined in 40 CFR 122.2.”
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.”
- C-16. Env-Wq 1702.05 defines “benthic community” as “the community of plants and animals that live on, over, or in the substrate of the surface water.”
- C-17. Env-Wq 1702.06 defines “benthic deposit” as “any sludge, sediment, or other organic or inorganic accumulations on the bottom of the surface water.”
- C-18. Env-Wq 1702.07 defines “best management practices” as “those practices that 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-19. Env-Wq 1702.08 defines “biological integrity” as “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-20. Env-Wq 1702.15 defines “cultural eutrophication” as “the human-induced addition of wastes that contain nutrients to surface waters, resulting in excessive plant growth or a decrease in dissolved oxygen, or both.”
- C-21. Env-Wq 1702.17 defines “designated uses” as “those uses specified in water quality standards for each water body or segment whether or not such uses are presently occurring. The term includes the following:
- (a) Swimming and other recreation in and on the water, meaning the surface water is suitable for swimming, wading, boating of all types, fishing, surfing, and similar activities;
 - (b) Fish consumption, meaning the surface water can support a population of fish free from toxicants and pathogens that could pose a human health risk to consumers;
 - (c) Shellfish consumption, meaning the tidal surface water can support a population of shellfish free from toxicants and pathogens that could pose a human health risk to consumers;
 - (d) Aquatic life integrity, meaning the surface water can support aquatic life, including a balanced, integrated, and adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of similar natural habitats of the region;
 - (e) Wildlife, meaning the surface water can provide habitat capable of supporting any life stage or activity of undomesticated fauna on a regular or periodic basis; and
 - (f) Potential drinking water supply, meaning the surface water could be suitable for human intake and meet state and federal drinking water requirements after adequate treatment.”
- C-22. Env-Wq 1702.18 defines “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.”

The term “discharge” as defined under Env-Wq 1702.18 applies to the Surface Water Quality Standards and other provisions specified under Env-Wq 1700. The term “discharge” as defined under 40 CFR § 121.1(f) and section 401 of the CWA applies to authority provided to NHDES, and the requirements NHDES are subject to, under section 401 of the CWA and RSA 485-A:12, III (see Facts C-4 and C-5).

- C-23. Env-Wq 1702.22 defines “existing uses” as “those uses, other than assimilation waste transport, that actually occurred in the waterbody on or after November 28, 1975, whether or not they are included in the water quality standards.”
- C-24. Env-Wq 1702.23 defines “high quality waters” as “any surface water whose water quality is better than required by any aquatic life and/or human health water quality criteria contained in these rules or other criteria assigned to the surface water, or whose qualities and characteristics make the surface water critical to the propagation or survival of important living natural resources.”
- C-25. Env-Wq 1702.33 defines “nuisance species” as “any species of flora or fauna living in or near the water whose noxious characteristics or presence in sufficient number or mass prevent or interfere with a designated use of those surface waters.”
- C-26. Env-Wq 1702.37 defines “point source” as “a discernible, confined, and discrete conveyance from which pollutants are or might be discharged, excluding return flows from irrigated agriculture or agricultural stormwater runoff. The term includes, but is not limited to, a pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft.”
- C-27. Env-Wq 1702.38 defines “pollutant” as “‘pollutant’ as defined in 40 CFR 122.2.” 40 CFR 122.2 defines “pollutant” as “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. It does not mean:
- (a) Sewage from vessels; or
 - (b) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well [that is] used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.
- NOTE: Radioactive materials covered by the Atomic Energy Act are those encompassed in its definition of source, byproduct, or special nuclear materials. Examples of materials not covered include radium and accelerator-produced isotopes. See *Train v. Colorado Public Interest Research Group, Inc.*, 426 U.S. 1 (1976).”
- C-28. Env-Wq, 1703.01, titled “Water Use Classifications; Designated Uses”, specifies that:
- “(a) All surface waters shall be classified as provided in RSA 485-A:8, based on the standards established therein for class A and class B waters. Each classification shall identify the most sensitive use 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 high or low flows are caused by naturally-occurring conditions, surface water quantity shall be maintained at levels that protect existing uses and designated uses.”

C-29. Env-Wq 1703.03, titled “General Water Quality”, specifies, in part, that:

“(a) 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. [...]

(c) Unless otherwise specifically allowed by a statute, rule, order, or permit, the following physical, chemical, and biological criteria shall apply to all surface waters:

(1) All surface waters shall be free from substances in kind or quantity that:

- a. Settle to form harmful benthic deposits;
- b. Float as foam, debris, scum or other visible substances;
- c. Produce odor, color, taste or turbidity that is not naturally occurring and would render the surface water unsuitable for its designated uses;
- d. Result in the dominance of nuisance species; or
- e. Interfere with recreational activities. [...]

C-30. Env-Wq 1703.07, titled “Dissolved Oxygen”, specifies that:

“(a) Class A waters shall have a dissolved oxygen content of at least 75% saturation, based on a daily average, and an instantaneous minimum of at least 6 mg/l [milligrams per liter] at any place or time except as naturally occurs.

(b) Except as naturally occurs and subject to (c) and (e), below, class B waters shall have a dissolved oxygen content of:

(1) At least 75% of saturation, as specified in RSA 485-A:8, II, based on a daily average; and

(2) An instantaneous minimum dissolved oxygen concentration of at least 5 mg/l.

(c) In areas identified by the New Hampshire fish and game department (NHF&G) as cold water fish spawning areas of species whose early life stages are buried in the gravel on the bed of the surface water, the 7 day mean dissolved oxygen concentration shall be at least 9.5 mg/l and the instantaneous minimum dissolved oxygen concentration shall be at least 8 mg/l for the period from October 1 of one year to May 14 of the next year, provided that the time period shall be extended to June 30 for a specific discharge to a specific waterbody if modeling done in consultation with the NHF&G determines the extended period is necessary to protect spring spawners or late hatches of fall spawners, or both.

(d) Unless naturally occurring or subject to (a), above, surface waters within the top 25 percent of depth of thermally unstratified lakes, ponds, impoundments, and reservoirs or within the epilimnion shall contain a dissolved oxygen content of at least 75 percent saturation, based on a daily average and an instantaneous minimum dissolved oxygen content of at least 5 mg/l. Unless naturally occurring, the dissolved oxygen content below those depths shall be consistent with that necessary to maintain and protect existing and designated uses.

(e) As specified in RSA 485-A:8, III, waters in a temporary partial use area established under RSA 485-A:8, II as a surface water that is receiving a combined sewer overflow discharge shall contain not less than 5 parts per million of dissolved oxygen for the duration of the discharge and up to 3 days following cessation of the discharge.”

C-31. Env-Wq 1703.08, titled “Benthic Deposits”, specifies that:

“(a) Class A waters shall contain no benthic deposits, unless naturally occurring.

(b) Class B waters shall contain no benthic deposits that have a detrimental impact on the benthic community, unless naturally occurring.”

C-32. Env-Wq, 1703.09, 1703.10 and 1703.12 include water quality criteria for oil and grease, color and slicks,

odors, and surface floating solids, respectively.

C-33. Env-Wq 1703.11, titled “Turbidity”, specifies that:

- “(a) Class A waters shall contain no turbidity, unless naturally occurring.
- (b) Class B waters shall not exceed naturally occurring conditions by more than 10 NTUs.
- (c) Turbidity in waters identified in RSA 485-A:8, III shall comply with the applicable long-term combined sewer overflow plan prepared in accordance with Env-Wq 1703.05(c).
- (d) For purposes of state enforcement actions, if a discharge causes or contributes to an increase in turbidity of 10 NTUs or more above the turbidity of the receiving water upstream of the discharge or otherwise outside of the visible discharge, a violation of the turbidity standard shall be deemed to have occurred.”

C-34. Env-Wq 1703.13, titled “Temperature”, specifies that:

- “(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.”

For class B waters, RSA-A:8, II states: “Any 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.”

RSA-A:8, VIII states: “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.”

C-35. Env-Wq 1703.14, titled “Nutrients”, specifies 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-36. Nutrient Numeric Thresholds: New Hampshire does not currently have numeric surface water quality criteria for nutrients (total phosphorus and total nitrogen) in rule (i.e., Env-Wq 1700) but has established numeric thresholds for nutrient response parameters such as chlorophyll-a that are used for surface water quality assessments. These numeric thresholds are included in New Hampshire’s Consolidated Assessment and Listing Methodology or CALM.⁵ The CALM states the following regarding the numeric chlorophyll-a threshold established to protect the recreation designated use: “Excessive algal growth (high biomass and high chlorophyll-a values) can impair the public safety and aesthetic enjoyment of surface waters. The General Water Quality Criteria (Env-Wq 1703.03) require that surface waters be

⁵ State of New Hampshire 2020/2022 Section 305(b) and 303(d) Consolidated Assessment and Listing Methodology. New Hampshire Department of Environmental Services. February 18, 2022 R-WD-20-20. [2020/2022 CALM \(nh.gov\)](https://www.nh.gov/2020/2022-CALM).

free of substances which: produce color or turbidity making the water unsuitable for the designated use or interfere with recreational activities (Env-Wq 1703.03 (c)(1) c & e). For assessment purposes, chlorophyll-a concentrations in excess of 15 µg/L in fresh water and 20 µg/L in salt water are indicators of excessive algal growth that interferes with recreational activities.”

C-37. Env-Wq 1703.18, titled “pH”, specifies that:

“(a) The pH of Class A waters shall be as naturally occurs.

(b) As specified in RSA 485-A:8, II, the pH of Class B waters shall be 6.5 to 8.0, unless due to natural causes.

(c) As specified in RSA 485-A:8, III, the pH of waters in temporary partial use areas shall be 6.0 to 9.0 unless due to natural causes.”

C-38. Env-Wq 1703.19, titled “Biological and Aquatic Community Integrity”, specifies that:

“(a) All 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.

(b) Differences from naturally-occurring conditions shall be limited to non-detrimental differences in community structure and function.”

C-39. Env-Wq 1703.21, titled “Water Quality Criteria for Toxic Substances”, specifies, in part, that:

“(a) 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:

(1) Injure or are inimical to plants, animals, humans or aquatic life; or

(2) Persist in the environment or accumulate in aquatic organisms to levels that result in harmful concentrations in:

a. Edible portions of fish, shellfish, or other aquatic life; or

b. Wildlife that might consume aquatic life.

(b) Unless allowed under Env-Wq 1707 or naturally occurring, concentrations of toxic substances in all surface waters shall not exceed the recommended safe exposure levels of the most sensitive surface water use shown in Table 1703-1 [...]:”

In Table 1703.01, the fresh water acute and chronic criteria for chlorides are 860,000 micrograms per liter (µg/l) and 230,000 ug/l, respectively.

C-40. Env-Wq 1705.01, titled “Assimilative Capacity”, under Part Env-Wq 1705, titled “Flow Standards”, specifies, in part, that:

“(a) [...] the department shall hold not less than 10 percent of the assimilative capacity of each surface water in reserve to provide for future needs.

C-41. Antidegradation provisions are included in Env-Wq 1702 and Env-Wq 1708.

a. Env-Wq 1702.03 defines “antidegradation” as “a provision of the water quality standards that maintains and protects existing water quality and uses.”

b. Env-Wq 1708.02 specifies 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 adversely 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) under

“Assessing Waterbodies”, which specifies that: “The applicant shall characterize the existing water quality and determine if there is remaining assimilative capacity for each parameter in question.”

- d. Env-Wq 1708.03(a) specifies that: “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 1702.04 defines “assimilative capacity” as “the amount of a pollutant or combination of 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, including the requirement under Env-Wq 1708.08(h) for the department to reserve no less than 10% of a surface water’s assimilative capacity as specified under Env-Wq 1705.01 (see Fact C-40).
- g. Env-Wq 1708.09, titled “Significant or Insignificant Determination”, specifies, in part, that: “(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. (b) The department shall not approve a discharge or activity that will cause a significant lowering of water quality unless the applicant demonstrates, in accordance with Env-Wq 1708.10, that the proposed lowering of water quality is necessary to achieve important economic or social development in the area where the waterbody is located. (c) [...] any applicant proposing an activity that will cause an insignificant lowering of water quality shall not be required to demonstrate that the activity is necessary to provide important economic or social development, provided the applicant implements best management practices to minimize degradation.”
- h. Env-Wq 1708.01(b)(1) specifies, in general, that 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 and the analysis required by Env-Wq 1708.10, that 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 ensure water quality adequate to fully protect existing uses. Further, the department shall ensure 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(b)(2) specifies that: “The department shall not approve any proposed discharge or activity that might cause degradation or lower water quality, without such conditions as are necessary to ensure that: a. Water quality will be adequate to protect existing uses; b. The highest statutory and regulatory requirements will be achieved for all new and existing point sources; and c. All cost effective and reasonable best management practices for nonpoint source control will be implemented.”

- C-42. Env-Wq 1708.06 titled “Protection of Water Quality in High Quality Waters” states the following:
- “(a) Subject to (b) through (d) below, high quality waters shall be maintained and protected.
 - (b) The department shall evaluate and authorize insignificant changes in water quality as specified in Env-Wq 1708.09.
 - (c) The department shall allow degradation of significant increments of water quality, as determined in accordance with Env-Wq 1708.09, in high quality waters only if the applicant can demonstrate 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 water is located.

(d) If the waterbody is Class A Water, the requirements of Env-Wq 1708.05 shall also apply.”

- C-43. The Androscoggin River and the tributaries to the Androscoggin in the vicinity of the Activity are Class B under New Hampshire Chapter Laws 1967, 311:1, XLV; 1965, 47:1, VII; and 1967, 147:15.

IV. CWA Section 303(d) List, TMDLs, and Requirements for Impaired Waters

- C-44. 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 Total Maximum Daily Load (TMDL) for the pollutants causing impairment. For these water quality-impaired waters, states must establish TMDLs for the pollutants causing the impairments and submit the list of impaired surface waters and TMDLs to the U.S. Environmental Protection Agency (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 submitted to EPA is the [2020/2022 Section 303\(d\) List](#). A list of all impaired waters is available through the [NHDES website](#).

- C-45. On December 20, 2007, EPA approved the [Northeast Regional Mercury TMDL](#) which addressed mercury impairments in all New Hampshire fresh surface waters. Surface waters near and potentially affected by discharges from the Activity are subject to this TMDL.

- C-46. When a surface water does not meet Surface Water Quality Standards (i.e., when it is impaired), Env-Wq 1703.01 (b) (see Fact C-28) states that “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.” Further, the addition of pollutants causing or contributing to impairment should be avoided as indicated in the following regulation and statute:

Env-Wq 1703.03 (a) (see Fact C-29) 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.”

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.”

V. USACE Permitting Program Under Section 404 of the CWA

- C-47. Section 404 of the CWA establishes a program to regulate the discharge of dredged or fill material into waters of the United States. According to EPA, “[t]he basic premise of the [permit program under CWA section 404] is that no discharge of dredged or fill material may be permitted if: (1) a practicable alternative exists that is less damaging to the aquatic environment or (2) the nation’s waters would be

significantly degraded. In other words, when you apply for a permit, you must first show that steps have been taken to avoid impacts to wetlands, streams and other aquatic resources; that potential impacts have been minimized; and that compensation will be provided for all remaining unavoidable impacts.”⁶

- C-48. On September 6, 2022, USACE published a public notice for the application for a permit required under section 404 of the CWA that USACE received from the Applicant for the Activity, which USACE referenced as File Number: NAE-2022-11963. In the public notice, USACE listed a comment period for the application from September 6, 2022 to October 6, 2022. On October 21, 2022, USACE informed NHDES that it had not received comments during the public comment period.

VI. EPA Construction General Permit

- C-49. Section 402 of the CWA prohibits any person from discharging pollutants through a point source into a water of the United States unless the person obtains a National Discharge Elimination System (NPDES) permit. According to EPA, “[t]he [NPDES] permit will contain limits on what you can discharge, monitoring and reporting requirements, and other provisions to ensure that the discharge does not hurt water quality or people's health. In essence, the permit translates general requirements of the Clean Water Act into specific provisions tailored to the operations of each person discharging pollutants.”⁷
- C-50. On January 18, 2022, EPA finalized its 2022 NPDES Construction General Permit (CGP) that authorized certain persons, under certain eligibility conditions, to discharge pollutants in accordance with the effluent limitations and conditions provided in the CGP. The 2022 NPDES CGP became effective on February 17, 2022 and expires on February 16, 2027. EPA typically reissues a NPDES CGP every five years. In Part 9.1.1 of the 2020 NPDES CGP, EPA included conditions of a water quality certification that NHDES granted under section 401 of the CWA for the CGP on August 13, 2021 for activities that may result in discharges to New Hampshire’s surface waters.⁸
- C-51. 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. Part 7 of the CGP requires operators to develop and keep up-to-date a Stormwater Pollution Prevention Plan (SWPPP) that describes how the Activity will meet the requirements of the CGP. Information that must be provided in a SWPPP include the following, among other things: a list of all site operators who will be engaged in construction activities; identification of the stormwater team; a description of the nature of construction activities; a site map that includes, among other things, locations, soil types, and topography of where polymers, flocculants, or other treatment chemicals will be used; identification of all non-stormwater discharges; a description of stormwater controls; procedures for inspection, maintenance, and corrective action; procedures for turbidity benchmark monitoring from dewatering discharges; documentation demonstrating compliance with other requirements (e.g., threatened and endangered species protection); certification of the SWPPP; and copies of certain documents once coverage under the CGP is authorized. The CGP requires operators to provide a copy of the SWPPP upon request by a State.

⁶ U.S. EPA. (updated April 20, 2022). *Permit Program under CWA Section 404*. EPA Section 404 of the Clean Water Act. <https://www.epa.gov/cwa-404/permit-program-under-cwa-section-404> (accessed September 26, 2022).

⁷ U.S. EPA. (updated September 7, 2022). *NPDES Permit Basics*. EPA National Pollutant Discharge Elimination System (NPDES). <https://www.epa.gov/npdes/npdes-permit-basics> (accessed September 26, 2022).

⁸ U.S. EPA. (updated May 11, 2022). *2022 Construction General Permit (CGP)*. EPA National Pollutant Discharge Elimination System (NPDES). <https://www.epa.gov/npdes/2022-construction-general-permit-cgp> (accessed September 27, 2022).

- C-52. If an operator subject to the CGP plans to add cationic treatment chemicals, including flocculants, to stormwater or authorized non-stormwater prior to discharge, Part 1.1.9 of the CGP requires the operator to request approval from the applicable EPA Regional Office for use of those chemicals. In a request, the operator is required to certify the following, among other things: the SWPPP includes a complete site-specific description of the chemical treatment system proposed for use, including specifications, design, and Material Safety Data Sheets for all chemicals to be used; the controls to be used on the site are compatible with the safe and effective use of cationic chemical treatment; verification through jar tests that the site soil is conducive to chemical treatment; verification that the chemical treatment system operators for this project received training; the operator has read, understands, and will follow all conditions and design criteria in the applicable use designation(s); the operator will keep the use level designation, operation and maintenance manual, and training certificate on site prior to and during use of chemical treatment; a licensed engineer designed the system for this project including system sizing, pond sizing, and flow requirements; verification that the discharge will not adversely affect downstream conveyance systems or stream channels (e.g., cause erosion).
- C-53. Part 3.3 of the CGP requires turbidity benchmark monitoring when discharging dewatering water to certain receiving waters. The operator must record the results of the monitoring and submit the results to EPA no later than 30 days following the end of each monitoring quarter as specified in Part 3.3.4 of the CGP.
- C-54. Part 4 of the CGP specifies that a “qualified person”, as described in the CGP, must conduct regular site inspections to ensure compliance with the CGP. Within 24 hours of completing any inspection, an inspection report must be completed that includes, among other things, a summary of any problems found during the inspection that make it necessary to perform routine maintenance or corrective action. Copies of all inspection reports must be kept at the site of the Activity or at an easily accessible location and be available upon request by EPA. Part 5.4 of the CGP requires an operator to record certain information in a corrective action log, and a copy of that log must be kept at the project site or an easily accessible location so that it can be made immediately available at the time of an on-site inspection or upon request by EPA.
- C-55. In the water quality certification that NHDES granted with conditions for the CGP, NHDES required, among other things, the following:
- “Should visible turbidity or benthic sediment deposits attributable or partly attributable to your construction activities be present in the receiving water, the ‘Corrective Actions’ specified in Part 5 [of the CGP] shall be immediately implemented to correct the water quality standard violations. In addition, daily monitoring (including photographs) of the receiving water shall be conducted until there is no visible turbidity or benthic deposits. Inspection Reports required in Part 4.7 of the CGP shall include, but not be limited to, the distance downstream and the percent of the river width where visible turbidity was observed, and the period of time that the visible turbidity persisted. A copy of the Inspection Report(s) shall be made available to NHDES within 24 hours of receiving a written request from NHDES.”

VII. State Alteration of Terrain Permitting Program

- C-56. RSA 485-A:17, I requires, among other things, any person proposing to dredge, excavate, place fill, mine, transport forest products or undertake construction in or on the border of the surface waters of the state, and any person proposing to significantly alter the characteristics of the terrain, in such a manner as to impede the natural runoff or create an unnatural runoff, to be directly responsible to submit to

NHDES detailed plans concerning such proposal and any additional relevant information requested by NHDES, at least 30 days prior to undertaking any such activity. The applicant must receive a permit from NHDES prior to undertaking those operations. The Commissioner of NHDES has adopted Alteration of Terrain (AOT) rules under Chapter Env-Wq 1500, titled “Alteration of Terrain”, to protect drinking water supplies, surface waters, and groundwater by specifying the procedures and criteria for obtaining permits required by RSA 485-A:17.

- C-57. Env-Wq 1503.19, titled “Criteria for Issuance of AOT Permits”, specifies, in part, that: “The department shall not issue an AOT permit unless the applicant demonstrates that all of the following criteria are met:
- (a) Temporary water quality protection measures in accordance with Env-Wq 1505.05 that are adequate to prevent violations of the surface water quality (SWQ) standards will be used during the construction phase of the proposed activity and maintained until all areas are stabilized;
 - (b) The permanent methods for protecting water quality proposed in the application meet the requirements of Env-Wq 1507.02 and are adequate to prevent violations of the SWQ standards.”
- C-58. Env-Wq 1502.67 defines “surface water quality standards (SWQ standards)” as “the combination of designated uses of surface waters and the water quality criteria for such surface waters based upon such uses as described in RSA 485-A:8-12 and Env-Wq 1700.”
- C-59. RSA 485-A:17, III, specifies, in part, that: “The department may exempt other state agencies from the permit and fee provisions of this section provided that each such agency has incorporated appropriate protective practices in its projects which are substantially equivalent to the requirements established by the department under this chapter.”
- C-60. On March 1, 2022, a memorandum of agreement was entered into by and between NHDES and the Applicant in accordance with RSA 485-A:17, III (NHDOT/NHDES AoT MOA) to exempt the Applicant from the AOT permit and fee provisions of RSA 485-A:17 and Env-Wq 1500 if the Applicant incorporates protective measures into its projects that are substantially equivalent to the terrain alteration requirements of RSA 485-A:17 and Chapter Env-Wq 1500 (see Fact C-56). To achieve substantially equivalence to the terrain alteration requirements of RSA 485-A:17 and Chapter Env-Wq 1500 and to prevent or control erosion of land and provide appropriate longer-term stormwater management and treatment practices, Stipulation II of the NHDOT/NHDES AoT MOA requires, among other things, the Applicant to design, construct, and maintain all projects in accordance with the contract provisions; engineering standards; guidelines or best management practices; and regulatory standards, as periodically amended; as identified in Appendix A of the NHDOT/NHDES AoT MOA. Stipulation III of the NHDOT/NHDES AoT MOA requires the Applicant to prepare, or cause to be prepared, stormwater and other water quality analyses, consistent with the standards identified in Appendix A, in order to demonstrate that project designs and plans are substantially equivalent to the terrain alteration requirements of RSA 485-A:17 and Chapter Env-Wq 1500, and such project-level analyses must be made available to NHDES upon request. The NHDOT/NHDES AoT MOA does not expire unless terminated pursuant to Stipulation VIII of the NHDOT/NHDES AoT MOA.
- C-61. Appendix A of the NHDOT/NHDES AoT MOA references the “NHDOT ‘Salt Management Plan,’ June 2019 (NHDOT SMP). In the NHDOT SMP, NHDOT states the following about a purpose of the SMP:
- “This Salt Management Plan strives to minimize the amount of NHDOT applied salt entering the environment by establishing Best Management Practices (BMPs) in the handling, storage and dispensing of road salt.”

In its *Salt Management Practice -2 Winter Maintenance Operations* of the NHDOT SMP, NHDOT (i.e., the Applicant) states the following:

“The goal of NHDOT’s snow and ice control operations is to provide a specified level of service during winter storm events and restore bare pavement as soon as practical following a winter storm event, depending on the class of roadway. Operations should achieve these goals while attempting to use a minimum amount of deicing chemicals. [...]”

- C-62. Appendix A of the NHDOT/NHDES AoT MOA references the “NHDES ‘New Hampshire Stormwater Management Stormwater Manual, Volumes 1, 2, & 3,’ December 2008”. The New Hampshire Stormwater Manual provides communities, developers, designers, and regulatory personnel with a reference guide for the selection, design, and application of measures to manage stormwater from newly developed and redeveloped properties, while meeting environmental objectives in the New Hampshire regulatory setting. These measures include source controls, design techniques (including low impact development design approaches), structural practices, and construction practices designed to minimize adverse hydrologic and water quality impacts, protecting and enhancing the functions of our natural wetlands and waterways.⁹ Volume 2 of the New Hampshire Stormwater Manual lists the following maintenance requirements for vegetated buffers for roadways: 1) Inspect buffer at least annually for signs of erosion, sediment buildup, or vegetation loss; 2) If a meadow buffer, provide periodic mowing as needed to maintain a healthy stand of herbaceous vegetation; 3) If a forested buffer, then the buffer should be maintained in an undisturbed condition, unless erosion occurs; 4) If erosion of the buffer (forested or meadow) occurs, eroded areas should be repaired and replanted with vegetation similar to the remaining buffer. Corrective action should include eliminating the source of the erosion problem and may require retrofit with a level spreader; 5) Remove debris and accumulated sediment, based on inspection.
- C-63. Appendix A of the NHDOT/NHDES AoT MOA references the “NHDOT ‘Stormwater BMP Inspection and Maintenance Plan,’ May 2019”. In the plan, NHDOT (i.e., the Applicant) specifies the following primary inspection items for vegetated buffers: 1) Presence of sediment/trash accumulation; 2) Sparse vegetation establishment; and 3) Invasive species becoming established. NHDOT also specifies the following maintenance requirements for vegetated buffers: 1) Prevent channelization caused by sediment buildup; 2) Periodic mowing as needed; 3) Debris/sediment removal as needed; and 4) Repair of eroded areas; 5) remove invasive species. NHDOT also specifies inspection protocols in the plan including that each stormwater BMP should be routinely inspected on an annual basis and additional inspections may be necessary beyond annual inspections after certain events that could damage the BMP. In Appendix A of the plan, NHDOT provides a template inspection form.
- C-64. Env-Wq 1505.02, titled “Required Construction Practices”, specifies the following to protect water quality during terrain alteration activities: “The following construction practices shall apply:
(a) Perimeter controls shall be installed prior to earth moving operations;
(b) Stormwater treatment ponds and drainage swales shall be installed before rough grading the site;
(c) Runoff shall be directed to temporary practices until stormwater BMPs are stabilized;
(d) Basins, ditches and swales shall be stabilized prior to directing runoff to them; and
(e) Erosion control practices shall be inspected at least weekly and after every rain event of 0.5 inch or more, provided that the inspections shall be conducted by the environmental monitor if one is required pursuant to Env-Wq 1505.03(b).”

⁹ NHDES. EPA. Comprehensive Environmental Inc. (December 2008). [New Hampshire Stormwater Manual \(Revision 1.0\)](#).

- C-65. Env-Wq 1506.13, titled “Sediment Control Methods: Flocculants”, establishes requirements for use of flocculants.
- C-66. Env-Wq 1508.09 titled, “Stormwater Treatment Practices: Vegetated Buffers”, specifies, among other things, certain requirements when using vegetated buffers to treat stormwater from roadways.
- C-67. Part Env-Wq 1509, titled “Waivers and Deadline Extensions”, establishes, in part, procedures and criteria for requesting and obtaining waivers to accommodate those situations where strict adherence to the rules in Env-Wq 1500 would not be in the best interest of the public or the environment.

VIII. State Shoreland Water Quality Protection Program

- C-68. RSA Chapter 483-B authorizes NHDES to regulate development activities in the protected shoreland established under the New Hampshire Shoreland Water Quality Protection Act (SWQPA). RSA 483-B:2 specifies, in part, the following: “To fulfill the state's role as trustee of its waters and to promote public health, safety, and the general welfare, the general court declares that the public interest requires the establishment of standards for the subdivision, use, and development of the shorelands of the state's public waters. The development standards provided in this chapter shall be the minimum standards necessary to protect the public waters of the state of New Hampshire. These standards shall serve to [...] Prevent and control water pollution [...] Protect fish spawning grounds, aquatic life, and bird and other wildlife habitats [...] Protect freshwater and coastal wetlands [...] Preserve the state's lakes, rivers, estuaries and coastal waters in their natural state [...] Promote wildlife habitat, scenic beauty, and scientific study [...] Protect public use of waters, including recreation [...] and] Anticipate and respond to the impacts of development in shoreland areas to the extent they may potentially damage the public waters.” The Commissioner of NHDES has adopted Env-Wq 1400 to implement the NHDES Shoreland Protection Program authorized by RSA 483-B for all land areas that fall within the definition of protected shoreland.
- C-69. RSA 483-B:4, XV defines “protected shoreland” in relevant part as “for natural, fresh water bodies without artificial impoundments, for artificially impounded fresh water bodies, except private garden water features and ponds of less than 10 acres, and for coastal waters and rivers, all land located within 250 feet of the reference line of public waters.”
- C-70. Env-Wq 483-B:5-b, I(a), specifies, in part, that “No person shall commence construction, excavation, or filling activities within the protected shoreland without obtaining a permit from the department to ensure compliance with this chapter.”
- C-71. Env-Wq 1404.01, titled “Protection of Water Quality, specifies the following:
“(a) No person shall undertake construction or any other activity in such a way as to degrade water quality in violation of the water quality standards specified in RSA 485-A:8 or Env-Wq 1700.
(b) As required by RSA 483-B:9, V(d)(2), new structures and all modifications to existing structures within the protected shoreland shall be designed and constructed to prevent the release of surface runoff across exposed soils.”
- C-72. Env-Wq 1406.01, titled “Permit Required”, specifies, in part, that:
“(a) Subject to (b), below, as specified in RSA 483-B:5-b, I(a), no person shall commence construction, excavation, or filling activities within the protected shoreland without obtaining a permit from the department to ensure compliance with RSA 483-B [...].”

- C-73. Env-Wq 1406.15, titled “Decisions on Shoreland Permit Applications”, requires the following, among other things:
“(b) The department shall approve an application for a shoreland permit if all of the following are true:
(1) The application is complete as specified in Env-Wq 1406.06; and
(2) The project, during and after construction if constructed as proposed, will comply with all applicable criteria of these rules and RSA 483-B.
(c) If the department determines that the project as proposed will not comply with all applicable criteria of these rules and RSA 483-B but that reasonable project-specific conditions could be imposed to bring the project into compliance, the department shall approve the application with such conditions as are necessary to ensure compliance. [...]
(g) All permits issued shall be subject to the conditions specified in Env-Wq 1406.20.”
- C-74. Env-Wq 1406.20, titled “Conditions Applicable to All Projects in the Protected Shoreland”, specifies, in part, that:
“(c) No person undertaking any activity in the protected shoreland shall cause or contribute to, or allow the activity to cause or contribute to, any violations of the surface water quality standards established in [...] Env-Wq 1700.”
- C-75. On December 2, 2022, NHDES received a Shoreland Permit Application for the Activity from the Applicant that included proposed construction, excavation, and filling activities in the protected shoreland.

IX. State Wetlands Permitting Program

- C-76. RSA 482-A:3, I(a) prohibits any person from excavating, removing, filling, dredging, or constructing any structures in or on any bank, flat, marsh, or swamp in and adjacent to any waters of the state without a permit from NHDES. RSA-A:4 specifies that Chapter 482-A to all surface waters of the state as defined in RSA 485-A:2 (see Fact C-15). The Commissioner of NHDES has adopted Env-Wt 100 through Env-Wt 900 to implement the NHDES permitting program authorized by RSA 482-A, including Chapter Env-Wt 300, titled “Permits and other Authorizations; Conditions Applicable to All Work in Jurisdictional Areas.”
- C-77. Env-Wt 103.25 defines “jurisdictional area” as “an area that is subject to regulation under RSA 482-A, including but not limited to surface waters, streams, lakes, rivers, ponds, wetlands, banks, flats, shores, sand dunes, upland tidal buffer zones, and duly-established 100-foot buffers.”
- C-78. Env-Wt 305.02, titled “Applicability”, specifies, in part, that:
“(a) Subject to (b)-(f), below, this chapter shall apply as of December 15, 2019 to any person who undertakes or proposes to undertake any dredge, fill, or construction activities, or any combination thereof, in a jurisdictional area.”
- C-79. Env-Wt 307.03, titled “Protection of Water Quality required”, specifies, in part, that:
“(a) No activity shall be conducted in such a way as to cause or contribute to a violation of:
(1) the surface water quality standards specified in RSA 485-A:8 or Env-Wq 1700. [...]
(b) All work, including management of soil stockpiles, shall be conducted so as to minimize erosion, minimize sediment transfer to surface waters or wetlands, and minimize turbidity in surface waters and wetlands using the techniques described in:
(1) Env-Wq 1505.02, Env-Wq 1505.04, Env-Wq 1506, and Env-Wq 1508; [...]”
- C-80. Env-Wt 307.18, titled “Reports”, specifies, in part, that: “The following plans and reports shall be

submitted to the department, where applicable:

- (a) Compensatory mitigation project monitoring reports in accordance with Env-Wt 803.04;
- (b) A construction monitoring plan with inspection reports, water quality reports, and a wetland planting plan prepared by a CPESC specialist or certified wetland scientist;
- (c) A report that describes the monitoring conducted and date(s) of inspections, and includes photos showing the extent of jurisdictional impacts, areas of restoration, and progress of any plantings;
- (d) A report that describes the stability of and status of stream or wetland systems, including a description of any necessary adjustments; and
- (e) A schedule and description of measures to be taken during construction and after completion of the project.”

- C-81. Part Env-Wt 514, titled “Bank/Shoreline Stabilization: All Projects”, establishes requirements that apply to all types of bank and shoreline stabilization projects, to maintain or restore healthy and vegetated bank and shoreline system functions.”
- C-82. Part Env-Wt 527, titled “Public Highways”, establishes requirements for construction and maintenance projects for public highways in jurisdictional areas. Env-Wt 527.05, titled “Construction Requirements for Public Highway Project”, specifies the following: “In addition to complying with all applicable conditions in Env-Wt 307, the following shall apply:
 - (a) The permit shall be contingent on review and approval by the department of final stream diversion and erosion control plans that detail the timing and method of stream flow diversion during construction and show temporary siltation, erosion, and turbidity control measures to be implemented; and
 - (b) The contractor responsible for completion of the work shall use techniques described in Env-Wq 1504.06, Env-Wq 1504.16, Env-Wq 1505.02, Env-Wq 1506, and Env-Wq 1508.” See Facts C-64, C-65, and C-66 for more information on some of the techniques described under Env-Wq 1500.
- C-83. Chapter Env-Wt 900, titled “Stream Crossings; Certified Culvert Maintainer Program”, establishes, among other things, requirements for stream crossings to preserve and enhance the functions and values of existing streams, support the restoration of impacted streams to their natural state, and improve aquatic organism passage and sediment transport.
- C-84. On July 11, 2022, NHDES received from the Applicant a Standard Dredge and Fill Wetlands Permit Application for proposed impacts related to the Activity, which NHDES later designated as Application No. 2022-01959. In Application No. 2022-01959, the Applicant proposed 225,953 square feet of permanent palustrine wetland impacts; 17,032 square of temporary palustrine wetland impacts; 4,016 square feet and 568 linear feet of permanent stream channel impacts; 1,990 square feet and 225 linear feet of temporary stream channel impacts; and compensatory mitigation that includes conserving a 2,611 acre property in Shelburne, New Hampshire through funds provided to the Society for the Protection of New Hampshire Forests for fee acquisition of a parcel located at the southern end of the Androscoggin watershed or a one-time payment of \$1,364,579.36 to the NHDES Aquatic Resource Mitigation Fund.
- C-85. On September 6, 2022, NHDES issued a Notice of Public Hearing for the Activity, which opened a public comment period for Application No. 2022-01959. On September 19, 2022, NHDES held the public hearing. NHDES did not receive comments on the during the public comment period or at the public hearing. On November 2, 2022, NHDES sent a letter to the Applicant to notify the Applicant that NHDES had approved Application No. 2022-01959 based on certain findings and that the approval was contingent upon the Applicant meeting certain conditions. On November 14, 2022, sent a letter to the

Applicant to notify the Applicant that NHDES had amended its approval of Application No. 2022-01959. In the November 14, 2022 letter, NHDES notified the Applicant that NHDES had approved Application No. 2022-01959, subject to certain conditions and based on certain findings, to dredge and fill 255,405 square feet and 1,610 linear feet of permanent and temporary impacts to jurisdictional areas related to the Activity. The approval is contingent upon compensatory mitigation, including “[c]ompensatory mitigation for the proposed impacts including 225,953 square feet (SF) of permanent palustrine wetland impacts, 17,032 SF of temporary palustrine wetland impacts, 4,016 SF / 568 linear feet (LF) of permanent stream channel impacts, and 1,990 SF / 225 LF of temporary stream channel impacts shall consist of conserving 2,717 acres in Shelburne, NH through funds provided to the Society for the Protection of New Hampshire Forests for fee acquisition of a parcel located at the southern end of the Androscoggin watershed, establishment of a permanent vegetated buffer along the Androscoggin River, and creation of 143 linear feet of stream channel, or a one-time payment of \$1,257,885.16 to the NHDES Aquatic Resource Mitigation (‘ARM’) Fund.”

X. Categorical Exclusion under the National Environmental Policy Act

C-86. In August 2020, a Categorical Exclusion was completed for the Activity in accordance with the National Environmental Policy Act of 1969 (42 U.S.C. 4332(2)(c)) and federal regulations under 23 CFR Part 771. On August 31, 2020, the Federal Highway Administration of the U.S. Department of Transportation notified the Applicant that it concurred with the Activity’s classification as a Categorical Exclusion, which is specified under 40 CFR §771.115(b). 40 CFR §771.117(a) specifies that Categorical Exclusions “[...] are actions that: Do not induce significant impacts to planned growth or land use for the area; do not require the relocation of significant numbers of people; do not have a significant impact on any natural, cultural, recreational, historic or other resource; do not involve significant air, noise, or water quality impacts; do not have significant impacts on travel patterns; or do not otherwise, either individually or cumulatively, have any significant environmental impacts.” In the Categorical Exclusion, impacts of the Activity to the following natural resources, among others, were evaluated: waters of the United States; waters of the state; shoreland; floodplains; water quality including proposed stormwater treatment and impacts from road salt; fish and wildlife; and rare, threatened, and endangered species.

XI. Section 401 Water Quality Certification Application and Other Relevant Information

C-87. On August 4, 2022, NHDES received from the Applicant an Application for Water Quality Certification for the Activity (the WQC Application). With the application, the Applicant included, among other things, the following for the Activity: information for an Application for Water Quality Certification; a request for certification as required under 40 CFR § 121.5; a copy the Standard Dredge and Fill Wetlands Permit Application that the Applicant submitted to NHDES (see Fact C-84); a copy of the application that the Applicant submitted to USACE (see Fact C-48); a Stormwater Pollutant Loading Analysis; Wetland Impact and Erosions Control plans.

C-88. On August 17, 2022, USACE notified NHDES that USACE had established a reasonable period of time of 120 days for the Activity in accordance with 40 CFR 121.6(b), which is the time period that NHDES may act on the Applicant’s request for certification and corresponds to December 2, 2022.

C-89. NHDES posted a draft version of this certification for public comment from October 28 to 4 p.m. on November 27, 2022.

D. FINDINGS

I. Applicant's Proposal

- D-1. *Activity Description:* The proposed Activity is described in the text and plans provided in the WQC Application (see C-87). Additional information about the Activity may be found at the Applicant's following website: [Dummer-Cambridge-Errol 16304B | Project Specific Information | Project Center | NH Department of Transportation](#).¹⁰

In WQC Application, the Applicant stated the following about the Activity:

"The purpose of the proposed project is to address the poor condition of the pavement and road base and provide a sustainable roadway that maintains the connectivity of the corridor, minimizes long-term maintenance and safety concerns resulting from the proximity of the Androscoggin River, and preserves the scenic quality of the surrounding area. [...]

The slopes between NH 16 and the Androscoggin River have a history of instability, and a number of slope failures have occurred in recent years to the north and south of the project area. Evidence of slope instability has been observed within the project area in the last year. Slope failures cause concern for public safety, require traffic delays or detours during repairs, and result in negative impacts to the river from sedimentation and loss of riparian habitat. [...]

The proposed activity involves the realignment and construction of a 1.3-mile segment of NH 16 in Cambridge, NH, with the new roadway alignment shifting from approximately 15' to 385' to the west of the existing alignment, away from the Androscoggin River. The Androscoggin River is the primary waterbody in the project area. Two unnamed perennial tributaries to the river pass under NH 16 within the project limits. Extensive wetland systems exist along the length of the project to the west of NH 16.

The project is currently scheduled to advertise for bids in January 2023, with construction anticipated to begin in early spring 2023. The duration of construction is expected to be 2 years. [...]

Stormwater runoff is the only discharge associated with the proposed project.^[11] [...]

The proposed roadway typical will provide two 11' travel lanes and two 4' shoulders. This represents an increase in paved shoulder width from 1 to 4 feet, adding +/-3 feet to either side and increasing the road width by 6 feet, on average. The pavement width of the new road will be 30 feet. [...] The proposed project will result in a net increase of 0.5 acres of impervious area, for a total area of 4.75 acres. [...]

Under proposed conditions, stormwater runoff will sheet flow off the edge of the pavement directly into a vegetated roadway buffer, discussed in more detail below, with the new edge of pavement ranging from 45' to 450' from the river. The buffer that will result from the proposed alignment will

¹⁰ Website address: <https://www.nh.gov/dot/projects/dummercambridgeerrol16304b/index.htm>

¹¹ In plans describing erosion control strategies that the Applicant included with the WQC Application, the Applicant also describes construction of basins or traps that may require dewatering during construction of the Activity. NHDES also determined that work involving proposed installation or removal of stream crossings could result in dewatering activities during construction Activity. Therefore, NHDES determined that any dewatering conducted for the Activity by the Applicant could also result in discharges to surface waters.

be approximately 20.5 acres in size along the length of the project. The amount of pavement that will be directed into the vegetated buffer (1.22 acres) is more than double the amount of pavement that will be added by the project (0.5 acres). [...]

[t]he proposed vegetated buffer will provide stormwater treatment and will minimize the potential pollutant load increase that could result from the proposed project. [...]

During construction of the project, adherence to the EPA's Construction General Permit, including the implementation of a Stormwater Pollution Prevention Plan, will minimize or avoid impacts to water quality and the associated designated uses within the project area.

Following construction of the project, the new alignment of the roadway and the presence of a vegetated buffer between the road and river will result in negligible changes in water quality and the designated uses of the project area's surface waters. [...]

Of the 4.75 acres of proposed pavement resulting from the project, approximately 1.22 acres of pavement will be directed to vegetated roadway buffers meeting the design guidelines contained in the NHDES Stormwater Manual. [...] The amount of pavement that will be directed to vegetated roadway buffers (1.22 acres) is more than double the amount of pavement that will be added by the project (0.5 acre). The vegetated roadway buffer will be located along the east side of the roadway once the road is shifted to the west. Stormwater will sheet flow off the edge of pavement directly into the buffer.

Of the roadway length that will be directed to the vegetated buffer, approximately 1895 feet will consist of one travel lane plus shoulder and approximately 929 feet of roadway will consist of two-lanes or full roadway width. Where the roadway is normal crown along the centerline, only the east side of the roadway can be directed to the vegetated buffer while the entire roadway width can be directed to the vegetated buffer where the roadway is superelevated through a curve.

NHDES's Simple Method Pollutant Loading Spreadsheet was utilized to estimate pollutant loadings associated with the pre-development and post-development condition. The pollutant removal efficiencies for paved areas where one travel lane will sheet flow directly to a 50-foot vegetated buffer and where two travel lanes will sheet flow directly to an 80-foot vegetated buffer were assumed to be 73%, 45% and 40% for Total Suspended Solids (TSS), Total Phosphorus (TP), and Total Nitrogen (TN) respectively, which are consistent with the NHDES Stormwater Manual.

Based on the results of this analysis, the proposed project is expected to reduce the [TSS] load by 9.3% or 431 lbs/year [pounds per year] and reduce the [TP] load by 1.3% or 0.2 lbs/year. The [TN] load is expected to increase slightly by 0.2% or 0.1 lbs/year. The negligible changes in TP and TN are within the expected accuracy of this modeling procedure and can be considered essentially the same when comparing the pre-development and post-development conditions. Also, given the size of the Androscoggin River and its watershed, the minimal amount of increase in nitrogen is not expected to impact the water quality of such a large water body. [...]

[D]uring construction of the project, adherence to the EPA's Construction General Permit, including the implementation of a Stormwater Pollution Prevention Plan, will minimize or avoid impacts to water quality.

The project will include the replacement of existing culverts on the two tributaries to the Androscoggin. The proposed structures consist of a 5' wide x 4' high box culvert at the southern

stream crossing and a 6'W x 6' box culvert at the northern crossing. Both structures will be embedded 1 foot with simulated streambed material. A total of 143 linear feet of stream channel will be reconstructed as part of the roadway realignment and stream crossing replacements. Natural streambed material will be placed within bankfull width. Existing streambed material is sandy, mucky material. Proposed simulated streambed material will be round or subrounded stone comprised mostly of gravel. The 2:1 side slope along each channel requires stone for stabilization but will be covered and seeded to bankfull elevation. Plantings will be installed parallel to the top of the bank along each channel.

The proposed project will result in 2.4 lane miles, a slight decrease from existing due to reduced curves along the new alignment. According to the NHDOT Winter Maintenance Snow and Ice Policy (2001), the typical application rate of road salt is 250 to 300 pounds per lane mile. This would equate to approximately 780 pounds of road salt applied within the 1.3-mile project area during any given treatment. The proposed alignment will be slightly shorter than the existing alignment, decreasing lane miles slightly and potentially resulting in a slight decrease in road salt to around 720 pounds per application. Based on the chloride levels just north of the project area in Bear Brook and the Androscoggin River, a 12-fold increase in chloride concentration would be required before acute or chronic water quality exceedances would be expected to occur in the river and more than a 1,000-fold increase would be required in the tributaries. This level of increase in chloride concentrations is not expected to occur, in part because the total lane miles would be decreasing over the existing condition, and in part because the improved pavement surface will allow for more efficient winter maintenance."

- D-2. The Applicant submitted an application to USACE for a federal permit required under section 404 of the CWA (see Fact C-48) for proposed impacts of the Activity to Waters of the United States. In the application, the Applicant proposed the following impacts: 225,953 square feet of permanent impacts and 17,032 square feet of temporary impacts to palustrine wetlands, of which 3,273 square feet and 45 square feet would be permanent and temporary impacts to vernal pools, respectively; 568 linear feet of permanent impacts to stream channels, which will result in 4,016 square feet of permanent impacts to stream channels; and 605 linear feet of permanent impacts to banks along the Androscoggin River, which will result in 3,136 square feet of permanent impacts.

II. Certification Requirements

- D-3. The Androscoggin River, its tributaries, and wetlands that would be impacted by the Activity are waters of the United States (see Facts C-6 and C-9).
- D-4. The Androscoggin River, its tributaries, and wetlands that would be impacted by the Activity surface waters of the state (see Fact C-15).
- D-5. The Applicant proposes discharges to waters of the United States and surface waters of the state (see Fact C-5 and Findings D-1 through D-4). Stormwater runoff during construction or operation of the Activity, including snowmelt runoff and groundwater flow from within the area affected by the Activity, may result in additional discharges to surface waters as that term is applied under section 401 of the CWA (see Facts C-1, C-4, C-5, and C-10). If not properly controlled, such discharges may cause the permanent alteration of, or temporary impacts to surface water quality, quantity, or both.
- D-6. Because the Activity would or may involve discharges, as that term is used in the CWA, to waters of the United States and surface waters of the state, and because the Activity requires a federal permit, a

certification is required from New Hampshire before the permit may be issued and before the Activity may commence (see Facts C-1 and C-10, and Findings D-1 and D-5).

D-7. NHDES is the authority in New Hampshire (i.e., certifying authority) responsible for issuing certifications (see Facts C-3 and C-10).

D-8. RSA 485-A:12, III (Fact C-10) states the following: “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.” Necessary conditions on and monitoring of an activity include, but are not limited to, the following:

- Identification of the effective date and expiration of a certification so that an applicant and other persons know when the certification conditions are applicable to the applicant;
- Notification to NHDES if control of the Activity changes from the Applicant to a new person so that NHDES and other persons know who is responsible for the Activity;
- Requiring an applicant to comply with Surface Water Quality Standards and other state or federal permits that would provide for the protection of surface water quality so those standards and permits may be enforced by the federal agency under the federal license or permit associated with the certification;
- Requiring an applicant to obtain approval from NHDES prior to modifying an activity that could have a significant or material effect on the findings or conditions of a certification so that NHDES may amend a certification, as necessary, to ensure that a modified activity will comply with Surface Water Quality Standards;
- Monitoring to determine compliance with conditions in this certification;
- On-site inspections;
- Development, submission, and implementation of monitoring plans;
- Analysis, preparation, and submittal of reports that summarize monitoring results or compliance with applicable permits so that NHDES and others may know whether there is compliance with Surface Water Quality Standards or certain permits applicable to an activity; and
- Notifying appropriate authorities in a timely manner when deviations from conditions in this certification occur.

D-9. The Applicant has submitted the WQC Application and a request for certification to NHDES for a certification (see Fact C-62).

III. Applicable Surface Waters and Water Quality Standards

D-10. NHDES has assigned assessment unit identification (AUID) numbers to many, but not all surface waters. Surface waters that do not have an AUID number are still considered surface waters (see C-15). Surface waters that would be or could be potentially affected by the Activity as well as any associated and known impairments of Surface Water Quality Standards listed in the 2020/2022 section 303(d) of the CWA list are included in the table below.¹² All impairments, with the exception of those highlighted in bold, which have approved TMDLs, are on the 2020/2022 303(d) list.

¹² In the WQC Application, the Applicant listed Bear Brook, AUID NHRIV400010602-08, which is approximately 0.6 miles north of the boundary of the Activity, as a surface water in the vicinity of the Activity. NHDES did not include Bear Brook in the Certification because NHDES determined that it would not likely be impacted by the Activity.

AUID	Description of Surface Waters	Cause of Impairment (Designated Use Impaired)
NHRIV400010602-04	Androscoggin River proximate to NH Rt 16	Mercury (FC)
NHRIV400010602-28	Unnamed Stream that the Applicant named "Stream L" in the WQC Application and flows under NH Rt 16 to the Androscoggin River via existing twin 18" pipes	Mercury (FC)
Not Applicable (N/A)	Unnamed Stream that the Applicant named "Stream E" in the WQC Application and flows under NH Rt. 16 to the Androscoggin River via an existing 24" pipe ("Stream E")	Mercury (FC)
NHRIV400010602-29	Unnamed Stream that the Applicant named "Stream J" in the WQC Application (i.e., in the USACE application that was enclosed with the WQC Application) and flows under Rt. 16 to the Androscoggin River via an existing culvert	Mercury (FC)
N/A	Several Palustrine Wetlands	Mercury (FC)
N/A	Several Vernal Pools	Mercury (FC)
Notes: AL = Aquatic Life, PCR = Primary Recreation, SCR = Secondary Recreation, FC = Fish Consumption, SFC = Shellfish Consumption Impairments highlighted in bold have approved TMDLs. All fresh surface waters are impaired for mercury due to elevated levels of mercury in fish tissue which has resulted in statewide fish consumption advisory.		

When a surface water does not meet Surface Water Quality Standards (i.e., when it is impaired), the addition of pollutants causing or contributing to impairment should be avoided (see Fact C-46). When a surface water whose water quality is better than required by any aquatic life and/or human health water quality criteria or other criteria assigned to the surface water, or whose qualities and characteristics make the surface water critical to the propagation or survival of important living natural resources, the surface water is high quality waters (see Facts C-24 and C-42). As noted in the table above, all fresh surface waters in New Hampshire 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 Fact C-45). The primary source of mercury addressed in the TMDL is atmospheric deposition from in-state and out-of-state emissions. Atmospheric deposition from in-state and out-of-state emissions of fossil fuel byproducts can also cause low pH in rain (aka, acid rain) which can contribute to pH violations in surface waters. NHDES does not anticipate that discharges associated with the Activity will contribute to the mercury impairment of surface waters.

- D-11. The Activity, the Androscoggin River, and unnamed streams and wetlands that would or may be affected by the Activity are surface waters and are subject to New Hampshire Surface Water Quality Standards (see Facts C-14 and Fact C-15). The affected and potentially affected surface waters are classified as Class B waterbodies and, therefore, the Activity and those surface waters are subject Surface Water Quality Standards applicable to the Class B classification (see Facts C-28 and C-43). Existing and designated uses that are applicable to those Class B surface waters include aquatic life integrity; swimming and other recreation in and on the water; fish consumption; wildlife; and, after adequate treatment, as a drinking water supply (see Fact C-21). The Applicant acknowledged those uses in the WQC Application (see Fact C-87).
- D-12. The Applicant is required to comply with antidegradation provisions specified in New Hampshire’s Surface Water Quality Standards because the Activity would involve hydraulic modifications and discharges of pollutants that would lower water quality (see Facts C-41 and C-42 and Findings D-1).

IV. Compliance with all Applicable Permits and Agreements

- D-13. The Applicant is required to obtain and comply with a permit for the Activity from USACE that is specified under section 404 of the CWA to authorize the Applicant's proposed discharges of dredge and fill material into waters of the United States (see Facts C-47 and C-48).
- D-14. The Applicant is required to comply with the 2022 NPDES CGP for construction of the Activity and until the applicant terminates CGP coverage under conditions specified in section 8.2 of the CGP. The 2022 NPDES CGP requires, among other things, the development and implementation of a SWPPP for the Activity, as well as certain monitoring, inspection, recording keeping, and reporting requirements (see Facts C-49, C-50, C-51, C-52, C-53, C-54, and C-55).
- D-15. The Activity is subject to certain requirements of RSA 485-A:17 and Env-Wq 1500 unless the Applicant complies with the NHDOT/NHDES AoT MOA by designing, constructing, and maintaining all projects in accordance with the contract provisions, engineering standards, guidelines or best management practices; and regulatory standards, as periodically amended, identified in Appendix A. Among other requirements of Env-Wq 1500, the Applicant is required to comply with, or incorporate protective measures into its projects that are substantially equivalent to, certain provisions of Env-Wq 1505.02, Env-Wq 1506.13, Env-Wq 1508.09 during construction or operation of the Activity (see Facts C-56, C-57, C-58, C-59, C-60, C-61, C-62, C-64, C-65, C-66, and C-67).
- D-16. Prior to commencing the Activity, the Applicant is required to obtain a Shoreland Permit for the Activity from NHDES that would authorize construction, excavation, and filling activities in the protected shoreland. During construction and operation of the Activity, the Applicant is required to comply with conditions of that permit (see Facts C-68, C-69, C-70, C-71, C-72, C-73, C-74, and C-75).
- D-17. Prior to commencing the Activity, The Applicant is required to obtain a NHDES Wetlands Permit for the Activity from the NHDES to authorize proposed impacts associated with dredge and fill material into jurisdictional areas, including impacts associated with bank/shoreline stabilization, stream crossings, construction and maintenance of public highways (see Facts C-76, C-77, C-78, C-79, C-80, C-81, C-82, C-83, C-84, and C-85). During construction of the Activity, the Applicant is required to comply with the permit.
- D-18. This certification decision relies, in part, on the Applicant complying with the NHDOT/NHDES AoT MOA and obtaining and complying with the permits that are required for the Activity because that agreement and those permits are necessary to help ensure compliance with Surface Water Quality Standards and because a purpose of that agreement and those permits is to help ensure compliance with Surface Water Quality Standards (see Findings D-13, D-14, D-15, D-16, and D-17). Condition E-7 addresses this finding. If the federal permit that is associated with this certification is not effective during the effective term of the referenced agreement or permits, then this certification decision also relies, in part, on the Applicant obtaining and complying with those permits and agreement, when applicable, outside the effective term of the federal permit (see Facts C-10 and C-11). Condition E-5, a "state-only" condition, addresses this finding.

V. Protection of Water Quality

- D-19. If not properly controlled, the disturbance of earth during construction of the Activity may temporarily increase turbidity levels in surface waters that are adjacent to and downstream from the area affected by or in the vicinity of the Activity, particularly during wet weather events, and may contribute to long-

term sediment retention in or transport through the surface waters. Turbidity, sediment, and other associated pollutants in stormwater discharges can harm plants and animals in the receiving water, increase the costs to treat any drinking water sources, and impair the aesthetic value and use of surface waters. Plans regarding proposed erosion and sediment control measures that will be employed during construction of the Activity were included in the application for a permit required under section 404 of the CWA, the NHDES Standard Dredge and Fill Wetlands Permit Application, the NHDES Shoreland Permit Application, and the NHDES Application for Water Quality Certification (see Facts C-48, C-75, C-84, C-85, and C-87). If approved by USACE and NHDES, proper implementation of erosion and control measures shown on those plans will be necessary to help ensure compliance with Surface Water Quality Standards (see Finding D-18 and Conditions E-5 and E-7). The NHDOT/NHDES AoT MOA found that if the Applicant designs, constructs, and maintains its projects by incorporating the protective measures as identified in Appendix A of the NHDOT/NHDES AoT MOA, then the Applicant would achieve substantial equivalency to the terrain alteration requirements of RSA 485-A:17 and Chapter Env-Wq 1500. The NHDOT/NHDES AoT MOA requires the Applicant to prepare, or cause to be prepared, stormwater and other water quality analyses to demonstrate that project designs and plans are substantially equivalent to the terrain alteration requirements of RSA 485-A:17 and Chapter Env-Wq 1500, and such project-level analyses must be made available to NHDES upon request. (see Finding D-15). The CGP, and associated SWPPP, requires eligible construction operators to minimize erosion, sediment, and other construction-related stormwater pollutants. The CGP also requires certain inspections, monitoring, and reporting to EPA and NHDES. NHDES concurs with the Applicant that adherence to the CGP will minimize or avoid impacts to water quality. Compliance with the inspection, monitoring, and reporting requirements of applicable permits and the NHDOT/NHDES AoT MOA will help ensure that the Activity complies with Surface Water Quality Standards for general water quality, turbidity, sedimentation, and benthic deposits (see Facts C-17, C-29, C-31, C-32, and C-33). In addition, NHDES Wetlands Permit No. 2022-01959 would be contingent upon NHDES' approval of final stream diversion and erosion control plans as required under Env-Wt 527.05(a) that detail the timing and method of stream flow diversion during construction and show temporary siltation, erosion, and turbidity control measures to be implemented; and the applicant is required to complete certain work of the Activity in accordance with Env-Wt 307.03(b)(1) and Env-Wt 527.05(b) (see Facts C-79 and C-82). Prompt reporting of noncompliance with applicable permits, Alteration of Terrain provisions or protective measures that are substantially equivalent, the CGP, and this certification, as well as reporting of corrective actions, is necessary to provide assurance that the Activity would comply with Surface Water Quality Standards because it would allow NHDES, USACE, or other persons to respond to conditions that could result in noncompliance with Surface Water Quality Standards. Condition E-8 addresses this finding. Since the federal permit that is associated with this certification may not be effective while the Applicant constructs or operates the Activity, then this certification decision also relies, in part, on the Applicant continuing to report noncompliance with a condition of this certification as required under Condition E-8.b outside the effective term of the federal permit (see Facts C-10 and C-11). Condition E-5, a "state-only" condition, addresses this finding.

- D-20. The Activity would result in a net increase of 0.5 acres of impervious surface area (i.e., after the existing roadway is removed, which has an existing impervious surface area of 4.25 acres), for a total area of 4.75 acres, due to widening of the paved roadway shoulder from 1 foot to 4 feet (see Finding D-1). If not properly controlled, an increase in impervious surface area may increase discharges of pollutants to surface waters during precipitation or melting events, which would be subject to antidegradation requirements of Env-Wq 1708 (See Facts C-21, C-27, and C-41). Pollutants may include chlorides (from road salt), total suspended solids, total phosphorous, total nitrogen, various metals (i.e., lead, zinc, etc.), and petroleum aromatic hydrocarbons. The Applicant proposes to direct 1.22 acres of the total 4.75 acres of runoff from the new impervious surface to vegetated roadway buffers (see Finding D-1).

When a surface water does not meet Surface Water Quality Standards (i.e., when it is impaired), the addition of pollutants causing or contributing to impairment must be avoided (see Fact C-46). That is, existing loadings should be held. For all other pollutants 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. If NHDES determines that a degradation of water quality is insignificant, then NHDES is required to authorize the degradation in high quality waters in accordance with Env-Wq 1708.06(b) (see Fact C-42). The surface waters adjacent to and downstream from the area affected by or in the vicinity of the Activity are currently only impaired for mercury; NHDES does not expect discharges from the Activity to contribute to the mercury impairment (see Fact D-10).

To demonstrate that pollutants can be removed by proposed stormwater BMPs, NHDES requests that applicants include with an Application for Water Quality Certification a pollutant loading analyses in accordance with guidance included in Volume 2 of the New Hampshire Stormwater Manual (see Fact C-62). The guidance allows use of the “Simple Method” for calculating loads before and after construction. NHDES uses total suspended solids (TSS), total nitrogen (TN) and total phosphorus (TP) as surrogates for most other pollutant parameters. That is, if the loadings for TSS, TN and TP are held to pre-construction levels, it is assumed that loadings of most other parameters, which can be removed by stormwater BMPs, are held as well. The pollutant removal efficiencies in 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, constructed, and maintained in accordance with Alteration of Terrain regulations (Env-Wq 1500) and the New Hampshire Stormwater Manual. The Application for Water Quality Certification submitted by the Applicant included a pollutant loading analysis which accounted for treatment of stormwater discharges from the Activity by a vegetated buffer. Results of the Applicant’s analysis showed the following percent difference between post- and pre-development pollutant loads: -9.3% TSS; -1.3% TP; and 0.2% TN. In its analysis, the Applicant stated the following: “The negligible changes in TP and TN are within the expected accuracy of this modeling procedure and can be considered essentially the same when comparing the pre-development and post-development conditions.” Based on the Applicant’s analysis, NHDES has determined that the Activity is subject to antidegradation requirements of Env-Wq 1708 (see Fact C-41). NHDES also determined that the Activity would not use 20% or more of the remaining assimilative for a water quality parameter, in terms of either concentration or mass of pollutants and, therefore, would only cause an insignificant degradation of water quality if the Applicant, in part, designs and constructs the proposed vegetated buffer in accordance with requirements of Env-Wq 1508.09, or protective practices that are substantially equivalent in accordance with the NHDOT/NHDES AoT MOA, and maintains the vegetated buffer in accordance with the 2008 New Hampshire Stormwater Manual and the 2019 NHDOT Stormwater BMP Inspection and Maintenance Plan (see Facts C-60, C-62, C-63, and C-66). If the proposed vegetated buffer is not properly designed, constructed, or maintained, then overland stormwater runoff or sheet flow of stormwater caused by impervious surfaces from the Activity could result in erosion of land that could cause channels or ditches to form within the boundary or vicinity of the Activity that would cause unplanned point source discharges to surface waters. Therefore, NHDES determined that is necessary to include a condition that requires the Applicant to design, construct, and maintain the proposed vegetated buffer in accordance with Env-Wq 1508.09 or in accordance with the NHDOT/NHDES AoT MOA to provide assurance that discharges from the Activity will comply with Surface Water Quality Standards. Condition E-9 addresses this Finding. Since the federal permit that is associated with this certification will expire and the Applicant will continue to operate the Activity, including the proposed roadway and vegetated buffer, this certification decision relies, in part, on the Applicant continuing to design, construct, and maintain the vegetated buffer as required under of Condition E-9 outside the effective term of the federal permit (see Facts C-10 and C-11). Condition E-5, a “state-only” condition, addresses this finding.

- D-21. Chlorides cannot be treated by stormwaters BMPs because they are highly soluble and relatively untreatable substances that persist in the environment. Deicing chemicals containing chloride (i.e., road salt) are typically the primary source of chlorides in fresh surface waters. Because they cannot be treated by stormwater BMPs, chlorides cannot be addressed by typical loading analyses. The Applicant stated that the Activity may result in a slight decrease of road salt in the area of the Activity and that an increase in chloride concentrations is not expected to occur as a result of the Activity (see Finding D-1). NHDES determined that implementation of the NHDOT SMP during construction and operation of the Activity will help ensure compliance with Surface Water Quality Standards for chlorides (see Facts C-39 and C-61). If NHDES determines that the Activity is increasing the concentrations of chlorides in surface waters or is causing a chloride impairment in surface waters, additional measures would be necessary. Condition E-4, a “state-only” condition, addresses this finding.
- D-22. Volume 3 of the New Hampshire Stormwater Manual provides the following general description and considerations of flocculants: “General Description: Flocculants (or coagulants) are natural materials or chemicals that cause colloidal particles (clay) to coagulate. The coagulated particles group together to form flocs, which settle out of detained stormwater. Flocculants can be used in conjunction with sediment basins and sediment traps to remove suspended clay and fine silt particles from stormwater runoff prior to discharge. Use of flocculants improves the ability of these settling facilities to remove finer particles than would be removed otherwise and can increase the percentage of fines removed during the detention period. **Flocculants should only be used upon approval by NHDES.** Considerations: Fine silts and clays are difficult to remove with conventional settling techniques such as sediment traps or basins. Colloidal particles in particular can remain in suspension indefinitely. When these soil materials are present in significant quantities, other measures will need to be considered to prevent impacts to receiving waters. If a construction site is characterized by soils with significant amounts of fine silts and clays, it is particularly critical to prevent erosion of these soils in the first place, because of the difficulty in removing fine and colloidal particles from suspension. There is a variety of flocculant materials available. Any product selected for use must be non-toxic and safe for both human and aquatic life and should not increase Biochemical Oxygen Demand (BOD) in the downstream receiving waters. The use of flocculants must consider the following: • Selection of an appropriate flocculant is highly dependent on the soil particle type and concentration. • Flocculants require specific dosing rates that must be developed on a site-specific basis. • Flocculants must be thoroughly mixed with the stormwater being treated. • Settling basins must have sufficient volume and flow capacity to provide the necessary detention time for settling. • When flocculants are used, the discharge must be carefully monitored to ensure that the chemical is adequately removed by settling. • Flocculated material must be periodically removed to maintain system capacity, and upon completion of the project unless otherwise approved by NHDES. For these reasons, flocculants are typically only used in special circumstances, and should be used under the direction of qualified professionals, and according to NHDES regulations.” NHDES has established requirements under Env-Wq 1506.13, including approval from NHDES prior to the use of flocculants (see Fact C-65). To provide assurance that a violation of Surface Water Quality Standards will not occur if the Applicant decides to use flocculants during construction of the Activity, NHDES determined that the Applicant should comply with the requirements of Env-Wq 1506.13, which requires, among other things, development of a flocculant application plan, NHDES’ approval of the plan, and certain operating, inspection, sampling, maintenance, and reporting requirements (see Fact C-65). Condition E-10 addresses this finding.
- D-23. *Water Quality Improvement Plan:* Conditions of this certification provide assurance that any degradation of surface waters caused by discharges from construction and operation of the Activity will be avoided or insignificant and will protect existing and designated uses in accordance with antidegradation provisions of Env-Wq 1708 (see Facts C-28, C-41, and C-42). According to Env-Wq 1703.01(b), “[a]ll

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” (see Fact C-28). To address any violations of Surface Water Quality Standards that may arise during construction and operation of the Activity at a magnitude, duration, and frequency that contributes to an impaired designated use, it would be necessary to require the Applicant to prepare and implement a WQIP. The purpose of a WQIP would be to restore surface waters to meet Surface Water Quality Standards in accordance with Env-Wq 1703.01(b) for parameters that are influenced by the Activity. If the stream or riverine segments immediately upstream and beyond the influence of the Activity is not meeting Surface Water Quality Standards, then the purpose of the WQIP would be to restore surface waters so that the parameters of water quality that are influenced by the Activity are not any worse than in the upstream segments. Parameters that may be influenced by the Activity include, but are not limited to, dissolved oxygen, temperature, pH, nutrients, chlorophyll-a, turbidity and benthic deposits. A WQIP would include measures to achieve the purpose of the WQIP; a schedule for implementing the measures; water quality monitoring and reporting to determine the effectiveness of the implemented measures; and recommendations for next steps. Condition E-4, a “state-only” condition, addresses this Finding.

E. CERTIFICATION CONDITIONS

I. State-Only Certification Conditions

The following conditions shall apply to the Applicant and Activity under the authority of RSA 485-A:12, III and may not be incorporated into the federal permit. Under RSA 485-A:12, III and RSA 485-A:22, NHDES may enforce these state-only certification conditions (see Facts C-10, C-11, C-48, and Finding D-2):

- E-1. **Effective Date and Expiration of Certification:** This certification shall become effective on the date this certification is granted and shall remain effective for the term of the associated federal permit and as long as the Applicant operates the Activity (i.e., operates the portion of NH Rt 16 that involves the Activity). State-only certification conditions and certification conditions to the federal agency that are specified under Condition E-5 shall be applicable as long as the Applicant operates the Activity. Should the federal agency deny the permit, this certification becomes null and void.

For an explanation of why this condition is necessary to assure that the discharge from the proposed Activity will comply with Surface Water Quality Standards, and for the law(s) or regulation(s) that authorize this condition, see Facts C-2, C-10, and C-11 and Finding D-8.

- E-2. **Proposed Modifications to the Activity:** The Applicant shall consult with and receive prior written approval from NHDES regarding any proposed modifications to the Activity that could have a significant or material effect on the findings or conditions of this certification, including any changes to operation of the Activity.

For an explanation of why this condition is necessary to assure that the discharge from the proposed Activity will comply with Surface Water Quality Standards, and for the law(s) or regulation(s) that authorize this condition, see Facts C-2, C-10, and C-11 and Finding D-8.

- E-3. **Compliance Inspections:** In accordance with applicable laws, the Applicant shall allow NHDES to inspect the Activity and affected surface waters to monitor compliance with the conditions of this certification.

For an explanation of why this condition is necessary to assure that the discharge from the proposed Activity will comply with Surface Water Quality Standards, and for the law(s) or regulation(s) that authorize this condition, see Facts C-2, C-10, and C-11 and Finding D-8.

- E-4. **Water Quality Improvement Plan (WQIP):** If NHDES determines that the Activity is causing or contributing to a violation of Surface Water Quality Standards at a magnitude, duration, and frequency that contributes to an impaired designated use, then NHDES shall notify the Applicant in writing, and the Applicant shall submit a WQIP to NHDES for approval within 120 days of the notification or other time period mutually agreeable to the Applicant and NHDES. The purpose of the WQIP is to restore surface waters to meet Surface Water Quality Standards in accordance with Env-Wq 1703.01(b) for parameters that are influenced by the Activity. If the stream or riverine segment immediately upstream and beyond the influence of the Activity is not meeting Surface Water Quality Standards, then the purpose of the WQIP is to restore surface waters so that the parameters of water quality that are influenced by the Activity are not any worse than in the upstream segment. Parameters that may be influenced by the Activity include, but are not limited to, dissolved oxygen, temperature, pH, nutrients, chlorophyll-a, turbidity, and benthic deposits. The WQIP shall include measures to achieve the purpose of the WQIP; a schedule for implementing the measures; water quality monitoring and reporting to determine the effectiveness of the implemented measures; and recommendations for next steps.

For an explanation of why this condition is necessary to assure that the discharge from the proposed Activity will comply with Surface Water Quality Standards, and for the law(s) or regulation(s) that authorize this condition, see Facts C-2, C-10, and C-28 and Findings D-8, D-21, and D-23.

- E-5. **Compliance with Conditions during Operation of the Activity:** The Applicant shall comply with conditions E-7, E-8.b, and E-9, of this certification, when applicable, during the effective term of this certification as provided under Condition E-1, including prior to when the federal agency issues the federal permit that is associated with this certification and after the expiration of that permit.

For an explanation of why this condition is necessary to assure that the discharge from the proposed Activity will comply with Surface Water Quality Standards, and for the law(s) or regulation(s) that authorize this condition, see Facts C-2, C-10, C-11, C-47 through C-85, and Findings D-8, D-13, D-14, D-15, D-16, D-17, D-18, D-19, D-20, D-21, D-22, and D-23.

II. Certification Conditions to the Federal Agency

NHDES provides the following conditions to the federal agency under the authority of RSA 485-A:12, III, section 401 of the CWA, and 40 CFR Part 121, and must be incorporated into the federal permit that the federal agency would issue for the Activity. Under federal law, the federal agency shall be responsible for enforcing certification authority to enforce the following conditions under the federal permit expires with the expiration of the federal permit. Under RSA 485-A:12, III and RSA 485-A:22, NHDES may enforce these certification conditions to the federal agency (see Facts C-1, C-2, C-3, C-4, C-5, C-6, C-7, C-10, C-11, and C-48, and Finding D-2):

- E-6. **Compliance with Surface Water Quality Standards**
- Statement of necessity to comply with 40 CFR § 121.7(d)(1)(i) (see Fact C-6):
To provide assurance that proposed or potential point source discharges from the Activity will comply with Surface Water Quality Standards, it is necessary to include a condition that prohibits the Applicant from causing or contributing to a violation of Surface Water Quality

Standards (see Facts C-12 through C-43). Once this condition is incorporated into the federal permit, the federal agency will have the authority to ensure compliance with and enforce New Hampshire’s Surface Water Quality Standards, which is also necessary to assure that discharges from the Activity will comply with Surface Water Quality Standards.

- Citation to law that authorizes the condition to comply with 40 CFR § 121.7(d)(1)(ii) (see Fact C-6): RSA 485-A:12, III

For additional explanations of why this condition is necessary to assure that the discharge from the proposed Activity will comply with Surface Water Quality Standards, and for the additional law(s) or regulation(s) that authorize this condition, see Facts C-2, C-10, C-14, and C-46 and Findings D-8 and D-11.

- Condition:
The Activity shall not cause or contribute to a violation of Surface Water Quality Standards.

E-7. **Compliance with all Applicable Permits and Agreements**

- Statement of necessity to comply with 40 CFR § 121.7(d)(1)(i) (see Fact C-6):
To provide assurance that proposed or potential point source discharges from the Activity will comply with Surface Water Quality Standards, it is necessary to include a condition that requires the Applicant to comply with all applicable permits and the agreements that authorize or control the Activity, including those listed in Findings D-14, D-15, D-16, D-17, and D-18 of this certification. The purpose, in part, of a section 404 of the CWA permit, the 2022 NPDES CGP, the NHDOT/NHDES AoT MOA, a NHDES Shoreland Permit, and a NHDES Wetlands Permit is to help ensure that discharges to waters of the United States and surface waters of the state do not result in degradation of surface waters to a degree that would result in noncompliance with Surface Water Quality Standards. Once this condition is incorporated into the federal permit, the federal agency will have the authority to ensure compliance with and enforce applicable permits and the agreements that authorize or control the Activity, which is also necessary to assure that discharges from the Activity will comply with Surface Water Quality Standards.
- Citation to law that authorizes the condition to comply with 40 CFR § 121.7(d)(1)(ii) (see Fact C-6): RSA 485-A:12, III

For additional explanations of why this condition is necessary to assure that the discharge from the proposed Activity will comply with Surface Water Quality Standards, and for the additional law(s) or regulation(s) that authorize this condition, see Facts C-2, C-10, and C-47 through C-85, and Findings D-8 and D-13, D-14, D-15, D-16, D-17, and D-18.

- Condition:
The Applicant shall comply with all applicable permits and related agreements associated with or resulting from the Activity, including, but not limited to, those listed in Findings D-13, D-14, D-15, D-16, and D-17 of this certification. Should there be any discrepancies between permit requirements, the more stringent requirement as it relates to compliance with Surface Water Quality Standards shall control.

E-8. Reporting

- Statement of necessity to comply with 40 CFR § 121.7(d)(1)(i) (see Fact C-6):

To provide assurance that proposed or potential point source discharges from the Activity will comply with Surface Water Quality Standards, it is necessary to include a condition that requires the Applicant to submit certain reports to NHDES that summarize monitoring results, compliance with applicable permits and regulations, or deviations of conditions of this certification so that NHDES and other persons, including USACE, may know whether or not the Applicant is complying with certain requirements or benchmarks applicable to the Activity. If the reports identify or indicate discharges to surface waters that may cause noncompliance with Surface Water Quality Standards, NHDES, USACE, and other persons may respond to help ensure compliance with Surface Water Quality Standards, mitigate unauthorized degradation of surface water quality, or restore or maintain the chemical, physical, and biological integrity of surface waters. Once this condition is incorporated into the federal permit, the federal agency will have the authority to ensure compliance with and enforce these reporting requirements, which is also necessary to assure that discharges from the Activity will comply with Surface Water Quality Standards.
- Citation to law that authorizes the condition to comply with 40 CFR § 121.7(d)(1)(ii) (see Fact C-6):

RSA 485-A:12, III
- Condition:

The Applicant shall submit the following reports to NHDES:

 - a. Within 24 hours of receiving a written request from NHDES, the Applicant shall provide NHDES with a copy of the following items that are required under the 2022 NPDES CGP: turbidity benchmark monitoring results that the Applicant has submitted to EPA under Part 3 of the CGP; inspection reports required under Part 4 of the CGP; or corrective action log required under Part 5 of the CGP.

For additional explanations of why this condition is necessary to assure that the discharge from the proposed Activity will comply with Surface Water Quality Standards, and for the additional law(s) or regulation(s) that authorize this condition, see Facts C-2, C-10, and C-49 through C-55 and Findings D-8, D-14, D-18, and D-19.

- b. If the Applicant discovers noncompliance with a condition of this certification, the Applicant shall submit a report to NHDES, within 48 hours of such discovery, that includes a description of the circumstances that lead to noncompliance, a description of the corrective action(s) that resolved or would resolve noncompliance, and the date the Applicant achieved or expects to achieve compliance with the condition.

For additional explanations of why this condition is necessary to assure that the discharge from the proposed Activity will comply with Surface Water Quality Standards, and for the additional law(s) or regulation(s) that authorize this condition, see Facts C-2, C-10, and Finding D-8, D-18, and D-19.

- c. If the Applicant uses flocculants and a discharge occurs during construction of the Activity, the Applicant shall submit a summary report to NHDES on a weekly basis that includes the following as required under Env-Wq 1506.13(l): the type and quantity of flocculant used; the date, duration of discharge, and estimated discharge rate; the total volume of water treated;

the concentration of flocculant in the discharge, with supporting calculations; and a comparison of the amount of flocculant used to that which was originally proposed in the approved flocculant application plan and an explanation for any deviations from the plan.

For additional explanations of why this sub-condition is necessary to assure that the discharge from the proposed Activity will comply with Surface Water Quality Standards, and for the additional law(s) or regulation(s) that authorize this condition, see Facts C-2, C-10, C-64, C-65, C-79 and C-82 and Findings D-8, D-15, D-18, D-19, and D-22.

E-9. Construction and Maintenance of Vegetated Buffer

- Statement of necessity to comply with 40 CFR § 121.7(d)(1)(i) (see Fact C-6):
NHDES determined that the Activity would not use 20% or more of the remaining assimilative for a water quality parameter, in terms of either concentration or mass of pollutants and, therefore, would only cause an insignificant degradation of water quality if the Applicant, in part, designs and constructs the proposed vegetated buffer in accordance with requirements of Env-Wq 1508.09, or protective practices that are substantially equivalent in accordance with the NHDOT/NHDES AoT MOA, and maintains the vegetated buffer in accordance with the 2008 New Hampshire Stormwater Manual and the 2019 NHDOT Stormwater BMP Inspection and Maintenance Plan (see Facts C-41, C-60, C-62, C-63, and C-66). If the proposed vegetated buffer is not properly designed, constructed, or maintained, then overland stormwater runoff or sheet flow of stormwater caused by impervious surfaces from the Activity could result in erosion of land that could cause channels or ditches to form within the boundary or vicinity of the Activity that would cause unplanned point source discharges to surface waters. Therefore, NHDES determined that is necessary to include a condition that requires the Applicant to design, construct, and maintain the proposed vegetated buffer in accordance with Env-Wq 1508.09 or in accordance with the NHDOT/NHDES AoT MOA to provide assurance that discharges from the Activity will comply with Surface Water Quality Standards. Once this condition is incorporated into the federal permit, the federal agency will have the authority to ensure that the Applicant complies with requirements related to the design, construction, and maintenance of the proposed vegetated buffer, which is also necessary to assure that discharges from the Activity will comply with Surface Water Quality Standards.
- Citation to law that authorizes the condition to comply with 40 CFR § 121.7(d)(1)(ii) (see Fact C-6):
RSA 485-A:12, III

For additional explanations of why this condition is necessary to assure that the discharge from the proposed Activity will comply with Surface Water Quality Standards, and for the additional law(s) or regulation(s) that authorize this condition, see Facts C-2, C-10, C-41, C-60, C-62, C-63, C-66, C-67, C-79 and C-82 and Findings D-8, D-15, D-18, D-19, and D-20.

- Condition:
The Applicant shall design and construct the proposed vegetated buffer for the Activity in accordance with design requirements of Env-Wq 1508.09 or hold a waiver to those rules under Env-Wq 1509 from NHDES; or in accordance with the NHDOT/NHDES AoT MOA. If the Applicant chooses to design and construct the proposed vegetated buffer in accordance with the NHDOT/NHDES AoT MOA, then the applicant shall provide the stormwater and other water quality analyses that demonstrate that the vegetated buffer is substantially equivalent to the design requirements of Env-Wq 1508.09 upon request from NHDES.

Once the vegetated buffer is constructed, the Applicant shall inspect and maintain the vegetated buffer in accordance with the 2008 New Hampshire Stormwater Manual and the 2019 NHDOT Stormwater BMP Inspection and Maintenance Plan, as is provided for in the NHDOT/NHDES AoT MOA.

The Applicant shall submit records of inspections of the vegetated buffer to NHDES upon request.

E-10. Flocculants

- Statement of necessity to comply with 40 CFR § 121.7(d)(1)(i) (see Fact C-6):
NHDES determined that if the Applicant uses of flocculants during construction of the Activity, potential discharges of flocculants to surface waters may degrade or impair aquatic life in surface waters if the Applicant does not comply with provisions of Env-Wq 1506.13 (see Fact C-65 and Finding D-22). Therefore, to provide assurance that potential point source discharges of flocculants from the Activity will not occur and the Applicant will comply with Surface Water Quality Standards if the Applicant decides to use flocculants, it is necessary to include a condition that requires the Applicant to comply with the requirements of Env-Wq 1506.13. Once this condition is incorporated into the federal permit, the federal agency will have the authority to ensure that the Applicant complies with requirements for flocculants under Env-Wq 1506.13, which is also necessary to assure that discharges from the Activity will comply with Surface Water Quality Standards.
- Citation to law that authorizes the condition to comply with 40 CFR § 121.7(d)(1)(ii) (see Fact C-6):
RSA 485-A:12, III

For an explanation of why this condition is necessary to assure that the discharge from the proposed Activity will comply with Surface Water Quality Standards, and for the law(s) or regulation(s) that authorize this condition, see Facts C-2, C-10, C-52, C-65, and C-61 and Findings D-8 and D-22.

- Condition:
Prior to using flocculants, the Applicant shall submit to NHDES the information required under Env-Wq 1506.13(f). During use of flocculants, the Applicant shall comply with applicable requirements of Env-Wq 1506.13.

F. NHDES CONTACT

Reports and other items that must be submitted to NHDES under a condition of this certification should be sent to the NHDES Water Quality Certification Supervisor and to the following NHDES email address:

wqc@des.nh.gov. On the date this certification is granted, James Tilley is the NHDES Water Quality Certification Supervisor and can be reached at james.w.tilley@des.nh.gov or (603) 271-0699. If you have questions regarding this certification, please contact James Tilley. If you are unable reach the NHDES Water Quality Certification Supervisor, please contact NHDES at (603) 271-3503.

G. ENFORCEMENT

Certification conditions are subject to enforcement mechanisms available to the federal licensing or permitting agency and to the state of New Hampshire, including those provided under RSA 485-A:12, III (see Fact C-10).

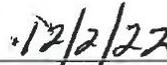
H. APPEAL PROCESS

Any person aggrieved by this decision may appeal to the N.H. Water Council (“Council”). An Environmental Fact Sheet with information on appealing a decision of the N.H. Department of Environmental Services can be found at the following link: [CO-7 \(nh.gov\)](https://www.nh.gov/CO-7). A link to the Council’s rules, is available on the [New Hampshire Environmental Council website](#) (or more directly at the [Water Council page](#)). Copies of the rules also are available from the NHDES Public Information Center at (603) 271-2975.

I. SIGNATURE AND DATE



Rene J. Pelletier, P.G., Director
NHDES Water Division



Date

cc: Michael Hicks (USACE)
Mark Hemmerlein (NHDOT)
Kevin Nyhan (NHDOT)
Jonathan Evans (NHDOT)
Timothy Dunn (NHDOT)
Calvin Diessner (NHDES)
Karl Benedict (NHDES)
Erin Holmes (NHDES)
Ted Diers (NHDES)
Ridge Mauck (NHDES)