STATE OF NEW HAMPSHIRE
INTER-DEPARTMENT COMMUNICATION

DATE: February 21, 2020

FROM: Mark T. Hemmerlein MTH
Water Quality Program Manager

AT (OFFICE): Department of Transportation

THRU: Kevin T. Nyhan MTH for
Administrator of Bureau of Environment

THRU: Keith A. Cota KAC
Chief Project Manager

SUBJECT: Request for Water Quality Certification for a Department of the Army Permit
Derry-Londonderry, IM-0931(021), 13065

TO: Ted Diers
New Hampshire Department of Environmental Services
Watershed Management Bureau
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

The New Hampshire Department of Transportation (NHDOT) herby requests that the NH Department of Environmental Services (NHDES) review and take action to issue a Clean Water Act Section 401 Water Quality Certification (WQC) to the Department of Army Permit (NAE-2005-03061) for the discharge of dredged or fill material associated with the subject project. As discussed and supported by the NHDOT at our pre-filing meetings on December 13, 2019, January 8, 2020, February 14, 2020, and February 21, 2020, the timeframe for issuance of the certification is requested within 81 days or prior May 13, 2020.

Please forward the Section 401 Certification, with a copy to the Department of Transportation, to:

Mr. Michael Hicks
US Army Corps of Engineers
Regulatory Branch
696 Virginia Road
Concord, MA 01742-2851

cc. Michael Hicks, US Army
Town of Derry
Town of Londonderry

Derry-Londonderry, IM-0931(201), 13065

Section 401 Water Quality Certification Request for a Department of Army Permit

For the Discharge of Dredged or Fill Material into Waters of the United States

February 07, 2020

FUSS & O'NEILL

50 Commercial Street
Manchester, NH 03101

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1 NHDES Water Quality Certification Application Form

APPLICATION FOR WATER QUALITY CERTIFICATION

Water Division

Water Quality Certification Program

RSA: 485-A:12

Date of Request 02/07/2020

Date Request Received by NHDES _____

I. Applicant Information

Principal Place of Business of the Applicant New Hampshire Department of Transportation	
Mailing Address [Street, PO Box, RR, etc.] 7 Hazen Drive	
City/Town and Zip Code Concord, NH 03301	
Telephone No. (603)271-1615	Email Address Keith.Cota@dot.nh.gov
Name and Title of Signatory Official Responsible for the Activity for which Certification is Sought (e.g., President, Administrator) Keith Cota, Chief Project Manager	

II. Project Information

Name of Project Derry-Londonderry 13065, I-93 Exit 4A
Name of Town and County that contains the Project Town of Londonderry/Town of Derry, Rockingham Country
Name of Receiving Waterbody and Drainage Basin Upper Beaver Brook
Summary of Activity (e.g., construction, operation, or other practice or action) Construction

III. Additional Submittal Information

PLEASE SUBMIT AS MUCH INFORMATION AS POSSIBLE IN ELECTRONIC FORMAT

phone (603) 271-2457
fax (603) 271-7894
PO Box 95, Concord, NH 03302-0095
www.des.nh.gov

Please provide an individual response to each bullet, below. If applicable information is contained in the application materials, please provide a reference to the specific section in the application materials that will represent the response to the individual bullets below.

- Type of activity (e.g., construction, operation, other action such as water withdrawal) and the start and end dates of the activity.
- The characteristics of the activity: Whether the activity is associated with a discharge and/or water withdrawal and whether the discharge and/or withdrawal is proposed or occurring.
- The characteristics of the discharge and/or withdrawal
    - Flow rate (cfs)
    - Potential chemical, physical, biological constituents
    - Frequency (e.g., daily, hourly,)
    - Duration
    - Temperature (Celsius)
    - Latitude and longitude (dd:mm:ss)

- The existing and designated use(s) that are potentially affected by the proposed activities. (Designated Uses are listed in the NHDES Consolidated Assessment and Listing Methodology).
- The provision(s) of surface water quality standards (Env-Wq 1700) that are applicable to the designated uses affected by the proposed activities.
- A pollutant loading analysis to show the difference between predevelopment and post-development pollutant loads for a typical year. The objective of the loading analysis is to show post-development pollutant loads do not exceed pre-development pollutant loads. Loading analysis guidance and a simple spreadsheet model will be provided by NHDES. The loading analysis will be used to determine appropriate stormwater management measures, which must be effectively designed, installed, and maintained to ensure compliance with surface water quality standards.
- A description of any other aspect of associated with construction and operation of the activity that would affect the chemical composition, temperature, flow, or physical aquatic habitat of the surface water.
- An original or color copy/reproduction of a United States Geological Survey Quadrangle Map that clearly shows the location of the activity and all potential discharge points.
- A copy of the final complete federal permit application or federal license application, including the federal permit, license, or project number.
- A copy of the NHDES wetlands permit (RSA 482-A:3), if necessary.
- A copy of the NHDES alteration of terrain permit (RSA 485-A:17), if necessary.
- The name(s) and address(es) of adjoining riparian or littoral abutters.
- A plan showing the proposed activities to scale including:
    - The location(s) and boundaries of the activities;
    - The location(s), dimension(s), and type(s) of any existing and/or proposed structures; and
    - The location(s), name(s), identification number(s), and extent of all potentially affected surface water bodies, including wetlands.
- For projects that involve a new surface water withdrawal, provide the following:

- a copy of the water conservation plan (WCP) submitted to the NHDES Water Conservation Program and the status of NHDES approval, or
- a copy of a waiver approved by the NHDES Water Conservation Program that waives the requirement to submit a WCP prior to or in conjunction with the application for water quality certification.

[Pursuant to Env-Wq 2101, and unless a waiver is applied for and granted by NHDES, all applicants for water quality certification are required to submit a water conservation plan (WCP) for projects that involve a new withdrawal from a surface water prior to or in conjunction with this application. Contact the NHDES Water Conservation Program for guidance related to drafting a WCP and the review and approval process. Information regarding the WCP, including contact information, may be found at http://des.nh.gov/organization/divisions/water/dwgb/water_conservation/index.htm

- If the project is located within ¼ (one quarter) mile of a designated river, as defined under RSA 483 (the Rivers Management and Protection Act), provide documentation showing that the Local River Management Advisory Committee (LAC) has been provided with a copy of this complete application. A list and map of the designated rivers, as well as contact information, may be found at http://des.nh.gov/organization/divisions/water/wmb/rivers/desigriv.htm

Signature – MUST BE SIGNED AND DATED BY APPLICANT

To the best of my knowledge, the data and information described above, which I have submitted to the New Hampshire Department of Environmental Services, is true and correct. I understand that an approval of the requested water quality certification based upon incorrect data may be subject to revocation of the certification. I have complied with all local regulations or ordinances relative to the proposed activity and have obtained or will obtain, prior to the commencement of any work, all other approvals that may be required.

Signed: _____

Date: _____

phone (603) 271-2457
fax (603) 271-7894
PO Box 95, Concord, NH 03302-0095
www.des.nh.gov

2 Type of Activity

Pursuant to 33 CFR 320.1(b)(5) the Department of Transportation proposes the discharge of dredged or fill material into waters of the United States to construct a new interchange with I-93 (known as Exit 4A) in Londonderry, NH, with additional improvements on local roads in Derry and Londonderry, and other transportation improvements to reduce congestion and improve safety along NH Route 102, from I-93 Exit 4 easterly through downtown Derry. The Project is approximately 3.2 miles in length between the new, proposed I-93 Exit 4A interchange and the eastern terminus in Derry. There would be approximately 1 mile of new roadway construction on a new alignment and 2.2 miles of existing roadway reconstruction. The new alignment would originate from the new I-93 Exit 4A interchange location and travel southeast through a wooded area to Folsom Road, near its intersection with North High Street and Madden Road in Derry. This Project would continue to follow Folsom Road to Ross' Corner (Manchester Road/NH 28) and continue on Tsienneto Road across NH 28 Bypass to its intersection with NH 102, adjacent to Beaver Lake. This Project is known as Alternative A, and is fully described in Section "3.6.2 Build Alternatives" of the I-93 Exit 4A Final Environmental Impact Statement/Record of Decision (FEIS/ROD) available at: http://www.i93exit4a.com/documents.aspx. See also Appendix A, the U.S. Army Corps of Engineers (USACE) Application for Department of Army (DoA) Wetland Permit and Appendix B, the NHDES Wetland Permit.

3 Characteristics of the Discharge

Approximately 905 cubic yards of clean granular fill will be discharged into the 100-year floodplain. Approximately 5.39 acres of direct, permanent impacts and 0.49 acres of temporary impacts to vegetated wetlands/vernal pools will result from fill or cuts for construction of new highway access ramps, the 1.0-mile connector road, widening of 2.2 miles of existing roads, and stormwater BMPs. These facilities will also have secondary and indirect impacts to wetlands and vernal pools that have also been quantified. Approximately 3,098 LF of stream channel impacts (not including banks) or 0.72 acres, will result from installation of new culverts, extension of existing culverts where roads are widened, and stream relocation. Of these stream channel impacts, 1,938 LF (0.50 acres) of them are temporary stream impacts that will be restored.

4 Designated Uses

New Hampshire's process for assessing surface water quality is detailed in the 2016 Section 305(b) and 303(d), Consolidated Assessment and Listing Methodology, which interprets New Hampshire's Water Quality Regulations (Env-Wq 1700). Env-Wq 1702.17 identifies "designated uses" that New Hampshire surface waters should support. All of the Designated Uses for New Hampshire Surface Waters from Env-Wq1702.17 apply to this Project, including Aquatic Life Integrity, Fish Consumption, Shellfish Consumption, Potential Drinking Water Supply, Swimming and Other Recreation in and on the Water, and Wildlife. The FEIS/ROD for the Project provides a detailed discussion about water quality and designated uses in Section 4.11, Surface Waters and Water Quality.

5 Water Quality Standards

The Project lies within the Upper Beaver Brook watershed (Level 12 Hydrologic Unit 010700061025) as mapped in USGS' Watershed Boundary Dataset (NHDES, 2017a). Beaver Brook, south of the Project, flows west under I-93 and then south in to Massachusetts where it joins the Merrimack River in Lowell. Please refer to the FEIS/ROD for the Project, which provides a detailed discussion about impaired waters and water quality standards in Section 4.11.

Section 404 of the Clean Water act pertains to discharges of dredged or fill material into waters of the United States. Wetland and surface water boundaries were field delineated by New Hampshire Certified Wetland Scientists following the three-parameter approach required by PART Env-Wt 301 Delineation and Classification of Wetlands, and Section 404 of the Clean Water Act, and detailed in the 1987 Corps of Engineers Wetland Delineation Manual and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0). Streams and wetland boundaries were flagged with labeled surveyor's flagging and located with Global Positioning System equipment and verified against the existing condition ground elevation model. The impacts to wetlands, vernal pools and streams are described under the Characteristics of the Discharge Section, the DoA Wetland Permit Application in Appendix A, and the NHDES Wetland Permit Application in Appendix B. The FEIS/ROD for the Project provides a detailed discussion about wetlands, vernal pools and streams in Sections 4.12.

6 Affects to Surface Waters & Wetlands

<u>Design</u>

The discharge of fill required to construct the project was designed to minimize and avoid impacts to wetlands, vernal pools and streams and in the case of unavoidable impacts, mitigated with an in-lieu fee to the Aquatic Resource Mitigation (ARM) fund. A portion of the Stream ARM fund contribution may be designated to a separate culvert replacement project(s) in accordance with the Stream Passage Improvement Program (SPIP). This is a potential mitigation effort that will need to be approved by the NHDES Wetlands Bureau and may be a condition of the NHDES wetland permit. Please see the DoA Wetlands Permit application in Appendix A for a summary of the impacts, the in-lieu fee calculations and the mitigation history for the Project.

Discharges from the Towns' of Derry and Londonderry and NHDOT are regulated under the Municipal Separate Storm Sewer System General Permit (MS4), which regulates the design and operation of redevelopment within the Urbanized Area. The proposed improvements were designed as outlined in Part 3.2.6 of the permit and in accordance guidance published by NHDES on May 18, 2018 to meet MS4 requirements and antidegradation provisions outlined in the guidance. The NHDES guidance document has been provided in Appendix D. Please see Appendix C for the Stormwater Treatment Memo and Plans, which summarizes the stormwater treatment proposed.

Construction

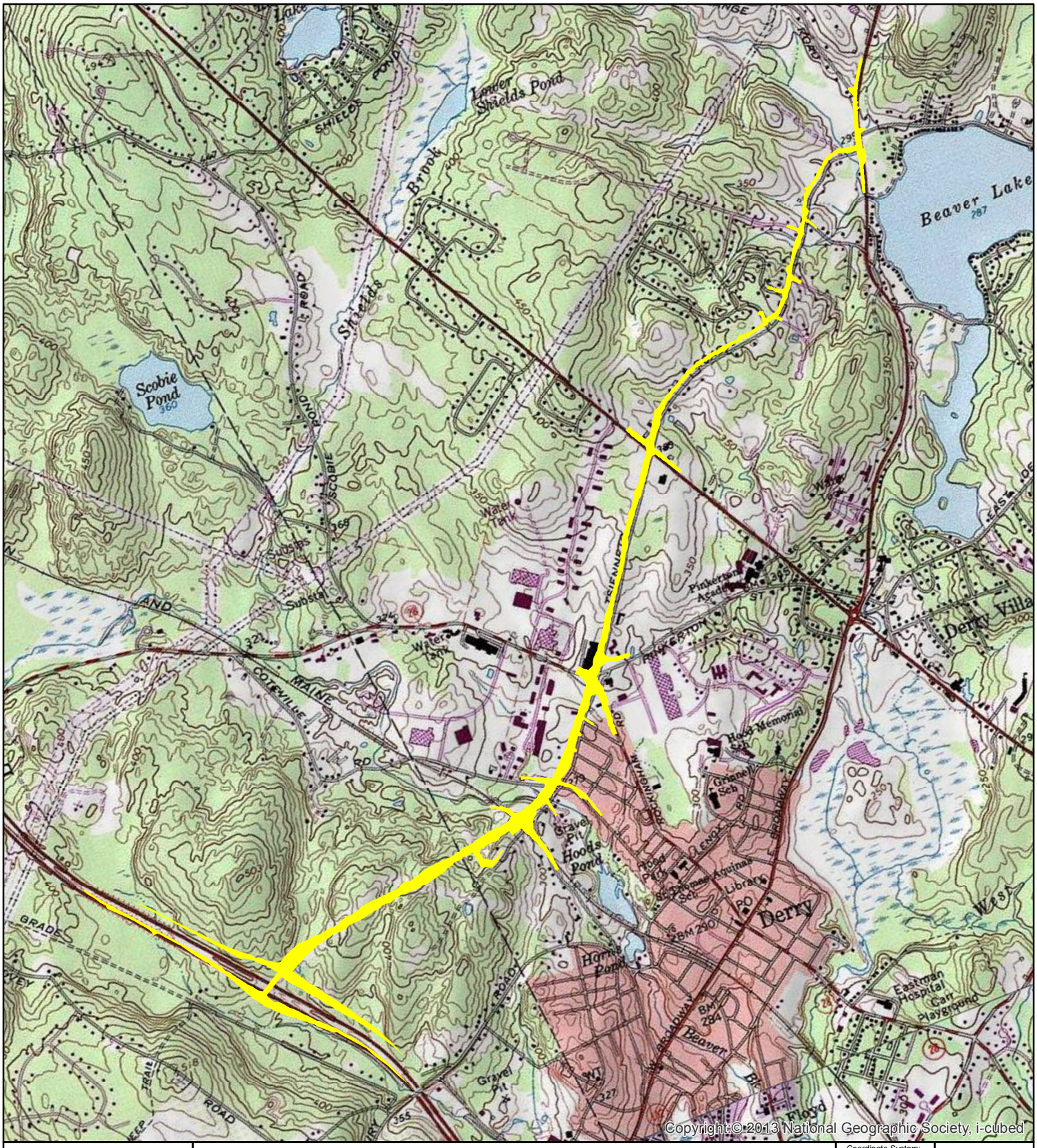
Discharges from construction activities are regulated under the Construction General Permit (CGP) for projects that disturb one or more acres. The Project is eligible for coverage under the CGP and will be constructed in accordance with the CGP. A Notice of Intent (NOI) will be filed at the beginning of construction. No Section 404 mixing zones are anticipated for the discharge of fill under the subject activity.

Operation

The respective communities, Derry, Londonderry and NHDOTs MS4 Stormwater Management plans (SWMPs) will control discharges during the eventual operation of the proposed infrastructure. Specific MS4 requirements include but are not limited to catch basin cleaning, street sweeping, winter maintenance activities, and facilities operation. The SWMPs and annual reports for Derry, Londonderry and NHDOT provide documentation of BMP's that have been or will be implemented in accordance with respective MS4 permit requirements and ensure that this proposed and other Town and State facilities are operated and maintained to meet NH Water Quality Standards. The Final Environmental Impact Statement/Record of Decision (FEIS/ROD) for the Project provides a detailed discussion of the anticipated implementation of BMPs.

The MS4 authorization letters from the EPA for the Derry, Londonderry and NHDOT have been provided in Appendix D.

7 USGS Map



Sources: CLD Engineers. Town of Derry GIS
Town of Londonderry GIS, New Hampshire DOT
NHDES (2016), U.S. Geolgical Survey (1991)

I-93 Exit 4A
Derry-Londonderry 13065
Site Location

Scale = 1:24,000

Coordinate System:
NAD 1983 StatePlane
New Hampshire (feet)

Date:
September 11, 2018

New Hampshire DOT

8 Federal Permit Application

See Appendix A for the DoA Permit Application.

9 Applicable Permits

The following authorities/regulations apply: Rivers and Harbor Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corp of Engineers; Final Rule 33 CFR 320-332.

In addition to the requirements of the DoA Wetland Permit Application, the Project is subject to National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP), NPDES Municipal Separate Storm Sewer System General Permit (MS4), NH Alteration of Terrain (AOT) Regulations, NH Wetlands Permits, and the Shoreland Water Quality Protection Act.

Below is a list of applicable permits and certifications for the Project.

Agency	Type of Approval	ID Number	Date Applied	Date Approved	Additional Information
USEPA	NPDES CGP	TBD	NOI will be filed at the start of construction.		*
USEPA	NPDES MS4-NHDOT	NHR043001	09/17/2018	03/18/2019	Appendix D**
USEPA	NPDES MS4-Derry	NHR041005	09/29/2019	08/21/2019	Appendix D**
USEPA	NPDES MS4-Londonderry	NHR041016	09/29/2018	06/12/2019	Appendix D**
FHWA	FEIS/ROD	4910-22-P	06/12/1998	02/03/2020	***
NHDES	NH Alteration of Terrain Program	MOA Updated on 07/11/2019			Appendix E
NHDES	Dredge and Fill Permit	2018-03134	10/03/2018	TBD	Appendix B
NHDES	Shoreland Water Quality Protection Act Permit	TBD	TBD	TBD	Appendix F
SHPO/FHWA	Adverse Effect Determination			08/12/2019	Appendix G
SHPO/FHWA	Section 106 MOA			10/29/2019	Appendix H
USFWS	NLEB No Effect Determination		08/21/2016	11/25/2019	Appendix I

*NPDES Construction General Permit (CGP).
https://www.epa.gov/npdes/stormwater-discharges-construction-activities

** MS4 Respective Community Webpages & SWMPs
NHDOT: https://www.nh.gov/dot/org/projectdevelopment/environment/units/program-management/water-quality.htm
Derry: https://www.derrynh.org/environmental/pages/stormwater-pollution-prevention
Londonderry: https://www.londonderrynh.org/engineering-division/pages/storms-stormwater

**FHWA Exit 4A Record of Decision (ROD): http://www.i93exit4a.com/documents.aspx

10 Abutters List

Please see the NHDES Wetland Permit Application, Attachment D, Adjoining Property Owner List. The Wetlands Permit Application has been included in Appendix B.

11 Water Conservation Plan

Not applicable, as there are no new surface water withdrawals for the Project.

12 Rivers Management and Protection Act

Not applicable, as the Project is not located within ¼ mile of a designated river, as defined under RSA 483 (the Rivers and Management Protection Act).