

Town of Hopkinton

330 Main Street • Hopkinton, New Hampshire 03229 • www.hopkinton-nh.gov

Tel: 603 746-3170 Fax: 603 746-2952

HOPKINTON PLANNING BOARD PUBLIC NOTICE - AGENDA MAY 8, 2018

Notice is hereby given that the **Hopkinton Planning Board** will meet on Tuesday, May 8, 2018, at 6:30 PM in the Hopkinton Town Hall, 330 Main Street, Hopkinton, NH, to review and take action on the following:

- I. Call to Order
- II. Approval of Meeting Minutes
 - a) Planning Board Meeting of April 10, 2018
- III. Master Plan Transportation Chapter
 - a) Central NH Regional Planning Commission Executive Director Michael Tardiff
- IV. Conceptual Consultations
- V. Applications.

<u>John Herrick (#2018-4)</u>, John Herrick, on behalf of Excalibur Shelving Systems, Inc., and Herrick Millwork, Inc., requesting Excavation approval for a total area of approximately 5.95 acres at 290 & 292 Burnham Intervale Road in the M-1 (industrial) district, TM/L 220-023-001 & 220-023-002.

- a) Determination Completeness
- b) Public Hearing
- c) Deliberation and Action on Application

VI. Other Business

- a) Reference Guide Zoning Ordinance, Subdivision Regulations, Site Plan Regulations
- b) Any other business to legally come before the meeting

VII. Adjournment.

a) Next scheduled meeting of the Planning Board – May 8, 2018

330 Main Street • Hopkinton, New Hampshire 03229 • www.hopkinton-nh.gov *Tel:* 603-746-3170 *Fax:* 603-746-3049

HOPKINTON PLANNING BOARD MINUTES APRIL 10, 2018

Members present: Chairman Bruce Ellsworth, Vice Chairman Michael Wilkey, Jane Bradstreet, James Fredyma, and Ex-Officio Sabrina Dunlap. Absent: Celeste Hemingson, Cettie Connolly, Rich Steele, and Alternates Clarke Kidder and Timothy Britain, and Planning Director Karen Robertson.

- I. Call to Order. Chairman Bruce Ellsworth called the meeting to order at 6:30 PM in the Hopkinton Town Hall. Due to the absence of regular members, Mr. Fredyma was designated as a voting member. Chairman Ellsworth welcomed Sabrina Dunlap to the Planning Board as an Ex-Officio member representing the Hopkinton Select Board.
- **II. Review of the Minutes of March 20, 2018.** Michael Wilkey, seconded by Jane Bradstreet, moved to APPROVE the Minutes of March 20, 2018 as presented. Motion carried unanimously in the affirmative.
- **III.** Conceptual Consultations. There were no conceptual consultations.
- **IV. Applications.** There were no applications.
- V. Election of Officers. Jane Bradstreet, seconded by James Fredyma, moved to elect Bruce Ellsworth as Chairman for 2018-2019. Motion carried unanimously in the affirmative.
- VI. Election of Officers. Jane Bradstreet, seconded by James Fredyma, moved to elect Michael Wilkey as Vice Chairman for 2018-2019. Motion carried unanimously in the affirmative.
- VII. Other Business. The was no other business.
- VIII. Adjournment. Michael Wilkey, seconded by Sabrina Dunlap, moved to adjourn the meeting at 6:40 PM. Motion carried unanimously in the affirmative. The next regular scheduled meeting of the Hopkinton Planning Board is at 6:30 PM on Tuesday, May 8, 2018 at the Hopkinton Town Hall.

Recording Secretary James Fredyma B

T.F. BERNIER, INC.

Land Surveyors~Designers~Consultants

50 Pleasant Street, P.O. Box 3464 Concord, NH 03302-3464 Environmental Permitting State and Local Permitting Land Surveying Aerial Mapping Aerial Photography

> Tel. (603) 224-4148 Fax (603) 224-0507

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APR 1 6 2018

HOPKINTON PLANNING DEPT.

April 16, 2018

Bruce Ellsworth, Chair Hopkinton Planning Board 330 Main Street Hopkinton, NH 03229

RE:

Application for Excavation Map 220 Lot 23.1 & 23.2

Herrick Mill Work, Inc. & Excalibur Shelving Systems, Inc.

290 & 292 Burnham Intervale Road

Dear Chair Ellsworth and members of the Board:

Please find enclosed the application for an Excavation Permit on Lots 23.1 and 23.2. The owners wish to excavate approximately 32,000 cubic yards of sand and gravel from an area of approximately 5.95 acres straddling the lot line between the two lots.

At its regular meeting on January 2, 2018, the Zoning Board of Adjustment granted a Special Exception for excavation within the M-1 District. The approval is subject to Planning Board approval and issuance of a NHDES Alteration of Terrain Permit. The excavation is to be conducted in such a manner that stormwater is contained within the site and there is no off-site stormwater flow. After excavation is completed the area will be loamed and seeded in accordance with the attached plans.

An application will be submitted to the NHDES Alteration of Terrain Bureau on April 17, 2018.

Thank you for your time and consideration of this request. If you have any questions or need additional information, please give us a call.

Sincerely,

T.F. BERNIER, INC.

Jonathan Crowdes Project Manager

enclosures

cc: file 014-01



TOWN OF HOPKINTON, NEW HAMPSHIRE PLANNING DEPARTMENT EXCAVATION APPLICATION/CHECKLIST

APR 16 2018

EXCAVATION APPLICATION CRECKES!
Name, mailing address and telephone number of Applicant John Herrick, PO Box 495 P220. CL 3618 HOPKINTON PLANNING DUPT
CONTRODUCION, NA 03229 603 493-9563 PLANNING DLPT
Name, mailing address and telephone number of Property Owner(s): Same as above
If the applicant is a corporate body, a list of the names of its responsible officers to be provided in an attachment.
Name, mailing address and telephone number of engineer, architect, soil scientist, wetland scientist, and land
surveyor Timothy F. Bernier of TF Bernier, Inc. PO Box 3464, Concord,
N.H. 03302-3464 603 224-4148
Location of Site: 290 & 292 Burnham Intervale Rd Nearest Street Pine Street
Tax Map: 220 Tax Lot: 23.1 & 23.2 Zoning District(s): M-1 (Industrial)
Number of Lots/Units for which approval is sought. 2 Lots
Type(s) of dwellings proposed in the subdivision:Single FamilyTwo-FamilyMulti-Family
Type of Sewage System:Other
Type of Water Supply: Municipal X Dug Well Artesian
NH Department of Environmental Services Approval for Subdivision No
Please submit the following with the completed application:
 Excavation/Reclamation Plan and Checklist - The checklist is prepared to assist in the review process. If questions arise about the specifics of each item, please consult either the Zoning Ordinance or the Subdivision and Site Plan Regulations. Abutters List as defined by RSA 672:3 - Include Tax Map, Lot Numbers, Name and Mailing Address of all abutters, including those across a street, brook or stream. Names should be those of current owners. One (1) set of addressed mailing labels of abutters, applicant, engineer, architect, soil scientist, wetland scientist, land surveyor, and of holders of conservation preservation, or agricultural preservation restrictions or easements. Four (4) paper prints of the final plan(s) at full scale. Legible copy of the final plan(s) reduced to no more than 11 x 17 inches. Appropriate filing fee.
Application fees: \$150.00 Excavation/Reclamation \$ 5.00 Abutter/Applicant/Owner Notification
The information contained in this application is complete and true to the best of my knowledge.
Signature of Applicant: MA Date: 118/18
Signature of Owner: Date: 4/16/13

EXCAVATION/RECLAMATION PLAN CHECKLIST

Site surveyed by a Registered Land Surveyor to establish an accurate base map showing boundary lines, topography, and significant features.

Excavation/Reclamation:

- X Property Lines
- X Existing topography
- \underline{X} Limits of Excavation
- X Excavation Depths (Excavated Topography)
- X Total Area of Excavation in acres
- X Access road(s) and intersection with Town or State highways
- X Vegetative buffer(s)
- X Abutters names and addresses
- X Distances from excavation limits to property lines
- X Schedule of excavation volumes
- X Test pit groundwater elevations
- X Top soil storage area
- N/ADrainage improvements (No off site runoff).
- X Photographs of existing conditions
- X Detailed written explanation of the restoration plan.
- X Diagram showing the restored topography and drainage at the completion of restoration.
- X Written report and diagram explaining the phasing of site restoration showing designated areas and completion dates, if the site is not to be restored all at once.
- X Seeding and mulching specifications.
- X Vegetation suitable to prevent erosion and with soils suitable to sustain such vegetation, except for exposed rock ledge.
- X Debris resulting from the excavation buried or removed.
- X All slopes graded to natural repose for the type of soil of which they are composed.
- X The elimination of any standing bodies of water created in the excavation project as may constitute a hazard to health and safety unless the Regulator specifies different restoration.
- X Such other information as the Regulator may require.

Abutters List Excavation Plan Herrick Mill Work, Inc. & Excaliber Shelving Systems, Inc. Tax Map 220 Lots 23.2 and 23.1

MAP		<u>LOT</u>	OWNER
220	23.2, 11, 21		Herrick Mill Work, Inc. c/o John Herrick PO Box 495 Contoocook, NH 03229-0495
220	23.1		Excalibur Shelving Systems, Inc. c/o John Herrick PO Box 498 Contoocook, NH 03229
219	14		Sloping Acres Farm 31 West Road Canterbury, NH 03224
219 209	12 58		Town of Hopkinton 330 Main Street Hopkinton, NH 03229
218	6		Martin Grady III 1468 Maple Street Contoocook, NH 03229
220	15, 16, 22		Richard M. George 97 Roby Road Webster, NH 03229
220	12, 13, 14, 19, 20		HIDCO c/o John Herrick PO Box 495 Contoocook, NH 03229-0495
220	24		Eternal Solutions, LLC 329 Boundtree Road Contopcook, NH 03229 15355 Crossville Hwy Monte Rey TN 38574

220	25	Boundstone Properties, LLC PO Box 691 Contoocook, NH 03229
209	53	Wayne L. Patenaude 87 Garrison Lane Hopkinton, NH 03229
220	28	Byron M. Carr, (ET AL) 191 Burnham Intervale Road Contoocook, NH 03229
220	8.1	Susan E. Heino 371 Burnham Intervale Road Contoocook, NH 03229
220	8	John L. Herrick PO Box 495 Contoocook, NH 03229-0495

Professional Consultants:

Timothy F. Bernier, LLS, CWS T.F. Bernier, Inc. PO Box 3464 Concord, NH 03302

ent:	1007884	TOWN OF HOP	KINTON	Phone:	(603) 746-3170				
l #	796151	Requested By:		Requested By: Fax:		Fax:			
ıles Rep.:	LEGA	CATHY VALLEY		Phone:	(603) 369-3210				
		cathy@cmonitor	.com	Fax:	(603) 228-8238				
ass.:	C166	LEGALS		2.51	100				
art Date:	04/20/20	18	End Date:	04/20/2018	Nb. of Inserts:	2			
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PUBLIC NOTICE

HOPKINTON PLANNING BOARD

MAY 8, 2018

Notice is hereby given that the Hopkinton Planning Board will meet on Tuesday, May 8, 2018 at 5:30 PM in the Hopkinton Town Hall, 330 Main Street Hopkinton, to review and take action on the following: John Herrick (#2018-4), on behalf of Excalibur Shelving Systems, Inc. and Herrick Millwork, Inc., requesting Excavation approval for an area of approximately 5.95 acres at 290 & 292 Burnham Intervale Road in the M-1 (industrial) district, TML 220-023-001 & 220-023-002. Public hearing will immediately follow if application is accepted as complete. cepted as complete.

April 20

<u>John Herrick (#2018-02)</u> Tim Bernier of T.F. Bernier, Inc. and John Herrick, President of Excalibur Shelving Systems and Herrick Millwork, Inc., were present to request a Special Exception to excavate approximately 50,000 – 60,000 yards of gravel (sand) on properties owned by Herrick Millwork, Inc. and Excalibur Shelving Systems, Inc., located at 290 and 292 Burnham Intervale Road, Tax Map 220 Lots 23.1 and 23.2, M-1 District. The application was submitted in accordance with Zoning Ordinance Table of Uses 3.6.G.7 and Section XI.

Mr. Bernier explained that both lots are relatively flat; however, Lot 23.1 has an elevation difference of approximately 7-feet from that of Lot 23.2. The area of excavation will be approximately 3.9 acres. It is anticipated that between 50,000 – 60,000 yards of gravel (sand) will be removed from the site. The material will most likely be removed by trailer trucks with five truck loads a day anticipated.

The Applicant's response to the criteria for a Special Exception as outlined in Section XV of the Zoning Ordinance was as follows:

- 1) Standards provided by this Ordinance for the particular use permitted by Special Exception. "The proposed excavation will comply with all local regulatory requirements." Regulatory requirements include NH DES Alteration of Terrain Permit and Planning Board approval per RSA 155:E.
- 2) No hazard to the public or adjacent property on account of potential fire, explosion or release of toxic materials. "The removal of gravel (sand) will not create a risk of fire, explosion or release of toxic material."
- 3) No detriment to property values in the vicinity or change in the essential characteristics of a residential neighborhood on account of the location or scale of buildings and other structures, parking areas, access ways, odor(s), smoke, gas, dust, or other pollutant, noise, glare, heat, vibration, or unsightly outdoor storage of equipment, vehicles or other materials. "None of the listed offenses will result from the proposed excavation." Mr. Herrick will utilize on-site loaders in removing the sand; therefore, no additional equipment is anticipated.

The properties are in the industrial district and are surrounded by commercial building, and residential houses that are owned by Mr. Herrick.

- 4) No creation of a traffic safety hazard or a substantial increase in the level of traffic congestion in the vicinity. "The gravel (sand) will be removed in a maximum of ten truck trips per day (5 loads). Due to changes in the commercial industries on Burnham Intervale Road, the additional truck traffic will be less than historical volumes."
- 5) No excessive demand on municipal services, including, but not limited to, water, sewer, waste disposal, police and fire protection, and schools. "The proposed excavation will not create a demand on any municipal services."
- 6) No significant increase of storm water runoff onto adjacent property or streets. "The existing grade and drainage patterns will be maintained, and all runoff will be contained on site."

Mr. Bernier explained that the Alteration of Terrain rules concerning pre/post conditions.

- 7) An appropriate location for the proposed use. "The site is presently an industrial park and the proposed excavation is an industrial activity."
- 8) Not affect adversely the health and safety of the residents and others in the area and not be detrimental to the use or development of adjacent or neighboring properties. "The proposed excavation will have no detrimental effects on the abutting properties." The site is currently used for lumber storage. The excavation will ultimately make the elevation of the lots, in the area in question, similar.
- 9) In the public interest and in the spirit of the ordinance. "The resulting excavation will improve the use of the property and is consistent with the spirit of the ordinance and public interest." Mr. Herrick noted the difficulty in finding high quality sand, and the fact that the earth material will be used for construction projects.

There was brief discussion concerning the estimated time frame in the removal of the material, given that only five truck loads would be removed from the site per day (Monday – Saturday). It was calculated that the project would take approximately 5-years to be completed.

Mr. Herrick reviewed the history of the truck traffic related to his businesses, dating back to use of the old Excalibur and New Kearsarge buildings. Excalibur was moved from what is now Prototek to the former New Kearsarge facility. Mr. Herrick noted that over the years, as a result of change, the truck traffic has been reduced.

Mr. Bernier explained how the project could be finished within 2-months; however, they did not believe that it would be in the best interest of the neighborhood to have the number of trucks that would be needed to enter and exit the property during a short period of time.

Chairman Rinden opened the public hearing portion of the meeting.

Abutter Byron Carr of 191 Burnham Intervale Road questioned whether the matter of trucking would be further discussed by the Planning Board. Chairman Rinden replied yes.

Abutter Richard George of 97 Roby Road, Webster, had no objections to the proposal as currently presented.

Public testimony was closed.

Toni Gray, seconded by Charles Koontz, motion to **APPROVE** Application #2018-02 subject to the following conditions:

- 1) Planning Board approval, and
- 2) NH DES Alteration of Terrain permit.

Motion carried in the affirmative (Koontz, Gray, Scheinman, Greenblott, and Rinden). The Applicant successfully addressed all criteria to be granted a Special Exception as outlined in Section XV of the Zoning Ordinance.



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HOPKINTON PLANNING DEPT.

PROJECT NARRATIVE

PREPARED FOR

Excavation Plan for

Herrick Millwork, Inc. & Excalibur Shelving Systems, Inc. Assessors Map 220 Lots 23.1 & 23.2 Hopkinton, NH

April 2018

PREPARED BY:

T. F. Bernier, Inc. P.O. Box 3464 50 Pleasant Street Concord, NH 03302-3464 Phone: 603-224-4148

Table of Contents

Copy of signed Application with checklist Copy of check USGS Map Project Narrative Introduction

Existing Conditions Project Description

- Web GIS printouts
 Natural Heritage Bureau letter
 Web Soil Survey
- Aerial Photographs

1. Project Narrative:

Introduction:

The project is to excavate approximately 32,000 yards of sand & gravel on Assessors Map 220 Lots 23.1 & 23.2. The site is located to the west of the end of Burnham Intervale Road in Hopkinton, New Hampshire, northerly of the Contoocook River. Lot 23.1 is owned by Excalibur Shelving Systems, Inc., and Lot 23.2 is owned by Herrick Millwork, Inc. Both of these companies are owned by John Herrick, who will be listed as the Applicant and the Owner on the Alteration of Terrain Permit.

The total area of disturbance proposed under this permit will be approximately 259,180 square feet (5.95 acres). The excavation site straddles the property line between the two lots, and is just south of the driveway to Herrick Millwork, lot 23.2. The work will consist of sand & gravel mining, and the mined material will be hauled off site via the existing driveway.

Existing Conditions:

This overall site is quite flat, except for a drop in elevation between the two lots of approximately 6 feet near the lot line between the two lots. Part of the site is grass field/meadow, some of the site is wooded, and part of the site is where lumber piles are currently stored for the millwork operations. These areas of lumber storage are quite flat and are chronically disturbed, having mixed sand, gravel and weeds on the surface. The soils on the site from the NRCS Web Soil Survey are 35- Champlain loamy fine sand and 300- Udipsamments, both are Hydrologic Soil Group A. Test pits were performed on the site to check for seasonal high water table depth, and the soils were consistent with the Web Soil Survey. Test pit logs are shown on sheet 2 of the plan set.

Project Description:

Any loam on the surface of the site will be removed and stockpiled on the property to be used during reclamation. During the excavation operation all slopes are to be pitched inward into the site to contain any surface runoff. After mining is complete the site will be regraded and revegetated. Perimeter sideslopes will be graded to a maximum slope of 3:1. There is a vegetated buffer between the excavation site and the Contoocook River of over 300' of relatively flat field and/or woods. After reclamation the overall drainage directions/patterns through the site will be the same as pre-excavation. The site will be reclaimed- loamed and seeded and stabilized in accordance with the plan notes.



RSA/ Rule: RSA 485-A:17, Env-Wq 1500

ALTERATION OF TERRAIN PERMIT APPLICATION



Services Water Division/ Alteration of Terrain Bureau/ Land Resources Management Check the Status of your Application:

	11				
		101			
1. APPLICANT INFORMATION (INTENDED PERMIT HOLDER	R)		20001		
Applicant Name: John Herrick	Contact Name: J	Contact Name: John Herrick			
Email: jlherrick@tds.net	Daytime Telephone	Daytime Telephone: (603) 493-9563			
Mailing Address: PO Box 495					
Town/City: Contoocook		State: NH	Zip Code: 03229		
2. APPLICANT'S AGENT INFORMATION If none, che	ck here:				
Business Name: T. F. Bernier, Inc.	Contact Name: Ti	mothy Bernie	er		
Email: tim@tfbinc.com	Daytime Telephone	(603) 224-4	1148		
Address: 50 Pleasant Street					
Town/City: Concord		State: NH	Zip Code: 03302		
3. PROPERTY OWNER INFORMATION (IF DIFFERENT FROM	M APPLICANT)				
Applicant Name: SAME	Contact Name:				
Email: Daytime Telephone:					
Mailing Address:					
Town/City:		State:	Zip Code:		
4. PROPERTY OWNER'S AGENT INFORMATION If no	one, check here:				
Business Name:	Contact Name:				
Email:	Daytime Telephone				
Address:			-		
Town/City:		State:	Zip Code:		
5. CONSULTANT INFORMATION If none, check here:					
Engineering Firm:	Contact Name:	-			
Email:	Daytime Telephone	Daytime Telephone:			
Address:		-			
Town/City:		State:	Zip Code:		

6. PROJECT TYPE	
⊠ Excavation Only □ Residential □ Commercial □ Agricultural □ Land Conversion □ Other:	☐ Golf Course ☐ School ☐ Municipal
7. PROJECT LOCATION INFORMATION	
Project Name: Excavation Plan	
Street/Road Address: 290 & 292 Burnham Interval	le Road
Town/City: Hopkinton Con	ounty: Merrimack
Tax Map: 220 Block:	Lot Number: 23.1 & 23.2 Unit:
Location Coordinates: N:258650, E:967935	ongitude UTM X State Plane
Post-development, will the proposed project withdraw from or directly opurpose.	discharge to any of the following? If yes, identify the
1. Stream or Wetland	☐ Yes ☐ Withdrawal ☐ Discharge
Purpose:	⊠ No
2. Man-made pond created by impounding a stream or wetland	Yes Withdrawal Discharge
Purpose:	⊠ No
Unlined pond dug into the water table	☐ Yes ☐ Withdrawal ☐ Discharge
Purpose: Post-development, will the proposed project discharge to:	⊠ No
will not cause net increase in phosphorus and/or nitrogen • A Class A surface water or Outstanding Resource Water? No will not cause net increase in phosphorus and/or nitrogen • A lake or pond not covered previously? No Yes - include increase in phosphorus in the lake or pond Is the project a High Load area? Yes No If yes, specify the type of high load land use or activity: Is the project within a Water Supply Intake Protection Area (WSIPA)? Is the project within a Groundwater Protection Area (GPA)? Will the well setbacks identified in Env-Wq 1508.02 be met? Note: Guidance document titled "Using NHOES's One Stop Water (WSIPA) details on the restrictions in these areas, read Chapter 3.1 in Volume Is any part of the property within the 100-year floodplain? Yes If yes: Cut volume: cubic feet within the 100-year floodp Fill volume: cubic feet within the 100-year floodp	☐ Yes ☒ No ☒ Yes ☐ No ☐ Locate Protection Areas" is available online. For more e 2 of the NH Stormwater Manual. ☒ No plain
Project is NOT within ¼ mile of a designated river	
☐ Project IS within a Coastal/Great Bay Region community - in ☑ Project is NOT within a Coastal/Great Bay Region community	nclude info required by Env-Wq 1503.08(I) if applicable
8. BRIEF PROJECT DESCRIPTION (PLEASE DO NOT REPLY	"SEE ATTACHED")
To excavate approximately 32,000 yards of approximately 5.95 acres. The mined materiathe drainage patterns through and surround after completion. Runoff will be contained	al will be removed from the site. ling the site will remain the same within the site during excavation.
9. IF APPLICABLE, DESCRIBE ANY WORK STARTED PRIOR	TO RECEIVING PERMIT

10. ADDITIONAL REQUIRED INFORMATI	ION		en e		
A. Date a copy of the application was sent to the municipality as required by Env-Wq 1503.05(e) ¹ : 4/6//8. (Attach proof of delivery)					
B. Date a copy of the application was sent to	the local river advisory con	mittee if requ	ired by Env-Wq 1503.05(e)2: 1/1/1/18.		
(Attach proof of delivery)	· · · · · · · · · · · · · · · · · · ·				
C. Type of plan required: Land Conversion	on Detailed Developmen	t 🖾 Excavat	ion, Grading & Reclamation Steep Slope		
D. Additional plans required: Stormwater		Groups 🗌 S	ource Control Chloride Management		
E. Total area of disturbance: 259,180 square f	eet				
F. Additional impervious cover as a result of impervious coverage).		eet (use the "	" symbol to indicate a net reduction in		
Total final impervious cover: 0 squar	e feet				
G. Total undisturbed cover: square fe	et				
H. Number of lots proposed: 0					
I. Total length of roadway:0_ linear feet	t .				
J. Name(s) of receiving water(s): NA (No	runoff leaves site)	- -			
K. Identify all other NHDES permits required pending, or if the required approval has be applicable.	K. Identify all other NHDES permits required for the project, and for each indicate whether an application has been filed and is pending, or if the required approval has been issued provide the permit number, registration date, or approval letter number, as applicable.				
Type of Approval Application Filed?					
Type of Approval	Application Filed?	Pending	If Issued:		
Water Supply Approval	☐ Yes ☒ No ☐N/A		Permit number:		
2. Wetlands Permit	☐ Yes ☒ No ☐N/A		Permit number:		
3. Shoreland Permit	☐ Yes ☒ No ☐N/A		Permit number;		
4. UIC Registration	☐ Yes ☒ No ☐N/A		Registration date:		
5. Large/Small Community Well Approval	☐ Yes ☒ No ☐N/A		Approval letter date:		
6. Large Groundwater Withdrawal Permit	☐ Yes ☒ No ☐N/A		Permit number:		
7. Other:	☐ Yes ☒ No		Permit number:		
10 Diet ellienssten istantitast bester harrier and					
L. List all species identified by the Natural He Northern Black Racer (snake)	eritage Bureau as threatene	d or endange	red or of concern:		
M. Using NHDES's Web GIS OneStop prograturned on, list the impairments identified for NA	a m (www.2 desistate nh usid	isionestop/), i	with the Surface Water Impairment Javer		
M. Using NHDES's Web GIS OneStop prograturned on, list the impairments identified for	am (<u>zow 2 des state nh us c</u> or each receiving water. If n	isionestopi), v o pollutants a	with the Surface Water Impairment Javer		
M. Using NHDES's Web GIS OneStop prograturned on, list the impairments identified for NA N. Did the applicant/applicant's agent have a If yes, name of staff member: O. Will blasting of bedrock be required? If yes, standard blasting BMP notes must be a standard blasting blasting blasting blasting blasting blasting blasting blasting	pre-application meeting with Yes No If yes pe placed on the plans, available for blast rock will be generate	o poliutants a h AOT staff? , estimated quilable at:	with the Surface Water Impairment layer are listed, enter "N/A." Yes No Dantity of blast rock: cubic yards		

² Env-Wq 1503.05(c)(6), requires proof that a completed application form, checklist, plans and specifications, and all other supporting materials have been sent or delivered to the Local River Advisory Committee, if the project is within ¼ mile of a designated river.

Env-Wq 1503.05(c)(6), requires proof that a completed application form, checklist, plans and specifications, and all other supporting materials have been sent or delivered to the governing body of each municipality in which the project is proposed.

11. CHE	CK ALL APPLICATION ATTACHMENTS THAT APPLY (SUBMIT WITH APPLICATION IN ORDER LISTED)
LOOSE:	
⊠ Che ⊠ Colo	ed application form: des.nh.gov/organization/divisions/water/aot/index.htm (with attached proof(s) of delivery) ck for the application fee: des.nh.gov/organization/divisions/water/aot/fees.htm or copy of a USGS map with the property boundaries outlined (1" = 2,000' scale) uplicant is not the property owner, proof that the applicant will have a legal right to undertake the project on the sperty if a permit is issued to the applicant.
BIND IN	A REPORT IN THE FOLLOWING ORDER:
⊠ Cop ⊠ Cop ⊠ Cop ⊠ Nari	y of the signed application form & application checklist (des.nh.gov/organization/divisions/water/aot/index.htm) y of the check y of the USGS map with the property boundaries outlined (1" = 2,000' scale) ative of the project with a summary table of the peak discharge rate for the off-site discharge points of the project with the "Surface Water Impairments" layer turned on -
http://w	ww-ides state.nh.us/onestopdatamapper/onestopniapper.aspx
│ 🔯 Web	GIS printouts with the AOT screening layers turned on -
http://w	<u>www.des.state.nh us onestoodatamapper/onestopmapper.asok</u>
☑ NHE	letter using DataCheck Tool - www.nhdfi.org/about-forests-and-lands bureaus natural-hentaga-bureaul
⊠ the ⊠ Aeri	Web Soil Survey Map with project's watershed outlined websoilsurvey.nrcs.usda.gov al photograph (1" = 2,000' scale with the site boundaries outlined) (1"=200')
	tographs representative of the site
	undwater Recharge Volume calculations (one worksheet for each permit application):
des.	nh.gov/organization/divisions/water/aot/documents/bmp_worksh.xls worksheets (one worksheet for each treatment system):
	nh.gov/organization/divisions/water/aot/documents/bmp_worksh.xls
des. □ Drai	nage analysis, stamped by a professional engineer (see Application Checklist for details)
Ripr	ap apron or other energy dissipation or stability calculations
☐ Site	Specific Soil Survey report, stamped and with a certification note prepared by the soil scientist that the survey was done coordance with the Site Specific Soil Mapping standards, Site-Specific Soil Mapping Standards for NH & VT, SSSNNE ecial Publication No. 3.
	ration Feasibility Report (example online) [Env-Wq 1503.08(f)(3)]
Reg	stration and Notification Form for Storm Water Infiltration to Groundwater (UIC Registration-for underground ems only, including drywells and trenches):
	i des tift govi utaanization divisions vieter dwebidwsee fevil disphares)
☐ Insp	ection and maintenance manual with, if applicable, long term maintenance agreements [Env-Wq 1503.08(g)] rece control plan
PLANS:	
	ne set of design plans on 34 - 36" by 22 - 24" white paper (see Application Checklist for details)
∐ Pr	e & post-development color coded soil plans on 11" x 17" (see Application Checklist for details)
∐ Pr	e & post-development drainage area plans on 34 - 36" by 22 - 24" white paper (see Application Checklist for tails)
	R FLOODPLAIN REPORT: information required in Env-Wq 1503.09, submitted as a separate report.
	NAL INFORMATION RE: NUTRIENTS, CLIMATE Checklist for Details
⊠ REVII	W APPLICATION FOR COMPLETENESS & CONFIRM INFORMATION LISTED ON THE APPLICATION IS JUDIC WITH SUBMITTAL.

42 DECUIPED CIONATURES	
12. REQUIRED SIGNATURES	
By initialing here, I acknowledge that I am re department in PDF format on a CD within on	quired by Env-Wq 1503.20(e) to submit a copy of all approved documents to the e week after permit approval.
By signing below, I certify that:	
 The information contained in or otherwise submi knowledge and belief; 	itted with this application is true, complete, and not misleading to the best of my
the application, revoke any permit that is granted engineers established by RSA 310-A:3 if I am a	
RSA 641.	pecified in New Hampshire law for falsification in official matters, currently
APPLICANT	APPLICANT'S AGENT:
Signature:	Date: 4/16/18
Name (print or type): JULA HETTIUL	Title:
PROPERTY OWNER	PROPERTY OWNER'S AGENT:
Signature:	Date: 4/16/18
Name (printor type): JUL n Herrick	Title:

ATTACHMENT A: ALTERATION OF TERRAIN PERMIT APPLICATION CHECKLIST

Check the box to indicate the item has been provided or provide an explanation why the item does not apply.

DESIGN PLANS

	☑ Plans printed on 34 - 36" by 22 - 24" white paper	
	☐ PE stamp	
	☐ Wetland delineation	
	Temporary erosion control measures	
	□ Treatment for all stormwater runoff from impervious surfaces such as roadways (including gravel roadways), ponon-residential roof runoff. Guidance on treatment BMPs can be found in Volume 2, Chapter 4 of the NH Storm Management Manual.	arking areas, and nwater
	☑ Pre-existing 2-foot contours	
	☑ Proposed 2-foot contours	
	☐ Drainage easements protecting the drainage/treatment structures	
	Compliance with the Wetlands Bureau, RSA 482- A compliance with the Wetlands is not allowed.	Note
	Compliance with the Comprehensive Shoreland Protection Act, RSA 483-B.	
	Benches. Benching is needed if you have more than 20 feet change in elevation on a 2:1 slope, 30 feet change a 3:1 slope, 40 feet change in elevation on a 4:1 slope.	e in elevation on
	☐ Check to see if any proposed ponds need state Dam permits.	
NT 70	DETAILS	
MA	Typical roadway x-section	
	☐ Detention basin with inverts noted on the outlet structure	
	Stone berm level spreader	
	Outlet protection – riprap aprons	
	A general installation detail for an erosion control blanket	
	☑ Silt fences or mulch berm	
	Storm drain inlet protection. Note that since hay bales must be embedded 4 inches into the ground, they are new hard surfaces such as pavement.	ot to be used on
	☐ Hay bale barriers	
	☐ Stone check dams	
	☑ Gravel construction exit	
	☐ Temporary sediment trap	
	☐ The treatment BMP's proposed	
	☐ Any innovative BMP's proposed	

NHDES-W-01-003

	CONST	RUCTION SEQUENCE/EROSION CONTROL
	⊠ Note 3800	that the project is to be managed in a manner that meets the requirements and intent of RSA 430:53 and Chapter Agr O relative to invasive species.
NA	☐ Note	that perimeter controls shall be installed prior to earth moving operations.
	☐ Note	e that temporary water diversion (swales, basins, etc) must be used as necessary until areas are stabilized.
		e that ponds and swales shall be installed early on in the construction sequence (before rough grading the site).
		e that all ditches and swales shall be stabilized prior to directing runoff to them.
	☐ Note	e that all roadways and parking lots shall be stabilized within 72 hours of achieving finished grade.
	☐ Note	that all cut and fill slopes shall be seeded/loamed within 72 hours of achieving finished grade
	☐ Note	that all erosion controls shall be inspected weekly AND after every half-inch of rainfall.
		the limits on the open area allowed, see Env-Wq 1505.02 for detailed information.
	Exam	nple note: The smallest practical area shall be disturbed during construction, but in no case shall exceed 5 acres at any one pefore disturbed areas are stabilized.
	✓ Note	the definition of the word "stable"
		mple note: An area shall be considered stable if one of the following has occurred:
		Base course gravels have been installed in areas to be paved.
		minimum of 85 percent vegetated growth has been established.
		minimum of 3 inches of non-erosive material such stone or riprap has been installed.
		Or, erosion control blankets have been properly installed.
		e the limit of time an area may be exposed imple note: All areas shall be stabilized within 45 days of initial disturbance.
	Prov prob	ride temporary and permanent seeding specifications. (Reed canary grass is listed in the Green Book; however, this is a lematic species according to the Wetlands Bureau and therefore should not be specified)
	☐ Prov	ride winter construction notes that meet or exceed our standards.
	Stand	dard Winter Notes:
	•	All proposed vegetated areas that do not exhibit a minimum of 85 percent vegetative growth by October 15, or which are disturbed after October 15, shall be stabilized by seeding and installing erosion control blankets on slopes greater than 3:1, and seeding and placing 3 to 4 tons of mulch per acre, secured with anchored netting, elsewhere. The installation of erosion control blankets or mulch and netting shall not occur over accumulated snow or on frozen ground and shall be completed in advance of thaw or spring melt events.
	•	All ditches or swales which do not exhibit a minimum of 85 percent vegetative growth by October 15, or which are disturbed after October 15, shall be stabilized temporarily with stone or erosion control blankets appropriate for the design flow conditions.
	•	After October 15, incomplete road or parking surfaces, where work has stopped for the winter season, shall be protected with a minimum of 3 inches of crushed gravel per NHDOT item 304.3.
	com	e at the end of the construction sequence that "Lot disturbance, other than that shown on the approved plans, shall not mence until after the roadway has the base course to design elevation and the associated drainage is complete and le." – This note is applicable to single/duplex family subdivisions, when lot development is not part of the permit.
	DRAIN	AGE ANALYSES
	Please	double-side 8 $\frac{1}{2}$ " x 11" sheets where possible but, do not reduce the text such that more than one page fits on one side.
	PE s	
	☐ Raii prec	nfall amount obtained from the Northeast Regional Climate Center Include extreme ipitation table as obtained from the above referenced website.
	☐ Draii	nage analyses, in the following order:

(603) 271-2147 NHDES Alteration of Terrain Bureau, PO Box 95, Concord, NH 03303-0095

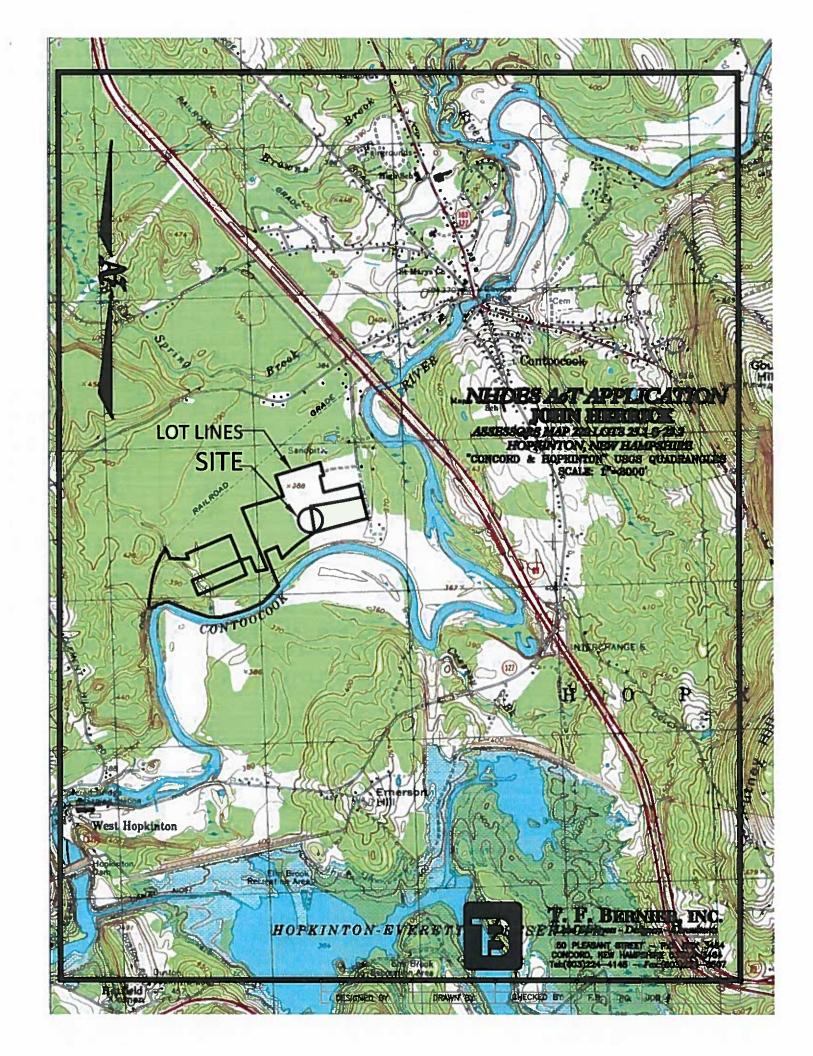
NHDES-W-01-003 Pre-development analysis: Drainage diagram. Pre-development analysis: Area Listing and Soil Listing. Pre-development analysis: Node listing 1-year (if applicable), 2-year, 10-year and 50-year. Pre-development analysis: Full summary of the 10-year storm. Post-development analysis: Drainage diagram. Post-development analysis: Area Listing and Soil Listing. Post-development analysis: Node listing for the 2-year, 10-year and 50-year. Post-development analysis: Full summary of the 10-year storm. Review the Area Listing and Soil Listing reports Hydrologic soil groups (HSG) match the HSGs on the soil maps provided. There is the same or less HSG A soil area after development (check for each HSG). There is the same or less "woods" cover in the post-development. Undeveloped land was assumed to be in "good" condition. The amount of impervious cover in the analyses is correct. Note: A good check is to subtract the total impervious area used in the pre analysis from the total impervious area used in the post-analysis. For residential projects without demolition occurring, a good check is to take this change in impervious area, subtract out the roadway and divide the remaining by the number of houses/units proposed. Do these numbers make sense? Check the storage input used to model the ponds. Check to see if the artificial berms pass the 50-year storm, i.e., make sure the constructed berms on ponds are not overtopped. Check the outlet structure proposed and make sure it matches that modeled. Check to see if the total areas in the pre and post analyses are same. Confirm the correct NRCS storm type was modeled (Coos, Carroll & Grafton counties are Type II, all others Type III). PRE- AND POST-DEVELOPMENT DRAINAGE AREA PLANS Plans printed on 34 - 36" by 22 - 24" on white paper. Submit these plans separate from the soil plans. A north arrow. A scale. ☐ Labeled subcatchments, reaches and ponds. Tc lines. A clear delineation of the subcatchment boundaries. Roadway station numbers. Culverts and other conveyance structures. PRE AND POST-DEVELOPMENT COLOR-CODED SOIL PLANS 11" x 17"sheets suitable, as long as it is readable. ☐ Submit these plans separate from the drainage area plans.

☐ Name of the soil scientist who performed the survey and date the soil survey took place.

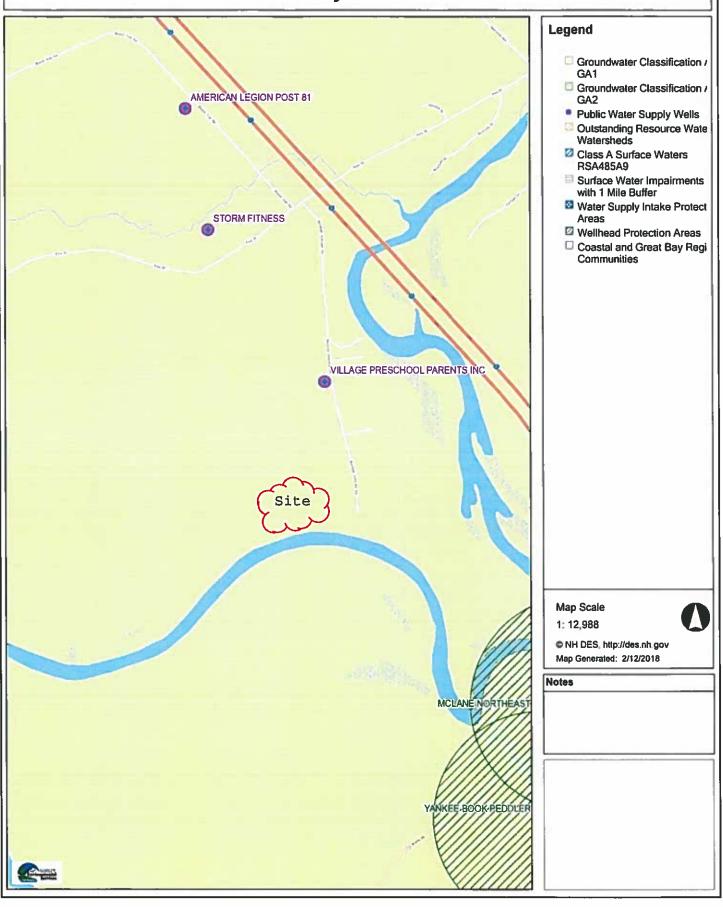
A north arrow.

□ A scale.

NHDES-W-01-003
2-foot contours (5-foot contours if application is for a gravel pit) as well as other surveyed features.
☐ Delineation of the soil boundaries and wetland boundaries.
☐ Delineation of the subcatchment boundaries.
Soil series symbols (e.g., 26).
A key or legend which identifies each soil series symbol and its associated soil series name (e.g., 26 = Windsor).
The hydrologic soil group color coding (A = Green, B = yellow, C= orange, D=red, Water=blue, & Impervious = gray).
Please note that excavation projects (e.g., gravel pits) have similar requirements to that above, however the following are common exceptions/additions:
☑ Drainage report is not needed if site does not have off-site flow.
5 foot contours allowed rather than 2 foot.
☑ No PE stamp needed on the plans.
Add a note to the plans that the applicant must submit to the Department of Environmental Services a written update of the project and revised plans documenting the project status every five years from the date of the Alteration of Terrain permit.
Add reclamation notes.
See NRCS publication titled: Vegetating New Hampshire Sand and Gravel Pits for a good resource, it is posted online at:
ADDITIONAL INFORMATION RE: NUTRIENTS, CLIMATE
If project will discharge stormwater to a surface water impaired for phosphorus and/or nitrogen, include information to demonstrate that project will not cause net increase in phosphorus and/or nitrogen.
If project will discharge stormwater to a Class A surface water or Outstanding Resource Water, include information to demonstrate that project will not cause net increase in phosphorus and/or nitrogen.
If project will discharge stormwater to a lake or pond not covered previously, include information to demonstrate that project will not cause net increase in phosphorus in the lake or pond.
☐ If project is within a Coastal/Great Bay Region community, include info required by Env-Wq 1503.08(I) if applicable.



AOT Layers 2/12/18



Memo



NH NATURAL HERITAGE BUREAU NHB DATACHECK RESULTS LETTER

> Jonathan Crowdes, T.F. Bernier, Inc. T0:

39 Warren St.

Concord, NH 03302-3464 P.O. Box 3464

Amy Lamb, NH Natural Heritage Bureau From:

2/16/2018 (valid for one year from this date) Date:

Town: Hopkinton Review by NH Natural Heritage Bureau NHB File ID: NHB18-0497

Excavate approximately 50,000-60,000 yards of gravel (sand) to be removed from site- there will be no runoff from the site. Description:

Location: Tax Maps: Tax Map 220 Lots 23.1 &

Kim Tuttle

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments: Please contact the NH Fish & Game Department to address wildlife concerns.

Vertebrate species

Northern Black Racer (Coluber constrictor

State Federal Notes

Contact the NH Fish & Game Dept (see below).

constrictor)

Codes. "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "-." = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

Contact for all animal reviews; Kim Tuttle, NH F&G, (603) 271-6544.

information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on species. An on-site survey would provide better information on what species and communities are indeed present.

Community (0) Site bounds Animal (1) System (0) Plant (0) Legend Northern Black Racer Northern Black Racer SITE Northern Black Racer R Northern Black Racer

0 0.1 0.2 0.3 0.4 0.5

NHB18-0497

New Hampshire Natural Heritage Bureau - Animal Record

Northern Black Racer (Coluber constrictor constrictor)

Legal Status

Conservation Status

Federal: Not listed

State:

Listed Threatened

Global: Demonstrably widespread, abundant, and secure

State: Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank:

Not ranked

Comments on Rank:

Detailed Description: 2016: Area 14220: Nest with 7-10 eggs.

y 2015: Area 14056: 1 adult shed skin found.

shed skin found.

br

/>2014: Area 13617: 1 adult observed, dead on trail with small puncture holes. Area 13669: 1 adult male observed. 2011:T101">br/>2011:T101, T176, T619: 3 radiotracked males. T401, T500: 2 radiotracked females. 2010:T101">br/>2010:T101, T120, T221, T321: 4 radiotracked individuals. 2009">br/>2009: Area 12299: 1 observed, about 28-29" long. 2007">br/>2007: Area 12456: 1 observed, about 28-29" long. 2007">sbr/>2007: Area 12456: 1 observed, about 28-29" long. 2007">sbr/>2007: Area 12456: 1 observed, about 28-29" long. 2007">sbr/>2007: Area 12456: 1 observed, about 28-29" long. 2007">sbr/>2007: Area 12456: 1 observed, about 28-29" long. 2007">sbr/>2007: Area 12456: 1 observed, about 28-29" long. 2007">sbr/>2007: Area 12456: 1 observed, about 28-29" long. 2007">sbr/>2007: Area 12456: 1 observed, about 28-29" long. 2007">sbr/>2007: Area 12456: 1 observed, about 28-29" long. 2007">sbr/>2007: Area 12456: 1 observed, about 28-29"

dead on road with eggs.

General Area:

2016: Area 14220: Sandy access road with shrubs.

Sandy access road with shrubs.

2015: Area 14056: Rock dike with grasses and forbs.

Sandy access road with shrubs.

P2015: Area 14056: Rock dike with grasses and forbs.

Sandy access road with shrubs.

Area 13669: Old field habitat surrounding several barns and debris.

2009: Area 12299: Base of riprap dam.

Sandy access road with shrubs.

Area 13669: Old field habitat surrounding several barns and debris.

2009: Area 12299: Base of riprap dam.

Sandy access road with shrubs.

Sandy acce

Area 12456: Roadside.

General Comments:

Management Comments:

Location

Survey Site Name: Hopkinton Dam

Managed By: Hopkinton-Everett Flood Control Reservoir

County: Merrimack Town(s): Hopkinton

Size: 307.7 acres

Elevation:

Precision:

Within (but not necessarily restricted to) the area indicated on the map.

Directions:

2016: Area 14220: Cressy Brook Spillway, at sandy access point for vehicles. br />2014: Area 13617: Elm Brook Park. Following the trail west between the rock dike and the woods this marked tree is at the west end of the most obvious elevation drop of the trail. It's a big dip in the otherwise fairly flat trail, you can't miss it. Several hundred yards, perhaps a quarter mile, from gate along the main road on the way into the park entrance. Area 13669: 64 Stumpfield Road, Hopkinton. br />2009: Area 12299: Near base of Hopkinton Dam (north side) (43.19014 / 71.73421). br />2007:

Area 12456: Rte. 127 downstream of flood control dam.

Dates documented

First reported:

2007-06-20

Last reported:

2016-07-15

The New Hampshire Fish & Game Department has jurisdiction over rare wildlife in New Hampshire. Please contact them at 11 Hazen Drive, Concord, NH 03301 or at (603) 271-2461.

Jonathan Crowdes

From: Jonathan Crowdes [jon@tfbinc.com]
Sent: Friday, March 09, 2018 3:38 PM

To: 'Jonathan Crowdes'

Subject: FW: NHB18- 0497 AOT application, Hopkinton Tax Maps: Tax Map 220 Lots 23.1 & 23.2

Jonathan Crowdes

T.F. Bernier, Inc.

50 Pleasant Street / PO Box 346.4 Concord, NH 03302-346.4 Tel: (603)224-4148 ext. 303 Lax (603)224-0507

From: Tuttle, Kim [mailto him Tuttle 6 wildide ningov]

Sent: Tuesday, February 27, 2018 10:27 AM

To: 'Jonathan Crowdes'

Subject: RE: NHB18-0497 AOT application, Hopkinton Tax Maps: Tax Map 220 Lots 23.1 & 23.2

Jonathan.

The NHFG flongame and Endangered Species Program has reviewed NHB18-0497 for the AOT application to excavate approximatel, 50,000-60,000 yards of gravel (sand) in Hopkinton. The NHB database check tool identified the state threatened northern black racer in the vicinity of the project. There are numerous records of this species on the south side of the Contocook River in Hopkinton in this area so there is a possibility for this species to be present at this location. Workers need to be made aware of the protected status of northern black racer, so please distribute the attached flyer to all pit workers. All observations of northern black racer should be <u>immediately</u> reported to the NHFG Department (Brendan Clifford 603-271-0463). Every effort to photodocument this species for verification should be taken

Avoid the use of welded plastic or biodegradable plastic' netting or thread in erosion control matting on this job. There are numerous documented cases of wildlife including turtles and the state threatened northern black racer being trapped and killed in erosion control matting with synthetic netting and thread. The use of erosion control berm, Filtrexx or equal filter sock, or several wildlife friendly options such as woven organic material (e.g., coco or jute matting) are commercially available if needed.

Regards:

Kim Tuttle Wildlife Biologist NH Fish and Game 11 Hazen Drive Concord, NH 03301 603-271-6544

Report your sightings of reptiles and amphibians in 3 ways:

- 1) Email details of observation or completed form to 4.2 APE 3.1. Tife his support
- 2) Enter your observation online at http://www.kdutesastungs.unn.edu...
- 31 Mail your reporting slip



SEEKING REPORTS OF RARE SNAKES

The NH Fish & Game Department is collecting observations of two species:



BLACK RACER (state threatened)





- Solid black with a white throat and chin
- Slender with glossy scales, 3-6 ft. long
- Hatchlings are very small and patterned

EASTERN HOGNOSE SNAKE (state endangered)





- Black, gray or patterned appearance
- · Upturned snout, 2-3 ft. long
- May spread neck out or hiss

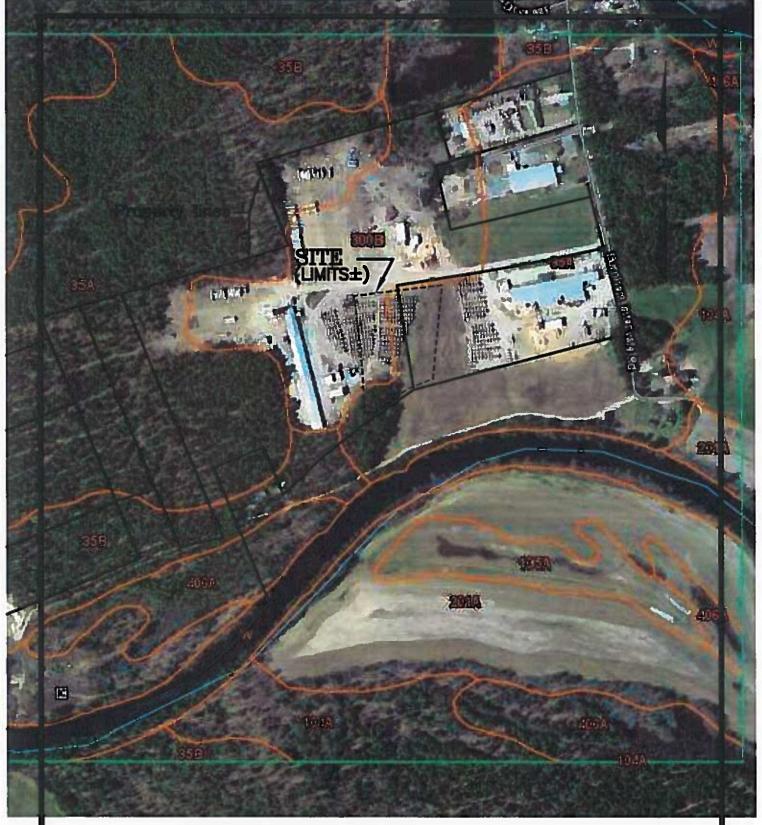
Both Species Are Harmless!

Report sightings to RAARP@wildlife.nh.gov or 603-271-2461

Please report promptly, noting specific location and date

Photographs strongly encouraged





1 " 6

WEB SOIL SURVEY MAP JOHN HERRICK

ASSESSORS MAP 220 LOTS 23.1 & 23.2 HOPKINTON, NEW HAMPSHIRE SCALE: 1"=500'



T. F. BERNIER, INC. Land Surveyors - Designers - Consultants

50 PLEASANT STREET - P.O. BOX 3464 CONCORD, NEW HAMPSHIRE 03302-3464 Tel:(603)224-4148 - Facc(603)224-0507



Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
35A	Champlain loamy fine sand, 0 to 3 percent slopes	168.8	37.5%
35B	Champtain loamy fine sand, 3 to 8 percent slopes	49.4	11.0%
35E	Champtain loamy fine sand, 15 to 60 percent slopes	2.6	0.6%
101A	Ondawa fine sandy loam, 0 to 3 percent slopes, frequently flooded	2.0	0.4%
104A	Podunk fine sandy loam, 0 to 3 percent slopes, frequently flooded	13,2	2.9%
105A	Rumney fine sandy loam, 0 to 3 percent slopes, frequently flooded	10.5	2.3%
201A	Ondawa fine sandy loam, 0 to 3 percent slopes, occasionally flooded	46.7	10.4%
214A	Naumburg loamy sand, 0 to 5 percent slopes	29.4	6.5%
290C	Champlain-Woodstock complex, 8 to 15 percent slopes	8.0	1.8%
300B	Udipsamments, 0 to 6 percent slopes	32.4	7.2%
406A	Medomak mucky silt loam, 0 to 2 percent slopes, frequently flooded	19.4	4.3%
613A	Croghan fine sandy loam, 0 to 5 percent slopes	42.7	9.5%
W	Water	25 0	5.5%
Totals for Area of Interest		450.0	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the

LOT LINES Photo (2010) Herrick SCALE: 1"=200" T. F. BERNER, INC.

