SOIL SURVEY REPORT
Tighe and Bond Engineers
Chinook, Fitzwilliam, NH

1. MAPPING STANDARDS

Site-Specific Soil Mapping Standards for New Hampshire and Vermont. SSSNNE Special Publication No. 3, Version 5.0, December 2017. This map product is within the technical standards of the National Cooperative Soil Survey. It is a special product, intended for the site specific soil survey. It was produced by a professional soil scientist and is not a product of the USDA Natural Resource Conservation Service.

2. DATE SOIL MAP PRODUCED

Field work was performed during the spring of 2018, with the soil map compilation completed on December 21, 2018.

3. GEOGRAPHIC LOCATION AND SIZE OF SITE

The area of the soil map was approximately 156 acres. The survey area is comprised of actively managed forest land. The survey area generally drains in two portions. In the northern half of the site the land slopes to the north towards Route 119 and to the west to a large wetland system. The southern half of the site slopes to the south to a large wetland system and west to an additional, separate, large wetland system. Several connected and isolated wetland systems occur on site. The site has some areas of rock outcrops throughout, along the far northwestern side and the southern portion with areas interspersed throughout the site. These areas are predominantly Monadnock, and Berkshire, Becket and Marlow very stony phases. Wetland areas were not delineated nor mapped by GES Inc. as part of the project.

4. PURPOSE OF THE SOIL MAP

The preparation of this map was requested by Tighe and Bond Engineers. The purpose was to meet the requirements of the NH Alteration of Terrain Bureau.

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5. SOIL IDENTIFICATION LEGEND

SYMBOL	SOIL TAXONOMIC NAME	Hydrologic Soil Group
143	Monadnock	B
168	Sunapee	B
73	Berkshire Very Stony	B
56	Becket	C
57	Becket Very Stony	C
559	Skerry	C
60	Tunbridge Berkshire Complex	C
76	Marlow	C
77	Marlow Very Stony	C

SOIL MAP UNIT DESCRIPTIONS

143 The Monadnock series consists of very deep, well drained soils that formed in loamy over sandy melt-out till on hills and mountains in glaciated uplands. Estimated saturated hydraulic conductivity is moderately high or high in the mineral solum and high or very high in the substratum. Estimated seasonal high water table (ESHWT) were found below 40" and had a typical profile in the higher areas and on hillsides on the site of loam over sand on the southern portion of the site.

168 The Sunapee series consists of very deep, moderately well drained soils formed in loamy melt-out till on hills and mountains in glaciated uplands. On site they are typically located on the upper reaches of the uplands in the southern portion as well as on some of the toe slopes in the central portion. These soils had ESHWT between 15-40", with textures of loose till and loamy.

73 The Berkshire series consists of very deep, well drained soils formed in loamy melt-out till on hills and mountains in glaciated uplands. On site these are found in the far southern end of the site in the higher reaches with areas of exposed rock. Soil profile consists of loose till over fine sand. ESHWT is below 40".

56/57 The Becket series consists of very deep, well drained soils that formed in a loamy mantle overlying dense, sandy till on drumlins and glaciated uplands. They are moderately deep to a densic contact. On site they are typically located on the upper reaches of the uplands in the southern portion as well as on some of the toe slopes in the central portion. These soils had ESHWT below 40", with firm, platy sandy textures in the A/B layers and gravelly sand in the C.

559 The Skerry series consists of very deep, moderately well drained soils that formed in a loamy mantle overlying dense, sandy till on drumlins and glaciated uplands. They are moderately deep to a densic contact. On site these soils are found

primarily along the toe slopes, but are also sporadically located in some of the higher reaches along hillsides. ESHWT is found between 15-40" and textures range from firm, platy, sandy till over loam.

60 The Tunbridge-Berkshire complex is composed of moderately deep, well drained soils on glaciated uplands. They formed in loamy supraglacial till (Tunbridge). And very deep, well drained soils formed in loamy melt-out till on hills and mountains in glaciated uplands (Berkshire). As a complex, these soils occur in such a manner that they are difficult to break out in separate units. These occur in the higher reaches typically on the southern portion of the site. ESHWT is below 40".

76/77 The Marlow series consists of well drained soils that formed in loamy lodgment till on hills and mountains in glaciated uplands. They are moderately deep to a dense substratum and very deep to bedrock. These soils on site are located primarily in the far eastern portion of the survey area, with ESHWT below 40". These soils have a typical profile of firm, platy, loamy till over fine sandy loam.

5. RESPONSIBLE SOIL SCIENTIST

Luke D. Hurley, C.S.S. #0095

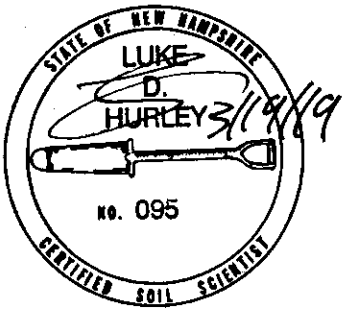
6. OTHER DISTINGUISHING FEATURES OF SITE
No distinguishing features were noted.

7. MAXIMUM SIZE OF LIMITING INCLUSIONS

No Inclusions were mapped.

8. SPECIAL FEATURE SYMBOLS

No special feature symbols were used.



LEGEND

- SITE SPECIFIC SOIL SURVEY BOUNDARIES
- WETLAND DELINEATION

SITE SPECIFIC SOIL SURVEY HYDROLOGIC SOIL GROUP (HSG) LEGEND

SYMBOL	SOIL TYPE, SLOPE RATING	HSG
56	BECKET (3 TO 8% AND 8 TO 15%)	C
57	BECKET, VERY STONY (3 TO 8%, 8 TO 15% AND 15 TO 25%)	C
60	TURNBRIDGE-BERKSHIRE COMPLEX (0 TO 8%)	C
73	BERKSHIRE (0 TO 8%, 8 TO 15% AND 15 TO 25%)	B
76	MARLOW (3 TO 8%, 8 TO 15%, 15 TO 25% AND 25 TO 50%)	C
77	MARLOW, VERY STONY (0 TO 8%, 8 TO 15% AND 15 TO 25%)	B
143	MONADNOCK (0 TO 8%, 8 TO 15%, 15 TO 25%, 25 TO 50% AND 50%+)	B
168	SUNAPEE (3 TO 8%, 8 TO 15% AND 15 TO 25%)	B
559	SKERRY (3 TO 8%, 8 TO 15% AND 15 TO 25%)	C

NOTES:

1. SSSS PREPARED BY LUKE HURLEY, GES INC., DATED 03/18/2019.
2. SITE-SPECIFIC SOIL MAPPING STANDARDS FOR NEW HAMPSHIRE AND VERMONT. SSSNNE SPECIAL PUBLICATION NO. 3, VERSION 5.0, DECEMBER 2017. THIS MAP PRODUCT IS WITHIN THE TECHNICAL STANDARDS OF THE NATIONAL COOPERATIVE SOIL SURVEY. IT IS A SPECIAL PRODUCT, INTENDED FOR THE SUBMISSION TO NH DES ALTERATION OF TERRAIN. IT WAS PRODUCED BY A PROFESSIONAL SOIL SCIENTIST AND IS NOT A PRODUCT OF THE USDA NATURAL RESOURCE CONSERVATION SERVICE.

N

SCALE IN FEET
0 200' 400'
GRAPHIC SCALE

STATE OF NEW HAMPSHIRE
LUKE D. HURLEY
NO. 098
CERTIFIED SOIL SCIENTIST
5/20/19

Tighe&Bond
www.tighebond.com

NEXTera ENERGY

Chinook Solar Project

Chinook Solar, LLC

Fitzwilliam, NH

VERIFY SCALE
BAR IS 1 INCH ON ORIGINAL DRAWING
0 1 INCH
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

MARK	DATE	DESCRIPTION
1	3/18/2019	REV. PER CLIENT COMMENTS

PROJECT NO:	N0758-019
DATE:	1/22/2019
FILE:	N-0758-017-HYDRO.dwg
DRAWN BY:	EGD/AFS/CJK
CHECKED:	JMP
APPROVED:	BLM

SITE SPECIFIC SOIL SURVEY

SCALE: AS SHOWN

1 OF 2

Last Saved: 3/19/2019
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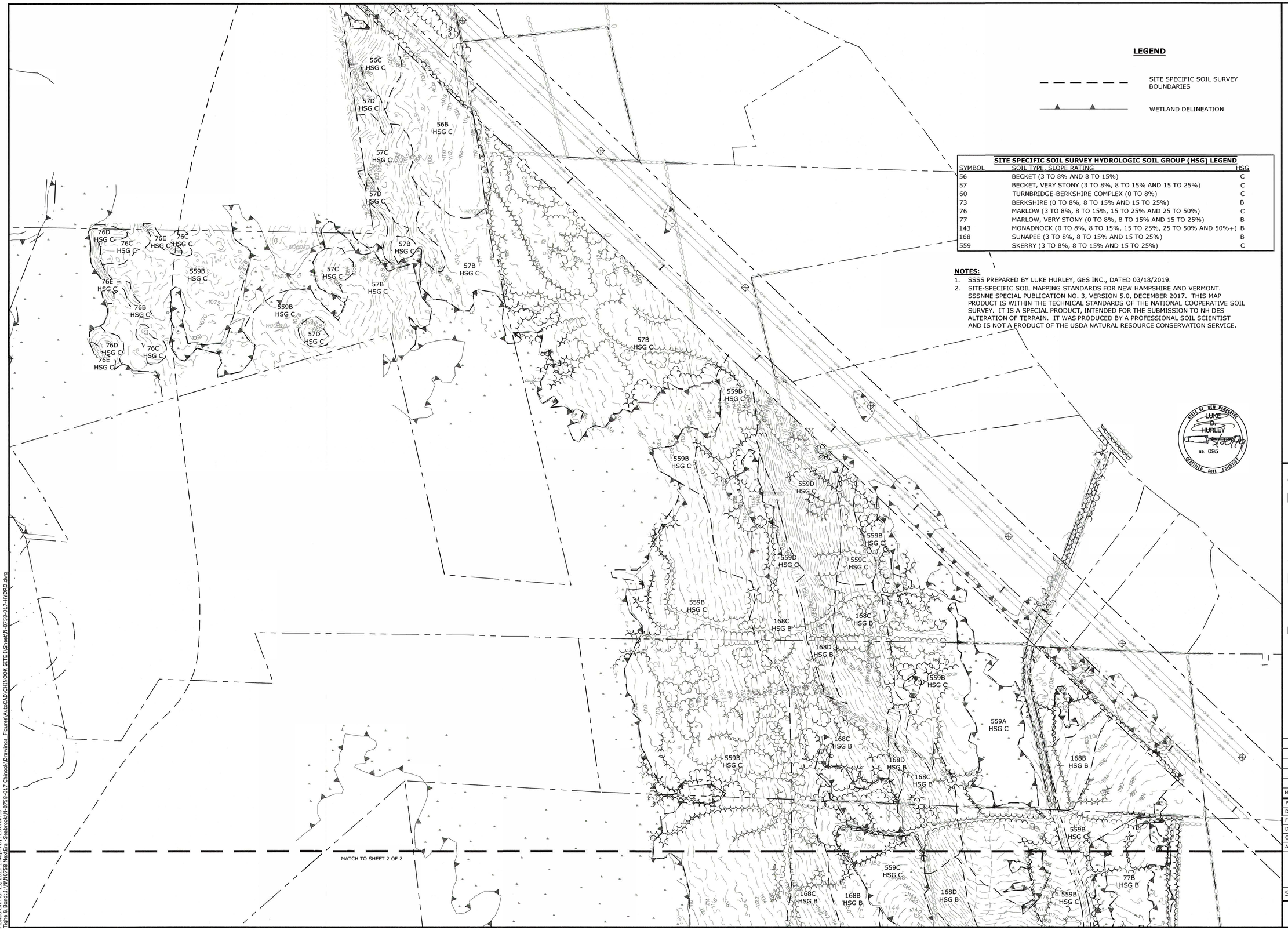

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SCALE: AS SHOWN

2 OF 2

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