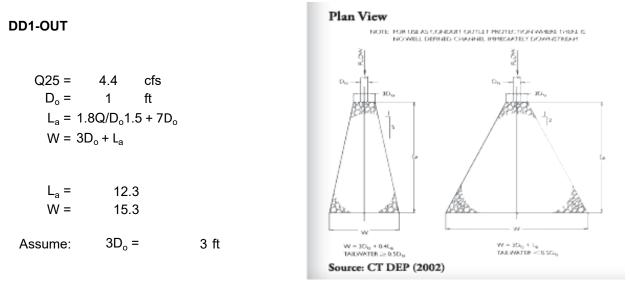
# Appendix K

**Outlet Protection Calculations** 

CMA ENGINEERS, Inc.	PROJECT:	Granite State Landfill
CIVIL/ENVIRONMENTAL ENGINEERS		
35 Bow Street	PROJECT NO:	1101
Portsmouth, NH 03801	DATE:	October 11, 2023
Phone: (603) 431-6196	CALC. BY:	NJM
Fax: (603) 431-5376	CHECK'D BY:	AJS

## **Outlet Protection Calculations NH Stormwater Manual Section 4-6)**



## DD2-OUT

## DD3-OUT

Notes:

D <sub>o</sub> =	2.40 cf 1 ft 8Q/D <sub>o</sub> 1.5 +		D <sub>o</sub> =	0.00 cfs 1 ft 8Q/D <sub>o</sub> 1.5 + 7	Do
W = 3[	° °	U U	W = 30	5	0
L <sub>a</sub> = W =	9.9 12.9		L <sub>a</sub> = W =	7.0 10.0	
Assume:	3D <sub>o</sub> =	3 ft	Assume:	3D <sub>o</sub> =	3 ft

## DD3A-OUT

## DD4-OUT

			12" Pipe
Q25 =	2.30 cfs	;	Q25 = 2.80 cfs
D <sub>o</sub> =	1 ft		$D_o = 1$ ft
L <sub>a</sub> = 1	.8Q/D <sub>o</sub> 1.5 + 7	D <sub>o</sub>	$L_a = 1.8Q/D_o 1.5 + 7D_o$
W = 3	D <sub>o</sub> + L <sub>a</sub>		$W = 3D_o + L_a$
L <sub>a</sub> =	9.8		L <sub>a</sub> = 10.4
VV =	12.8		W = 13.4
Assume:	3D <sub>o</sub> =	3 ft	Assume: $3D_{o} = 3$ ft

## DD5-OUT

### DD6-OUT

Pipe = 1	2" Pipe		
Q25 =	4.60 cfs		Q25 = 0.00 cfs
D <sub>o</sub> =	1 ft		$D_o = 1$ ft
L <sub>a</sub> = 1	.8Q/D <sub>o</sub> 1.5 + 7I	Do	$L_a = 1.8Q/D_o 1.5 + 7D_o$
W = 3	SD <sub>o</sub> + L <sub>a</sub>		$W = 3D_o + L_a$
L <sub>a</sub> =	12.5		L <sub>a</sub> = 7.0
W =	15.5		W = 10.0
Assume:	3D <sub>o</sub> =	3 ft	Assume: $3D_0 = 3$ ft

## POND-2-OUT

## POND-3-OUT

Q25 = D <sub>o</sub> =	0.00 2		(	Q25 = D <sub>o</sub> =	2.60 2		
L <sub>a</sub> = 1.8	8Q/D <sub>o</sub> 1.	5 + 7D <sub>o</sub>		L <sub>a</sub> = 1.	8Q/D₀1.	5 + 7D <sub>o</sub>	
W = 30	$D_o + L_a$			W = 3[	$D_o + L_a$		
L <sub>a</sub> =	14.0			L <sub>a</sub> =	15.0	3	
W =	20.0			W =	21.6	5	
Assume:	3D <sub>o</sub> =	6 ft	Ass	sume:	3D <sub>o</sub> =	=	6 ft

## POND-4-OUT

## POND-5-OUT

D <sub>o</sub> =	1.80 cfs 1 ft 8Q/D <sub>o</sub> 1.5 + 7 D <sub>o</sub> + L <sub>a</sub>		$Q25 = 6.00 \text{ cfs}$ $D_o = 1 \text{ ft}$ $L_a = 1.8Q/D_o 1.5 + 7D_o$ $W = 3D_o + L_a$
L <sub>a</sub> = W =	9.2 12.2		$L_a = 14.2$ W = 17.2
Assume:	3D <sub>o</sub> =	3 ft	Assume: $3D_o = 3$ ft

## POND-6-OUT

## POND-7-OUT

Q25 = D <sub>o</sub> =					13.40 2		
L <sub>a</sub> = 1.8 W = 3D	•	5 + 7D <sub>o</sub>			.8Q/D <sub>o</sub> 1. D <sub>o</sub> + L <sub>a</sub>	5 + 7D <sub>o</sub>	
L <sub>a</sub> =	7. <sup>-</sup> 2	7		L <sub>a</sub> =	U U	0	
	10.	-		 W =	28.0	-	

Assume: $3D_0 = 3$	3 ft
--------------------	------

## POND-8-OUT

Q25 = 8.00 cfs  $D_o = 2$  ft  $L_a = 1.8Q/D_o 1.5 + 7D_o$   $W = 3D_o + L_a$   $L_a = 18.8$  W = 24.8Assume:  $3D_o = 6$  ft

## POND-9-OUT

cfs ft I.5 + 7D <sub>o</sub>	Q25 = 13.00 cfs $D_o = 2$ ft $L_a = 1.8Q/D_o 1.5 + 7D_o$ $W = 3D_o + L_a$
.8	$L_a = 21.8$
.8 = 6 ft	$W = 27.8$ Assume: $3D_0 = 6$ ft

#### POND-10-OUT

POND-11-OUT

					-		
8Q/D <sub>o</sub> 1.	5 + 7D <sub>o</sub>			L <sub>a</sub> = 1	1.8Q/D <sub>o</sub> 1.5	5 + 7D <sub>o</sub>	
$D_o + L_a$				W = 3	3D <sub>o</sub> + L <sub>a</sub>		
17.4	ŀ			$L_a =$	26.7		
23.4	ļ			VV =	32.7		
3D, =	: 6	ft		Assume <sup>.</sup>	3D, =	6	ft
	2 8Q/D <sub>o</sub> 1.9 0 <sub>o</sub> + L <sub>a</sub> 17.4 23.4	17.4 23.4	2 ft $BQ/D_0 1.5 + 7D_0$ $D_0 + L_a$ 17.4 23.4	2 ft $BQ/D_0 1.5 + 7D_0$ $D_0 + L_a$ 17.4 23.4	2       ft $D_o =$ $BQ/D_o 1.5 + 7D_o$ $L_a = 1$ $D_o + L_a$ $W = 3$ 17.4 $L_a =$ 23.4 $W =$	2 ft $D_0 = 2$ $BQ/D_0 1.5 + 7D_0$ $L_a = 1.8Q/D_0 1.5$ $D_0 + L_a$ $W = 3D_0 + L_a$ 17.4 $L_a = 26.7$ 23.4 $W = 32.7$	2 ft $BQ/D_0 1.5 + 7D_0$ $D_0 + L_a$ 17.4 23.4 $D_o = 2$ ft $L_a = 1.8Q/D_0 1.5 + 7D_0$ $W = 3D_0 + L_a$ $L_a = 26.7$ W = 32.7

## POND-12-OUT

POND-13-OUT

Ū.	2 .8Q/D <sub>o</sub> 1	ft			L <sub>a</sub> = 1	0.00 2 .8Q/D <sub>o</sub> 1 D <sub>o</sub> + L <sub>a</sub>	ft	
L <sub>a</sub> = W =	14. 20.	-			L <sub>a</sub> = W =	14. 20.	-	
Assume:	3D <sub>o</sub>	=	6 ft		Assume:	3D <sub>o</sub>	=	6 ft

## POND-DD-1A-IN

#### FOREBAY-DD6-IN

Q25 =	8.20	cfs		Q25 =	3.80	cfs
D <sub>o</sub> =	1	ft		D <sub>o</sub> =	1	ft
L <sub>a</sub> = 1	.8Q/D <sub>o</sub> 1	.5 + 7D <sub>o</sub>		L <sub>a</sub> = 1	.8Q/D <sub>o</sub> 1	.5 + 7D <sub>o</sub>
W = 3	D <sub>o</sub> + L <sub>a</sub>			W = 3	D <sub>o</sub> + L <sub>a</sub>	

L <sub>a</sub> =	16.8		L <sub>a</sub> =	11.6	
W =	19.8		W =	14.6	
Assume:	3D <sub>o</sub> =	3 ft	Assume:	3D <sub>o</sub> =	3 ft

## POND-2-IN

DP-10

D <sub>o</sub> =	32.00 cf 1.25 ft 8Q/D₀1.5 +		D <sub>o</sub> =	1.80 1.25 1.8Q/D₀1.5	ft
W = 30	D <sub>o</sub> + L <sub>a</sub>		VV =	3D <sub>o</sub> + L <sub>a</sub>	
L <sub>a</sub> = W =	39.5 43.2		L <sub>a</sub> = W =	10.5 14.2	
Assume:	3D <sub>o</sub> =	3.75 ft	Assume:	3D <sub>o</sub> =	3.75 ft

## FOREBAY-3-IN

POND-4-IN

D <sub>o</sub> =	12.80 c 1.25 ft 8Q/D <sub>o</sub> 1.5 +		5	3.60 c 1 f .8Q/D <sub>o</sub> 1.5 -	t
$L_a = 1.0$ W = 3D	0		ŭ	$D_0 + L_a$	
$L_a =$	21.0		$L_a =$	11.3	
W =	24.8		VV =	14.3	
Assume:	3D <sub>o</sub> =	3.75 ft	Assume:	3D <sub>o</sub> =	3 ft

#### FOREBAY-5-IN

#### FOREBAY-6-IN

Q25 = D <sub>o</sub> =	9.30 1.25			4.70 cfs 1 ft	3
L <sub>a</sub> = 1.	8Q/D <sub>o</sub> 1.	5 + 7D <sub>o</sub>	L <sub>a</sub> = 1	.8Q/D <sub>o</sub> 1.5 + 7	7D <sub>o</sub>
W = 30	$D_o + L_a$		W = 3	$D_o + L_a$	
L <sub>a</sub> =	17.7	,	L <sub>a</sub> =	12.6	
W =	21.4	Ļ	VV =	15.6	
Assume:	3D <sub>0</sub> =	· 3.75 ft	Assume:	3D <sub>o</sub> =	3 ft

### FOREBAY-7-IN

FOREBAY-8-IN

Q25 =	21.30	cfs	Q25 =	21.70	cfs
D <sub>o</sub> =	2	ft	D <sub>o</sub> =	2	ft
L <sub>a</sub> = 1	.8Q/D <sub>o</sub> 1.	5 + 7D <sub>o</sub>	L <sub>a</sub> = 1	.8Q/D₀1.	5 + 7D <sub>o</sub>

W = 3	D <sub>o</sub> + L <sub>a</sub>		W = 3	$W = 3D_o + L_a$					
L <sub>a</sub> = W =			L <sub>a</sub> = W =	27.0 33.0					
Assume:	3D <sub>o</sub> =	6 ft	Assume:	3D <sub>o</sub> =	6 ft				

## FOREBAY-9-IN

## FOREBAY-11-IN

D <sub>o</sub> =	15.60 cfs 2 ft 8Q/D <sub>o</sub> 1.5 + 7	D <sub>o</sub>	D <sub>o</sub> =	24.10 cfs 2 ft 1.8Q/D <sub>o</sub> 1.5 + 7D	00
W = 30	D <sub>o</sub> + L <sub>a</sub>		W = 3	3D <sub>o</sub> + L <sub>a</sub>	
L <sub>a</sub> = W =	23.4 29.4		L <sub>a</sub> = W =	28.5 34.5	
Assume:	3D <sub>o</sub> =	6 ft	Assume:	3D <sub>o</sub> =	6 ft

## FOREBAY-12-IN

## FOREBAY-13-IN

	38.60 d 2 f			36.80 cfs 2 ft	
L <sub>a</sub> = 1	.8Q/D <sub>o</sub> 1.5 ·	+ 7D <sub>o</sub>	$L_a = 1$	1.8Q/D <sub>o</sub> 1.5 + 7D <sub>o</sub>	
W = 3	D <sub>o</sub> + L <sub>a</sub>		W = 3	$BD_{o} + L_{a}$	
L <sub>a</sub> =	37.2		L <sub>a</sub> =	36.1	
W =	43.2		W =	42.1	
Assume:	3D <sub>o</sub> =	6 ft	Assume:	3D <sub>o</sub> =	6 ft

Q25 = Outlet discharge for 25-year storm event (cfs)

 $D_o$  = Diameter of pipe (ft)

 $L_a$  = Length of the apron (ft)

W = Width of the apron (ft)

## Appendix L

Site Specific Soil Survey Mapping and Report

Michael Cuomo, Soil Scientist 6 York Pond Road, York, Maine 03909 207 363 4532 mcuomosoil@gmail.com

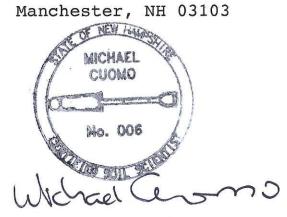
Site Specific Soil Map Report

Granite State Landfill

Dalton and Bethlehem, NH

prepared for:

CMA Engineers, Inc 1 Sundial Avenue, suite 510N



30 August 2022

## Michael Cuomo, Soil Scientist 6 York Pond Road, York, Maine 03909 207 363 4532 mcuomosoil@gmail.com

This report is in reference to the proposed Granite State Landfill site in Bethlehem and Dalton, NH. A Site Specific Soil Map was prepared on a +/-267 acre portion of the larger parcel to comply with soil mapping requirements of NHDES Env-Wq 1504.09(b)(3), Alteration of Terrain. The Alteration of Terrain rules reference the 'Site Specific Soil Mapping Standards for New Hampshire and Vermont' SSSNNE publication number three, dated July 2021. The Site Specific Soil Map and this report comply with these standards. This report is a component of the Site Specific Soil Map and must be submitted with it for regulatory review.

Because of the size of the work area and phasing of the work, the field work and soil mapping was done by a team of three New Hampshire Certified Soil Scientists in 2021 and 2022: Joseph W. Noel, NHCSS 17, Marc E. Jacobs, NHCSS 38, and Michael Cuomo, NHCSS 6. The final soil map and this report are the responsibility of the author, Michael Cuomo. The soil map was prepared on a 1"=100' base plan with 2 foot topographic contours prepared by Horizons Engineering.

#### Soil Map Unit Descriptions

Soil series names and numerical map unit labels were selected based on best fit with those used in the *New Hampshire State-Wide Numerical Soils Legend* published by the USDA Natural Resources Conservation Service. The soils are described in detail below. Two hundred and thirty five excavator test pits and hand dug soil observations were made at the site, described in detail, and used in making this soil map. The test pit data and data from some of the hand dug soil observations is attached at the rear of this report. Additional hand dug observations were made for limited purposes and were not recorded. The map unit descriptions below are based on soils specific to this site. The saturated hydraulic conductivity and hydrologic soil groups were taken from SSSNNE publication number five.

#### Becket very stony (57)

Landscape setting and surface features: ridge tops, side slopes, and elevated plateaus with surface boulders and stones. Natural soil drainage class: well drained. Parent material: basal till. Hydrologic soil group: C Saturated Hydraulic Conductivity (ksat): 0.6 to 2.0 in/hr in B horizon; 0.06 to .06 in/hr in the C horizon. Typical Description: test pit MJ61 is an example of Becket soils. 1-0" Leaf litter. 0-3" Black (10YR 2/1) fine sandy loam, granular, friable. 3-6" Gray (10YR 6/1) fine sandy loam, granular, friable. 6-17" Brown (7.5YR 4/4) fine sandy loam, blocky, friable. 17-36" Strong brown (7.5YR 5/6) fine sandy loam, blocky, friable. 36-62" Grayish brown (10YR 5/2) loamy sand, massive, firm.

Inclusions: test pit MC41 found Becket variant soils with a friable layer below the dense layer. Test pit MC36 found Becket soils buried by soil from construction of the road. Test pit MJ55 found Becket variant soil with presumed bedrock at less than 60" depth. Trails and roads were also included in some map units. Inclusions of Skerry soils are typical. Inclusions of Monadnock soils are estimated at 5%. Total dissimilar inclusions are about 20%.

Other features of this soil: the presence of a dense basal till layer about two feet from the surface perches water briefly. This is not considered groundwater saturation in the classic sense as it comes from atmospheric water above, and does not continuously connect to the groundwater table below. On this site some Becket soils had high chroma redoximorphic (redox) features within the dense basal till, not just in the upper 2 inches as described in the well-drained soil interpretive limits. Slope and landscape position were also used in distinguishing Becket from the similar Skerry soils. Becket soils occurs widely in the project area.

#### <u>Waumbek very stony (59)</u>

Landscape setting and surface features: valley, side slope, and foot slope settings with surface boulders and stones. Natural soil drainage class: moderately well drained. Parent material: loose glacial till. Hydrologic soil group: B Saturated Hydraulic Conductivity (ksat): 2.0 to 20.0 in/hr in B horizon;

6.0 to 20.0 in/hr in the C horizon.

Typical Description: test pit MC50 is an example of Waumbek soils.

- 5-0" Leaf litter.
- 0-3" Gray (7.5YR 6/1) stony fine sandy loam, granular, friable.
- 3-12" Strong brown (7.5YR 4/6) stony fine sandy loam, blocky, friable.
- 12-20" Reddish yellow (7.5YR 6/6) stony fine sandy loam, blocky, friable.
- 20-26" Olive yellow (2.5Y 6/6) stony fine sandy loam, blocky, friable, common & distinct redox.
- 26-63" Light olive brown (2.5Y 5/3) stony loamy sand, massive,

friable, common & distinct redox.

Inclusions: the Waumbek soil map unit contains trails created for forestry and recreation. Skerry inclusions are typical. Total dissimilar inclusions are about 5%.

Other features of this soil: this soil is of limited extent in the project area.

#### Marlow (76)

Landscape setting and surface features: ridge tops, side slopes, and elevated plateaus with surface boulders and stones. Natural soil drainage class: well drained. Parent material: basal till. Hydrologic soil group: C Saturated Hydraulic Conductivity (ksat): 0.6 to 2.0 in/hr in B horizon; 0.06 to .06 in/hr in the C horizon.

Typical Description: test pit MC84 is an example of Marlow soils. 1-0"

- Leaf litter.
- 0-3" Brown (7.5YR 4/2) bouldery fine sandy loam, granular, friable.
- 3-8″ Strong brown (7.5YR 4/6) bouldery fine sandy loam, blocky, friable.
- 8-25" Yellowish brown (10YR 5/6) bouldery fine sandy loam, blocky, friable.
- Light olive brown (2.5Y 5/3) bouldery fine sandy loam, 25-64″ massive, firm.

Inclusions: test pit MC83 found Marlow variant soils with bedrock at less than 60" depth. Trails and roads are also found in Marlow map units. Inclusions of Skerry and Becket soils are typical. Total dissimilar inclusions are about 20%.

Other features of this soil: the presence of a dense basal till layer about two feet from the surface perches water briefly. This is not considered groundwater saturation in the classic sense as it comes from atmospheric water above, and does not continuously connect to the groundwater table below. On this site Marlow soils are described having no redoximorphic (redox) features within the dense basal till, but some Marlow may have redox within 2 inches of the upper boundary of the dense layer. Marlow soils are of limited extent in the project area.

#### Tunbridge very stony (99)

Landscape setting and surface features: hill tops and steep irregular side slopes with surface stones and boulders. Natural soil drainage class: well drained. Parent material: loose glacial till with bedrock 20 to 40 inches from the surface. Hydrologic soil group: C Saturated Hydraulic Conductivity (ksat): 0.6 to 6.0 in/hr in B horizon; 0.6 to 6.0 in/hr in the C horizon. Typical Description: test pit MC15 is an example of Tunbridge soils. 2-0" Leaf litter 0-4" Dark brown (7.5YR 3/3) stony fine sandy loam, granular, friable. 4-8" Gray (7.5YR 5/1) stony fine sandy loam, massive, friable. 8-15″ Strong brown (7.5YR 4/6) stony fine sandy loam, blocky, friable. Brownish yellow (10YR 6/6) stony fine sandy loam, 15-28" blocky, friable. 28"+ Bedrock.

Inclusions: test pits MC17 and MC60 found Tunbridge variant soils with a dense basal till layer above moderately deep bedrock. Inclusions of the shallow Lyman and deep Monadnock soils are typical. Total dissimilar inclusions are about 20%

Other features of this soil: when flat rock was exposed at the bottom of a test pit which could not be moved with the small excavator used, it was labeled bedrock. This may not be bedrock but rather a very large boulder. In cases where more capable drilling equipment contradicts the soil map, the user should assume the bedrock depth data gathered with the drilling equipment is more accurate. This soil is of moderate extent in the project area.

#### Monadnock very stony (143)

Landscape setting and surface features: elevated plateaus, hills, and side slopes with surface stones and boulders. Natural soil drainage class: well drained. Parent material: loose glacial till. Hydrologic soil group: B Saturated Hydraulic Conductivity (ksat): 0.6 to 2.0 in/hr in B horizon; 2.0 to 6.0 in/hr in the C horizon.

Typical Description: test pit MC59 is an example of Monadnock soils.

4-0"	Leaf litter.
0-3″	Gray (7.5YR 5/2) stony fine sandy loam granular,
	friable.
3-9″	Brown (7.5YR 4/4) stony fine sandy loam, blocky,
	friable.
9-16″	Strong brown (7.5YR 4/6) stony fine sandy loam, blocky,
	friable.

- 16-24" Brownish yellow (10YR 6/6) stony fine sandy loam, blocky, friable.
- 24-60" Light yellowish brown (2.5Y 6/4) stony loamy sand, massive, friable.

Inclusions: Monadnock variants with deep compact layers in the substrate, such as test pit MC21 were observed. Total dissimilar inclusions are about 15%.

Other features of this soil: this soils of moderate extent in the project area.

#### <u>Sunapee very stony (169)</u>

Landscape setting and surface features: found on foot slope landscape positions and in sloping valleys and drainage ways with surface stones and boulders. Natural soil drainage class: moderately well drained. Parent material: loose glacial till. Hydrologic soil group: B. Saturated Hydraulic Conductivity (ksat): 0.6 to 2.0 in/hr in B horizon;

0.6 to 6.0 in/hr in the C horizon.

Typical Description: test pit JN45 is an example of Sunapee soils. 2-0" Leaf litter. 0-3″ Black (10YR 2/1) fine sandy loam, granular, friable. 3-5″ Dark brown (7.5YR 3/4) fine sandy loam, granular, friable. 5-8″ Dark yellowish brown (10YR 4/6) fine sandy loam, blocky, friable. 8-34" Yellowish brown (10YR 5/4) fine sandy loam, blocky, friable. 34-60" Olive gray (5Y 4/2) loamy fine sand to loamy very fine

sand, massive, friable, common & distinct redox.

Inclusions: Waumbek and Colonel inclusions are typical. Total dissimilar inclusions are about 10%.

Other features of this soil: this soil is of very limited extent in the project area.

#### Lyme very stony (247)

Landscape setting and surface features: topographic depressions and drainage ways with surface stones and boulders. Natural soil drainage class: poorly drained. Parent material: loose glacial till. Hydrologic soil group: C. Saturated Hydraulic Conductivity (ksat): 0.6 to 6.0 in/hr in B horizon; 0.6 to 6.0 in/hr in the C horizon.

- Typical Description: test pit JN44 is an example of Lyme soils. 1-0" Leaf litter.
- 0-5" Dark olive gray (5YR 3/2) fine sandy loam, granular, friable, common & prominent redox.
- 5-12" Olive gray (5Y 4/2) fine sandy loam, blocky, friable, common & prominent redox.
- 12-18" Light olive brown (2.5Y 5/3) fine to very fine sandy loam, massive, friable, common & distinct redox.
- 18-32" Olive gray (5Y 4/2) fine to very fine sandy
- loam, massive, friable, common & prominent redox.
- 32-40" Gray (5Y 5/1) loamy very fine sand, massive, friable, common & prominent redox.

Inclusions: inclusions of Pillsbury soils are typical. Total dissimilar inclusions are about 10%.

Other features of this soil: These wetland soils are of very limited extent in the project area.

#### Udorthents, cuts and fills (299)

Landscape setting and surface features: these are large areas of soils significantly manipulated by heavy machinery and/or filled, primarily made by moving on-site soil. Natural soil drainage class: this can not be determined using conventional methods. These soils do not fit into drainage class concepts. Parent material: glacial till that has been moved by human activity. Hydrologic soil group: C. Best professional judgement and best fit with similar natural soils were used to assign hydrologic soil groups to this soil. These soils are highly variable, so no published reference data is available. Saturated Hydraulic Conductivity (ksat): these soils are highly variable, so no published reference data is available. Where location specific data is required, it must be measured in the field.

```
Typical Description: Test pit MJ17 is an example of Udorthents,
cut and fill soils.
0-27" Brown (10YR 5/3) loamy fine sand fill, massive, friable,
relict redox in fill.
27-39" Dark gray (10YR 4/1) fine sand fill, massive, friable.
39-54" Dark yellowish brown (10YR 4/4) fine sandy loam,
massive, friable.
```

54-66" Brown (10YR 5/3) sandy loam, massive, firm.

Inclusions: the variability of the materials in these map units can be high and can include concrete waste, ash, and dredge spoils. There is a large pile of broken pavement in one area and a large topsoil stockpile in another. Other features of this soil: these soils are highly variable and widespread in the project area.

#### <u>Ossipee (495)</u>

Landscape setting and surface features: wet depressions in the landscape with pit and mound topography due to frequent tree throw resulting from poor rooting depth. Natural soil drainage class: very poorly drained. Parent material: organic soils over dense basal till or loose glacial till. Hydrologic soil group: D Saturated Hydraulic Conductivity (ksat): There is no B horizon in this soil. 0.2 to 2.0 in/hr in the C horizon. Typical Description: test pit MC68 is an example of Ossipee soils. 1-0" Leaf litter.

0-10" Dark brown (10YR 3/3) peat, massive, friable.

10-20" Very dark gray (2.5Y 3/1) muck, massive, friable.

- 20-32" Black (7.5YR 2.5/1) muck, massive, friable.
- 32-40" Dark brown (7.5YR 3/2) mucky fine sandy loam, massive, friable.
- 40-45" Dark brown (10YR 3/3) mucky fine sandy loam, massive, friable.

Inclusions: inclusions of the Peacham soil are typical along the edges of these map units. Total dissimilar inclusions are about 15%.

Other features of this soil: Ossipee soils have very low bearing strength and pockets of shallow open water. These are wetland soils. Ossipee soils are of limited extent in the project area.

#### <u>Udorthents, loamy (500)</u>

Landscape setting and surface features: variable landscape positions in which the upper soil horizons have been removed, exposing the loamy glacial till substrate at the surface. These soils have been regraded and shaped by heavy equipment. Natural soil drainage class: this can not be determined using conventional methods. These soils do not fit into drainage class concepts. Parent material: glacial till with the lower horizons exposed at the surface by human activity. Hydrologic soil group: C. Best professional judgement and best fit with similar natural soils were used to assign hydrologic soil groups to this soil. These soils are highly variable, so no published reference data is available. Saturated Hydraulic Conductivity (ksat): these soils are highly variable, so no published reference data is available. Where location specific data is required, it must be measured in the field.

Typical Description: test pit MJ21 is an example of Udorthents, loamy. 0-65" Light olive brown (2.5Y 5/3) sandy loam, massive, friable, with fine sandy loam plates which are firm.

Inclusions: the variability of the materials in these map units is high and can include non-soil materials such as concrete waste and broken pavement. Inclusions of 299 and soil stockpiles were found. Total dissimilar inclusions are estimated to be 20%.

Other features of this soil: excavation has removed all soil horizon development down to the parent material in many locations. This soil is of limited extent in the project area.

#### <u>Peacham very stony (549)</u>

Landscape setting and surface features: wet depressions in the landscape with pit and mound topography due to frequent tree throw resulting from poor rooting depth. These soils have surface stones and boulders. Natural soil drainage class: very poorly drained. Parent material: thin organic soil over dense basal till. Hydrologic soil group: D

Saturated Hydraulic Conductivity (ksat):

0.6 to 2.0 in/hr in B horizon;

0.0 to 0.2 in/hr in the C horizon.

Typical Description: test pit JN15 is an example of Peacham soils. 0-11" Black (5Y 2.5/2) muck, granular, friable. 11-41" Gray (5Y 5/1) loamy very fine sand to very fine sandy loam, massive, friable, common & faint redox. 41-44" Gray (5Y 5/1) very fine sandy loam, massive, firm, common & faint redox.

Inclusions: Pillsbury inclusions were noted along the edges of Peacham map units. Some Peacham map units were extremely stony or bouldery. Total dissimilar inclusions are about 20%.

Other features of this soil: these wetland soils are of limited extent in the project area.

#### Udorthents, bedrock less than 60" (550)

Landscape setting and surface features: variable landscape positions where the surface soils have been removed, exposing the subsoil or bedrock. Natural soil drainage class: this can not be determined using conventional methods. These soils do not fit into drainage class concepts. Parent material: substrate of glacial till or bedrock exposed at the surface. Hydrologic soil group: C. Best professional judgement and best fit with similar natural soils were used to assign hydrologic soil groups to this soil. These soils are highly variable, so no published reference data is available. Saturated Hydraulic Conductivity (ksat): these soils are highly variable, so no published reference data is available. Where location specific data is required, it must be measured in the field.

Typical Description: test pit MJ23 is an example of Udorthents, bedrock less than 60 inches. 0-36" Light olive brown (2.5Y 5/3) sandy loam, massive, firm. 36"+ Bedrock.

Inclusions: exposed bedrock is at the surface in less than 5% of the map unit area. Inclusions of 299 and 500 are typical. Total dissimilar inclusions are about 20%.

Other features of this soil: this soil is of limited extent in the project area. When flat rock was exposed at the bottom of a test pit which could not be moved with the small excavator used, it was labeled bedrock. This may not be bedrock but rather a very large boulder. In cases where more capable drilling equipment contradicts the soil map, the user should assume the bedrock depth data gathered with the drilling equipment is more accurate. This soil is of moderate extent in the project area.

#### <u>Skerry very stony (559)</u>

Landscape setting and surface features: valleys, gently sloping hill sides, and foot slopes with surface stones and boulders. Natural soil drainage class: moderately well drained. Parent material: basal till. Hydrologic soil group: C Saturated Hydraulic Conductivity (ksat): 0.6 to 2.0 in/hr in B horizon; 0.06 to 0.6 in/hr in the C horizon.

Typical Description: test pit MJ22 is an example of Skerry soils. 2-0" Leaf litter. 0-3″ Black (10YR 2/1) fine sandy loam, granular, friable. Gray (10YR 6/1) fine sandy loam, granular, friable. 3-6" 6-8″ Brown (7.5YR 4/4) stony fine sandy loam, massive, friable. 8-24″ Yellowish brown (10YR 5/4) fine sandy loam, blocky, friable. 24-36″ Light yellowish brown (10YR 6/4) stony sandy loam, blocky, friable, common & distinct redox. 36-60" Brown (10YR 5/3) sandy loam, massive, firm.

Inclusions: test pits MC12 and JN37 found Skerry variants with loose coarse sand or friable loamy sand below the dense basal till. Test pit MC30 found Skerry soils buried by soil from road construction. Skerry map units contain constructed roads and trails, Colonel, and Becket soil inclusions. Total dissimilar inclusions are about 20%.

Other features of this soil: where evidence of the seasonal high water table was found substantially above the dense basal till, the soil was mapped as Skerry, even if the seasonal high water table was more than 2 feet from the surface. This is one way the Becket and Skerry were separated on this site, along with slope and landscape position. Skerry is likely the most widespread soil in the project area.

#### <u>Pillsbury very stony (647)</u>

Landscape setting and surface features: seasonally wet depressions in the landscape with pit and mound topography due to frequent tree throw resulting from poor rooting depth. These soils have surface stones and boulders. Natural soil drainage class: poorly drained. Parent material: basal till. Hydrologic soil group: C. Saturated Hydraulic Conductivity (ksat): 0.6 to 2.0 in/hr in B horizon; 0.06 to 0.2 in/hr in the C horizon.

Typical Description: test pit JN8 is an example of Pillsbury soils.

- 4-0" Leaf litter.
- 0-7" Gray (7.5YR 5/1) stony loamy sand, massive, friable, common & faint redox.
- 7-15" Grayish brown (2.5¥ 5/2) stony sandy loam, blocky, friable, common & distinct redox.
- 15-24" Strong brown (7.5YR 5/6) stony sandy loam, blocky, friable, common & distinct redox.
- 24-55" Olive (5Y 5/3) gravelly loam sand, platy, firm, common & distinct redox.

Inclusions: some Pillsbury map units contain small stream channels which have eroded down to bedrock in some areas. In some locations fill has been placed to cross these map units. Very stony inclusions of Colonel, Peacham, and Lyme soil inclusions were noted. Some Pillsbury map units are extremely stony or bouldery. Man-made ditches with mineral soil bottoms are also included. Total dissimilar inclusions are about 20%.

Other features of this soil: on this site Pillsbury was chosen as the best fit to describe the poorly drained soils with loamy sand texture dense basal till. The typical description of Pillsbury has a fine sandy loam dense basal till layer. This is a wetland soil. Pillsbury occurs extensively in the project area.

#### <u>Meadowsedge (894)</u>

Landscape setting and surface features: wet depressions in the landscape with pit and mound topography due to frequent tree throw resulting from poor rooting depth. Natural soil drainage class: very poorly drained. Parent material: deep organic soil formed in place. Hydrologic soil group: D Saturated Hydraulic Conductivity (ksat): none given in reference.

Typical Description: test pit MC69 is an example of Meadowsedge soils. 0-10" Very dark brown (7.5YR 2.5/2) peat, massive, friable. 10-15" Black (10YR 2/1) muck, massive, friable. 15-17" Dark gray (10YR 4/1) mucky loamy sand, massive, friable. 17-26" Black (10YR 2/1) muck, massive, friable. 26-44" Very dark gray (10YR 3/1) muck, massive, friable.

Inclusions: inclusions of Ossipee, Peacham, Pillsbury, and Pondicherry soils are anticipated along the edges of these soil map units. Total dissimilar inclusions are about 20%.

Other features of this soil: Meadowsedge are wetland soils which are of limited extent in the project area. These soils have low bearing strength and pockets of shallow open water.

#### Moosilauke (935)

Landscape setting and surface features: gently sloping areas, often near wetlands and in drainage swales. Natural soil drainage class: on this site Moosilauke is only mapped as somewhat poorly drained. Parent material: glacial outwash. Hydrologic soil group: C. Saturated Hydraulic Conductivity (ksat): 2.0 to 6.0 in/hr in B horizon; more than 6.0 in/hr in the C horizon.

Typical Description: test pit MJ35 is an example of Moosilauke soils.

- 0-6" Black (10YR 2/1) very fine sandy loam, granular, friable.
- 6-18" Light olive brown (2.5Y 5/3) loamy very fine sand, massive, friable, many & prominent redox.
- 18-24" Light olive brown (2.5Y 5/3) coarse sand, single grained, loose, common & faint redox.
- 24-32" Grayish brown (2.5Y 5/2) loamy coarse sand, massive, friable, redox masked.

Inclusions: poorly drained Lyme soils are typical. Dissimilar

inclusions total about 10%.

Other features of this soil: the Moosilauke differs from the similar Colonel soil in that it lacks a dense restrictive layer in the substrate. This soil is of very limited extent in the project area.

#### Colonel very stony (947)

Landscape setting and surface features: gently sloping areas often near wetlands and in drainage swales, with surface stones and boulders. Natural soil drainage class: somewhat poorly drained. Parent material: basal till. Hydrologic soil group: C. Saturated Hydraulic Conductivity (ksat): 0.6 to 2.0 in/hr in B horizon; 0.06 to 0.6 in/hr in the C horizon.

Typical Description: test pit JN12 is an example of Colonel soils.

- 3-0" Leaf litter.
- 0-4" Dark reddish brown (5YR 3/3) stony fine sandy loam, granular, friable.
- 4-11" Brown (7.5YR 4/4) stony fine sandy loam, blocky, friable.
- 11-20" Brown (7.5YR 4/4) stony sandy loam, massive, friable, common & distinct redox.
- 20-52" Brown (10YR 4/3) cobble loamy sand, platy, firm, common & distinct redox.

Inclusions: test pit MC5 is an inclusion of Pillsbury soils within the Colonel map unit. Inclusions of Skerry soils are typical. Test pits JN30 and MC58 are examples with friable lower layers. Test pit MC57 found an unnamed somewhat poorly drained soil variant. Total dissimilar inclusions are about 20%.

Other features of this soil: Colonel was chosen as the best fit to describe the somewhat poorly drained soils with loamy sand texture dense basal till. The typical description of Colonel has a fine sandy loam dense basal till layer. Colonel is of moderate extent in the project area.

#### Pondicherry (992)

Landscape setting and surface features: wet depressions in the landscape with pit and mound topography due to frequent tree throw resulting from poor rooting depth. Natural soil drainage class: very poorly drained. Parent material: organic soils over outwash sands. Hydrologic soil group: D Saturated Hydraulic Conductivity (ksat): There is no B horizon in this soil. 6.0 to 20.0 in/hr in the C horizon.

Typical Description: test pit JN50 is an example of Pondicherry soils. 0-22" Olive gray (5Y 5/2) muck, granular, friable. 22-29" Gray (5Y 5/1 & 5Y 6/1) gravelly sand to coarse sand, massive, friable. Observation discontinued.

Inclusions: inclusions of Searsport soils are described in test pit JN6. Total dissimilar inclusions are about 15%.

Other features of this soil: these wetland soils have low bearing strength and pockets of shallow open water. Pondicherry soils are of limited extent in the project area.

#### Limitations

Excavator access was limited by dense vegetation, steep slopes, and surface boulders. Most excavator-dug test pits were close to the existing roads and trails because of this.

In some cases, the target depth of 60 inches could not be reached because of boulders, even with the excavator. In many cases hand dug observations could not reach the target depth of 40 inches because of stones and boulders.

The 'very stony' modifier was used in many of the map units, which means about 3 to 27 feet between surface stones and boulders. There are many areas that classify as extremely stony surfaces, with about 3 to 17 feet between surface stones and boulders. Other areas lack surface stones. Considering use and management and to simplify the map, these differences were not mapped as separate soil map units and are considered non-limiting inclusions.

Existing roads and trails are treated as inclusions within the soil map units. Some roads and trails are not shown on the base map.

Soil boundaries are determined by observing the changes in topography, vegetation, and appearance of the surface. Of these, topography is relied on most heavily. In some areas the topography is not current on the base map due to active working of the site or dense vegetation obscuring the surface. The site has been worked by people for many years, so the tree line is not an accurate substitute for the edge of disturbance. These factors lessen the accuracy of soil map unit boundary line placement.

Soil boundaries are depicted as distinct lines between different soil types, but soils may meet at diffuse transition zones. The soil map is a simplified two dimensional representation of a complex three dimensional natural system. The wetlands were flagged by Barry H. Keith, Certified Wetland Scientist. In most of the soil map area, the wetlands were flagged prior to the soil mapping and the wetland flag locations were plotted and used as part of the ground control in the preparation of this map. The wetland flag lines were used as soil map boundaries for the poorly and very poorly drained soil types in many areas.

A slope class is assigned to each soil map unit. Each slope class has a slope range. Small areas of slopes outside that range are allowed in the map units as inclusions. Less steep slopes are nonlimiting inclusions and more steep slopes are limiting inclusions.

#### Soil Taxonomy

Soil taxonomy is the complex multi-level classification system developed over more than a century to identify and distinguish between soils around the world. The definitive reference is *Soil Taxonomy A Basic System of Soil Classification for Making and Interpreting Soil Surveys, 1999* from which the following two excerpts were taken.

The primary objective of soil taxonomy is to establish hierarchies of classes that permit us to understand, as fully as possible, the relationship among soils and between soils and the factors responsible for their character. A second objective is to provide a means of communication for the discipline of soil science. Soil taxonomy was originally developed to serve the purposes of soil survey. During the last few decades, it has evolved into a means of communication in soil science...

Soil surveys require many non-taxonomic classifications that can be related to the real bodies of soil and that facilitate comparisons of both similarities and differences among them for a great variety of purposes...

For this Site Specific Soil Map, the author of this report has made the judgement that physically similar soils with taxonomic differences should be mapped as one for this land-use.

#### Summary

The natural soils on this site are primarily dense basal till. The upper horizons are commonly fine sandy loam and the lower horizons are commonly loamy sand. Drainage of excess precipitation is slowed by the presence of dense basal till in the lower layers of most of the soils. Excess water collects in low lying areas where wetland soils have formed.

The rolling landscape and large elevation difference from one end of the project site to the other explain some of the different soils mapped. Other differences in the soils can be attributed to different geologic parent material and landscape position.

Much of the project area has been heavily manipulated by human activity. Soil and rock has been removed for construction material and/or stockpiled for future use. The project area has been logged and some areas cleared. Roads, trails, and structures have been built.

#### <u>Certification</u>

This report and soil map are within the technical standards of the National Cooperative Soil Survey. The report and soil map are a special purpose product intended for development planning and engineering interpretations. They were produced by professional soil scientists, and are not products of the USDA Natural Resources Conservation Service. There is a map which accompanies this report.

The Site Specific Soil Map and this report conform to the standards of SSSNNE publication No. 3, as amended, "Site Specific Soil Mapping Standards for New Hampshire and Vermont." This map and report have been prepared to comply with soil mapping requirements of RSA 485 A:17 and NHDES Env-Wq 1500, Alteration of Terrain. Example of Bouldery Surface Granite State Landfill



Test Pit JN4 Granite State Landfill Becket soil 15 September 2021



Tst Pit JN6 Granite State Landfill Searsport soil 16 September 2021



Granite State Landfill 16 May 2022 Surface boulder left behind by the glaciers. The soil auger (in front for scale) is about 42" tall



Test Pit JN20 Granite State Landfill Skerry soil 16 September 2021



Test pit JN 57 Granite State Landfill Colonel very stony 16 May 2022



Test pit JN59 Granite State Landfill Colonel Soil 16 May 2022





## Granite State Landfill

Typical area of Udorthents, loamy (map unit 500) created by excavation to the underlying parent material.

## Site Specific Soil Map Legend, Granite State Landfill, Bethlehem and Dalton, NH

<u>Map unit</u>		NRCS soil name	Drainage Class	Parent Material	Restrictive Layer	<u>HSG</u>
	57	Becket very stony	Well drained	Basal till	Yes	С
	59	Waumbek very stony	Moderately well	Loose till	No	В
	76	Marlow	Well drained	Basal till	Yes	С
	99	Tunbridge very stony	Well drained	Loose till over bedrock	No	С
	143	Monadnock very stony	Well drained	Loose till	No	В
	169	Sunapee, very stony	Moderately well	Loose till	No	В
	247	Lyme, very stony	Poorly drained	Loose till	No	С
	299	Udorthents, cuts and fills	Not determined	Regraded glacial till	Variable	С
	495	Ossipee	Very poorly	Organic over till	No	D
	500	Udorthents, loamy	Well to somewhat poorly drained	Loamy glacial till	Variable	С
	549	Peacham very stony	Very poorly	Basal till	Yes	D
	550	Udorthents, bedrock less than 60"	Well to somewhat poorly drained	Excavated glacial till	Variable	С
	559	Skerry very stony	Moderately well	Basal till	Yes	С
	647	Pillsbury very stony	Poorly drained	Basal till	Yes	С
	894	Meadowsedge	Very poorly	Deep organic	No	D
	935	Moosilauke	Somewhat poorly drained	Glacial outwash	No	С
	947	stony	Somewhat poorly drained	Basal till	Yes	С
	992	Pondicherry	Very poorly	Organic over sands	No	D
			d at the end of the	soil map unit label	represents the ave	erage slope
		Slope Legend				
		А	0-3%			
		В	3-8%			
		С	8-15%			
		D	15-25%			
		E	25% or more			

This map is within the technical standards of the National Cooperative Soil Survey.

It is a special purpose product intended for development planning and engineering interpretations.

It was produced by a professional soil scientist, and is not a product

of the USDA Natural Resources Conservation Service.

There is a report that accompanies this map.

This detailed Site Specific Soil Map conforms to the standards of SSSNNE publication

No. 3, as amended, "Site Specific Soil Mapping Standards for NH and VT."

This map has been prepared to comply with soil mapping requirements of RSA 485 A:17 and

NHDES Env-Wq 1500, Alteration of Terrain.

## Michael Cuomo, Soil Scientist

6 York Pond Road, York, Maine 03909 207 363 4532 mcuomosoil@gmail.com

Test Pit Data

Granite State Landfill Dalton and Bethlehem, NH

prepared for:

CMA Engineers, Inc

1 Sundial Avenue, suite 510N Manchester, NH 03103

30 August 2022

	OTHER FEATURES					Friable upon rennoval			ран 1 2	OTHER FEATURES						
	CONSISTENCE		FR	11 R	FR	1		×		CONSISTENCE		FR	R	FR	FR	
	STRUCTURE		SR SR	BKY	MA	セーイ				STRUCTURE		GR	BKY	BKY	MA	
12/51/6	SOIL TEXTURE (USDA)		ST FSL	STFSL	G LS	ŝ		Standing:	12/51/6	SOIL TEXTURE (USDA)		ŚT SL	5T SL	ST SL	65	S
1 # NI # 1	REDOXIMORPHIC FEATURES					CF REDOX IN TOP OF CO			TN#2	REDOXIMORPHIC FEATURES					-	NT BOULDER
TION TEST PIT # JN	MATRIX COLOR (moist)		7.542 SI	7.542 4/6	104R4/6	104R 5/3		Depth to Observed Groundwater (inches): Weeping: Depth To Seasonal High Watertable: 24 <sup>(n)</sup> Depth To Restrictive Horizon: 24 <sup>(n)</sup> Depth To Bedrock: <u>Nove To S7<sup>(n)</sup></u> Soil Series: <u>Secket</u>	TION TEST PIT #_	MATRIX COLOR (moist)		Tisyr 5/	54R 34	7.5 YR 5/4	107R 5/4	APPAREN
SOIL TEST PIT DESCRIPTION	DEPTH (inches)	4-0	0-1	01-1	10-24	24-57	-	Depth to Observed Groundwater (incl Depth To Seasonal High Watertable: Depth To Restrictive Horizon: 24 Depth To Bedrock: Nove To 57 Soil Series: Becker	SOIL TEST PIT DESCRIPTION	DEPTH (inches)	010	-0	1-9	9-15	15-22	72
SOIL TEST	SOIL H0RIZON	0e	Ш	N M	Bw	Ð		Depth to Ol Depth To St Depth To R Depth To B Soil Series:	SOIL TEST	SOIL H0RIZON	06	٢٦	Bhs	5%	BC	

Standing:\_

WN-OVER	OTHER FEATURES			SHOLLOW PAN		1		OTHER FEATURES							
IN OLD LOGGING ROAD - GROWN-OVER	CONSISTENCE		FR	FI SHAL				CONSISTENCE		FR	FR	FR	0-1-		
N OLD LOCON	STRUCTURE		BKY	イレイ	~			STRUCTURE		BXY	BKY	MA	PLY		
и <i>r/si</i> /b	SOIL TEXTURE (USDA)		St Asl	G LS			Standing:	SOIL TEXTURE (USDA)		GSL	GSL	GIS	G 15		Standing:
TN#3	REDOXIMORPHIC FEATURES						Á )	REDOXIMORPHIC FEATURES			J		C: D IOYR 5/10		/eeping:
TION TEST PIT #_	MATRIX COLOR (moist)		7.54R3/4	104R5/2			(inche ble:	MATRIX COLOR (moist)		7.54R4/2	7,5424/6	104R 5/4	104R 6/3		Depth to Observed Groundwater (inches): Weeping: Depth To Seasonal High Watertable: 20 // Depth To Restrictive Horizon: 20 //
SOIL TEST PIT DESCRIPTION	DEPTH (inches)	010	0-15	5-53			Depth to Observed Groundwater (incluepth To Seasonal High Watertable: Depth To Restrictive Horizon: しち Depth To Bedrock: <u>Nevle To 5</u> Soil Series: <u>DECL/ET</u> 7 Soil Series: <u>DECL/ET</u> 7	DEPTH (inches)	4-0	0-3	3-13	13-20	20-58		Depth to Observed Groundwater (inch Depth To Seasonal High Watertable: Depth To Restrictive Horizon:
SOIL TEST	SOIL H0RIZON	06	tr v	Ca			Depth to Obs Depth To Sea Depth To Res Depth To Bec Soil Series: SOIL TEST P	SOIL H0RIZON	0e	Ш	R	Bul	Ca	·	Depth to Ob Depth To Se Depth To Re

	ENCE OTHER FEATURES	BOULDERYSTONY	-2" DISCONTINUOS						ENCE OTHER FEATURES							
	CONSISTENCE		d H	17R	0_			PHOTO	CONSISTENCE	2H	Ţ					
	STRUCTURE		222	MA	514			Ą	STRUCTURE	GR	MA					4
6/12/21	SOIL TEXTURE (USDA)		57 56	51 13	e GLS		Standing:	9/15/21	SOIL TEXTURE (USDA)	SAPRIC	x GS					Standing:
JH HZ	REDOXIMORPHIC FEATURES			CD 2.5×5/2 Low chroma	CD HIGHCHrond		/eeping:	# TN # 6	REDOXIMORPHIC FEATURES		CF - REDUCED MATRI		AND	8		Veeping: 24"
TION TEST PIT #_	MATRIX COLOR (moist)		7.54R4/	1042 3/6	2,54 42		Depth to Observed Groundwater (inches): Weeping: Depth To Seasonal High Watertable: 16 % Depth To Restrictive Horizon: 23 Depth To Bedrock: None to 54 % Soil Series: 54 ERRY	rion Test Pit #	MATRIX COLOR (moist)	5+ 2.5/	54 5/1		ED-IN WETLAND			O
SOIL TEST PIT DESCRIPTION	DEPTH (inches)	3-0	0-16	16-23	23-54		Depth to Observed Groundwater (inc Depth To Seasonal High Watertable: Depth To Restrictive Horizon: 2.3 Depth To Bedrock: None to 5.4 Soil Series: 5.4.6.8.4	SOIL TEST PIT DESCRIPTION	DEPTH (inches)	0-0	12-0		STOPPED	1) s		Depth to Observed Groundwater (inche Depth To Seasonal High Watertable:
SOIL TEST	SOIL HORIZON	Ôe	2 hs	50	Col		Depth to Observed G Depth To Seasonal H Depth To Restrictive Depth To Bedrock: Soil Series:	SOIL TEST I	SOIL HØRIZON	0a	Ca	J				Depth to Ob: Depth To Se:

Soil Series: SEARSHORT

			10.0	6						225			Wery wavy	M				
	OTHER FEATURES		1" SY 34 BHS								OTHER FEATURES		TONGHUG E - Very BOUNDAL	DISCONTIN' BUS				
	CONSISTENCE		FR	FQ	FR	10			<b>x</b>		CONSISTENCE		T R	FR.	FR	50		
	STRUCTURE		BK-1	して	MA	54					STRUCTURE		MA	BLY	BKY	Purk		
9/15/21	SOIL TEXTURE (USDA)		57 15	57 51	57 51	N		Standing:		9/15/21	SOIL TEXTURE (USDA)		ST LS	ST SL	ST SL	O LS	ŧ.	Standing:
LANT #	REDOXIMORPHIC FEATURES			de constituenten es es		SF FD		/eeping:		# JN#0	REDOXIMORPHIC FEATURES		CFAINT ST	CD 545/2	CD	65		leeping:
TION TEST PIT #	MATRIX COLOR (moist)		104R 5/2	7.542 46	104R 3/6	1042 5A		Depth to Observed Groundwater (inches): Weeping: Depth To Seasonal High Watertable: 25 % Depth To Restrictive Horizon: 25 % Depth To Bedrock: NonE TO 53 %		TION TEST PIT #_	MATRIX COLOR (moist)		7.54R 5/	21545/2	7.542 5/6	54 5/3		Depth to Observed Groundwater (inches): Weeping: Depth To Seasonal High Watertable: <u>〇 ペ ヘア S</u> Depth To Restrictive Horizon: 2+ <sup>ル</sup>
SOIL TEST PIT DESCRIPTION	DEPTH (inches)	3-0	0-2	5-13	13-25	25-53		Depth to Observed Groundwater Depth To Seasonal High Watertah Depth To Restrictive Horizon: Depth To Bedrock: <u>Nove To</u>		SOIL TEST PIT DESCRIPTION	DEPTH (inches)	4-0	6-0	7-15	12-51	24-55		Depth to Observed Groundwater (inche Depth To Seasonal High Watertable: Depth To Restrictive Horizon: 2.4 ^
SOIL TEST	SOIL HØRIZON	Qe	Ш	BSI	322	Cq		Depth to Obs Depth To Sea Depth To Rea Depth To Bea Scall Scattor	series.	SOIL TEST	SOIL H0RIZON	0e	5	BW	35	Cal		Depth to Ob Depth To Se Depth To Re

Depth To Bedrock: Nove to 55 Soil Series: PILLS BURY

Depth To Restrictive Horizon: 20 % Depth To Bedrock: <u>Nove To 38</u> % Soil Series: <u>Piulsbury - like</u> (AQUOD)

l

					Y N			10									1
	OTHER FEATURES				PLATY POCKE					OTHER FEATURES							
	CONSISTENCE		LT Q	A A	0- []			x	5 1	CONSISTENCE		1 2 2	FR R	FR	0_1		-
	STRUCTURE		C B	のオイ	MA					STRUCTURE		GR	377	M4.	PLY		
9/16/21	SOIL TEXTURE (USDA)		5751	57 FSL	CLS			Standing:	9/16/21	SOIL TEXTURE (USDA)		ST FSL	STFSL	1. ST SL	Cobbly LS	/	Standing:
11 # NL	REDOXIMORPHIC FEATURES				CP 7.5YR4/6			eeping:	ZI # N.D	REDOXIMORPHIC FEATURES			-	ED HGHCHROM	CD HIGHCHROM		eeping:
TION TEST PIT #_	MATRIX COLOR (moist)		7.542 2.5/3	7,5423/4	2,544/3	•		Depth to Observed Groundwater (inches): Weeping: Depth To Seasonal High Watertable: 16 Depth To Restrictive Horizon: 16 Depth To Bedrock: Nove To Se	LION TEST PIT #	MATRIX COLOR (moist)		5YR 3/3	7.54R 4/4	7.57R 4/4	1042 43	DN Boulder	Depth to Observed Groundwater (inches): Weeping: Depth To Seasonal High Watertable:    // Weeping: Depth To Restrictive Horizon: 20// Depth To Bedrock: Novie TO S2// Soil Series: Colone
SOIL TEST PIT DESCRIPTION	DEPTH (inches)	2-0	0-2	5-16	16-56			Depth to Observed Groundwater (in Depth To Seasonal High Watertable: Depth To Restrictive Horizon: Depth To Bedrock: <u>NoNE TO</u> Soil Series: <u>SKE RR</u>	SOIL TEST PIT DESCRIPTION	DEPTH (inches)	3-0	0-4	4-11	1-20	20-52	STOPPED	Depth to Observed Groundwater (inc Depth To Seasonal High Watertable: Depth To Restrictive Horizon: <u>26</u> Depth To Bedrock: <u>Nove TO S2</u> Soil Series: <u>Colone</u>
SOIL TEST	SOIL HORIZON	0	¥	Bhs	Cd			Depth to Ob Depth To Se: Depth To Re Depth To Be Soil Series: _	SOIL TEST	SOIL H0RIZON	00	¥	Bhs	ßs	B		Depth to Observed ( Depth To Seasonal H Depth To Restrictive Depth To Bedrock: _ Soil Series:

SOIL TEST	SOIL TEST PIT DESCRIPTION	TION TEST PIT #_	# JN#13	9/16/21			
SOIL HDRIZON	DEPTH (inches)	MATRIX COLOR (moist)	REDOXIMORPHIC FEATURES	SOIL TEXTURE (USDA)	STRUCTURE	CONSISTENCE	OTHER FEATURES
0	3-0						
Ψ	0-3	7.54 5/1	]	5756	S R	L V	
Bhs	3-7	58R 34		ST 5L	CR	FR	
50%	7-23	7,54R 4/6		ST LS	MA	L 2 2	
30	23.29	7.542 4/4		65	MA	24	Weakly computed
Ca	29-52	104e 4/2	CFEFD	GISTO GS	MA TO PLY	0_ 10	
		`					
Depth to Observed C Depth To Seasonal H Depth To Restrictive Depth To Bedrock: Soil Series:	Depth to Observed Groundwate Depth To Seasonal High Watert Depth To Restrictive Horizon: _ Depth To Bedrock: Soil Series:	Depth to Observed Groundwater (inches): Weeping: Depth To Seasonal High Watertable: 29 <sup>1//</sup> Depth To Restrictive Horizon: 25 <sup>1//</sup> Depth To Bedrock: Nove To S2 <sup>1//</sup> Soil Series: <u>BECKET</u>	Veeping:	Standing:		as i	ы К
SOIL TEST	SOIL TEST PIT DESCRIPTION	TION TEST PIT #_	# JN# 14	9/16/21			
SOIL HORIZON	DEPTH (inches)	MATRIX COLOR (moist)	REDOXIMORPHIC FEATURES	SOIL TEXTURE (USDA)	STRUCTURE	CONSISTENCE	OTHER FEATURES
Oe	2-0						
· M ·	0-4	7,54R25/2		FSL	N	22	
35	4-19	7154R 4/6		FSC	TX-	TP	
36	19-25	7.542 5/3	Name of the Association of the A	()	MM	9	
$\mathcal{C}$	25-54	104e 5/2	CF, FD REDOX	S	MA	2	
	St	LARGE ROU	Uder				
Depth to O	bserved Groun	Depth to Observed Groundwater (inches): Weeping:	/eeping:	Standing;			

	RES								1963	RES								
	OTHER FEATURES									OTHER FEATURES								
	CONSISTENCE	ER.	d. LL	°- 11				×		CONSISTENCE		FR	#R	1	FR			
	STRUCTURE	Gr	MA	MA						STRUCTURE		GR	MA	MA	MA		31	
9/16/21	SOIL TEXTURE (USDA)	SAPRIC ORGANIC	1VF5 /VF51	VFSL			Standing: 31		9/16/21	SOIL TEXTURE (USDA)		V	Ś	5	63		Standing: 39	
TEST PIT # JN # 15	REDOXIMORPHIC FEATURES	)	CF	CF-			Veeping:		1 # NT #	REDOXIMORPHIC FEATURES		Z.STRS/L CD - CONCENT.	ST 5/2 CD - DEPLE	CD - Nich Ch Concentration	NOT NOTED	Hzo wind	leeping:	
	MATRIX COLOR (moist)	2/5-2/5	24 5/1	1/515	-		Depth to Observed Groundwater (inches): Weeping: Depth To Seasonal High Watertable: ヘームー Depth To Restrictive Horizon: サー Depth To Bedrock: Now や サリ	( center fit)	TION TEST PIT #_	MATRIX COLOR (moist)		7,54R 4/2	2154 43	2.54 5/2	7.54R 4/6		Depth to Observed Groundwater (inches): Weeping: Depth To Seasonal High Watertable:/AF 502276	IZON: 20 11
SOIL TEST PIT DESCRIPTION	DEPTH (inches)	0-11	11-41	41-44			Depth to Observed Groundwater (inc Depth To Seasonal High Watertable: Depth To Restrictive Horizon: 41 Depth To Bedrock: Nove to 444		SOIL TEST PIT DESCRIPTION	DEPTH (inches)	2-0	0-6	6-20	20-37	37-48		served Groun asonal High V	Depth To Restrictive Horizon: 20
SOIL TEST	SOIL HORIZON	Oa	Cal	Car	2		Depth to Observed ( Depth To Seasonal I Depth To Restrictiv Depth To Bedrock:	Soil Series:	SOIL TEST I	SOIL HORIZON	Oe	A	BE	Cd	20		Depth to Ob Depth To Se	Depth To Re

2 Depun 10 Bearock: None to Soil Series: LYME - LiKe

SOIL TEST	SOIL TEST PIT DESCRIPTION		TEST PIT # JN # 17	9/16/21			
SOIL H0RIZON	DEPTH (inches)	MATRIX COLOR (moist)	REDOXIMORPHIC FEATURES	SOIL TEXTURE (USDA)	STRUCTURE	CONSISTENCE	OTHER FEATURES
06	3-0						
11	0-3	7.54R 4/1		ST FSL	G R	L V	
Bhs	3-11	7.54R 4/4		ST FSL	DY	FR	
84	[1-23	1042 4/4		27. 51	44 7	FR	
BC	23-28	2:54 4/4	CD, Concent.	S 1218200	MA	29 29	
Ca	28-44 STOPPED	2,54 4/2	e Depletions	COBBLY IS	MA TO PLY	- ٥ لــــــــــــــــــــــــــــــــــــ	
Depth To Se Depth To Re Depth To Be Soil Series: _	Depth To Seasonal High Watertable: Depth To Restrictive Horizon: 26 Depth To Bedrock: <u>Nove To 44</u> Soil Series: <u>SKERPY</u>	Depth To Seasonal High Watertable: <u>23</u> Depth To Restrictive Horizon: <u>26</u> Depth To Bedrock: <u>Nove To 44</u> Soil Series: <u>Skerzy</u>				(X.)	
SOIL TEST	SOIL TEST PIT DESCRIPTION	TION TEST PIT #_	8) # ND #	9/16/21	PHOTO TAKEN	KEN	
SOIL HDRIZON	DEPTH (inches)	MATRIX COLOR (moist)	REDOXIMORPHIC FEATURES	SOIL TEXTURE (USDA)	STRUCTURE	CONSISTENCE	OTHER FEATURES
Oe	3-0						THIN DISCONTE "
Bsi	0-6	7.54R 3/4	All manufactures of the second se	5L FSL	BKY	FR	
B52	10-10	7.5424/6	Management	121	日大イ	25	
BC	18-21	10423/6	CD-REDOX	65	ΨĄ	VFR	
Cg	21-54	2.545/2	CD Redox	GLSTO CS	NA TO PLY	0-11	
Depth to 0 Depth To S	Depth to Observed Groundwater (inch Depth To Seasonal High Watertable:	Depth to Observed Groundwater (inches): Weeping: Depth To Seasonal High Watertable: 18 %	/eeping:	Standing:			
Depth To F Depth To B	Depth To Restrictive Horizon: Depth To Bedrock: Nome To	IZON: AI					

Depth To Bedrock: <u>Newe TO 54</u> Soil Series: <u>SKERRY</u>

	IRES							че П	(2)	RES					ENSES		
	OTHER FEATURES						-			OTHER FEATURES					SANDY LEN		
	CONSISTENCE		FR	F	12	0-1-		ίλ.		CONSISTENCE		2	LR	FR	0- [[		
PHOTO	STRUCTURE	ŭ.	MA	104 104 10	国大人	NA TO PLY			THOTO	STRUCTURE		せん	ヌイ	MA	22		
01/10/21	SOIL TEXTURE (USDA)		FSL	FSL	TS-1	C. GLS TO 65		Standing:	9/16/21	SOIL TEXTURE (USDA)		ST FSL	ST FSL	cobby SL	615		Standing:
51 # NS #	REDOXIMORPHIC FEATURES					CD REDOX CONIC	-	eeping:	TEST PIT # JN # 20	REDOXIMORPHIC FEATURES		1	and the second se	I	CFECD		eeping:
TION TEST PIT #_	MATRIX COLOR (moist)		7.54R5/,	7,54e4/6	10424/10	10426/3		Depth to Observed Groundwater (inches): Weeping: Depth To Seasonal High Watertable: 15 " Depth To Restrictive Horizon: 15 " Depth To Bedrock: Nove To Se " Soil Series: 56 50 50		MATRIX COLOR (moist)		7.542 S/	54R 3/4	7.54R 4/4	2.54 4/3	6	Depth to Observed Groundwater (inches): Weeping: Depth To Seasonal High Watertable: <u>/                                   </u>
SOIL TEST PIT DESCRIPTION	DEPTH (inches)	2-0	0-1	5-1	5,12	15-56		Depth to Observed Groundwater (inc Depth To Seasonal High Watertable: Depth To Restrictive Horizon: 15 Depth To Bedrock: Nove To S Soil Series: Soil Series:	SOIL TEST PIT DESCRIPTION	DEPTH (inches)	3-0	0-3	3-6	6-18	18-55		Depth to Observed Groundwater (inc Depth To Seasonal High Watertable: Depth To Restrictive Horizon: // Depth To Bedrock: <u>MoME TO SS *</u> Soil Series: ろんビスティ
SOIL TEST	SOIL HORIZON	00	Ш	Bhs	00	Ca		Depth to Observed ( Depth To Seasonal H Depth To Restrictive Depth To Bedrock: Soil Series:	SOIL TEST I	SOIL HORIZON	Oe	m	Bhs	22	Col	•	Depth to Obs Depth To Ses Depth To Re Depth To Re Soil Series:

0e 3.			and the second se	and the second			
	0-	5		-			
0	2	7,54RA/2		STFSL	はたい	F	
Bhs 3	3-7	54234	Į	ST FSL	BKY	FR	
	91-18	Tisye 4/6	*******	STFSL	2 M	TR	
BC 18	12-91	7.54R 5/4	CD REDOX	57 56	MA	1.R	5/2 depte times
Cd 21	22.60	10424/2	CF REDOK	SJ	PLY	0- LL	
SOIL TEST PIT DESCRIPTION	DESCRIP'	TION TEST PIT #_	# JN# 33	9/16/21			
SOIL D HORIZON (i)	DEPTH (inches)	MATRIX COLOR (moist)	REDOXIMORPHIC FEATURES	SOIL TEXTURE (USDA)	STRUCTURE	CONSISTENCE	OTHER FEATURES
	0-7						
Bhs 0	5	715483/4		ST FSL	R.K.	Ц Ц	
Bs. 15	15-20	1/22454/	A CONTRACTOR OF	STFSL	)- )- )-	A A A	
	20-26	104 esta	CD redox Depletions.	SIS	MA	FR	
Cd 24	26-69	2.545/3	don to	LS	714	0 1	

SOIL TEST	SOIL TEST PIT DESCRIPTION	PTION TEST PIT # JN	# JN # 23	9/16/21			
SOIL	DEPTH (inches)	MATRIX COLOR (moist)	REDOXIMORPHIC FEATURES	SOIL TEXTURE (USDA)	STRUCTURE	CONSISTENCE	OTHER FEATURES
U U	0-2	7,54 R 5/2	ſ	STERI	RKY	TR	
Bus	S-C	542 3/2		STESL	BKY	I'R	
35	5-17	7,5423/4	ļ	STESL	して	25	
200	17-36	2,545/2	CD redox	57 56	MA	FR	
Ca	36-48	10/2 5/3	CD red X	GLS	PLY	0_	
SOIL TEST	SOIL TEST PIT DESCRIPTION	PTION TEST PIT #_		9/16/21			
SOIL HORIZON	DEPTH (inches)	MATRIX COLOR (moist)	REDOXIMORPHIC FEATURES	SOIL TEXTURE (USDA)	STRUCTURE	CONSISTENCE	OTHER FEATURES
Oe	4-0						
Ē	2-0	7.54e 5/	An and a second s	ST FSL	BKI	FR	
Bhs	2-8	548 3/4		STFSL	BAY	FR	
3	07-8	7.54R 2/4	4	STFSL	TW	FR	
Cd	20-60	104R 5/3	CD Vedox	GLS TO 65	PLY	10	
		9.			(MA- areas)		1
Depth to U Depth To S	bserved Groui easonal High V	Depth to Observed Groundwater (inches): Weeping: Depth To Seasonal High Watertable: 20 <sup>#</sup>	Veeping:	Standing:			

(BORDERLINE - BECKET - Shullow pun). Depth To Restrictive Horizon: 20 " Depth To Restrictive Horizon: 20 " Depth To Bedrock: Nove To 60 " Soil Series: SKERRY (Border L

	OTHER FEATURES						on Boulder			OTHER FEATURES							
	CONSISTENCE		ER.	FR	Fre	10		x	2.	CONSISTENCE		FR	FR	FR	 		
	STRUCTURE		GR	BKY	BKY	MA TO PLY		1		STRUCTURE		BKY	のたい	MA	PLY		
9/16/21	SOIL TEXTURE (USDA)		ST FSL	ST FSL	ST FSL	GLS		Standing:	9/16/24	SOIL TEXTURE (USDA)		ST F5L	5T FSL	ST 51	GLS		
TEST PIT # JN # 25	REDOXIMORPHIC FEATURES				-	C-D redox Concentration		/eeping:	TEST PIT # JN # 26	REDOXIMORPHIC FEATURES		No. of Concession, Name	The second se	CD redox depletions.	CD redox Concent		
	MATRIX COLOR (moist)		5YR 2.5/2	7,54R 4/6	104R 5/4	1042 5/3		Depth to Observed Groundwater (inches): Weeping: Depth To Seasonal High Watertable: 26 Depth To Restrictive Horizon: 26 Depth To Bedrock: <u>boke To S4</u> Soil Series: <u>BECKET</u>		MATRIX COLOR (moist)		7.54R 5/	1,542 4/6	1042 5/4	2154 4/2		
SOIL TEST PIT DESCRIPTION	DEPTH (inches)	4-0	S-0	5-16	16-26	26-54		Depth to Observed Groundwater (inclepth To Seasonal High Watertable: Depth To Restrictive Horizon: Depth To Bedrock: <u>Mone To S4</u> Soil Series: <u></u>	SOIL TEST PIT DESCRIPTION	DEPTH (inches)	4-0	2-0	2-16	16-22	22-44	BOULDER	
SOIL TEST	SOIL HORIZON	00	$\triangleleft$	de	BC	Cd		Depth to Ob Depth To Se Depth To Re Depth To Be Soil Series: .	SOIL TEST	SOIL H0RIZON	06	Ш	Bs	BC	Ca		

Standing: 

	(inches)	(moist)	FEATURES				
06	4-0			-			
IJ	0-3	7,54R 4/	No.	STASI	GR	ER.	
Bhs	3-0	54R 4/6		St fs1	BKY	FR	
Bs	8-19	7,54R 4/6	- Andrew State	ST As/	00 7-70	FR	
BC	19-28	104R 4/6	CF CONCEN.	615	MA	1-1	
P	28-60	2,545/3	CD CONCEN	015 70 65	DLY	01	
Soll TEST I	SOIL TEST PIT DESCRIPTION	TION TEST PIT #	# JN# 20	11/24		r N	εα
SOIL	DEPTH	MATRIX COLOR	REDOXIMORPHIC	SOIL TEXTURE (USDA)	STRUCTURE	CONSISTENCE	OTHER FEATURES
HORIZON	(inches)	(moist) ズイ フ. イ/	FEATURES	Hem. C			
000	2-9	11	dimensional second	Sapaic			
101	9-15	544/2	EP CONCEN	S	MA	FR	FIRM in place
200	15-38	54 4/3 6 3/3	CF DEPL.	IS TO S	MA	FR	
9			•				8

Depth To Bedrock: Nové To 38 " Soil Series: VPD - Peachon - ESTIMATED

								ж.	×.									]	
	OTHER FEATURES								р.	OTHER FEATURES									
	CONSISTENCE		FR	FE	50	E,º				CONSISTENCE		FR	52	FR	0_ LL	FR			
	STRUCTURE		GR	BKY	MM	PLY				STRUCTURE		AD.	BKY	BK	MA TO PLY	MA		~	
12/21/L	SOIL TEXTURE (USDA)	SAPRIC	ST FSL	ST FSL	2	12		Standing:	12/11/5	SOIL TEXTURE (USDA)		57 51	57 51	Ň	<u>v</u>	2		Standing: 53	
	REDOXIMORPHIC FEATURES				CD DEPL.	CD DED OVE S/L	10405/2	eeping:	TEST PIT # JU # 30	REDOXIMORPHIC FEATURES				CD	cp,	CD		eeping: 27 //	
TION TEST PIT # CN	MATRIX COLOR (moist)	BLACK	7,542 4/2	7.542 4/6	1042 4/4	- 2,54 4/2		Depth to Observed Groundwater (inches): Weeping: Depth To Seasonal High Watertable: /7 // Depth To Restrictive Horizon: 27 // Depth To Bedrock: NonE TO 52 // Soil Series: らんもねマ	1	MATRIX COLOR (moist)		51 5/	543/4	7.54R 4/6	54 5/2-	54 5/2		Depth to Observed Groundwater (inches): Weeping: Depth To Seasonal High Watertable: <u>/の</u> <sup>(</sup> Depth To Restrictive Horizon: <u>28</u> <sup>(</sup> Depth To Bedrock: <u>Non に S7</u> (	
SOIL TEST PIT DESCRIPTION	DEPTH (inches)	4-0	0-3	4-17	12-21	22-52		Depth to Observed Groundwater (inc Depth To Seasonal High Watertable: Depth To Restrictive Horizon: 21 Depth To Bedrock: <u>None To 5</u> Soil Series: らんちんつ	SOIL TEST PIT DESCRIPTION	DEPTH (inches)	5-0	0-3	3-10	10-28	20.34	34-57		Depth to Observed Groundwater (inc Depth To Seasonal High Watertable: Depth To Restrictive Horizon: <u>28</u> Depth To Bedrock: <u>Now 57</u>	Colone
SOIL TEST	SOIL HORIZON	Oa	U	Bhs	BC	J		Depth to Observed Depth To Seasonal Depth To Restrictiv Depth To Bedrock: Soil Series: SK	SOIL TEST	SOIL HØRIZON	06	IJ	Bhs	Bs	Cd	20	÷.	Depth to Observed ( Depth To Seasonal H Depth To Restrictiv Depth To Bedrock: _	Soil Series:

SOIL TEST PIT DESCRIPTION TEST PIT # JN # 29 9/17/21

								 52									]
	OTHER FEATURES									OTHER FEATURES							
2	CONSISTENCE		FR	F.@	FR	FR	£,0	α.		CONSISTENCE		ΓR	1-10	Fe	FR	2/0	
PHOTO	STRUCTURE		N P.	BLY	BKT	MA	PLY			STRUCTURE		GR	BK	BKY	MA	PLY	8
12/11/2	SOIL TEXTURE (USDA)		ST LFS	5T ESL	57 FSL	15	15	Standing:	12/11/21	SOIL TEXTURE (USDA)		ST FSL	ST FSL	57 51	N	5	Standing:
TEST PIT # JN # 31	REDOXIMORPHIC FEATURES					CD CONC. J. SALE SL	1042 5/4 1042 5/4	/eeping:	# JN # 32	REDOXIMORPHIC FEATURES		J	J	J	CU DEPL & CONC	TOP OF PAW	Veeping:
	MATRIX COLOR (moist)		1042 G/1	7.542 4/c	7.542 4/4-	10425/3	1042 5/2-	Depth to Observed Groundwater (inches): Weeping: Depth To Seasonal High Watertable: 16 % Depth To Restrictive Horizon: 26 % Depth To Bedrock: 10 % 10 % 10 %	TION TEST PIT #	MATRIX COLOR (moist)		1042 3/2	542 4/c	7.54R 46	7,542 4/4	104R 4/2	Depth to Observed Groundwater (inches): Weeping: Depth To Seasonal High Watertable: 25% Depth To Restrictive Horizon: 31% Depth To Bedrock: Now to 62 Soil Series: 5460P4
SOIL TEST PIT DESCRIPTION	DEPTH (inches)	3-0	0-2	2.5	5-16	16.26	26.60	Depth to Observed Groundwater (inc Depth To Seasonal High Watertable: Depth To Restrictive Horizon: 26 Depth To Bedrock: Now to 60 Soil Series: 58522	SOIL TEST PIT DESCRIPTION	DEPTH (inches)	3-0	0-3	3-6	6-25	12-52	31-62	Depth to Observed Groundwater (inch Depth To Seasonal High Watertable: Depth To Restrictive Horizon: 31 Depth To Bedrock: Now to 62 Soil Series: 5460P4
SOIL TEST	SOIL HORIZON	De	U	1251	652	BC	CA	 Depth to Observed G Depth To Seasonal H Depth To Restrictive Depth To Bedrock: Soil Series:	SOIL TEST	SOIL H0RIZON	0	$\forall$	Bhs	0s	30	Ca	Depth to Observed Gro Depth To Seasonal High Depth To Restrictive H Depth To Bedrock: <u>N</u> Soil Series: <u>5Keapy</u>

TEST PIT # JN # 31

MATRIX COLOR	REDOXIMORPHIC	SOIL TEXTIBE (ISDA)	CTDIICTIBE	CONCICTENCE	
(moist)	FEATURES		SIRUCIURE	CONSISTENCE	OTHER FEATURES
7.542 Zz	2 million and a second	57 551	GR	4	
7,542 5/1	-	11	GR	12	
542. 4/c	(community)	2	BKY	25	
7.5 4/4/6	And a second	STSL	めネイ	22	
104/2 5/3	CD CON. Sh	636	NA.	FR	
0426/3	CD LONC. TOP OF DAN	15 70 5	MA TO PLY	-0 11	COARSE PLATES W
SOIL TEST PIT DESCRIPTION TEST PIT #_	# JN#34	12/11/6			
MATRIX COLOR (moist)	REDOXIMORPHIC FEATURES	SOIL TEXTURE (USDA)	STRUCTURE	CONSISTENCE	OTHER FEATURES
7.54e 2.5/2		57 51	C	Fe	DISCONTIN. E
7,542 A/6		5T 5L	2 7-7 2	FR	
12×4/2	CD CONCEN. 7572. 5/4	GLS TO 65	DLY.	0-1-	
	*				
		-			

( due too Shallow pun) Depth To Restrictive Horizon: 12 Depth To Bedrock: None to 64 Soil Series: Colonel (du

SOIL TEST	SOIL TEST PIT DESCRIPTION		TEST PIT # JN # 35	12/11/6			
SOIL HORIZON	DEPTH (inches)	MATRIX COLOR (moist)	REDOXIMORPHIC FEATURES	SOIL TEXTURE (USDA)	STRUCTURE	CONSISTENCE	OTHER FEATURES
O	4-0						
Ш	0-3	7,54R 5/2		ST FSL	BKY	Fe	
Bhs	0-0	7.542 A/6		ST FSL	BKY	Fe	
Bs	8-20	7.54R 4/4		ST FSL	J Kr	FQ	
BC	20-23	104E sho	CD DEPLETIONS	えいて	VW	TR.	
CA	23-54	2.545/3	CD CONCENTRAD	G1570 85	27	0-1-1	
SOIL TEST	SOIL TEST PIT DESCRIPTION		TEST PIT # JN # 36	9/17/24			
Soll	DEPTH	MATRIX COLOR	REDOXIMORPHIC	SOIL TEXTURE (USDA)	STRUCTURE	CONSISTENCE	OTHER FEATURES
Je C	3-0	(moust)	FEALUKES				
14	0-3	104e 5/2-		STFSL	012	te	
Bhs	3-8	542 4/10		57 1552	いたろ	52	
Bs	8-18	7.5 YR 4/4		ST FSL	BKY	FR	
BC	10-24	104e 5/4	CD- CONCENT and depletions.	SL	114	d	
CG	24-62	2154 5/3	CD - CONCENT.	615 70 65	PLY	0-	
Depth to 0	bserved Groun	Depth to Observed Groundwater (inches): Weeping:	Veeping:	Standing:			

Depth To Seasonal High Watertable: / <sup>6</sup> <sup>(</sup> Depth To Restrictive Horizon: <u>24</u><sup>(</sup> Depth To Bedrock: <u>Non E To 62</u><sup>()</sup> Soil Series: <u>SKERR</u>

Oe 3-0 Bhs 0-6 542 Bac 1-10	(moist)	FEATURES				Overse as a state of the second state
0-6						
1-10	2 4/6	-	75 25	のスト	Y L	
010	7.54246		57 SL	ちんち	52.	
BC 18-24 1042	5/4	CD CONCENT DEPLETIONS	St SL	ΥM	A	
a 24-41 2.5	4 5/2	CD CONC. &	GLS TO 65	アンイ	2-1-	
20 41-51 2.54	5/2	CF CONCEN	G COS	MA	F2	
SOL TEST PIT DESCRIPTION	TEST PIT #	i	9/17/21			
N (inches)	MATRIX COLOR (moist)	REDOXIMORPHIC FEATURES	SOIL TEXTURE (USDA)	STRUCTURE	CONSISTENCE	OTHER FEATURES
0 2.0		Ą				
0-00 543	3/2	CONCENTRATION	ST 15S	GR	FR	
a1 8-16 54:	2/2	CP CONCENTRA.	57175	MA	FR	a series de la constant de la const
2 16-30 541	4/3	CF DEPLETIONS	GLS	MA	FR	
	1					
		ir.				
						1

SOL TEST	PIT DESCRIF	SOLT TEST PIT DESCRIPTION TEST PIT # JN & 39	# JNA 39	9/17/21				
SOIL HDRIZON	DEPTH (inches)	MATRIX COLOR (moist)	REDOXIMORPHIC FEATURES	SOIL TEXTURE (USDA)	STRUCTURE	CONSISTENCE	OTHER FEATURES	
00	1-0							<b>.</b>
A	0-10	7,542.5/3	7,5425/6 CD	57 155	GR	FC		
Car	10-18	5/5/1	CF 5/2.	55 255	MA	FR		1
Ca 2	18-26	54 41	the as	1145	VW	FL		-
20	26-40	544/2	1042. all	/5	MM	FC		
							X	-
								<b>T</b>
Depth to Ol Depth To S Depth To R Depth To B Soll Series:	Depth to Observed Groundwater (incl Depth To Seasonal High Watertable: _ Depth To Restrictive Horizon: Depth To Bedrock: Soil Series:	Depth to Observed Groundwater (inches): W Depth To Seasonal High Watertable: Depth To Restrictive Horizon: Above To ye Depth To Bedrock: Nove To ye Soil Series: <u>PD - Pillsbury</u>	Depth to Observed Groundwater (inches): Weeping: Depth To Seasonal High Watertable: Depth To Restrictive Horizon: <u>Now E</u> Depth To Bedrock: <u>Now E To 40</u> Soil Series: <u>PD - Pithsbury</u>	Standing: $32^{4}$	~.4	DNE END OF PIT. HAD SPODIC MORPHOLOGY - DOUOD - W	MERNDOF PIT HAD SPODIC MORPHOLOGY - NOUOD - W/ Bh horizon	horizon

-				AND DESCRIPTION OF THE OWNER			
OTHER FEATURES					EXCAUATED TO WEAT APPEARED TO BE TOP OF	Cd LAYER.	
CONSISTENCE		T R	32	FR	0.		
STRUCTURE		GR	BKY	1700 1-1-200	MA		
SOIL TEXTURE (USDA)		ST FSL	ST FOL	STFSL	5		
REDOXIMORPHIC FEATURES		MASKED	CD CONCENT:	C D CONCENT	11		
MATRIX COLOR (moist)		1/5.2 25/1	54 5/2	54 4/3	254 42		
DEPTH (inches)	1-0	0-6	6-12	12.21	12-28	LIDE	
SOIL HORIZON	Oe	A	Bg	Bw	Col		
	DEPTH MATRIX COLOR REDOXIMORPHIC SOIL TEXTURE (USDA) STRUCTURE CONSISTENCE (inches) (moist) FEATURES	DEPTH     MATRIX COLOR     REDOXIMORPHIC     SOIL TEXTURE (USDA)     STRUCTURE     CONSISTENCE       (inches)     (moist)     FEATURES     SOIL TEXTURE (USDA)     STRUCTURE     CONSISTENCE       1 - U     1 - U     1 - U     1 - U     1 - U     1 - U	DEPTHMATRIX COLORREDOXIMORPHICSOIL TEXTURE (USDA)STRUCTURECONSISTENCE(inches)(moist)FEATURESSOIL TEXTURE (USDA)STRUCTURECONSISTENCE $1-0$ $1-0$ $5 \chi 2.5/I$ MASKED $57 F.5 L$ $GR$ $FR$	DEPTH (inches)     MATRIX COLOR     REDOXIMORPHIC FEATURES     SOIL TEXTURE (USDA)     STRUCTURE     CONSISTENCE       1-0     7     25/1     MASKED     57     57     6     7     7       0-1     57     57     25/1     MASKED     57     57     6     7     7       0-1     57     57     25     7     6     7     7     7	DEPTH (inches)     MATRIX COLOR (moist)     REDOXIMORPHIC FEATURES     SOIL TEXTURE (USDA)     STRUCTURE     CONSISTENCE       1-0     1-0     5Y 2:5/1     MASKED     ST F5 L     GR     FR       0-6     5Y 2:5/1     MASKED     ST F5 L     GR     FR       12-12     5Y 4/3     C.D.COWCENTL     ST F5 L     BKY     FR       12-12     5Y 4/3     C.D.COWCENTL     ST F5 L     BKY     FR	DEPTH (inches)     MATRIX COLOR (moist)     REDOXIMORPHIC FEATURES     SOIL TEXTURE (USDA)     STRUGTURE     CONSISTENCE       1-0     1-0     5Y 2:5/1     MASKED     ST F5L     GR     FR       0-6     5Y 2:5/1     MASKED     ST F5L     GR     FR       12.12     5Y 4/3     CD CONCENTLIS     ST F5L     BKY     FR       12.12     5Y 4/3     CD CONCENTLIS     ST F5L     BKY     FR       12.12     5Y 4/3     CD CONCENTLIS     ST F5L     BKY     FR       12.12     5Y 4/3     CD CONCENTLIS     ST F5L     BKY     FR	DEPTHMATRIX COLORREDOXIMORPHICSOIL TEXTURE (USDA)STRUCTURECONSISTENCE(inches)(inches)FEATURESSOIL TEXTURE (USDA)STRUCTURECONSISTENCE1-05Y 2:5/1MASKEDST F5LGRFR0-65Y 2:5/1MASKEDST F5LBKYFR12:125Y 4/3CD CONCENTSST F5LBKYFR12:125Y 4/3CD CONCENTSFRFRFR12:125Y 4/3TTTFRFR12:125Y 4/3TTFRFRFR12:12FRFRFRFRFRFR12:12FRFRFRFRFRFR </th

Depth to Observed Groundwater (inches): Weeping: Depth To Seasonal High Watertable: <u>O'(Ar SonFace)</u> Depth To Restrictive Horizon: <u>22</u>" Depth To Bedrock: <u>None to 28</u> Soil Series: <u>Pitte Bury</u>

Standing:

	URES						H LATER			URES	EMIC ZONES.						
al	OTHER FEATURES						DID NOT REACH			OTHER FEATURES	PRIMARILY HEMIC						
iel à Auceo	CONSISTENCE							λ.	ER	CONSISTENCE	FR	μ					
DUG Show	STRUCTURE		GR	GR	BKY	MA			DUG - AUG	STRUCTURE	GR	MA					
10/7/21 HAND DUG Shovel & AUGER	SOIL TEXTURE (USDA)		STFSL	57 731	57 F5L	57 51		Standing:	10/7/21 HAND DUG - AUGER	SOIL TEXTURE (USDA)	hemie material	1VF5 TO VF51				1	E Standing: 201
TNHHI	REDOXIMORPHIC FEATURES			)		CD DEPLETIONS		eeping:	JU <sup>#</sup> +2	REDOXIMORPHIC FEATURES	5	REDUCED MATRIV		2		ŝ	EEPING: @ SURFALE AT SORFALE 30 "
TION TEST PIT #	MATRIX COLOR (moist)		104R 4/1	542 3/4	7,54R.4/6	7.5 YR 4/4		Depth to Observed Groundwater (inches): Weeping: Depth To Seasonal High Watertable: 2 Depth To Restrictive Horizon: Nove や 20 '' Depth To Bedrock: Nowe To 20'' Soil Series: Colone	FION TEST PIT #_	MATRIX COLOR (moist)	542.5/2	545/	-				es): W
SOLT TEST PIT DESCRIPTION	DEPTH (inches)	3-0	0-3	3.5	5-12	12-20		Depth to Observed Groundwater (inc) Depth To Seasonal High Watertable: Depth To Restrictive Horizon: <u>Nove</u> Depth To Bedrock: <u>Nowe To Ze</u> Soil Series: <u>Colonx</u>	SOL TEST PIT DESCRIPTION	DEPTH (inches)	0-21	21-30					Depth to Observed Groundwater (inch Depth To Seasonal High Watertable: Depth To Restrictive Horizon: <u>Movie</u> Depth To Bedrock: <u>Novie</u> To 30
SOIL TEST ]	SOIL HDRIZON	Oe	Ш	Bhs	BSI	B52		Depth to Observed G Depth To Seasonal H Depth To Restrictive Depth To Bedrock: Soil Series:	SOL TEST F	SOIL HDRIZON	0 O	Ca	b				Depth to Obs Depth To Sea Depth To Res Depth To Bec

OLOR     REDOXIMORPHIC     SOLI TEXTURE (USDA)     STRUCTURE     CONSISTENCE       0.1     FATURES     ST FSL     CR     FC       7     ST FSL     GR     FC       7     ST FSL     BKY     FR       6     CD     Standing:     Standing:     GR       6     ST FSL     BKY     FR       6     ST FSL     BKY     MA       7     CP     ST FSL     BKY       6     ST FSL     BKY     MA       7     CP     ST FSL     BKY       7     CP     ST FSL     BKY       7     CP </th <th>L TES</th> <th>SOLTEST PIT DESCRIPTION</th> <th>TIA ICHI NOTI</th> <th></th> <th>1-12</th> <th>LINNY 1000 / 10001 / NOV</th> <th>and in and</th> <th>1 2210 NOT 7 3210</th>	L TES	SOLTEST PIT DESCRIPTION	TIA ICHI NOTI		1-12	LINNY 1000 / 10001 / NOV	and in and	1 2210 NOT 7 3210
N     ST FSL     CR     FR       YI     ST FSL     GR     FR       YS     ST FSL     BKY     FR       Straw, 2.5Y 4/s     Strading:     Standing:     Standing:       Ineg); Weeping:     Standing:     Standing:     Standing:       Ineg); Weeping:     Standing:     Standing:     Ing       Ineg); Weeping:     Standing:     Standing:     Ing       Ineg); Weeping:     Standing:     Standing:     Ing       Ineg); Weeping:     Standing:     Ing     Ing       Inf     Inf     Inf     Inf     Ing	OIL. RIZON	DEPTH (inches)	MATRIX COLOR (moist)	REDOXIMORPHIC FEATURES	SOIL TEXTURE (USDA)	STRUCTURE	CONSISTENCE	OTHER FEATURES
0.1     57     52     С.0     7.0       3/3     57     57     51     6.0     7.0       3/3     57     57     51     8.47     7.0       3/4     C.D. DEPLE:     57     57     51     7.0       3/4     C.D. DEPLE:     57     57     54     7.0       3/4     C.D. DEPLE:     57     51     8.47     7.0       4.0     C.D. DEPLE:     57     51     8.40     8.4       4.0     Standing:	20	0-1						V. Stony surface
$Y_1$ $\Box$ $ST$ $ST$ $SL$ $BKY$ $FR$ $3/3$ $\Box$ $ST$ $ST$ $ST$ $BKY$ $FR$ $3/4$ $CD$ $DeructicSTSTBKYFR4/6CDDeructicSTSTBKYFR4/6CDDeructicSTSTBKYFR4/6CDDeructicSTSTBKYFR4/6Steuk2.5 V d_1AuberBKYFRergling:CPStanding:Standing:Constratederergling:EranderStanding:Standing:Constratederergling:EranderStanding:CRERergling:EranderStanding:CRERergling:EranderStanding:CRERergling:EranderEranderEREReranderStanding:CREREReranderEranderEranderERRReranderEranderRRRRRReranderEranderRRRRRReranderEranderRRRRRReranderEranderRRRRRReranderEranderRRRRRReranderRRRRRRRReranderRRRRRRRR$	A	0-4				6312	FO	
3/2     STESL     BKY     FR       4/6     CD     DEPLE     STESL     BKY     FR       5 stell     2.5 Y A3     Stading:     Stading:     Stading:     FR       des3;     Weeping:	11	4.6				62	FR	
$\mathcal{H}_{c}$ CDDEPLST FSLBKYFRsva.M. $2.5 V M_{3}$ Stading: $BKY$ FRsva.M. $2.5 V M_{3}$ Stading: $Auger$ $BKY$ FRsva.M. $2.5 V M_{3}$ Stading: $Auger$ $Auger$ $Auger$ sr. $20^{10}$ $ETD 20^{11}$ $Auder$ $Auger$ $Auger$ sr. $ETD 20^{11}$ $Aud DOLg$ $Bhvl$ $Auger$ sr. $ETD 20^{11}$ $Aud DOLg$ $Auger$ $Auger$ sr. $ETD 20^{11}$ $Bub DOLg$ $Auger$ $Auger$ sr. $ETD 20^{11}$ $EDD 20^{11}$ $Bhvl$ $Auger$ sr. $ETD 20^{11}$ $Bub DOLg$ $Bhvl$ $Auger$ sr. $ETD 20^{11}$ $EDD 20^{11}$ $EDD 20^{11}$ $Bhvl$ sr. $EDD 20^{11}$ $ED 20^{11}$ $ED 20^{11}$ $Bhvl$ $Auger$ st. $ED 20^{11}$ $ED 20^{11}$ $ED 20^{11}$ $Bhvl$ $Auger$ st. $ED 20^{11}$ $ED 20^{11}$ $ED 20^{11}$ $Auger$ $Auger$ st. $ED 20^{11}$ $ED 20^{11}$ $ED 20^{11}$ $Auger$ $Auger$ st. $ED 20^{11}$ $ED 20^{11}$ $ED 20^{11}$ $Auger$ $Auger$ st. $ED 20^{11}$ $ED 20^{11}$ $Auger$ $Auger$ $Auger$ st. $ED 20^{11}$ $ED 20^{11}$ $Auger$ $Auger$ $Auger$ st. $ED 20^{11}$ $ED 20^{11}$ $Auger$ $Auger$ $Auger$ st. $ED 20^{11}$ $Auger$ <td>SMS</td> <td>6-01</td> <td></td> <td></td> <td></td> <td>Bri</td> <td>1-10</td> <td></td>	SMS	6-01				Bri	1-10	
SVR.M. 2.5 V M3     Standing:       Inegl: Weeping:     Standing:       Standing:     Standing:	33			, U	100	めたい	FR	
the3: Weeping:     Standing:       E TO ZO     Standing:       E TO ZO     Standing:       E TO ZO     Standing:       C To				2.544				DID NOT GET TO
MATRIX COLORREDOXIMORPHICSOIL TEXTURE (USDA)STRUCTURECONSISTENCE $(mols1)$ FEATURESSOIL TEXTURE (USDA)STRUCTURECONSISTENCE $SY 3/2$ CP $7 \cdot SY a/6$ F5LCRFR $SY 4/2$ C2 $SY 4/2$ CP $7 \cdot SY a/6$ F5LBK? $T:SY 5/3$ CD $D_{20}$ $SY 5/4$ F7MA $T:SY 5/3$ CD $D_{20}$ $SY 5/4$ F7MA $SY 4/2$ CP $7 \cdot SY a/6$ F7MA $T:SY 5/3$ CD $D_{20}$ $SY 5/4$ MA $SY 5/4$ CP $7 \cdot SY a/6$ MAMA $Matertables: OstOstMAT \cdot OstMatertables: OstOstT \cdot OstT \cdot OstMatertables: OstT \cdot OstT \cdot OstT \cdot OstMatertables: Ost<$	th to 0 th To 5 th To 1 th To 1 Series: L TEST	bserved Grour teasonal High V testrictive Hor Bedrock: <u>Mo</u> PIT DESCRIP	a to a later	王	Standing:	FOOLS Shovel		2 30'W of Wet Flac U3
CP 7.5YR4/6 F5L CR CP 7.5YR4/6 F5L CR CP 5Y5/6 F5L BKY S3 CD Dep 5Y5/6 F76 VRSI MA CP 7.5YR4/6 " MA CP 7.5YR4/6 " MA CP 7.5YR4/6 " MA hes): Weeping:	UIL.	DEPTH (inches)	MATRIX COLOR (moist)		SOIL TEXTURE (USDA)	STRUCTURE	CONSISTENCE	OTHER FEATURES
CP 7.54246 F32 CP 7.5446 F32 CP CP 7.5446 F32 CP 204246 F32 BKY CP 204246 F32 BKY SS CD Dep 5456 F70 VFS1 MA CP 7.5446 " MA CP 7.5446 " MA MA MA MA MA MA MA MA MA MA	Ji	0-1						
P     CD     SY UL     F 5L     B       S/3     CD     Dep     SY 5L     F     N       S/3     CD     Dep     SY 5K     F     N       CP     7.5Ya     N     N     N       CP     1.4     <	T	0-5		7.54241	FSL	GR	FR	
\$\frac{1}{3}\$     CD Dep. \$\frac{1}{3} \frac{5}{5}_{4}\$     \$\frac{1}{6}\$     \$	99	5-12	54 4/2	546/1	FSL	したい		
СР 7.544 10 10 СР 7.544 10 10 10 10 СР 7.544 10 10 10 10 СР 7.544 10 10 10 10 10 0." (AT SURFALE Standing:	JE	12-18	5	Dep.	Fto VFGI	MM		
CP 7.547 4 / VFS hes): Weeping: Standing:	30	18-32		245.6	اد	MA		Fi - wiplace.
hes): Weeping:Standing:(AT SURFALE	$\epsilon$	32-40		7.540	1 VFS	MA	$\wedge$	
hes): Weeping:Standing:(AT Sull FALEStanding:(AT Sull FALE)								
	th to O th To S th To R	bserved Groun easonal High V	Idwater (inches): V Vatertable:	Veeping: AT SURFALE	Standing:			
Depth To Bedrock: Nover to 40 °	th To B	Anorb. No	als de date					

RE-DUG A HAND EXCAUATED PIT DUG THE DAY BEFORE	OTHER FEATURES		THIN DISCONT.						CLASS DOC.	OTHER FEATURES								
RE-DUG A HAND EXCAU	CE OTI		AL50 T						DUG - FOR DRAINAGE									
	CONSISTENCE		Ц.	FR	Fe	FR	FR	ά.		CONSISTENCE		4 X	27					
CAVATED 10	STRUCTURE		GR	GR	BLY	BLY	MA		D/ Shovel & auger			GR	MA	4		na na ana amin'ny fanina amin'ny fanina amin'ny fanina amin'ny fanina amin'ny fanina amin'ny fanina amin'ny fan		
BACK HOE EXCAVATED 10/8/21	SOIL TEXTURE (USDA)	(NOT STONY).	FSL	FSL	FSL	FSL	1fs to 145	Standing:	HAND EXCAVATED	SOIL TEXTURE (USDA)	SPHAS.	Bouldery FSL	5T F3L					Standing:
TEST PIT # IN # 45	REDOXIMORPHIC FEATURES					-	CD REDOX. CONCEN.	Veeping:	TEST PIT # JN # 4	REDOXIMORPHIC FEATURES		CP FINE TISYR 5/6	CFIST YI		-		E.	eeping: AT 12/1 L AT SUPERCE
	MATRIX COLOR (moist)		1042 2/1	7,54 R 3/4	1042 4/6	loye 5/4	5442	lwater (inches): V atertable: <u>34</u> on: <u>None To</u> E To <i>loo</i> "		MATRIX COLOR (moist)		2.542.5/	2154 4/1					Depth to Observed Groundwater (inches): Weeping: Depth To Seasonal High Watertable: O'' C 47 Depth To Restrictive Horizon: <u>Nove 70 12 ''</u> Depth To Bedrock: <u>Nove 70 12 ''</u> Soil Series: PLL4 3.100 - ESS, MARCH
SQL TEST PIT DESCRIPTION	DEPTH (inches)	0-2	0-3	3-12	2.0	2-2-2	34-60	Depth to Observed Groundwater (inche Depth To Seasonal High Watertable: <u>3</u> Depth To Restrictive Horizon: <u>NoNE</u> Depth To Bedrock: <u>NeNE</u> To <u>ka</u> Soil Series: <u>SUNAPEE</u>	SQL TEST PIT DESCRIPTION	DEPTH (inches)	3-0	0-6	6-12	5700PED	ON STONE			Depth to Observed Groundwater (inc Depth To Seasonal High Watertable: Depth To Restrictive Horizon: <u>None</u> Depth To Bedrock: <u>None</u> <u>70</u> 12.1 Soil Series: Print 3.10.2 - 555.100
SOL TEST	SOIL	00	A	Bhs	05.	Bu	0	 Depth to Ol Depth To Si Depth To R Depth To B Soil Series:	SOIL TEST	SOIL HDRIZON	0i	A	Ba	5				Depth to Ob Depth To Se Depth To Re Depth To Be Soil Series.

ВЕНИ МАТКИХ СОДОВ ПЕДАТИВНИЕ ЗОЦАТСИНИЕ (LEGIN)         STRUCTURE         CONSETENCE         OTHER FLATURENE           ОС         3-0         (model)         FEATURES         STRUCTURE         CONSETENCE         OTHER FLATURENE           ОС         3-0         (model)         (model)         FEATURES         STRUCTURE         CONSETENCE         OTHER FLATURENE           ОК         3-0         57/8 4/L         ST         ST         ST         ST         ST         ST           ОК         3-2         57/8 5/L         ST	And the state of t				
0       1 $10xe S_1$ $ST ESL       CR FR FR         1       10xe S_1 ST ESL       CR FR FR FR         12       37xeS_1 GR FR FR FR FR FR         12       35yeS_1 GR FR FR FR FR         12       3.5yeS_1 RR FR FR FR FR         12       3.5yeS_1 RR FR RR FR FR         12       3.5yeS_1 RR FR RR FR FR         12       3.5yeS_1 RR RR RR FR FR         12       2.5yeS_1 RR RR RR FR FR         12       2.5yeS_1 RR RR RR FR FR         12       RR RR RR RR RR FR RR         12       RR RR RR RR RR RR RR $	REDOXIMORPHIC FEATURES	SOIL TEXTURE (USDA)	STRUCTURE	CONSISTENCE	OTHER FEATURES
I $ Dvr. S_1 $ $$ $ST FS_1L$ $CR$ $FR$ $FR$ $R$ $Sr. SY 4/4$ $$ $ST FS_1L$ $RR$ $FR$ $FR$ $R$ $2.5Y 4/4$ $$ $ST FS_1L$ $RR$ $FR$ $FR$ $R$ $2.5Y 4/4$ $$ $ST FS_1L$ $RR$ $FR$ $FR$ $R$ $2.5Y 4/4$ $$ $ST FS_1L$ $RR$ $FR$ $FR$ $R$ $2.5Y 4/4$ $$ $ST FS_1L$ $RR$ $FR$ $FR$ $R$ $2.5Y 5/4$ $$ $ST FS_1L$ $RR$ $RR$ $FR$ $FR$ $R$ $2.5Y 5/4$ $R$ $RR$ $RR$ $RR$ $RR$ $RR$ $RR$ $RR$ $Albout 4 = 2.4$ $R$ $RR$ $RR$ $RR$ $RR$ $RR$ $RR$ $RR$ $R$ $RR$					
$C$ $SYR$ $L_{L}$ $ST$ $ST$ $RSL$ $RR$ $FR$ $R2$ $75YRSL$ $MTSL$ $BEY$ $FR$ $FR$ $C$ $2.5YS/3$ $CD$ -concentrals $STSIMAFRR02.5YS/3CD-concentralsISPLYFRR02.5YS/3CD-concentralsISPLYFRR02.5YS/3CD-concentralsISPLYFRR0R0RERRRRRRR0R0RERRRRRRR1R1R1RRRRRRR0R1RRRRRRRRR1R1RRRRRRRRR1R1R1RRRRRRR1R1R1RRRRRRR1R1R1RRRRRRR1R2$		1	GR	52	
$R_{1}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{1}$ $Z_{1}$ $Z_{2}$ $Z_{1}$ $Z_{2}$ $R_{1}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $Z_{2}$ $Z_{2}$ $Z_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{1}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{1}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{1}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{1}$ $R_{1}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{1}$ $R_{1}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{1}$ $R_{1}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{1}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{1}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{2}$ $R_{1}$ $R_{2}$ <		55 852	GR	52	
$L_{c}$ $2:SY 4/4$ $$ $sST51$ $MA$ $FR$ $R$ $R_{c}$ $2:SY 5/3$ $CD$ -concentrality $I_{c}$ $R_{c}$ </td <td></td> <td>57 FSL</td> <td>ちょう</td> <td>22</td> <td></td>		57 FSL	ちょう	22	
$\mathcal{D}$ $2.5 \times 5/3$ $\mathcal{CD}$ -Concentrable $\mathcal{S}$ $\mathcal{DL}$ $\mathcal{L}$ $\mathcal{L}$ Groundwater (Inches): Weeping:     Groundwater (Inches): Weeping:     Standing:     Standing:       High Watertable: $2.6 \times 7$ Standing:     Standing:       High Watertable: $2.6 \times 7$ Standing:     Standing:       Coundwater (Inches): Weeping:     Standing:     Standing:     Standing:       Effection: $2.6 \times 7$ Standing:     Standing:       Effection: $2.6 \times 7$ MAND Excavaries Shovel & Auger       Manuel Aussin     Sour Textruse (USDA)     Structruse     OT       Effection: $2.6 \times 7$ Structruse     OT       Effection: $2.6 \times 7$ Structruse     Structruse       Mantax Color     Reportings     Sour Textruse (USDA)     Structruse       Standards     Incode     Standards     Structruse       Standards     Incode     Standards     Structruse       Standards     Incode     Standards     Standards       Standards     Incode     Standards     Standards       Standards     Incode     Standards     Standards       Standards     Incode     Standards     Standards       Standards     Incode     Standards		5	MA	78	
Groundwater (Inches): Weeping:     Standing:       High Watertable: 2.6 /// High Watertable: 2.6 /// Endote     Standing:       Ellips Watertable: 2.6 /// Policion: 2.1 /// Montexton     Standing:       Ellips Watertable: 2.6 /// Policion: 2.1 /// Montexton     Standing:       Ellips Watertable: 2.6 /// Policion: 2.1 /// Montexton     Io/8/21       Montexton     REDOXINORPHIC Montexton       Marrix Color     REDOXINORPHIC Montexton       Marrix	CD-concentration	-	212	11	
Groundwater (Inches): Weeping:					
4-0		10/8/21 MA Soil texture (USDA)	ND EXCAVATED STRUCTURE		NUGER Photo of Bouldery SURFace
0-3     10m u/l     57 SI     GR     FR       3-8     7.5 m l/l     -     57 SI     GR     FR       8-24     7.5 m s/L     -     57 SI     BKY     FR       216-29     10 x s/L     -     15     MA     FR       29-31     10 x s/L     -     15     MA     FR       29-31     10 x s/L     -     15     MA     FR					
3-8     7.5 YR 4/6     -     57 51     GR     FR       8-24     7.5 YR 5/6     -     57 51     BKY     FR       216-29     104R 5/4     -     15     MA     FR       24-31     104R 5/3     -     15     MA     FR	Non-second second se	11	GR	Fø	
- E-26 75% 5/6 5751 BKY FR 26-29 10485/4 15 MA FR 29-31 10425/3 15 MA FR		57 5	GR	FP	
C 26-29 10YR 5/4 - 15 MA FR TR TUTTOP L 29-31 10YR 5/3 - 15 MA F? JUST ON TOP		1.	BKC	Fe	
-31 10425/2 15 MA E, JUST ON TOP		N	MA	Fe	
		15	M	D_0-	JUST ON TOP OF RESTRICTIVE LAYER
	8				
Depth to Observed Groundwater (inches): Weeping: Denth To Sessonal High Waterschla, Abade To 20	The second	CD-CONCENTRATION eeping: FEATURES eeping:	# 4 ATURES	W TURES	Image: Strate     Strate     Strate     Strate       Strate     Strate     Strate     Strate       Strate     Strate     Strate     Strate       Standing:     Standing:     Standing:         Standing:     Standing:         Standing:     Standing:         Standing:     Standing:         Standing:     Standing:         Standing:     Standing:         Standing:     Standing:         Standing:     Standing:

			ーーキョ	No.	FOR DRAINAGE CLASS DOLUMENTATION	ASS DOLUM	aen ta tion	
TEST	FIT DESCRIP	SOLTEST PIT DESCRIPTION TEST PIT # _ N - 79	H. N.	10/8/21 HAN	HAND EXCAVATED	SHOVEL & LUGEN	WET. FLAG	Clable
SOIL	DEPTH (inches)	MATRIX COLOR (moist)	REDOXIMORPHIC FEATURES	SOIL TEXTURE (USDA)	STRUCTURE	CONSISTENCE	OTHER FEATURES	
0	4-0							
1	0-3	2157 25/	Machine Due to Machinelo	55 551	GR	44 10		
BW	3-16	2.543/2	CF & FD DE DOX	57 15	P.Y.Y	512	UNUSUAL COLOR IN SUBSOIL	
	47000ED C	ATOPOED ON STONE	•					
							-	
h To S h To S h To B h To B eries:	Depth To Seasonal High Watertable: Depth To Restrictive Horizon: <u>Mode</u> Depth To Bedrock: <u>Mode To 10</u> Soil Series: <u>Fill Seder To 10</u>	Depth To Seasonal High Watertable: C (AT SU Depth To Seasonal High Watertable: C (AT SU Depth To Bedrock: <u>Aprile To Le</u> Soil Series: <u>VILLERUP</u> (ESTIMATE). Soil Series: <u>VILLERUP</u> (ESTIMATE).	TEST PIT # JN # 50	10/8/21 HAND EXCAVATED AVCER	EXCAVATES AUG	ER. N. 20 M	ERON TO A C	
SOIL HDRIZON	DEPTH (inches)	MATRIX COLOR (moist)	REDOXIMORPHIC FEATURES	SOIL TEXTURE (USDA)	STRUCTURE	CONSISTENCE	OTHER FEATURES	
Ma	22-0	54	ORGANIC	Hemic/SADRIC	GR	Fl		
Ro	22-22	515/2544	Reduced	65 to COS	MA	FR		
J			WATRIX					
						an de la constante de la const		
			· ·					
n to Ol n To Si n To R	Depth to Observed Groundwate Depth To Seasonal High Watert Depth To Restrictive Horizon:	Depth to Observed Groundwater (inches): Weeping: Depth To Seasonal High Watertable: O <sup>11</sup> AT SURE Depth To Restrictive Horizon: Nove TO 2.4	Neeping: 2 18" AT SURFACE) 2.9 "	Standing: # 24				
ieries:			IERRY	8				