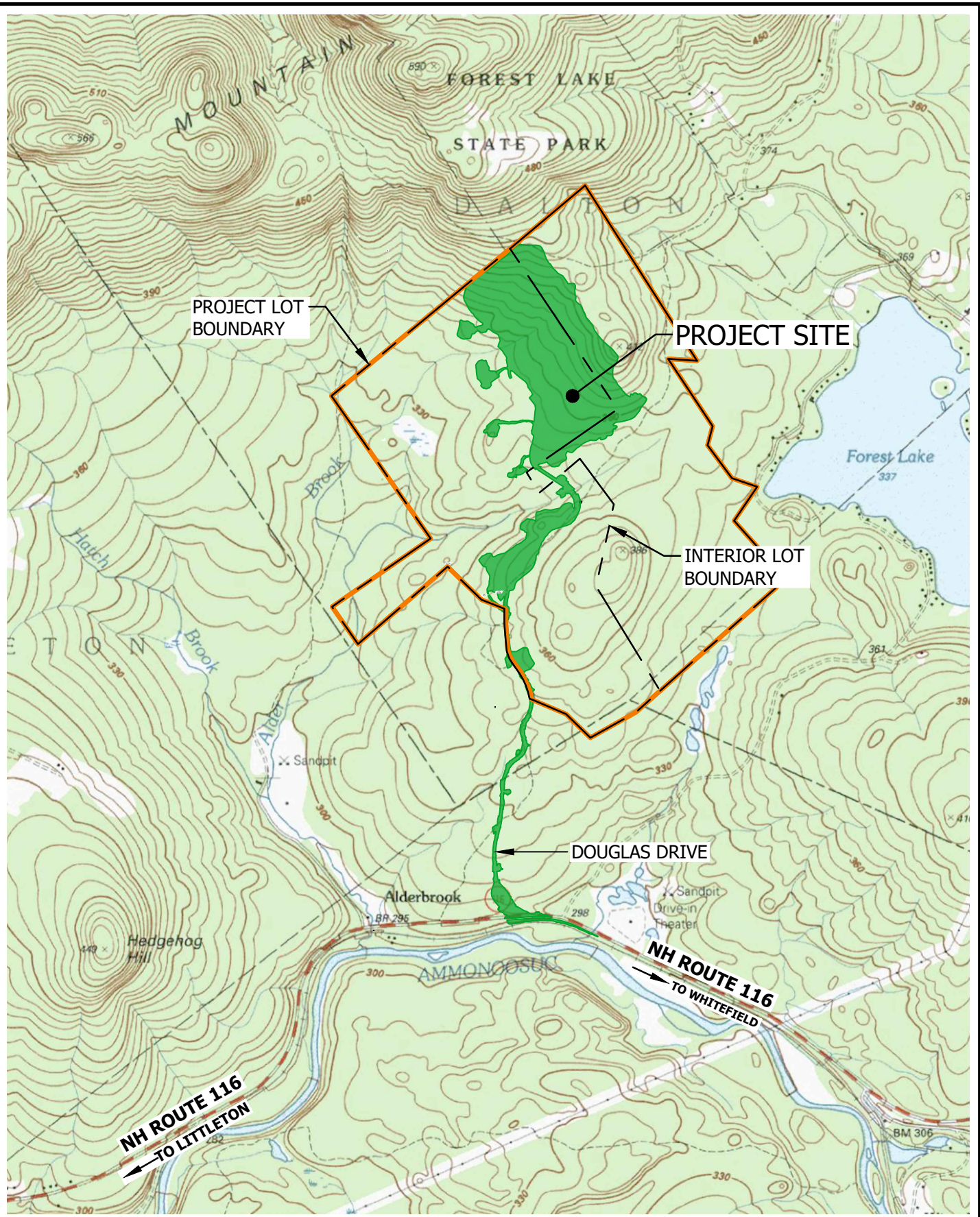


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GRANITE STATE LANDFILL, LLC
DALTON, NEW HAMPSHIRE

USGS LOCUS

PROJECT #:	19045
DRAWN BY:	BHK/KRP
DATE:	APRIL 2023

2020 NH WILDLIFE HABITAT LAND COVER

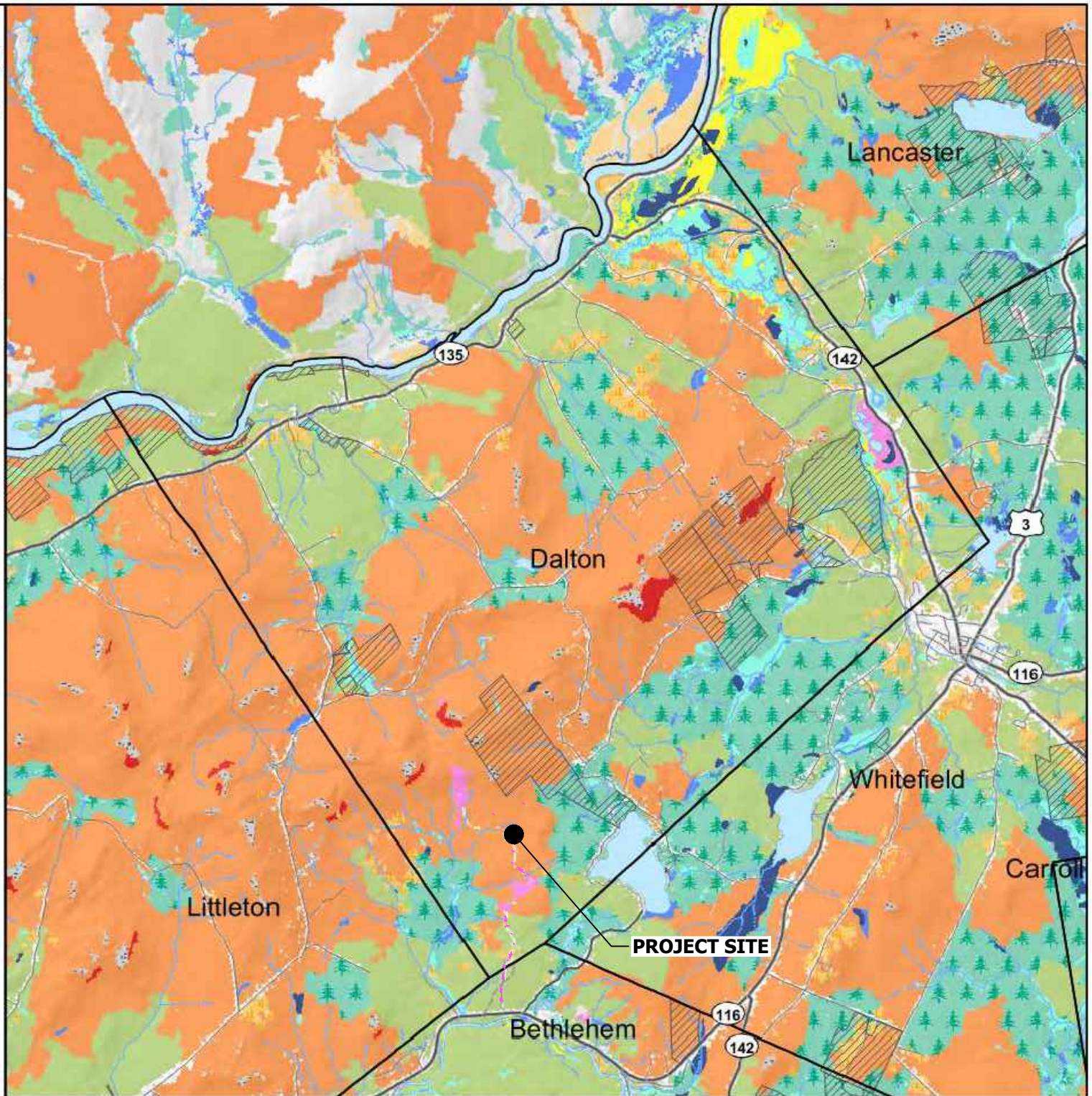
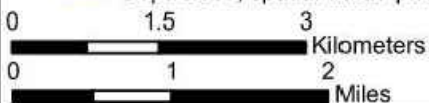
-  Coastal Island/Rocky coast
-  Dune
-  Salt marsh
-  Peatland
-  Marsh and Shrub wetland
-  Northern or Temperate Swamp
-  Floodplain Forest
-  Grassland
-  Pine barren
-  Cliff or Talus slope
-  Rocky ridge
-  Alpine
-  High-elevation Spruce-fir
-  Low-elevation Spruce-fir
-  Northern hardwood-conifer
-  Appalachian oak-pine
-  Hemlock-hardwood-pine
-  Open Water
-  Sand/Gravel
-  Developed Impervious
-  Developed or Barren
-  Conservation or public land

Base map data provided by NH GRANIT at UNH May 2020. Intended for planning use only.



NEW HAMPSHIRE
Wildlife Action Plan

Sept. 2015, spatial data Apr. 2020




2020 HIGHEST RANKED WILDLIFE HABITAT BY ECOLOGICAL CONDITION

 Highest Ranked Habitat in New Hampshire

 Highest Ranked Habitat in the Biological Region

Biological region = TNC ecoregional subsection for terrestrial habitats or Aquatic Resource Mitigation region for wetlands and floodplain forest.

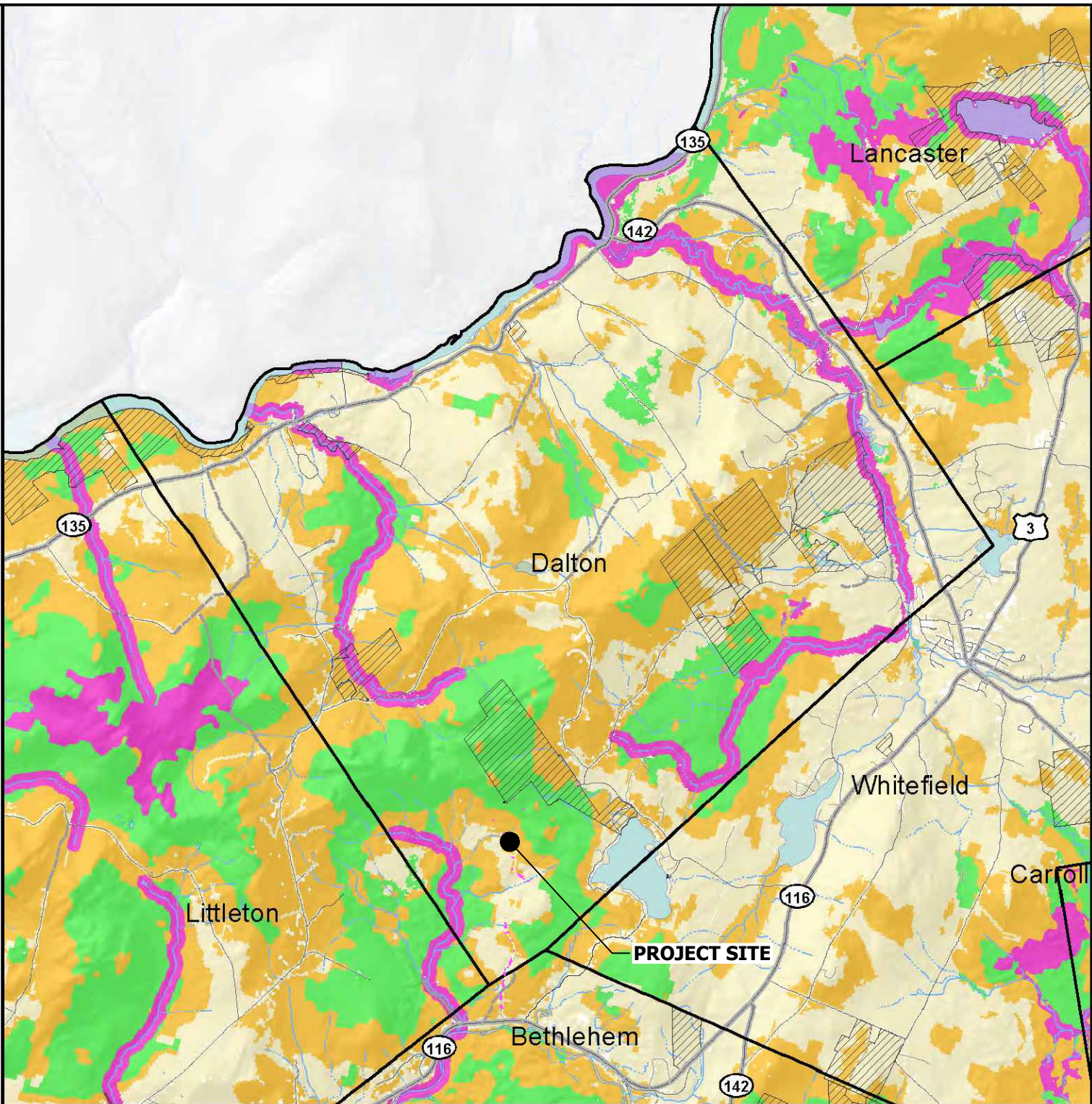
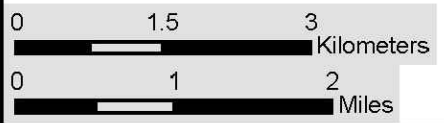
 Supporting Landscapes

 Conservation or public

Base map data provided by NH GRANIT at UNH May 2020. Intended for planning use only.



Sept. 2015, spatial data Apr. 2020



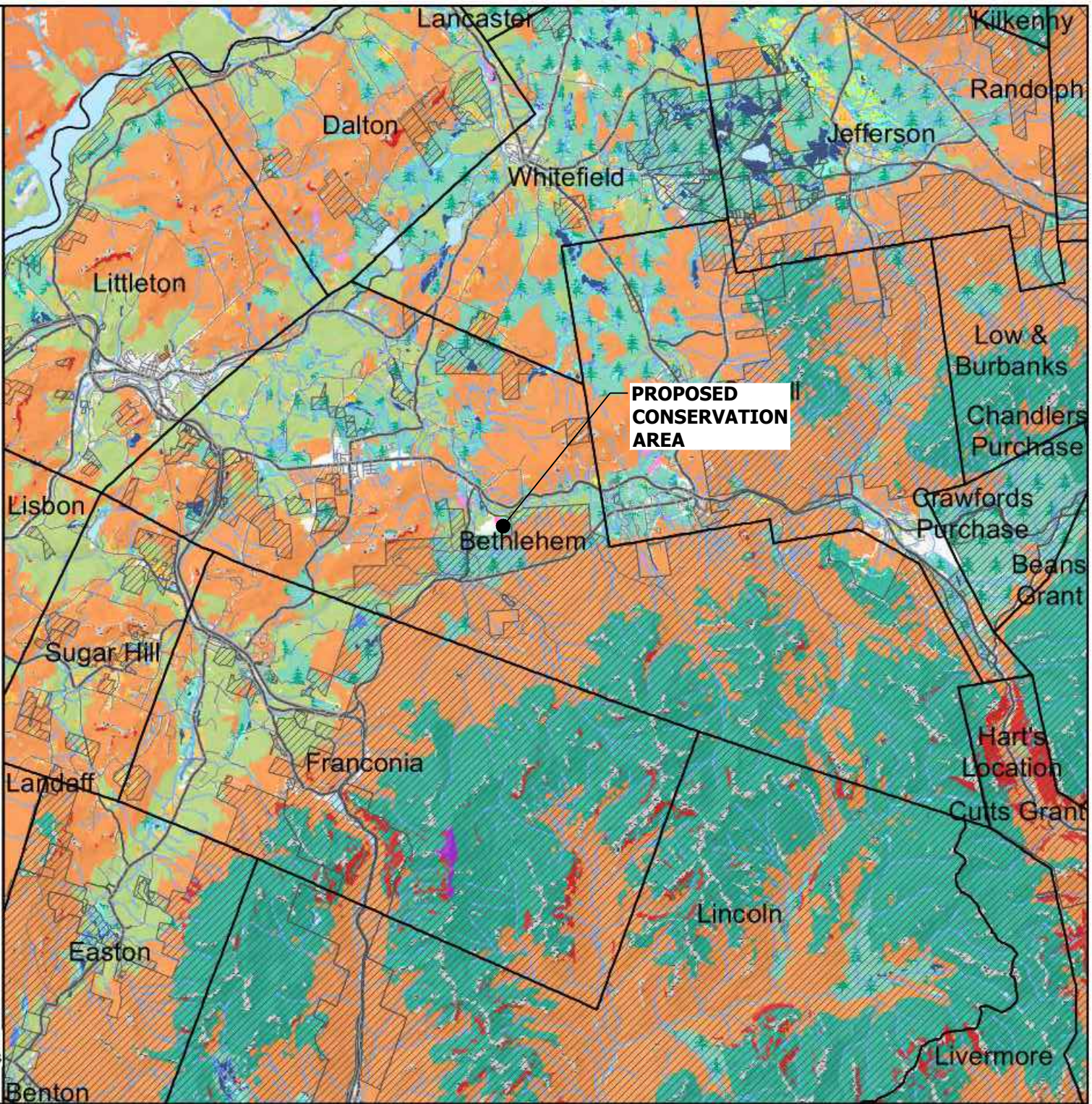
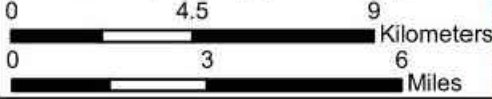
2020 NH WILDLIFE HABITAT LAND COVER

-  Coastal Island/Rocky coast
-  Dune
-  Salt marsh
-  Peatland
-  Marsh and Shrub wetland
-  Northern or Temperate Swamp
-  Floodplain Forest
-  Grassland
-  Pine barren
-  Cliff or Talus slope
-  Rocky ridge
-  Alpine
-  High-elevation Spruce-fir
-  Low-elevation Spruce-fir
-  Northern hardwood-conifer
-  Appalachian oak-pine
-  Hemlock-hardwood-pine
-  Open Water
-  Sand/Gravel
-  Developed Impervious
-  Developed or Barren
-  Conservation or public land


Base map data provided by NH GRANIT at UNH May 2020. Intended for planning use only.



Sept. 2015, spatial data Apr. 2020




2020 HIGHEST RANKED WILDLIFE HABITAT BY ECOLOGICAL CONDITION

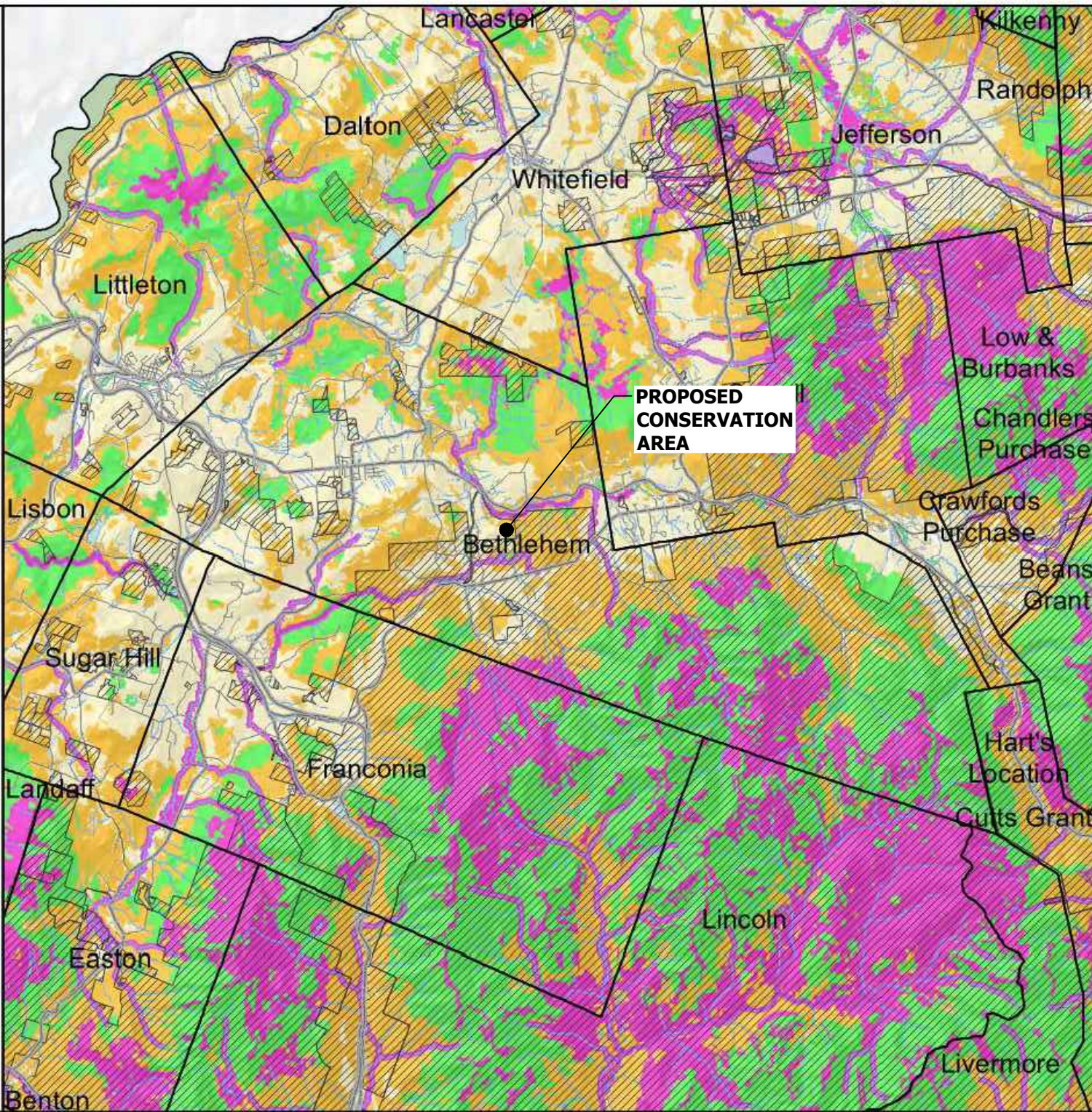
 Highest Ranked Habitat in New Hampshire

 Highest Ranked Habitat in the Biological Region

Biological region = TNC ecoregional subsection for terrestrial habitats or Aquatic Resource Mitigation region for wetlands and floodplain forest.

 Supporting Landscapes

 Conservation or public



Base map data provided by NH GRANIT at UNH May 2020. Intended for planning use only.

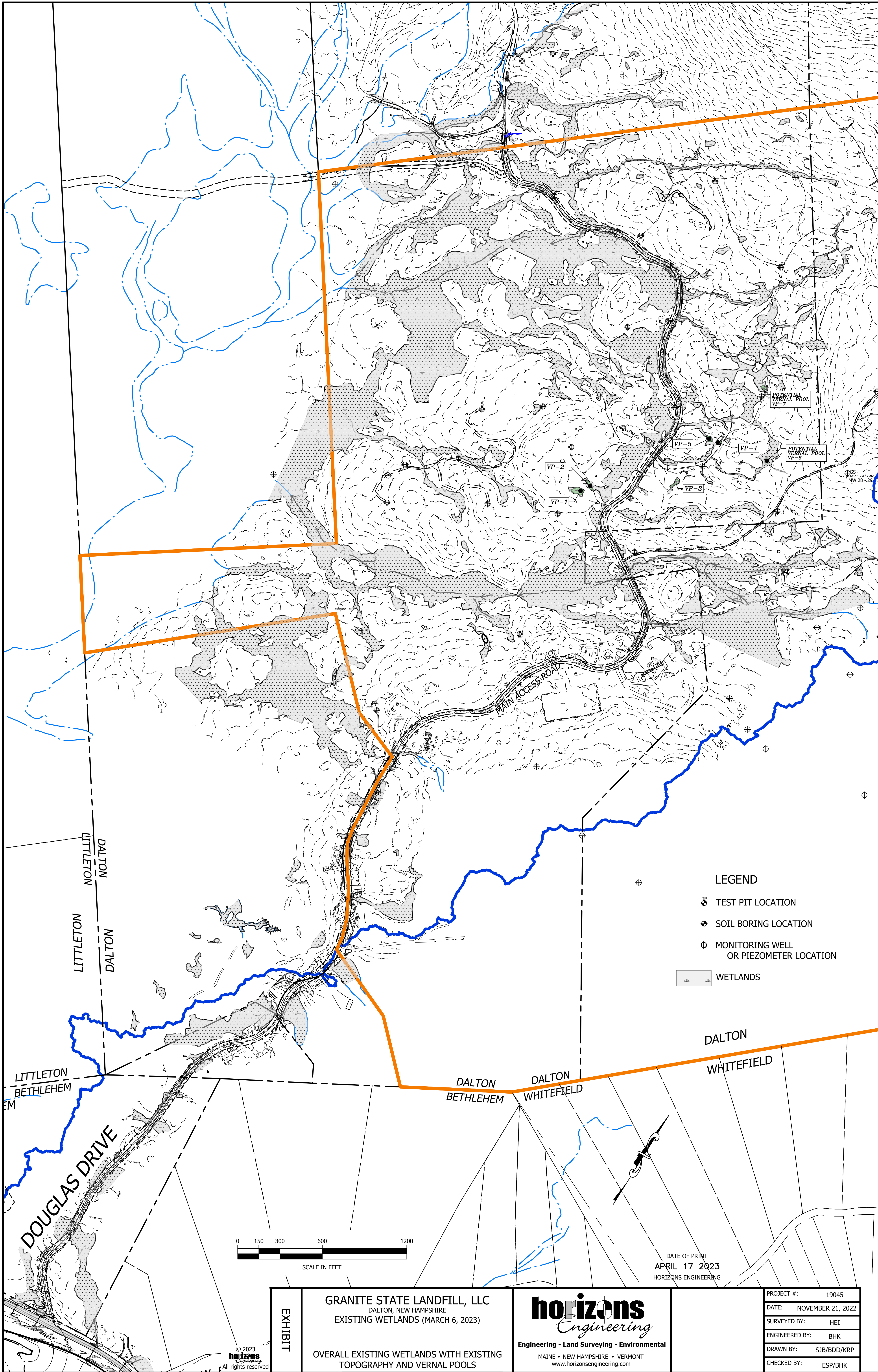


NEW HAMPSHIRE
Wildlife Action Plan





Sept. 2015, spatial data Apr. 2020

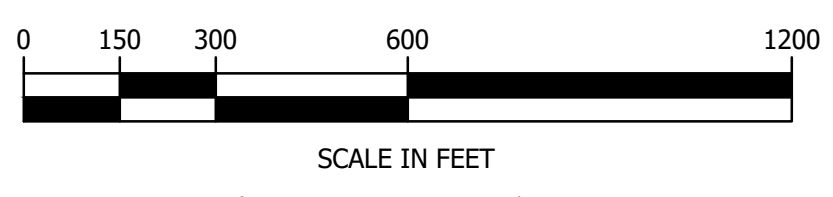
0 4 8 Kilometers

0 3 6 Miles



LEGEND

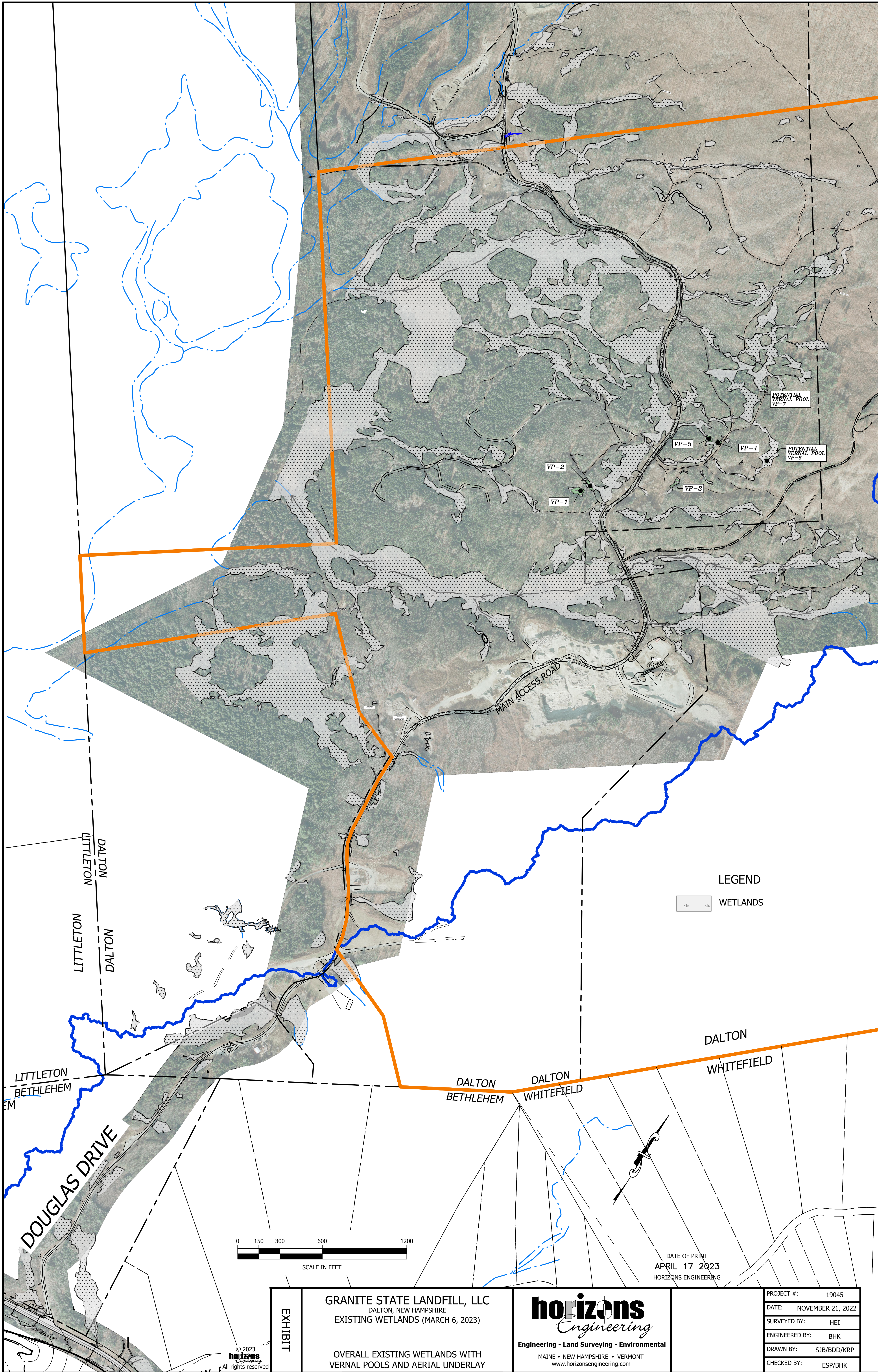
-  TEST PIT LOCATION
-  SOIL BORING LOCATION
-  MONITORING WELL OR PIEZOMETER LOCATION
-  WETLANDS



DATE OF PRINT
APRIL 17 2023
HORIZONS ENGINEERING

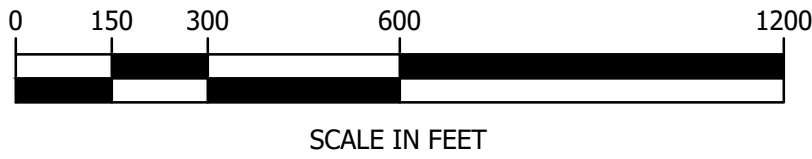
EXHIBIT	GRANITE STATE LANDFILL, LLC DALTON, NEW HAMPSHIRE EXISTING WETLANDS (MARCH 6, 2023)		 horizons <i>Engineering</i> Engineering - Land Surveying - Environmental MAINE • NEW HAMPSHIRE • VERMONT www.horizonsengineering.com	PROJECT #:	19045
	OVERALL EXISTING WETLANDS WITH EXISTING TOPOGRAPHY AND VERNAL POOLS			DATE:	NOVEMBER 21, 2022
				SURVEYED BY:	HEI
				ENGINEERED BY:	BHK
				DRAWN BY:	SJB/BDD/KRP
OVERALL EXISTING WETLANDS WITH EXISTING TOPOGRAPHY AND VERNAL POOLS		CHECKED BY:	ESP/BHK		

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Engineering
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LEGEND

WETLANDS



DATE OF PRINT
 APRIL 17 2023
 HORIZONS ENGINEERING

EXHIBIT

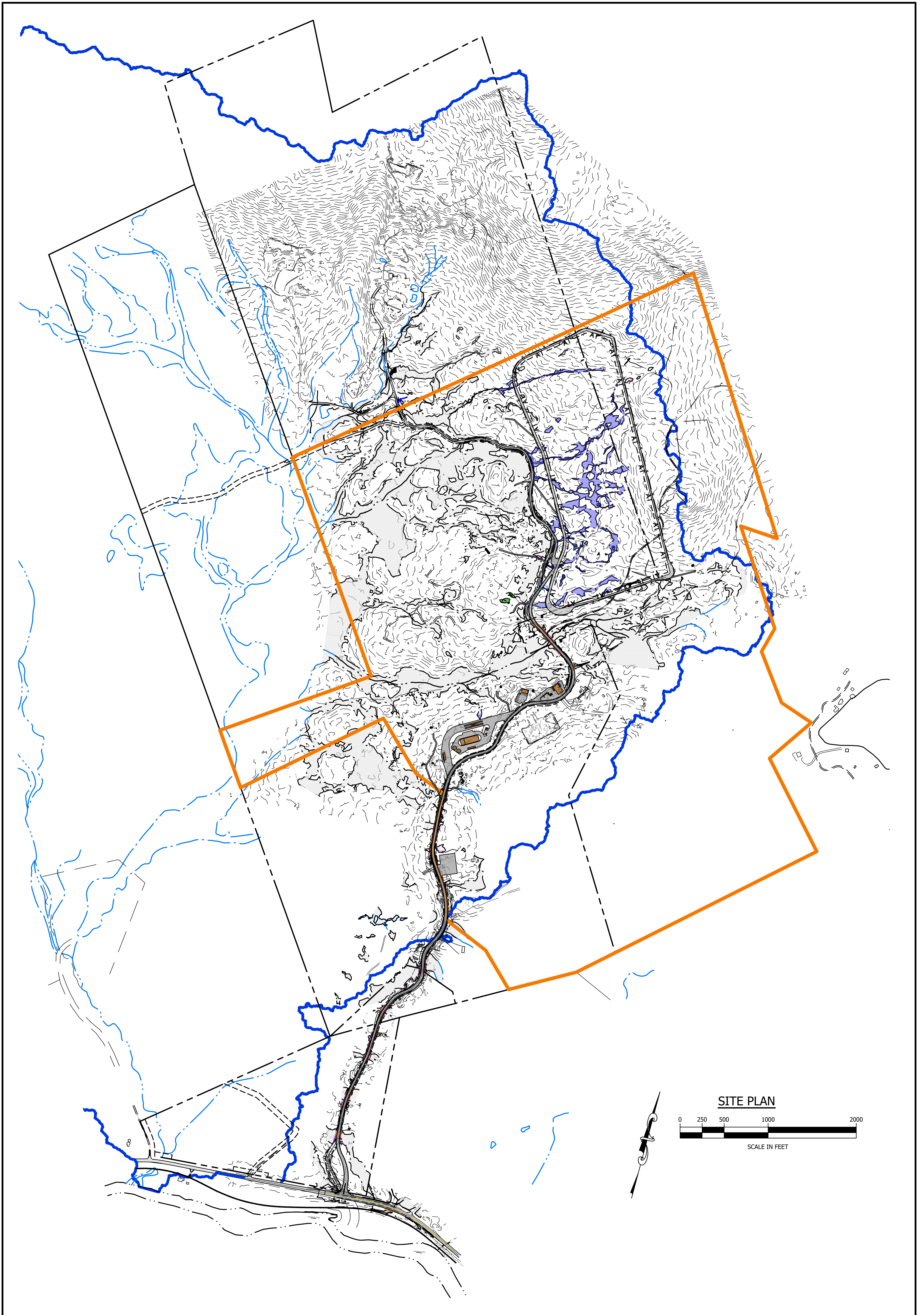
GRANITE STATE LANDFILL, LLC
 DALTON, NEW HAMPSHIRE
 EXISTING WETLANDS (MARCH 6, 2023)

OVERALL EXISTING WETLANDS WITH
 VERNAL POOLS AND AERIAL UNDERLAY

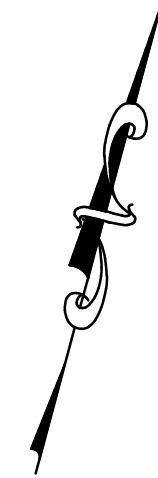
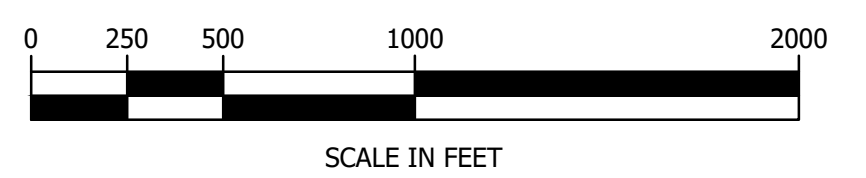
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Engineering

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PROJECT #:	19045
DATE:	NOVEMBER 21, 2022
SURVEYED BY:	HEI
ENGINEERED BY:	BHK
DRAWN BY:	SJB/BDD/KRP
CHECKED BY:	ESP/BHK



SITE PLAN



EXHIBIT

GRANITE STATE LANDFILL, LLC
DALTON, NEW HAMPSHIRE
EXISTING WETLAND PLANS

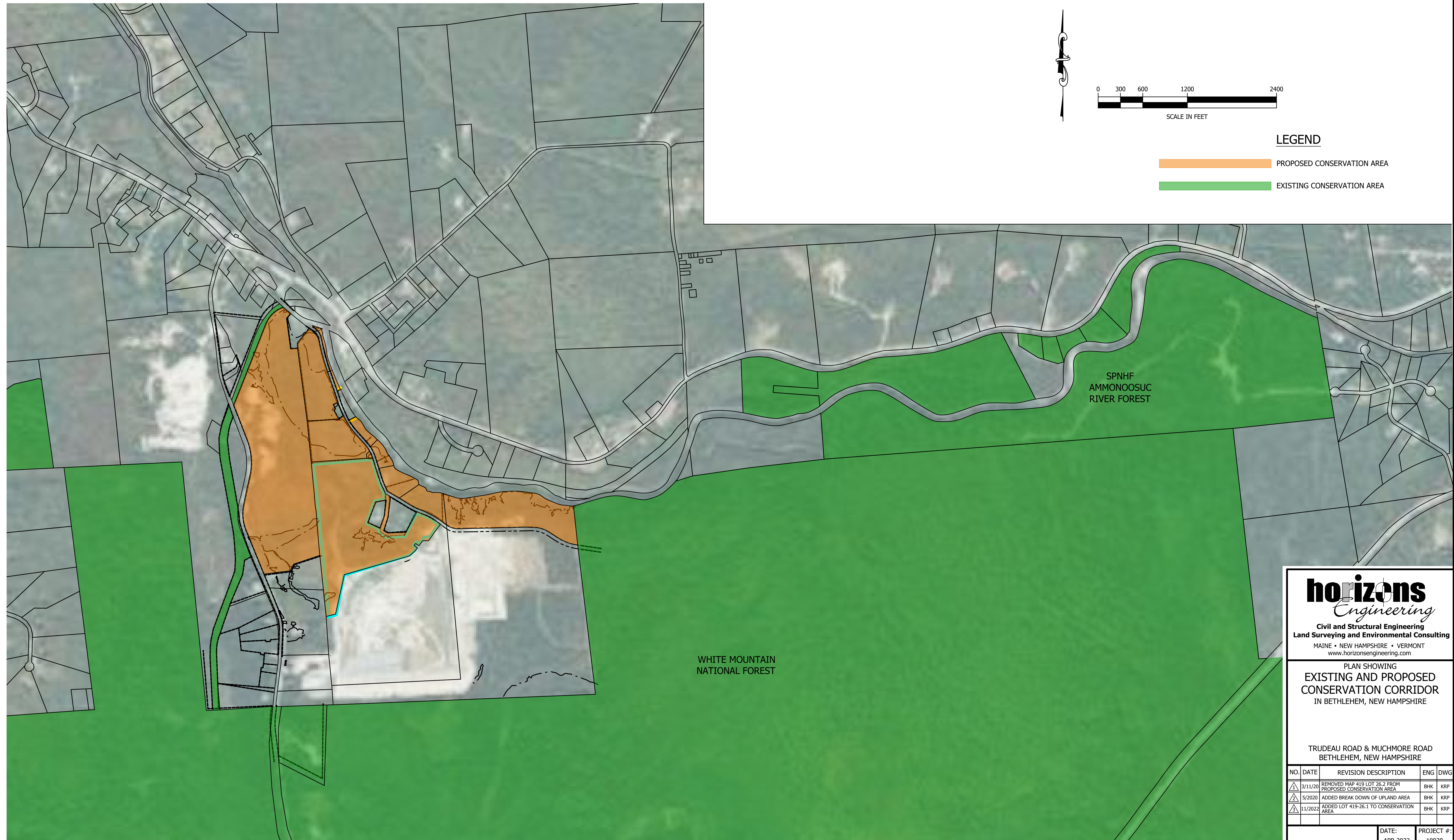
OVERALL WETLAND IMPACT PLAN WITH PROPOSED
LANDFILL FOOTPRINT AND INFRASTRUCTURE

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Engineering

Engineering - Land Surveying - Environmental

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PROJECT #:	19045	NO.	DATE	REVISION DESCRIPTION	ENG	DWG
DATE:	JULY 2020					
SURVEYED BY:	HEI					
ENGINEERED BY:	BHK					
DRAWN BY:	SJB/BDD/KRP					
CHECKED BY:	ESP/BHK					



LEGEND

- PROPOSED CONSERVATION AREA
- EXISTING CONSERVATION AREA

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PLAN SHOWING
**EXISTING AND PROPOSED
CONSERVATION CORRIDOR**
IN BETHLEHEM, NEW HAMPSHIRE

TRUDEAU ROAD & MUCHMORE ROAD
BETHLEHEM, NEW HAMPSHIRE

NO.	DATE	REVISION DESCRIPTION	ENG	DWG
△	3/11/20	REMOVED MAP 419 LOT 26.2 FROM PROPOSED CONSERVATION AREA	BHK	KRP
△	5/2020	ADDED BREAK DOWN OF UPLAND AREA	BHK	KRP
△	11/2022	ADDED LOT 419-26.1 TO CONSERVATION AREA	BHK	KRP

DATE:	PROJECT #:
APR 2023	18030
ENG'ND BY:	DRAWN BY:
.	KRP
CHECK'D BY:	ARCHIVE #:
.	H-EXH

DATE OF PRINT
APRIL 18 2023
HORIZONS ENGINEERING

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2023 EXHIBIT

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United States Department of the Interior



FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104

In Reply Refer To:
Project Code: 2023-0068537
Project Name: Granite State Landfill

April 13, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

Updated 3/8/2023 - Please review this letter each time you request an Official Species List, we will continue to update it with additional information and links to websites may change.

About Official Species Lists

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Federal and non-Federal project proponents have responsibilities under the Act to consider effects on listed species.

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested by returning to an existing project's page in IPaC.

Endangered Species Act Project Review

Please visit the “**New England Field Office Endangered Species Project Review and Consultation**” website for step-by-step instructions on how to consider effects on listed

species and prepare and submit a project review package if necessary:

<https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review>

NOTE Please do not use the **Consultation Package Builder** tool in IPaC except in specific situations following coordination with our office. Please follow the project review guidance on our website instead and reference your **Project Code** in all correspondence.

Northern Long-eared Bat - (Updated 3/8/2023) The Service published a final rule to reclassify the northern long-eared bat (NLEB) as endangered on November 30, 2022. The final rule will go into effect on **March 31, 2023**. After that date, the current 4(d) rule for NLEB will be invalid, and the 4(d) determination key will no longer be available. New compliance tools will be available in March 2023, and information will be posted in this section on our website and on the northern long-eared bat species page, so please check this site often for updates.

Depending on the type of effects a project has on NLEB, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective. If your project may result in incidental take of NLEB after the new listing goes into effect, this will need to be addressed in an updated consultation that includes an Incidental Take Statement. Many of these situations will be addressed through the new compliance tools. If your project may require re-initiation of consultation, please wait for information on the new tools to appear on this site or contact our office for additional guidance.

Additional Info About Section 7 of the Act

Under section 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether projects may affect threatened and endangered species and/or designated critical habitat. If a Federal agency, or its non-Federal representative, determines that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Federal agency also may need to consider proposed species and proposed critical habitat in the consultation. 50 CFR 402.14(c)(1) specifies the information required for consultation under the Act regardless of the format of the evaluation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/service/section-7-consultations>

In addition to consultation requirements under Section 7(a)(2) of the ESA, please note that under sections 7(a)(1) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Please contact NEFO if you would like more information.

Candidate species that appear on the enclosed species list have no current protections under the ESA. The species' occurrence on an official species list does not convey a requirement to

consider impacts to this species as you would a proposed, threatened, or endangered species. The ESA does not provide for interagency consultations on candidate species under section 7, however, the Service recommends that all project proponents incorporate measures into projects to benefit candidate species and their habitats wherever possible.

Migratory Birds

In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see:

<https://www.fws.gov/program/migratory-bird-permit>

<https://www.fws.gov/library/collections/bald-and-golden-eagle-management>

Please feel free to contact us at **newengland@fws.gov** with your **Project Code** in the subject line if you need more information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat.

Attachment(s): Official Species List

Attachment(s):

- Official Species List
-

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office

70 Commercial Street, Suite 300

Concord, NH 03301-5094

(603) 223-2541

PROJECT SUMMARY

Project Code: 2023-0068537

Project Name: Granite State Landfill

Project Type: Landfill - Solid Waste

Project Description: This project proposes the development of a lined landfill. Work includes excavation and site prep for landfill, infrastructure area, roadway improvements, and stormwater BMPs.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@44.346700600000005,-71.69166126974417,14z>



Counties: Coos and Grafton counties, New Hampshire

ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Canada Lynx <i>Lynx canadensis</i> Population: Wherever Found in Contiguous U.S. There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3652	Threatened
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPAC USER CONTACT INFORMATION

Agency: CMA Engineers
Name: Nicholas Messina
Address: 10 Free Street
City: Portland
State: ME
Zip: 04101
Email: nmessina@cmaengineers.com
Phone: 6034258635

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Army Corps of Engineers

N.H. FISH AND GAME DEPARTMENT
PRE-CONSULTATION MEETING
GRANITE STATE LANDFILL
DALTON, N.H.

MARCH 7, 2023

ATTENDEES: Michael Dionne, F&G Environmental Review Coordinator; Dianne Timmins, Inland Fisheries Chief; Andrew Timmins, Wildlife Division; John Magee, Inland Fisheries Habitat Biologist; Joe Gay; Sean Stimmell; and Barry Keith.

The primary focus of the meeting was to introduce the new Environmental Coordinator (Michael Dionne) and other NHFG staff members to the new project layout and to inform them of our current plans and activities for environmental sampling on-site during the 2023 field season.

Joe provided an overall introduction to the project, highlighted design considerations as depicted in the power point presentation.

Barry and Sean discussed the status of our on-going studies and the need to coordinate with F&G and DES moving forward with planned data collection activities in the upcoming field season.

Dianne Timmins and John Magee expressed interest in the 2022 temperature data and the distribution of Brook Trout and Northern Redbelly Dace. It was discussed that, in accordance with the DES Sampling Analysis Plan, that additional temperature data would be collected this field season. F&G recognizes that potential impacts from temperature and D.O. will need to be evaluated.

Andrew Timmins discussed wildlife corridors and general wildlife habitat utilization within the overall watershed. Concerns associated with black bear and gull activity at the facility were discussed. Barry discussed on-going measures at NCES to discourage un-wanted wildlife activity.

A site visit to view landfill operations at NCES and a tour of the GSL site for later this spring was discussed. GSL will follow up with F&G accordingly.

Various compensatory mitigation options were discussed. There appeared to be some interest in the NCES site, riverine restoration, and potential for future ARM fund projects.

F&G Standards and Consultation requirements in accordance with rules (PART Fis 1003-1005) were discussed. Upon providing the required information for Consultation, the Department has 30 days to perform an initial review and provide a request for additional information. Upon receipt of the information, the Department will evaluate the materials within 60 calendar days. Further consultation may be requested, based upon written recommendations. Upon issuance of final recommendations, any aggrieved party may request an adjudicative proceeding within 30 days of receipt of written notice of the recommendations.

Michael Dionne expressed that the Department will require a complete Consultation submission which will need to include the 2023 data and an impact analysis, in order to initiate the formal Consultation Process. He did, however, note that he and the environmental review staff would be welcome the opportunity to work with the GSL team as we move forward with the project.

PROJECT CHRONOLOGY

- August 2020 - Granite State Landfill (DES File No. 2020-02239) filed.
- August 23, 2021 – Initial DES Section 401 Work Session
- October 21, 2021 – DES Section 401 Work Session
- December 22, 2021 – Withdraw Standard Dredge & Fill Application
- January- April 2022 – Revised Landfill (1 Phase) Conceptual Plans
- April 19, 2022 – DES Section 401 Work Session
- July 11, 2022 – NHF&G – Fishery Sampling Meeting
- November 22, 2022 – DES Site Visit
- November 30, 2022 – Bath Conservation Commission Meeting
- December 7, 2022 – Trout Unlimited Ammonoosuc River Chapter Meeting
- March 6, 2023 – DES Section 401 Meeting
- March 7, 2023 – NHF&G Pre-Consultation Meeting
- April 19, 2023 – NHDES Pre-Application Mitigation Meeting

SUMMARY
WETLAND FUNCTIONS & VALUES
GRANITE STATE LANDFILL
DALTON, NEW HAMPSHIRE

	SUITABILITY	PRINCIPAL FUNCTION
CATEGORY A		
Roadside Wetlands (dx)		
	Groundwater Discharge	
	Wildlife Habitat	Yes
CATEGORY B		
Small Altered Wetlands near Douglas Drive		
	Groundwater Discharge	
	Floodflow Alteration	
	Wildlife Habitat	Yes
CATEGORY C		
Altered Wetlands-Contiguous		
	Groundwater Discharge/Recharge	
	Sediment/Toxicant Retention	
	Wildlife Habitat	Yes
CATEGORY D		
Upper Headwater Wetlands		
	Groundwater Discharge/Recharge	Yes
	Floodflow Alteration	Yes
	Sediment/Toxicant Retention	
	Nutrient Removal	
	Production Export	Yes
	Wildlife Habitat	Yes
CATEGORY E		
Mid-Lower Headwater Wetlands		
	Groundwater Discharge/Recharge	Yes
	Floodflow Alteration	Yes
	Fish & Shellfish Habitat	Yes
	Sediment/Toxicant Retention	Yes
	Nutrient Removal	Yes
	Production Export	Yes
	Sediment/Shoreline Stabilization	Yes
	Wildlife Habitat	Yes

**PRE-APPLICATION MITIGATION MEETING
 GRANITE STATE LANDFILL, LLC
 DALTON, NEW HAMPSHIRE**

PROJECT DESCRIPTION:

Overall Goal of the Project.

The development of the Granite State Landfill, LLC (GSL) will provide the State of New Hampshire with critical long-term waste disposal planning and management need, consistent with the New Hampshire Department of Environmental Services (DES) “2022 Solid Waste Management Plan.” Long-term secure disposal capacity is critical infrastructure to meet the health and safety of New Hampshire’s natural environment and the people who live there. The new facility would replace North Country Environmental Services (NCES) landfill upon its closure.

The facilities and work that could impact jurisdictional areas.

Project Location: The proposed project (see locus plan) is located within Tax Map 406 Lot 2.1 and Tax Map 406 Lot 3 in Dalton, New Hampshire. This approximately 713 acre property is accessible via Douglas Drive from New Hampshire Route 116 in Bethlehem, New Hampshire and is located in an industrial area of Dalton. The Town of Dalton has no zoning ordinance.

Project Description: The original DES Wetlands Permit application was applied for in August 2020. This application (NHWB # 2020-02239) was for a 3 phased landfill (see Overall Conceptual Plan) encompassing approximately 135 acres with approximately 270 acres of land disturbance. As designed, the project would have affected approximately 16.6 acres of wetland, 150 linear feet of perennial stream, and 1,350 linear feet of intermittent stream. The facility had an estimated life of approximately 38 years. The total property consisted of 4 parcels encompassing approximately 1,280 acres.

Design Plans: During the application review process, comments from state and federal regulators served to shift the emphasis from a 3 phase project to a single phase project with a reduced overall footprint. The revised project (see Revised Overall Conceptual Plan) property consists of 2 parcels totaling approximately 713 acres. The revised design reduces the project impacts as follows:

	Original 3 – Phase Project	New Project	Net Reduction
Project Property	1,280 acres	713 acres	567 acres
Lined Footprint	135 acres	70 acres	65 acres
Area of Disturbance	270 acres	147 acres	123 acres
Project Life	38 years	18 years	20 years
Wetland Impacts	+/-17 acres	+/-10 acres	+/-7 acres

Intended Outcome: The project is planned to replace the NCES landfill facility in Bethlehem, New Hampshire upon its closure.

NATURAL RESOURCES IN THE PROJECT AREA THAT MAY BE IMPACTED:

The accompanying aerial photo of the overall project area was taken November 2022. This photo serves to provide an overview of existing land use features, wetlands, watershed boundary, and approximate limits of disturbance. As previously mentioned, approximately 10 acres of largely forested wetland within the depicted limits of disturbance will be impacted by the project. Three vernal pools and two potential vernal pools will be impacted. A portion of an intermittent stream will be filled, and two perennial stream (Tier 1) crossings are planned to be replaced and upgraded with adequately sized structures. The principal wetland functions to be affected center on wildlife habitat, flood flow alteration and groundwater discharge. The project is not within a floodplain or within a one mile radius of an impaired water. Fish habitat was documented in the vicinity of a perennial stream crossing. No fish habitat is anticipated to be directly affected within the landfill limits of disturbance.

The Natural Heritage Bureau (NHB#22-3682) report dated December 6, 2022 (see attached) listed the Northern White Cedar Seepage Forest natural community, the state endangered marsh horsetail (*Equisetum palustre*), and state threatened Common Loon (*Gavis immer*). These species and natural community known locations are off-site to the north and east of the subject property and were not documented at the site during natural resource surveys completed to date. As warranted, further site investigations are planned during the 2023 field season.

The NHF&G Wildlife Action Plan (“WAP”, see attached) “Highest Ranked Wildlife Habitat by Ecological Condition” mapped portions of the project area as “Supporting Landscapes”. Other Priority Resource Areas, not directly impacted but in the vicinity of the project area, include “Highest Ranked Habitat in Biological Region” associated with Forest Lake State Park, high elevation areas associated with Dalton Mountains, and large contiguous wetlands associated with Alder and Hatch Brooks, a “Highest Ranked Habitat in New Hampshire”.

A Pre-Consultation meeting was held with NHF&G staff on March 7, 2023 (see attached meeting notes) to review the status of the project and to coordinate Consultation in accordance with PART Fis 1004 Consultation rules and requirements.

A Phase 1A archeological study was originally completed for the overall 3 phase project. The report is currently being updated and coordination with USACE (Section 106) and NHDHR is planned.

The project is within the jurisdiction of the Ammonoosuc River Local Advisory Committee.

ALTERNATIVES ANALYSIS:

A site selection search was originally conducted to identify and investigate the viability of sites for the proposed project in the states of New Hampshire, Vermont, Maine, and Massachusetts. Based on

regulatory restrictions on siting a landfill facility in Vermont and Maine, sites in these states were eliminated from further consideration. Several potential sites were initially screened in New Hampshire and Massachusetts. As previously stated, a three phased project was initially planned. Based on state and federal agency comments, the current design goals centered a one phase project which significantly reduces wetland impacts and provides buffers to sensitive environmental receptors. Recognizing these goals, the site selection search was re-visited to review the viability of the respective alternatives.

Based on specific site constraints to best meet design goals and/or the availability of potential subject parcels, the preferred site (Dalton) was identified.

Several on-site design alternatives were assessed to further avoid and minimize wetland impact. The initial concept centered on developing solely Phase 1 of the original 3-phase project. This project would have required the original proposed infrastructure area and wetland crossing. Due to the limits of waste and stormwater management areas in close proximity to the high quality Alder Brook wetlands, this design was dismissed.

A revised concept was considered within the original Phase 1 area that focused on pulling back the limits of waste and eliminating stormwater management areas situated adjacent to the high quality wetlands. While reducing wetland impact to approximately 12 acres, this concept still required significant land disturbance near the major wetland complex. Therefore, it was deemed not viable and dismissed from further consideration.

Other design alternatives centered combinations of Phases 2 and 3. Maintaining the general Phase 2 and Phase 3 footprint allowed for the reduction in wetland impact, however, 5 vernal pools would be impacted and the limits of waste would directly and indirectly impact contiguous wetland resources west of Douglas Drive.

AVOIDANCE AND MINIMIZATION:

The preferred site design alternative (see Design Plans) shifted the landfill and associated infrastructure to the east of Douglas Drive. The initial downstream crossing was eliminated and stream and culvert crossing improvements/restoration along the existing Douglas Drive upstream crossings are planned. Douglas Drive will serve as the main access for the facility. The scales, leachate collection system, maintenance building, and office are positioned further from wetlands and closer to Douglas Drive in the vicinity of the existing soil stockpile area and former asphalt plant. Where possible, stormwater management areas have been positioned to avoid wetlands while maintaining viable vegetative buffers to adjacent wetland resources. All temporarily disturbed areas within the Project area shall be stabilized and vegetated in accordance with NHDES Alteration of Terrain requirements.

This design achieves our goal of significantly reducing direct and indirect (secondary) wetland impacts, provides further buffer to maintain the functions of the large contiguous network of wetlands and headwater streams, and increases the setback to Alder Brook.

COMPENSATORY MITIGATION:

The project will require compensatory mitigation. As previously described, approximately 10 acres of wetland will be directly impacted along with portions of an intermittent stream, 2 perennial stream crossings, 3 vernal pools and 2 potential vernal pools. The primary loss of function is wildlife habitat, flood flow alteration, production export, and groundwater discharge. The site is not within an area designated in the WAP as highest-ranked habitat. A Phase 1-A Archeological study was conducted in 2020 and is currently being updated.

The original 3 Phase project provided both on-site and off-site land preservation mitigation options. The on-site option centered on preserving an approximate 244 acre parcel which contained headwater wetlands and streams associated with Alder Brook. No viable 3rd parties to hold a conservation easement were identified. Therefore, this mitigation option was eliminated from further consideration.

The off-site land preservation option would protect, via a conservation easement, approximately 108 acres of land with approximately 4,275 linear feet of frontage on the Ammonoosuc River, a WAP "Highest Ranked Wildlife Habitat in New Hampshire". This site borders other conservation land, including approximately 31,000 acres of US Forest Service land and river lands protected in-fee by the Society for the Protection of New Hampshire Forests (SPNHF). In total, approximately 3 miles of riverbank would be protected creating a significant corridor along the river. This mitigation option continues to be considered a viable alternative. In addition to land preservation, work to restore upland buffers, eradicate invasive species (Japanese knotweed) and create vernal pool habitat within the site are under consideration. Outreach to several viable 3rd party easement holders has been on-going.

Other potential restoration projects within the general vicinity are currently being explored. These opportunities center primarily on riverbank and floodplain restoration, restoration of riparian zones, stream crossing improvements, and potential dam removal projects. These opportunities will require a collaborative approach with various interest groups.

Should permittee responsible mitigations options prove not viable or feasible, then an in-lieu mitigation payment can be provided to the Aquatic Resource Compensatory Mitigation Fund (ARM) in accordance with RSA 482-A:28-A:30.

Memo

NH Natural Heritage Bureau
NHB DataCheck Results Letter

Please note: portions of this document are confidential.
Maps and NHB record pages are confidential and should be redacted from public documents.

To: Nicholas Messina
35 Bow St
Portsmouth, NH 03801

From: NHB Review, NH Natural Heritage Bureau

Date: 12/6/2022 (valid until 12/06/2023)

Re: Review by NH Natural Heritage Bureau

Permits: NHDES - Alteration of Terrain Permit, NHDES - Wetland Standard Dredge & Fill - Major

NHB ID: NHB22-3682

Town: Dalton

Location: Douglas Drive

Description: Casella Waste Systems proposes the construction of a new lined landfill. The project will include wetland filling and construction of the landfill, access road, and stormwater BMPs.

cc: NHFG Review

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

Comments NHB: Please coordinate with NHB regarding rare plant surveys. Is this a new phase, or has the original plan been changed?
F&G: Please refer to NHFG consultation requirements below. Is this a new phase, or has the original plan been changed?

Natural Community

Northern white cedar seepage forest*

State¹ Federal Notes

-- --

Highly sensitive to erosion and mechanical disturbance, changes in local hydrology, and increased nutrient inputs.

Plant species

marsh horsetail (*Equisetum palustre*)

State¹ Federal Notes

E --

This wetland species, which occurs in marshes and wet meadows, would be threatened by changes to local hydrology, including increased nutrient input from stormwater runoff, and sedimentation from nearby disturbance. It also occurs on river and streambanks, where the primary threats would be direct destruction of plants or their habitat.

Memo

NH Natural Heritage Bureau NHB DataCheck Results Letter

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Vertebrate species	State ¹	Federal	Notes
Common Loon (<i>Gavia immer</i>)	T	--	Contact the NH Fish & Game Dept (see below).

¹Codes: "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.

For all animal reviews, refer to 'IMPORTANT: NHFG Consultation' section below.

Disclaimer: 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 information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

IMPORTANT: NHFG Consultation

If this NHB Datacheck letter DOES NOT include ANY wildlife species records, then, based on the information submitted, no further consultation with the NH Fish and Game Department pursuant to Fis 1004 is required.

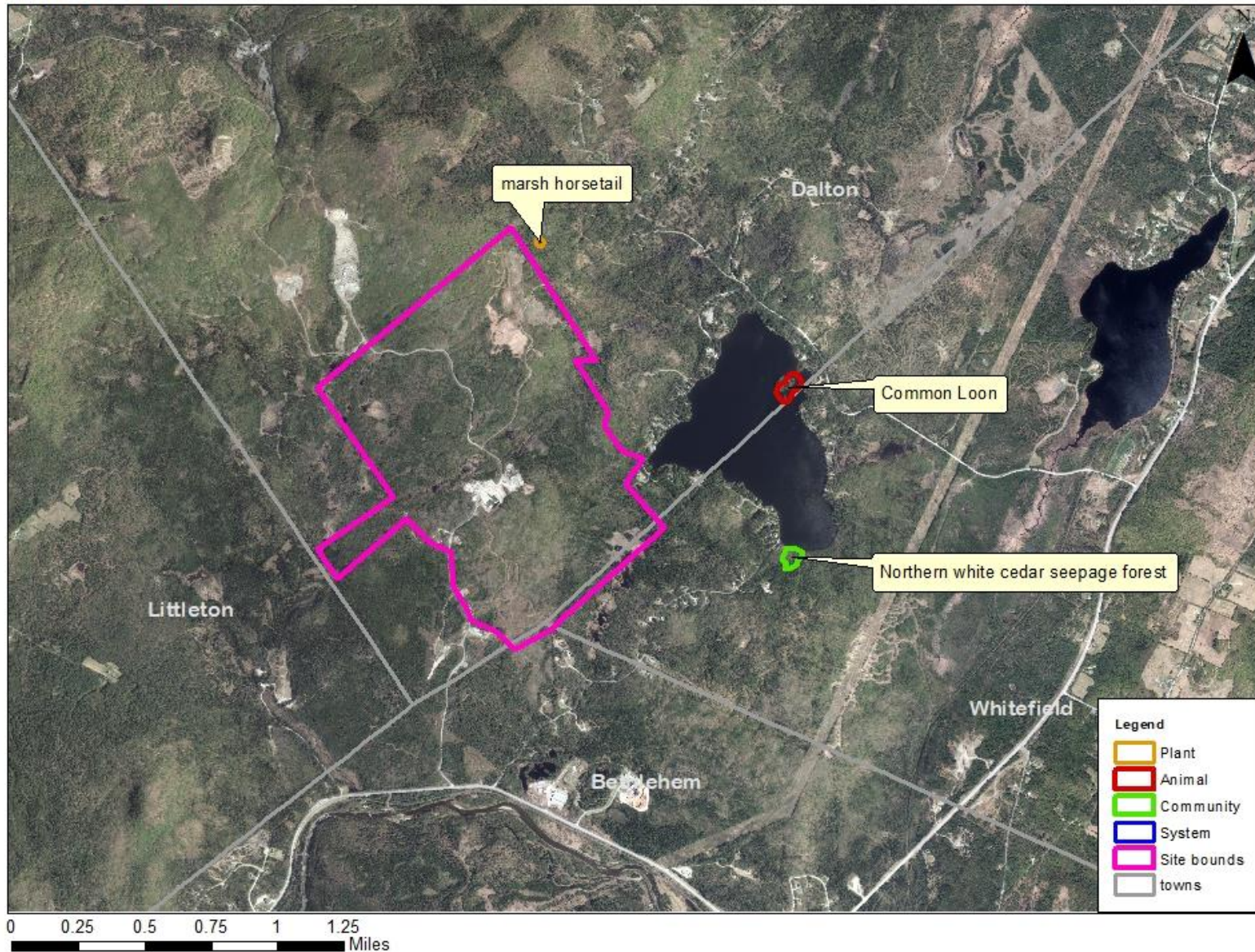
If this NHB Datacheck letter includes a record for a threatened (T) or endangered (E) wildlife species, consultation with the New Hampshire Fish and Game Department under Fis 1004 may be required. To review the Fis 1000 rules (effective February 3, 2022), please go to <https://wildlife.state.nh.us/wildlife/environmental-review.html>. All requests for consultation and submittals should be sent via email to NHFGreview@wildlife.nh.gov or can be sent by mail, and **must include the NHB Datacheck results letter number and "Fis 1004 consultation request" in the subject line.**

If the NHB DataCheck response letter does not include a threatened or endangered wildlife species but includes other wildlife species (e.g., Species of Special Concern), consultation under Fis 1004 is not required; however, some species are protected under other state laws or rules, so coordination with NH Fish & Game is highly recommended or may be required for certain permits. While some permitting processes are exempt from required consultation under Fis 1004 (e.g., *statutory permit by notification, permit by rule, permit by notification, routine roadway registration, docking structure registration, or conditional authorization by rule*), coordination with NH Fish & Game may still be required under the rules governing those specific permitting processes, and it is recommended you contact the applicable permitting agency. For projects not requiring consultation under Fis 1004, but where additional coordination with NH Fish and Game is requested, please email: Kim Tuttle kim.tuttle@wildlife.nh.gov with a copy to NHFGreview@wildlife.nh.gov, and include the NHB Datacheck results letter number and "review request" in the email subject line.

Contact NH Fish & Game at (603) 271-0467 with questions.

CONFIDENTIAL – NH Dept. of Environmental Services review

NHB22-3682



New Hampshire Natural Heritage Bureau - Community Record

Northern white cedar seepage forest

Legal Status

Federal: Not listed
State: Not listed

Conservation Status

Global: Not ranked (need more information)
State: Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Fair quality, condition and/or landscape context ('C' on a scale of A-D).
Comments on Rank: --

Detailed Description: 1983: Has *Thuja occidentalis* (northern white cedar) (only to 12 DBH) plus *Abies balsamea* (balsam fir), *Goodyera repens* (lesser rattlesnake-plantain), *Ledum groenlandicum* (Labrador tea), *Platanthera clavellata* (small green woodland orchid), *P. obtusata* (blunt-leaved orchid), *Pyrola secunda* (one-sided shinleaf), and *Listera* ? (twayblade).

General Area: 1983: This is a cedar-dominated swamp which grades into larch and then acidic fen at the lake edge.

General Comments: 1983: This area may be important for possible rare plant locations rather than as a community.

Management
Comments: --

Location

Survey Site Name: Forest Lake Cedar Swamp
Managed By:

County: Coos
Town(s): Whitefield
Size: 2.5 acres

Elevation:

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

Directions: South end of Forest Lake. Swamp occurs on both sides of the dirt road.

Dates documented

First reported: 1983
Last reported: 1983-05-12

New Hampshire Natural Heritage Bureau - Plant Record

marsh horsetail (*Equisetum palustre*)**Legal Status**

Federal: Not listed
 State: Listed Endangered

Conservation Status

Global: Demonstrably widespread, abundant, and secure
 State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
 Comments on Rank: --

Detailed Description: 2021: Species observed. No additional details.

General Area: 2021: Plants growing in **subacid forest seep** with cinnamon fern (*Osmundastrum cinnamomeum*), eastern rough sedge (*Carex scabrata*), foam-flower (*Tiarella cordifolia*), sensitive fern (*Onoclea sensibilis*), and dwarf raspberry (*Rubus pubescens*).

General Comments: --

Management: --

Comments:

Location

Survey Site Name: Forest Lake State Park
 Managed By:

County: Coos

Town(s): Dalton

Size: .4 acres

Elevation:

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

Directions: 2021: In Dalton, park at the intersection of Faraway Road and Hunter Farm Road. Walk up Hunter Farm Road onto the state property. From the property line, go west approximately 500 meters to a series of seeps at the base of the slope.

Dates documented

First reported: 2021-06-04

Last reported: 2021-06-04

New Hampshire Natural Heritage Bureau - Animal Record

Common Loon (*Gavia immer*)

Legal Status

Federal: Not listed
State: Listed Threatened

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Not ranked (need more information)

Description at this Location

Conservation Rank: Not ranked
Comments on Rank: --

Detailed Description: 2021: Nest 2: 2 chicks hatched, 2 chicks survived. 2020: 1 pair, no nest. 2019: 1 pair, no nest. 2018: 1 pair, no nest. 2017: 1 pair, no nest. 2016: 1 pair, no nest. 2015: Nest 3: 2 chicks hatched, 1 chick survived. 2014: Nest 3: 1 chick hatched, 1 chick survived. 2013: Nest 3: 1 chick hatched, 1 chick survived. 2012: 1 pair, no nest. 2011: Nest 3: Nest and eggs present, no chicks hatched. 2010: Nest 1: Nest and eggs present, no chicks hatched. 2009: Nest 3: 1 chick hatched, 1 chick survived. 2008: Nest 3: Nest and eggs present, no chicks hatched. 2007: 1 pair, no nest. 2006: Nest 1: 2 chicks hatched, 2 chicks survived. 2005: pair, 1 hatched and survived. 2004: pair. 2003: 3 adults. 2002: Nest 2: pair, 1 hatched and survived. 2001: 3 adults, 2 hatched and survived. 2000: Nest 1: pair, 2 hatched and survived.

General Area: --
General Comments: LPC territory NHT0132.
Management: --
Comments:

Location

Survey Site Name: Forest Lake
Managed By:

County: Coos
Town(s): Dalton
Size: 3.7 acres
Elevation:

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

Directions: --

Dates documented

First reported: 2000-05-17
Last reported: 2015

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.