

Town of Windham

For:

Sketch Plan Application for Minor Subdivision Application Franklin Drive Subdivision 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

September 2024

230411



September 26, 2024 230411

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

sjpuleo@windhammaine.us

Sketch Plan for Minor Subdivision Application
Franklin Drive Subdivision, Windham - New Gen Estates, LLC
Tax Map/Lot: 18/26-2

Dear Steve:

On behalf of New Gen Estates, LLC, Sebago Technics, Inc. is pleased to submit the enclosed Sketch Plan Application for Minor Subdivision Review, concept plan, and associated exhibits for a proposed 4-lot subdivision located off Franklin Drive. The proposed development is located just east of the terminus of Franklin Drive on a lot identified on the Town of Windham Tax Map 18 as Lot 26-2. The project site is approximately 38.59 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 Lots 1-3 will be provided from a proposed right-of-way extension from Franklin Drive. The proposed right-of-way will be approximately 390 feet long and 60 feet wide. This right-of-way will be built to Town of Windham Standards with parking along the roadway. Access to Lot 4 will be provided from Sandbar Road on which Lot 4 will receive frontage. Grading is proposed to create a drainage swale to convey runoff around the access row and to maintain existing drainage patterns.

As part of the subdivision, a request will be made to the Town to release an existing access easement over the property from Franklin Drive to the natural area to the north of the property. It is expected that a new access easement from the Franklin Drive Extension will be provided as determined upon coordination with the town planning department during the development of the proposed lots of the subdivision. In addition, the individual lot development will be designed to meet the standards of the Commercial District 1 (C-1) and the any individual performance standards of proposed uses including buffers.



We look forward to discussing this project with the Town Planning Board and 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.

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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 REVIEW - MAJOR\MINOR SUBDIVISION APPLICATION **APPLICATION FEE:** \$200.00 AMOUNT PAID: **FEES FOR SKETCH PLAN REVIEW REVIEW ESCROW:** \$300.00 - MINOR \$400.00 - MAJOR DATE: Office Use: Office Stamp: 18 26-2 C-1 1.680,980 SF Zoning **Total Land** Parcel ID Map# Lot(s)# District(s) Area SF **PROPERTY DESCRIPTION** 20 Franklin Drive Chaffin Pond/Little Sebago Lake Physical Watershed: **Address** New Gen Estates, LLC 50 Maine Mall Road Name South Portland, ME 04074 **PROPERTY** (207) 371-0070 Phone Mailing **OWNER'S Address** (207) 400-0657 INFORMATION Fax or Cell sgali@nghmllc.com Email same as above Name of Name **Business APPLICANT'S INFORMATION** Phone (IF DIFFERENT Mailing Fax or Cell **Address** FROM OWNER) Email Robert A. McSorley, PE Sebago Technics, Inc. Name of Name **Business APPLICANT'S** 207-200-2074 75 John Roberts Road **Phone AGENT** Suite 4A Mailing South Portland, ME 04106 **INFORMATION** Fax or Cell **Address** rmcsorley@sebagotechnics.com **Email** Existing Land Use (Use extra paper, if necessary): Vacant Provide a narrative description of the Proposed Project (Use extra paper, if necessary): PROJECT INFORMATION The purpose of the subdivision is to create the lots for future commercial and residential uses of the property. Provide a narrative description of construction constraints (wetlands, shoreland zone, flood plain, non- conformance, etc. Use extra paper, if necessary): See attached.



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 Steve Puleo, Town Planner Amanda Lessard, Planning Director (207) 894-5960, ext. 2 sipuleo@windhammaine.us 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 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 SPECFICS, PER SECTIONS 120-906C(3) and 120-907A(2)(b)[2]).

documentation.					
Submission Requirements: Ap		Staff		Applicant	Staff
a) Completed Sketch Plan Application form			h) Copy of portion of the USGS topographic map of the area, showing the boundaries of the proposed subdivision.	Z	
b) Proposed Project Conditions:			 i) An existing resources inventory and site analysis sketch plan for conservation subdivisions as described in § 120-911K(3) 		
- Condition of the site			j) Copy of that portion of the Cumberland County		
- Proposed use	Ū⁄		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	Z	
- Constraints/opportunities of site			Plan Requirements		
			Name of subdivision, north arrow, date and scale.	Z	
Outline any of the follow	العتبير		Boundary and lot lines of the subdivision.		
- Traffic Study			Approximate location, width, and purpose of easements or restrictions.	Ø	
- Utility Study	MARIE			(C)	
- Market Study			4. Streets on and adjacent to the tract.	2	
c) Name, address, phone for record owner and applicant	Z		5. Approximate location and size of existing utilities on and		
d) Names and addresses of all consultants working on the project	2		adjacent to the tract, including utility poles and hydrants (if none, so state).	Ø	
e) Evidence of right, title, or interest in the property					
f) Evidence of payment of Sketch Plan fees and escrow deposit			Existing buildings, structures, or other improvements on the site.	Z	
g) Any anticipated waiver requests (Section 120-908)			site.		
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. 			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	Z	
Waivers from Subdivision Performance Standards in <u>Section</u> 120-911 of the Land Use Ordinance.			features.		
 If yes, submit letter with the waivers being requested, along with a completed "Performance and Design Standards Waiver Request" form. 			PDF Electronic Submission	2	

The undersigned	hereby i	makes	application	to the	Town o	of Windham	for	approval	of the	proposed	project	and declare	s the f	oregoing	g to be
true and accurate	to the b	est of	his/her knov	vædae.											

Son	mun	9/26/
APPLICANT OR	AGENT'S SIGNATURE	DATE

Suresh Gali, Owner

Section 1

Description and Constraints

Sketch Plan Application 230411

Property Description

The property is a 38.59-acre parcel that is situate on property at the end of Franklin Drive in Windham Maine. This is shown of the town's tax map 18, lot 26-2. The southern part of the site is dominated by a plateau of uplands that ranges from 325 to 315 NAVD in elevation which then slopes down to wetlands on the east, north and northwest. To the northeast from this plateau is a strip of uplands with a gravel roadway that extend to the northeast boundary. The grade steeply slopes from this roadway to the aforementioned wetlands with a milder steep to a small ravine on the north end. At the northeast corner of the site is another smaller plateau of uplands that fronts on Sandbar Road, this area slopes back to one of the wetlands to the south and to the ravine to the west.

Property Constraints

As mentioned in preceding section, the back one half of the site is dominated by wetlands and steep slopes adjacent to the wetlands. There is strip of land approximately 330'+ wide between wetlands with the gravel road in the middle. Based upon the slopes in this area, it would appear that this area is not conducive for development. Towards the northeast boundary the slopes are less excessive and may allow the use of the uplands area for the installation of a solar array facility.

The site has been previously reviewed by Flycatcher, LLC. The wetlands on the eastern boundary was found to include to 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 was previously calculated that 86,002 sf of the CTH can be impacted by development. The proposed subdivision has been created to minimum impacts by the main two development lots, lots 1 and 2. A table has been provided indicating the are of these impacts with the balance available to occur on lot 3 with impacts by the gravel roadway and potential access/stormwater easement along the boundary of lot 1 and a proposed 50 right-of-way off the end of the cul-de-sac of Franklin Drive.

There is a 50' wide access easement extending from the cul-de-sac northwest along the southern boundary that curves away form the property to the north to the property line. It is believed that this access was created for eventual access for town residents to the adjacent natural area. In discussions with the town, it was indicated that this easement may be able to be replaced by a pedestrian path from the Franklin Drive roadway to the natural area.

Opportunities of Site

The plateau area at the southern part of the site is significant in size to provide for development of a couple projects. 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 cul-de-sac, there is a water main, electric and communication lines available with the right-of-way, a short distance to the southwest along the roadway. In addition, the current sewer project under way in Windham is expected to provide

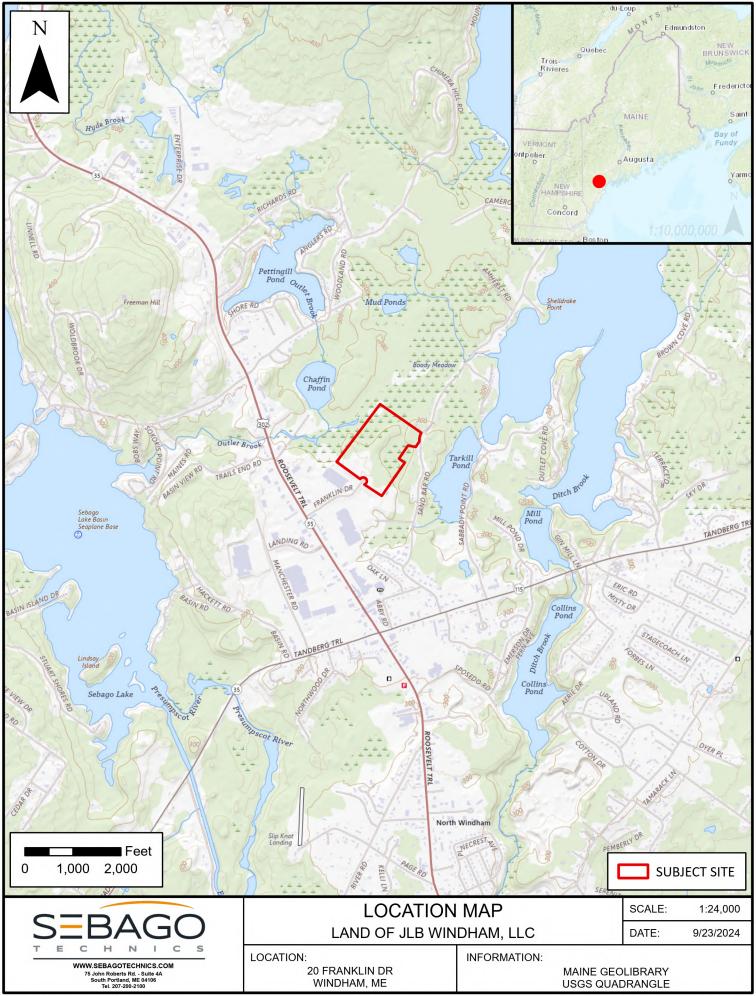
domestic wastewater service to the parcel which mitigates any effects to the area's groundwater and the Sebago Lake Watershed.

Lastly, the small plateau area at the northeast corner of the property provides the potential for a small residential with the extension of water and sewer utilizes to the parcel. It is assumed that water would be easily extended along Sandbar Road and a low pressure force main could be installed to connect to the sewer to be extend to the Franklin Drive cul-de-sac.

Section 2

Site Location Map

Sketch Plan Application 230411



Section 3

Right, Title, or Interest

Sketch Plan Application 230411

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

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 22 day of 2024.

WITNESS:

GRANTOR:

JLB WINDHAM LLC

Print Name:

STATE OF ONTO DOLL)	
COUNTY OF HILLSOOPONCH }	SS:
The foregoing instrument was acknowledged by	pefore me on the day of bullated 2024 of JLB Windram LiC
and that the same is his/her free deed in said capacity a LLC.	nd the free act and deed of said Jonlee Windham
MARY KOLESAR Notary Public - State of Florida Commission # HN 288119 My Comm. Expires Jul 14, 2026 Bonded through National Notary Assn.	May lel

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 1/4" 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.

RECEIVED - RECORDED, CUMBERLAND COUNTY REGISTER OF DEEDS

01/08/2024, 08:06:30A

Register of Deeds Jessica M. Spaulding E-RECORDED

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

Sketch Plan Application 230411



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

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.

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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

Custom Soil Resource Report

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

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 LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Points

Soil Map Unit Lines

Special Point Features

Blowout ဖ

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

å

Spoil Area Stony Spot



Very Stony Spot



Wet Spot Other



Special Line Features

Water Features

Streams and Canals

Transportation

Rails ---

Interstate Highways

US Routes



Local Roads 00

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 20, Sep 5, 2023

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

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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	1.5	4.0%
HgB	Hermon sandy loam, 3 to 8 percent slopes	6.1	15.8%
HhC	Hermon sandy loam, 8 to 15 percent slopes, very stony	2.1	5.4%
HIB	Hinckley loamy sand, 3 to 8 percent slopes	12.0	31.2%
Sp	Sebago mucky peat	8.6	22.2%
Wa	Walpole fine sandy loam	8.3	21.4%
Totals for Area of Interest		38.6	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

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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

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

Description of Deerfield

Setting

Landform: Outwash deltas, outwash terraces, outwash plains, kame terraces

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

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: Mountains, hills

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

HhC—Hermon sandy loam, 8 to 15 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2w9rd

Elevation: 0 to 1,080 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: Not prime farmland

Map Unit Composition

Hermon, very stony, and similar soils: 85 percent

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

Description of Hermon, Very Stony

Setting

Landform: Mountains, hills

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

Landform position (three-dimensional): Mountainbase, mountainflank, side slope,

nose slope, interfluve

Down-slope shape: Convex

Across-slope shape: Convex

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

and gneiss

Typical profile

Oa - 0 to 2 inches: highly decomposed plant material

E - 2 to 3 inches: sandy loam Bhs - 3 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

Surface area covered with cobbles, stones or boulders: 1.1 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 14.03 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 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: A

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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 deltas, outwash terraces, kames, kame terraces, moraines, eskers, outwash plains

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)

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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: 10 to 2,100 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: Not prime farmland

Map Unit Composition

Sebago and similar soils: 85 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

Wa—Walpole fine sandy loam

Map Unit Setting

National map unit symbol: blk7

Elevation: 0 to 540 feet

Mean annual precipitation: 48 to 49 inches Mean annual air temperature: 45 to 46 degrees F

Frost-free period: 145 to 165 days

Farmland classification: Not prime farmland

Map Unit Composition

Walpole and similar soils: 85 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

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