Mr. Josh Levy
Seabrook Development Associates, Inc.
322 Reservoir Street
Needham, MA 02494

WATER QUALITY CERTIFICATION

In Fulfillment of

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

WQC # 2018-404I-002

Activity Name	Seabrook Commercial Development
Activity Location	603 Lafayette Road, Seabrook, New Hampshire
Affected Surface waters	Mary's Brook - NHRIV600031004-17 Mary's Pond on Mary's Brook - NHIMP6000301004-07 Cains Pond on Cains Brook- NHIMP6000301004-05 Unnamed wetlands
Owner/Applicant	Mr. Josh Levy Seabrook Development Associates, Inc. 322 Reservoir Street Needham, MA 02494
Applicable Federal and State permit(s):	U.S. Army Corps of Engineers Individual 404 Permit (ACOE# NAE-2017-00395) (PENDING) New Hampshire Department of Environmental Services Wetlands Permit [File No. 2017-02335] (PENDING) New Hampshire Department of Environmental Services Alteration of Terrain Permit AoT-1618
DATE OF APPROVAL (subject to Conditions below)	January 8, 2020

A. INTRODUCTION

Seabrook Development Associates, Inc. (Applicant) is proposing to construct 97,290 square feet (sf) of retail space, a 200 seat restaurant (4,992 sf) and associated drives, parking areas and utilities on an approximate 23.40 acre parcel of land located on the west side of Lafayette Road in Seabrook, NH. A

more complete description of the Activity is provided in Finding D-1 of this Certification.

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

B. 401 CERTIFICATION APPROVAL

Based on the facts, findings and conditions noted below, the New Hampshire Department of Environmental Services (NHDES or DES) has determined that there is reasonable assurance that construction and operation of the Activity will not violate surface water quality standards. NHDES hereby issues this Certification, subject to the conditions in Section E of this Certification, in accordance with Section 401 of the United States Clean Water Act (33 U.S.C. 1341) and RSA 485-A:12, III.

C. STATEMENT OF FACTS AND LAW

C-1. Section 401 of the United States Clean Water Act (33 U.S.C. 1341) states, in part: "Any applicant for a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates or will originate...that any such discharge will comply with the applicable provisions of sections 301, 302, 303, 306, and 307 of this title.....No license or permit shall be granted until the certification required by this section has been obtained or has been waived...No license or permit shall be granted if certification has been denied by the State..."

C-2. §401(d) of the CWA provides that: "Any certification provided under this section [401] shall set forth any effluent limitations and other limitations, and monitoring requirements necessary to assure that any applicant for a Federal license or permit will comply with [enumerated provisions of the CWA]...and with any other appropriate requirement of State law set forth in such certification, and shall become a condition on any Federal license or permit subject to the provisions of this section."

According to EPA 401 Guidance[1], "Under § 401(d) the water quality concerns to consider and the range of potential conditions available to address those concerns, extend to any provision of state or tribal law relating to the aquatic resource. Considerations can be quite broad so long as they relate to water quality. The U.S. Supreme Court has stated that, once the threshold of a discharge is reached (necessary for § 401 certification to be applicable), the

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

conditions and limitations in the certification may address the permitted activity as a whole."[2]

C-3. NH RSA 485-A:12, III, states: "No activity, including construction and operation of facilities, that requires certification under section 401 of the Clean Water Act and that may result in a discharge, as that term is applied under section 401 of the Clean Water Act, to surface waters of the state may commence unless the department certifies that any such discharge complies with the state surface water quality standards applicable to the classification for the receiving surface water body. The department shall provide its response to a request for certification to the federal agency or authority responsible for issuing the license, permit, or registration that requires the certification under section 401 of the Clean Water Act. Certification shall include any conditions on, modifications to, or monitoring of the proposed activity necessary to provide assurance that the proposed discharge complies with applicable surface water quality standards. The department may enforce compliance with any such conditions, modifications, or monitoring requirements as provided in RSA 485-A:22."

C-4. NH RSA 485-A: IV states: "No activity that involves surface water withdrawal or diversion of surface water that requires registration under RSA 488:3, that does not otherwise require the certification required under paragraph III, and which was not in active operation as of the effective date of this paragraph, may commence unless the department certifies that the surface water withdrawal or diversion of surface water complies with state surface water quality standards applicable to the classification for the surface water body. The certification shall include any conditions on, modifications to, or monitoring of the proposed activity necessary to provide reasonable assurance that the proposed activity complies with applicable surface water quality standards."

C-5. NH RSA 488:3 regarding registration of withdrawals and discharges states the following:

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

C-6. NH RSA 485-A:8 and Env-Wq 1700 (Surface Water Quality Standards), together fulfill the requirements of Section 303 of the Clean Water Act that the State of New Hampshire adopt water quality standards consistent with the provisions of the Act.

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

C-7. Env-Wq 1701.02, entitled "Applicability", states that 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 surface waters."

C-8. Env-Wq 1703.01 entitled "Water Use Classifications; Designated Uses", states the following:

"(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-9. Env-Wq 1702.44 defines surface waters as "surface waters of the state" as defined in NH RSA 485-A:2, XIV and waters of the United States as defined in 40 CFR 122.2.

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

40 CFR 122.2 defines "waters of the United States".

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

C-11. Env-Wq 1702.07 states that ""Best management practices" means 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-12. Env-Wq 1702.05 states that ""Benthic community" means the community of plants and animals that live on, over, or in the substrate of the surface water."

C-13. Env-Wq 1702.06 states that ""Benthic deposit" means any sludge, sediment, or other organic or inorganic accumulations on the bottom of the surface water."

C-14. Env-Wq 1702.08 states that ""Biological integrity" means the ability of an aquatic ecosystem to support and maintain a balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of similar natural habitats of a region."

C-15. Env-Wq 1702.26 states that ""Mixing zone" means a defined area or volume of the surface water surrounding or adjacent to a wastewater discharge where the surface water, as a result of the discharge, might not meet all applicable water quality standards."

C-16. Env-Wq 1702.15 states that ""Cultural eutrophication" means 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-17. Env-Wq 1702.17 states that ""Designated uses" means 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-18. Env-Wq 1702.18 states that ""Discharge" means

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

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

C-19. Env-Wq 1702.22 states that ""Existing uses" means 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-20. Env-Wq 1702.33 states that ""Nuisance species" means 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-21. Env-Wq 1702.38 states that ""Pollutant" means "pollutant" as defined in 40 CFR 122.2." According to 40 CFR 122.2, "pollutant" means "dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water."

C-22. The term "discharge", as applied under section 401 of the Clean Water Act means the potential for a discharge. It does not need to be a certainty, only that it may occur should the federal license or permit be granted. Further, the discharge does not need to involve the addition of pollutants (such as water released from the tailrace of a dam). As the U.S. Supreme Court has stated "[w]hen it applies to water, 'discharge' commonly means a 'flowing or issuing out'" and an addition of a pollutant is not "fundamental to any discharge" [3].

C-23. Env-Wq 1703.03 entitled "General Water Quality" includes the following:

(c)(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;

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

c. 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-24. Env-Wq 1703.06 includes water quality criteria for bacteria.

C-25. Env-Wq 1703.07 includes water quality criteria for dissolved oxygen.

C-26. Env-Wq 1703.08 entitled "Benthic Deposits" states the following:
"(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-27. 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-28. Env-Wq 1703.11 entitled "Turbidity" states the following:

"(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-29. Env-Wq 1703.13 entitled "Temperature", states the following:

"(a) There shall be no change in temperature in class A waters, unless naturally occurring.
(b) Temperature in class B waters shall be in accordance with RSA 485-A:8, II, and VIII."

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

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

Agency, whichever requirements and recommendations provide the most effective level of thermal pollution control."

C-30. Env-Wq 1703.14, entitled "Nutrients", states the following:

"(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-31. Env-Wq 1703.18, entitled "pH", states the following:

"(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-32. Env-Wq 1703.19, entitled "Biological and Aquatic Community Integrity", states the following:

"(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-33. Env-Wq 1703.21 entitled "Water Quality Criteria for Toxic Substances" states the following:

"(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."

C-34. Env-Wq 1707.01 entitled "Designation of Mixing Zones" states the following:

"(a) Because RSA 485-A:8, I prohibits the discharge of any sewage or other wastes into class A waters, mixing zones shall be prohibited in such waters.

(b) For class B waters, the department shall designate a limited area or volume of the surface water as a mixing zone if the applicant provides sufficient scientifically valid documentation to allow the department to independently determine that all criteria in Env-Wq 1707.02 have been met."

C-35. Env-Wq 1707.02 entitled "Criteria for Approval of Mixing Zones" states that "the department shall not approve a mixing zone unless the proposed mixing zone:

(a) Meets the criteria in Env-Wq 1703.03(c)(1);

(b) Does not interfere with biological communities or populations of indigenous species;

(c) Does not result in the accumulation of pollutants in the sediments or biota;

(d) Allows a zone of passage for swimming and drifting organisms;

(e) Does not interfere with existing and designated uses of the surface water;

(f) Does not impinge upon spawning grounds or nursery areas, or both, of any indigenous aquatic species;

(g) Does not result in the mortality of any plants, animals, humans, or aquatic life within the mixing zone;

(h) Does not exceed the chronic toxicity value of 1.0 TUc at the mixing zone boundary; and

(i) Does not result in an overlap with another mixing zone."

C-36. Env-Wq 1707.03 entitled "Conditions for Mixing Zones" states that "if the department approves a mixing zone, the department shall include such conditions as are needed to ensure that the criteria on which the approval is based are met."

C-37. Env-Wq 1707.04 entitled "Technical Standards" states that mixing zones "shall be established in accordance with "Technical Support Document for Water Quality-based Toxics Control", EPA/505/2-90-001, dated March 1991, available as noted in Appendix B."

C-38. Antidegradation provisions are included in Env-Wq 1702 and Env-Wq 1708.

a. Env-Wq 1702.03 states that ""Antidegradation" means a provision of the water quality standards that maintains and protects existing water quality and uses.
b. Env-Wq 1708.02 states that "Antidegradation shall apply to: (a) Any proposed new or increased activity, including point source and nonpoint source discharges of pollutants, that would lower water quality or 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) (Assessing Waterbodies) which states "The applicant shall characterize the existing water quality and determine if there is remaining assimilative capacity for each parameter in question."
d. According to Env-Wq 1708.03 (b), "A proposed discharge or activity shall not eliminate any existing uses or the water quality needed to maintain and protect those uses".
e. Env-Wq 1702.04 states that "Assimilative capacity" means 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.
g. Env-Wq 1708.09 entitled "Significant or Insignificant Determination" states the following: (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.
h. Env-Wq 1708.01(b)(1), in general, states 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 assure water quality adequate to fully protect existing uses. Further, the department shall assure that the highest statutory and regulatory requirements shall be achieved for all new and existing point sources and that all cost effective and reasonable best management practices for nonpoint source control shall be implemented.
i. Env-Wq 1708.01(b)(2), in general, states 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-39. Env-Wq 1708.04 entitled "Protection of Water Quality in ORW" states that the following:

"(a) Surface waters of national forests and surface waters designated as natural under NH RSA 483:7-a, I, shall be considered outstanding resource waters (ORW).

(b) Subject to (c), below, water quality shall be maintained and protected in surface waters that constitute ORW.

(c) The department shall allow a limited point or nonpoint source discharge to an ORW only if:

(1) The discharge will result in no more than temporary and short-term changes in water quality, wherein "temporary and short term" means that degradation is limited to the shortest possible time;

(2) The discharge will not permanently degrade water quality or result at any time in water quality lower than that necessary to protect the existing and designated uses in the ORW; and

(3) All practical means of minimizing water quality degradation are implemented."

C-40. Env-Wq 1708.06 entitled "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 a Class A Water, the requirements of Env-Wq 1708.05 shall also apply."

C-41. Env-Wq 1708.12 states the "" transfer" means the intentional conveyance of water from one surface water to another surface water for the purpose of

increasing volume of water available for withdrawal from the receiving surface water. The term does not include the transfer of stormwater, for the purpose of managing stormwater during construction, between basins created or otherwise lawfully used for stormwater detention or treatment, or both, and does not include the discharge of stormwater from a detention or treatment basin to a surface water."

C-42. RSA 483 regarding Designated Rivers, states the following:

RSA 483:4, XVIII. "River corridor" means the river and the land area located within a distance of 1,320 feet of the normal high water mark or to the landward extent of the 100-year floodplain as designated by the Federal Emergency Management Agency, whichever distance is larger.

RSA 483:8-a, III. The duties of such committees shall be:

(a) To advise the commissioner, the advisory committee, the municipalities through which the designated river or segment flows, and municipalities within tributary drainage areas on matters pertaining to the management of the river or segment and tributary drainage areas. Municipal officials, boards, and agencies shall inform such committees of actions which they are considering in managing and regulating activities within designated river corridors.

(b) To consider and comment on any federal, state, or local governmental plans to approve, license, fund or construct facilities that would alter the resource values and characteristics for which the river or segment is designated.

RSA 483:10-b. Withholding of Section 401 Certification. – The general court finds that the development of any dam or channel alteration activities within a natural river or segment or the development of any new dam within a rural or community river or segment, except as provided in RSA 483:9-a, II and RSA 483:9-b, II, will alter the physical and chemical characteristics of that river and will constitute violation of the water quality standards established under RSA 485-A:8. The commissioner shall deny certification of any federally licensed or permitted activity on such designated rivers or segments under section 401 of the Federal Water Pollution Control Act, P.L. 92-500, as amended.

RSA 483:12-a State Action; Notification of Rivers Coordinator; Petition for Review

I. Any state agency considering any action affecting any river or segment designated under this chapter shall notify the rivers coordinator prior to taking any such action. Such agency shall forward to the rivers coordinator for review and comment copies of all notices of public hearings, or, where a public hearing is not required, a copy of the application for issuance of a permit, certificate, or license within the designated river or corridor under RSA 485-C, RSA 485-A, RSA 483-B, RSA 12-E, RSA 270:12, RSA 482, RSA 482-A, RSA 149-M, RSA 430, or RSA 147-A. If an agency is notified by the rivers coordinator that a proposed activity would violate a protection measure under RSA 483:9, 483:9-a, 483:9-aa, or 483:9-b, such agency shall deny the application.

C-43. NH RSA 485:61 regarding Rules for Water Conservation, states the following:

"I. The department shall adopt rules, pursuant to RSA 541-A, for water conservation practices for water users. These rules shall strike a reasonable balance between environmental, energy, and economic impacts and be consistent with current industry standards and practices for different types of water users.

II. The water conservation rules in paragraph I of this section shall apply to all new permit applicants and applications for water withdrawals subject to the provisions of RSA 485:3, RSA 485:48, RSA 485-C:21 and section 401 of the Clean Water Act.

III. Water conservation rules shall be consistent with applicable state or federal rules and regulations. Water Conservation Rules were adopted May 14, 2005 codified as Env-Wq 2101."

C-44. Env-Wq 2101.24 entitled "Water Conservation Plan Required", states that

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

"(5) For a new withdrawal from a surface water associated with a project requiring a 401 Water Quality Certification, the water conservation plan shall be submitted prior to or in conjunction with the application for a 401 Water Quality Certification pursuant to Section 401 of the federal Clean Water Act;
(6) For a new withdrawal from a surface water that requires water quality certification pursuant to RSA 485-A:12, IV, the water conservation plan shall be submitted prior to or in conjunction with the certification request".

Env-Wq 2101.23, entitled Waivers, allows DES to grant waivers of certain provisions in Env-Wq 2101 provided the person requesting the waiver submits a written request to DES that includes the information specified in Env-Wq 2101.23(d).

C-45. NH RSA 483:4 defines "interbasin transfer" and "river drainage basin" as follows:

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

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

C-46. NH RSA 483:9 Natural Rivers Protection (at 9-a, 9-aa, and 9-b) states that no interbasin transfers from designated rural, rural-community, or community rivers or their segments shall be permitted.

C-47. In 2010, DES published guidance (hereinafter called the 2010 instream flow guidance or 2010 ISF guidance) for estimating instream flow requirements for the protection of aquatic life for situations. The guidance is available at: http://des.nh.gov/organization/commissioner/pip/publications/wd/documents/wd-11-3.pdf.

C-48. NH Division of Pesticides regulations (Pes 1001.01-Restrictions on Pesticide Use by Residential Property Owners, Private Applicators and Commercial Applicators) states that "[N]o residential property owner, private applicator, or commercial applicator shall apply pesticides within the following distances of the reference line[4]:

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

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

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

C-49. With regards to fertilizers, NH RSA 483:1, XXII defines turf as follows: "Turf'" or "lawn" means non-agricultural land planted in closely mowed, managed grasses except golf courses, parks, athletic fields, and sod farms."

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

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

[4] Reference line is defined in Pes 101.28.

greater than 0.7 pounds per 1,000 square feet per month when applied according to the instructions on the label."

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

"I. No fertilizer sold at retail that is intended for use on turf shall exceed a content level of 0.67% available phosphate unless specifically labeled for establishing new lawns, for repairing a lawn, for seeding, or for use when a soil test indicates a phosphorus deficiency.

II. No fertilizer sold at retail that is intended for use on newly established or repaired lawns, or for lawns testing deficient in phosphorus shall exceed an application rate of one pound per 1,000 square feet annually of available phosphate.

III. No natural organic turf fertilizer shall exceed a per application rate of one pound of available phosphate per 1,000 square feet when applied according to the instructions on the label."

In addition, NH RSA 483-B:9 (d) of the Shoreland Water Quality Protection Act states the following: "No fertilizer shall be applied to vegetation or soils located within 25 feet of the reference line of any public water. Beyond 25 feet, slow or controlled release fertilizer, as defined by rules adopted by department, may be used."

C-50. 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 EPA for approval. TMDLs include source identification, determination of the allowable load and pollutant reductions (by source) necessary to meet the allowable load. Once a TMDL is conducted, the pollutant/surface water is transferred to the list of impaired waters with approved TMDLs (known as Category 4A waters). The Section 303(d) List is, therefore, a subset of all impaired waters. The most recent Section 303(d) list of impaired waters is the 2018 Section 303(d) List. A list of all impaired waters is available at http://www2.des.state.nh.us/WaterShed_SWQA/WaterShed_SWQA.aspx

C-51. On December 20, 2007, EPA approved the Northeast Regional Mercury TMDL[5] which addressed mercury impairments in all New Hampshire fresh surface waters.

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

C-52. On September 21, 2010, EPA approved the Statewide Bacteria TMDL for 394 surface waters listed as impaired on the 2008 303(d) List of impaired waters[6].

C-53. When a surface water does not meet water quality standards (i.e., when it is impaired), the addition of pollutants causing or contributing to impairment should be avoided as indicated in the following regulation and statute:

> Env-Wq 1703.03 (a) states that "The presence of pollutants in the surface waters shall not justify further introduction of pollutants from point or nonpoint sources, alone or in any combination".
>
> NH RSA 485-A:12 (I) (Enforcement of Classification) states that "After adoption of a given classification for a stream, lake, pond, tidal water, or section of such water, the department shall enforce such classification by appropriate action in the courts of the state, and it shall be unlawful for any person or persons to dispose of any sewage, industrial, or other wastes, either alone or in conjunction with any other person or persons, in such a manner as will lower the quality of the waters of the stream, lake, pond, tidal water, or section of such water below the minimum requirements of the adopted classification".

C-54. NH RSA 482-A (Fill and Dredge in Wetlands) requires any person who excavates, removes, fills, dredges or constructs any structures in or on any bank, flat, marsh, or swamp in and adjacent to any waters of the state to obtain a wetlands permit from DES [NH RSA 482-A:3 I (a)]. NHDES has received an application from the Applicant for a Wetlands Permit (file number 2017-02335). In accordance with a NHDES Wetlands Bureau Time Extension Agreement dated December 24, 2019, which was signed by the Applicant and NHDES, the Applicant has agreed to provide a wetlands mitigation package to NHDES no later than March 5, 2020.

C-55. NHDES Alteration of Terrain regulations (Env-Wq 1500) include design criteria for stormwater best management practices (BMPs) as well as criteria for minimizing the hydrologic impacts of stormwater runoff both during and after construction. Further, BMP design details as well as guidance for preparing pollutant loading analyses using the "Simple Method" are provided in *The New Hampshire Stormwater Manual* (http://des.nh.gov/organization/divisions/water/stormwater/manual.htm).

C-56. In accordance with Env-Wq 1500, NHDES received an application from the Applicant for a NHDES Alteration of Terrain permit. On June 11, 2019, the NHDES Alteration of Terrain Bureau issued Alteration of Terrain Permit AoT-1618 for the Activity with conditions.

C-57. On May 24, 2018, NHDES received an application from the Applicant for Section 401 Water Quality Certification for the Activity. Supplemental information was

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[6] Final Report, New Hampshire Statewide Total Maximum Daily Load (TMDL) for Bacteria Impaired Waters. Prepared by FB Environmental Associates, Inc. for the New Hampshire Department of Environmental Services. September, 2010.

received from that time until June 11, 2019 which included a revised pollutant loading analysis and construction plans.

C-58. The U.S. Army Corps of Engineers (ACOE) received an application from the Applicant for an individual section 404 permit. On November 17,2017 the ACOE issued a provisional permit (NAE-2017-00395). The permit does not authorize work; rather it only describes the work that will be authorized, as well as any conditions that may be placed on the final permit by the Department of Army, if the New Hampshire Water Quality Certification and/or Coastal Zone Management program are satisfied.

C-59. NHDES issued a draft section 401 Water Quality Certification for public comment from October 26, 2018 to November 29, 2018. No comments were received.

C-60. Substantive Changes Made to the 401 Water Quality Certification: Since the draft certification was issued for public comment in the fall of 2018, revisions were made to the plans that included removal of a proposed permanent stormwater treatment system from the NH Department of Transportation Right-of-Way. This change resulted in a reduction of approximately 0.33 acres of imperviousness compared to the plan reviewed for the draft Certification. The reduction in imperviousness primarily came from a reduction in the proposed gravel pad for future development. The revised plans also received an Alteration of Terrain (AoT) permit and conditional approval of a revised pollutant loading analysis. This final 401 Water Quality Certification reflects these changes.

D. FINDINGS

D-1. *Activity Description:* The proposed Activity is described in the text and plans provided in the application for Section 401 Water Quality Certification filed by the Applicant (see C-56) and in information provided later. The approved plans, latest revision May 16, 2019 approved by the Alteration of Terrain Bureau, and pollutant loading analysis received on May 3, 2019 are part of this certification.

In general, the proposed commercial development project includes 97,290 square feet (sf) of retail space, a 200 seat restaurant (4,992 sf), 440 parking spaces and other associated infrastructure on an approximate 23.40 acre parcel of land in Seabrook, New Hampshire. The parcel abuts I-95 to the west, Route 107 to the north, Lafayette Road (Route 1) to the east, and Perkins Avenue (which is where a manufactured and mobile home park called Seabrook Village is located) to the south. Access to the project is proposed to be from Perkins Avenue. Approximately 2 acres of the property has frontage on Lafayette Road that is currently developed as a medical office building. The remaining portion of the site is currently undeveloped but was once used as a sand and gravel extraction area, which created or modified much of the wetland on the site. There is an existing pond on the south side of the site called Benny's Pond and a smaller pond in the northwestern portion of the site. These ponds are proposed to be dewatered with floating pumps that discharge to a sedimentation basin. The total area of permanent and temporary wetland

impacts as well as information regarding mitigation, are included in the Applicant's application for a NHDES Wetlands Permit. Impervious area on the site (excluding ponds) is proposed to increase by approximately 10.4 acres with stormwater runoff from much of this area treated by infiltration practices.

The project will be served by municipal sewer and public water. Stormwater will be collected by catch basins and conveyed by stormwater pipes and swales to structures that will detain and/or treat the stormwater. The intent of the drainage design is to maintain the post-development peak flow to the pre-development peak flow conditions and to treat the stormwater. Proposed detention/treatment structures for on-site drainage include 5 extended wet ponds (one of which is Benny's Pond on the south side of the property which is to be dredged and reconstructed), 1 extended detention wetland, 1 shallow wetland, and 3 infiltration basins. Existing treatment structures that will be used include an infiltrating catch basin and a rain garden. The majority of drainage from the site discharges to a 36-inch culvert under Perkins Avenue which discharges to Mary's Brook. Mary's Brook flows south into Mary's Pond and Cains Pond and then east along Cains Brook to the estuary.

Construction is anticipated to take approximately 2-½ years to complete.

D-2. *Responsibility:* The Applicant is responsible for the Activity.

D-3. *Navigable Waters:* Surface waters are navigable waters for the purposes of certification under Section 401 of the Clean Water Act.

D-4. *Potentially Affected Surface Waters:* The named and unnamed streams and wetlands affected by the Activity, are surface waters under Env-Wq 1702.44 (see C-9) and are therefore subject to New Hampshire Surface Water Quality Standards (Env-Wq 1700 – see C-6). NHDES has assigned Assessment Unit (AU) identification numbers to many, but not all surface waters. Surface waters that do not have an AU number are considered surface waters of the State in accordance with Env-Wq 1702.44 (see C-9). Surface waters that could be potentially affected by the Activity and their associated AU numbers (where available) include, but are not limited to the following:

Assessment Unit ID*	Description
NHRIV600031004-17	Mary's Brook
NHIMP600031004-07	Mary's Pond on Mary's Brook (an approximate 2 acre impoundment)
NHIMP600031004-05	Cains Pond on Cains Brook (an approximate 3 acre impoundment)
--	Unnamed wetlands
• The waterbodies with AUIDs are listed in order from upstream to downstream	

D-5. *Class of Waters and Designated Uses:* The potentially affected surface waters are Class B waterbodies; therefore, Class B New Hampshire surface water quality standards apply to the Activity. Class B waterways are considered suitable for aquatic life, primary and secondary contact recreation, fish consumption, wildlife, and, after adequate treatment, as a water supply (see C-17).

D-6. *Discharges:* Stormwater runoff during construction and/or operation of the Activity, including snowmelt runoff, and groundwater flow from within the area affected by the Activity, are discharges as defined in Env-Wq 1702.18 (see C-18). They are also discharges as applied under Section 401 of the Clean Water Act (see C-22). If not properly controlled, such discharges may cause the permanent alteration of, or temporary impacts to surface water quality, quantity, or both.

D-7. *Federal 404 Permit Required*: The Activity requires an individual section 404 permit from the U.S. Army Corps of Engineers (ACOE). The ACOE has issued a provisional permit (see C-58) which does not authorize work; rather it only describes the work that will be authorized, as well as any conditions that may be placed on the final permit by the Department of Army, if the New Hampshire Water Quality Certification and/or Coastal Zone Management program are satisfied. It is expected that the USACOE will issue a permit following issuance of the 401 Certification.

D-8. *401 Water Quality Certification Required:* Because the Activity may result in a discharge (see D-6) to navigable surface waters (see D-3) and requires a federal permit (see D-7), a section 401 Water Quality Certification is required in accordance with section 401 of the Clean Water Act (see C-1) and RSA 485-A:12, III (see C-3). NHDES has received an application from the Applicant for 401 Water Quality Certification (see C-57).

D-9. *NHDES Wetlands Permit Required*: Surface waters are jurisdictional wetlands for the purposes of wetlands permitting under RSA 482-A. The Activity includes dredge and fill of jurisdictional wetlands in New Hampshire and therefore requires a NHDES Wetlands Permit (or permits) under NH RSA 482-A. NHDES has received an application from the Applicant for a Wetlands Permit and has assigned it a file number (see C-54). This 401 Certification decision relies, in part, on an approved permit (or permits) from the NHDES Wetlands Bureau for the potential impacts to jurisdictional wetlands. Through its processing and issuance, NHDES wetlands permits issued for the Activity will address the dredge and fill impacts to jurisdictional wetlands. Issuance of the wetlands permit is contingent on approval of a wetlands mitigation plan and redesign of Benny's Pond as a wildlife pond. In accordance with the NHDES Wetlands Bureau Time Extension Agreement dated December 24, 2019, which was signed by the Applicant and NHDES, the Applicant has agreed to provide the mitigation package to NHDES no later than March 5, 2020.

D-10. *NHDES AoT Permit Required:* The Activity will involve alteration of terrain that will require a NHDES Alteration of Terrain (AoT) permit issued according to RSA 485-A:17. NHDES received an application for an AoT permit and on June 11, 2019 issued AoT Permit AoT-1618 (see C-55). When AoT permits are required for the Activity, this 401 Certification decision relies, in part, on an approved permit (or permits) from the NHDES AoT Bureau for the potential construction and/or operation-related impacts of stormwater on surface waters. Through its processing and issuance, AoT permits issued for the Activity will address many of the potential impacts of stormwater from the Activity on receiving surface waters during and after construction.

D-11. *Designated Rivers Determination:* The Activity is not within ¼ mile of a Designated River under the Designated Rivers Program (see C-42). As such, the Activity is not within the jurisdiction of the Designated Rivers Program.

D-12. *Outstanding Resource Waters Determination:* The surface waters in the vicinity of the Activity are not Outstanding Resource Waters (see C-39).

D-13. *Interbasin Transfer Determination:* The Activity does not involve an interbasin transfer as defined in RSA 483:4 (see C-45)

D-14. *Transfer of Water Determination:* The Activity does not involve a "transfer" of water as defined in Env-Wq 1708.12 (a) (see C-41).

D-15. *Surface Water Withdrawals Determination:* The Activity does not involve any surface water withdrawals that exceed those specified in RSA 488:3 (see C-5).

D-16. *NHDES Water Conservation Program Requirements:* On September 17, 2018, staff from the NHDES Water Conservation Program confirmed that the Activity, as described in the 401 WQC application, does not require Water Use Registration (see C-5) or submittal of a Water Conservation Plan (see C-43 and C-44). This is based on the understanding that there are only construction-related withdrawals such as for dewatering excavation pits and pumping of water to drain an on-site wetland.

D-17. *Impaired Surface Waters:* According to the 2018 305(b)/303(d) lists of impaired waters (see C-50), the following surface waters in the vicinity of the proposed Activity are listed as impaired. All known impairments, with the exception of those highlighted in bold (which have approved TMDLs), are on the Section 303(d) List. There is currently insufficient data to assess other designated uses (such as aquatic life) in Mary's Brook and Mary's Pond[7].

Assessment Unit (AU)	**Description**	**Cause of Impairment (Designated Use Impaired)**
NHRIV600031004-17	Mary's Brook	**Mercury (FC)**
NHIMP600031004-07	Mary's Pond (a small impoundment on Mary's Brook)	**Mercury (FC)**
NHIMP600031004-05	Cains Pond on Cains Brook (an approximate 3 acre impoundment)	**Mercury (FC)** Dissolved Oxygen (AL) pH (AL)

[7] Some data was collected in Mary's Pond by the Cains Brook Volunteer River Assessment Program group in 2009 but it was insufficient to make an assessment (see https://www.des.nh.gov/organization/divisions/water/wmb/vrap/cains/documents/cns_data09.pdf). Further the data is now considered too old to be used for current assessments according to the 2018 New Hampshire Consolidated Listing and Assessment Methodology (see https://www.des.nh.gov/organization/divisions/water/wmb/swqa/2018/documents/r-wd-19-04.pdf).

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

When a surface water does not meet water quality standards (i.e., when it is impaired), the addition of pollutants causing or contributing to impairment should be avoided (see C-53). As noted above, all fresh surface water 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 C-51). The primary source of mercury is atmospheric deposition from in-state and out-of-state emissions. The proposed Activity is not expected to have a significant impact on mercury levels in fish tissue.

D-18. *Mary's Pond and Cains Pond:* Drainage from the Activity flows south from Mary's Brook to Mary's Pond to Cains Pond (see D-4) and then east to Cains Brook where it eventually discharges to the estuary. According to a 2006 Watershed Study[8], Mary's Pond has a surface area of approximately 2 acres with an average depth of approximately 6 feet. Using funds from Clean Water Act Section 319 grants, approximately 12,000 tons of accumulated sediment was dredged from Cains Pond from 2007-2010. This increased the average pond depth from approximately 2 feet to 7 feet, which allowed non-motorized boats to once again navigate Cains Pond. It is important that the Activity properly treats its stormwater to prevent adverse effects on downstream surface waters, including, but not limited to, Cains Pond.

D-19. *Fishery Type Determination*: According to representatives of the New Hampshire Fish and Game Department (NHFGD), Mary's Brook (including Mary's Pond) and Cains Brook (including Cains Pond) are warm water fisheries.

D-20. *Construction – Inspection of Erosion and Sediment Controls:* The AoT permit requires the Applicant to employ a Certified Professional in Erosion and Sediment Control or a Professional Engineer licensed in New Hampshire to inspect the site from the start of alteration of terrain activities until the site is in full compliance with the AoT permit. During this period, the Monitor shall do the following:

- Inspect the subject site at least once a week, and if possible, during any ½ inch or greater rain event (i.e. ½ inch of precipitation or more within a 24-hour period) or if unable to be present during such a storm, inspect the site within 24 hours of this event.
- Provide technical assistance and recommendations to the Contractor on the appropriate Best Management Practices (BMPs) for Erosion and Sediment

[8] *Cains Brook and Mill Creek Watershed Management Plan, Seabrook New Hampshire.* By Waterfront Engineers. December 28, 2006.

Controls required to meet the requirements of RSA 485-A:17 and all applicable NHDES permit conditions.

- Within 24 hours of each inspection, submit a report to the NHDES AoT Bureau via email.

These requirements will help to ensure water quality standards are met during construction.

D-21. *Construction – NPDES CGP Requirements*: The Applicant must comply with conditions in the federal National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP)[9]. CGPs are typically reissued by the U.S. Environmental Protection Agency (EPA) every 5 years. The most recent CGP was issued in 2017 and became effective on February 16, 2017. Activities must comply with the CGP if they "[d]isturb 1 or more acres of land, or will disturb less than 1 acre of land but is part of a common plan of development or sale that will ultimately disturb 1 or more acres of land". The CGP covers construction related stormwater discharges (including stormwater runoff, snowmelt runoff and surface runoff and drainage) as well other discharges, including but not limited to, construction dewatering that has been treated by an appropriate control. The CGP requires development of a Stormwater Pollution Prevention Plan (SWPPP) that describes how the Activity will meet the requirements of the CGP. This includes identification of the stormwater team, a description of the nature of construction activities, emergency-related projects, identification of other site operators, the sequence and estimated dates of construction activities, a site map, identification of construction site pollutants and non-stormwater discharges, buffer documentation, a description of stormwater control measures, pollution prevention procedures, procedures for inspection, maintenance and corrective requirements, SWPPP Certification and Post-Authorization Additions to the SWPPP. According to the CGP, the SWPPP must be made available to NHDES upon request.

Compliance with the NPDES CGP requirements will help to ensure water quality standards are met during construction.

D-22. *Construction – Water Quality Monitoring:* If not properly controlled, the discharges associated with earth disturbance during construction may temporarily increase turbidity levels in receiving surface waters due to suspended solids and other suspended matter, particularly during wet weather events, and may contribute to long-term sediment retention in receiving surface waters. As discussed in D-20 and D-21, construction BMPs will be implemented, inspected and maintained to help ensure that erosion and sediment control measures are properly functioning. If necessary, and in accordance with state statute (see C-3), NHDES can also require monitoring, including, but not limited to, turbidity monitoring and sedimentation inspections to confirm that turbidity water quality criteria are met (see C-28) and that

[9]The 2017 Construction General Permit is available at https://www.epa.gov/npdes/epas-2017-construction-general-permit-cgp-and-related-documents.

benthic sediment deposits (see C-12, C-13, C-23, and C-26) are in compliance with State surface water quality standards.

D-23. *Antidegradation Determination for Hydrologic Alterations and Pollutant Loads:* The Activity includes the addition of approximately 10.4 acres of impervious area (excluding the ponds). If not properly controlled, the increase in impervious area and change in land use can cause violations of the antidegradation provisions of the surface water quality standards (see C-38) due to hydrologic alterations (i.e., increased flow) and/or increased deposition and eventual transport to surface waters of pollutants such as chlorides (from road salt), total suspended solids, nutrients, various metals (i.e., lead, zinc, etc.), and petroleum aromatic hydrocarbons (PAHs).

Hydrologic Alterations: With regards to potential hydrologic alterations, the Applicant provided calculations with their application for an AoT permit to demonstrate that the Activity is not anticipated to result in a significant increase in stormwater runoff flow. The NHDES AoT Bureau has reviewed the calculations, determined that they are in compliance with the AoT regulations (Env-Wq 1500) and issued an AoT permit (see C-56). Issuance of an AoT permit is interpreted by NHDES to mean that the Activity also complies with the antidegradation provisions of Env-Wq 1700 regarding hydrologic modifications.

Pollutant Loading: With regards to pollutants, as stated in C-53 of this Certification, when a surface water does not meet water quality standards (i.e., when it is impaired), the addition of pollutants causing or contributing to impairment should be avoided. That is, existing loadings should be held. Further, as stated in C-50 of this Certification, TMDLs must be conducted for any surface water listed on the Section 303(d) List. The TMDL includes source identification, determination of the allowable load and reductions (by source) necessary to meet the allowable load. For waters with an approved TMDL, pollutant reductions per the TMDL should be implemented. For pollutants causing an impairment without a TMDL, loadings of the pollutant causing impairment should be held such that there are no increased loadings until such time as a TMDL is prepared.

For all other pollutants (i.e., those not known to be causing impairment) which are likely to be discharged from the Activity, Applicants can either hold existing loadings (i.e., no degradation), or request to degrade the water in accordance with the antidegradation provisions of Env-Wq 1708. To demonstrate no additional loading for pollutants which can be removed by structural BMPs, NHDES allows Applicants to submit pollutant loading analyses (PLAs) in accordance with guidance included in the NHDES Stormwater Manual (see C-55). The guidance allows use of the "Simple Method" for calculating loads before and after construction. At this time, NHDES uses total suspended solids (TSS), total nitrogen (TN) and total phosphorus (TP) as surrogates for all other parameters. That is, if the loadings for TSS, TN and TP are held to pre-construction levels, it is assumed that loadings of all other parameters which can be removed by structural 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 and maintained in accordance with current

Alteration of Terrain regulations (Env-Wq 1500). On May 3, 2019, NHDES received a revised PLA. NHDES reviewed the PLA and on June 14, 2019 determined that it is acceptable subject to final approval by the Alteration of Terrain Bureau regarding the design of the BMPs and proper inspection and maintenance of the BMPs. According to the AoT permit issued for the Activity (see C-56), information must be provided to confirm that the design infiltration rates for infiltration basins #1 and #4 are correct. A NHDES approved PLA is necessary to satisfy antidegradation requirements.

Chlorides cannot be treated by conventional structural BMPs because they are conservative and relatively untreatable substances that persist in the environment. De-icing chemicals containing chloride (i.e., road salt) are typically the primary source of chlorides in fresh surface waters. The Applicant submitted a road salt minimization plan[10] with their application for an AoT permit and with their application for section 401 Water Quality Certification. NHDES has reviewed the plan and determined that it is acceptable.

D-24. *Antidegradation Determination for BMPs*: Section C-38h and C-38i of this Certification includes excerpts from Env-Wq 1708.01 regarding antidegradation which state that "the department shall assure that the highest statutory and regulatory requirements shall be achieved for all new and existing point sources and that all cost effective and reasonable best management practices for nonpoint source control shall be implemented". In addition to being cost effective and reasonable, best management practices must be selected to ensure attainment of water quality standards in receiving waters as evidenced by the following:

a. As stated in section C-11 of this Certification, "Best Management Practices" (BMPs) are defined in Env-Wq 1702.06 as "those practices which are determined, after problem assessment and examination of all alternative practices and technological, economic and institutional considerations, to be the most effective practicable means of preventing or reducing the amount of pollution generated by point or nonpoint sources to a level *compatible with water quality goals"* (italics added).
b. Env-Wq 1708 (b)(1) and (b)(2) (see section C-38h and C-38i of this Certification) which states "In allowing such degradation or lower water quality, the department shall assure water quality adequate to fully protect existing uses".

NHDES has determined that BMPs for the Activity are in compliance with the above regulations provided the Applicant complies with all conditions in this Certification.

D-25. *Galvanized Roof Determination:* Untreated stormwater from galvanized roofs can contain elevated levels of zinc which can be toxic to aquatic life. On

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[10] *Salt Minimization Plan, Proposed Commercial Development Tax Maps 8 Lot 1, Lot 8, 603 Lafayette Road, Seabrook, NH 03874.* Prepared for Waterstone Retail Development, 145 Rosemary Street Building D, Needham, MA 02494. Prepared by Jones and Beach Engineers, Inc. Submitted to NHDES with the application for 401 Water Quality Certification by Jones and Beach via letter of transmittal dated May 23, 2018.

September 17, 2018, the Applicant's consulting engineer advised that none of the buildings will have galvanized roofs.

D-26. *Pesticide Controls:* Operation of the Activity could result in application of pesticides such as herbicides and insecticides. Improper application of pesticides can harm aquatic life and result in surface water quality violations. In New Hampshire, pesticides are regulated by the Department of Agriculture Pesticide Division. As stated in Pes 1001.01(see C-48), and unless otherwise allowed per Pes 1001.02 (see C-48), no residential property owners, private applicator, or commercial applicator shall apply pesticides within the 25 feet of the reference line of surface waters or beyond 25 feet in such a manner or by such methods that would result in the presence of pesticides within 25 feet of any lake, pond, river or coastal water. The NH Pesticide regulations also require licensing or permitting of all commercial and private pesticide applicators as well as pesticide dealers. Through this process, only persons demonstrating satisfactory competence in the safe and legal use of pesticides within New Hampshire may apply pesticides. Compliance with the NH Pesticide Division regulations regarding the application of pesticides is expected to prevent water quality standard violations due to pesticides.

D-27. *Fertilizer Controls:* If not properly controlled, projects involving alteration of terrain can result in discharges to surface waters of nutrients such as phosphorus and nitrogen that can lead to excessive aquatic plant growth and impairment of aquatic life and contact recreational uses such as swimming or wading. Application of fertilizers can be a primary source of nutrients. NH RSA 431:4-a and 431:4-b (see C-49), which became effective January 1, 2014, limits the nitrogen and phosphorus content of fertilizers sold at retail and intended for use on turf. Among other things, these statutes include annual application rates for nitrogen and phosphorus. Other examples of state fertilizer statutes include NH RSA 483-B:9 (d) of the Shoreland Water Quality Protection Act which prohibits application of fertilizer within 25 feet of the reference line of any public water and only allows slow or controlled release fertilizer beyond 25 feet (see C-49). Application of fertilizer in accordance with these statutes can reduce the potential for surface water quality violations due to fertilizer application.

D-28. *Post Construction Water Temperature Controls:* If not properly controlled, projects involving alteration of terrain can result in water temperature increases due to solar heating associated with removal of vegetation adjacent to surface waters that provide natural shading, and stormwater discharges from impervious surfaces (such as pavement and rooftops) and stormwater BMPs such as detention ponds that are exposed to the sun. Significant temperature increases can adversely impact the Biological and Aquatic Community Integrity (Env-Wq 1703.19) of surface waters especially in temperature sensitive cold water fisheries. As mentioned in D-19, the New Hampshire Fish and Game Department has advised that Mary's Brook and Cain's Brook (including Cains Pond) are warm water fisheries. In the 401 Water Quality Certification, the Applicant stated that the following:

- The existing site contains large wetland complexes and shallow areas of open water which can contribute to an increase in stormwater discharge temperatures due to solar heating.
- To mitigate the potential temperature increase, infiltration BMP's and underground detention BMPs such as Stormtech isolator rows have been utilized for stormwater control and pollutant removal throughout the site.
- Results of research conducted by the University of New Hampshire in 2011 indicated that two of the more effective BMPs for reducing increases in temperature due to stormwater runoff are infiltration and isolator row practices. The Activity proposes to use infiltration practices and isolator rows to treat stormwater.
- The perimeter of the site is proposed to be left vegetated to the best extent practical, areas to be cleared and not utilized for pavement or buildings well be grassed, and natural buffer areas surrounding the proposed ponds on the south side of the property are to remain, which will provide additional vegetative buffering and help shade the ponds and stormwater flow.

In addition to the above, the reconstructed Benny's Pond on the south side of the property is proposed to be significantly deeper (maximum depth of approximately 14.5 feet) than it is under current conditions (approximately 0 feet under drought conditions and approximately 2 to 3 feet under high water level conditions), which should also help to buffer thermal impacts. To determine actual thermal impacts, monitoring of surface water temperatures can be required.

D-29. *Post Construction- Inspection and Maintenance of Permanent Stormwater BMPs*: The Applicant submitted a permanent stormwater BMP Inspection and Maintenance Manual[11] with their application for an AoT permit. The NHDES AoT permit will include requirements to:

- inspect and maintain all stormwater practices in accordance with Env-Wq 1507.07 and the project Inspection and Maintenance (I&M) Manual;
- maintain all record keeping required by the I&M Manual and to provide such records to NHDES upon request; and
- to include photographs of the site and BMPs with the I&M submittals.

Compliance with the above requirements will help ensure that permanent stormwater best management practices (BMPs) will always function as intended while the Activity is in operation.

D-30. *Post Construction - Water Quality Monitoring:* Operation of the Activity can result in water quality violations if not properly mitigated (see D-23). State statute allows NHDES to require monitoring to provide assurance that surface

[11] *Stormwater Management Operation and Maintenance Manual, Proposed Commercial Development, Tax Map8 Lot 1, Lot 8, 603 Lafayette Road, Seabrook, NH 02494.* Prepared for Waterstone Retail Development. Prepared by Jones & Beach Engineers, Inc. Submitted to NHDES with the application for an Alteration of Terrain permit by Jones and Beach.

water quality standards are met during construction as well as when the Activity is in operation (see C-3). As mentioned in D-17, there is currently insufficient data to assess the aquatic life designated use in Mary's Brook and Mary's Pond.

E. WATER QUALITY CERTIFICATION CONDITIONS

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

E-1. Compliance with Certification Conditions: The Applicant shall construct and operate the Activity to comply with this Certification.

E-2. Compliance with Water Quality Standards: The Activity shall not cause or contribute to a violation of New Hampshire surface water quality standards.

E-3. Modification of Certification: The conditions of this Certification may be amended and additional terms and conditions added as necessary to ensure compliance with New Hampshire surface water quality standards, when authorized by law, and, if necessary, after notice and opportunity for hearing.

E-4. 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 conditions of this Certification including any changes to project operation or approved plans required by this Certification. This includes, but is not limited to, any proposed development on the proposed gravel pad on the western portion of the site and any redesign of Benny's Pond. If necessary, NHDES may modify the Certification in accordance with condition E-3 of this Certification.

E-5. 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.

E-6. Transfer of Certification: Should this Certification be transferred to a new owner, contact information for the new owner (including name, address, phone number and email) shall be provided to NHDES within 30 days of the transfer.

E-7. Compliance with Other Permits: The Applicant shall comply with all applicable permits associated with the Activity, and any amendments or reissuances including, but not limited to, the following:

- NHDES Wetlands Permit,
- NHDES Alteration of Terrain Permit,
- U.S. Army Corps of Engineers Section 404 Permit,
- NPDES Construction General Permit (CGP).

The conditions of these permits shall become conditions of this Certification upon issuance of this Certification. Should there be any discrepancies between permit requirements, the more stringent requirement as it relates to compliance

with New Hampshire surface water quality standards shall apply. Construction shall not begin until all applicable permits have been obtained.

E-8. Galvanized Roofs: The Activity shall not include any buildings with galvanized roofs.

E-9. Confirmation that Permanent Stormwater BMPS comply with AoT: Prior to occupancy, the Applicant shall provide written evidence and receive approval by the NHDES Watershed Management Bureau that the NHDES Alteration of Terrain (AoT) Bureau has received the information required in Alteration of Terrain Permit AoT-1618 regarding infiltration basins #1 and #4 and concur that the stormwater treatment practices are designed and ultimately will be constructed in accordance with Alteration of Terrain regulations. If the AoT Bureau does not concur, the Applicant shall immediately cease construction and consult with the NHDES AoT and Watershed Management Bureaus to determine actions necessary to allow construction to continue, and occupancy of the proposed Activity.

E-10. Stormwater Pollution Prevention Plan (SWPPP) and BMP Inspection Reports: The Applicant shall provide a copy of the SWPPP and/or BMP construction BMP inspection reports required by the NPDES Construction General Permit (CGP) within 14 days of receiving a written request from NHDES.

E-11. Road Salt Minimization Plan: The Applicant shall implement the NHDES approved road salt minimization plan (see D-23). All record keeping required by the approved plan shall be maintained by the Applicant and made available to NHDES within 14 days of receiving a request from NHDES.

E-12. Pesticides (Insecticides and Herbicides): The Applicant shall minimize the use of pesticides to the maximum extent practicable and shall comply with all applicable state, federal and local laws and regulations regarding application of pesticides, including but not limited to Pes 1001.01 and 1001.02 (see D-26). If requested by NHDES, the Applicant shall provide NHDES with a list of the pesticides applied, the name of the Applicator and their NH pesticide license or permit number within 14 days of receiving a written request.

E-13. Fertilizer Minimization: Only fertilizer that meets the requirements of RSA 431:4-a and 431:4-b regarding nitrogen and phosphorus content shall be used (see D-27). Fertilizer shall not exceed the nitrogen and phosphorus application rates specified in RSA 431:4-a and 431:4-b (see D-27) and, with the exception of the first time fertilizer is applied to establish turf, shall not be applied within 25 feet of any surface water (including wetlands). The Applicant shall maintain records of the following which shall be submitted to NHDES within 14 days of receiving a written request from NHDES: Brand of fertilizer; the nitrogen and phosphorus content of the fertilizer; dates when fertilizer was applied; the locations where fertilizer was applied; the amount (pounds) of fertilizer used during each application; and, the application rate (i.e., lbs/square foot).

E-14. Permanent Stormwater BMP Inspection and Maintenance: The Applicant shall implement the Stormwater Management Operation and Maintenance

Manual, approved by the NHDES Alteration of Terrain Bureau (see D-24 and D-29). All record keeping required by the approved plan shall be maintained by the Applicant and made available to NHDES within 14 days of receiving a request from NHDES.

E-15. Construction Water Quality Monitoring: Prior to construction (or other date acceptable to NHDES), the Applicant shall submit a Turbidity Monitoring Plan (TMP) to NHDES for review and approval. The Applicant shall then implement the approved plan. Unless otherwise authorized by NHDES the TMP shall include, but not be limited to, the turbidity monitoring locations (on a plan view as well as latitude and longitude), turbidity meter specifications (including accuracy), quality assurance/quality control provisions, sampling protocols, how precipitation will be predicted (for mobilizing monitoring teams) and how actual precipitation amounts will be determined and field data sheets. Turbidity monitoring shall occur during construction when the site is dewatered, whenever a plume is evident, and during storms that are predicted to result in 0.5 inches or more of precipitation in 24 hours. Depending on the number and extent of turbidity violations, and if directed by NHDES, the Applicant shall also conduct additional monitoring to determine if downstream receiving waters have experienced significant sedimentation due the Activity that has impacted aquatic life.

The Applicant shall consult guidance prepared by NHDES for the NH Department of Transportation (NHDOT)[12] when preparing the TMP for this Activity.

Turbidity Monitoring Reports shall be submitted to NHDES via email within 48 hours of completion of the event and shall include all water quality sampling results compiled in a table or spreadsheet. The reports shall also include a narrative description or summary which includes the dates of monitoring; names of persons who conducted the monitoring and prepared the report; predicted and actual precipitation amounts; start and end times of sampling; summary of sampling results including duplicates and blanks; time when meter was calibrated and calibration results; summary of any exceedances of the turbidity compliance criteria and a summary of corrective actions, if needed. NHDES shall be notified via email (gregg.comstock@des.nh.gov) of any non-compliances within 24 hours.

E-16. Water Quality Monitoring: Prior to construction (or other date acceptable to NHDES), the Applicant shall submit a Water Quality Monitoring Plan (WQMP) to NHDES for review and approval to determine how operation of the Activity impacts surface water quality. Unless otherwise authorized by NHDES, the WQMP shall include, but not be limited to, all monitoring locations (on a plan view as well as latitude and longitude), meter specifications (including accuracy), quality assurance/quality control provisions, sampling and lab analysis protocols, sample preservation provisions, field datasheets, chain of custody forms and a commitment to upload all collected data into the NHDES

[12] August 14, 2013 memorandum from Gregg Comstock and Jocelyn Degler of NHDES to Mark Hemmerlein of NHDOT regarding "Guidance for SWPPPs, BMP Inspection and Maintenance, Turbidity and Sediment Monitoring for NHDOT Projects with 401 Water Quality Certifications".

Environmental Monitoring Database (EMD). The Applicant shall then implement the approved plan. The WQMP shall also include the following provisions:

Continuous Temperature and Specific Conductivity Monitoring: To determine the thermal effects of the proposed permanent BMPs on receiving waters, and the potential for chloride violations, water temperature and specific conductivity[13] shall be measured near the outlet of the reconstructed Benny's Pond on a continuous basis with an automatic data logger for a minimum of one year beginning the first spring after the project is completed and is operational. If directed by NHDES, the Applicant shall continue this monitoring for more than one year. Data shall be downloaded approximately every 4 weeks (or more frequently if necessary). The Applicant shall then submit the data in MS Excel format and a summary report that includes the dates of monitoring, the minimum, maximum, average and median temperature for the current monitoring period as well as for each of the previous monitoring periods, to NHDES on a monthly basis (i.e., within 30 days of downloading the data from the meter).

Grab Samples for Aquatic Life Use Assessment. To facilitate assessment of the aquatic life use support in the receiving surface waters, at least 10 grab samples (excluding those taken for quality assurance/quality control) taken on different days during the low flow summer period and prior to 7:30 am, shall be collected in Mary's Brook and Mary's Pond for dissolved oxygen (concentration and percent saturation), temperature, specific conductivity, pH and chloride. Sampling shall commence the first summer after the project is complete and operational. The Applicant shall submit a report within 60 days of last day of monitoring which includes sampling and meter calibration results, field and lab data sheets, chain of custody forms, a narrative summarizing the results including compliance with quality assurance/ quality control provisions and whether there were any violations of state surface water quality standards. Depending on the results, the Applicant shall conduct additional sampling if directed by NHDES.

F. APPEAL

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

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

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[13] Specific conductivity can be used to estimate chloride concentrations in surface waters (see the 2018 New Hampshire Consolidated Listing and Assessment Methodology at https://www.des.nh.gov/organization/divisions/water/wmb/swqa/2018/documents/r-wd-19-04.pdf).

If you have questions regarding this Certification, please contact Gregg Comstock at (603) 271-2983 or Gregg.Comstock@des.nh.gov.

Thomas E. O'Donovan, P.E.
Director, NHDES Water Division

cc via email:
Michael Hicks, USACOE
William M. Manzi III, Seabrook Town Manager
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Mark Kern, USEPA