

Raymond Conservation Commission

Meeting Agenda

February 9th, 2022

7:00 PM

Media Center – High School

Call to order

Public Input - 3 min./person, 15 min. total

Agenda Items

1. Wetland Mitigation work session
2. March & April newsletter
3. LRAC Newsletter

Finance

4. Conservation Fund report

Approval of Minutes

5. January 12, 2022

Correspondence

6. Green Road - DES response
7. NHACC Member update form

Other items that may come before the board

Future Items/Events

CC-February 23rd

CC-March 9th

Non-Public RSA 91A:3, II (d) Property

Adjournment (no later than 9:00)

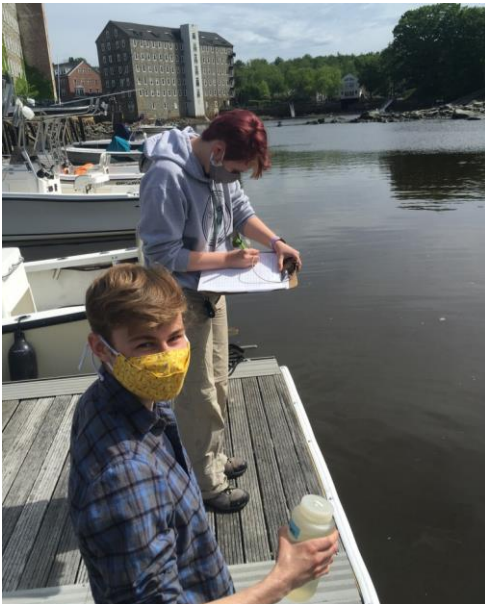
The public is encouraged and welcome to attend. Comments may also be submitted to conscomchair@raymondnh.gov

Supporting documents may be found at the Town of Raymond Website:
[Conservation Commission supporting documents](#)



Grant Summary: Tracking Bacteria in the Lamprey River

For many years, people have asked LRAC members if the water in the river is safe for fishing and swimming. From all the data we have found and based on NH classifications, the river as a whole is fishable and swimmable. But the devil is in the details and those are not always easy to find. The state tests public beaches for bacteria, but the Lamprey River does not have any public beaches.



In the summer of 2021, Dr. Steve Jones and his team from UNH took monthly water samples at four locations along the Lamprey River: where Moonlight Brook empties into the Lamprey River in Newmarket, Newmarket harbor, the impoundment at Wiswall Falls in Durham, and the Public Canoe Access in Lee. They looked for overall fecal bacteria counts and then determined the DNA source of those bacteria: human, dog, cow, horse, geese, gull, and mammal.

*Students taking water samples in Newmarket
Photo by Steve Jones*

Here are some of the key findings:

- Evidence of animal fecal bacteria was found at all sites on all sample dates, but the sources and concentrations varied.
- Dog fecal bacteria were detected at all sites except for Moonlight Brook. Cow bacteria were detected at all four sites in June.
- Human fecal contamination at concentrations that exceed accepted safety levels was found in 4/5 of samples at Moonlight Brook. Contamination at Moonlight Brook appears to be a public infrastructure problem, not a river or watershed issue. Local and state authorities have been alerted to address this.

Back to the original question: Is the Lamprey River safe for fishing and swimming? The overall answer is still yes, the river is clean enough for fishing and swimming. But the devil is in the details! When you have recreational contact with water, assume that the water might contain things that could make you sick, especially if you are vulnerable. Do

not expose open skin wounds to untreated water. Try to keep untreated water out of your eyes, mouth, and nose; if it happens, rinse with fresh water. Scoop dog poop and dispose of it properly. Avoid direct contact with surface waters after a heavy rain storm.

To read the full report, please visit www.LampreyRiver.org and type “bacterial tracking” in the search box. For more guidance about safely recreating on surface waters such as the Lamprey, type “recreational precautions for bacteria” in the search box.

To Feed or Not to Feed? Oh, Deer!



<http://extension.unh.edu>

Humans know that winter is a hard time. We do our best to take extra care of our families, our homes, our animals, and our neighbors. So what about our deer friends? They are outside. They look cold and hungry. They surely must need our help. Or do they?

Deer have evolved behavioral and physiological strategies to help them survive winter. They build up their fat reserves during the summer and fall. They lie low when snow is abundant, so they do not waste valuable calories. They create pathways through the woods so they can evade predators. They gather in small groups for warmth.

Many people feed deer in winter with hay, corn, white cedar brush, vegetable scraps, or livestock pellets. Such feeding is done with good intentions, but even the best of intentions can have serious, negative impacts. These good intentions can go terribly wrong: more deer starve than would occur naturally, the land near the feeding station is degraded or destroyed, diseases are more likely to spread through the deer population, the youngest deer incur the greatest harm, predation increases, deer lose their wildness and become dependent on people, and more deer are killed in collisions with cars. Feeding is a non-productive, short-term activity. What can landowners do to help the deer in the long term?

- Provide deer opportunities to build their fat reserves before winter.
- Protect the deer’s natural habitat:
 - Leave a variety of trees on the property for browse: beeches, white cedars, hemlocks, oaks, fruiting trees and shrubs.
 - Let white cedars grow naturally: do not prune them. Over its long lifetime, a white cedar’s natural litterfall can feed many deer for many years and its boughs and branches provide shelter. A cut cedar feeds a herd for one day.
 - Perform light timber management activities in winter when the deer need the browse most.
 - Distribute browse areas and winter cover areas throughout the property: discourage concentrating resources. Small herds are desirable, but large

gatherings of deer cause problems both to the deer themselves and to the landscape.

For more information about feeding deer, please see [Do Not Feed Deer | Wildlife | New Hampshire Fish and Game Department \(state.nh.us\)](https://www.state.nh.us/fishandwildlife/wildlife/feeding-deer/)

New Year, New Opportunities

The Lamprey River watershed connects fourteen towns and six rivers. It covers 214 square miles. The main stem Lamprey River alone traverses 49 miles, making it longer than the State of Rhode Island. Despite these impressive details, the number of individuals participating in the Lamprey River Advisory Committee is small, too small. We invite you to consider joining us!

Being a town representative means you play a key role in protecting the river for today and the future. You help to decide how best to manage and protect important resources, from clean water, habitats, recreational areas, and historic sites, to commenting on development projects that are being proposed in the river corridors. As a Partnership Wild and Scenic River, the committee receives funding from the National Park Service to implement the River Management Plan, a plan written by the committee. Each town is allowed up to four representatives. Representatives can have a focus on wildlife, agriculture, local business, history, education, recreation, or simply have a desire to give back to the river that means a lot to them. Joining forces with diverse people from neighboring towns can have a really powerful impact.

Meetings, scheduled for the third Tuesday evening of the month, are open to the public. We invite you to attend and meet the committee members or to contact us with any questions or suggestions. We hope to see you in 2022.

Visual Appeal



The LRAC's website, www.LampreyRiver.org, has several well-made videos available to view when the weather or other circumstances keep you at home. You can learn about Lamprey River history, protection, habitats, Wiswall Mill, and interviews with David Carroll, NH naturalist, artist, and author. Check them out!

CITIZENS BANK
 900 ELM STREET
 MANCHESTER, NH 03101

STATEMENT PERIOD
 FROM THROUGH
 12-01-21 12-31-21

TOWN OF RAYMOND
 CONCENTRATION ACCOUNT
 4 EPPING ST
 RAYMOND NH 03077-2529

PAGE 6 OF 29

COMBINED STATEMENT OF RELATED ESCROW MASTER AND SUB ACCOUNTS

SUB ACCOUNT DETAIL INFORMATION

NAME: TOWN OF RAYMOND
 SUB-ACCOUNT NUMBER: 10-8200294385
 INTEREST PAID THIS PERIOD: 20.62 INTEREST PAID THIS YEAR: 236.41
 CURRENT BALANCE: 303,476.14 FED TAX WITHHELD THIS PERIOD: .00
 AVERAGE RATE THIS PERIOD .08% FED TAX WITHHELD THIS YEAR: .00

EFF-DT	PROC-DT	DESCRIPTION CHR/DEP NO	CONFIRM#	DESCRIPTION CREDITS	DEBITS	BALANCE
11-30	11-30	BEGINNING BALANCE				303,455.52
12-31	12-31	INTEREST PAYMENT		20.62		303,476.14
12-31	12-31	ENDING BALANCE				303,476.14

000154 6128



Town of Raymond
Conservation Commission DRAFT Minutes of
January 12, 2022

Commission Members in Attendance:

Jan Kent, Chair
Kathy McDonald, Vice Chair
Kris Holleran
Melissa Potter
Michael Unger (arrived at 7:04 PM)

Meeting Called to Order by:

Chair Jan Kent at 7:00 PM

Commission Members Excused:

Deb McNelly, Secretary

Commission Members Absent:

Recording Secretary:

Alvina Snegach (taking notes from the live stream)

Members of the Public in Attendance:

Public Input:

Agenda Items

Annual Report – review

Members reviewed the draft annual report and made several changes.

Ms. Potter made a motion to approve the annual report as amended. Mr. Unger duly seconded and motion passed with everyone voting in favor.

February newsletter – Deb

Members reviewed the draft of the February newsletter written by Ms. McNelly about the Lamprey River and the sea lamprey. Small changes were proposed. Ms. McDonald left the room at 7:18 PM and returned at 7:19 PM during the discussion.

Ms. Holleran made a motion to accept the February newsletter as amended. Ms. Potter duly seconded and motion passed with a unanimous vote in favor.

Cassier parking area update.

Ms. Kent noted that there was a picture of the completed project in the packet. She added that she had seen some positive feedback on social media from the residents who have used it already. Members thanked Mr. Unger for all this work related to completing this project.

Finance

Earth and Stone Contracting, LLC - Invoice approval

Ms. Kent showed the invoice from Earth and Stone Contracting, LLC for the Cassier Forest parking area improvements in the amount of \$9,252.00.

Ms. Kent made a motion to approve paying the invoice from Earth and Stone Contracting, LLC in the amount of \$9.252.00 to be paid out of the

Town of Raymond
Conservation Commission DRAFT Minutes of
January 12, 2022

43 **Conservation Fund account #06-8052-050. Mr. Unger duly seconded and**
44 **motion passed unanimously.**

45
46 **Conservation Fund report (if available)**
47 Ms. Kent said that the statement was in the packet. The November Conservation Fund
48 statement showed the beginning balance of \$303,435.57 and the ending balance of
49 #303,455.52 with the only change being the interest.

50
51 **Approval of minutes**
52 *December 8, 2021 meeting minutes* draft was reviewed, and changes were made. **Ms.**
53 **Holleran made a motion, duly seconded by Ms. Potter to approve the minutes**
54 **of 12/08/2021 as amended. Motion passed with a unanimous vote in favor.**

55
56 *September 22, 2021 meeting minutes* draft was reviewed, and changes were made.
57 **Mr. Unger made a motion to approve the 09/22/2021 minutes as amended.**
58 **Motion was duly seconded by Ms. Holleran and passed with a unanimous**
59 **vote in favor.**

60
61 **Correspondence**
62 **Green Road DES letter**
63 Chair Kent read from the NHDES letter regarding the Green Road special permit
64 application and said that it seems that the applicant will have to provide NHDES with
65 more information regarding the project.

66
67 **Other items**
68 Mr. Unger said that he had talked to Cheryl Bondi, NHDES Program Specialist in the
69 wetland mitigation about the Commission's list of mitigation projects. He said that it
70 was suggested that the Commission add more columns to the table that would help
71 with the process of selecting projects, information about the mitigation priority, and
72 project readiness. Members discussed the need to work on this project list with the new
73 Director of Public Works as Steve Brewer has retired and possibly inviting him to a
74 future meeting. It was also suggested that it would be good to have Ms. Bondi come
75 out to a future meeting to talk to the Commission about mitigation projects.
76 Another discussion ensued about how the mitigation would be done once the project
77 has been selected.
78 Ms. McDonald asked Mr. Unger if the fish pond could be considered such a project and
79 he responded that for the project to qualify it would have to be on a permanently
80 conserved land. Ms. Kent suggested that proposing a combo of conservation and
81 mitigation may work in cases like this.
82 Mr. Unger offered to work on adding the columns to the table, and Ms. Kent said that
83 she will resend the file with the spreadsheet to everyone.

Town of Raymond
Conservation Commission DRAFT Minutes of
January 12, 2022

84 Next Commission meeting will take place in February. Members discussed if there was
85 any business that would need to be discussed before then. Ms. Kent suggested that
86 members try to work with the Aquatic Mapper tool in the meantime.

87 Ms. McDonald reminded everyone that they should have gotten an email about Saving
88 Special Places.

89 The last discussion was about Ms. Kent having a conversation with Anthony, who
90 alluded that he has experience with fixing spillways and that he may be of help with the
91 one at Cassier. Ms. Kent explained what she called a spillway, which was an outlet
92 structure with a screen, for a man made pond at Cassier, and that the screen has rotted
93 out and the top is missing, therefore the structure is clogged and is not working. She
94 said that it may be that a wetlands permit is needed as well. Members discussed
95 possible ways to proceed. Ms. Unger said that he can take a walk out to the spillway
96 with Antony and then ask NHDES what may be necessary to fix the problem.

97

98 **Adjournment**

99 **Ms. McDonald made a motion to adjourn, which was duly seconded by Ms.**
100 **Potter and passed with a unanimous vote in favor.**

101

102 The meeting was adjourned at 8:10 pm.

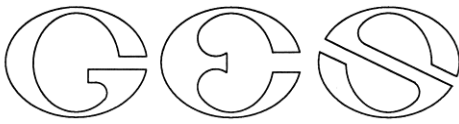
103

104 Respectfully Submitted,

105

106 Alvina Snegach

107 Recording Secretary



GOVE ENVIRONMENTAL SERVICES, INC.

January 20, 2022

Eben M. Lewis, Southeast Region Supervisor
Wetlands Bureau, Land Resources Management
Water Division, NH Department of Environmental Services
29 Hazen Drive
Concord, NH 03801
Phone: (603) 271-3503

Re: NHDES Wetlands Bureau Files: 2021-03235/03236/03237
Green Road, Raymond Tax Map 21 Lots 73/74/75

Subject: Request for More Information Response

Dear Mr. Lewis,

Please find enclosed a response to your RFMI dated December 8th, 2021. All items are addressed in the order they appear in your letters.

Request for More Information Response

1. This project is classified as a minor impact project pursuant to Env-Wt 524.06 (c) (3) Any single component of the project meets the requirements for minor impact classification as the crossings impact a total of 129 linear feet of intermittent stream impacts as specified in Env-Wt 407, Env-Wt 903, or this chapter; or Table 407-1. Please provide a complete response to Env-Wt 313.03(b)(1-9) as found in the [Standard Dredge and Fill Wetlands Permit Application Attachment A: Minor and Major Projects. Version 2.0](#)

Please see Attachment A in the attachments.

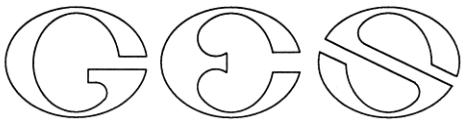
2. In accordance with Env-Wt 311.10(a)(1), subject to Env-Wt 311.10(d) and (e), the functional assessment required by Env-Wt 311.03(b)(10) for minor or major projects impacting non-tidal wetlands, vernal pools, and watercourses must be performed by a certified wetland scientist.

Please see attached Functional Assessment of the wetlands on site and associated Functional Analysis.

3. In addition to meeting the applicable design requirements established in Env-Wt 300, a residential, development project in non-tidal wetlands shall be designed to meet the following criteria: In accordance with Env-Wt 524.04(a-f).

(a) The project complies with all applicable requirements of Env-Wt 400, Env-Wt 700, Env-Wt 800, Env-Wt 900, and other applicable project-specific criteria in this chapter;

The application has been upgraded to meet the chapter 400 criteria for permit application classification from a minimum impact per lot to a minor impact project due to cumulative stream



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impact over 50 LF per the rules mentioned above. The applicant meets all the criteria for chapter 900 with designed crossings for the three lots to meet a tier 1 stream crossing that is designed to handle a 50-year flood and maintain existing hydrologic connectivity.

(b) The project does not use wetlands or surface waters to serve as stormwater or water quality treatment to mitigate impacts;

The proposed project does not use wetlands or surface waters on the subject properties to serve as stormwater or water quality treatment to mitigate impacts.

(c) The project provides setbacks and water quality protection measures sufficient to protect private and public drinking water supplies, source water protection areas, and fisheries;

The applicant is abiding by all town setbacks; however, the proposed residential constructions will not have any significant impacts to the water quality on the subject properties. The proposed crossings will impact the hydrologic integrity of the intermittent stream or have any detrimental impacts to the water quality associated with that intermittent stream.

(d) The project maintains or restores hydrologic connections to maintain flows necessary to preserve adjacent wetland and riparian functions;

The applicants proposed driveway crossings are designed to maintain the existing flows on each of the subject properties and have been designed to meet the stream crossing rules in chapter 900.

(e) The project maintains the geomorphic condition of important habitat for aquatic organisms by attenuating peak flood flows or stormwater runoff or by reducing the scouring and erosion of stream banks, or both;

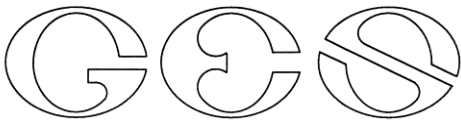
The applicants proposed stream crossing designs meet the all-applicable stream crossing rules mentioned in chapter 900 and will maintain existing hydrologic flows and handle all stormwater and peak flows for the subject properties.

(f) The project maintains existing fishery spawning, feeding, or cover habitat and fish passage necessary to maintain fishery or habitat or populations; and

No such areas are present on any of the subject properties.

(g) The project maintains existing wetland-dependent wildlife habitat and its associated migratory pathways, reproductive sites, and associated wetland complex or wetland community system.

The proposed tier 1 intermittent stream crossings for driveway are designed to maintain existing hydrology and as the culverts are proposed as RCP culverts, they will not hinder the passage of wetland dependent wildlife on any of the subject properties.



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4. For the stream crossing projects, please provide the information on the plans as specified in Env-Wt 903.04(b) (7), cross-sections showing the water surface elevation resulting from the applicable design storm.

Please see attached cross section for crossing #1. This crossing as described in the attached emails is the main contributing source and is the limiting factor in flow for the two down stream crossings.

This completes the response to the request for more information if you have any questions or need any clarification on the information provided, please feel free to contact me at bwalden@gesinc.biz or by phone 207-710-7863.

Brenden Walden
Business Manager and Wetland Scientist
Gove Environmental Services, Inc.

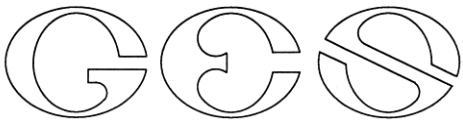
GES# 2021119

CC:

Municipal Clerk & Conservation Commission – Hard copy

Attachments:

- NH DES Request for More Information
- Attachment A
- Functions and Values Analysis
- Crossing #1 Lot 75 Cross Section



GOVE ENVIRONMENTAL SERVICES, INC.

NH DES Request for More Information



The State of New Hampshire
Department of Environmental Services



Robert R. Scott, Commissioner

Request for More Information

December 8, 2021

Page 1 of 2

LIBERTY WOODS LLC
724 EAST INDUSTRIAL PARK DR UNIT 13
MANCHESTER NH 03109

Re: NHDES Wetlands Bureau Files 2021-03235/03236/03237, Green Road, Raymond Tax Map 21 Lots 73/74/75

Dear Applicant:

The New Hampshire Department of Environmental Services (NHDES) Wetlands Bureau reviewed the above-referenced Standard Dredge and Fill Wetlands Permit Applications (Applications). Pursuant to RSA 482-A:3, XIV(a)(2) and Rules Env-Wt 100 through 900, the NHDES Wetlands Bureau determined the following additional information is required to complete its evaluation of the Applications:

The three (3) above-referenced applications are considered one project under Env-Wt 408.03: *Env-Wt 408.03 Aggregation of Projects: Consistent Scheme of Development. (a) As authorized by RSA 482-A:11, V, a series of minor or minimum impact projects, or any combination thereof, undertaken by a single developer or several developers within the 5 years preceding the application for the current project shall constitute a major impact project if the projects, when taken in the aggregate, meet any of the criteria for a major impact project as identified in Env-Wt 407.02 or Env-Wt 407.03, and:*

- (1) The subject properties are abutting;*
- (2) The projects are a part of an overall scheme of development; or*
- (3) The projects are otherwise consistent parts of an eventual whole.*

Therefore, please provide the following:

1. This project is classified as a minor impact project pursuant to Env-Wt 524.06 (c) (3) Any single component of the project meets the requirements for minor impact classification as the crossings impact a total of 129 linear feet of intermittent stream impacts as specified in Env-Wt 407, Env-Wt 903, or this chapter; or Table 407-1. Please provide a complete response to Env-Wt 313.03(b)(1-9) as found in the [Standard Dredge and Fill Wetlands Permit Application Attachment A: Minor and Major Projects. Version 2.0](#)
2. In accordance with Env-Wt 311.10(a)(1), subject to Env-Wt 311.10(d) and (e), the functional assessment required by Env-Wt 311.03(b)(10) for minor or major projects impacting non-tidal wetlands, vernal pools, and watercourses must be performed by a certified wetland scientist.
3. In addition to meeting the applicable design requirements established in Env-Wt 300, a residential, development project in non-tidal wetlands shall be designed to meet the following criteria: In accordance with Env-Wt 524.04(a-f).
4. For the stream crossing projects, please provide the information on the plans as specified in Env-Wt 903.04(b) (7), cross-sections showing the water surface elevation resulting from the applicable design storm.

www.des.nh.gov

29 Hazen Drive • PO Box 95 • Concord, NH 03302-0095

NHDES Main Line: (603) 271-3503 • Subsurface Fax: (603) 271-6683 • Wetlands Fax: (603) 271-6588

TDD Access: Relay NH 1 (800) 735-2964

Please submit the required information as soon as practicable. Pursuant to RSA 482-A:3, XIV(a)(2), **the required information must be received by the NHDES Wetlands Bureau within 60 days of the date of this request (no later than February 7, 2022), or the Application will be denied.** Should additional time be necessary to submit the required information, an extension of the 60-day time period may be requested. Requests for additional time must be received prior to the deadline in order to be approved. In accordance with applicable statutes and regulations, the applicant is also expected to provide copies of the required information to the municipal clerk and all other interested parties.

Pursuant to RSA 482-A:3, XIV(a)(3), the NHDES Wetlands Bureau will approve or deny the Application within 30 days of receipt of all required information, or schedule a public hearing, if required by RSA 482-A or associated rules.

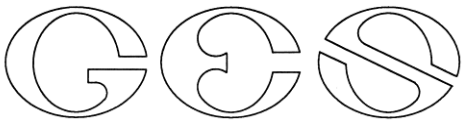
If you have any questions, please contact me at Eben.Lewis@des.nh.gov or (603) 559-1515.

Sincerely,



Eben M. Lewis
Southeast Region Supervisor, Wetlands Bureau
Land Resources Management, Water Division

cc: Brenden Walden, Gove Environmental Services, Inc.
Raymond Conservation Commission



GOVE ENVIRONMENTAL SERVICES, INC.

Attachment A



STANDARD DREDGE AND FILL
WETLANDS PERMIT APPLICATION
ATTACHMENT A: MINOR AND MAJOR PROJECTS



Water Division/Land Resources Management
Wetlands Bureau

[Check the Status of your Application](#)

RSA/ Rule: RSA 482-A/ Env-Wt 311.10; Env-Wt 313.01(a)(1); Env-Wt 313.03

APPLICANT'S NAME: Liberty Woods, LLC

TOWN NAME: Raymond

Attachment A is required for *all minor and major projects*, and must be completed *in addition* to the [Avoidance and Minimization Narrative](#) or [Checklist](#) that is required by Env-Wt 307.11.

For projects involving construction or modification of non-tidal shoreline structures over areas of surface waters having an absence of wetland vegetation, only Sections I.X through I.XV are required to be completed.

PART I: AVOIDANCE AND MINIMIZATION

In accordance with Env-Wt 313.03(a), the Department shall not approve any alteration of any jurisdictional area unless the applicant demonstrates that the potential impacts to jurisdictional areas have been avoided to the maximum extent practicable and that any unavoidable impacts have been minimized, as described in the [Wetlands Best Management Practice Techniques For Avoidance and Minimization](#).

SECTION I.I - ALTERNATIVES (Env-Wt 313.03(b)(1))

Describe how there is no practicable alternative that would have a less adverse impact on the area and environments under the Department's jurisdiction.

THE APPLICANTS THREE INDIVIDUAL LOTS HAVE AN INTERMITTENT STREAM THAT RUNS ALONG THE FRONTAGE OF EACH LOT PARALELL TO GREEN ROAD. THE DISTANCE BETWEEN THE STREAM AND THE ROADWAY DOESN'T ALLOW FOR A BUILDABLE LOT HOWEVER EACH LOT HAS BUILDABLE UPLANDS TO THE SOUTH ON THE SOUTHERN SIDE OF THE INTERMITTENT STREAM. THE APPLICANT HAS WORKED WITH THE ENGINEER TO ESTABLISH THE CROSSING PROPOSED FOR EACH LOT AT THE NARROWEST LOCATION POSSIBLE FOR EACH LOT TO REACH THE BUILDABLE ENVELOPE ON EACH OF THESE LOTS.

SECTION I.II - MARSHES (Env-Wt 313.03(b)(2))

Describe how the project avoids and minimizes impacts to tidal marshes and non-tidal marshes where documented to provide sources of nutrients for finfish, crustacean, shellfish, and wildlife of significant value.

The applicant is proposing three crossings of an intermittent stream. There will be no impacts to tidal marshes and non-tidal marshes that are documented to provide sources of nutrients for finfish, crustacean, shellfish, and wildlife of significant value.

SECTION I.III - HYDROLOGIC CONNECTION (Env-Wt 313.03(b)(3))

Describe how the project maintains hydrologic connections between adjacent wetland or stream systems.

The three lots are working with culverts suitable for 50 year flood waters, these three crossings will maintain the existing hydrologic connectivity that currently exists on the three subject properties.

SECTION I.IV - JURISDICTIONAL IMPACTS (Env-Wt 313.03(b)(4))

Describe how the project avoids and minimizes impacts to wetlands and other areas of jurisdiction under RSA 482-A, especially those in which there are exemplary natural communities, vernal pools, protected species and habitat, documented fisheries, and habitat and reproduction areas for species of concern, or any combination thereof.

The applicant has designed all three crossings to impact the narrowest part of the intermittent stream on each of the three lots. No exemplary natural communities located one any of the subject properties.

SECTION I.V - PUBLIC COMMERCE, NAVIGATION, OR RECREATION (Env-Wt 313.03(b)(5))

Describe how the project avoids and minimizes impacts that eliminate, depreciate or obstruct public commerce, navigation, or recreation.

All work will be done within the limits of the subject properties and have no effect on navigation or recreation. The proposed construction of the three single family residential dwellings will have a positive effect on the public commerce in the form of added tax base and local spending.

SECTION I.VI - FLOODPLAIN WETLANDS (Env-Wt 313.03(b)(6))

Describe how the project avoids and minimizes impacts to floodplain wetlands that provide flood storage.

No floodplain wetlands were observed adjacent to the tier 1 intermittent stream.

SECTION I.VII - RIVERINE FORESTED WETLAND SYSTEMS AND SCRUB-SHRUB – MARSH COMPLEXES (Env-Wt 313.03(b)(7))

Describe how the project avoids and minimizes impacts to natural riverine forested wetland systems and scrub-shrub – marsh complexes of high ecological integrity.

The proposed impacts are designed to cross at the narrowest point of the intermittent stream that bisects the frontage of each lot, at the narrowest point possible for each designed crossing. By designing these crossings in this manner we have avoided unnecessary impacts to this intermittent stream system that spans all 3 lots.

SECTION I.VIII - DRINKING WATER SUPPLY AND GROUNDWATER AQUIFER LEVELS (Env-Wt 313.03(b)(8))

Describe how the project avoids and minimizes impacts to wetlands that would be detrimental to adjacent drinking water supply and groundwater aquifer levels.

No aquifers are located near the site and the proposed tier 1 stream crossings will not have any negative impacts to wetlands down stream as they will maintain existing hydrologic connectivity.

SECTION I.IX - STREAM CHANNELS (Env-Wt 313.03(b)(9))

Describe how the project avoids and minimizes adverse impacts to stream channels and the ability of such channels to handle runoff of waters.

The applicant has sized the proposed culverts for each tier 1 stream crossing to handle a 50 year storm event. This sizing will maintain the existing flows and hydrologic connectivity that currently exists on site.

SECTION I.X - SHORELINE STRUCTURES - CONSTRUCTION SURFACE AREA (Env-Wt 313.03(c)(1))

Describe how the project has been designed to use the minimum construction surface area over surface waters necessary to meet the stated purpose of the structures.

There are no shoreline structures proposed for this application

SECTION I.XI - SHORELINE STRUCTURES - LEAST INTRUSIVE UPON PUBLIC TRUST (Env-Wt 313.03(c)(2))

Describe how the type of construction proposed is the least intrusive upon the public trust that will ensure safe docking on the frontage.

There are no shoreline structures proposed for this application

SECTION I.XII - SHORELINE STRUCTURES – ABUTTING PROPERTIES (Env-Wt 313.03(c)(3))

Describe how the structures have been designed to avoid and minimize impacts on ability of abutting owners to use and enjoy their properties.

There are no shoreline structures proposed for this application

SECTION I.XIII - SHORELINE STRUCTURES – COMMERCE AND RECREATION (Env-Wt 313.03(c)(4))

Describe how the structures have been designed to avoid and minimize impacts to the public's right to navigation, passage, and use of the resource for commerce and recreation.

There are no shoreline structures proposed for this application

SECTION I.XIV - SHORELINE STRUCTURES – WATER QUALITY, AQUATIC VEGETATION, WILDLIFE AND FINFISH HABITAT (Env-Wt 313.03(c)(5))

Describe how the structures have been designed, located, and configured to avoid impacts to water quality, aquatic vegetation, and wildlife and finfish habitat.

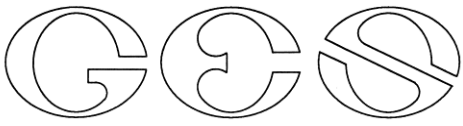
There are no shoreline structures proposed for this application

SECTION I.XV - SHORELINE STRUCTURES – VEGETATION REMOVAL, ACCESS POINTS, AND SHORELINE STABILITY (Env-Wt 313.03(c)(6))

Describe how the structures have been designed to avoid and minimize the removal of vegetation, the number of access points through wetlands or over the bank, and activities that may have an adverse effect on shoreline stability.

There are no shoreline structures proposed for this application

PART II: FUNCTIONAL ASSESSMENT
<p>REQUIREMENTS</p> <p>Ensure that project meets the requirements of Env-Wt 311.10 regarding functional assessment (Env-Wt 311.04(j); Env-Wt 311.10).</p>
<p>FUNCTIONAL ASSESSMENT METHOD USED:</p> <p>Highway Methodology</p>
<p>NAME OF CERTIFIED WETLAND SCIENTIST (FOR NON-TIDAL PROJECTS) OR QUALIFIED COASTAL PROFESSIONAL (FOR TIDAL PROJECTS) WHO COMPLETED THE ASSESSMENT: BRENDEN WALDEN CWS 297</p>
<p>DATE OF ASSESSMENT: 1/19/22</p>
<p>Check this box to confirm that the application includes a NARRATIVE ON FUNCTIONAL ASSESSMENT:</p> <p><input checked="" type="checkbox"/></p>
<p>For minor or major projects requiring a standard permit without mitigation, the applicant shall submit a wetland evaluation report that includes completed checklists and information demonstrating the RELATIVE FUNCTIONS AND VALUES OF EACH WETLAND EVALUATED. Check this box to confirm that the application includes this information, if applicable:</p> <p><input checked="" type="checkbox"/></p> <p>Note: The Wetlands Functional Assessment worksheet can be used to compile the information needed to meet functional assessment requirements.</p>



GOVE ENVIRONMENTAL SERVICES, INC.

Functions and Values Analysis

Wetland Function-Value Evaluation Form

Total area of wetland Large Human made? No Is wetland part of a wildlife corridor? no or a "habitat island"? no
 Adjacent land use Rural residential/undeveloped land Distance to nearest roadway or other development 0 ft
 Dominant wetland systems present PFO1E/PSS1E/RUBS Contiguous undeveloped buffer zone present no

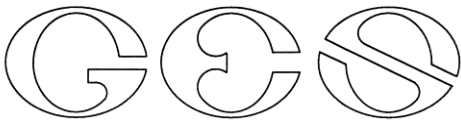
Is the wetland a separate hydraulic system? no If not, where does the wetland lie in the drainage basin? upper
 How many tributaries contribute to the wetland? unknown Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. Wetland 1
 Latitude _____ Longitude _____
 Prepared by: Brenden Walden Date 7/29/21
 Wetland Impact: _____
 Type intermittent stream Area 1,714 SF

Evaluation based on:
 Office YES Field YES
 Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	4, 7, 15	N	This wetland is not associated with any aquifer recharge or discharge
Floodflow Alteration	Y	2, 5, 7, 13, 16	Y	The intermittent stream is associated with a larger scrubshrub wetland on the western side of the property
Fish and Shellfish Habitat	N	1	N	intermittent stream that doesn't support fish in the area proposed for impact
Sediment/Toxicant Retention	Y	4, 7, 8, 10, 11	Y	The intermittent stream is associated with a larger scrubshrub wetland on the western side of the property
Nutrient Removal	Y	3, 4, 8, 9, 10, 11,	Y	The intermittent stream is associated with a larger scrubshrub wetland on the western side of the property
Production Export	Y	1, 2, 4, 5, 7, 12	N	The intermittent stream is associated with a larger scrubshrub wetland on the western side of the property
Sediment/Shoreline Stabilization	N	2, 3, 9, 13, 14,	N	tier 1 intermittent stream channel within a forested wetland area.
Wildlife Habitat	Y	1, 3, 4, 5, 6, 13, 15, 17, 18, 19,	Y	The intermittent stream is associated with a larger scrubshrub wetland on the western side of the property
Recreation	N		N	subject properties are privately owned and have no available recreation areas.
Educational/Scientific Value	N		N	The subject property is private land and the wetland extends off property
Uniqueness/Heritage	Y		N	no view points from this location
Visual Quality/Aesthetics	N		N	no view points or site access from roadway points
ES Endangered Species Habitat				NHB21-2779 / NHB21-2780 / NHB21-2781
Other				

Notes: _____
 * Refer to backup list of numbered considerations.



GOVE ENVIRONMENTAL SERVICES, INC.

Date: 1/20/22

Subject: Functions and Values Analysis

Re: Major Dredge and Fill Application
Green Road, Raymond, NH
Map 21, Lots 73, 74 & 75

Functions and Values Analysis

There is one primary wetland system that is evaluated for this functional analysis. The wetland system bisects the three subject properties along the frontage of adjacent to green road. The wetland originates off site in an area upslope on the western side of lot 75 as a PFO1E/PSS1E dominated wetland that drains via an intermittent tier 1 stream to the east. This intermittent stream is the primary wetland that bisects the subject properties as shown on the existing and proposed conditions plans. This wetland system has principal functions consisting of Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal., and Wildlife Habitat. These functions are limited as the wetland systems overall size is unknown and occurs in the upper portions of the drainage basin. The functions of the intermittent stream that bisects the subject properties are limited to primarily hydrologic connectivity between the PFO1E/PSS1E on the western portion of the property and the wetland that exists on the eastern side of the subject property.

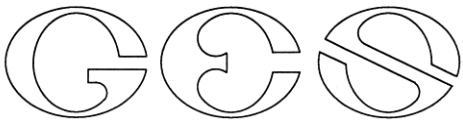
The applicant is proposing three separate driveway crossings for each of the three lots mentioned above. These driveway crossings are designed to be constructed at the narrowest point possible on each lot with a waiver being requested for lot 73 to work with 10 ft of the adjacent property boundary. These crossings will maintain the existing hydrologic connectivity and are designed to handle the 50-year flood as required for a tier 1 stream crossings. These crossings are necessary to access the buildable upland area on the southern portions of the site to utilize these areas for the proposed residential development.

Looking at the overall functions and values of these proposed impact areas the applicant is proposing for each lot the specific functions are primarily hydrologic connectivity and with the applicants current crossing designs, the proposed crossings will maintain the existing hydrologic connectivity between the two wetland having almost a net neutral effect on the overall functions and values of the intermittent stream..

This concludes the functions and values analysis minor dredge and fill application for the aforementioned lots on Green Road in Raymond. If you have any other questions or believe I can assist you and any other way please feel free to contact me either by email: bwalden@gesinc.biz or by phone: 207-710-7863.

Sincerely

Brenden Walden
Business Manager & Wetland Scientist
Gove Environmental Services, Inc.



GOVE ENVIRONMENTAL SERVICES, INC.

Cross Section and Correspondence

CULVERT SIZING

Prepared by The Dubai Group, Inc.

HydroCAD® 10.00-24 s/n 07602 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 50 YR Rainfall=6.90"

Printed 1/4/2022

Page 1

Summary for Reach WET: EX WETLAND

Inflow Area = 13.622 ac, 0.00% Impervious, Inflow Depth > 2.05" for 50 YR event
Inflow = 18.70 cfs @ 12.38 hrs, Volume= 2.324 af
Outflow = 18.70 cfs @ 12.39 hrs, Volume= 2.323 af, Atten= 0%, Lag= 0.3 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.14 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 0.86 fps, Avg. Travel Time= 1.0 min

Peak Storage= 437 cf @ 12.39 hrs
Average Depth at Peak Storage= 0.72'
Bank-Full Depth= 2.00' Flow Area= 32.0 sf, Capacity= 120.96 cfs

10.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 3.0 ' / ' Top Width= 22.00'
Length= 50.0' Slope= 0.0050 ' / '
Inlet Invert= 540.00', Outlet Invert= 539.75'



CULVERT SIZING

Prepared by The Dubai Group, Inc.

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Type III 24-hr 50 YR Rainfall=6.90"

Printed 1/4/2022

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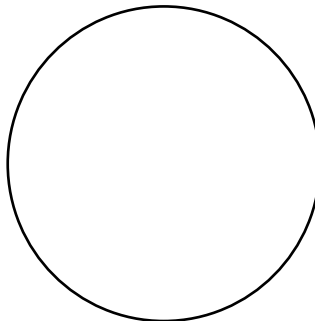
Summary for Pond C1: CULVERT

Inflow Area = 13.622 ac, 0.00% Impervious, Inflow Depth > 2.05" for 50 YR event
Inflow = 18.70 cfs @ 12.38 hrs, Volume= 2.324 af
Outflow = 18.70 cfs @ 12.38 hrs, Volume= 2.324 af, Atten= 0%, Lag= 0.0 min
Primary = 18.70 cfs @ 12.38 hrs, Volume= 2.324 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 541.92' @ 12.38 hrs
Flood Elev= 544.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	539.60'	30.0" Round Culvert L= 25.0' Ke= 0.500 Inlet / Outlet Invert= 539.60' / 539.50' S= 0.0040 '/ Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=18.62 cfs @ 12.38 hrs HW=541.91' (Free Discharge)
↑**1=Culvert** (Barrel Controls 18.62 cfs @ 5.13 fps)



Brenden Walden

From: Sam Kauh <sam@thedubaygroup.com>
Sent: Tuesday, January 4, 2022 10:24 AM
To: Brenden Walden
Subject: RE: green rd raymond

Yes. We assumed equal flow through the latter two as the contributing flow is minimal compared to the overall flow that leads to the first crossing.

Sam Kauh, EIT
Project Engineer

The Dubai Group Inc.
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From: Brenden Walden <bwalden@gesinc.biz>
Sent: Tuesday, January 4, 2022 10:22 AM
To: Sam Kauh <sam@thedubaygroup.com>
Subject: RE: green rd raymond

Sam, I would assume that would suffice, are those the same calculations used for all 3 crossings?
Thanks!
-BW

From: Sam Kauh <sam@thedubaygroup.com>
Sent: Tuesday, January 4, 2022 8:26 AM
To: Brenden Walden <bwalden@gesinc.biz>
Subject: RE: green rd raymond

Hi Brenden,

Here is what we had for the stream crossing. I printed off the data for the 50 year storm and added the figures on each sheet showing existing and proposed elevations. Hopefully this is all you need to respond to the RFMI but let me know if you need anything else.

Sam Kauh, EIT
Project Engineer

The Dubai Group Inc.