



March 16, 2026

Project #23-029

Amanda Lessard, Senior Planner/Project Manager  
Planning Department  
Town of Windham  
8 School Road  
Windham, ME 04062

**Sketch Plan Application  
Frost Lane Subdivision**

Dear Amanda,

On behalf of Frost Lane, LLC, Terradyn Consultants, LLC (Terradyn) is pleased to submit the attached Sketch Plan Application submission package on behalf of Frost Lane, LLC, for a proposed 5 lot, single family residential subdivision to be located off of Frost Lane in Windham, Maine. The property is shown as Lot 51 on Town of Windham Map 13.

**Existing Conditions:**

The 46.29-acre parcel is located within the Farm Residential (FR) and Limited Residential (LR) Districts and is provided frontage on Albion Road and Frost Lane. The project parcel is an undeveloped wooded lot that is bound by residential development and Highland Lake to the East. The parcel is not located on a mapped significant sand and gravel aquifer by the Maine Geological Survey. A portion of the property does include an area of Flood Zone AE, with a base flood elevation of 192.70, as shown on Flood Insurance Rate Map 230050511F. The location of Flood Zone AE is shown on the attached plans.

The project parcel features topography that ranges from elevation 245 along Albion Road to elevation 191 along Highland Lake. A boundary survey was prepared in 2023 on behalf of the applicant and is attached to this letter.

The existing parcel features approximately 110 linear feet of frontage along Albion Road and has access via Frost Lane Right-of-Way into the property.

**Wetlands:**

Wetlands on site were delineated by Mainely Soils, LLC in May of 2021, and verified by Erik Lema of Basswood Environmental in December of 2023. A copy of the wetland report from Basswood Environmental is attached to this letter. The property contains approximately 36.94 acres of wetland area which in accordance with Section 120-911K(6) have been included within primary conservation areas on the attached plans.

**Proposed Conditions:**

The proposed subdivision is a 5 lot conservation subdivision to be developed in accordance with the Town of Windham’s ordinance requirements for a conservation subdivision featuring a minimum lot size of 20,000 square feet.

**Schematic Layout**

The site was designed to work with existing elevation constraints. The development will be accessed via a reconstruction and extension of Frost Lane. The proposed Frost Lane will be approximately 1,300 linear feet in length and terminated with a hammerhead. We understand that this will require a waiver from Section 911M(5)(b)(5), additional waiver information is provided below.

**Access & Traffic**

The project will be accessed off of an extension of Frost Lane. The existing portion of Frost Lane and proposed extension will be 18-foot wide paved travel way with curbing to aid in the collection of stormwater. The private drive will be constructed to the Town of Windham Private Way Standards. There is one proposed stream crossing for the extension of Frost Lane in the location of an existing woods road crossing. The stream crossing will be an embedded arch pipe crossing open to the natural stream bottom. A second stream crossing is proposed for a trail extension not associated with Frost Lane.

Daily Peak hour trip generation was determined for the proposed project based upon trip tables presented in the 11<sup>th</sup> edition of the Institute of Transportation Engineers (ITE) “Trip Generation” handbook. The ITE publication provides numerous land use categories and the average volume of trips generated by each category. Site Trip estimates for this project are based upon LUC #210 (Single Family Detached Housing) Calculations of the total number of trips generated per each corresponding time period are summarized below:

Land Use	Multifamily Low Rise – LUC 220		
	Size # of units	Generation Rate (Trips per Units)	Trips Generated
Weekday	5	9.43	47
AM Weekday Peak Hour (Street)	5	0.70	4
PM Weekday Peak Hour (Street)	5	0.94	5
AM Weekday Peak Hour (Generator)	5	0.75	4
PM Weekday Peak Hour (Generator)	5	0.99	5
Saturday	5	9.48	47
Saturday Peak Hour	5	0.92	5
Sunday	5	8.48	42
Sunday Peak Hour	5	0.83	4

**Utilities**

Frost Lane is currently served by overhead electrical; the applicant is proposing to preserve the existing overhead electrical. Any new electrical will be installed underground. All the proposed lots will be served by an extension of the public water and individual septic systems. A waiver for the preservation of the existing overhead electric is described below.

### Net Residential Calculations

The property area is 46.29 acres in size comprising of approximately 36.05 acres of wetland, steep slopes, and floodplain areas and 1 acre of right of way area, this results in a net residential area of 9.18 acres or 399,881 sf. The net residential density for the Farm Residential district is 40,000 square feet per lot this results in a possible 9 lots allowable at the property. A net residential breakdown is shown on the attached sketch plan drawing.

### Conservation subdivision

In accordance with the requirements within the Farm Residential zone the proposed subdivision is proposed to be a conservation subdivision. Section 120-911K(3) outlines the design process for the open space. The proposed open space is to include nearly all areas (99.5%) of primary conservation areas, the areas not included are within the proposed Frost Lane Right-of-Way and are not anticipated to be disturbed outside of the construction of the road. As mentioned above the property is 46.29 acres in size and is comprised of approximately 36.05 acres of primary conservation areas. No secondary conservation areas were identified. The attached "Existing Resource inventory and Site Analysis Sketch Plan" is attached to this letter. All areas shaded in blue are primary conservation areas.

Additionally, in accordance with Section 120-911K(6) 50% of all the remaining land not subtracted from the net residential area calculations is required to be set aside as open space. This will result in an additional 4.59 acres of open space bringing the total open space area required for the project to 41.70. acres. The proposed subdivision is proposing 42.30 acres of open space. This area is show on the attached sketch plan drawing.

The entire open space is contiguous as defined by 120-911K3.b and incorporates all natural features to the greatest extent possible, there are no wetlands areas proposed to be within any of the proposed lots. The building sites have been laid out to be generally away from the primary and secondary conservation areas to the maximum extent practicable. The project site contains a large amount of wetland areas, when laid out with a 100' offset of primary conservation areas this leaves an area of approximately 18,000 square feet. This area is located near the Hammerhead and comprises portions of Lots 2-5.

As such, to facilitate any development on the site, plans have been prepared proposing that all of the building sites are at least 50' from any primary conservation area. Lots 2-5 all have approximately ¼ of their building site outside of the 100' offset of primary conservation areas.

The site features a large amount of wetland area which limits some of the building envelopes, all building envelopes shown on the attached plan have been located a minimum of 50' from any conservation area.

The property currently features an easement for neighboring properties to access Highland Lake, as part of the proposed open space The applicants are proposing to connect the proposed 5 lots to that easement system via a proposed boardwalk/trail system. The easement is described within the attached deed.

### Stormwater Management

A Stormwater Management Plan will be prepared in accordance with the requirements of the MeDEP Stormwater Law and the Town of Windham. Stormwater runoff will be collected and conveyed from a majority of the proposed roadway via storm drain and catch basin systems discharging to stormwater management areas. Stormwater management areas will likely be a bio retention areas or gravel wetland, additionally all homes will likely feature roof drain filter strips.

In addition, the development parcel is located within the Highland Lake Watershed. Highland Lake is listed as a lake most at risk in accordance with MeDEP Chapter 502. Therefore, the proposed development activities will be subject to the Phosphorus Standards contained within Chapter 500 of the MeDEP Stormwater Law for creation of over 20,000 square feet of impervious areas or 5 acres of developed area in a lake at risk watershed.

A site-specific Erosion & Sedimentation Control Plan will be developed for the project in accordance with the MeDEP Basic Standards and the project will also be required to provide stormwater quantity control to runoff flows to ensure that the post-development peak flow rates for the 2, 10, and 25-year/24-hour design storm event do not exceed the pre-development conditions in accordance with Town Ordinance requirements.

Onsite Soils

Onsite soils were delineated from the Cumberland County and Part of Oxford County Medium Intensity Soil Survey as show on the Soil Data Viewer on the NRCS website. The medium intensity soil survey provides information on the project site soils consist of Hydrologic Soil Group (HSG) soils ranging from HSG A to HSG D and are largely HSG D soil types within the project area. see a copy of the project NRCS Medium Intensity Soil Survey Report attached to this letter.

Consultant Team

The Applicant has assembled a qualified team of professionals to plan, permit and develop construction documents for the project. The team services will be provided by the following companies:

<i>Civil Engineer</i>	Craig Sweet, P.E. Terradyn Consultants, LLC 41 Campus Drive, Suite 301 New Gloucester, ME 04260 (207) 926-5111
<i>Surveyor</i>	Nicholas Racioppi, P.L.S. Terradyn Consultants, LLC 95 Main Street, 2 <sup>nd</sup> Floor Auburn, ME 04210 (207) 926-5111
<i>Wetland Scientist and Soil Scientist</i>	Erik Lema LSE Basswood Environmental, LLC 32 Brentwood Road Cape Elizabeth, ME 04107 (207) 518-8442

The team of consultants retained by the Applicant has expertise and experience in the design of similar projects. Resumes of key personnel for the development team can be provided upon request.

### **Project Permitting:**

The proposed construction activities are anticipated to create approximately 4,200 sf of wetland fill for the improvements and extension of Frost Lane and trail which is less than a 1/10<sup>th</sup> of an acre (4,300 SF) of wetland alterations and therefore, a MeDEP Natural Resource Protection Act (NRPA) Tier 1 Wetland Alteration Permit would not be required for the project. We anticipate that at a minimum, the project will require the following additional permit applications:

- Major Subdivision approval from the Town of Windham Planning Board.
- MeDEP Stormwater Permit for over 20,000 square feet of impervious area or 5 acres of developed area in a lake at risk watershed.
- U.S. Army Corp. of Wetland Permit.
- MeDEP NRPA Stream Crossing Permit by Rule for the installation of a stream crossing for both the Frost Lane roadway culvert and trail culvert crossing.
- Maine Construction General Permit for erosion controls for land disturbances over 1 acre.

A pre-application meeting was held with Town Staff on March 9, 2026 and with MeDEP staff on July 28, 2025.

### **Covenants & Deed Restrictions:**

- Homeowners Association Documents will be developed for the formation of a Homeowners Association for lot owners of the proposed subdivision that will detail rights, access, and maintenance requirements for the proposed roadway, open space, stormwater facilities, and common infrastructure.

### **Waiver Request**

- The applicant is requesting a waiver from section 120-911M(5)(b)(5)(b) to construct a hammerhead turnaround instead of a cul-de-sac. This is requested due to the large amount of natural resources on the property, the installation of a cul-de-sac would utilize a large portion of the developable area and would create a greater impact on the wetlands and streams. The installation of a hammerhead also reduces the impervious area created by the roadway. Frost Lane will remain private and will not need to be maintained the Town of Windham. A waiver request form is attached to this letter.
- The applicant is requesting a waiver from section 120-911M(5)(b)(5)(e)(vi) to construct a driveway off the turnaround branch of the hammerhead for Lot 3. This is to reduce possible impacts within 75' the stream and to reduce impervious area created on the lots.
- The applicant is requesting a waiver from 120-911A(2)(a) for all utilities to be installed underground. The applicant is requesting to leave the existing two utility poles and approximately 425' of overhead electric that currently exists along Frost Lane serving the existing home. All newly installed utilities will be underground from the point of the existing services.

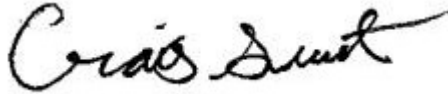
Town of Windham  
March 16, 2026

Project #23-029  
Frost Lane Subdivision

At this time, we request to be added to the Planning Board's next available meeting agenda to discuss the project's Sketch Plan submission. If you have any questions or need more information, please contact me at (207) 370-2776 or by email at [Craig@terradyconsultants.com](mailto:Craig@terradyconsultants.com).

Sincerely,

**TERRADYN CONSULTANTS, LLC**

A handwritten signature in black ink that reads "Craig Sweet". The signature is written in a cursive, flowing style.

Craig Sweet, P.E.  
Senior Project Engineer

Enclosers



## LIST OF ATTACHMENTS

Attachment 1	Application Form
Attachment 2	Waiver Request From
Attachment 3	Property Deed
Attachment 4	Wetland Report
Attachment 5	Existing Conditions Figures
Attachment 6	Survey Drawings
Attachment 7	Sketch Plan Drawings

## **ATTACHMENT #1**

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**Application Form**



## SKETCH PLAN REVIEW – MAJOR\MINOR SUBDIVISION APPLICATION

<b>FEES FOR SKETCH PLAN REVIEW</b>		<b>APPLICATION FEE:</b> <input checked="" type="checkbox"/> \$200.00 <b>REVIEW ESCROW:</b> <input type="checkbox"/> \$300.00 - MINOR <input checked="" type="checkbox"/> \$400.00 - MAJOR		<b>AMOUNT PAID:</b> \$ _____  <b>DATE:</b> _____  <i>Office Use:</i> _____		<i>Office Stamp:</i> _____			
<b>PROPERTY DESCRIPTION</b>	<b>Parcel ID</b>	<b>Map #</b>	13	<b>Lot(s) #</b>	51	<b>Zoning District(s)</b>	FR & LR	<b>Total Land Area SF</b>	2,016,392
	<b>Physical Address</b>	0 Frost Lane				<b>Watershed:</b>	Highland Lake		
<b>PROPERTY OWNER'S INFORMATION</b>		<b>Name</b>	Frost Lane, LLC ATTN Micheal Lewis			<b>Mailing Address</b>	868 Roosevelt Trail, Windham, ME 04062		
		<b>Phone</b>	207-831-2312						
		<b>Fax or Cell</b>							
		<b>Email</b>	[REDACTED]						
<b>APPLICANT'S INFORMATION (IF DIFFERENT FROM OWNER)</b>		<b>Name</b>				<b>Name of Business</b>			
		<b>Phone</b>				<b>Mailing Address</b>			
		<b>Fax or Cell</b>							
		<b>Email</b>							
<b>APPLICANT'S AGENT INFORMATION</b>		<b>Name</b>	Craig Sweet, P.E.			<b>Name of Business</b>	Terradyn Consultants, LLC		
		<b>Phone</b>	207-370-2776			<b>Mailing Address</b>	41 Campus Drive, Suite 301 New Gloucester ME. 04260		
		<b>Fax or Cell</b>							
		<b>Email</b>	[REDACTED]						
<b>PROJECT INFORMATION</b>	<b>Existing Land Use (Use extra paper, if necessary):</b> Vacant land please see attached cover letter								
	<b>Provide a narrative description of the Proposed Project (Use extra paper, if necessary):</b> 5 lot residential subdivision, please see attached cover letter.								
	<b>Provide a narrative description of construction constraints (wetlands, shoreland zone, flood plain, non- conformance, etc. Use extra paper, if necessary):</b>  Please see attached cover letter.								



# SKETCH PLAN MAJOR/MINOR SUBDIVISION APPLICATION REQUIREMENTS

## Section 120-910 of the Land Use Ordinance

The submission shall contain, five (5) copies of following information, including full plan sets. Along with one (1) electronic version of the entire submission unless a waiver of a submission requirement is granted.

### The Sketch Plan document/map:

- A) Plan size: 24" X 36"
- B) Plan Scale: No greater 1":100'
- C) Title block: Applicant's name and address
- Name of preparer of plans with professional information
- Parcel's tax map identification (map and lot) and street address, if available

- Complete application submission deadline: three (3) weeks prior to the desired Planning Board or Staff Review Committee meeting.
  - Five copies of application and plans
  - Application Payment and Review Escrow
- Pre-submission meeting with the Town staff is required.
- Contact information:
  - Windham Planning Department (207) 894-5960, ext. 2
  - Steve Puleo, Town Planner [sipuleo@windhammaine.us](mailto:sipuleo@windhammaine.us)
  - Amanda Lessard, Planning Director [allessard@windhammaine.us](mailto:allessard@windhammaine.us)

## APPLICANT/PLANNER'S CHECKLIST FOR SKETCH PLAN REVIEW REQUIREMENTS

**SUBMITTALS THAT THE TOWN PLANNER DEEMS INCOMPLETE IN CONTENT WILL NOT BE SCHEDULED FOR PLANNING BOARD REVIEW.**

The following checklist includes items generally required for development by the Windham's LAND USE ORDINANCE, [Section 120-910](#). Due to projects specifics, are required to provide a complete and accurate set of plans, reports and supporting documentation.

**IT IS THE RESPONSIBILITY OF THE APPLICANT TO PRESENT A CLEAR UNDERSTANDING OF THE PROJECT.**

**NOTE TO APPLICANT: PRIOR TO THE SITE WALK, TEMPORARY MARKERS MUST BE ADEQUATELY PLACED THAT ENABLE THE PLANNING BOARD TO READILY LOCATE AND APPRAISE THE LAYOUT OF DEVELOPMENT (SEE RULES OF PLANNING BOARD FOR MORE SPECIFICS, PER SECTIONS 120-906C(3) and 120-907A(2)(b)(2)).**

Submission Requirements:	Applicant	Staff		Applicant	Staff
a) Completed Sketch Plan Application form	<input checked="" type="checkbox"/>	<input type="checkbox"/>	h) Copy of portion of the USGS topographic map of the area, showing the boundaries of the proposed subdivision.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Proposed Project Conditions:			i) An existing resources inventory and site analysis sketch plan for conservation subdivisions as described in § 120-911K(3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Condition of the site	<input checked="" type="checkbox"/>	<input type="checkbox"/>	j) Copy of that portion of the Cumberland County Medium Intensity Soil Survey covering the proposed subdivision, showing the boundaries of the proposed subdivision Submit initialed form regarding additional fees, from applicant intro packet	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Proposed use	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
- Constraints/opportunities of site	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>Plan Requirements</b>		
Outline any of the follow			1. Name of subdivision, north arrow, date and scale.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Traffic Study	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. Boundary and lot lines of the subdivision.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Utility Study	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. Approximate location, width, and purpose of easements or restrictions.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Market Study	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4. Streets on and adjacent to the tract.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Name, address, phone for record owner and applicant	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5. Approximate location and size of existing utilities on and adjacent to the tract, including utility poles and hydrants (if none, so state).	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Names and addresses of all consultants working on the project	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
e) Evidence of right, title, or interest in the property	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
f) Evidence of payment of Sketch Plan fees and escrow deposit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6. Existing buildings, structures, or other improvements on the site.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Any anticipated waiver requests ( <a href="#">Section 120-908</a> )			7. Major natural features of the site, approximated by the applicant including wetlands, streams and ponds, floodplains, groundwater aquifers, treelines, significant wildlife habitat and fisheries, and any other important features.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Waivers from Submission Criteria. Will the applicant be requesting waivers from the "Submission information for which a Waiver May be Granted"?	<input type="checkbox"/>	<input type="checkbox"/>			
- If yes, submit letter with waivers being requested, along with a completed "Performance & design Standards Waiver Request Form.	<input type="checkbox"/>	<input type="checkbox"/>			
Waivers from Subdivision Performance Standards in <a href="#">Section 120-911</a> of the Land Use Ordinance.	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
- If yes, submit letter with the waivers being requested, along with a completed "Performance and Design Standards Waiver Request" form.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>PDF Electronic Submission</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The undersigned hereby makes application to the Town of Windham for approval of the proposed project and declares the foregoing to be true and accurate to the best of his/her knowledge.

12/19/2025

Michael Lewis

APPLICANT OR AGENT'S SIGNATURE

DATE

PLEASE TYPE OR PRINT NAME



**Town of Windham**

Planning Department:  
8 School Road  
Windham, Maine 04062  
Tel: (207) 894-5960 ext. 2  
Fax: (207) 892-1916 -  
[www.windhammaine.us](http://www.windhammaine.us)

AGENT AUTHORIZATION				
APPLICANT/ OWNER	Name	Frost Lane, LLC ATTN Micheal Lewis		
PROPERTY DESCRIPTION	Physical Address	0 Frost Lane	Map	13
			Lot	51
APPLICANT'S AGENT INFORMATION	Name	Craig Sweet, P.E.		
	Phone	(207) 370-2776	Business Name & Mailing Address	Terradyn Consultants, LLC 41 Campus Drive, Suite 301 New Gloucester, ME 04620
	Fax/Cell			
	Email	craig@terradyconsultants.com		

**Said agent(s) may represent me/us before Windham Town officers and the Windham Planning Board to expedite and complete the approval of the proposed development for this parcel.**

  
 \_\_\_\_\_  
 APPLICANT SIGNATURE

12/19/2025  
 \_\_\_\_\_  
 DATE

Michael Lewis  
 \_\_\_\_\_  
 PLEASE TYPE OR PRINT NAME HERE

\_\_\_\_\_  
 \_\_\_\_\_  
 CO-APPLICANT SIGNATURE

\_\_\_\_\_  
 \_\_\_\_\_  
 DATE

\_\_\_\_\_  
 \_\_\_\_\_  
 PLEASE TYPE OR PRINT NAME HERE

  
 \_\_\_\_\_  
 APPLICANT'S AGENT SIGNATURE

12/19/2025  
 \_\_\_\_\_  
 DATE

Craig Sweet  
 \_\_\_\_\_  
 PLEASE TYPE OR PRINT NAME HERE

## **ATTACHMENT #2**

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**Waiver Request Form**

# TOWN OF WINDHAM MINOR\MAJORSUBDIVISION APPLICATION

## Performance and Design Standards Waiver Request Form ([Section 120-908](#) – Minor\Major Subdivision Review, Waivers)

For each waiver request from the [Performance and Design Standards](#) detailed in [Section 120-911](#) of the Town of Windham Land Use Ordinance, please submit separate completed copy of this waiver request form for all waivers requested

**Subdivision or Project Name:** Frost Lane Subdivision  
**Tax Map:** 13  
**Lot(s):** 51

**Waivers are requested from the following Performance and Design Standards (Add Forms as necessary):**

Ordinance Section	Standard	Mark which waiver this form is for
120-911M(5)(b)(5)	Dead End Streets	<input checked="" type="checkbox"/>
120-911M(5)(b)(5)(e)(vi)	Driveway off of turn around branch	<input checked="" type="checkbox"/>
120-911A(2)(a)	Underground utilities	<input checked="" type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>

- a. Describe how a waiver from the standard indicated above will improve the ability of the project to take the property’s pre-development natural features into consideration. Natural features include, but are not limited to, topography, location of water bodies, location of unique or valuable natural resources, relation to abutting properties or land uses. Attach a separate sheet if necessary.

Please see the attached cover letter for a description of the waiver request.

(Continued next page)

911M(b)(5)(b)

Ordinance Section: \_\_\_\_\_ (PLEASE PROVIDE A SEPERATE IMPACT CRITERIA FRO EACH ORDIANCE SECTION)

b. Will the waiver have an impact on any of the following criteria?

	Yes	No
Water or air pollution	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Light pollution or glare	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Water supply	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Soil erosion	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Traffic congestion or safety	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Pedestrian safety or access	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Supply of parking	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sewage disposal capacity	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Solid waste disposal capacity	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Scenic or natural beauty, aesthetics, historic sites, or rare or irreplaceable natural areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Flooding or drainage issues on abutting properties	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The Town's ability to provide the subdivision with public safety services (if subdivision)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If granting the waiver will result in an impact on any of the criteria above, please provide more detail below.

Please see attached cover letter.

120-911M(5)(b)(5)(e)

(vi)

Ordinance Section: \_\_\_\_\_ (PLEASE PROVIDE A SEPERATE IMPACT CRITERIA FRO EACH ORDIANCE SECTION)

b. Will the waiver have an impact on any of the following criteria?

	Yes	No
Water or air pollution	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Light pollution or glare	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Water supply	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Soil erosion	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Traffic congestion or safety	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Pedestrian safety or access	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Supply of parking	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sewage disposal capacity	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Solid waste disposal capacity	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Scenic or natural beauty, aesthetics, historic sites, or rare or irreplaceable natural areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Flooding or drainage issues on abutting properties	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The Town's ability to provide the subdivision with public safety services (if subdivision)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If granting the waiver will result in an impact on any of the criteria above, please provide more detail below.

Please see attached cover letter.

120-911A(2)(a)

Ordinance Section: \_\_\_\_\_ (PLEASE PROVIDE A SEPERATE IMPACT CRITERIA FRO EACH ORDIANCE SECTION)

b. Will the waiver have an impact on any of the following criteria?

	Yes	No
Water or air pollution	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Light pollution or glare	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Water supply	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Soil erosion	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Traffic congestion or safety	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Pedestrian safety or access	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Supply of parking	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sewage disposal capacity	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Solid waste disposal capacity	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Scenic or natural beauty, aesthetics, historic sites, or rare or irreplaceable natural areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Flooding or drainage issues on abutting properties	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The Town's ability to provide the subdivision with public safety services (if subdivision)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If granting the waiver will result in an impact on any of the criteria above, please provide more detail below.

Please see attached cover letter.

## **ATTACHMENT #3**

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**Property Deed**

MAINE REAL ESTATE TAX-Paid

**AFTER RECORDING RETURN TO:**


Jeffrey B. Herbert, Esq.  
Jensen Baird Gardner & Henry  
P.O. Box 4510  
Portland, Maine 04112-4510

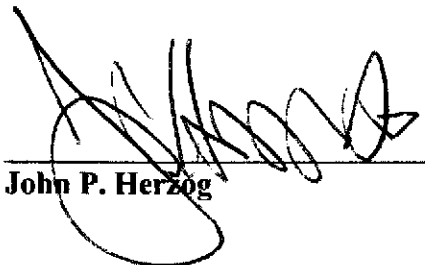
**WARRANTY DEED**  
**Maine Statutory Short Form**  
**DLN: 2488253**

**KNOW ALL BY THESE PRESENTS**, that **JOHN P. HERZOG**, whose address is 110 Oriental Gardens, Portsmouth, New Hampshire 03801, for consideration paid, **GRANTS** to **FROST LANE, LLC**, a Maine limited liability company whose mailing address is 868 Roosevelt Trail, Windham, Maine 04062, with **WARRANTY COVENANTS**, that certain lot or parcel of land, with any buildings thereon, located in the Town of Windham, County of Cumberland and State of Maine, being more particularly described on Schedule A attached hereto and made a part hereof.

IN WITNESS WHEREOF, the said John P. Herzog has caused this instrument to be executed and delivered this 17<sup>th</sup> day of February, 2025.

**SIGNED, SEALED AND DELIVERED**  
**IN THE PRESENCE OF**

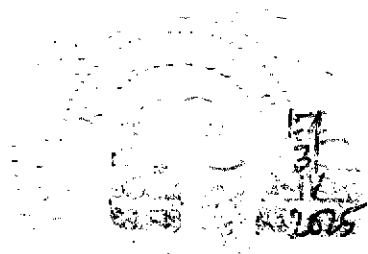
  
\_\_\_\_\_  
WITNESS RHETT ALVIN S. BASTARDE


  
\_\_\_\_\_  
John P. Herzog

State of THE REPUBLIC OF THE PHILIPPINES  
County of LOLO CITY, ss.

17 FEB 2025, 2025

Then personally appeared the above-named John P. Herzog and acknowledged the foregoing instrument to be his free act and deed, before me,



  
**JOHN PAUL SUABERON**  
Notary Public for the City and Province of Iloilo  
Notarial Commission No. 14, until December 31, 2026  
Trol & Trol, Doña Maria Building, Aranceta-San Juan Sta., Molo, Iloilo City  
Roll of Attorney's No. 87905  
P.T. No. 881748 \* Iloilo City \* January 2, 2025  
Notary Public  
My commission expires  
MCI E Compliance No. VIII-0013707 valid until April 14, 2028

## SCHEDULE A

A certain lot or parcel of land situated on the northerly shore of Highland Lake and westerly of the westerly terminus of Brentwood Road in the Town of Windham, County of Cumberland, State of Maine and being more particularly described as follows:

BEGINNING at a 5/8" rebar on the westerly sideline of land now or formerly of Cynthia L. Schadler, Trustee of the Cynthia L. Schadler Revocable Trust U/T/A as described in a deed dated March 08, 2012 and recorded in the Cumberland County Registry of Deeds in Book 29426, Page 64;

- 1) Thence, S 45° 06' 30" E by said Schadler a distance of ten feet more or less ( $\pm 10'$ ) to the northerly shore of Highland Lake;
- 2) Thence, southerly, westerly and northerly around a point of land and by the high water mark of said Highland Lake a distance of eight hundred sixty-one feet, more or less ( $\pm 861'$ ) to a point. Said point being N 81° 14' 08" W a distance of forty-nine and 01/100 feet (49.01') from the 5/8" rebar at the point of beginning above-described;
- 3) Thence, N 23° 53' 35" W crossing a small cove or outlet, a distance of one hundred fifty-six and 56/100 (156.56') to a 5/8" rebar near the southeast corner of land now or formerly of Arnold F. and Doris C. Blackstone as described in a deed dated August 4, 1998 and recorded in said Registry in Book 14042, Page 074;
- 4) Thence, N 23° 43' 41" W by the easterly sideline of said Blackstone, a distance of six hundred fifty and 64/100 feet (650.64') to an iron pipe found at the southeast corner of land now or formerly of Linda Willette as described in a deed dated December 15, 1982 and recorded in said Registry in Book 6397, Page 47;
- 5) Thence, N 24° 06' 17" W by said Willette and by Dorthea A. Millington as described in a Deed recorded in said Registry in Book 3859, Page 191 and by Glenwood and Linda Willette as described in a deed recorded in said Registry in Book 6398, Page 152, and by Henry L. Gelzer as described in a Deed recorded in said Registry in Book 15328, Page 212, a distance of seven hundred sixty and 58/100 feet (760.58') to 5/8" rebar at the northeast corner of land now or formerly Designs Dwellings, Inc. as described in a deed recorded in said Registry in Book 14116, Page 300;
- 6) Thence, N 24° 42' 04" W by the end line of Critter Drive and by the easterly sideline of land now or formerly of Amy B. Hyland as described in a deed recorded in said Registry in Book 4965, Page 249 and by Aaron M. Bridges as described in a deed recorded in said Registry in Book 12692, Page 84, a distance of three hundred two and 96/100 feet (302.96') to an iron pipe at the southeast corner of land now or formerly of Stanley E. and Mary E. Scott as described in a deed recorded in said Registry in Book 6402, Page 81;
- 7) Thence, N 26° 13' 25" W by the easterly sideline of said Scott and by Stephen C. Blais as described in a deed recorded in said Registry in Book 9222, Page 235 and by Carl W. Hickson as described in a Deed recorded in said Registry in Book 6349, Page 23, a distance of one hundred ninety-six and 51/100 feet (196.51') to an iron pipe at the southeast corner of land now or formerly of Carl Alexander et al. as described in a deed recorded in said Registry in Book 16448, Page 04;

- 8) Thence, N 26° 20' 19" W by the easterly sideline of said Alexander and by Joan Goodwin as described in a deed recorded in said Registry in Book 9401, Page 01 and by Frederick R. McDonald as described in a deed recorded in said Registry in Book 5050, Page 29 and by Michael R. Paskewicz as described in a deed recorded in said Registry in Book 17557, Page 171, a distance of six hundred seventy-two and 43/100 feet (672.43') to a 5/8" rebar on the apparent southeasterly sideline of Albion Road;
- 9) Thence, N 36° 06' 31" E by the apparent southeasterly sideline of said Albion Road a distance of one hundred nine and 96/100 feet (109.96') to a point at the southwest corner of land now or formerly of Tyler Thompson and Kristina A. Emmons as described in a deed recorded in said Registry in Book 28525, Page 04;
- 10) Thence, S 38° 34' 31" E by the southwesterly sideline of said Thompson/Emmons a distance of eight hundred sixty-five and 48/100 feet (865.48") to a 5/8" rebar for a corner;
- 11) Thence, N 29° 20' 09" E by the southeasterly sideline of said Thompson/Emmons to a 5/8" rebar on the southwesterly sideline of land now or formerly of Joseph J. and Julie A. Dugas as described in a Deed recorded in said Registry in Book 12227, Page 56, said 5/8" rebar also being S 57° 13' 54" E a distance of two hundred ninety-one and 78/100 feet (291.78') from a 5/8" rebar at the most southerly corner of Lot 3A as shown on a plan of the Amended Subdivision Plan of Albion Woods Subdivision - Albion Road - Windham, Maine and recorded in the Cumberland County Registry of Deeds in Plan Book 195, Page 371;
- 12) Thence, S 57° 13' 54" E by the southwest sideline of said Dugas and by Donald F. LeClaire as described in a deed recorded in said Registry in Book 13512, Page 01 and by Douglas E. and Diane S. Sharp as described in a deed recorded in said Registry in Book 13681, Page 25, a distance of five hundred forty-four and 92/100 feet (544.92') to the westerly corner of land now or formerly of Joel and Jessica Harden as described in a deed dated April, 1999 and recorded in said Registry in Book 14688, Page 332;
- 13) Thence, S 52° 16' 54" E by southwest sideline of said Harden and by land of Sherry Chase as described in a deed recorded in said Registry in Book 14439, Page 187 and by Daniel A. and Brenna J. Reali as described in a deed recorded in said Registry in Book 18458, Page 252 and crossing a fifty-foot (50') right of way, a distance of five hundred forty and 92/100 feet (540.92') to an iron pipe at the westerly corner of land now or formerly of Joseph P. Mains and Paula I. Adams as described in a deed dated June 26, 1997 and recorded in said Registry in Book 13163, Page 328;
- 14) Thence, S 51° 32' 07" E by the southwest sideline of said Mains/Adams and by Linda McPhee as described in a deed recorded in said Registry in Book 3643, Page 301 and by Ronald F. and Linda W. Small as described in a deed recorded in said Registry in Book 4283, Page 288, a distance of five hundred fifty-one and 11/100 feet (551.11') to an iron pipe at the westerly corner of land now or formerly of Donald I. and Linda L. Meserve as described in a deed dated May 04, 1973 and recorded in said Registry in Book 3392, Page 212;
- 15) Thence, S 52° 34' 33" E by the southwest sideline of said Meserve, a distance of two hundred forty- nine and 14/100 feet (249.14') to an intersection of stone walls on the northwest sideline of land now formerly Brian T. and Deborah L. Clark as described in a deed dated July 28, 1999 and recorded in said Registry in Book 14939, Page 307;

- 16) Thence, S 36° 10' 35" W by the northwest sideline of said Clark and by Gerry V. and Lydia R. Therrien as described in a deed recorded in said Registry in Book 14652, Page 233 and by Dick E. and Marisa A. Bentley as described in a deed recorded in said Registry in Book 20677, Page 273 and by Timothy W. and Cynthia W. DeCosta as described in a deed recorded in said Registry in Book 11982, Page 156 and by Dennis M. Regan as described in a deed recorded in said Registry in Book 7701, Page 100, a distance of four hundred forty-three and 07/100 feet (443.07') to point for an angle;
- 17) Thence, S 37° 31' 51" W by the northwest sideline of said Regan and by land now or formerly of Dawn H. Baumer and Rosie Hartzler as described in a deed dated March 10, 2003 and recorded in said Registry in Book 19025, Page 170, a distance of two hundred thirty-nine and 72/100 feet (239.72') to a point at the northeast corner of land now or formerly of James A. Labrecque as described in a deed dated April 03, 2007 and recorded in said Registry in Book 24996, Page 302;
- 18) Thence, N 60° 22' 54" W by the northeast sideline of said Labrecque, a distance of two hundred fifty-three and 95/100 feet (253.95') to a point;
- 19) Thence, S 62° 14' 29" W by the northwest sideline of said Labrecque, a distance of one hundred eighty-two and 83/100 feet (182.83') to a point at the northwest corner of other land of said Labrecque as described in a deed dated April 03, 2007 and recorded in said Registry in Book 24996, Page 259;
- 20) Thence, S 03° 23' 14" W by the westerly sideline of said Labrecque, a distance of one hundred thirty-one and 77 /100 feet (131.77') to a 5/8" rebar at the northeast corner of land now or formerly of Richard F. and Nancy M. Shaw as described in a deed dated December 17, 2004 and recorded in said Registry in Book 22151, Page 27;
- 21) Thence, S 55° 03' 34" W by the northwest sideline of said Shaw, a distance of two hundred fifty-six and 78/100 feet (256.78') to a point on the southeast shoreline of a small cove or backwater of said Highland Lake and being the most northerly corner of said Schadler, said point also being N 45° 06' 30" W a distance of ten feet more or less ( $\pm 10'$ ) from a 5/8" rebar as a witness between the common sideline of said Shaw and Schadler;
- 22) Thence, southwesterly by the southeasterly shoreline of said cove or backwater of Highland Lake and being the northeast sideline of said Schadler, a distance of two hundred ninety-five feet more or less ( $\pm 295'$ ) to a point;
- 23) Thence, S 45° 06' 30" E by the southwest sideline of said Schadler, a distance of ten feet more or less ( $\pm 10'$ ) to a 5/8" rebar, said rebar being S 28° 00' 04" W, a distance of two hundred seventy-seven and 90/100 feet (277.90') from the rebar reference in paragraph 21 above;
- 24) Thence, S 45° 06' 30" E by the southwest sideline of said Schadler, a distance of sixty and 07/100 feet (60.07') to the POINT OF BEGINNING.

ALSO CONVEYING herewith that fifty-foot (50') right of way reserved by Willis B. Austin in his deeds to John F. Chase recorded in the Cumberland County Registry of Deeds in Book 13753, Page 85, in Book 14527, Page 284 and in Book 14527, Page 287.

EXCEPTING and RESERVING a certain lot or parcel of land together with the improvements thereon as described in a deed from Tandberg Trail Associates, LLC to Alan J. and Karen T.

Figerald dated December 17, 2004 and recorded in the Cumberland County Registry of Deeds in Book 22159, Page 212.

The bearings above-referred to are referenced to Grid North - Maine West Zone - NAD 83.

TOGETHER WITH AND SUBJECT TO a certain fifty-foot (50.00') right of way for the ingress and egress of vehicles, utilities and the maintenance thereon leading southeasterly from the said Albion Road and being more particularly described in a Corrective Deed to Todd G. Harvey from Tandberg Trail Associates, LLC dated October 26 2010 and recorded in the Cumberland County Registry of Deeds in Book 28208, Page 53.

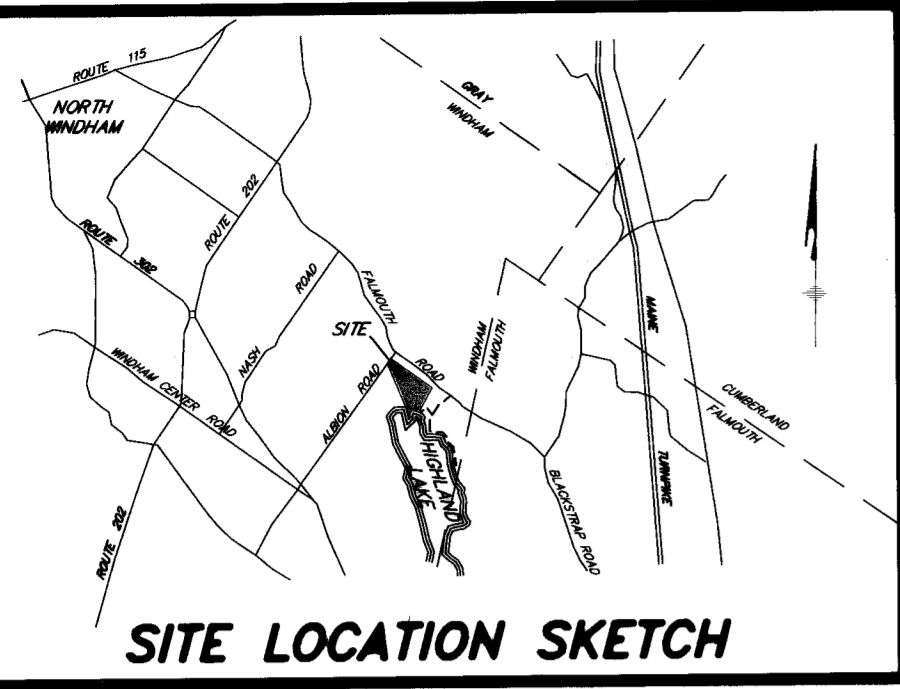
ALSO TOGETHER WITH AND SUBJECT TO a certain twenty-foot (20.00') walking path easement and right of way for the ingress and egress by foot and the maintenance thereof over lands in the following described deeds to wit:

- 1) From Tandberg Trail Associates, LLC to Cyndy Pratt dated March 25, 2005 in Book 22478, Page 275.
- 2) From Tandberg Trail Associates, LLC to Nancy M. Shaw, et al., dated December 17, 2004 in Book 22151, Page 27.
- 3) From Tandberg Trail Associates, LLC to James A. Labrecque dated April 03, 2007 in Book 24996, Page 259.
- 4) From Tandberg Trail Associates, LLC to James A. Labrecque dated April 03, 2007 in Book 24996, Page 302.

Said walking path easement and right of way is as depicted on a plan entitled "Tandberg Trail Associates" recorded in the Cumberland County Registry of Deeds in Plan Book 206, Page 51.

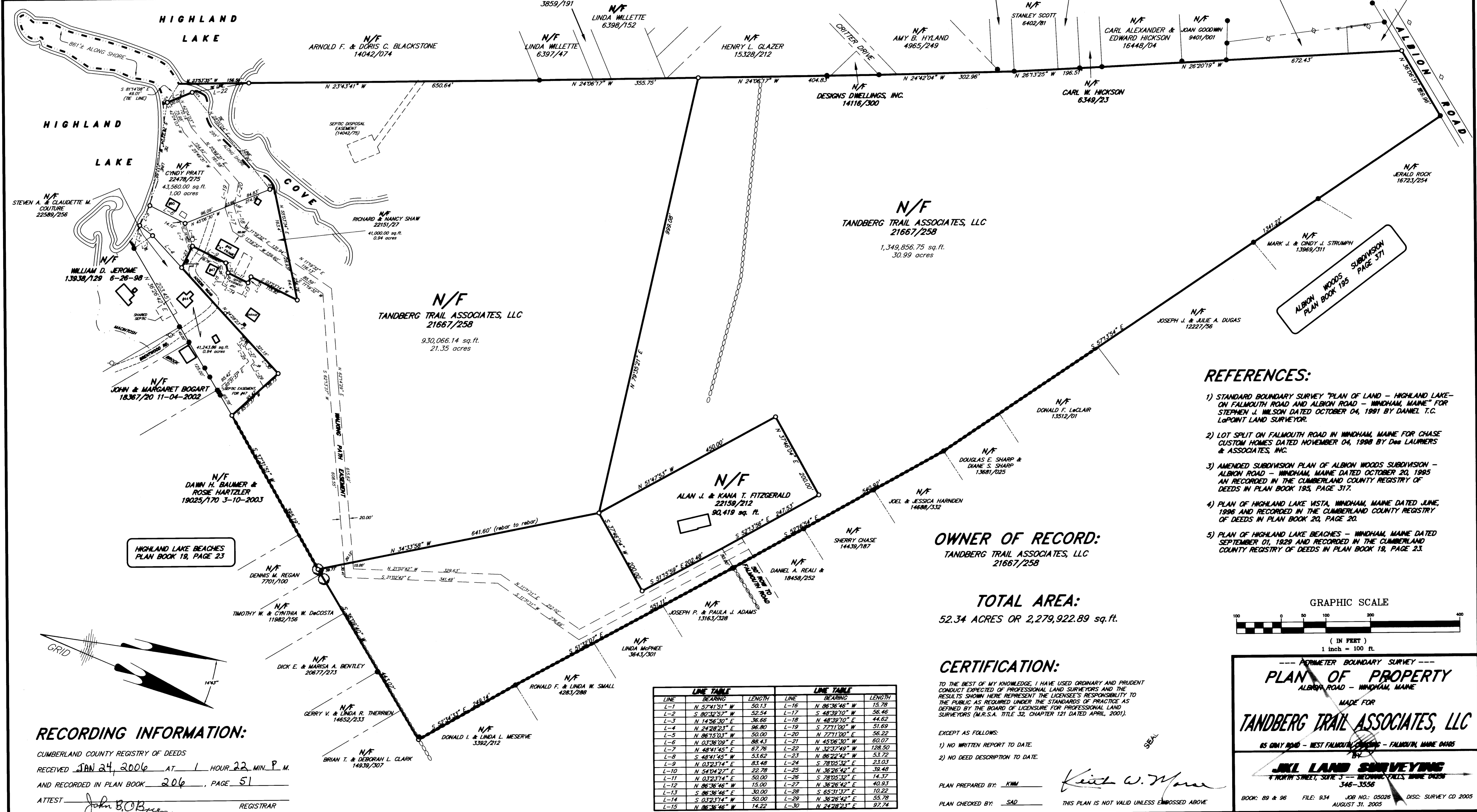
This description is prepared pursuant to a Perimeter Boundary Survey - Albion Road - Windham, Maine made for Timothy M. Nolan and Todd G. Harvey dated August 31, 2005 and revised August 08, 2010 by JKL Land Surveying - Mechanic Falls, Maine.

Also conveying a certain lot or parcel of land located along the southeasterly side of Critter Drive in the Town of Windham, Cumberland County, Maine, which parcel of land is shown as Lot 64 on a subdivision plan of Highland Lake Vista, dated June 1931 and recorded in Plan Book 20, Page 20 of the Cumberland County Registry of Deeds. Also conveying without warranty all of the Granters right, title, and interest in and to the streets and ways as shown on said plan.



- LEGEND:**
- IRON PIPE FOUND (3/4" hollow pipe unless noted)
  - IRON PIN SET (5/8" rebar with yellow cap inscribed JKL Land Surveying, PLS 2216)
  - N/F NOW OR FORMERLY
  - UTILITY POLE
  - ⊙ WELL
  - RIGHT OF WAY LIMITS
  - == EDGE OF PAVEMENT
  - ⊖ STONE WALL

- NOTES:**
- 1) BEARINGS ARE REFERENCED TO GRID NORTH, MAGNETIC IS 14'-43" WEST.
  - 2) DEED REFERENCES ARE MADE TO THE CUMBERLAND COUNTY REGISTRY OF DEEDS - PORTLAND, MAINE.

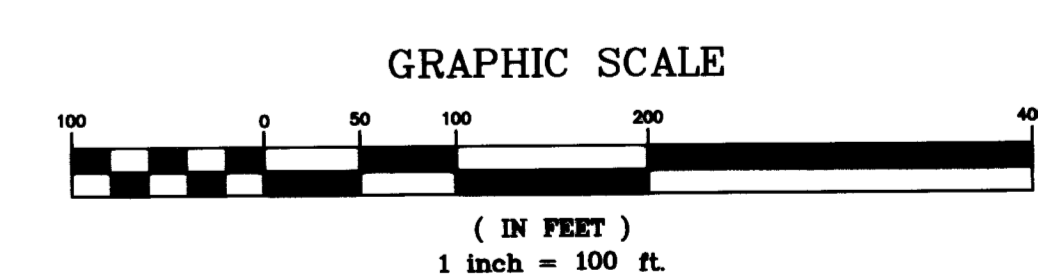


LINE TABLE		LINE TABLE			
LINE	BEARING	LENGTH	LINE	BEARING	LENGTH
L-1	N 57°41'51" W	50.13	L-16	N 06°36'46" W	15.78
L-2	S 80°32'27" W	52.54	L-17	S 48°39'10" W	56.46
L-3	N 14°56'30" E	36.66	L-18	N 48°39'10" E	44.62
L-4	N 24°28'23" E	96.80	L-19	S 77°11'00" W	51.69
L-5	N 06°15'03" W	50.00	L-20	N 77°11'00" E	56.22
L-6	N 03°36'09" E	88.43	L-21	N 45°06'30" W	60.07
L-7	N 48°41'45" E	67.76	L-22	N 32°37'49" W	128.50
L-8	S 48°41'45" W	53.62	L-23	N 06°32'42" W	53.72
L-9	N 03°23'14" E	83.48	L-24	S 78°05'32" E	23.03
L-10	N 54°24'27" E	22.78	L-25	N 36°26'42" E	39.48
L-11	N 03°23'14" E	50.00	L-26	S 78°05'32" E	14.37
L-12	N 06°36'46" W	15.00	L-27	N 36°26'42" E	40.93
L-13	S 06°36'46" E	30.00	L-28	S 65°31'37" E	10.22
L-14	S 03°23'14" W	50.00	L-29	N 36°26'42" E	55.78
L-15	N 06°36'46" W	14.22	L-30	N 24°28'23" E	92.74

- REFERENCES:**
- 1) STANDARD BOUNDARY SURVEY "PLAN OF LAND - HIGHLAND LAKE - ON FALMOUTH ROAD AND ALBION ROAD - WINDHAM, MAINE" FOR STEPHEN J. WILSON DATED OCTOBER 04, 1991 BY DANIEL T.C. LoPOINT LAND SURVEYOR.
  - 2) LOT SPLIT ON FALMOUTH ROAD IN WINDHAM, MAINE FOR CHASE CUSTOM HOMES DATED NOVEMBER 04, 1998 BY Dee LAURMERS & ASSOCIATES, INC.
  - 3) AMENDED SUBDIVISION PLAN OF ALBION WOODS SUBDIVISION - ALBION ROAD - WINDHAM, MAINE DATED OCTOBER 20, 1995 AN RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 195, PAGE 317.
  - 4) PLAN OF HIGHLAND LAKE VISTA, WINDHAM, MAINE DATED JUNE, 1996 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 20, PAGE 20.
  - 5) PLAN OF HIGHLAND LAKE BEACHES - WINDHAM, MAINE DATED SEPTEMBER 01, 1929 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 19, PAGE 23.

**OWNER OF RECORD:**  
TANDBERG TRAIL ASSOCIATES, LLC  
21667/258

**TOTAL AREA:**  
52.34 ACRES OR 2,279,922.89 sq. ft.



**CERTIFICATION:**

TO THE BEST OF MY KNOWLEDGE, I HAVE USED ORDINARY AND PRUDENT CONDUCT EXPECTED OF PROFESSIONAL LAND SURVEYORS AND THE RESULTS SHOWN HERE REPRESENT THE LICENSEE'S RESPONSIBILITY TO THE PUBLIC AS REQUIRED UNDER THE STANDARDS OF PRACTICE AS DEFINED BY THE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS (M.R.S.A. TITLE 32, CHAPTER 121 DATED APRIL, 2001).

EXCEPT AS FOLLOWS:

- 1) NO WRITTEN REPORT TO DATE.
- 2) NO DEED DESCRIPTION TO DATE.

PLAN PREPARED BY: KMM *Keith W. Moore*

PLAN CHECKED BY: SAD THIS PLAN IS NOT VALID UNLESS EMBOSSED ABOVE

--- PERIMETER BOUNDARY SURVEY ---

**PLAN OF PROPERTY**  
ALBION ROAD - WINDHAM, MAINE

MADE FOR  
**TANDBERG TRAIL ASSOCIATES, LLC**

85 GINY ROAD - WEST FALMOUTH, MAINE - FALMOUTH, MAINE 04045

**JKL LAND SURVEYING**  
4 NORTH STREET, SUITE 3 - BEDFORD FALLS, MAINE 04026  
346-3556

BOOK: 89 & 96 FILE: 934 JOB NO.: 05026 DISC: SURVEY CD 2005  
AUGUST 31, 2005

**RECORDING INFORMATION:**

CUMBERLAND COUNTY REGISTRY OF DEEDS

RECEIVED JAN 24, 2006 AT 1 HOUR 22 MIN P.M.

AND RECORDED IN PLAN BOOK 206, PAGE 51

ATTEST John B. O'Brien REGISTRAR

## **ATTACHMENT #4**

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**Wetland Report**



December 18, 2023

Mr. Craig Sweet, P.E.  
Terradyn Consultants, LLC  
41 Campus Drive, Suite 101  
New Gloucester, ME 04260

Re: **Natural Resources Survey** – Proposed Luxury Campground, Albion Rd/Frost Ln, Windham, Maine.

Mr. Sweet,

The following summary serves as verification and documentation of a wetland delineation performed on an approximately 46-acre parcel off of Frost Lane in Windham Maine. The parcel is identified as Lot 51 on Windham Tax Map 13. It is proposed to be developed into an upscale camping area, and is currently undeveloped except for a series of old woods roads and stone walls. Wetlands on site were most recently delineated in late winter/early spring of 2021, and thus are still valid, if accurate. Basswood Environmental LLC (Basswood) walked the site on December 1<sup>st</sup>, 2023 to determine the accuracy of the previous delineation, and document the natural resources accordingly. Erik Lema, owner and principal scientist at Basswood Environmental, Inc. (Basswood) conducted the survey in support of the proposed project. This included a wetland and stream verification and off-season vernal pool survey. Spatial data collected by Basswood has been submitted to Terradyn for inclusion onto site plans.

### **Methods**

The standard three-parameter approach was used for verifying and delineating jurisdictional wetlands, as detailed in the U.S. Army Corps of Engineers' *Regional Supplement to the Corps of Engineers Wetland delineation Manual: Northcentral and Northeast Region (V2.0)*<sup>1</sup>. This approach uses a combination of wetland vegetation, soils and hydrology to determine the boundary of a wetland that is under the regulatory jurisdiction of the U.S. Army Corps of Engineers (ACOE), the Maine Department of Environmental Protection (DEP), and possibly the municipality under local ordinances. In addition, the survey area was also examined for the presence of jurisdictional streams and other protected natural resources, such as vernal pools, that may affect the proposed project.

The 2021 wetland delineation was digitized from georeferenced plans and loaded onto a tablet for use in the field with a sub-meter accurate GPS receiver. All wetland boundaries were walked to determine accuracy. Pink "wetland delineation" type flagging was used to demarcate areas that were not flagged or where the flagging had degraded. All upland areas were traversed to determine if any wetland areas were missed during the 2021 survey, with special emphasis on areas proposed for development.

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<sup>1</sup> U.S. Army Corps of Engineers. 2011. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, C. V. Noble, and J. F. Berkowitz. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

## Site Description

The parcel is located on the north side of Highland Lake, with frontage on Albion Road. An old woods road extends through the interior of the site from Frost Lane, and includes culverts over several drainages. The site contains areas of gently rolling hills on the west side, sloping gradually south and east toward Highland Lake. Soils are mapped as hydric Scantic silt loam throughout much of the site. The woods road has an associated drainage ditch along much of its length, and the woods throughout have evidence of past earth-moving activities that have altered the terrain. None of these activities appear recent, and much of the upland area is now in mature oak-pine forest with scattered stands of quaking aspen (*Populus tremuloides*).

## Results

The 2021 wetland delineation was determined to be satisfactory and no changes to this delineation were made during the site walk. The wetland boundary flagging was mostly still visible throughout the survey area, although some areas were re-flagged where the original flagging had degraded or could not be found.

All of the wetlands on site are forested, dominated by an overstory of red maple (*Acer rubrum*), with lesser amounts of green ash (*Fraxinus pennsylvanica*). In the large wetland area nearer to the lake, the overstory continues to be dominated by red maple, however a dense shrub layer consisting of speckled alder (*Alnus incana* ssp. *rugosa*), common winterberry (*Ilex verticillata*), and highbush blueberry (*Vaccinium corymbosum*) is present. The herbaceous layer is dominated by various ferns, such as cinnamon fern (*Osmundastrum cinnamomeum*), sensitive fern (*Onoclea sensibilis*), and evergreen wood fern (*Dryopteris intermedia*), with many wetland sedges evident. Invasive species are common on site, with multiflora rose (*Rosa multiflora*), Morrow's honeysuckle (*Lonicera morrowii*), and Japanese barberry (*Berberis thunbergii*) the most common.

During the survey, the presence of potential vernal pools was evaluated. No potential vernal pool habitat was located. The survey was performed well outside of the vernal pool survey window, however little opportunity for vernal pool development was noted and no in-season surveys should be necessary.

## Regulatory Considerations

Several factors influence the regulatory requirements of a potential project on this site. Under Chapter 310 of the Maine Natural Resources Protection Act (NRPA)<sup>2</sup>, all of the streams on site are subject to a 75-foot setback to disturbance. This setback can be reduced to as little as 25-feet with a simple Permit-by-Rule (PBR) type NRPA permit. Encroachment within this 25-foot setback typically requires an Individual Permit, which can be significantly more involved and require compensation fees and additional surveys. The exception to this is the perpendicular crossing of the watercourse, when necessary to access developable land. Such crossings are eligible for a PBR, assuming erosion controls are in place and maintained, and any culverts are appropriately installed and sized at least 1.2x the channel width or as specified by DEP.

The wetlands outside of the 250-foot shoreland zone of Highland Lake do not meet NRPA criteria for designation as Wetlands of Special Significance (WOSS). As such, these wetland areas can be impacted up to 4,300 square-feet without the need for a NRPA permit as long as applicable setbacks to the

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<sup>2</sup> State of Maine, Department of Environmental Protection, Natural Resources Protection Act Statute, 38 M.R.S.A. §480-A to 480-HH, DEPLW284-W2010, Revised August 12, 2011.

streams are maintained. Impacts of up to 15,000 square-feet can be made with a relatively simple Tier-1 type permit, however the U.S. Army Corps has recently reduced the area eligible to be impacted without compensation fees to 5,000 square-feet, and should be taken into consideration when planning the potential project impacts. Additional information would be necessary in this scenario, such as a functional assessment and paired Corps data plots.

If there is additional detail or clarity that Basswood can provide regarding the above report, please do not hesitate to contact Erik Lema at 207-518-8442 or by email at [erik@basswoodenv.com](mailto:erik@basswoodenv.com).

Best regards,



Erik Lema, Owner/Principal  
Basswood Environmental LLC

Attachment: Site Resource Photos



*Figure 1: Stream, entering site from north boundary corner.*



*Figure 2: Stream, interior of site*



*Figure 3: Forested wetland*

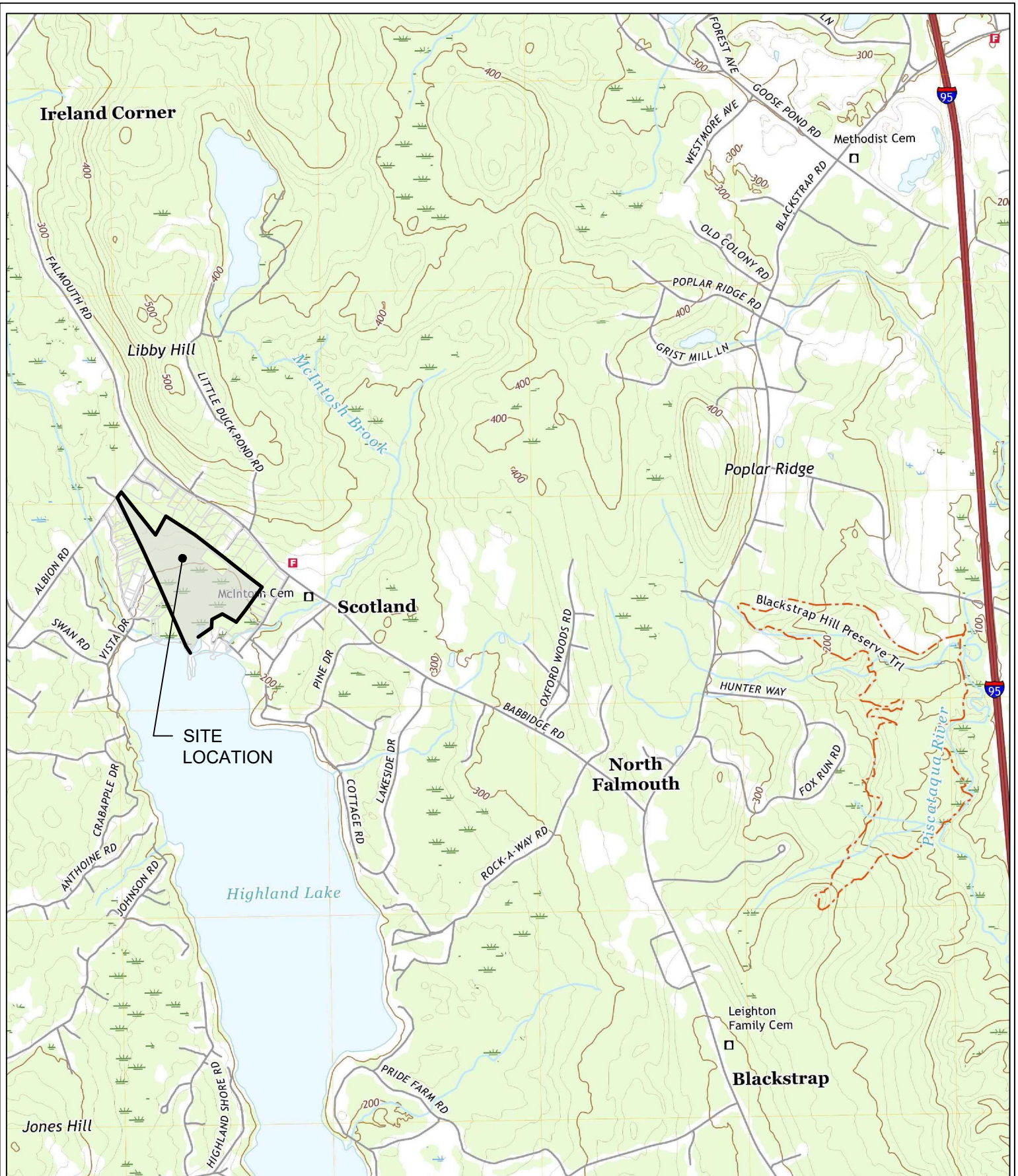


*Figure 4: Forested wetland with a dense shrub layer of alder.*

## **ATTACHMENT #5**

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**Existing Condition Figures**



**USGS QUADRANGLE MAP**

PROJECT:  
FROST LANE SUBDIVISION  
WINDHAM, MAINE

PREPARED FOR:  
FROST LANE, LLC  
868 ROOSEVELT TRAIL  
WINDHAM MAINE 04062



207.926.5111 • info@terradyconsultants.com • www.terradyconsultants.com

**PINELAND**  
41 CAMPUS DRIVE, SUITE 301  
NEW GLOUCESTER, ME 04260

**PORTLAND**  
565 CONGRESS STREET, SUITE 201  
PORTLAND, ME 04101

PROJECT NO.

23-029

DATE

12/17/2025

SCALE

1"=2,000'

SHEET

1

OF

3



SITE LOCATION

**AERIAL MAP**

PROJECT:  
 HIGHLAND LAKE CAMPING  
 WINDHAM, MAINE  
 PREPARED FOR:  
 FROST LANE, LLC  
 868 ROOSEVELT TRAIL  
 WINDHAM MAINE 04062



**PINELAND**  
 41 CAMPUS DRIVE, SUITE 101  
 NEW GLOUCESTER, ME 04260  
**PORTLAND**  
 565 CONGRESS STREET, SUITE 201  
 PORTLAND, ME 04101

207.926.5111 • info@terradyconsultants.com • www.terradyconsultants.com

PROJECT NO.	23-029	SHEET	2
DATE	10/3/2023	OF	
SCALE	1"=400'		3



**NRCS MEDIUM INTENSITY SOIL MAP**

PROJECT:  
HIGHLAND LAKE CAMPING  
WINDHAM, MAINE

PREPARED FOR:  
FROST LANE, LLC  
868 ROOSEVELT TRAIL  
WINDHAM MAINE 04062



207.926.5111 • info@terradyconsultants.com • www.terradyconsultants.com

PINELAND  
41 CAMPUS DRIVE, SUITE 101  
NEW GLOUCESTER, ME 04260

PORTLAND  
565 CONGRESS STREET, SUITE 201  
PORTLAND, ME 04101

PROJECT NO.

23-029

DATE

10/3/2023

SCALE

1"=100'

SHEET

3

OF

3



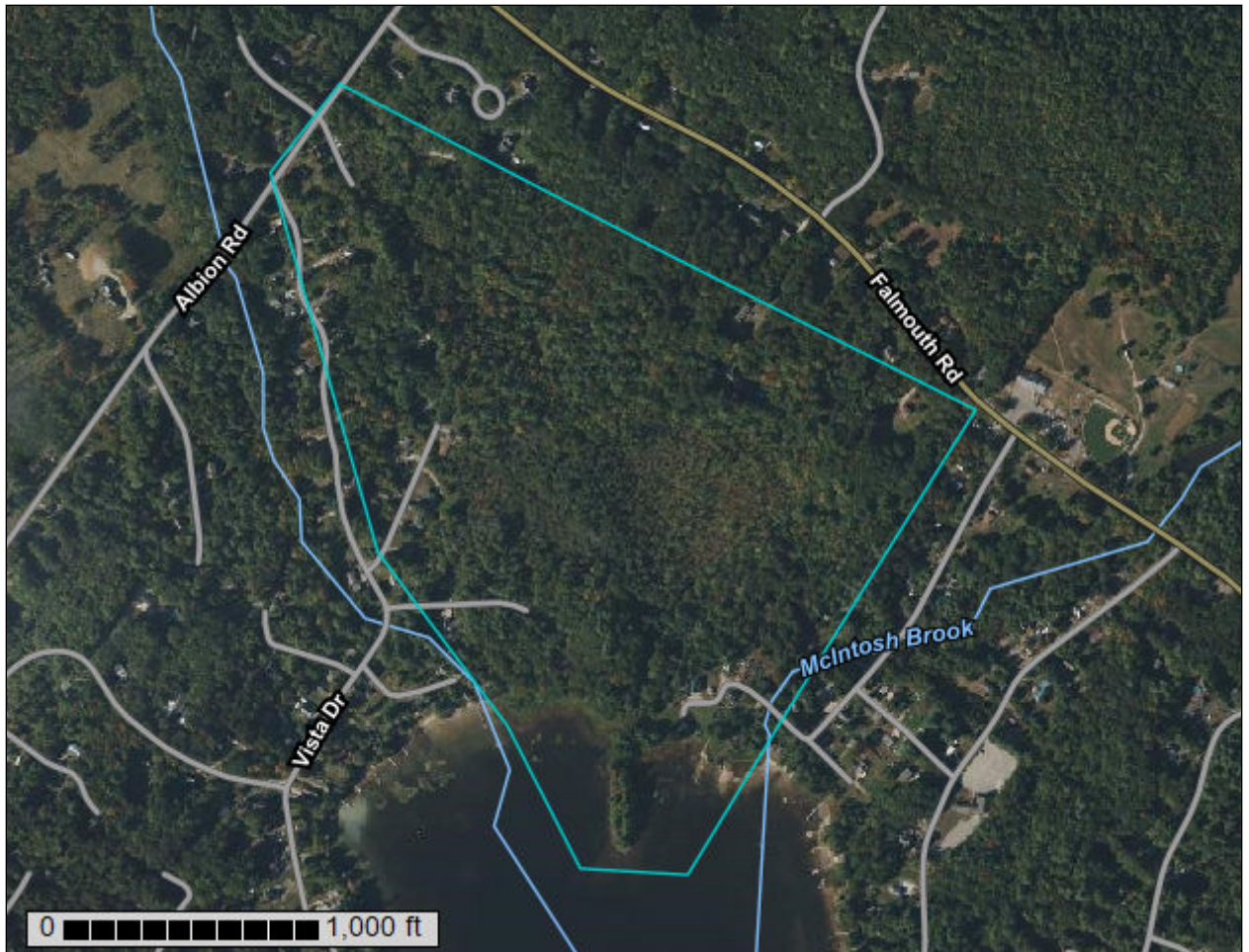
United States  
Department of  
Agriculture

**NRCS**

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for Cumberland County and Part of Oxford County, Maine



# Preface

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Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

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Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

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scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

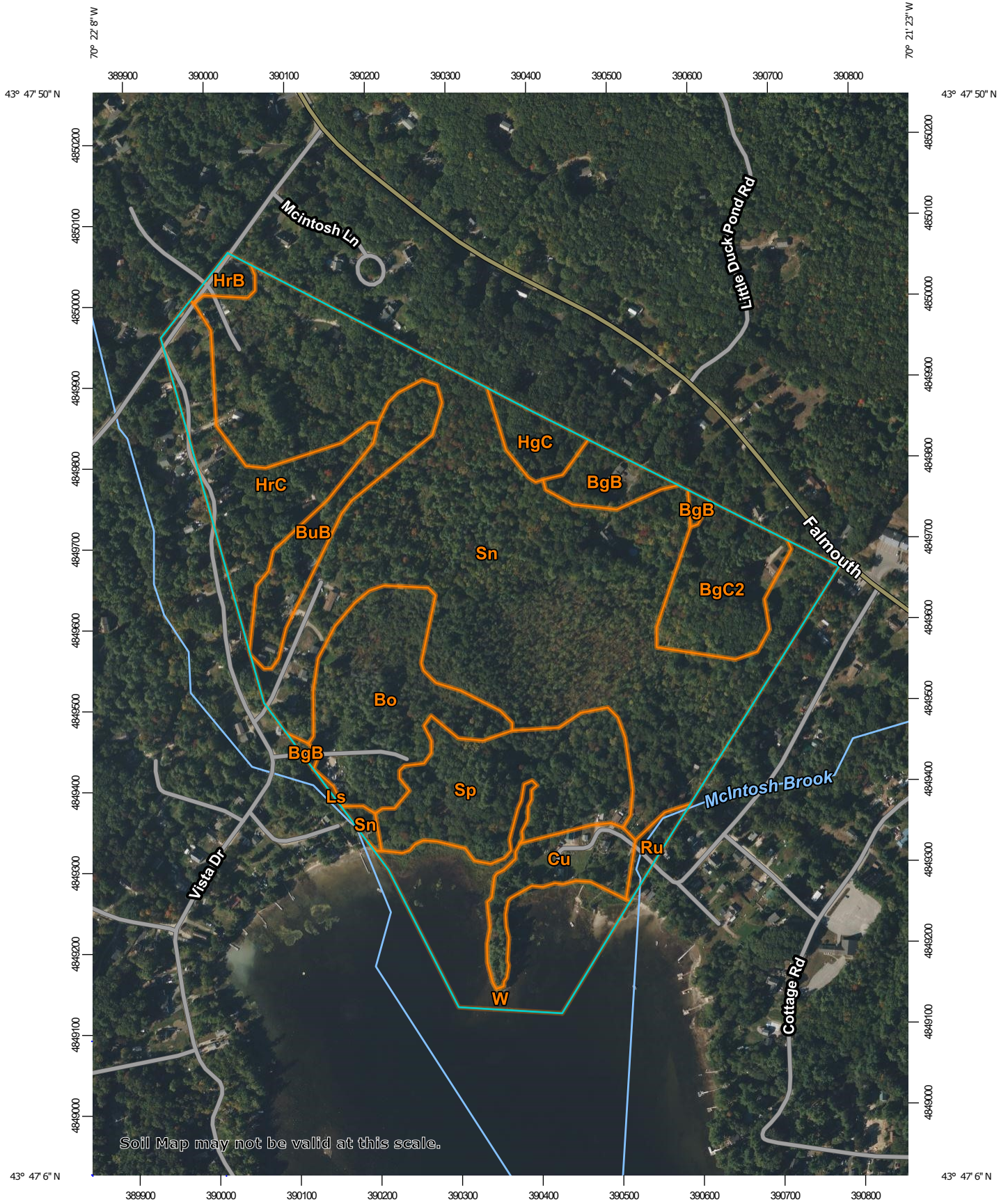
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identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

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The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



Map Scale: 1:6,520 if printed on A portrait (8.5" x 11") sheet.


0 50 100 200 300 Meters

0 300 600 1200 1800 Feet


Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84


### MAP LEGEND

**Area of Interest (AOI)**

 Area of Interest (AOI)




















**Soils**







 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

**Special Point Features**






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features


**Water Features**

 Streams and Canals

**Transportation**

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

**Background**

 Aerial Photography

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL:  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cumberland County and Part of Oxford County, Maine  
 Survey Area Data: Version 21, Aug 26, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

**MAP LEGEND**

**MAP INFORMATION**

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BgB	Nicholville very fine sandy loam, 0 to 8 percent slopes	2.2	2.1%
BgC2	Nicholville very fine sandy loam, 8 to 15 percent slopes	5.3	5.2%
Bo	Biddeford mucky peat, 0 to 3 percent slopes	9.3	9.1%
BuB	Lamoine silt loam, 3 to 8 percent slopes	4.4	4.3%
Cu	Cut and fill land	3.3	3.2%
HgC	Hermon sandy loam, 8 to 15 percent slopes	1.7	1.7%
HrB	Lyman-Tunbridge complex, 0 to 8 percent slopes, rocky	0.7	0.7%
HrC	Lyman-Tunbridge complex, 8 to 15 percent slopes, rocky	7.4	7.2%
Ls	Limerick-Saco silt loams	0.1	0.1%
Ru	Rumney fine sandy loam, 0 to 3 percent slopes, frequently flooded	0.7	0.7%
Sn	Scantic silt loam, 0 to 3 percent slopes	48.6	47.4%
Sp	Sebago mucky peat	9.6	9.4%
W	Water	9.2	9.0%
<b>Totals for Area of Interest</b>		<b>102.5</b>	<b>100.0%</b>

## 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 characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

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Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion

## Custom Soil Resource Report

of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

## Cumberland County and Part of Oxford County, Maine

### BgB—Nicholville very fine sandy loam, 0 to 8 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2yjg5

*Elevation:* 20 to 2,300 feet

*Mean annual precipitation:* 34 to 50 inches

*Mean annual air temperature:* 37 to 45 degrees F

*Frost-free period:* 90 to 160 days

*Farmland classification:* Farmland of statewide importance

#### Map Unit Composition

*Nicholville and similar soils:* 85 percent

*Minor components:* 2 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Nicholville

##### Setting

*Landform:* Lakebeds (relict)

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Coarse-silty glaciomarine deposits

##### Typical profile

*Ap - 0 to 7 inches:* very fine sandy loam

*Bs - 7 to 19 inches:* very fine sandy loam

*BC - 19 to 30 inches:* very fine sandy loam

*C - 30 to 65 inches:* loamy very fine sand

##### Properties and qualities

*Slope:* 0 to 8 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Moderately well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.14 to 1.42 in/hr)

*Depth to water table:* About 18 to 30 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline (0.0 to 1.9 mmhos/cm)

*Available water supply, 0 to 60 inches:* High (about 10.3 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2e

*Hydrologic Soil Group:* C

*Ecological site:* F144BY501ME - Loamy Slope (Northern Hardwoods)

*Hydric soil rating:* No

#### Minor Components

##### Roundabout

*Percent of map unit:* 2 percent

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*Landform:* Lakebeds (relict)  
*Landform position (two-dimensional):* Footslope, toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave  
*Hydric soil rating:* Yes

### **BgC2—Nicholville very fine sandy loam, 8 to 15 percent slopes**

#### **Map Unit Setting**

*National map unit symbol:* 2yjg6  
*Elevation:* 20 to 2,300 feet  
*Mean annual precipitation:* 34 to 50 inches  
*Mean annual air temperature:* 37 to 45 degrees F  
*Frost-free period:* 90 to 160 days  
*Farmland classification:* Farmland of local importance

#### **Map Unit Composition**

*Nicholville and similar soils:* 85 percent  
*Minor components:* 1 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### **Description of Nicholville**

##### **Setting**

*Landform:* Lakebeds (relict), eskers  
*Landform position (two-dimensional):* Backslope, footslope  
*Landform position (three-dimensional):* Side slope, base slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Coarse-silty glaciomarine deposits

##### **Typical profile**

*Ap - 0 to 7 inches:* very fine sandy loam  
*Bs - 7 to 19 inches:* very fine sandy loam  
*BC - 19 to 30 inches:* very fine sandy loam  
*C - 30 to 65 inches:* loamy very fine sand

##### **Properties and qualities**

*Slope:* 8 to 15 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Moderately well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.14 to 1.42 in/hr)  
*Depth to water table:* About 18 to 30 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Maximum salinity:* Nonsaline (0.0 to 1.9 mmhos/cm)  
*Available water supply, 0 to 60 inches:* High (about 10.3 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 3e  
*Hydrologic Soil Group:* C  
*Ecological site:* F144BY501ME - Loamy Slope (Northern Hardwoods)  
*Hydric soil rating:* No

**Minor Components**

**Roundabout**

*Percent of map unit:* 1 percent  
*Landform:* Lakebeds (relict), eskers  
*Landform position (two-dimensional):* Footslope, toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Concave, linear  
*Hydric soil rating:* Yes

**Bo—Biddeford mucky peat, 0 to 3 percent slopes**

**Map Unit Setting**

*National map unit symbol:* 2t0jn  
*Elevation:* 10 to 1,200 feet  
*Mean annual precipitation:* 33 to 60 inches  
*Mean annual air temperature:* 39 to 45 degrees F  
*Frost-free period:* 90 to 160 days  
*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Biddeford and similar soils:* 82 percent  
*Minor components:* 17 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Biddeford**

**Setting**

*Landform:* Marine terraces, river valleys  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Dip  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave, linear  
*Parent material:* Organic material over glaciomarine deposits

**Typical profile**

*Oe - 0 to 12 inches:* mucky peat  
*Eg - 12 to 16 inches:* silt loam  
*Bg - 16 to 45 inches:* silty clay  
*Cg - 45 to 65 inches:* clay

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### Properties and qualities

*Slope:* 0 to 3 percent  
*Surface area covered with cobbles, stones or boulders:* 0.0 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Very poorly drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.14 in/hr)  
*Depth to water table:* About 0 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* Frequent  
*Available water supply, 0 to 60 inches:* High (about 11.8 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 5w  
*Hydrologic Soil Group:* D  
*Ecological site:* F144BY002ME - Marine Terrace Depression, F144BY304ME - Wet Clay Flat  
*Hydric soil rating:* Yes

### Minor Components

#### Scantic

*Percent of map unit:* 9 percent  
*Landform:* Marine terraces, river valleys  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* F144BY001ME - Marine Terrace Flat  
*Hydric soil rating:* Yes

#### Wonsqueak

*Percent of map unit:* 6 percent  
*Landform:* Marine terraces, river valleys  
*Landform position (two-dimensional):* Footslope, toeslope  
*Landform position (three-dimensional):* Dip  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Hydric soil rating:* Yes

#### Swanville

*Percent of map unit:* 2 percent  
*Landform:* Lake plains, marine terraces  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* Yes

## **BuB—Lamoine silt loam, 3 to 8 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2t0kc

*Elevation:* 10 to 490 feet

*Mean annual precipitation:* 33 to 60 inches

*Mean annual air temperature:* 36 to 52 degrees F

*Frost-free period:* 90 to 160 days

*Farmland classification:* Farmland of statewide importance

### **Map Unit Composition**

*Lamoine and similar soils:* 85 percent

*Minor components:* 11 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Lamoine**

#### **Setting**

*Landform:* Marine terraces, river valleys

*Landform position (two-dimensional):* Footslope

*Landform position (three-dimensional):* Base slope

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Fine glaciomarine deposits

#### **Typical profile**

*Ap - 0 to 7 inches:* silt loam

*Bw - 7 to 13 inches:* silt loam

*Bg - 13 to 24 inches:* silty clay loam

*Cg - 24 to 65 inches:* silty clay

#### **Properties and qualities**

*Slope:* 3 to 8 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Somewhat poorly drained

*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.14 in/hr)

*Depth to water table:* About 6 to 17 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline (0.0 to 1.9 mmhos/cm)

*Available water supply, 0 to 60 inches:* Moderate (about 7.6 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3w

*Hydrologic Soil Group:* C/D

*Ecological site:* F144BY401ME - Clay Flat

*Hydric soil rating:* No

## Minor Components

### Scantic

*Percent of map unit:* 10 percent  
*Landform:* Marine terraces, river valleys  
*Landform position (two-dimensional):* Footslope, toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave  
*Hydric soil rating:* Yes

### Biddeford

*Percent of map unit:* 1 percent  
*Landform:* Marine terraces, river valleys  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Ecological site:* F144BY002ME - Marine Terrace Depression  
*Hydric soil rating:* Yes

## Cu—Cut and fill land

### Map Unit Composition

*Cut and fill land:* 90 percent  
*Minor components:* 2 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Cut And Fill Land

#### Typical profile

*H1 - 0 to 65 inches:* very gravelly sandy loam

#### Properties and qualities

*Slope:* 0 to 35 percent  
*Drainage class:* Moderately well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to very high (0.06 to 20.00 in/hr)  
*Depth to water table:* About 24 to 42 inches  
*Available water supply, 0 to 60 inches:* Moderate (about 6.6 inches)

## Minor Components

### Tidal marsh

*Percent of map unit:* 2 percent  
*Landform:* Tidal flats  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Dip  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave

*Hydric soil rating:* Yes

## **HgC—Hermon sandy loam, 8 to 15 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2w9r9

*Elevation:* 0 to 980 feet

*Mean annual precipitation:* 31 to 65 inches

*Mean annual air temperature:* 36 to 52 degrees F

*Frost-free period:* 90 to 160 days

*Farmland classification:* Farmland of local importance

### **Map Unit Composition**

*Hermon and similar soils:* 90 percent

*Minor components:* 1 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Hermon**

#### **Setting**

*Landform:* Hills, mountains

*Landform position (two-dimensional):* Summit, shoulder, backslope

*Landform position (three-dimensional):* Mountainflank, mountainbase, interfluve, nose slope, side slope

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Sandy and gravelly supraglacial meltout till derived from granite and gneiss

#### **Typical profile**

*Ap - 0 to 9 inches:* sandy loam

*Bs1 - 9 to 16 inches:* very gravelly sandy loam

*Bs2 - 16 to 32 inches:* extremely gravelly loamy sand

*C - 32 to 65 inches:* very gravelly coarse sand

#### **Properties and qualities**

*Slope:* 8 to 15 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Somewhat excessively drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (1.42 to 14.17 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline (0.0 to 1.9 mmhos/cm)

*Available water supply, 0 to 60 inches:* Low (about 3.9 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3e

*Hydrologic Soil Group:* A

*Ecological site:* F144BY601ME - Dry Sand

## Custom Soil Resource Report

*Hydric soil rating:* No

### Minor Components

#### Brayton

*Percent of map unit:* 1 percent

*Landform:* Hills, mountains

*Landform position (two-dimensional):* Foothlope, toeslope

*Landform position (three-dimensional):* Mountainflank, mountainbase, interfluve, nose slope, side slope

*Microfeatures of landform position:* Closed depressions, open depressions, closed depressions, open depressions

*Down-slope shape:* Concave

*Across-slope shape:* Concave

*Hydric soil rating:* Yes

### HrB—Lyman-Tunbridge complex, 0 to 8 percent slopes, rocky

#### Map Unit Setting

*National map unit symbol:* 2x1cx

*Elevation:* 0 to 520 feet

*Mean annual precipitation:* 36 to 65 inches

*Mean annual air temperature:* 36 to 52 degrees F

*Frost-free period:* 90 to 160 days

*Farmland classification:* Farmland of statewide importance

#### Map Unit Composition

*Lyman and similar soils:* 50 percent

*Tunbridge and similar soils:* 30 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Lyman

##### Setting

*Landform:* Hills, ridges

*Landform position (two-dimensional):* Summit, shoulder, backslope

*Landform position (three-dimensional):* Nose slope, crest

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till derived from mica schist

##### Typical profile

*Oe - 0 to 1 inches:* moderately decomposed plant material

*A - 1 to 3 inches:* loam

*E - 3 to 5 inches:* fine sandy loam

*Bhs - 5 to 7 inches:* loam

*Bs1 - 7 to 11 inches:* loam

*Bs2 - 11 to 18 inches:* channery loam

## Custom Soil Resource Report

*R - 18 to 79 inches: bedrock*

### Properties and qualities

*Slope: 0 to 8 percent*

*Surface area covered with cobbles, stones or boulders: 1.5 percent*

*Depth to restrictive feature: 11 to 24 inches to lithic bedrock*

*Drainage class: Somewhat excessively drained*

*Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 14.03 in/hr)*

*Depth to water table: More than 80 inches*

*Frequency of flooding: None*

*Frequency of ponding: None*

*Available water supply, 0 to 60 inches: Low (about 3.2 inches)*

### Interpretive groups

*Land capability classification (irrigated): None specified*

*Land capability classification (nonirrigated): 6s*

*Hydrologic Soil Group: D*

*Ecological site: F144BY702ME - Shallow and Moderately-deep Till*

*Hydric soil rating: No*

## Description of Tunbridge

### Setting

*Landform: Hills, ridges*

*Landform position (two-dimensional): Summit, shoulder, backslope*

*Landform position (three-dimensional): Side slope, crest*

*Down-slope shape: Linear*

*Across-slope shape: Convex*

*Parent material: Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till derived from mica schist*

### Typical profile

*Oe - 0 to 3 inches: moderately decomposed plant material*

*Oa - 3 to 5 inches: highly decomposed plant material*

*E - 5 to 8 inches: fine sandy loam*

*Bhs - 8 to 11 inches: fine sandy loam*

*Bs - 11 to 26 inches: fine sandy loam*

*BC - 26 to 28 inches: fine sandy loam*

*R - 28 to 79 inches: bedrock*

### Properties and qualities

*Slope: 3 to 8 percent*

*Surface area covered with cobbles, stones or boulders: 1.5 percent*

*Depth to restrictive feature: 21 to 41 inches to lithic bedrock*

*Drainage class: Well drained*

*Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 14.03 in/hr)*

*Depth to water table: More than 80 inches*

*Frequency of flooding: None*

*Frequency of ponding: None*

*Available water supply, 0 to 60 inches: Low (about 5.6 inches)*

### Interpretive groups

*Land capability classification (irrigated): None specified*

*Land capability classification (nonirrigated): 6s*

## Custom Soil Resource Report

*Hydrologic Soil Group:* C

*Ecological site:* F144BY702ME - Shallow and Moderately-deep Till

*Hydric soil rating:* No

### **HrC—Lyman-Tunbridge complex, 8 to 15 percent slopes, rocky**

#### **Map Unit Setting**

*National map unit symbol:* 2x1cy

*Elevation:* 0 to 520 feet

*Mean annual precipitation:* 36 to 65 inches

*Mean annual air temperature:* 36 to 52 degrees F

*Frost-free period:* 90 to 160 days

*Farmland classification:* Farmland of local importance

#### **Map Unit Composition**

*Lyman and similar soils:* 45 percent

*Tunbridge and similar soils:* 40 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### **Description of Lyman**

##### **Setting**

*Landform:* Hills, ridges

*Landform position (two-dimensional):* Summit, shoulder, backslope

*Landform position (three-dimensional):* Nose slope, crest

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till derived from mica schist

##### **Typical profile**

*Oe - 0 to 1 inches:* moderately decomposed plant material

*A - 1 to 3 inches:* loam

*E - 3 to 5 inches:* fine sandy loam

*Bhs - 5 to 7 inches:* loam

*Bs1 - 7 to 11 inches:* loam

*Bs2 - 11 to 18 inches:* channery loam

*R - 18 to 79 inches:* bedrock

##### **Properties and qualities**

*Slope:* 8 to 15 percent

*Surface area covered with cobbles, stones or boulders:* 1.5 percent

*Depth to restrictive feature:* 11 to 24 inches to lithic bedrock

*Drainage class:* Somewhat excessively drained

*Capacity of the most limiting layer to transmit water (Ksat):* Very low to high (0.00 to 14.03 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

## Custom Soil Resource Report

*Available water supply, 0 to 60 inches:* Low (about 3.2 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 6s

*Hydrologic Soil Group:* D

*Ecological site:* F144BY702ME - Shallow and Moderately-deep Till

*Hydric soil rating:* No

### Description of Tunbridge

#### Setting

*Landform:* Hills, ridges

*Landform position (two-dimensional):* Summit, shoulder, backslope

*Landform position (three-dimensional):* Side slope, crest

*Down-slope shape:* Linear

*Across-slope shape:* Convex

*Parent material:* Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till derived from mica schist

#### Typical profile

*Oe - 0 to 3 inches:* moderately decomposed plant material

*Oa - 3 to 5 inches:* highly decomposed plant material

*E - 5 to 8 inches:* fine sandy loam

*Bhs - 8 to 11 inches:* fine sandy loam

*Bs - 11 to 26 inches:* fine sandy loam

*BC - 26 to 28 inches:* fine sandy loam

*R - 28 to 79 inches:* bedrock

#### Properties and qualities

*Slope:* 8 to 15 percent

*Surface area covered with cobbles, stones or boulders:* 1.5 percent

*Depth to restrictive feature:* 21 to 41 inches to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Very low to high (0.00 to 14.03 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Low (about 5.6 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 6s

*Hydrologic Soil Group:* C

*Ecological site:* F144BY702ME - Shallow and Moderately-deep Till

*Hydric soil rating:* No

## **Ls—Limerick-Saco silt loams**

### **Map Unit Setting**

*National map unit symbol:* blj2  
*Elevation:* 10 to 2,000 feet  
*Mean annual precipitation:* 34 to 48 inches  
*Mean annual air temperature:* 37 to 46 degrees F  
*Frost-free period:* 80 to 160 days  
*Farmland classification:* Farmland of local importance

### **Map Unit Composition**

*Limerick and similar soils:* 55 percent  
*Saco and similar soils:* 30 percent  
*Minor components:* 7 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Limerick**

#### **Setting**

*Landform:* Flood plains  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Coarse-silty alluvium derived from slate

#### **Typical profile**

*H1 - 0 to 8 inches:* silt loam  
*H2 - 8 to 16 inches:* silt loam  
*H3 - 16 to 65 inches:* silt loam

#### **Properties and qualities**

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Poorly drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.60 to 2.00 in/hr)  
*Depth to water table:* About 0 to 12 inches  
*Frequency of flooding:* Frequent  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Very high (about 18.2 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4w  
*Hydrologic Soil Group:* B/D  
*Ecological site:* F144BY120ME - Small Floodplain Riparian Complex (reserved),  
F144BY110ME - Broad Floodplain Riparian Complex  
*Hydric soil rating:* Yes

**Description of Saco**

**Setting**

*Landform:* Flood plains  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Parent material:* Coarse-silty alluvium

**Typical profile**

*H1 - 0 to 12 inches:* silt loam  
*H2 - 12 to 24 inches:* silt loam  
*H3 - 24 to 65 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Very poorly drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.60 to 2.00 in/hr)  
*Depth to water table:* About 0 to 6 inches  
*Frequency of flooding:* Frequent  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Very high (about 15.0 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6w  
*Hydrologic Soil Group:* B/D  
*Ecological site:* F144BY120ME - Small Floodplain Riparian Complex (reserved),  
F144BY110ME - Broad Floodplain Riparian Complex  
*Hydric soil rating:* Yes

**Minor Components**

**Rumney**

*Percent of map unit:* 7 percent  
*Landform:* Flood plains  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* Yes

**Ru—Rumney fine sandy loam, 0 to 3 percent slopes, frequently flooded**

**Map Unit Setting**

*National map unit symbol:* 2qgvs

## Custom Soil Resource Report

*Elevation:* 0 to 2,440 feet  
*Mean annual precipitation:* 31 to 95 inches  
*Mean annual air temperature:* 27 to 54 degrees F  
*Frost-free period:* 80 to 160 days  
*Farmland classification:* Farmland of local importance

### Map Unit Composition

*Rumney and similar soils:* 84 percent  
*Minor components:* 9 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Rumney

#### Setting

*Landform:* Flood plains  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Coarse-loamy alluvium derived from schist and/or coarse-loamy alluvium derived from quartzite and/or coarse-loamy alluvium derived from granite and gneiss

#### Typical profile

*Ap - 0 to 9 inches:* fine sandy loam  
*Bg1 - 9 to 20 inches:* fine sandy loam  
*Bg2 - 20 to 30 inches:* sandy loam  
*Cg - 30 to 65 inches:* loamy sand

#### Properties and qualities

*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Poorly drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to high (0.14 to 14.17 in/hr)  
*Depth to water table:* About 0 to 12 inches  
*Frequency of flooding:* Frequent  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Moderate (about 6.9 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4w  
*Hydrologic Soil Group:* B/D  
*Ecological site:* F144BY120ME - Small Floodplain Riparian Complex (reserved),  
F144BY110ME - Broad Floodplain Riparian Complex  
*Hydric soil rating:* Yes

### Minor Components

#### Medomak

*Percent of map unit:* 6 percent  
*Landform:* Flood plains  
*Microfeatures of landform position:* Closed depressions  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave  
*Hydric soil rating:* Yes

**Charles**

*Percent of map unit:* 3 percent  
*Landform:* Flood plains  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* Yes

**Sn—Scantic silt loam, 0 to 3 percent slopes**

**Map Unit Setting**

*National map unit symbol:* 2slv3  
*Elevation:* 10 to 900 feet  
*Mean annual precipitation:* 33 to 60 inches  
*Mean annual air temperature:* 39 to 45 degrees F  
*Frost-free period:* 90 to 160 days  
*Farmland classification:* Farmland of local importance

**Map Unit Composition**

*Scantic and similar soils:* 85 percent  
*Minor components:* 5 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Scantic**

**Setting**

*Landform:* Marine terraces, river valleys  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Glaciomarine deposits

**Typical profile**

*Ap - 0 to 9 inches:* silt loam  
*Bg1 - 9 to 16 inches:* silty clay loam  
*Bg2 - 16 to 29 inches:* silty clay  
*Cg - 29 to 65 inches:* silty clay

**Properties and qualities**

*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Poorly drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)  
*Depth to water table:* About 0 to 12 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Moderate (about 6.3 inches)

## Custom Soil Resource Report

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 4w

*Hydrologic Soil Group:* D

*Ecological site:* F144BY304ME - Wet Clay Flat

*Hydric soil rating:* Yes

### Minor Components

#### Biddeford

*Percent of map unit:* 3 percent

*Landform:* Marine terraces, river valleys

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Dip

*Down-slope shape:* Concave

*Across-slope shape:* Concave, linear

*Ecological site:* F144BY002ME - Marine Terrace Depression

*Hydric soil rating:* Yes

#### Roundabout

*Percent of map unit:* 2 percent

*Landform:* River valleys, marine terraces

*Landform position (three-dimensional):* Tread, talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Hydric soil rating:* Yes

## Sp—Sebago mucky peat

### Map Unit Setting

*National map unit symbol:* blk0

*Elevation:* 0 to 2,500 feet

*Mean annual precipitation:* 28 to 55 inches

*Mean annual air temperature:* 37 to 52 degrees F

*Frost-free period:* 80 to 195 days

*Farmland classification:* Not prime farmland

### Map Unit Composition

*Sebago and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Sebago

#### Setting

*Landform:* Bogs

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

## Custom Soil Resource Report

*Parent material:* Organic material

### Typical profile

*Oe - 0 to 36 inches:* mucky peat

*Oi - 36 to 65 inches:* mucky peat

### Properties and qualities

*Slope:* 0 to 1 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Very poorly drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(1.42 to 6.00 in/hr)

*Depth to water table:* About 0 inches

*Frequency of flooding:* None

*Frequency of ponding:* Frequent

*Available water supply, 0 to 60 inches:* Very high (about 18.0 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 8w

*Hydrologic Soil Group:* A/D

*Ecological site:* F144BY230ME - Acidic Peat Wetland Complex

*Hydric soil rating:* Yes

### Minor Components

#### Wonsqueak

*Percent of map unit:* 9 percent

*Landform:* Swamps

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Hydric soil rating:* Yes

#### Whitman

*Percent of map unit:* 3 percent

*Landform:* Swamps

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Hydric soil rating:* Yes

#### Saugatuck

*Percent of map unit:* 1 percent

*Landform:* Swamps

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Rise

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Hydric soil rating:* Yes

#### Ridgebury

*Percent of map unit:* 1 percent

*Landform:* Swamps

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Rise

## Custom Soil Resource Report

*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Hydric soil rating:* Yes

### **Walpole**

*Percent of map unit:* 1 percent  
*Landform:* Swamps  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Rise  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Hydric soil rating:* Yes

## **W—Water**

### **Map Unit Composition**

*Water:* 100 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Water**

#### **Setting**

*Landform:* Lakes

# Soil Information for All Uses

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## Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

## Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

## Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

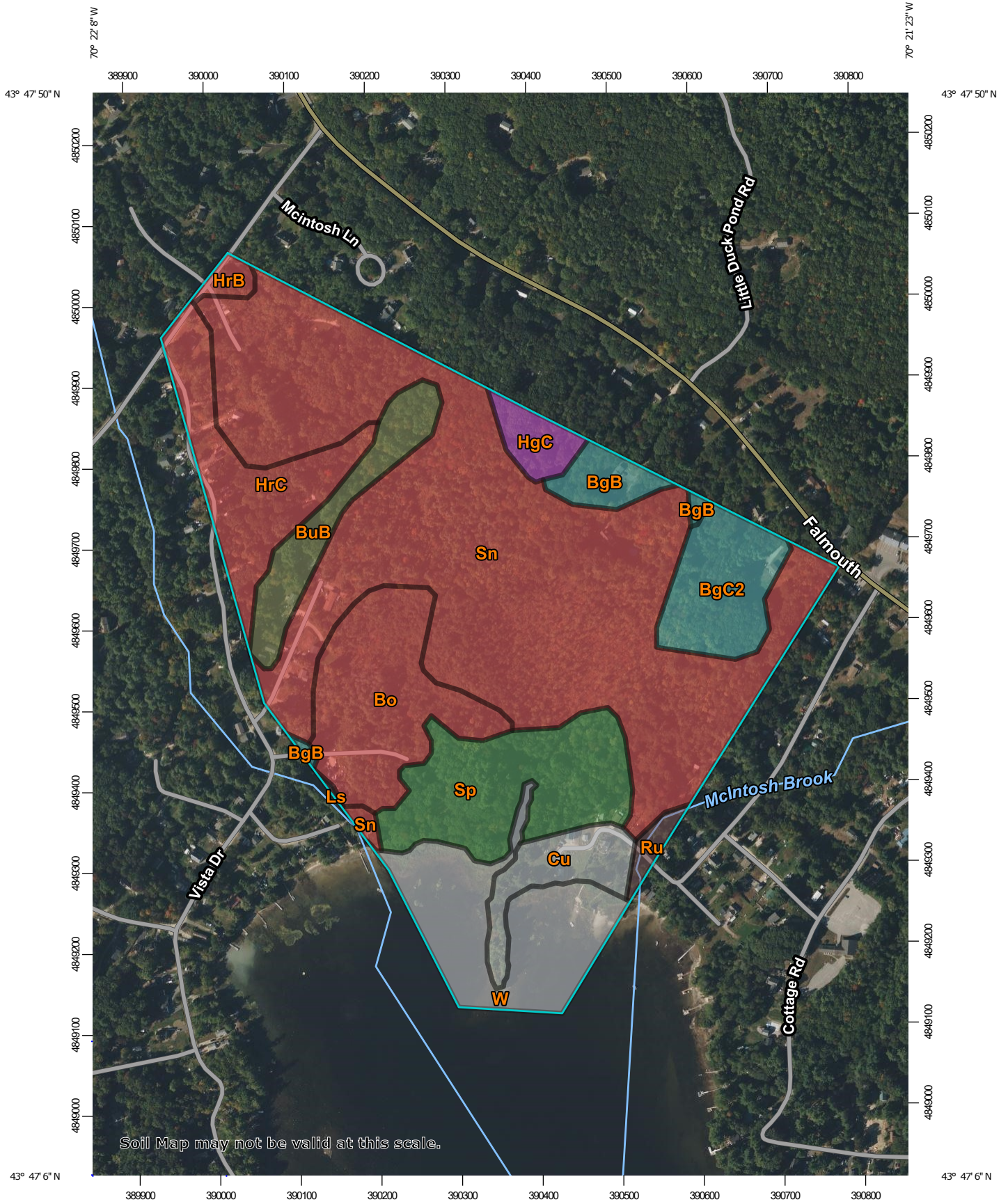
Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

## Custom Soil Resource Report

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.



Map Scale: 1:6,520 if printed on A portrait (8.5" x 11") sheet.


0 50 100 200 300 Meters

0 300 600 1200 1800 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

### MAP LEGEND

**Area of Interest (AOI)**









 Area of Interest (AOI)

**Soils**

**Soil Rating Polygons**





-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available

**Soil Rating Lines**


-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available

**Soil Rating Points**






-  A
-  A/D
-  B
-  B/D

-  C
-  C/D
-  D
-  Not rated or not available

**Water Features**

 Streams and Canals

**Transportation**

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

**Background**

 Aerial Photography

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL:  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cumberland County and Part of Oxford County, Maine  
 Survey Area Data: Version 21, Aug 26, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

**MAP LEGEND**

**MAP INFORMATION**

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

**Table—Hydrologic Soil Group**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BgB	Nicholville very fine sandy loam, 0 to 8 percent slopes	C	2.2	2.1%
BgC2	Nicholville very fine sandy loam, 8 to 15 percent slopes	C	5.3	5.2%
Bo	Biddeford mucky peat, 0 to 3 percent slopes	D	9.3	9.1%
BuB	Lamoine silt loam, 3 to 8 percent slopes	C/D	4.4	4.3%
Cu	Cut and fill land		3.3	3.2%
HgC	Hermon sandy loam, 8 to 15 percent slopes	A	1.7	1.7%
HrB	Lyman-Tunbridge complex, 0 to 8 percent slopes, rocky	D	0.7	0.7%
HrC	Lyman-Tunbridge complex, 8 to 15 percent slopes, rocky	D	7.4	7.2%
Ls	Limerick-Saco silt loams	B/D	0.1	0.1%
Ru	Rumney fine sandy loam, 0 to 3 percent slopes, frequently flooded	B/D	0.7	0.7%
Sn	Scantic silt loam, 0 to 3 percent slopes	D	48.6	47.4%
Sp	Sebago mucky peat	A/D	9.6	9.4%
W	Water		9.2	9.0%
<b>Totals for Area of Interest</b>			<b>102.5</b>	<b>100.0%</b>

**Rating Options—Hydrologic Soil Group**

*Aggregation Method: Dominant Condition*

*Component Percent Cutoff: None Specified*

*Tie-break Rule: Higher*

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## **ATTACHMENT #6**

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**Survey Drawings**

## **ATTACHMENT #7**

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**Sketch Plan Drawings**