Town of Windham

For:

Sketch Plan Application for
Site Plan Review
Franklin Drive Solar Development
Windham, ME 04062

Applicant:

New Gen Estates, LLC
50 Maine Mall Road
South Portland, ME 04074

Prepared by:

Sebago Technics, Inc.
75 John Roberts Road, Suite 4A
South Portland, Maine 04106

May 2025

230411-02

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Steve Puleo, Planning Director
Town of Windham
8 School Road
Windham, Maine 04062

sjpuleo@windhammaine.us

Sketch Plan for Site Plan Review
Franklin Drive Solar, Windham - New Gen Estates, LLC
Tax Map/Lot: 18/26-2-A

Dear Steve:

On behalf of New Gen Estates, LLC, Sebago Technics, Inc. is pleased to submit the enclosed Sketch Plan Application, concept plan, and associated exhibits for a proposed solar array located off Franklin Drive. The proposed development is located east of the terminus of Franklin Drive on a lot 3 of the recently approved Frankin Drive Subdivision on the Town of Windham Tax Map 18 as Lot 26-2-A. The lot is approximately 23.8 acres in size and consists of mainly undeveloped area with an existing trail through the middle of the property.

The subject parcel is located in Windham's Commercial 1 (C-1) zoning district. Access to the project site will be provided from the permitted right-of-way extension from Franklin Drive. The proposed development will include a 425 kW DC solar array comprised of 640 modules. A proposed gravel access drive runs through the center of the array for construction and maintenance access. The entire array will be secured with an 8-foot-tall security fence with an access gate for ingress and egress.

The project site is located on a plateau between wetlands delineated to the north and south of the site. Additionally, a significant vernal pool was located approximately 200 feet to the south of the site. No impacts are proposed to the on-site wetlands. Additionally, no development is proposed within the 100-foot setback from the significant vernal pool. A small area of development will occur within the 250-foot setback of the significant vernal pool. The proposed development will be well under the 25% development allowed within the 250 foot setback.

We look forward to discussing this project with the Town Staff at the upcoming meetings. Please feel free to contact us if additional information is needed. Thank you for your time and consideration related to this project.

Sincerely,

SEBAGO TECHNICS, INC.

Robert A. McSorley, NH/MA/ME/VT P.E.
Senior Project Manager

RAM/jtg
Enc.

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

SKETCH PLAN - MAJOR SITE PLAN REVIEW APPLICATION

FEES FOR SKETCH PLAN REVIEW		**APPLICATION FEE:**	☑ $200.00		**AMOUNT PAID:** $_____ DATE: _____ *Office Use:*		*Office Stamp:*		
		REVIEW ESCROW:	☑ $400.00						
PROPERTY DESCRIPTION	**Parcel ID**	**Map(s) #**	18	**Lot(s) #**	26-2-A/ Lot 3	**Zoning District(s)**	C-1	**Total Land Area SF**	1,036,728 sf
	Total Disturbance. >1Ac	☑ Y ☐ N		**Est. Building SF:**	N/A	**No Building; Est. SF of Total Development:**		N/A	
	Physical Address:	**20 Franklin Drive**				**Watershed:**	**Sebago Lake**		
PROPERTY OWNER'S INFORMATION	**Name:**	**New Gen Estates, LLC**				**Name of Business:**	**New Gen Estates, LLC**		
	Phone:	**207-371-0070**				**Mailing Address:**	**50 Maine Mall Road South Portland, ME 04074**		
	Fax or Cell:	**207-4000657**							
	Email:	**sgali@nghmllc.com**							
APPLICANT'S INFORMATION (*IF DIFFERENT FROM OWNER*)	**Name:**	Same as above				**Name of Business:**			
	Phone:					**Mailing Address:**			
	Fax or Cell:								
	Email:								
APPLICANT'S AGENT INFORMATION	**Name:**	**Robert A. McSorley, PE**				**Name of Business:**	**Sebago Technics, Inc.**		
	Phone:	**207-200-2074**				**Mailing Address:**	**75 John Roberts Road, Suite 4A South Portland, ME 04106**		
	Fax or Cell:								
	Email:	**rmcsorley@sebagotechnics.com**							

PROJECT INFORMATION

Existing Land Use *(Use extra paper, if necessary)*:
Vacant

Provide a narrative description of the Proposed Project *(Use extra paper, if necessary)*:
The proposed project is for the development of a 425 kW DC solar array on lot 3 of the previously approved subdivision.

Provide a narrative description of construction constraints (wetlands, shoreland zone, flood plain, non-conformance, etc.):
See Attached.

SKETCH PLAN REVIEW REQUIREMENTS FOR A MAJOR SITE PLAN APPLICATION

Section 120-811 of the Land Use Ordinance

The submission shall contain five (5) copies of the 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
Amanda Lessard, Planning Director	allessard@windhammaine.us

APPLICANT/PLANNER'S CHECKLIST FOR SKETCH PLAN REVIEW REQUIREMENTS

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

The following checklist includes items generally required for development by the Town of Windham's LAND USE ORDINANCE, Sections 811, 812, & 813. Due to projects specifics, are required to provide a complete and accurate set of plans, reports and supporting documentation (as listed in the checklist below)..

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 SPECFICS, PER SECTION 120-807D(2)).

Submission Requirements:	Applicant	Staff
a) Completed Sketch Plan Application form	☑	☐
b) Proposed Project Conditions:		
- Condition of the site	☑	☐
- Proposed use	☑	☐
- Constraints/opportunities of site	☑	☐
Outline any of the follow		
- Traffic Study	☐	☐
- Utility Study	☐	☐
- Market Study	☐	☐
c) Name, address, phone for record owner and applicant	☑	☐
d) Names and addresses of all consultants working on the project.	☑	☐
e) Evidence of right, title, or interest in the property	☑	☐
f) Evidence of payment of Sketch Plan fees and escrow deposit	☑	☐
g) Any anticipated waiver requests (Section 120-808)		
Waivers from Submission Criteria. Will the applicant be requesting waivers from the "Submission information for which a Waiver May be Granted"?	☐	☐
- If yes, submit letter with waivers being requested, along with a completed "Performance & design Standards Waiver Request Form.	☐	☐
Waivers from Subdivision Performance Standards in Section 120-812 of the Land Use Ordinance.	☐	☐

Submission Requirements (continued)	Applicant	Staff
-If yes, submit letter with the waivers being requested, along with a completed "Performance and Design Standards Waiver Request" form.	☐	☐
Plan Requirements		
Please note: the Sketch Plan does not need to be surveyed. However, if it is surveyed, please refer to the GIS requirements for Final Plan review. It may be in the applicant's interest to obtain the required GIS data while the surveyor is on site		
1] The name of the development, North arrow, date, and scale.	☑	☐
2] The boundaries of the parcel.	☑	☐
3] The relationship of the site to the surrounding area.	☑	☐
4] The topography of the site at an appropriate contour interval depending on the nature of the use and character of the site (in many instances, submittal of the applicable USGS ten-foot contour map will be adequate).	☑	☐
5] The approximate size and location of major natural features of the site, including wetlands, streams, ponds, floodplains, groundwater aquifers, significant wildlife habitats and fisheries or other important natural features (if none, so state).	☑	☐
6] Existing buildings, structure, or other improvements on the site (if none, so state).	☑	☐
7] Existing restrictions or easements on the site (if none, so state).	☑	☐
8] Approximate location and size of existing utilities on and adjacent to the tract, including utility poles and hydrants (if none, so state)	☑	☐
9] A Class D medium-intensity soil survey (information from the most current soil survey for Cumberland County, Maine, is acceptable).	☑	☐
10] The location and size of proposed buildings, structures, access drives, parking areas, and other development features (if applicable).	☑	☐
PDF Electronic Submission	☑	☐

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.

APPLICANT OR AGENT'S SIGNATURE	DATE	PLEASE TYPE OR PRINT NAME
[signature]	5/19/25	Suresh Gali, Owner

AGENT AUTHORIZATION

APPLICANT/ OWNER	**Name**	New Gen Estates, LLC		
PROPERTY DESCRIPTION	**Physical Address**	Franklin Drive	**Map**	18
			Lot	26-2-A
APPLICANT'S AGENT INFORMATION	**Name**	Robert A. McSorley, PE		
	Phone	207-200-2074	**Business Name & Mailing Address**	Sebago Technics, Inc. 75 John Roberts Road Suite 4A South Portland, ME 04106
	Fax/Cell			
	Email	rmcsorley@sebagotechnics.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 — DATE: 12/16/24

Suresh Gali
PLEASE TYPE OR PRINT NAME HERE

CO-APPLICANT SIGNATURE — DATE

PLEASE TYPE OR PRINT NAME HERE

APPLICANT'S AGENT SIGNATURE — DATE: 12/17/2024

Robert A. McSorley
PLEASE TYPE OR PRINT NAME HERE

Section 1

Description and Constraints

Property Description

The property is a 23.8-acre lot that is situated on property at the end of Franklin Drive in Windham Maine. This is shown of the town's tax map 18, lot 26-2-A. The site is dominated by a plateau of uplands that ranges from 316 to 297 NAVD in elevation which then slopes down to wetlands on either side of the proposed development.

Property Constraints

The parcel has been previously reviewed by Flycatcher, LLC. Wetlands were located on the subject lot, including two vernal pools. One of the vernal pools was considered significant and as such, Maine Department of Environmental Protection defines the critical terrestrial habitat (CTH) of 250' from the pool. The CTH is regulated such that no impacts are allowed in the first 100' and the property is allowed to impact up 25% of the CTH (on the property owner's property) outside of the first 100' as long as it does not isolate any portion of the CTH.

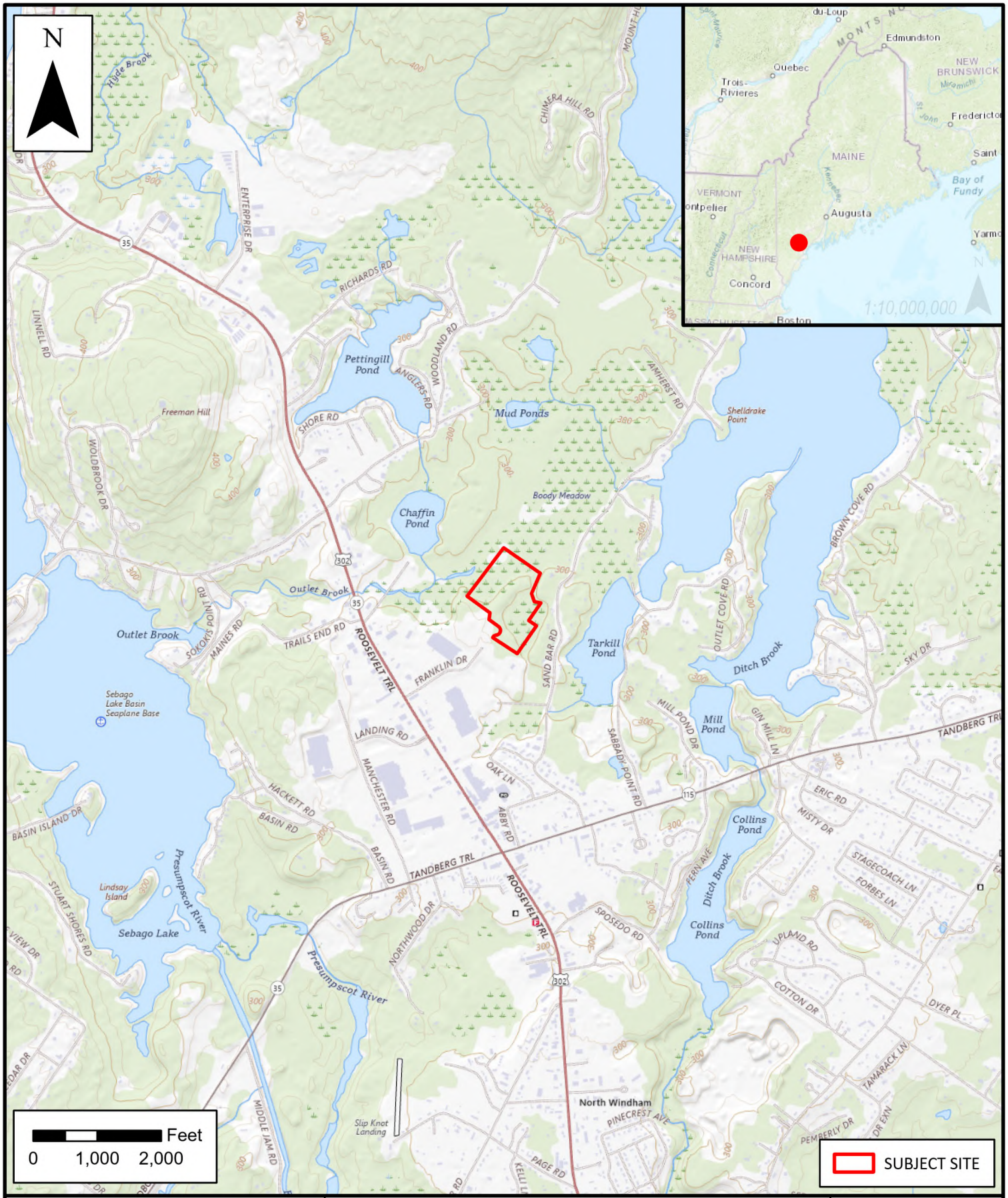
The CTH for this vernal pool extends up into the western plateau as well as a portion of the gravel roadway area between wetlands. Based upon the total CTH area on the property, it is calculated that 101,920 sf of the CTH will be impacted by development of the property; this impact will be approximately 23% of the CTH which will require a permit-by-rule approval from MDEP.

Opportunities of Site

The subject lot is significant in size and able to provide for the proposed development. Access is readily available from the Franklin Drive right-of way; this access provides direct connection to SR 302, Roosevelt Trail and the connecting main throughfares in the town area. Although utilities are not evident at the terminus of the right-of-way, there is electric and communication lines available within the right-of-way along the roadway. In addition, the current design will not require water or sewer service for the site. This project is not anticipated to create any significant traffic or impacts to the adjacent roadways.

Section 2

Site Location Map



SEBAGO TECHNICS

WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd. - Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

LOCATION MAP

FRANKLIN DRIVE SOLAR PARCEL

SCALE:	1:24,000
DATE:	3/31/2025

LOCATION:
FRANKLIN DRIVE
WINDHAM, MAINE

INFORMATION:
MAINE GEOLIBRARY
USGS QUADRANGLE

Section 3

Right, Title, or Interest

After Recording Return to:
New Gen Estates, LLC
675 Main Street
South Portland, ME 04106

MAINE REAL ESTATE TAX-Paid

QUITCLAIM DEED WITH COVENANT

DLN: 1002440261357

KNOW ALL MEN BY THESE PRESENTS, that **JLB WINDHAM LLC**, a Maine limited liability company, with an address C/O Redstone Investments, of 5050 Belmont Avenue, Youngstown, Ohio 44505 ("**Grantor**"), for consideration paid, grants to **NEW GEN ESTATES, LLC,** a Maine Limited Liability Company with a mailing address of 675 Main Street, South Portland, ME 04106 ("**Grantee**), with Quitclaim Covenant, all of its right, title and interest in that certain parcel of land situated in the Town of Windham, County of Cumberland, State of Maine, described as follows:

See **Exhibit A** attached hereto and incorporated herein by reference (the "**Property**").

TOGETHER with all the tenements, hereditaments and appurtenances, with every privilege, right, title, interest and estate, reversion, remainder and easement thereto belonging or in anywise appertaining.

Subject to taxes and assessments for the year 2024 and subsequent years, which are not yet due and payable and to all easements, covenants, restrictions, and other matters of record.

IN WITNESS WHEREOF, Grantor has caused this instrument to be executed this 2ND day of January, 2024.

WITNESS:

Print Name: Mya Taylor

GRANTOR:

JLB WINDHAM LLC

Print Name: Lee Birdman
Title: Manager

STATE OF ~~OHIO~~ Florida)
) SS:
COUNTY OF Hillsborough)

The foregoing instrument was acknowledged before me on the 2nd day of January, 2024 by Lee Budreau, the Manager of JLB Windham LLC and that the same is his/her free deed in said capacity and the free act and deed of said Jonlee Windham LLC.

(Notary Seal)

MARY KOLESAR
Notary Public - State of Florida
Commission # HH 288119
My Comm. Expires Jul 14, 2026
Bonded through National Notary Assn.

Notary Public

EXHIBIT A

Property

A certain lot or parcel of land located on the westerly sideline of Sandbar Road, so-called, and at the terminus of Franklin Drive, so-called, in the Town of Windham, County of Cumberland and State of Maine and shown on the plan titled "Existing Conditions, Land of JLB Windham LLC, 20 Franklin Drive, Windham, Maine", dated November 2022 as revised through 6/7/23, by BH2M, Inc.; said parcel being more particularly described as follows:

Beginning at a 5/8" iron rod found on the westerly sideline of said Sandbar Road at the southeasterly corner of land now or formerly of Michael & Terry Desmond as shown on aforesaid plan;

thence in a general southerly direction along the westerly sideline of said Sandbar Road and along a circular curve to the left, circumscribed by a radius of 300.00 feet, an arc length of 157.72 feet to a capped iron rod found (PLS #586); said capped iron rod found being S 15°-08'-51" W a tie distance of 155.91 feet from said previous 5/8" iron rod found;

thence S 00°-05'-11" W along the westerly sideline of said Sandbar Road a distance of 32.39 feet to a capped iron rod found (PLS #586) and land now or formerly of Clifford Libby;

thence S 33°-43'-11" W along the land of said Libby a distance of 135.63 feet to a 1 ¼" iron pipe found;

thence N 79°-11'-33" W along the land of said Libby a distance of 163.77 feet to a capped iron rod found (PLS #1057);

thence S 34°-43'-02" W along the land of said Libby a distance of 332.75 feet to a capped iron rod found (PLS #1057);

thence S 55°-15'-48" E along the land of said Libby a distance of 147.03 feet to a point and land now or formerly of Scott Vanvalkenburgh;

thence S 34°-45'-17" W along the land of said Vanvalkenburgh, along land now or formerly of Marvin R. Mayberry and along land now or formerly of Windham Veterans Association Inc. a distance of 841.47 feet to a 5/8" iron rod found and land now or formerly of Jonlee Windham, LLC;

thence N 56°-48'-18" W along the land of Jonlee Windham, LLC a distance of 434.59 feet to a point and the easterly sideline of said Franklin Drive;

thence in a general circular direction along the terminus of said Franklin Drive and along a circular curve to the left (non-tangent to the last described line), circumscribed by a radius of 75.00 feet, an arc length of 287.81 feet to a point and land now or formerly of JLB Windham, LLC; said point being N 36°-48'-30" W a tie distance of 140.98 feet from said previous point;

thence N 53°-55'-00" W along the land of said JLB Windham, LLC a distance of 658.28 feet to a point and land now or formerly of Town of Windham known as Donnabeth Lippman Park;

thence S 77°-23'-09" E along the land of the Town of Windham a distance of 54.19 feet to a point;

thence N 37°-05'-59" E along the land of the Town of Windham a distance of 1482.78 feet to a 6"x 6" granite monument found and land now or formerly of Francis L. Ungvary IV;

thence S 55°-13'-49" E along the land of said Ungvary and along the land of Desmond a distance of 1044.01 feet to the point of beginning.

The above described parcel contains 38.59 acres. All bearings refer to grid north.

The premises conveyed hereby are also described as follows:

PARCEL THREE ("Large Back Lot"):

A certain lot or parcel of land with any buildings thereon situated in Windham, Cumberland County, Maine, and bounded and described as follows:

Beginning at the easterly corner of Lot #14 and the southerly corner of Lot #15 as appears on the Plan of Fourth and Last Division of Lots in Windham, Maine, recorded in the Cumberland County Registry of Deeds in Plan Book 6, Page 9. Also being the most southerly corner of land conveyed by Silas Jacobson to Clinton H. Philpot, et al., by deed recorded in the Cumberland County Registry of Deeds; thence North thirty-seven (37°) degrees forty-five (45') minutes west eleven hundred sixty-five (1,165') feet, more or less, to an iron pipe driven in the ground; thence south fifty-two (52°) degrees fifteen (15') minutes east (inadvertently stated as west in prior deeds) along the southeasterly line of land formerly of E.C. Maines, now of Portland Water District, fourteen hundred seventy-two (1,472') feet, more or less, to a stake and other land now or formerly owned by Veronica P. Smith; thence south thirty-seven (37°) degrees forty-five (45') minutes east along line of other land now or formerly of said Smith a distance of eleven hundred sixty-five (1,165') feet, more or less, to a stake; thence north fifty-two (52°) degrees fifteen (15') minutes west fourteen hundred seventy-two (1,472') feet, more or less, to the point of beginning. Meaning and intending to convey hereby a part of Lot #14 as appears in the Plan of Fourth and Last Division of Lots in Windham, Maine, above-referred to, and being a part of the same premises conveyed to Howard H. Boody by Orin P. Chaffin by deed dated August 8, 1895 and recorded in the Cumberland County Registry of Deeds on August 12,1895 in Book 629, Page 11.

Excepting from the above-described premises the Sand Bar Road, so-called, formerly known as South Pond Road, as it is presently laid out, which runs across the above-described premises and which is a public way.

Also excepting from said Parcel Three, those lands described in the following instruments:

1. Deed from Lawrence E. Smith and Veronica P. Smith to Clinton L. Smith and Lois L. Smith dated May 27, 1997 and recorded in said Registry of Deeds in Book 13542, Page 46.

2. Deed from Lawrence E. Smith and Veronica P. Smith to Windham Mall Associates dated February 24,1992 and recorded in said Registry of Deeds in Book 9919, Page 207.

3. Deed from Veronica P. Smith to Bradley S. Woodbrey and Mitchell W. Woodbury dated June 10,2003 and recorded in said Registry of Deeds in Book 19532, Page 165.

Also conveying all rights and easements (if any) reserved in any of the above-described instruments.

Being a portion of those premises conveyed to Grantor by deed of Veronica P. Smith dated June 15, 2005, and recorded in the Cumberland County Registry of Deeds in Book 22854, Page 243.

PARCEL FOUR ("Sand Bar Road Lot"):

A certain lot or parcel of land with any buildings thereon situated on the westerly side of Sand Bar Road in the Town of Windham, County of Cumberland and State of Maine, bounded and described as follows:

Beginning at 2' iron found on the westerly side of Sand Bar Road at the southeasterly corner of land now or formerly owned by Clinton L. Smith and Lois L. Smith (Book 8109, Page 188); thence N 16° 01' 26" East distance of 207.00 feet to the POINT OF BEGINNING: thence from said point of beginning N 62° 32' 56" W a distance of 77.91 feet to a point at the easterly corner of land to be conveyed to said Clinton L. Smith and Lois L. Smith by Lawrence E. Smith and Veronica P. Smith by deed dated May 27,1997 and recorded in said Registry of Deeds in Book 13542, Page 46; thence N 51 ° 16 '19" E a distance of 73.90 feet to a 1 - /2" iron found; thence N 48° 56' 01" E a distance of 62.05 feet to a point on the westerly sideline of Sand Bar Road; thence southerly along the westerly sideline of said Sand Bar Road 127.87 feet more or less to the point of beginning.

Meaning and intending to convey a 4,789 square foot parcel of land shown on Standard Boundary Survey on Sand Bar Road, Windham, Maine, prepared by Owen Haskell, Inc., dated May 9,1997, last revised May 27,1997.

Being the same premises conveyed to Grantor by deed of the Lawrence E. Smith Revocable Trust dated June 15, 2005, and recorded in the Cumberland County Registry of Deeds in Book 22854, Page 241.

Section 4

Soil Report and Map

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

March 31, 2025

Preface

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).

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.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

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

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.

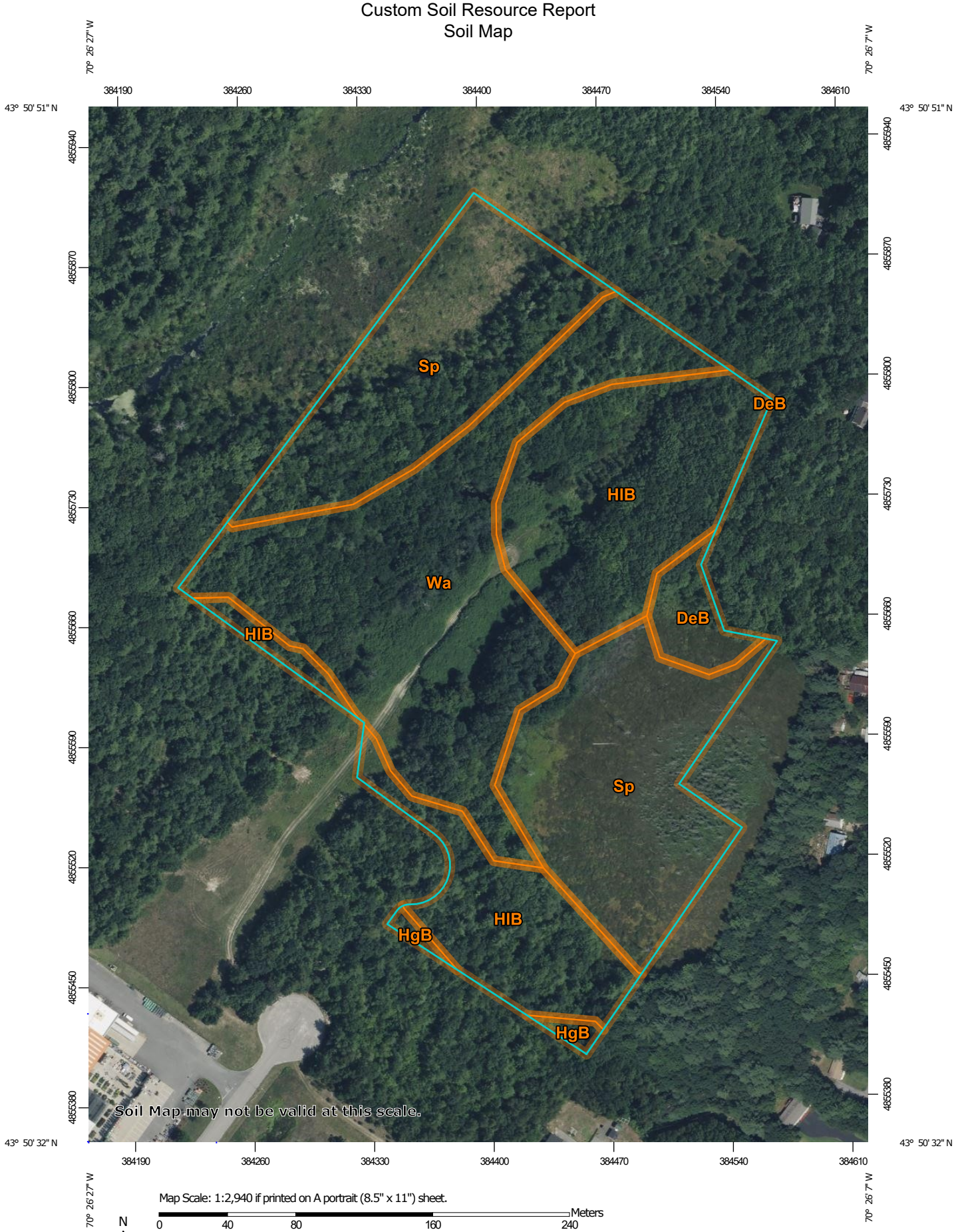
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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

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.

Custom Soil Resource Report
Soil Map



Map Scale: 1:2,940 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 40 80 160 240

Feet: 0 100 200 400 600

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: Jul 22, 2021—Oct 7, 2021

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
DeB	Deerfield loamy fine sand, 3 to 8 percent slopes	0.7	2.8%
HgB	Hermon sandy loam, 3 to 8 percent slopes	0.2	0.8%
HlB	Hinckley loamy sand, 3 to 8 percent slopes	6.7	28.3%
Sp	Sebago mucky peat	8.6	36.0%
Wa	Walpole fine sandy loam	7.6	32.1%
Totals for Area of Interest		**23.8**	**100.0%**

Map Unit Descriptions

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

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

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 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

DeB—Deerfield loamy fine sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2xfg9
Elevation: 0 to 1,190 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Deerfield

Setting

Landform: Kame terraces, outwash plains, outwash terraces, outwash deltas
Landform position (three-dimensional): Tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Parent material: Sandy outwash derived from granite, gneiss, and/or quartzite

Typical profile

Ap - 0 to 9 inches: loamy fine sand
Bw - 9 to 25 inches: loamy fine sand
BC - 25 to 33 inches: fine sand
Cg - 33 to 60 inches: sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: About 15 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Sodium adsorption ratio, maximum: 11.0
Available water supply, 0 to 60 inches: Moderate (about 6.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: A
Ecological site: F144AY027MA - Moist Sandy Outwash
Hydric soil rating: No

Minor Components

Wareham

Percent of map unit: 5 percent
Landform: Depressions, drainageways
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

HgB—Hermon sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2w9r8
Elevation: 0 to 950 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 statewide importance

Map Unit Composition

Hermon and similar soils: 90 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): Mountainbase, interfluve, base 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: 3 to 8 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): 2s
Hydrologic Soil Group: A
Ecological site: F144BY601ME - Dry Sand
Hydric soil rating: No

HIB—Hinckley loamy sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2svm8
Elevation: 0 to 1,430 feet
Mean annual precipitation: 36 to 53 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Hinckley and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Outwash plains, eskers, moraines, kame terraces, kames, outwash terraces, outwash deltas
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Nose slope, side slope, base slope, crest, riser, tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 8 inches: loamy sand
Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 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: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

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
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
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

Wa—Walpole fine sandy loam

Map Unit Setting

National map unit symbol: blk7
Elevation: 0 to 2,800 feet
Mean annual precipitation: 34 to 50 inches
Mean annual air temperature: 37 to 46 degrees F
Frost-free period: 80 to 165 days
Farmland classification: Not prime farmland

Map Unit Composition

Walpole and similar soils: 85 percent
Minor components: 14 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Walpole

Setting

Landform: Outwash plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy glaciofluvial deposits

Typical profile

H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 20 inches: fine sandy loam
H3 - 20 to 65 inches: gravelly 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): High (2.00 to 6.00 in/hr)
Depth to water table: About 0 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: F144BY303ME - Acidic Swamp
Hydric soil rating: Yes

Minor Components

Au gres

Percent of map unit: 9 percent
Landform: Outwash plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Scarboro

Percent of map unit: 5 percent
Landform: Outwash plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

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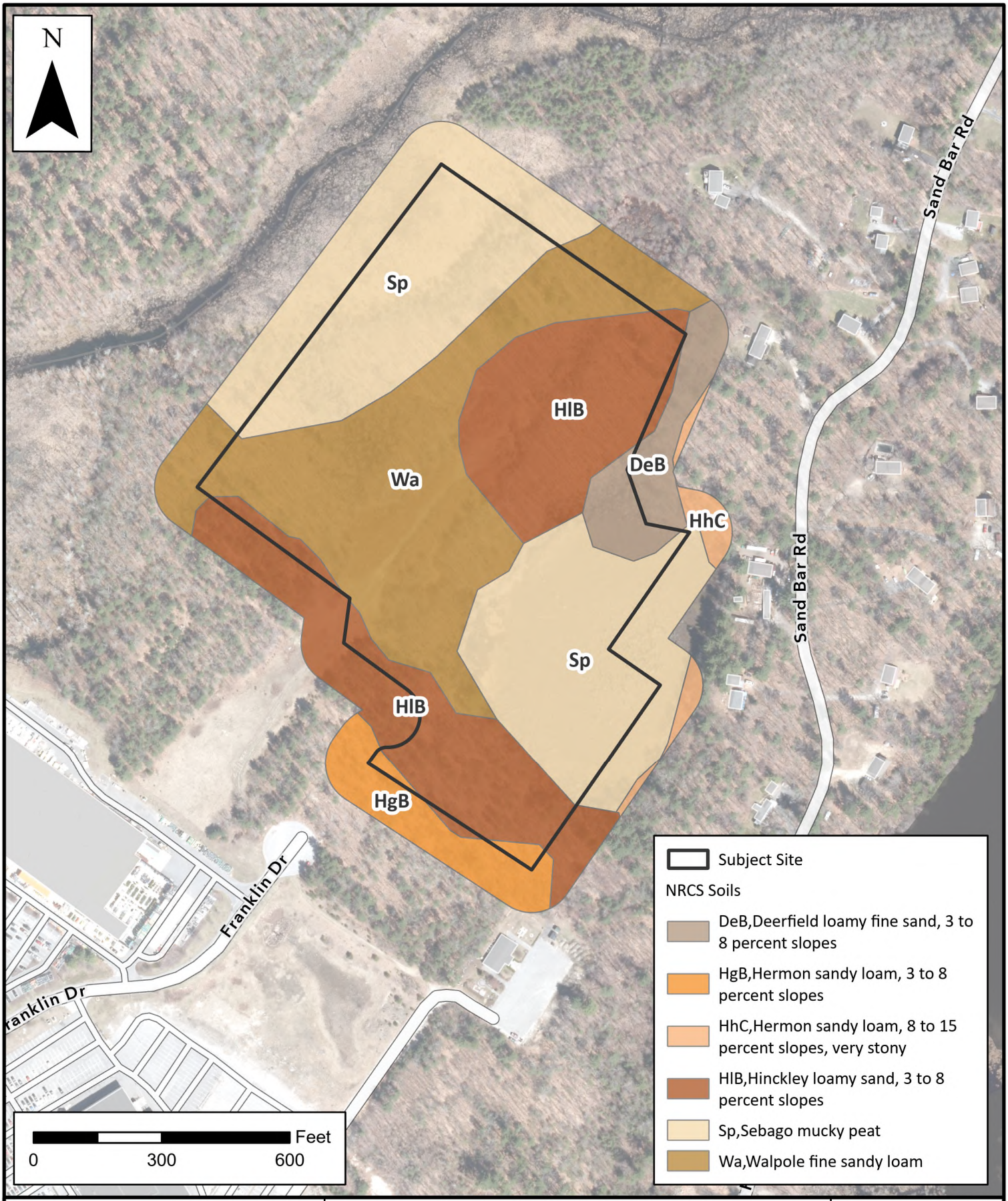

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South Portland, ME 04106
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NRCS SOIL SURVEY MAP

FRANKLIN DRIVE SOLAR PARCEL

SCALE: 1:3,600

DATE: 3/31/2025

LOCATION:
FRANKLIN DRIVE
WINDHAM, MAINE

INFORMATION:
MAINE GEOLIBRARY
USDA NRCS SOIL SURVEY 2020