Commission Members:
Chair Pat Bailey, Jayne Foley, Daniel Herzlinger, Jennifer Fox, Robert Foster, Jon Kachmar, Simon Rucker, Baxter Miatke, and City Counselor Anna Trevorrow

City of Portland
Land Bank Commission Agenda
April 12, 2023
5:00 PM
On the second Wednesday of the month at 5:00 pm, the Portland Land Bank Commission will hold a hybrid digital (zoom)/in-person meeting.

Physical location of meeting for April 12th, 2023 will be Portland City Hall, room #209

I. Call to Order
II. Citizen Comment Period
    i. Emailed citizen comment
III. Agenda Items
    i. Acceptance of Meeting Minutes: March 8, 2023
    ii. New Business
        a. Secretary's Report
        b. Treasurer's Report
        c. Wetland Report - Coolidge
        d. Confirming Land Bank Commission meeting times - Ethan
        e. Update on homelessness and Land Bank properties - Ethan (10 Minutes)
    iii. Old Business
    iv. Communications and Parcel Updates
        a. Parks Division Report
        b. Parks Commission Report - Jon
        c. Davis Family Pines Update - Jon
    v. Commissioner requests for Agenda Items
IV. Adjournment

The Land Bank Commission is responsible for identifying and protecting open space resources within the City of Portland. The commission seeks to preserve a balance between development and conservation of open space important for wildlife, ecological, environmental, scenic or outdoor recreational values.

Sale and tax history for 57 Ballpark Dr

Sale History Tax History

Today

Mar 22, 2023	Pending	–
Date	MREIS #1553921	Price
Mar 16, 2023	Listed (Active)	$875,000
Date	MREIS #1553921	Price

Nov, 2017

Nov 13, 2017	Sold (MLS) (Sold)	$500,000
Date	MREIS #1328443	Price

Thomas Nickerson <tnickerson@portlandmaine.gov>

Land Bank Public Comment: Boston Globe Article and 57 Ballpark Dr (North Deering) Case Study

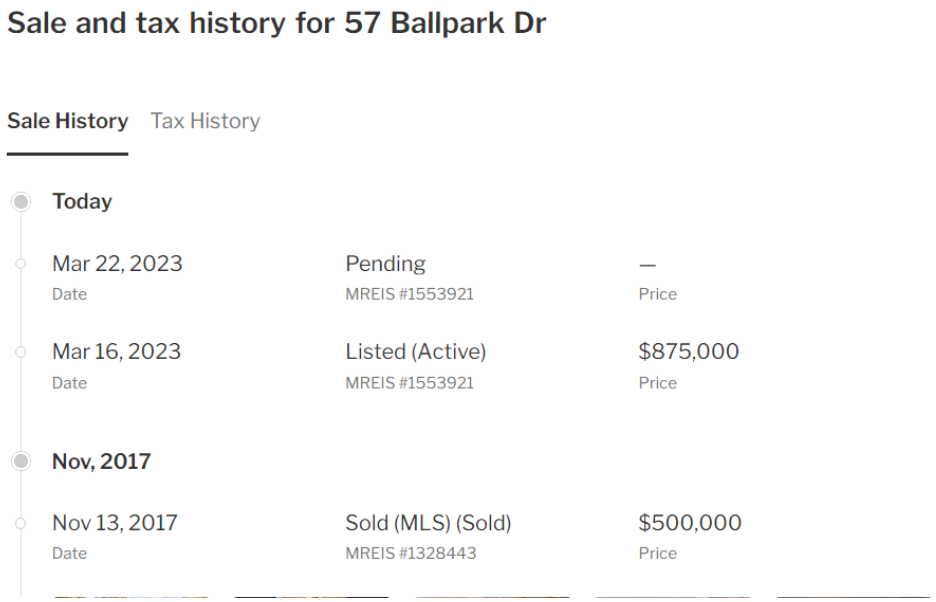
George Rheault <george.rheault@gmail.com> Tue, Apr 11, 2023 at 11:58 AM
To: landbank@portlandmaine.gov, Thomas Nickerson <tnickerson@portlandmaine.gov>

Please find attached a recent Boston Globe story perfectly illustrating the phenomenon of conservation/open space being used to worsen our housing crisis.

Portland of course has followed much the same path as Peabody, Massachusetts and indeed hundreds of municipalities across the Northeast and all across the nation have been encouraged to engage in this kind of behavior. It is precisely this level of scale that underlies a major source of our ongoing housing crisis.

Of course, if you are an incumbent homeowner and you wish to sell, this state of affairs is all very lucrative and convenient. 57 Ballpark Drive went under contract in less than a week at a huge premium from what it sold for in late 2017.

I wish our City Council and Planning Department was a lot more curious about things like this.



Sale and tax history for 57 Ballpark Dr

Sale History | Tax History

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SOURCE: 57 Ballpark Dr, Portland, ME 04103 | MLS# 1553921 | Redfin

Using Fig Leaf of Open Space Concerns to Block Housing Opportunity - Boston_Globe_Article_March_16_2023.pdf
2174K

A developer proposed housing in Peabody. To stop it, the city bought the land.

The city will pay $7.2 million for the 80-acre parcel, with plans to maintain it as an open space, instead of allowing a large-scale housing development to move forward

By **Andrew Brinker** Globe Correspondent, Updated March 16, 2023, 5:28 a.m.

The city of Peabody announced last month that it is planning to purchase an 80-acre property on the city's border with Salem to prevent it from being developed into housing. BARRY CHIN/GLOBE STAFF

For decades, rumors had swirled around an 80-acre patch of land in South Peabody.

The land, a hilly, wooded stretch that has long sat untouched, was owned by a local developer, and residents feared a housing development could crop up there — a big one.

It nearly happened late last year, when the developer, in a private meeting, presented city officials with site plans, some of which laid out hundreds of apartments.

Mayor Edward Bettencourt didn't like it.

So he devised a plan, and declared it during his annual State of the City address in January: the city would buy the land itself, and prevent any new housing from being built there. It would cost around $7.2 million.

"We were not going to have housing on this site," Bettencourt said in an interview. "We've lost too much of our city to development recently."

Bettencourt's plan has proven popular in town — city councilors and some residents have applauded the move. But other observers say the purchase would take one of the sites where large-scale new construction is possible in slow-growing Peabody off the market, significantly lowering the town's capacity for new housing.

Bettencourt and the city councilors who support him don't argue that point. But Peabody, they say, is built out, thanks in part to a number of multifamily developments permitted in recent years under the state's Chapter 40B law — which overrides local zoning in communities where less than 10 percent of housing is set aside at income-restricted rents. Adding more housing would only strain the city's resources, they say, and preserving open land is a more valuable objective.

The push and pull over this patch of Peabody is just one in a series of local debates over what to do with undeveloped land in Eastern Massachusetts, conversations

that have been intensified by the state's recent push for more multifamily housing. Constructing and maintaining functional open space can be expensive for smaller cities and towns, especially on sites as big as the one in Peabody, but local governments still set aside parcels for it, sometimes blocking new housing in the process.

The city of Peabody announced last month that it is planning to purchase an 80-acre property on the city's border with Salem to prevent it from being developed into housing. BARRY CHIN/GLOBE STAFF

Few comparable communities have built less new housing over the last decade than Peabody. Between 2017 and 2021, the city of roughly 55,000 people permitted 144 new units, just 16 of which were multifamily apartments or condos. That does not include several multifamily developments that received approval in 2022 under 40B.

Those projects, approved by the planning board out of legal obligation despite considerable pushback from residents, pushed the city over its state-obligated 10 percent affordable housing threshold, meaning officials can turn down future 40Bs as long as they remain over that benchmark.

Bettencourt sees it as a chance to regain control over the city's future.

"We were at a disadvantage and it took away our ability to work with developers," he said. "Projects were approved by the state that were bigger than we were hoping for. If the city is going to grow, we should be the ones deciding when, where, and how."

That's where those 80 acres comes in. The potential site plans presented to Bettencourt by the land's owner, DiBiase Homes, ran the gamut, the mayor said, from rows of single-family houses to apartment complexes with hundreds of units. All, he said, were untenable. They also likely would've run into political opposition. The land is only zoned for single-family homes, so any sort of multifamily housing would've required zoning relief, something city officials said they're generally opposed to. So he began looking for funding sources, eventually settling on Community Preservation Act funds and loans.

Once city officials made their opposition clear, Bettencourt said, DiBiase agreed to sell the site. (The developer did not return a request for comment). Bettencourt envisions cleaning up the property and building walking trails or recreational areas there, though that may prove challenging. Today, the land, a pair of two 40-acre plots, is essentially a stretch of woods on the city's border with Salem that hugs a municipal golf course and several residential neighborhoods.

"The city just doesn't have the funding to make that into a park or whatever they want to do with it," said Jason Panos, a land-use attorney and former member of Peabody's Zoning Board of Appeals. "That's the kind of place that requires a developer with a lot of cash on hand to invest in revamping the land."

To be sure, Peabody's housing production lags behind in large part because it is one of the denser communities on the North Shore, said Panos. But also, he said, many city officials are hesitant to support new development because they worry additional density will put a strain on local sewers and roads.

Ultimately, that puts communities like Peabody that insist they do not have the space or capacity for new housing squarely at odds with the state and its push to spread the onus of building out of Greater Boston's housing shortage across every town and city.

Indeed, Bettencourt said he's skeptical of state rules on housing, like the MBTA Communities law, which mandates cities and towns with access to the MBTA zone

for multifamily housing, and that Peabody may well not go along.

“We’re just at a point where we can selective about the projects we want again, and there’s a new state rule,” he said. “It’s silly. Our housing should be up to us.”

Downtown Peabody. The city of roughly 50,000 approved just 144 units of housing between 2017 and 2021. JONATHAN WIGGS

Andrew Brinker can be reached at andrew.brinker@globe.com. Follow him on Twitter at @andrewnbrinker.

Show 168 comments

Commission Members:

Chair Pat Bailey, Jayne Foley, Daniel Herzlinger, Jennifer Fox, Robert Foster, Jon Kachmar, Kara Wooldrik, Simon Rucker, Baxter Miatke, Brian Wasser and City Counselor Anna Trevorrow

City of Portland
Land Bank Commission Agenda
March 8th, 2023

I. Call to Order

II. Citizen Comment Period:

Emailed attachments - no comments from the public.

III. Agenda Items

I. Acceptance of Meeting Minutes: Feb 8, 2022 - no comments on the notes. Motions made to accept. Motion passes unanimously.

ii.New Business

A. Bayside Community Garden - No actions taken
   - Residents are worried that they might lose the garden if the property is sold,the garden is on private property. Council Member Anna T would like the LB to weigh in on the topic and potentially provide support for the project: LB determined that this really isn't in the purview of the commission. PRF confirmed that Planning has been advised of the neighborhood's desire to keep the property.

B. Stroudwater Bridge project. - No actions taken
   - Ethan provided additional information and details regarding the project. Portland Trails submitted a volunteer run grant, and they are currently fundraising. $100K is needed and residents are excited for the project.

C. Davis Family Pines property - No actions taken
   - Not a lot of movement. Jon made contact with the realtor who sold the property, Josh Soley. Pat requested additional information regarding the composition of the property and water features. Doug provided details about the roads in the area and that they are privately owned.

D. Aligning Land Bank Priorities with Council Priorities - 10 mins - Ethan Hipple - *Actions Taken: Council Member Anna Trevorrow would like to organize a workshop with City Leadership and the Land Bank, to establish a better understanding of what the commission does.*
    - Ethan advised that North Deering has been to City Council a number of times, and they had feedback: their focus is housing, Commission should be aware of this particular focus, scoring is helpful. Commissioners had additional questions: Land Bank works to procure properties that have been passed over by realtors as not developable. Commissioners provided ideas on how to address council concerns.
    - Chair - the burden of housing should not be on the Land Bank.
    - Councilor provided more information about the City Council perspective, and she recommended keeping the council informed and continuing to provide information regarding equity.
    - This issue was discussed in depth and a multitude of opinions expressed.

E. Adopting new hybrid policy - **Vote to adopt the policies: Passed unanimously.**
    - City Council has asked the Commission to review and adopt the State issued hybrid meeting policies.

iii. Old Business

A. Hobart Street - *Actions taken: Ethan will be speaking with Seth Garrison of Portland Water District*
    a. Discussed Hobart Street (potential location for the hand carry boat launch project) sewer overflow issues and additional details. Portland Water District will need to provide approval for any improvements to this area. The Commission discussed current details and concerns with the C.S.O. (Combined Sewer Overflow)

iv. Communications and Parcel Updates

A. Parks Report/Land Bank Commission report -
    a. John provided an update on the Parks Commission - they are restoring the sub-committees and refocusing their goals. Green space gathering is coming up.

B. North Deering Park - 5 mins - Ethan Hipple
    a. Ethan provided an update on the project.

C. Coolidge & Davenport Lots Updates
    a. The Commission discussed the status of this acquisition.

v. Commissioner requests for Agenda Items

JONES ASSOCIATES

Foresters, Surveyors and Environmental Consultants

WETLAND REPORT

COOLIDGE AND DAVENPORT AVENUE

PORTLAND, MAINE 04101

Prepared for:	Prepared by:
Lori J. Paulette Economic Development Department City of Portland 389 Congress Street Portland, Maine 04101	Jones Associates, Inc. 280 Poland Spring Road Auburn, Maine 04210

This wetland delineation was conducted by:

Jason Tome
Jones Associates, Inc.

JA Job #22-053PO
January 2023

TABLE OF CONTENTS

INTRODUCTION

Jones Associates, Inc. was contracted to provide wetland delineation services for the City of Portland on Tax Map 348, Lots C1-C13 and B5-B14; and Tax Map 349, Lots C1-21. These lots are all located off Coolidge and Davenport Avenue in Portland, Maine and encompass a total of +/-3.2 acres. The following report summarizes site conditions observed during a site visit in November of 2022.

Wetland/upland boundaries were identified and delineated according to *U.S. Army Corps of Engineers (ACOE) Wetlands Delineation Manual (Environmental Laboratory 1987)* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, January 2012*. Wetlands were identified based on the presence of hydric soil (inundated or saturated soil conditions resulting from permanent or periodic inundation by ground water or surface water), hydrology (movement and distribution of water), and predominance of hydrophytic species (Hydrophytes: vegetation typically adapted for life in saturated soil conditions).

Wetland delineations consist of transecting the property, examining periodic soil samples, observing any evidence of hydrology, and assessing each stratum of vegetation for its percentage of hydrophytic species. If all three factors were evident, the study plot was considered wetland habitat. Transitions between upland and wetland were clearly marked with blue sub-zero flagging every 30-40 feet and labeled with alphanumeric codes to identify individual systems (A1, A2, A3….).

Wetland flags were located with using Leica Global Positioning System (GPS) technology with expected average accuracy of sub-meter. This method is recognized by both state and federal agencies. This being stated, Jones Associates, Inc. recommends that the wetland boundary be surveyed using a more precise method of location if any fill or regulated activities are to be performed within 20 feet of the GPS located wetland.

EXISTING CONDITIONS

The parcels are located between Northwood Drive, Coolidge Avenue, and Washington Avenue in Portland, Maine. The delineation area almost entirely consists of broad-leaved deciduous vegetation in the overstory. Other vegetation includes invasive scrub-shrub species, which is typical in areas that are in proximity to high-density development. These invasive species were primarily observed near the edges of the property where soil disturbance has previously occurred.

Areas to the north, east, and south of the parcels consist of high-density residential development. To the west, the parcels are adjacent to a large undeveloped area.

WETLAND CHARACTERISTICS

The term "wetlands" means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

--Corps of Engineers Wetlands Delineation Manual (U.S. Army Corps of Engineers 1987)

The delineation area contains three wetlands (Wetlands A, B, and C) which are shown on the attached Wetland Delineation Plan. Wetland A is located in the western portion of the site, specifically on Tax Map 349, Lots C17-C21. Wetland B is located centrally on site and appears to be entirely located on Tax Map 348, Lot C4. Wetland C is immediately east of Wetland B and is the largest wetland on site, as it is located over Tax Map 348, Lots B1-B5, B13-B14, and C5-C7.

All wetlands are in proximity of one another and exhibit similar characteristics. Therefore, all wetlands can be accurately described using one set of datasheets. These wetlands can be described using the Wetlands and Deepwater Habitats Classification as palustrine (P) forested (FO) wetlands with broad-leaved deciduous vegetation (1) that are saturated (B) or (PFO1B). Hydrological indicators in the wetlands consist of saturation, drainage patterns, high water table, and geomorphic position. Vegetation in the wetlands consist of red maple (*Acer rubrum*), black ash (*Fraxinus nigra),* red oak (*Quercus rubra*), white pine (*Pinus strobus*), sensitive fern (*Onoclea sensibilis*), and morrow's honeysuckle (*Lonicera morrowii*), indicating the presence of hydrophytic vegetation. Soil color consisted of 10YR 4/1 down to >20 inches in depth. Soils were classified as loamy mucky mineral, indicating the presence of hydric soils.

WETLANDS OF SPECIAL SIGNIFICANCE (WOSS)

No wetlands of special significance were identified during investigations.

STREAMS

No streams were observed to be present on site. Please refer to Addendum 4.B (Stream Channels) for more detailed information on stream criteria.

RARE OR UNUSUAL FEATURES AND VERNAL POOLS

Jones Associates Inc. did not identify any potential vernal pools during investigations. No unusual plant or animal species were observed within the property. Vegetation on this property was dominated by plant communities typical of this region of Maine.

NORTHERN LONG-EARED BAT

If impacts are proposed on-site, then the items found in Section 1 of the Addendum below will need to be addressed for Northern Long-Eared Bats (NLEB).

JONES ASSOCIATES
Foresters, Surveyors and Environmental Consultants

WETLAND DELINEATION CHECKLIST

Job #:	22-053PO		
Client:	Lori J. Paulette – City of Portland		
Site Address:	Coolidge and Davenport Avenue, Portland, Maine 04101		

Wetland Scientist:	Jason Tome
Date of Office Review:	01/2023
Date(s) of Field Delineation:	11/2022

Wetlands of Special Significance

Yes	No	
	X	Does the on-site or immediately adjacent wetland contain a mapped and numbered DWA?
	X	Does the on-site or immediately adjacent wetland contain an Inland Waterfowl Wading Bird Habitat?
	X	Does the on-site or immediately adjacent wetland contain a potential significant vernal pool?
	X	Are there areas of open water or wetlands with emergent marsh vegetation greater than 20,000 sq. ft. on-site or immediately adjacent?
	X	Does the on-site or immediately adjacent wetland contain a 100-year flood plain?
	X	Does the on-site or immediately adjacent wetland contain a S1 or S2 community?
	X	Does the on-site or immediately adjacent wetland contain a significant wildlife habitat?
	X	Is the on-site wetland within 250' of a coastal wetland?
	X	Is the on-site wetland within 250' of a great pond?
	X	Does the site contain peatlands?
	X	Are there wetlands occurring within 25' of a river, stream, or brook?

Stormwater Qualifications

X		Is the site in the watershed of a Great Pond or Impaired stream?
X		Is the site in a lake watershed?
X		Is the site in a watershed most at risk?

Additional Comments:

FEMA flood zone FIRM:

Portland 2300510002C, Effective December 8th, 1998

Watershed:

HUC_8: 0106001 Presumpscot
HUC_10: 010600103 Presumpscot River
HUC_12: 01060010306 Highland Lake – Lower Presumpscot River

PHOTOS

Characteristic Wetlands

Characteristic Uplands

ADDENDUM

1. NORTHERN LONG-EARED BAT

The United States Fish and Wildlife Service listed the Northern Long-Eared Bat (NLEB) (*Myotis septentrionalis*) as threatened with Interim 4(d) Rule. This listing affects development occurring within the range of the NLEB (www.fws.gov/midwest/endangered/mammals/nleb/nlebRangeMap.html) and within the White Nose Syndrome Buffer Zone (http://www.fws.gov/midwest/nleb/WNSBuffer.pdf) that could cause purposeful or incidental take (harm, kill or otherwise harass). This includes the clearing of trees where NLEB could be living, activity occurring within 0.25 miles of a known, occupied hibernacula, and activities occurring within a 150-foot radius from a maternity roosting tree during the pup rearing season from June 1 to July 31st. If your project requires such action a permit may be necessary.

2. SOILS

According to U.S. Department of Agriculture, Natural Resources Conservation Service, five soil types are located within the project area. Characteristics of each series are described in the soil report according to: Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture, Official Soil Series Descriptions, https://soilseries.sc.egov.usda.gov/osdname.aspx.

DEERFIELD SERIES

The Deerfield series consists of very deep, moderately well drained soils formed in glaciofluvial deposits. They are nearly level to strongly sloping soils on terraces, deltas, and outwash plains. Slope ranges from 0 to 15 percent. Saturated hydraulic conductivity is high or very high. Mean annual temperature is about 9 degrees C. and mean annual precipitation is about 1194 mm.

TYPICAL PEDON: Deerfield loamy fine sand in a hayfield at an elevation of about 19 meters. (Colors are for moist soil.)

GEOGRAPHIC SETTING: Deerfield soils are level to strongly sloping soils on outwash terraces, outwash deltas, and outwash plains. Slope gradients are commonly 0 to 3 percent, but range to 15 percent. The soils formed in thick deposits of sand derived mainly from granite, gneiss and quartzite, but in places containing materials from schist and sandstone. The sand is poorly graded; medium sand is generally dominant and typically contains little or no gravel. The mean annual precipitation typically ranges from 965 to 1397 mm but the range includes as low as 660 mm in some places east of Adirondack Mountains in the Champlain Valley of New York. The mean annual temperature ranges from 7 to 11 degrees C. The frost-free period ranges from 120 to 200 days.

DRAINAGE AND SATURATED HYDRAULIC CONDUCTIVITY: Moderately well drained. Runoff is negligible to low. Saturated hydraulic conductivity is high or very high.

USE AND VEGETATION: Mainly cleared and used for truck crops, tobacco, potatoes, hay, pasture and silage corn. Forested areas have pitch pine, white pine, gray birch, red maple, oaks, and sugar maple. Many areas are in urban uses.

LYMAN SERIES

The Lyman series consists of shallow, somewhat excessively drained soils on glaciated uplands. They formed in loamy superglacial till. Estimated saturated hydraulic conductivity is moderately high or high throughout the mineral soil. Slope ranges from 0 to 80 percent. Mean annual temperature is about 5 degrees C.

TYPICAL PEDON: Lyman loam, on a northwest facing, 55 percent slope in a very rocky forested area. (Colors are for moist soil.)

GEOGRAPHIC SETTING: Lyman soils are on nearly level to very steep glaciated uplands. They are on the tops and sides of hills and mountains. Slope ranges from 0 to 80 percent. The soils formed in loamy supraglacial till of Wisconsin age derived mainly from micaceous schist, gneiss, phyllite, and granite. The mean annual precipitation is 790 to 2420 mm, and the mean annual temperature is -3 to 9 degrees C. The frost-free period is from 60 to 160 days. Elevation ranges from about 2 to 800 meters above mean sea level.

DRAINAGE AND SATURATED HYDRAULIC CONDUCTIVITY: Somewhat excessively drained. Potential runoff is very high. Estimated saturated hydraulic conductivity is moderately high or high in the mineral soil.

USE AND VEGETATION: Most areas are wooded. The common trees are American beech, white ash, yellow birch, paper birch, northern red oak, sugar maple, eastern white pine, eastern hemlock, red spruce, white spruce, and balsam fir. Some areas have been cleared and are primarily used for hay and pasture. A few cleared areas are used for cultivated crops.

TUNBRIDGE SERIES

The Tunbridge series consists of moderately deep, well drained soils on glaciated uplands. They formed in loamy supraglacial till. Saturated hydraulic conductivity is moderately high or high throughout the mineral soil. Slope ranges from 0 to 80 percent. Mean annual precipitation is about 1180 mm, and mean annual temperature is about 6 degrees C.

TYPICAL PEDON: Tunbridge fine sandy loam, on a west-facing, 58 percent slope under mixed northern hardwoods. (Colors are for moist soil.)

GEOGRAPHIC SETTING: Tunbridge soils are on nearly level to very steep glaciated uplands. They are on the tops and sides of hills and mountains. Slope ranges from 0 to 80 percent. The soils formed in loamy supraglacial till of Wisconsin age derived mainly from micaceous schist, gneiss, phyllite, granite, and meta-anorthosite. The mean annual precipitation is 790 to 2420 mm, and the

mean annual temperature is -3 to 7 degrees C. The frost-free period is from 60 to 160 days. Elevation ranges from about 2 to 800 meters above mean sea level.

DRAINAGE AND SATURATED HYDRAULIC CONDUCTIVITY: Well drained. Saturated hydraulic conductivity is moderately high or high throughout the mineral soil.

USE AND VEGETATION: Most areas are wooded. The common trees are American beech, white ash, yellow birch, paper birch, northern red oak, sugar maple, eastern white pine, eastern hemlock, red spruce, white spruce, and balsam fir. Some areas have been cleared and are primarily used for hay and pasture. A few cleared areas are used for cultivated crops.

SCANTIC SERIES

The Scantic series consists of very deep, poorly drained soils formed in glaciomarine or glaciolacustrine deposits on coastal lowlands and river valleys. Slope ranges from 0 to 8 percent. Saturated hydraulic conductivity of the surface and subsurface horizons is moderately high or high and low or moderately slow in the subsoil and substratum. Mean annual temperature is about 7 degrees C, and mean annual precipitation is about 1168 mm inches at the type location.

TYPICAL PEDON: Scantic silt loam, on a 1 percent slope in an idle field. (Colors are for moist soil unless otherwise noted.)

GEOGRAPHIC SETTING: Scantic soils are on coastal lowlands and river valleys. Slope ranges from 0 to 8 percent. The soils formed in medium, moderately fine and fine textured glaciomarine or glaciolacustrine deposits. The climate is humid and cool temperate. Mean annual temperature ranges from about 6 to almost 8 degrees C , and mean annual precipitation ranges from 863 to 1219 mm. The frost-free season ranges from 90 to 160 days. Elevation ranges from about 2 to 275 m above mean sea level.

DRAINAGE AND SATURATED HYDRAULIC CONDUCTIVITY: Poorly drained. Surface runoff is slow. Saturated hydraulic conductivity of the surface and subsurface horizons is moderately high or high and low or moderately slow in the subsoil and substratum.

USE AND VEGETATION: Mostly idle or woodland, some areas are used for growing hay and pasture. Common tree species include red maple, elm, gray birch, white ash, balsam fir, red and white spruce, tamarack, and some eastern white pine.

HINCKLEY SERIES

The Hinckley series consists of very deep, excessively drained soils formed in glaciofluvial materials. They are nearly level through very steep soils on outwash terraces, outwash plains, outwash deltas, kames, kame terraces, and eskers. Saturated hydraulic conductivity is high or very

high. Slope ranges from 0 to 60 percent. Mean annual temperature is about 7 degrees C, and mean annual precipitation is about 1143 mm.

TYPICAL PEDON: Hinckley loamy sand in woodland at an elevation of about 240 meters. (All colors are for moist soil.)

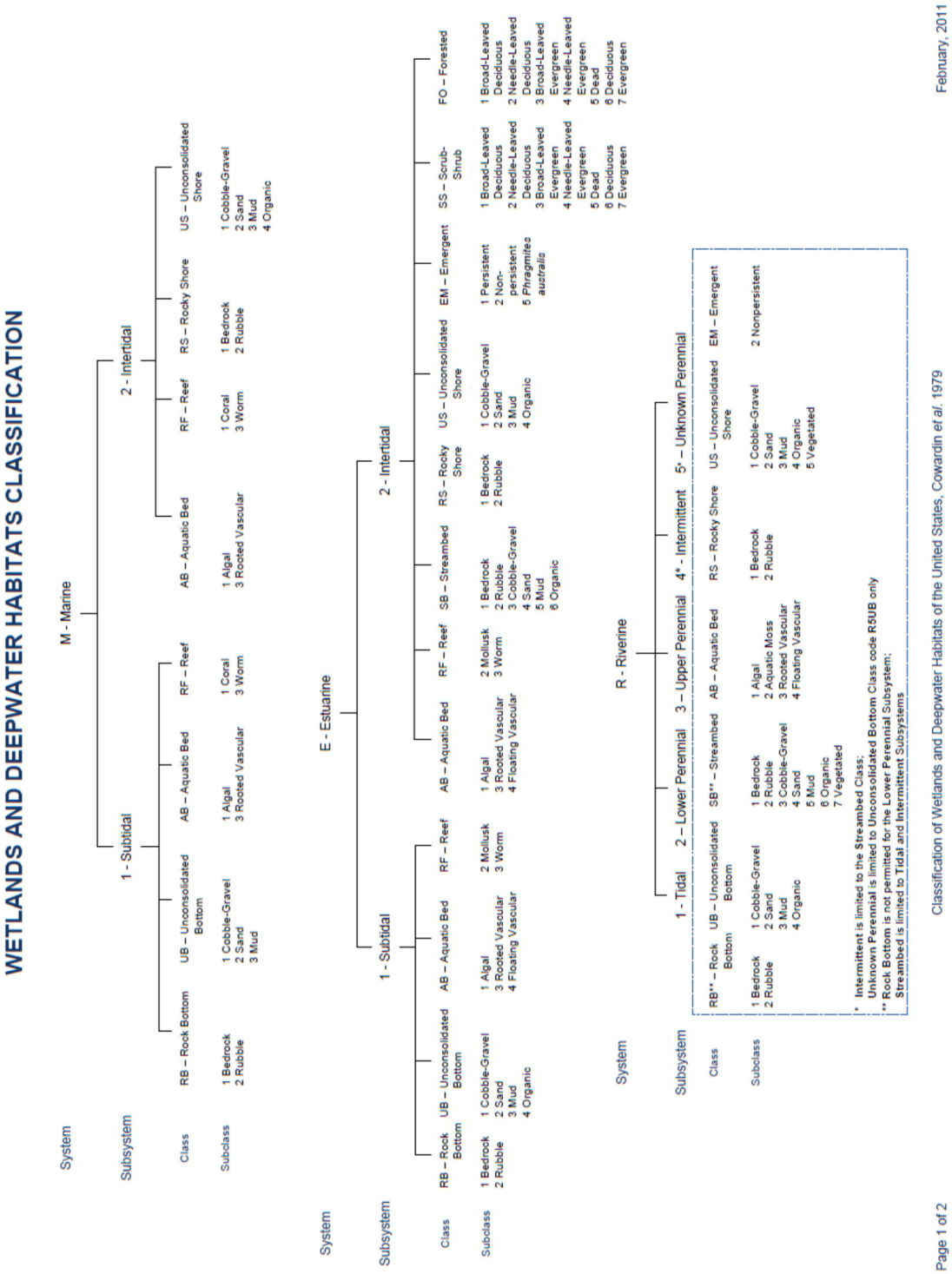
GEOGRAPHIC SETTING: Hinckley soils are nearly level through very steep soils on outwash terraces, outwash plains, outwash deltas, kames, kame terraces, and eskers. Slope is generally 0 through 8 percent on tops of the terraces, outwash plains and deltas. Slope of 8 through 60 percent or more are on the kames, eskers and margins of the outwash plains, deltas, and terraces. The soils formed in glaciofluvial sand and gravel derived principally from granite, gneiss, and schist. Mean annual temperature ranges from 7 to 13 degrees C, and mean annual precipitation ranges from 1016 to 1270 mm. Length of the growing season ranges from 140 through 240 days.

DRAINAGE AND SATURATED HYDRAULIC CONDUCTIVITY: Excessively drained. Surface runoff is negligible through low. Saturated hydraulic conductivity is high or very high.

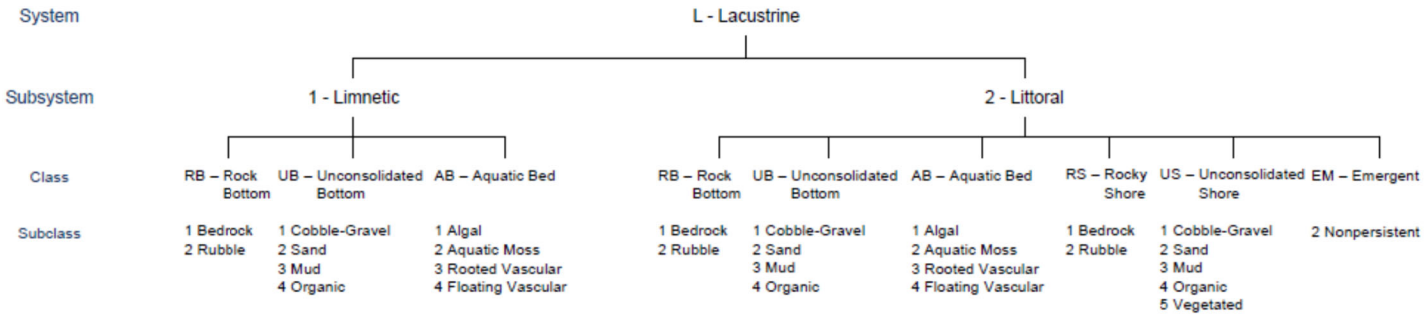
USE AND VEGETATION: Cleared areas are used for hay, pasture, and silage corn. In the southern Connecticut River Valley, Hinckley soils are used for growing tobacco and truck crops and in eastern Massachusetts, truck crops. Most areas are forested, brush land or used as urban land. Northern red, black, white, scarlet and scrub oak, eastern white and pitch pine, eastern hemlock, and gray birch are the common trees. Unimproved pasture and idle land support hardhack, little bluestem, bracken fern, sweet fern, and low bush blueberry.

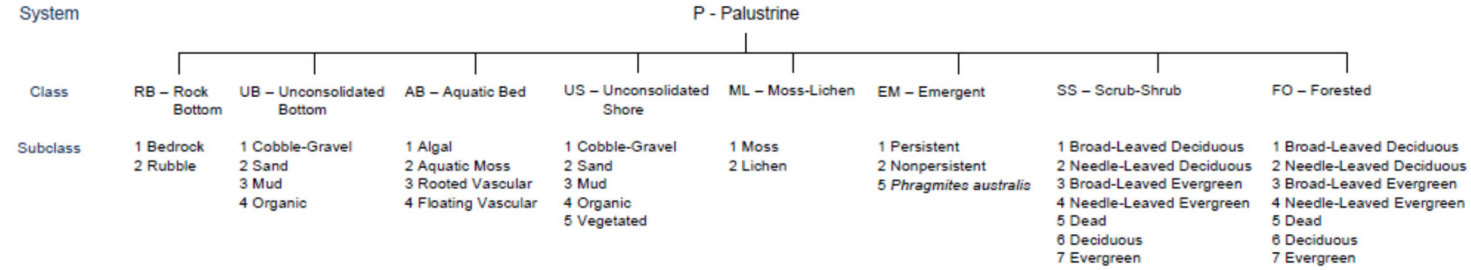
3. WETLANDS AND DEEPWATER HABITATS CLASSIFICATION

US Fish and Wildlife Service, http://www.fws.gov/wetlands/Documents/Wetlands-and-Deepwater-Habitats-Classification-chart.pdf



WETLANDS AND DEEPWATER HABITATS CLASSIFICATION





MODIFIERS

In order to more adequately describe the wetland and deepwater habitats, one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy. The farmed modifier may also be applied to the ecological system.

Water Regime			Special Modifiers	Water Chemistry			Soil
Nontidal	**Saltwater Tidal**	**Freshwater Tidal**		**Coastal Halinity**	**Inland Salinity**	**pH Modifiers for all Fresh Water**	
A Temporarily Flooded	L Subtidal	S Temporarily Flooded-Tidal	b Beaver	1 Hyperhaline	7 Hypersaline	a Acid	g Organic
B Saturated	M Irregularly Exposed	R Seasonally Flooded-Tidal	d Partly Drained/Ditched	2 Euhaline	8 Eusaline	t Circumneutral	n Mineral
C Seasonally Flooded	N Regularly Flooded	T Semipermanently Flooded-Tidal	f Farmed	3 Mixohaline (Brackish)	9 Mixosaline	i Alkaline	
E Seasonally Flooded/ Saturated	P Irregularly Flooded	V Permanently Flooded-Tidal	h Diked/Impounded	4 Polyhaline	0 Fresh		
F Semipermanently Flooded			r Artificial	5 Mesohaline			
G Intermittently Exposed			s Spoil	6 Oligohaline			
H Permanently Flooded			x Excavated	0 Fresh			
J Intermittently Flooded							
K Artificially Flooded							

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4. WETLAND RULES AND INFORMATION

A. WETLANDS OF SPECIAL SIGNIFICANCE

All coastal wetlands and great ponds are considered wetlands of special significance. In addition, certain freshwater wetlands are considered wetlands of special significance.

A. Freshwater Wetlands of Special Significance. A freshwater wetland of special significance has one or more of the following characteristics.

(1) Critically imperiled or imperiled community. The freshwater wetland contains a natural community that is critically imperiled (S1) or imperiled (S2) as defined by the Natural Areas Program.

(2) Significant wildlife habitat. The freshwater wetland contains significant wildlife habitat as defined by 38 M.R.S.A. § 480-B (10).

(3) Location near coastal wetland. The freshwater wetland area is located within 250 feet of a coastal wetland.

(4) Location near GPA great pond. The freshwater wetland area is located within 250 feet of the normal high water line, and within the same watershed, of any lake or pond classified as GPA under 38 M.R.S.A. § 465-A.

(5) Aquatic vegetation, emergent marsh vegetation or open water. The freshwater wetland contains, under normal circumstances, at least 20,000 square feet of aquatic vegetation, emergent marsh vegetation or open water.

(6) Wetlands subject to flooding. The freshwater wetland area is inundated with floodwater during a 100-year flood event based on flood insurance maps produced by the Federal Emergency Management Agency or other site-specific information.

(7) Peatlands. The freshwater wetland is or contains peatlands, except that the department may determine that a previously mined peatland, or portion thereof, is not a wetland of special significance.

(8) River, stream or brook. The freshwater wetland area is located within 25 feet of a river, stream or brook.

B. Permit Process. Alterations of wetlands of special significance usually require an individual permit. However, some alterations of freshwater wetlands of special significance may be eligible for Tier 1 or 2 review if the department determines, at the applicant's request, that the activity will not negatively affect the freshwater wetlands or other protected natural resources present. In making this determination, the department considers such factors as the size of the alteration, functions of the impacted area, existing development or character of the area in and around the alteration site, elevation differences and hydrological connection to surface water or other protected natural resources, among other things.

C. Seasonal Factors. When determining the significance of a resource or impact from an activity, seasonal factors and events that temporarily reduce the numbers or visibility of

plants or animals, or obscure the topography and characteristics of a wetland such as a period of high water, snow and ice cover, erosion event, or drought, are taken into account. Determinations may be deferred for an amount of time necessary to allow an assessment of the resource without such seasonal factors.

B. STREAM CHANNELS

According to Maine's Natural Resource Protection Act, Title 38, Article 5-A, Protection of Natural Resources, §480-B Definitions:

"River, stream or brook" means a channel between defined banks. A channel is created by the action of surface water and has two or more of the following characteristics:

(1) It is depicted as a solid or broken blue line on the most recent edition of the U.S. Geological Survey 7.5-minute series topographic map or, if that is not available, a 15-minute series topographic map.

(2) It contains or is known to contain flowing water continuously for a period of at least 6 months of the year in most years.

(3) The channel bed is primarily composed of mineral material such as sand and gravel, parent material or bedrock that has been deposited or scoured by water.

(4) The channel contains aquatic animals such as fish, aquatic insects or mollusks in the water or, if no surface water is present, within the stream bed.

(5) The channel contains aquatic vegetation and is essentially devoid of upland vegetation.

"River, stream or brook" does not mean a ditch or other drainage way constructed, or constructed and maintained, solely for the purpose of draining storm water or a grassy swale.

C. VERNAL POOLS

As defined by Maine's Department of Environmental Protection (MDEP): A vernal pool, also referred to as a seasonal forest pool, is a natural, temporary to semi-permanent body of water occurring in a shallow depression that typically fills during the spring or fall and may dry during the summer. Vernal pools have no permanent inlet and no viable populations of predatory fish. A vernal pool may provide the primary breeding habitat for wood frogs (*Rana sylvatica*), spotted salamanders (*Ambystoma maculatum*), blue-spotted salamanders (*Ambystoma laterale*), and fairy shrimp (*Eubranchipus spp*.), as well as valuable habitat for other plants and wildlife, including several rare, threatened, and endangered species. A vernal pool intentionally created for the purposes of compensatory mitigation is included in this definition.

As of September 1, 2007, "Significant Vernal Pools" are defined by MDEP as "Significant Wildlife Habitat." As read in MDEP's Chapter 335 -- Significant Wildlife Habitat Rules, "Whether a vernal pool is a significant vernal pool is determined by the number and type of pool-breeding amphibian egg masses in a pool, or the presence of fairy shrimp, or use by threatened or endangered species as specified in Section 9(B). Significant vernal pool habitat consists of a vernal pool depression and a portion of the critical terrestrial habitat within a 250-foot radius of the spring or fall high water mark of the depression. An activity that takes place in, on, over, or adjacent to a significant vernal pool habitat must meet the standards of this chapter."

Species and abundance criteria required for Significant Vernal Pools.

Species	Abundance Criteria
Fairy shrimp	Presence in any life stage.
Blue spotted salamanders	Presence of 10 or more egg masses.
Spotted salamanders	Presence of 20 or more egg masses.
Wood frogs	Presence of 40 or more egg masses.

MDEP habitat management standards for significant vernal pools: To the greatest extent practicable, the following management practices must be followed within significant vernal pool habitat.

(1) No disturbance within the vernal pool depression;

(2) Maintain a minimum of 75% of the critical terrestrial habitat as unfragmented forest with at least a partly-closed canopy of overstory trees to provide shade, deep litter and woody debris.

(3) Maintain or restore forest corridors connecting wetlands and significant vernal pools;

(4) Minimize forest floor disturbance; and

(5) Maintain native understory vegetation and downed woody debris.

If more than 25% of the critical terrestrial habitat has been previously developed, restoring a portion of that area through supplemental planting or regrowth of native forest species may be considered toward meeting these standards, or towards standards for avoidance, minimization, or compensation. For purposes of Chapter 355, developed area includes disturbed areas excluding

areas that are returned to a condition with the same drainage patterns and the same or improved cover type that existed prior to the disturbance;

Currently, Army Corps of Engineers (ACOE) regulate vernal pools but do not have specific characteristics that define a vernal pool, or a definition of which vernal pools require protection or buffering. They review each site on a case by case basis. ACOE's jurisdiction does not begin until the waters of the United States are impacted.

D. MDEP NRPA - PERMIT BY RULE

A "permit by rule" or "PBR", when approved by MDEP, is an approval for an activity that requires a permit under the Natural Resources Protection Act (NRPA). Only those activities described in Chapter 305 may proceed under the PBR process. A PBR activity will not significantly affect the environment if carried out in accordance with this chapter, and generally has less of an impact on the environment than an activity requiring an individual permit. A PBR satisfies the NRPA permit requirement and Water Quality Certification requirement. The following projects may be eligible as PBR activities:

Section (2) Activity Adjacent to Protected Natural Resource

> (An activity adjacent to (any land area within 75 feet, measured horizontally, of the normal high water line), but not in: a coastal wetland, great pond, river, stream or brook or significant wildlife habitat contained within a freshwater wetland; or freshwater wetlands consisting of or containing: under normal circumstances, at least 20,000 square feet of aquatic vegetation, emergent marsh vegetation or open water, except for artificial ponds or impoundments; or peatlands dominated by shrubs, sedges and sphagnum moss.

Section (3) Placement of permanent intake pipes and water monitoring devices (including drilled wells)

Section (4) Replacement of Structures

Section (6) Movement of Rocks or Vegetation

Section (7) Placement of outfall pipes (including ditches and drain tiles)

Section (8) Shoreline stabilization using vegetation or riprap

Section (9) Construction of crossings (utility lines, pipes and cables)

Section (10) Construction of stream crossings (bridges, culverts and fords)

Section (11) State Transportation Facilities

Section (12) Restoration of natural areas (i.e., "undoing" human alteration)

Section (13) Fisheries & wildlife habitat creation or enhancement and water quality improvement projects

Section (15) Public Boat Ramps

Section (16) Selected activities in coastal sand dunes

Section (17) Transfers and Permit Extensions

Section (18) One-time renewals of maintenance dredging permits

Section (19) Activities in/on/over significant vernal pool habitat

Section (20) Activities located in/on/over high or moderate value inland waterfowl & wading bird habitat or shorebird nesting, feeding & roosting areas

E. MDEP NRPA - TIER REVIEW PROCESS

NRPA's Tier Review process constitutes an application to the Maine Department of Environmental Protection (MDEP) for a proposed alteration to a freshwater wetland that qualifies for Tier 1, 2 or 3 review. The square footage of impact is based on the alteration or impact of the whole activity in the wetland. If any part of the overall activity requires a higher tier review, then the whole activity will be reviewed under that higher tier.

The Tier Review process is required for impacts larger than 4,300 square feet, and for requesting a permit for activities in, on, or over a protected natural resource. It is also used for activities adjacent to certain protected natural resources (38 MRSA 480-C(1)). The Tier Review process is required when the activity is not eligible for a PBR.

According to 38 M.R.S.A. Section 480-X(2), an application for a permit to undertake activities altering freshwater wetlands must be reviewed in accordance with the following:

(1) A Tier 1 review process applies to any activity that involves a freshwater wetland alteration up to 15,000 square feet and does not involve the alteration of freshwater wetlands listed in 38 M.R.S.A. Section 480-X(4);

(2) A Tier 2 review process applies to any activity that involves a freshwater wetland alteration of 15,000 square feet up to one acre and does not involve the alteration of freshwater wetlands listed in 38 M.R.S.A. Section 480-X (4 or 5);

(3) A Tier 3 review process applies to any activity that does involve a freshwater wetland alteration greater than one acre, or an alteration of a freshwater wetland listed in 38 M.R.S.A. Section 480-X (4 or 5).

According to 38 M.R.S.A. Section 480-X(4), the following activities are not eligible for Tier 1 or Tier 2 review unless MDEP determines that the activity will not negatively affect the freshwater wetlands and other protected natural resources present.

(1) Activities located within 250 feet of a coastal wetland;

(2) Activities located within 250 feet of the normal high-water line, and within the same watershed, of any lake or pond classified as GPA under section 465-A;

(3) Activities occurring in freshwater wetlands, other than artificial ponds or impoundments, containing under normal circumstances at least 20,000 square feet of aquatic vegetation, emergent marsh vegetation or open water;

(4) Activities occurring in freshwater wetlands that are inundated with floodwater during a 100-year flood event based on flood insurance maps produced by the Federal Emergency Management Agency or other site-specific information;

(5) Activities occurring in freshwater wetlands containing significant wildlife habitat that has been mapped, identified or defined, as required pursuant to section 480-B(10), at the time of the filing by the applicant;

(6) Activities occurring in peatlands dominated by shrubs, sedges and sphagnum moss, except that applications proposing work in previously mined peatlands may be considered by the department for Tier 1 or Tier 2 review, as applicable;

(7) Activities occurring within 25 feet of a river, stream or brook.

According to 38 M.R.S.A. Section 480-X(5), an activity in freshwater wetlands containing a natural community that is imperiled (S2) or critically imperiled (S1), as defined by the Natural Areas Program pursuant to Title 12, Section 544 is not eligible for Tier 2 review unless the department determines that the activity will not negatively affect the freshwater wetlands and other protected natural resources present.

NRPA General Requirements for both the Tier 1 and Tier 2 review process require that the proposed freshwater wetland alteration must be avoided, if feasible, after considering cost, logistics, technology and the overall purpose of the project. However, if unavoidable, the alteration must be limited to the minimum amount necessary to complete the project. The project must utilize both temporary and permanent erosion control measures to prevent sedimentation of any protected natural resource. In addition, the alteration site must maintain an undisturbed 25 foot buffer strip between the activity and any river, stream or brook and must not violate any state water quality law, including those governing the classification of the State's waters.

F. U.S. ARMY CORPS OF ENGINEERS REVIEW PROCESS

The New England District of the U.S. Army Corps of Engineers (ACOE) requires authorization regardless of the amount of proposed alterations to freshwater wetlands. The New England District of ACOE issues 23 General Permits (GPs), for activities subject to ACOE jurisdiction in waters of the United States within the boundaries of the State of Maine including tribal lands, and in adjacent ocean waters to the seaward limit of the outer continental shelf. These GPs are issued in accordance with ACOE regulations at 33 CFR 320 – 332 and specifically 33 CFR 325.2(e)(2).

Permits are required from the ACOE for the following work:

A. The construction of any structure in, over, or under any navigable water of the U.S. (see 33 CFR 328), the excavating or dredging from or depositing of material in such waters, or the accomplishment of any other work affecting the course, location, condition, or capacity of such waters. The ACOE regulates these activities under Section 10 of the Rivers and Harbors Act of 1899 (see 33 CFR 322);

B. The discharge of dredged or fill material and certain discharges associated with excavation into waters of the U.S. including wetlands. The ACOE regulates these activities under Section 404 of the Clean Water Act (see 33 CFR 323); and

C. The transportation of dredged material for the purpose of disposal in the ocean. The Corps regulates these activities under Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (see 33 CFR 324).

In order for activities to qualify for these General Permits (GPs), they shall meet the GPs terms and eligibility criteria within pages 1-4 of the Department of the Army General Permits for the State of Maine, all applicable general conditions (GCs) in Section IV of the Department of the Army General Permits for the State of Maine, and terms of the Maine General Permits in Section V of the Department of the Army General Permits for the State of Maine. Any activity not specifically listed may still be eligible for authorization under these GPs; prospective permittees are advised to contact the ACOE for specific eligibility determination.

Under these GPs, activities may qualify for the following:

• Self-Verification (SV): Prospective permittees shall confirm that the activity meets all the applicable terms and conditions of SV. Consultation with the ACOE and/or other relevant federal and state agencies may be necessary to ensure compliance with the applicable general conditions (GCs) and related federal laws such as the National Historic Preservation Act (GC 15), the Endangered Species Act (GC 16), the Magnuson-Stevens Fishery Conservation and Management Act (GC 17), and the Wild and Scenic Rivers Act (GC 13). Activities that are eligible for SV are authorized under these GPs provided the prospective permittee has:

i. Confirmed that the activity meets all applicable terms and conditions of SV.
ii. Provided notifications to the State Historic Preservation Officer (SHPO) (the SHPO in the State of Maine is the Maine Historic Preservation Commission, or MHPC) and all

five federally-recognized tribes in the State of Maine (Tribal Historic Preservation Officers, or THPOs) listed in Section VIII before submitting the SV to the ACOE in order to be reviewed for the presence of historic, archeological, architectural, or tribal resources in the action area that the activity may affect (see GC 15). Prospective permittees are not required to wait for a response to their notifications before submitting the SV to the ACOE.

iii. At least two weeks before work is to commence, submitted to the ACOE a Self-Verification Notification Form (SVNF, page 36) with all of the following attachments: location map, project plans, and an Official Species List of federally threatened and endangered species that may occur in the activity's action area and the email address of the person who generated the list (see GC 16).

NOTE: A copy of a state permit application form may be an acceptable surrogate for the SVNF itself; however, the applicant shall not rely on the state permitting agency to provide the Corps a copy of their state permit application.

• Pre-Construction Notification (PCN): Notification to, and written verification from the ACOE is required. For activities that do not qualify for SV or where otherwise required by the terms and conditions of the GPs, the prospective permittee shall submit a PCN and obtain written verification from the ACOE before starting work in Corps jurisdiction. The ACOE will coordinate review of all PCN activities with other federal and state agencies, as appropriate. The ACOE will attempt to issue written verification of the PCN within 60 days of receiving a complete application.

All prospective permittees for PCN activities shall follow the instructions on found on pages 37 – 42, and in particular:

i. Submit directly to the ACOE application form *ENG Form 4345* (pages 40 – 42), or the surrogate state permit application form as noted above.
ii. Provide project information outlined on pages 37 – 42 (Content of a Pre-Construction Notification).
iii. Submit an Official Species List of federally threatened and endangered species that may occur in the activity's action area and the email address of the person who generated the list (GC 16).
iv. Provide notifications to the SHPO (MHPC) and all five THPOs in the State of Maine listed in Section VIII before submitting the PCN to the ACOE in order to be reviewed for the presence of historic, archeological, architectural, or tribal resources in the action area that the activity may affect (see GC 15). The PCN shall include documentation that MHPC and all of the THPOs were notified (a copy of the prospective permittee's cover letter or emails to MHPC and the THPOs is acceptable). Prospective permittees are not required to wait for a response to their notifications before submitting a PCN to the ACOE.

Projects that are not eligible to GPs require an Individual Permit.

- Individual Permit (IP): Prospective permittees shall submit an application directly to the ACOE. These GPs do not affect the ACOE IP review process or activities exempt from ACOE regulation. For general information regarding IPs prospective permittees are encouraged to contact the ACOE.

  In addition, the ACOE retains discretionary authority on a case-by-case basis to elevate GP-eligible activities to an IP based on concerns for the aquatic environment or for any other factor of the public interest (33 CFR 320.4(a)). Whenever the ACOE notifies a prospective permittee that an IP is required, no work in ACOE jurisdiction may be conducted until the ACOE issues the required authorization in writing indicating that the work may proceed

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Maine Department of Environmental Protection: www.maine.gov/dep/land/nrpa/index.html

United States Fish and Wildlife Service, National Wetlands inventory: www.fws.gov/wetlands/

United States Army Corps of Engineers, New England District: www.nae.usace.army.mil/Missions/Regulatory.aspx

United States Natural Resources Conservation Service, United States Department of Agriculture, Official Soil Series Descriptions: soils.usda.gov/technical/classification/osd/index.html.

ATTACHMENTS:

- **NRCS CUSTOM SOIL RESOURCE REPORT**
- **WETLAND DELINEATION DATASHEETS**
- **WETLAND DELINEATION PLAN**

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

December 9, 2022

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.

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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.


70° 17' 54" W
70° 17' 36" W
395400
395440
395480
395520
395560
395600
395640
395680
395720
395760
43° 42' 20" N
43° 42' 12" N
4839980
4839940
4839900
4839860
4839820
4839780
4839740
DeB
HIB
HIB
DeB
Sn
Sn
HrB
Soil Map may not be valid at this scale.
Map Scale: 1:1,760 if printed on A landscape (11" x 8.5") sheet.
N
Meters
0 25 50 100 150
Feet
0 50 100 200 300
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 19, Aug 30, 2022

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

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

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

MAP LEGEND

MAP INFORMATION

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DeB	Deerfield loamy fine sand, 3 to 8 percent slopes	1.3	41.1%
HlB	Hinckley loamy sand, 3 to 8 percent slopes	0.3	9.6%
HrB	Lyman-Tunbridge complex, 0 to 8 percent slopes, rocky	0.5	15.2%
Sn	Scantic silt loam, 0 to 3 percent slopes	1.1	34.2%
Totals for Area of Interest		**3.3**	**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
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

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

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

Map Unit Setting

National map unit symbol: 2x1cx
Elevation: 0 to 520 feet
Mean annual precipitation: 36 to 65 inches
Mean annual air temperature: 36 to 52 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Lyman and similar soils: 50 percent
Tunbridge and similar soils: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lyman

Setting

Landform: Hills, ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till derived from mica schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 3 inches: loam
E - 3 to 5 inches: fine sandy loam
Bhs - 5 to 7 inches: loam
Bs1 - 7 to 11 inches: loam
Bs2 - 11 to 18 inches: channery loam
R - 18 to 79 inches: bedrock

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.5 percent
Depth to restrictive feature: 11 to 24 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 14.03 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: F144BY702ME - Shallow and Moderately-deep Till
Hydric soil rating: No

Description of Tunbridge

Setting

Landform: Hills, ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till derived from mica schist

Typical profile

Oe - 0 to 3 inches: moderately decomposed plant material
Oa - 3 to 5 inches: highly decomposed plant material
E - 5 to 8 inches: fine sandy loam
Bhs - 8 to 11 inches: fine sandy loam
Bs - 11 to 26 inches: fine sandy loam
BC - 26 to 28 inches: fine sandy loam
R - 28 to 79 inches: bedrock

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.5 percent
Depth to restrictive feature: 21 to 41 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 14.03 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F144BY702ME - Shallow and Moderately-deep Till
Hydric soil rating: No

Sn—Scantic silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2slv3
Elevation: 10 to 900 feet
Mean annual precipitation: 33 to 60 inches
Mean annual air temperature: 39 to 45 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Scantic

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: D
Ecological site: F144BY304ME - Wet Clay Flat
Hydric soil rating: Yes

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WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Coolidge and Davenport Avenue City/County: Portland, Maine Sampling Date: 11/2022

Applicant/Owner: City of Portland State: ME Sampling Point: A

Investigator(s): JT Section, Township, Range:

Landform (hillside, terrace, etc.): Mound Local relief (concave, convex, none): Convex Slope (%): 2

Subregion (LRR or MLRA): LRR R, MLRA 144B Lat: 43°42'15.9728" Long: 70°17'46.3024" Datum: NAD83

Soil Map Unit Name: NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation NO , Soil NO , or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation NO , Soil NO , or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No	**within a Wetland?** **Yes** X **No**
Wetland Hydrology Present?	Yes X	No	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No ___	Depth (inches): ___
Water Table Present?	Yes ___	No ___	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: A

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus tremuloides*	20	Yes	FACU
2. *Quercus rubra*	10	No	FACU
3. *Pinus strobus*	25	Yes	FACU
4. *Tsuga canadensis*	10	No	FACU
5. *Fagus grandifolia*	10	No	FACU
6.			
7.			
	75	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Abies balsamea*	25	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	25	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *N/a*			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
		=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *N/a*			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	25	x 3 =	75
FACU species	75	x 4 =	300
UPL species	0	x 5 =	0
Column Totals:	100 (A)		375 (B)

Prevalence Index = B/A = 3.75

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-15	5Y 5/3						Mucky Loam/Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Coolidge and Davenport Avenue City/County: Portland, Maine Sampling Date: 11/2022

Applicant/Owner: City of Portland State: ME Sampling Point: A

Investigator(s): JT Section, Township, Range:

Landform (hillside, terrace, etc.): gentle slope Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA): LRR R, MLRA 144B Lat: 43°42'15.4807" Long: 70°17'42.0055" Datum: NAD83

Soil Map Unit Name: NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation NO , Soil NO , or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation NO , Soil NO , or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area**	
Hydric Soil Present?	Yes X	No	**within a Wetland?**	**Yes** X **No**
Wetland Hydrology Present?	Yes X	No	If yes, optional Wetland Site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)	___ Water-Stained Leaves (B9)	___ Surface Soil Cracks (B6)
X High Water Table (A2)	___ Aquatic Fauna (B13)	X Drainage Patterns (B10)
X Saturation (A3)	___ Marl Deposits (B15)	___ Moss Trim Lines (B16)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Dry-Season Water Table (C2)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Crayfish Burrows (C8)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Saturation Visible on Aerial Imagery (C9)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Stunted or Stressed Plants (D1)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	X Geomorphic Position (D2)
___ Inundation Visible on Aerial Imagery (B7)	___ Other (Explain in Remarks)	___ Shallow Aquitard (D3)
___ Sparsely Vegetated Concave Surface (B8)		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present?	Yes ___	No ___	Depth (inches): ___	
Water Table Present?	Yes X	No ___	Depth (inches): 20	
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 0	**Wetland Hydrology Present?** **Yes** X **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: A

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus nigra*	20	Yes	FACW
2. *Quercus rubra*	5	No	FACU
3. *Pinus strobus*	5	No	FACU
4. *Acer rubrum*	15	Yes	FAC
5.			
6.			
7.			
	45	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Lonicera morrowii*	10	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	10	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Onoclea sensibilis*	50	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	50	=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	70	x 2 =	140
FAC species	15	x 3 =	45
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals:	105 (A)		265 (B)

Prevalence Index = B/A = 2.52

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 4/1						Mucky Loam/Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- X Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

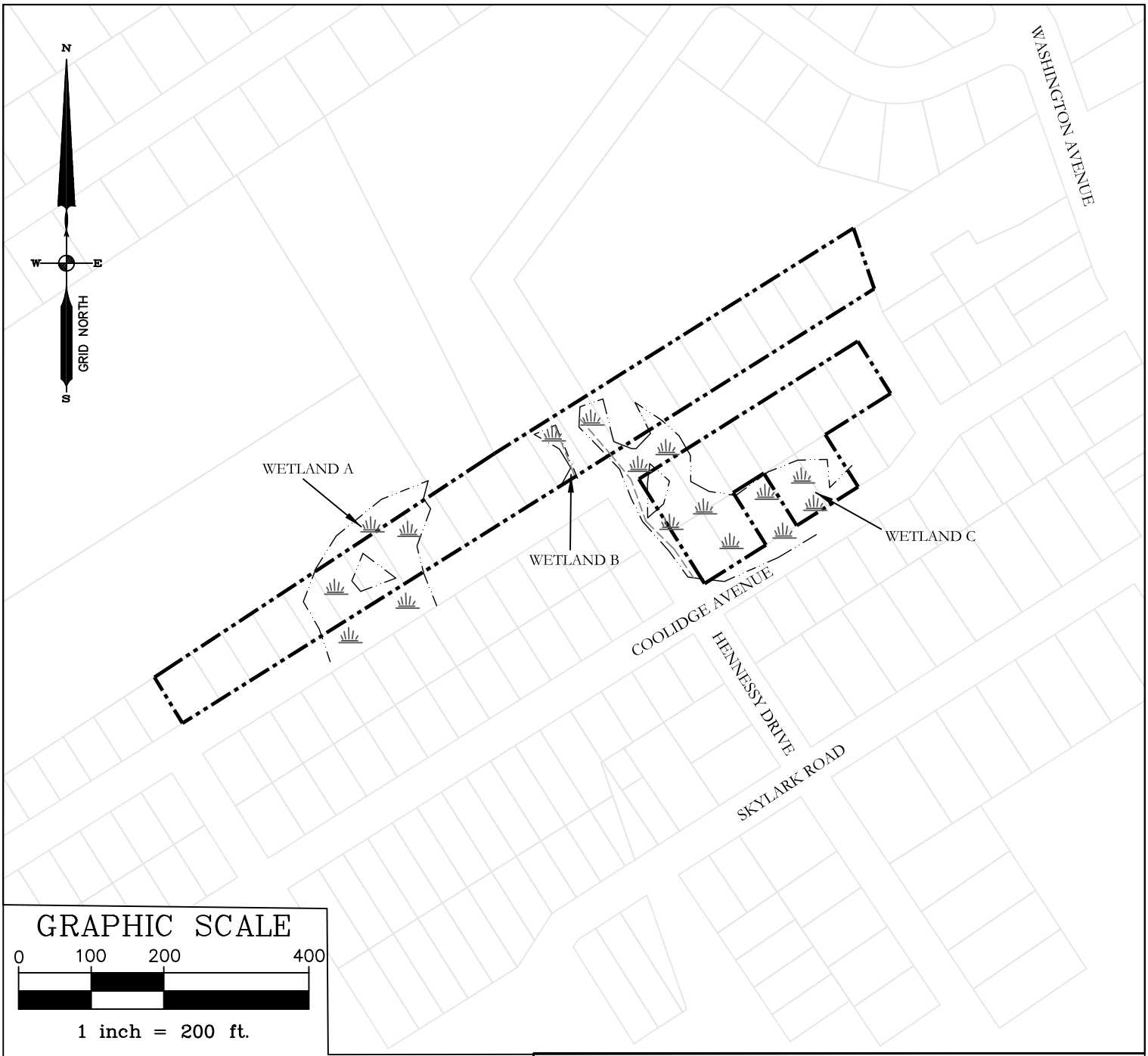
Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:



GRAPHIC SCALE

0 100 200 400

1 inch = 200 ft.

LEGEND

- DELINEATION EXTENTS
- DELINEATED WETLANDS
- DITCH

NOTES:

1. PARCEL BOUNDARY INFORMATION OBTAINED FROM STATE OF MAINE GIS DATABASE.
2. DATUM: NAD83 STATE PLANE MAINE WEST (FEET).
3. 2 FOOT CONTOURS OBTAINED FROM NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA).
4. WETLAND BOUNDARIES WERE IDENTIFIED AND DELINEATED BY JONES ASSOCIATES INC IN NOVEMBER OF 2022 ACCORDING TO U.S. ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL (1987) AND REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION.
5. WETLAND FLAGS WERE LOCATED USING TRIMBLE GLOBAL POSITIONING SYSTEM (GPS) TECHNOLOGY WITH EXPECTED AVERAGE ACCURACY OF SUB-METER. THIS METHOD IS RECOGNIZED BY BOTH STATE AND FEDERAL AGENCIES. HOWEVER, JONES ASSOCIATES INC RECOMMENDS THAT THE WETLAND BOUNDARY BE SURVEYED USING A MORE PRECISE METHOD IF ANY FILL OR REGULATED ACTIVITIES ARE TO BE PERFORMED WITHIN 20 FEET OF THE GPS LOCATED WETLAND.
6. NO STREAMS WERE OBSERVED DURING THIS DELINEATION. DITCHES WERE OBSERVED AND SKETCHED ONTO THE WETLAND PLAN AND ARE APPROXIMATE ONLY. DITCHES ARE NOT CLASSIFIED AS WETLANDS.

PLAN TITLE:

WETLAND PLAN

COOLIDGE & DAVENPORT AVENUE
TAX MAP 348 LOTS C001-C013 & B005-B014
TAX MAP 349 LOTS C013-C021
PORTLAND, MAINE 04103

PREPARED FOR:

LORI J. PAULETTE
389 CONGRESS STREET
PORTLAND, MAINE 04101

PREPARED BY:

JONES ASSOCIATES INC.
Foresters, Surveyors And Environmental Consultants
280 POLAND SPRING ROAD, AUBURN, MAINE 04210
(207) 241-0235

PLAN DATE: NOVEMBER 2022

FIELD WORK DATE: NOVEMBER 2022

SCALE: 1"=200'

PROJ. #: 22-053PO

CITY OF PORTLAND
Parks, Recreation & Facilities Department
Ethan Hipple, Director

CITY OF PORTLAND
Parks, Recreation & Facilities Department
Alex Marshall, Parks Director

Memorandum

TO: Parks Commission and Land Bank Commission
FROM: Alex Marshall, Parks Director, Parks, Recreation and Facilities Department
SUBJECT: Parks Division Update
DATE: April 2023

Parks Division Staffing

- Total Budgeted positions in Parks Division: 33
- Vacancy: City Arborist
- Seasonal Positions: Park Maintenance, Horticulture, Forestry, Ballfields, Playgrounds, Park Rangers

Tree Planting Season

The City Forestry team is preparing the tree planting locations for 2023. The tree planting season runs from Mid-April to the end of June. The first few weeks are when bare root trees are planted followed by the remaining ball and burlap trees. Typically, the crew plants between 150-200 trees per year. The numbers are all contingent on weather conditions, staffing levels and viable planting spaces. Each year the team gives attention to our neighborhoods in need of improved canopy cover while also addressing co-op and general tree planting requests. The tree species selected for each location is decided by a number of factors such as homeowner request, overhead utilities, diversity of existing species on the street, etc. Sebago Technics is also moving the ARPA Bayside Tree Planting Project forward which will be an influx of 80 or more trees in the Bayside Neighborhoods. Bid documents will be advertised shortly and a Spring and Fall planting is expected in 2023.

Capital Improvements Plan (CIP)

The City Council has approved the CIP budget for Fiscal Year 2024. This process for Parks started back in May of 2022 and worked its way through Friends Groups, the Parks Commission, City Staff, Finance Department, City Manager, Finance Committee and concluded with the City Council. The Parks projects that were funded in this process are below:

<u>Parks, Recreation & Facilities</u>
Longfellow Playground Replacement - $450,000
Deering Oaks ADA Sidewalks and Curbing - Tennis Court Road (State to Deering) - $335,000
Preble Street Fitness Course - $30,000
Great Diamond Island Basketball Court Reconstruction - $35,000
Clark Street, Tyng-Tate Playground Equipment Replacements and Reiche Playground Design - $150,000
Riverton Tennis Court Conversion to Pickleball Courts - $150,000
Court Resurfacing: Various Tennis/Pickleball Courts - $50,000

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Planning & Urban Development
Congress Square Redesign - $700,000
Parkside to Libbytown Pathway Phase II - $140,000

In-ground Trash Barrels
In 2021, the City was awarded ARPA funding of which the Parks Department was granted a portion of to improve trash barrels citywide. Our current barrels are only about 30 gallons of capacity and prove to be a challenge on busier summer days when they fill quickly. Because of this limitation, City Staff explored in-ground trash barrels that can hold up to 300 gallons of waste at a time and require less frequent servicing and minimal maintenance. This week, Parks Staff are installing the first 6 of that style barrel at the Eastern Promenade and Quarry Run Dog Park as a pilot for future additions in other Parks.

Homeless Impacts on Parks
Currently there are a reported 102 tents citywide. These can be anywhere from a single tent in a remote park to a group of tents on the peninsula as seen in a few locations. City Staff are currently working diligently to provide additional housing for the influx of Asylum Seekers as well as the more traditional homeless population so there can be less pressure on the citywide park system. The impacts to local businesses, park visitors and city staff are ever increasing. The campsites around the City are not sanctioned, and as soon as there is capacity in our homeless shelters, campsites will be removed and campers offered indoor shelter.

Park Projects and Department Updates
Staff are working on the following Park Improvement projects:

- Park Walkway improvements: Phase 3 of 3 at Deering Oaks Park has begun and all new walkway base work has been completed. The contractor is mobilizing their team to Dougherty Field Playground to finish some site work as they wait for asphalt plants to open up for the season.
- Fitzpatrick Drainage Improvements: Drawings are complete. An RFP is ready to be advertised.
- Talbot School Basketball Court Reconstruction: The bid documents have been advertised.
- Preble Street Field & Stormwater Project: Final design and landscaping plans are being finalized. There have been some construction delays that will push the installation of the field back to the Fall of 2023 with field play to begin in the late Spring or Summer of 2024.
- Riverton Preserve: Recreation improvement plans are in progress and will consist primarily of a trail network with other improvements. This project is intended to fulfill LWCF conversion requirements, and final approval of the improvement plan rests with the state and National Park Service, which has a public engagement process.
- Riverton Trolley Park: Our project team is working through finalizing the contract with the state for this grant and defining the RFP for the site work to commence in 2023 and 2024.
- Lower Western Prom Park Improvements: Final design improvements have been made and we have secured the additional funding via CDBG to execute the project later in 2023 or beginning

CITY OF PORTLAND
Parks, Recreation & Facilities Department
Alex Marshall, Parks Director

of 2024

- Dougherty Field Skatepark Expansion: Construction has begun. The Contractor will be working on site for the next 10-12 weeks with the anticipation of finishing the project before the Summer.
- Community Garden Fence and Shed Replacement: All existing fence locations have been demolished and sheds removed. Excessive debris has been removed and new water lines ran where applicable. The new fencing and sheds will be installed over the course of the next month.