ATTACHMENT 9. NATURAL RESOURCES REPORT

Wetland and watercourse delineations were conducted for the Project area in 2020 and 2021 by Boyle Associates (Boyle), Biodiversity Research Institute (BRI), and Stantec Consulting Services Inc. (Stantec). Additionally, vernal pool surveys were completed separately during 2019 and 2020 by Kleinschmidt Associates (KA) for the solar array area and portions of the Genlead. Concurrent with Stantec's wetland and watercourse delineation, potential vernal pool surveys were conducted outside of the spring amphibian breeding period for portions of the Genlead.

9.1 SURVEY RESULTS

A brief overview of the natural resources present in the Project area is provided below and depicted on Figure 9-1. Further details of the wetland and waterbody resources identified within the Project area, as well as relevant data forms for the Project, are provided in the Natural Resources Report for the solar array area (Attachment 9-1) and the Wetland and Watercourse Delineation and Potential Vernal Pool Survey Report for the Genlead (Attachment 9-2). The vernal pool data submission to MDIFW is included as Attachment 9-3.

9.1.1 Wetlands and Streams

Solar Array Area

Boyle and BRI identified a total of 57 wetlands and 4 streams within the Project solar array area. Wetlands observed were primarily forested wetlands, often combined with areas of scrub-shrub communities. The only exception is wetland W-MR-01, which contains large areas of emergent wetland habitats. W-MR-01 is the largest wetland onsite and contains forested, scrub-shrub, and emergent wetland types. Fifteen wetlands or portions thereof are considered WOSS as they either contain an SVP, a delineated stream, over 20,000 sf of emergent wetland habitat, and/or are located within mapped IWWH. The four identified streams consist of narrow, perennial, or intermittent watercourses.

Genlead

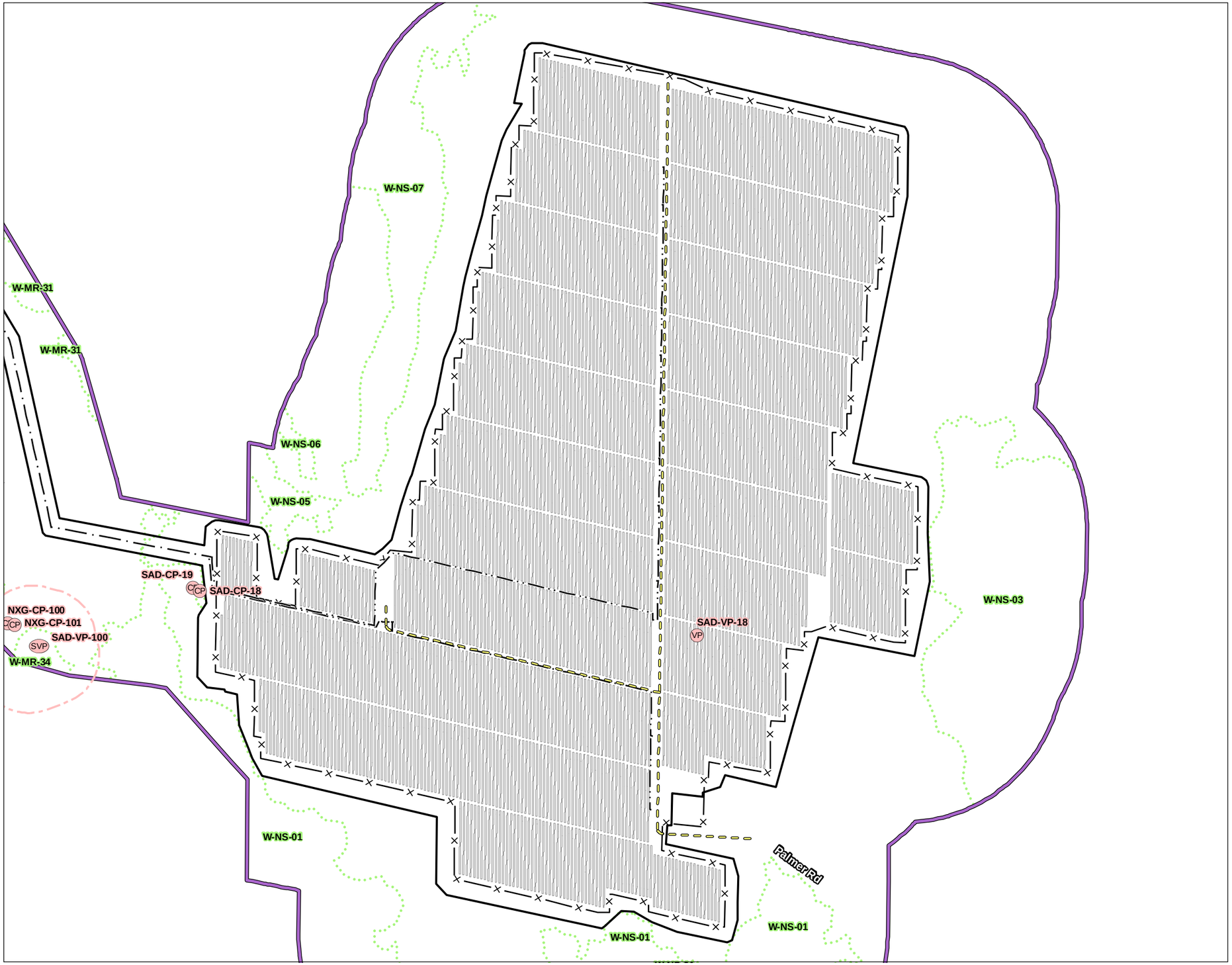
Stantec identified a total of 62 wetlands, 10 streams, and 1 waterbody (i.e., pond) within the Project Genlead area. Wetlands observed were primarily forested wetlands, often combined with areas of scrub-shrub communities. Portions of several wetlands have wet meadow wetland habitat (e.g., W03) as they occur within cleared areas associated with existing logging access roads or transmission corridors. Large emergent wetland complexes, primarily occurring off-site, are associated with several wetlands. Sixteen wetlands or portions thereof are considered WOSS as they either contain an SVP, a delineated stream, over 20,000 sf of emergent wetland habitat, are located within mapped IWWH, and/or rare plant populations (see Section 9.0 of the Site Law permit application). Three wetlands are considered potential WOSS as they contain PSVPs. Identified streams ranged from narrow perennial or intermittent streams to larger perennial streams (e.g., S07 – Fifteenmile Stream).

9.1.2 Vernal Pools

Eighty vernal pools were identified within the solar array delineation area and portions of the Genlead delineation areas. Additionally, 10 potential vernal pools were identified within the Genlead delineation area. Within the solar array delineation area, 41 vernal pools were identified as natural or natural-modified in origin and 18 of these natural or natural-modified pools were determined to be potentially significant based on state criteria. Five of the potential vernal pools within the Genlead delineation area were identified as natural or natural-modified in origin and could potentially contain requisite numbers of indicator species to meet the criteria of an SVP. As such, the pools are considered PSVPs and are assumed to be significant for permitting purposes. Potential vernal pools identified with the Genlead delineation area are detailed further in the Wetland and Watercourse Delineation and Potential Vernal Pool Survey Report for the Genlead (Attachment 9-2). Vernal pools identified by KA within the Project solar array delineation area and Genlead delineation area are detailed further in the vernal pool data submission to MDIFW (Attachment 9-3).

Figure 9-1

Natural Resources Overview Maps



Stantec

Legend

- CP — Corps Vernal Pool
- VP — Vernal Pool
- PVP — Potential Vernal Pool
- SVP — Significant Vernal Pool
- PSVP — Potential Significant Vernal Pool
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- Delineated Perennial Stream
- Delineated Wetland
- 250' SVP/PSVP Critical Terrestrial Habtat
- BRI Delineation Limits
- Stantec Delineation Limits

Rare Plant Population (1 location)

- *Allium canadensis* (Wild Garlic)
- Municipal Boundary
- Deer Winter Area
- Inland Waterfowl Wading Bird Habitat

Proposed Infrastructure

- Access Road
- Overhead Collection Line
- Underground Collection Line
- Overhead Transmission Line
- Solar Panel Array
- Fence
- Substation
- Project Area

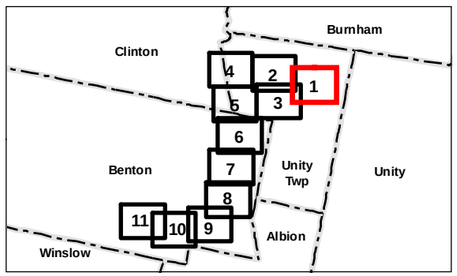
N

0 500 Feet

(At original document size of 11x17)
1:6,000

Notes

1. Coordinate System: NAD 1983 UTM Zone 19N
2. Data Sources: Longroad, Stantec, Boyle, MDIFW, LUPC, MEGIS
3. Background: NAIP 2018



Project Location
Benton, Clinton, Unity Twp, Maine

Prepared by GC on 2022-01-07
Reviewed by EB on 2022-01-10

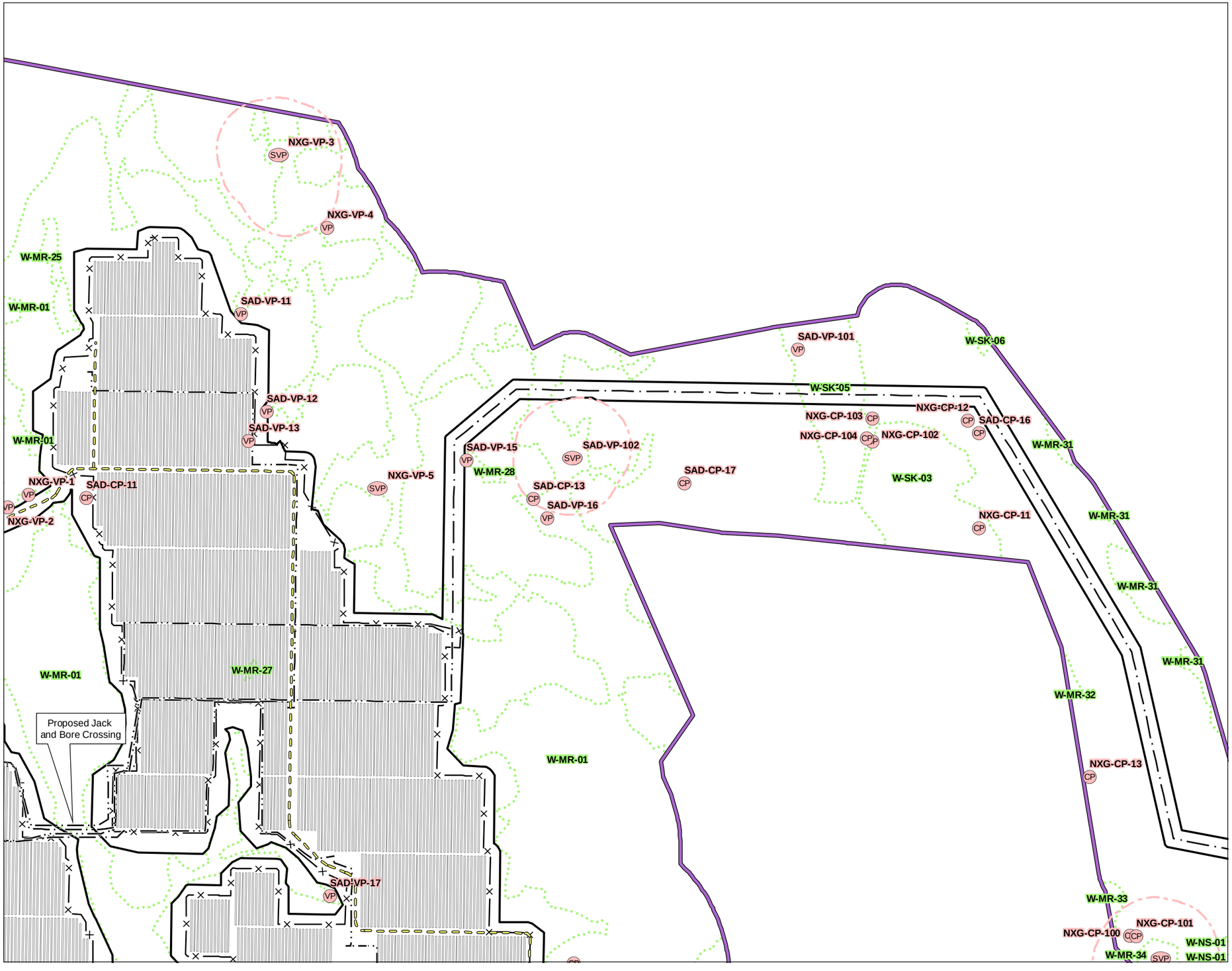
Client/Project
Three Corners Solar Project

195601453

Figure No.
9-1

Title
Natural Resource Maps
Sheet 1 of 11

V:\195\active\195601453\03_data\gis_cad\gis\MXDs_Permit\Jan2021DEP\NRPA\01453_9-1_Wetlands.mxd Revised: 2022-01-27 By: gcarpentier



Stantec

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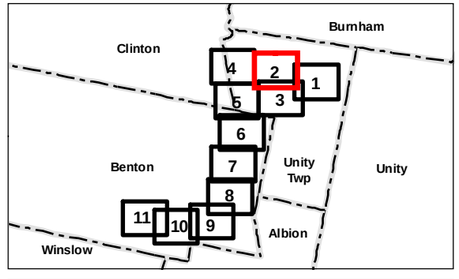

Project Location
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Client/Project
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195601453

Figure No.
9-1

Title
Natural Resource Maps
Sheet 2 of 11

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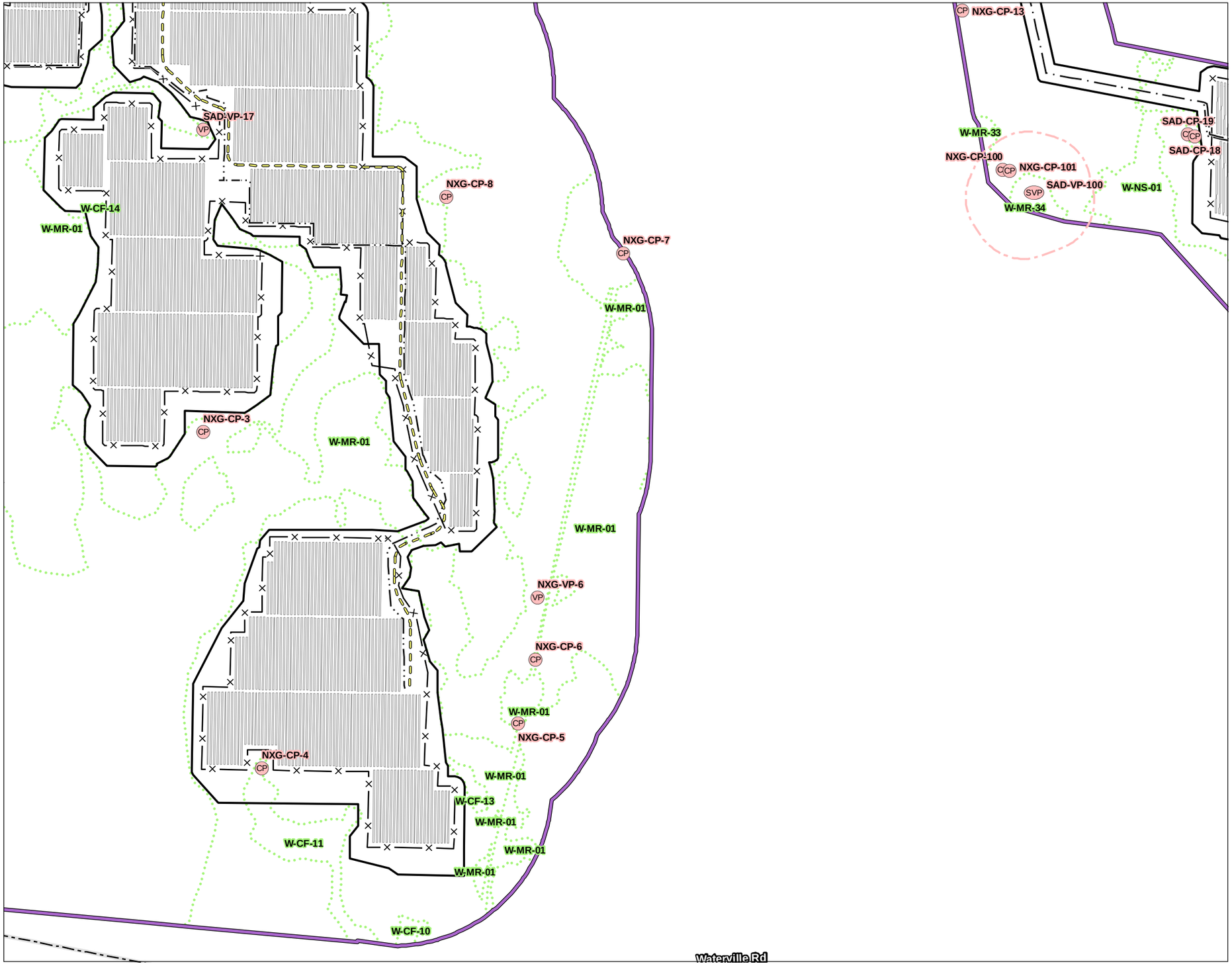

Stantec

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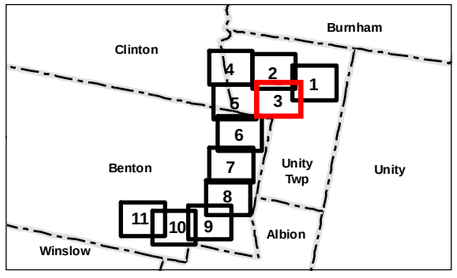

Project Location
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Prepared by GC on 2022-01-07
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Client/Project
Three Corners Solar Project

195601453

Figure No.
9-1

Title
Natural Resource Maps
Sheet 3 of 11

V:\195\active\195601453\03_data\gis_cad\gis\MXDs_Permit\Jan2021\DEP\WRPA01453_9-1_Wetlands.mxd Revised: 2022-01-27 By: gcarpenter

W-CF-05
W-CF-04
SVP SAD-VP-10
SVP SAD-VP-9
W-CF-03
W-CF-08
W-NS-12
SAD-CP-8
CP
W-NS-13
SAD-CP-9
CP
W-NS-14
W-CF-07
W-NS-16
W-CF-02
S-CF-01
W-CF-01
W-MR-23
SAD-VP-107
SVP
SVP NXG-VP-105
W-MR-24
W-MR-20
W-MR-19
W-MR-18
NXG-VP-104
VP
SAD-VP-106
SVP
W-MR-21
NXG-CP-105
CP
W-MR-16
W-MR-15
Unity Twp
Clinton
W-NS-18
W-MR-01
S-NS-01
SAD-CP-10
CP
NXG-CP-1
CP
NXG-CP-2
CP
S-MR-02
W-MR-01
NXG-VP-1
VP
NXG-VP-2
VP
W-MR-01
SAD-CP-6
SVP SAD-VP-8
SVP SAD-VP-7
W-MR-01
W-MR-01

Stantec

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0 500 Feet

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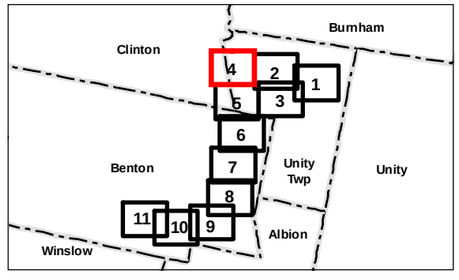

Project Location
Benton, Clinton, Unity Twp, Maine

Prepared by GC on 2022-01-07
Reviewed by EB on 2022-01-10

Client/Project
Three Corners Solar Project

195601453

Figure No.
9-1

Title
Natural Resource Maps
Sheet 4 of 11

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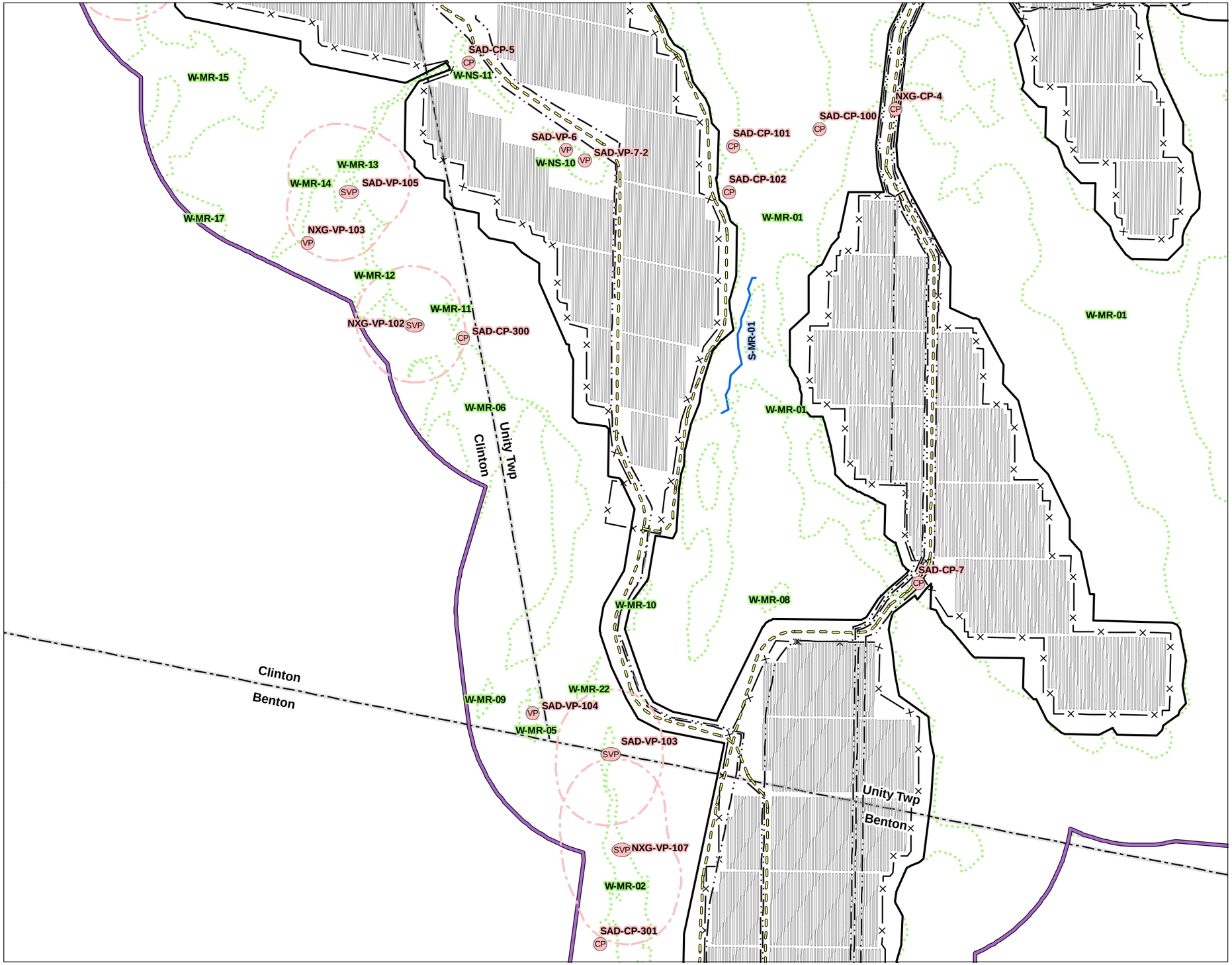

Stantec

Legend

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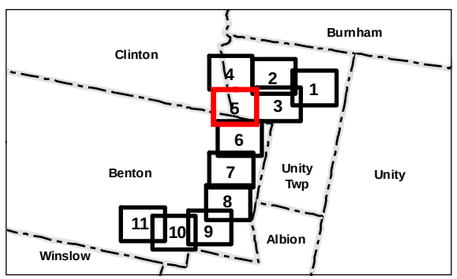

Project Location
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Client/Project
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Figure No.
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Natural Resource Maps
Sheet 5 of 11

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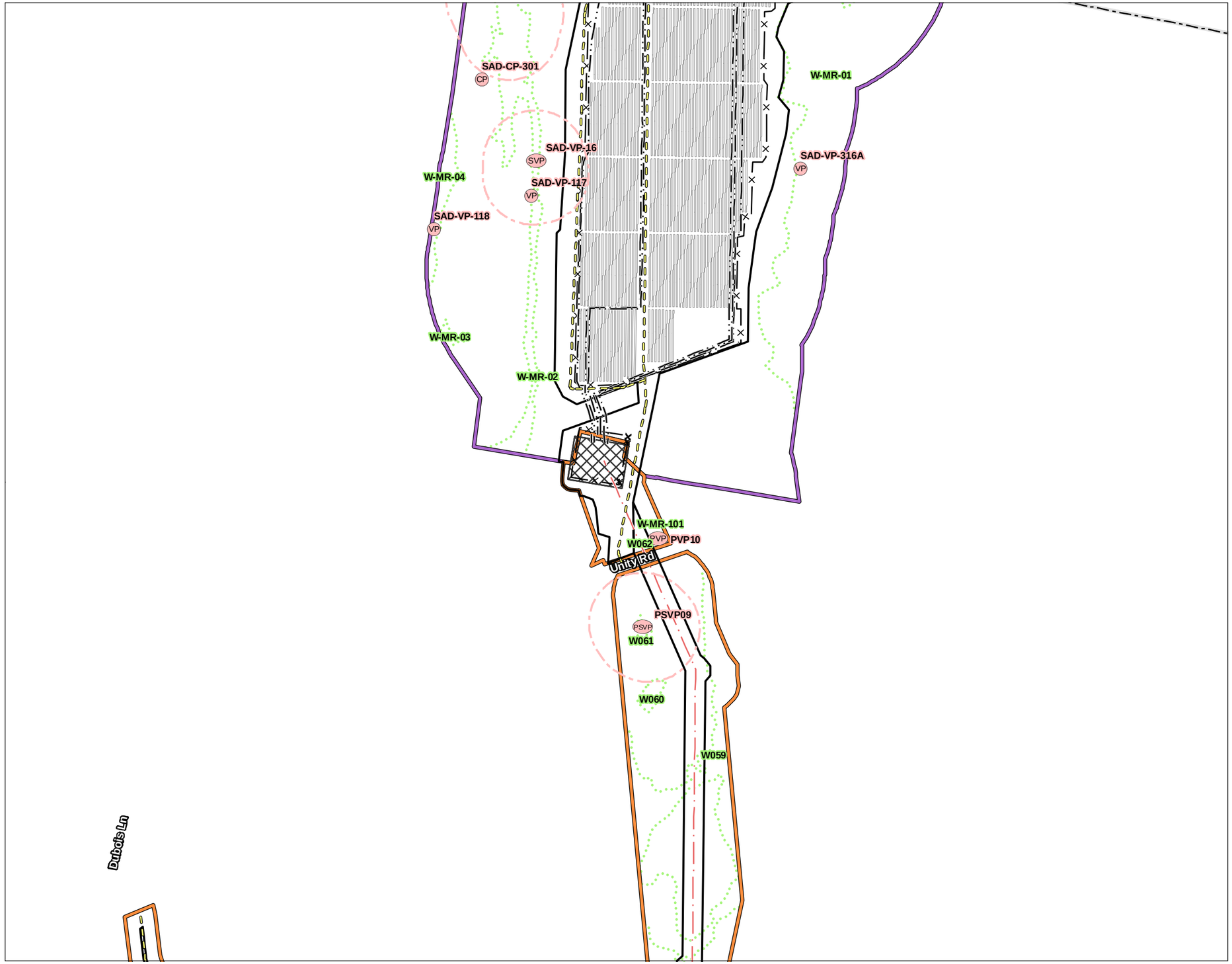

Stantec

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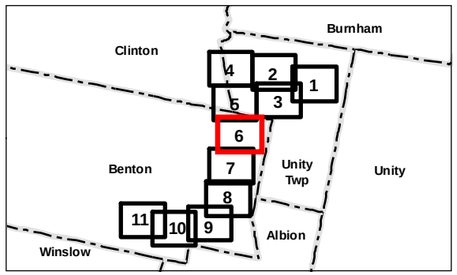

Project Location
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Client/Project
Three Corners Solar Project

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Figure No.
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Title
Natural Resource Maps
Sheet 6 of 11

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Stantec

Legend

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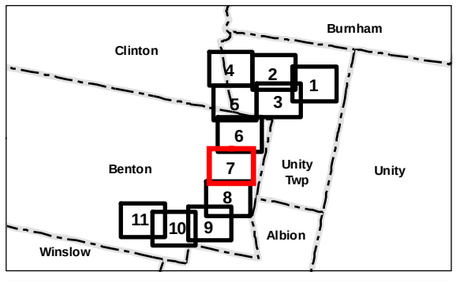

Project Location
Benton, Clinton, Unity Twp, Maine

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Client/Project
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Figure No.
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Sheet 7 of 11

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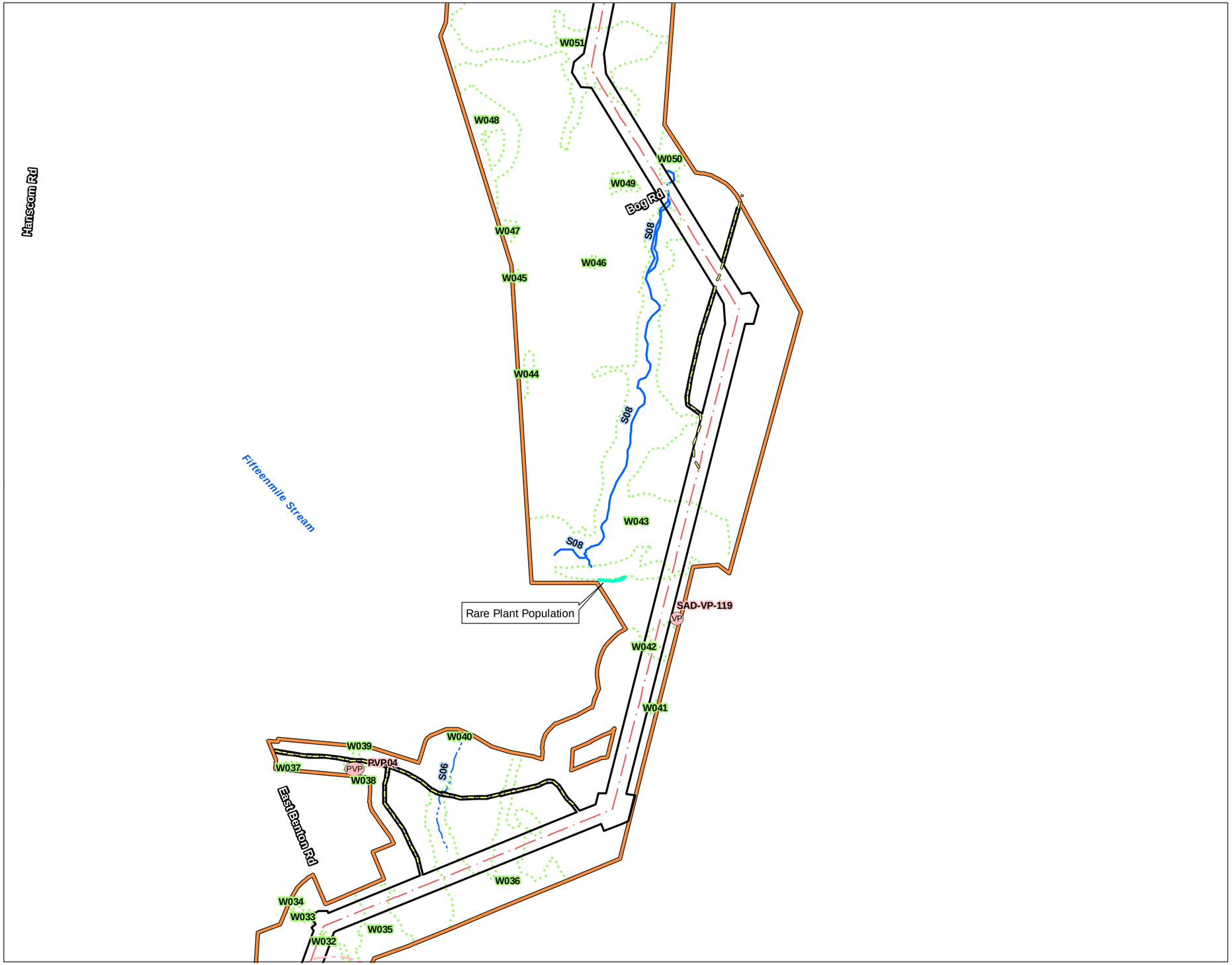

Stantec

Legend

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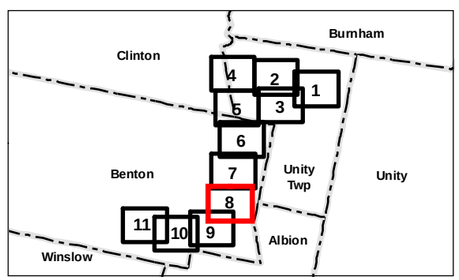

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Sheet 8 of 11

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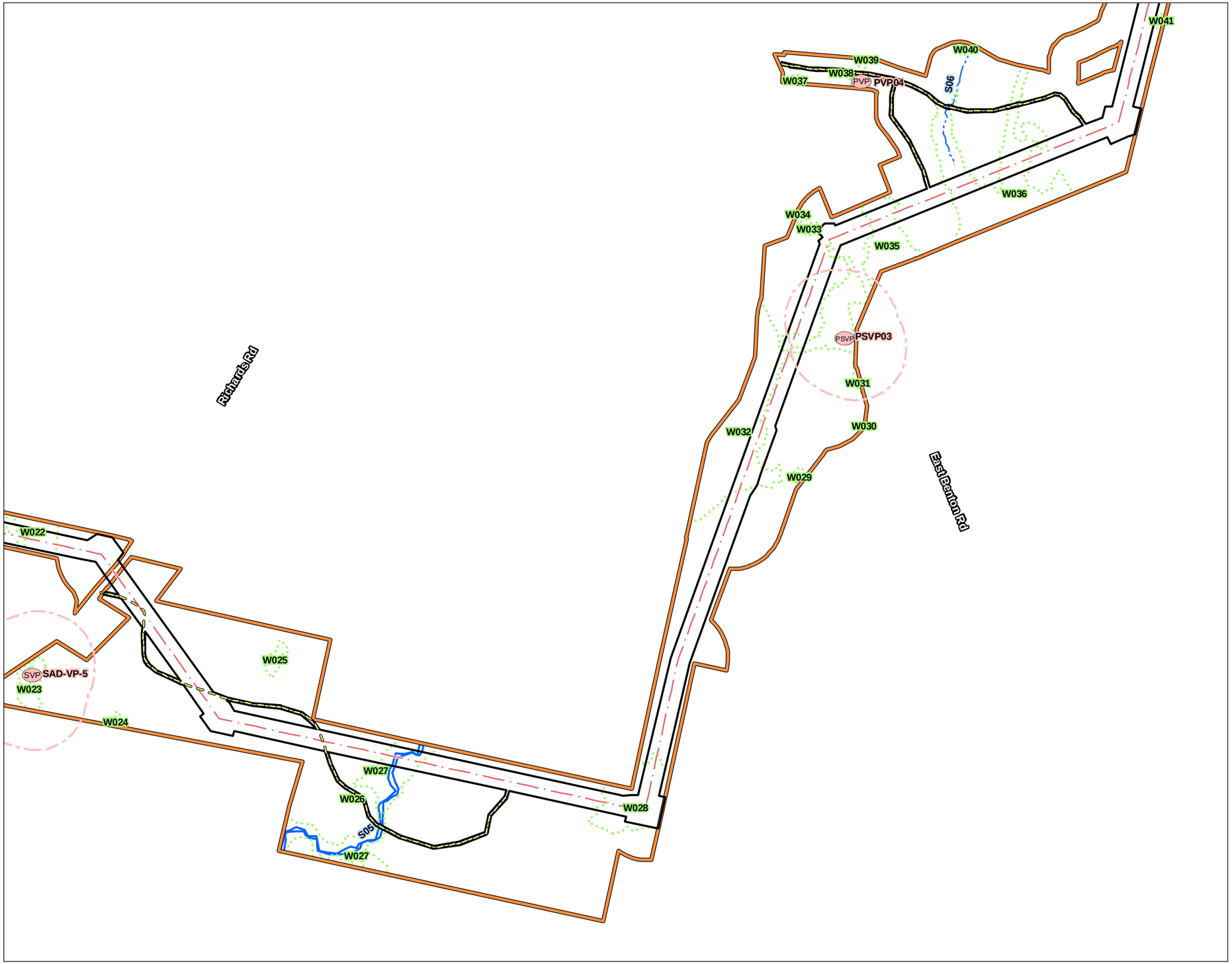

Stantec

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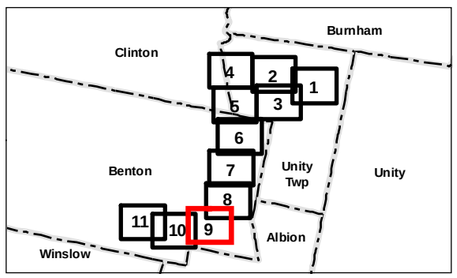

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Sheet 9 of 11

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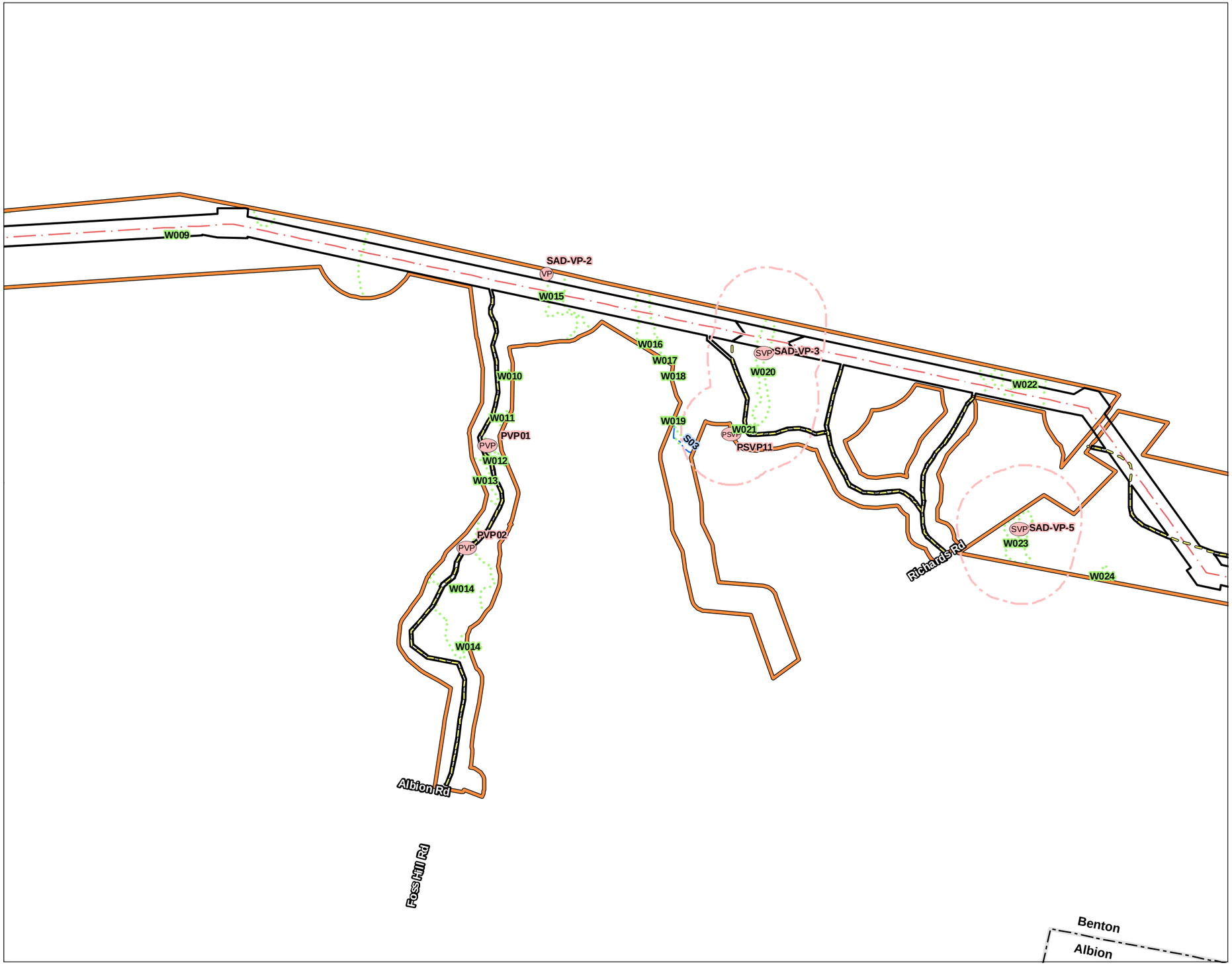

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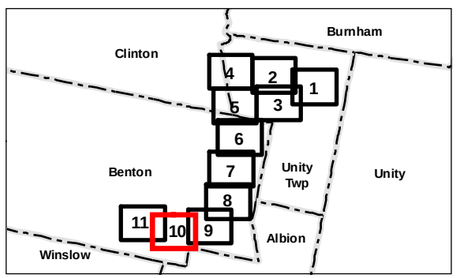

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Sheet 10 of 11

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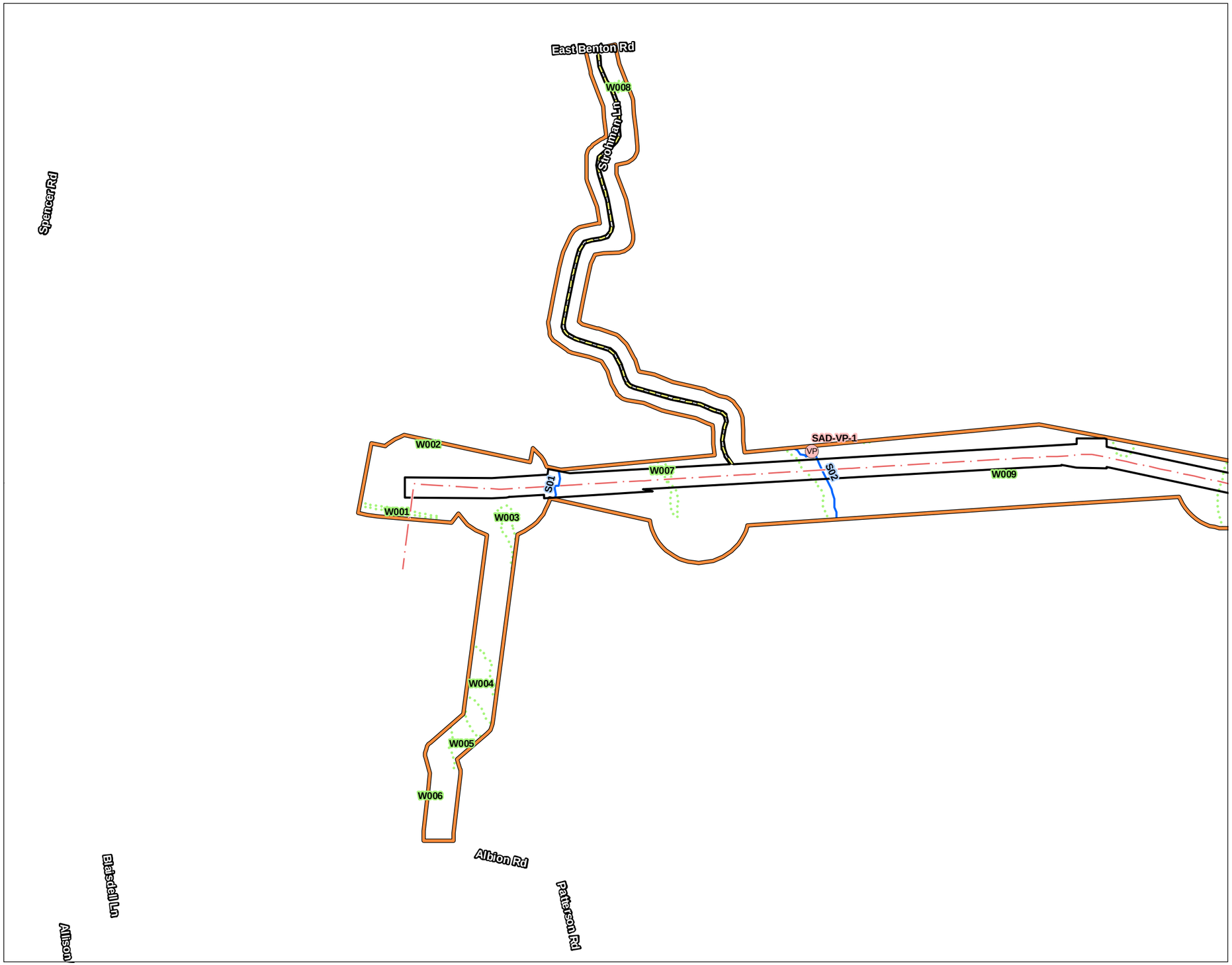


Stantec

Legend

- CP — Corps Vernal Pool
- VP — Vernal Pool
- PVP — Potential Vernal Pool
- SVP — Significant Vernal Pool
- PSVP — Potential Significant Vernal Pool
- Delineated Intermittent Stream
- Delineated Perennial Stream
- Delineated Wetland
- 250' SVP/PSVP Critical Terrestrial Habtat
- BRI Delineation Limits
- Stantec Delineation Limits

Rare Plant Population (1 location)

- *Allium canadensis* (Wild Garlic)
- Municipal Boundary
- Deer Winter Area
- Inland Waterfowl Wading Bird Habitat

Proposed Infrastructure

- Access Road
- Overhead Collection Line
- Underground Collection Line
- Overhead Transmission Line
- Solar Panel Array
- Fence
- Substation
- Project Area

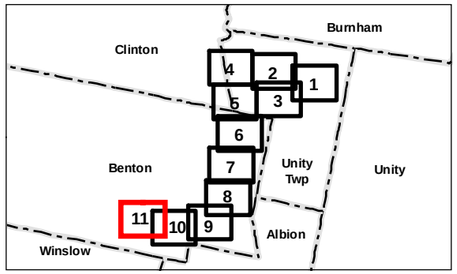
N

0 500 Feet

(At original document size of 11x17)
1:6,000

Notes

1. Coordinate System: NAD 1983 UTM Zone 19N
2. Data Sources: Longroad, Stantec, Boyle, MDIFW, LUPC, MEGIS
3. Background: NAIP 2018



Project Location
Benton, Clinton, Unity Twp, Maine

Prepared by GC on 2022-01-07
Reviewed by EB on 2022-01-10

Client/Project
Three Corners Solar Project

195601453

Figure No.
9-1

Title
Natural Resource Maps
Sheet 11 of 11

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Attachment 9-1

Natural Resources Report: Solar Array Area

Natural Resources Report

Three Corners Solar Project

Prepared by BRI Environmental

December 2021

longroad ENERGY

BIODIVERSITY RESEARCH INSTITUTE

Contents

Exhibits

1.0 Introduction

Biodiversity Research Institute (BRI) staff was retained by Longroad Energy (Longroad) to finalize natural resource reporting regarding field surveys on an approximately 2,146-acre area located off Bessey Lane in Unity Township, Maine (Site) as shown in Figure 1. This survey area consists of a single parcel and field work was performed during the months of June, July, and August 2020.

2.0 Geographic Setting

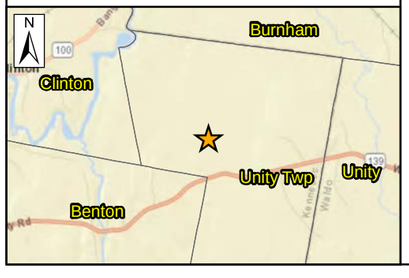
The Site is generally characterized by regenerating uplands and wetlands that are actively managed for timber. The Site is surrounded by limited residential development and more working forest. The nearest waterbody is the Sebasticook River, which is approximately 0.4 miles to the north, and Unity Pond, which is 2.8 miles east at the nearest points.

The Site falls within the US Environmental Protection Agency's (EPA) Eco-region of the Central Maine Embayment within the Acadian Plains and Hills. The EPA's description of the region is as follows:

The Central Maine Embayment is a diverse region of rolling plains with hills and some high hills. It has a complex geologic mix of bedrock, with large areas of metamorphosed pelite, sandstone, and limestone/dolostone, some granitic intrusives, along with other metasedimentary and metavolcanics rocks. Glaciomarine sediments of silt, clay, sand, and gravel cover many of the flatter lower elevations, deposits formed from marine submergence of lowland areas, or where glacial meltwater streams entered the sea. Some broader river valleys and associated alluvial deposition occur in the region such as the Androscoggin and Kennebec. A few areas of wet flats with swamp and bog deposits occur, but not as many as in Ecoregion Penobscot Lowlands to the east. Surface water alkalinity values tend to be higher than adjacent ecoregions. The region has a relatively moderate climate, transitional between the coastal climates and inland continental regions, and diverse flora and fauna. Vegetation transition zones occur in the region, and the northern range limits of many woody and herbaceous species are reached here. Transition hardwoods, northern hardwoods, northern hardwoods-spruce forests are major forest types. The ecoregion has a relatively high population density for Maine, with an extensive pattern of settlement and roads.[1]

[1] Ecoregions of New England http://ecologicalregions.info/data/vt/new_eng_front.pdf

INDEX MAP



LEGEND

Project Survey Boundary

BIODIVERSITY RESEARCH INSTITUTE
innovative wildlife science

longroad ENERGY

SCALE:

0 1,500 3,000 Feet

1 inch = 1,500 feet

FIGURE 1
PROJECT LOCATION MAP - AERIAL
THREE CORNERS SOLAR SITE: UNITY TWP, MAINE

JANUARY 13, 2022

3.0 Methods

Prior to the initial site visit, the field team conducted a desktop review of publicly available data, which included the National Wetlands Inventory (NWI)[2], Natural Resources Conservation Service (NRCS) Web Soil Survey[3], Beginning with Habitat data (BWH)[4], topographic maps, and aerial photos. Following this initial assessment, field work was completed to formally map resources on Site using the methodologies described below. These methods represent the current standard of practice for the delineation of regulated natural resources.

3.1 Wetland Delineation

Wetlands on the Site were delineated according to the survey techniques described in the *1987 US Army Corps of Engineers Wetland Delineation Manual*[5] and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, v2.0*[6]. In areas where evidence of hydrology or hydrophytic plants were observed, samples of the soil profile were observed to further investigate evidence of saturated conditions within the upper part of the soil profile. Survey flags are hung along the wetland-upland boundaries. The flags are labeled with a unique alpha-numeric code and sequence denoting the wetland identification number and flag number (e.g., W-MR-01, W-MR-02 etc.).

3.2 Stream Identification

The survey area was reviewed for conditions that meet the definition of river, stream, or brook. Features mapped meet the definition described in Article 5-A of the Natural Resource Protection Act (NRPA)[7]. Where streams are identified less than 6 feet in width survey flags were hung along the centerline of the stream, for streams mapped that are wider than 6 feet both banks (i.e., the ordinary high-water mark) of the stream were flagged. Flags are labeled with a unique alpha-numeric code and sequence denoting the stream identification number and flag number (e.g., S-MR-01, S-MR-02 etc.).

3.3 Function and Values

BRI preliminarily evaluated wetland functions and values using the U.S. Army Corps of Engineers (USACE) Highway Methodology[8]. Functions and values are assessed based on a descriptive approach and characteristics observed within the field as well as a review of pertinent desktop and publicly available information. Functions and values are assigned either a Principal or Secondary function based on the assessment of the wetland to provide functions and values at high levels.

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[2] U.S. Fish and Wildlife Service National Wetland Inventory Mapper https://www.fws.gov/wetlands/data/mapper.html

[3] U.S NRCS Web Soil Survey https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm

[4] Maine Beginning with Habitat Online Mapper https://webapps2.cgis-solutions.com/beginningwithhabitat/

[5] US Army Corps of Engineers Wetland Delineation Manual (1987)
https://www.nae.usace.army.mil/Portals/74/docs/regulatory/JurisdictionalLimits/wlman87.pdf

[6] US Army Corps of Engineers *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, v2.0*
https://www.nae.usace.army.mil/Portals/74/docs/regulatory/JurisdictionalLimits/RegionalSupplement2012.pdf

[7] Natural Resource Protection Act, Maine Statute Title 38, Chapter 3, subchapter 1, Article 5-A, §480-B
http://www.mainelegislature.org/legis/statutes/38/title38sec480-B.html

[8] USACE Highway Method
https://www.nae.usace.army.mil/Portals/74/docs/regulatory/Forms/HighwaySupplement6Apr2015.pdf

4.0 Results

Field surveys were completed on June 30, July 1 and 2, July 6-10, July 13-17, July 20-23, August 13, and August 17, 2020. Weather during the field work ranged from sunny to partly cloudy with only one major rain event that occurred on August 17. The survey area included approximately 2,146-acres. Exhibit A includes the resources mapped on Site and Exhibit B incudes photographs of mapped resources. The NRCS soil survey is included as Exhibit C. Vernal pool surveys were completed by Kleinschmidt associates in 2019 and 2020 and their data is described in Exhibit E: Maine Department of Inland Fisheries and Wildlife (MDIFW) Vernal Pool Memo Submission.

4.1 Upland Habitats

Upland forests at the Site include species such as balsam fir (*Abies balsamea*), black spruce (*Picea mariana*), white ash (*Fraxinus americana*), eastern white pine (*Pinus strobus)*, yellow birch (*Betula allegheniensis*), gray birch (*Betula populifolia*), red spruce (*Picea rubens*), American beech (*Fagus grandifolia),* northern white cedar (*Thuja occidentalis*), and red maple (*Acer rubrum*). Shrub communities in upland habitats include red maple, American beech, balsam fir, northern red oak (*Quercus rubra*), Eastern white pine, red spruce, beaked hazelnut (*Corylus cornuta*), and wild sarsaparilla (*Aralia nudicaulis*). The upland herb stratum varies widely in composition and coverage throughout the Site and includes Canadian bunchberry (*Cornus canadensis*), false lily-of-the-valley (*Maianthemum canadense*), bracken fern (*Pteridium aquilinum*), prostrate speedwell (*Veronica prostrata*), running ground-pine (*Lycopodium clavatum*), interrupted club moss (*Spinulum annotinum*), yellow bluebead-lily (*Clintonia borealis*), starflower (*Trientalis borealis*), wild sarsaparilla, shining fir-moss (*Huperzia lucidula*), and Indian cucumber-root (*Medeola virginiana*). Poison ivy (Toxicodendron radicans) is present, particularly along old rock walls and edges of wetlands.

The Site is predominantly forested, although partially cut for timber with numerous tote roads present throughout the property. Soils onsite are diverse and include Lyman-Tunbridge complex, Monarda silt loam, and Woodbridge very stony fine sandy loam (Table 1). Most of the Site is dominated equally by these three soil units. The Lyman-Tunbridge complex ranges from somewhat excessively drained loam derived from loamy superglacial till to well drained fine sandy loam. Monarda is a poorly drained silt loam formed in dense till on lower slopes or in slight depressions on till plains. Woodbridge is a moderately well drained fine sandy loam formed in lodgment till. The remainder of the Site is comprised by a diverse collection of soils that take up very small portions of the Site. Exhibit C includes a NRCS soil survey.

Table 1. NRCS Soil Summary Table

Map Unit Symbol	Map Unit Name	Percent of Survey Area
HrB	Lyman-Tunbridge complex, 0-8 percent slopes, rocky	26.0%
HgC	Lyman-Tunbridge complex, 8-15 percent slopes, rocky	1.1%
MoA	Monarda silt loam, 0-3 percent slopes	0.2%
MrA	Monarda silt loam, 0-3 percent slopes, very stony	33.8%
PdB	Paxton-Charleton fine sandy loams, 3-8 percent slopes	0.4%
PeB	Paxton-Charleton very stony fine sadny loams, 3-8 percent slopes	0.3%
PeC	Paxton-Charleton very stony fine sandy loams, 8-15 percent slopes	0.0%
RF	Rifle mucky peat	2.6%
ScA	Scantic silt loam, 0-3 percent slopes	0.7%
TO	Togus fibrous peat	0.9%
WrB	Woodbridge fine sandy loam, 3-8 percent slopes	3.2%
WsB	Woodbridge very stony fine sandy loam, 3-8 percent slopes	30.8%

Upland soils were generally characterized by 0-10” 10YR 5/3 loam; 0-2” 10YR 4/1 sandy loam, and 2-18” 7.5YR 5/8 sandy loam; 1-2.5” 10YR 4/4 sandy loam, 3.5-13.5” 10YR 5/6 sandy loam, and 13.5-22” 10YR 4/6 sandy loam; 0-2” 10YR 5/6 sandy loam, and 2-22” 10YR 6/6 gravelly sandy loam; 0-7” 2.5Y 2.5/2 loam, 7-11” 10YR 7/1 sandy loam, and 11-16” 7.5YR 2.5/3 loam; and 3-16” 10YR 4/6 sandy loam with redoximorphic features 7.5YR 5/8 (10% concentration in the matrix). In upland areas, bedrock was at times shallow and restrictive at 10 inches.

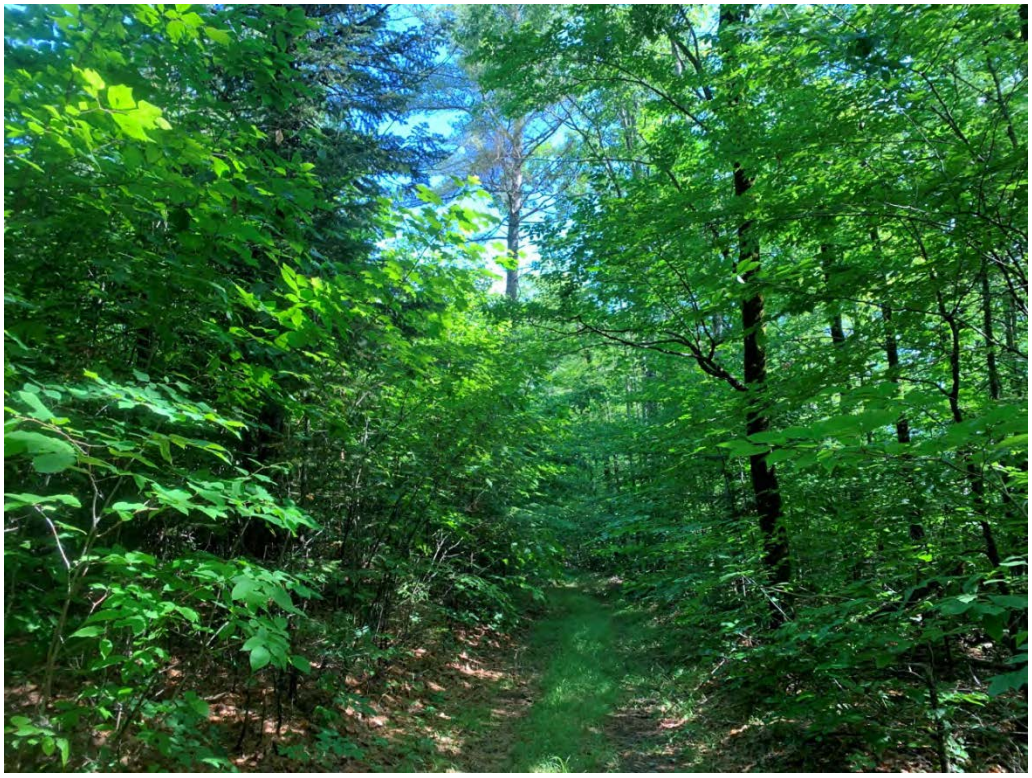


Photo 1. Representative view of a forested upland on site.

4.2 Wetland Habitats

A total of 57 wetlands were identified on Site. Wetlands observed were primarily forested wetlands, often combined with areas of scrub-shrub communities. The only exceptions are W-MR-01, which contains large areas (>20,000 square feet) of emergent wetland habitats. W-MR-01 is the largest wetland onsite and contains forested, scrub-shrub, and emergent wetland types.

The observed hydric soil indicators for wetlands identified onsite included histosol, histic epipedon, loamy gleyed matrix, depletion below a dark surface, and a thick dark surface. The general soil profile for wetlands observed onsite includes 0-20" 10YR 2/1 organics; 0-7" 10YR 2/1 organic, 7-14" 10YR 2/2 clay loam organic, 14-20" 10YR 3/2 clay, and 20-30" Gley 1 4/10y silty loam; 0-4" 10YR 2/1 organic, 4-13" Gley 1 5/5 GY clay with redoximorphic features 7.5YR 5/8 (5% concentration in the matrix), and 13-23" Gley 1 5/5 GY with redoximorphic features 10YR 5/8 (35% concentrations in the matrix); 0-11" 10YR 2/2 organic, and 11-28" Gley 1 5/5 GY loamy sand containing fragmented bedrock; 0-24" 10YR 2/2 organic and 24-29+" Gley 1 4/N clay; and 0-2" 10YR 2/1 silt loam and 2-16" 10YR 4/1 silt loam with redoximorphic features 7.5YR 5/8 (10% concentration in the matrix). In addition to photos of each wetland included in Exhibit B, representative photos of a typical forested wetland and a typical emergent wetland are provided below. Table 2 includes summary information for the wetlands identified onsite. USACE wetland data forms are included as Exhibit D.

Table 2. Wetland Summary Table

Wetland ID	Wetland Type[9]	WOSS[10]	Total Area (Acres)
W-NS-01	PFO	No	57.09
W-NS-03	PFO	No	25.74
W-NS-05	PFO	No	2.10
W-NS-06	PFO	No	0.63
W-NS-07	PFO	No	14.24
W-NS-10	PFO	No	0.87
W-NS-11	PFO	No	0.73
W-NS-12	PFO	No	0.34
W-NS-13	PFO	No	6.17
W-NS-14	PFO	No	0.02
W-NS-16	PFO	No	0.72
W-NS-18	PFO	No	0.92
W-MR-01	PFO/PEM	Yes; Contains areas greater than 20,000 sq.ft. of open water and/or emergent vegetation and Significant Vernal Pool	392.72
W-MR-02	PFO	Yes, contains Significant Vernal Pool	4.84
W-MR-03	PFO	Potentially, wetland falls within mapped Deer Wintering Area-Consultation with MDFIW suggests this is not DWA.	0.16
W-MR-04	PFO	Potentially, wetland falls within mapped Deer Wintering Area-Consultation with MDFIW suggests this is not DWA.	1.08
W-MR-05	PFO	Potentially, wetland falls within mapped Deer Wintering Area-Consultation with MDFIW suggests this is not DWA.	0.42
W-MR-06	PFO	Potentially, wetland falls within mapped Deer Wintering Area-Consultation with MDFIW suggests this is not DWA.	8.23
W-MR-08	PFO	Potentially, wetland falls within mapped Deer Wintering Area-Consultation with MDFIW suggests this is not DWA.	0.26
W-MR-09	PFO	Potentially, wetland falls within mapped Deer Wintering Area-Consultation with MDFIW suggests this is not DWA.	0.18
W-MR-10	PFO	Potentially, wetland falls within mapped Deer Wintering Area-Consultation with MDFIW suggests this is not DWA.	0.21
W-MR-11	PFO	Potentially, wetland falls within mapped Deer Wintering Area (DWA)-Consultation with MDFIW suggests this is not DWA.	0.12
W-MR-12	PFO	Yes, contains Significant Vernal Pool	1.27
W-MR-13	PFO	Yes, contains Significant Vernal Pool	0.66
W-MR-14	PFO	No	0.69
W-MR-15	PFO	No	5.96
W-MR-16	PFO	Yes, contains Significant Vernal Pool	0.04
W-MR-17	PFO	No	0.66

[9] PFO-Palustrine Forested Wetland, PSS-Palustrine Scrub-Shrub Wetland, PEM- Palustrine Emergent Wetland (Cowardin et al 1979)

[10] WOSS-Wetland of Special Significance as defined in the Natural Resources Protection Act: Chapter 310

Wetland ID	Wetland Type[9]	WOSS[10]	Total Area (Acres)
W-MR-18	PFO	No	3.80
W-MR-19	PFO	No	0.05
W-MR-20	PFO	No	0.20
W-MR-21	PFO	No	0.12
W-MR-22	PFO	Potentially, wetland falls within mapped Deer Wintering Area-Consultation with MDFIW suggests this is not DWA.	0.21
W-MR-23	PFO	Yes, contains Significant Vernal Pool	1.71
W-MR-24	PFO	No	0.20
W-MR-25	PFO	Yes, Wetland is within Mapped DWA	0.90
W-MR-27	PFO	No	0.04
W-MR-28	PFO	Yes, Wetland is within Mapped DWA	0.24
W-MR-31	PFO/PSS	No	2.22
W-MR-32	PFO	Yes; Contains areas greater than 20,000 sq.ft. of open water and/or emergent vegetation	0.25
W-MR-33	PFO	Yes; Contains areas greater than 20,000 sq.ft. of open water and/or emergent vegetation	0.34
W-MR-34	PFO	Yes; Contains areas greater than 20,000 sq.ft. of open water and/or emergent vegetation and Significant Vernal Pool	0.90
W-CF-01	PFO	No	0.01
W-CF-02	PFO	Yes; <25 feet from a stream	3.72
W-CF-03	PFO	No	0.26
W-CF-04	PFO	No	0.02
W-CF-05	PFO	Yes, contains Significant Vernal Pool	0.37
W-CF-07	PFO	No	0.10
W-CF-08	PFO	No	1.05
W-CF-10	PFO	No	0.35
W-CF-11	PFO	No	3.50
W-CF-13	PFO	No	0.47
W-CF-14	PFO	No	0.02
W-SK-03	PFO/PSS	Yes; Contains areas greater than 20,000 sq.ft. of open water and/or emergent vegetation	7.43
W-SK-05	PFO/PSS	Yes; Contains areas greater than 20,000 sq.ft. of open water and/or emergent vegetation	5.82
W-SK-06	PFO/PSS	No	0.27
W-MR-101	PFO/PSS	No	0.01
Total Area (Acres)			**561.66**

Forested wetlands onsite are dominated by depleted and organic soils, within these areas overstory vegetation is dominated by red maple, northern white cedar, paper birch (*Betula papyrifera*), eastern hemlock, yellow birch, balsam fir, black ash (*Fraxinus nigra*), and eastern white pine. Shrub communities often include balsam fir, black ash, speckled alder, white

meadowsweet (*Spiraea alba*), and common winterberry (*Ilex verticilata*). Herbaceous vegetation within forested communities includes sensitive fern (*Onoclea sensibilis*), cinnamon fern (*Osmunda cinnamomea*), eastern marsh fern (*Thelypteris palustris*), three-leaf goldthread (*Coptis trifolia*), creeping snowberry (*Gaultheria hispidula*), wild sarsaparilla, Canadian bunchberry (*Cornus canadensis*), dwarf red raspberry (*Rubus pubescens*), common marsh bedstraw (*Galium palustre*), Virginia water-horehound (*Lycopus virginicus*), bluejoint (*Calamagrostis canadensis*), meadow horsetail (*Equisetum pratense*), bog dewberry (*Rubus hispidoides*), porcupine sedge (*Carex hystericina*), greater bladder sedge (*Carex intumescens*), fowl manna grass (*Glyceria striata*), woodland bulrush (*Scirpus expansus*), starflower, and royal fern (*Osmunda spectabilis*).

Photo 2. Representative Photo of a Forested Wetland (W-MR-17, July 14,2020).

In emergent wetlands, overstory vegetation is minimal, and included occasional red maple and northern white cedar. Shrub stratum in emergent habitats contained sparse saplings of red maple, speckled alder, black spruce, and bog willow (*Salix pedicellaris*), and the herbaceous stratum is composed of spotted touch-me-not (*Impatiens capensis*), sensitive fern, bluejoint, steeplebush (*Spiraea tomantosa*), common red raspberry (*Rubus idaeus*), swampcandles (*Lysimachia terrestris*), and uptight sedge (*Carex stricta*). Photo 2 shows a representative view of a forested wetland (W-MR-17) and Photo 3 shows a representative view of a representative emergent/open water wetland (W-MR-1).

Photo 3. Representative Photo of an Open Water/ Emergent Wetland (W-MR-01, July 16,2020).

4.3 Streams and Aquatic Habitats

Four Maine Department of Environmental Protection (MDEP) jurisdictional streams are present onsite. S-MR-01, S-MR-02, and S-NS-01 are all located within wetland W-MR-01, which is a large wetland complex that spans much of the central and eastern portions of the Site. Stream S-MR-01 and S-NS-01 are located within a forested portion of W-MR-01, while S-MR-02 is located in an emergent and open water portion of W-MR-01. Stream S-CF-01 is a small stream that occurs within wetland W-CF-01. Photo 4 shows a representation of streams onsite (S-MR-01). Table 3 includes a summary of the streams identified onsite as well as the criteria used to identify the streams.

Photo 4. Representative Photo of Stream (S-MR-1).

Table 2. Stream Summary Table

Stream ID	Substrate Type	Estimated Type	Avg. Width (Ft.)	Avg. Depth (In.)	Stream Criteria[11]
S-MR-01	Cobble/Boulder	Perennial	2	6	1. Scoured Mineral Bed 2.Aquatic Macroinvertebrates
S-MR-02	Cobble/Boulder	Perennial	5	12	1. Scoured Mineral Bed 2. Defined banks 3.Aquatic Macroinvertebrates
S-NS-01	Cobble/Boulder	Intermittent	2	3	1. Scoured Mineral Bed 2. No Upland Vegetation
S-CF-01	Cobble/Boulder	Intermittent	3	2	1. Scoured Mineral Bed 2. No Upland Vegetation 3. Aquatic Macroinvertebrates

4.5 Wildlife

The survey area includes both upland and wetland habitats, which are likely to be utilized by a wide variety of birds and wildlife. Based on the proximity of residential development and working forest wildlife present are likely habitat generalists, which are accustomed to disturbance.

[11] Title 38 §480-B. Definitions

Species such as white-tailed deer (*Odocoileus virginianus*), striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), red squirrel (*Sciurus vulgaris*), porcupine (*Erethizon dorsatum*) and red fox (*Vulpes vulpes*) are likely all present within the Site. Given the intact forested habitat surrounding this Site it is likely that larger mammals including moose (*Alces alces*) and black bear (*Ursus americanus*) also occur on the Site. Large areas of open water and emergent marshes likely provide habitat for beaver (*Castor canadensis*) and muskrat (*Ondatra zibethicus*).

There is some likelihood that bat species are present during the breeding and pupping season. While the Site has been recently partially harvested for timber, there remain some large diameter trees and snags present on site. There were no areas of observed talus or rocky debris that could be used as overwintering sites.

Herptiles onsite include common species such as the common garter snake (*Thamnophis sirtalis*), which are likely in forested areas and edge habitats. Several garter snakes were observed during the survey. In addition, snapping turtles (*Chelydra serpentina*) and painted turtles (*Chrysemys picta*) likely occur within the larger areas of open water and emergent marsh.

A wide variety of bird species are likely present, examples include Chickadee (*Poecile atricapillus*), European Starling (*Sturnus vulgaris*), Red-wing Blackbird (*Agelaius phoeniceus*), White throated Sparrow (*Zonotrichia albicollis*), Downy Woodpecker (*Picoides pubescens*), Partridge (*Bonasa umbellus*), Black-throated Green Warbler (*Setophaga virens*), Winter Wren (*Troglodytes hiemalis*), Oven Bird (*Seiurus aurocapilla*), Wild Turkey (*Meleagris gallopavo silvestris*), Barred Owl (*Strix varia*), and Timberdoodle (*Scolopax minor*). Given the large areas of emergent and open water marsh, wetland W-MR-01 likely supports dabbling ducks such as mallard (*Anas platyrhynchos*) and wood ducks (*Aix sponsa*) as well as other waterfowl.

5.0 Functions and Values

BRI preliminarily evaluated wetland functions and values using the USACE Highway Methodology. Functions and values are assessed based on characteristics observed within the field as well as a review of pertinent desktop and publicly available information. Wetlands on the site are expansive, many of which include large open water and emergent marshes. These larger wetlands provide several significant functions. Principal functions for wetlands on the Site are related to water quality improvements including sediment and toxicant reduction, nutrient retention, and production export. Larger wetlands which include areas of open water and large emergent fringe marshes provide flood storage and attenuation as well as fish and shellfish habitat. All wetlands provide wildlife habitat, as evidenced by wildlife signs (i.e., tracks and scat) as well as observations of wildlife. In addition, wetlands associated with streams and provide some shoreline and sediment stabilization as well as limited flood flow attenuation.

Wetlands on Site occur on privately owned property; however, the Site is used recreationally with landowner permission and therefore these wetlands provide services in the form of visual quality, aesthetics, and recreation.

6.0 Agency Consultation

A desktop review of publicly available data from the Maine Department of Environmental Protection and the Maine Department of Inland Fisheries and Wildlife (MDIFW) showed no mapped habitats or known occurrence of Rare, Threatened or Endangered Species. Specific correspondence regarding rare species or habitats is associated with environmental permitting, being completed by others. There are general areas within the site are identified as Deer Wintering Areas (DWA) and consultation with the MDIFW has been initiated regarding these habitats.

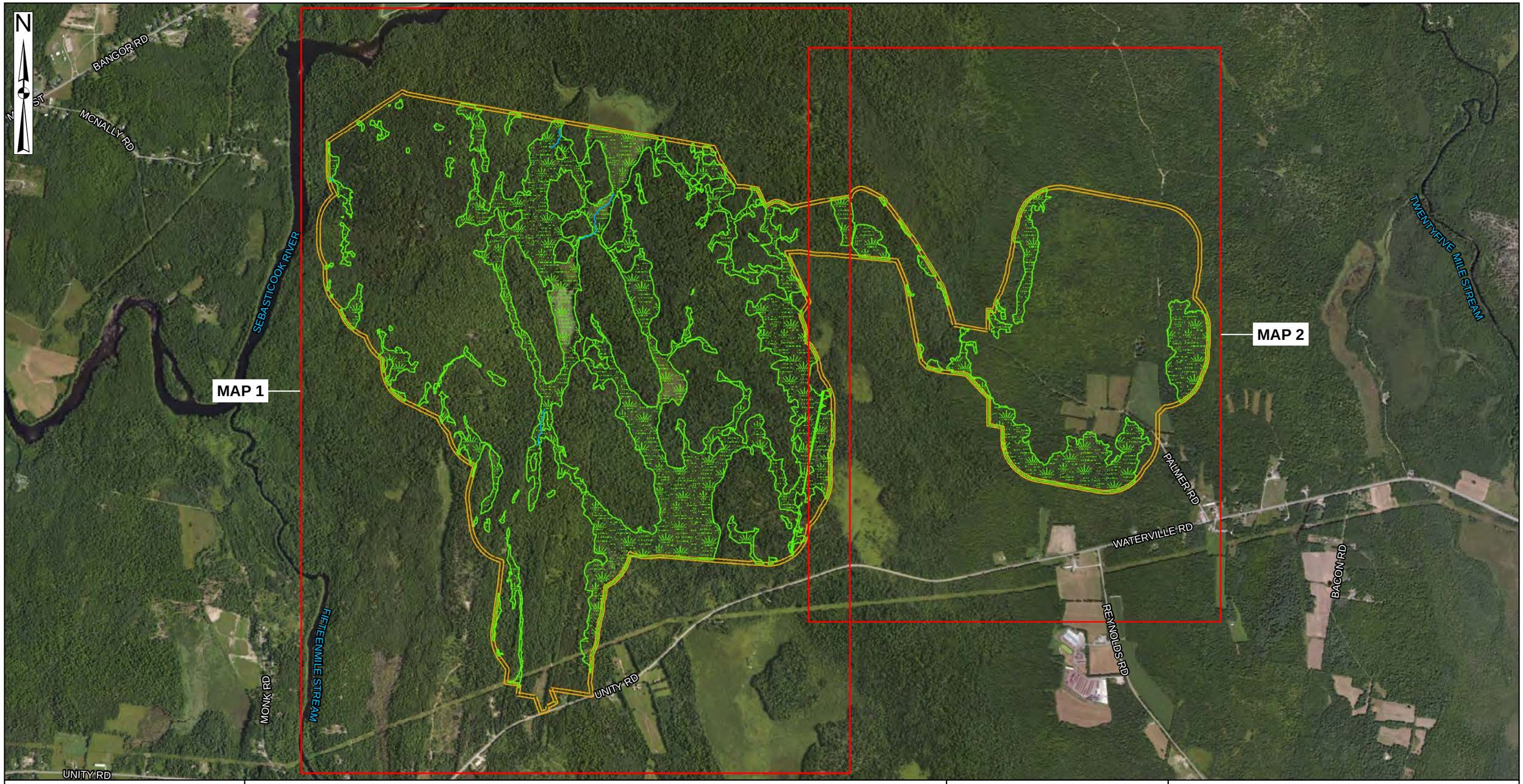
7.0 Discussion

The Site has been actively logged for some time, and forested uplands and wetlands are interspersed with many haul roads and skidder trails. Currently there are several gravel access roads that traverse the Site as well as an old narrow-gauge rail bed which bisects a portion of wetland W-MR-01 along the eastern boundary of the Site. The Site includes 57 wetlands, which account for a total of 561.66 acres, and four streams. Much of the wetland area on Site occurs within a large wetland complexe, which span the central portion of the Site. This large wetland (W-MR-01) is a Wetlands of Special Significance (WOSS) due to the presence of greater than 20,000 sq. ft. of open water or emergent wetland and significant vernal pools. Vernal pool surveys were completed by other consultants in 2019 and 2020. Several vernal pools were identified as Significant Vernal pools, these pools maintain special protections under Chapter 335 of the NRPA including a protective 250-foot upland buffer. Additionally, the Site includes areas of mapped DWA, these habitats provide shelter cover for white tail deer during the winter months. Currently, Longroad is consulting with the MDIFW to determine the status of these DWA, as some areas include non-conforming cover (i.e., hardwoods). The Site also includes smaller pockets of wetlands, these areas provide minimal function, primarily wildlife habitat.

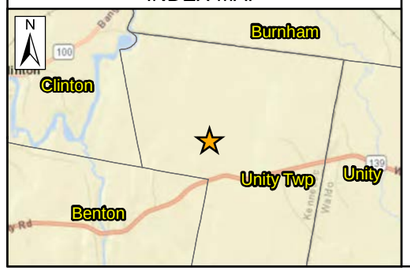
The larger wetlands and those identified as WOSS have special protections under the NRPA. Protections include limits on development within these wetlands, setbacks, and additional requirements related to development. Areas identified as DWA also may have additional protections, based on the quality of habitat. Currently, Longroad is consulting with the MDIFW to determine the quality of DWA that is identified within the Site.

Exhibit A:

Resources Map



INDEX MAP



LEGEND

- Stream
- Wetland
- Project Survey Boundary

BIODIVERSITY RESEARCH INSTITUTE
innovative wildlife science

longroad ENERGY

SCALE:

0 1,750 3,500 Feet

1 inch = 1,750 feet

NATURAL RESOURCES MAP KEY
THREE CORNERS SOLAR SITE: UNITY TWP, MAINE

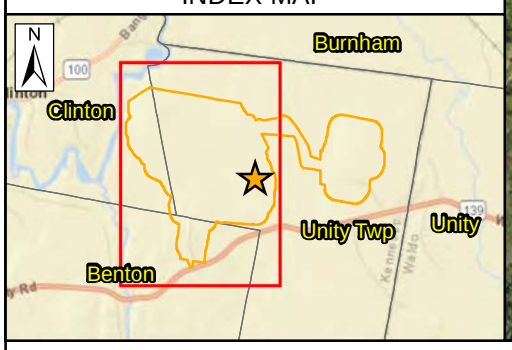
JANUARY 13, 2022

N

SEBASTICOOK RIVER

W-CF-05
W-CF-04
W-CF-08
W-CF-03
W-NS-13
W-NS-18
W-NS-12
S-NS-01
W-MR-01
W-CF-07
W-NS-14
S-CF-01
W-NS-16
W-CF-02
W-SK-05
W-MR-25
W-CF-01
S-MR-02
W-MR-01
W-MR-23
W-MR-28
W-MR-24
W-MR-20
W-MR-19
W-MR-27
W-MR-01
W-MR-18
W-MR-21
W-NS-11
W-MR-16
W-MR-13
W-MR-01
W-MR-15
W-CF-14
W-NS-10
W-MR-17
W-MR-14
W-MR-12
W-MR-11
S-MR-01
W-MR-06
W-MR-08
W-CF-13
W-MR-10
W-MR-09
W-MR-05
W-MR-22
W-CF-10
W-MR-02
W-CF-11
WATERVILLE RD
W-MR-01
FIFTEENMILE STREAM
W-MR-04
W-MR-09
UNITY RD
W-MR-101

INDEX MAP



LEGEND

- Stream
- Wetland
- Project Survey Boundary

Biodiversity Research Institute
innovative wildlife science

longroad ENERGY

SCALE:

0 1,000 2,000 Feet

1 inch = 1,000 feet

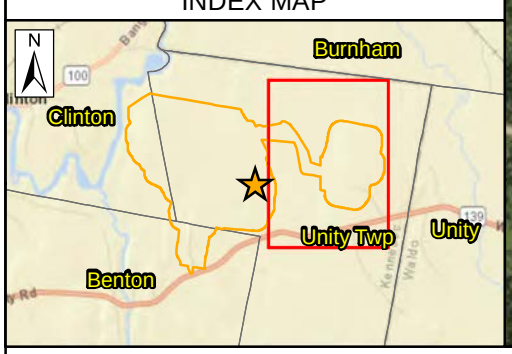
NATURAL RESOURCES MAP 1 OF 2
THREE CORNERS SOLAR SITE:
UNITY TWP, MAINE

JANUARY 13, 2022

N

W-SK-05
W-SK-06
W-MR-31
W-SK-03
W-MR-32
W-NS-07
W-NS-06
W-NS-05
W-NS-03
W-MR-33
W-MR-34
W-NS-01
W-MR-01
PALMER RD
WATERVILLE RD
WATERVILLE RD
REYNOLDS RD

INDEX MAP



LEGEND

- Stream
- Wetland
- Project Survey Boundary

BIODIVERSITY RESEARCH INSTITUTE
innovative wildlife science

longroad ENERGY

SCALE:
0 750 1,500 Feet
1 inch = 750 feet

NATURAL RESOURCES MAP 2 OF 2
THREE CORNERS SOLAR SITE:
UNITY TWP, MAINE

JANUARY 13, 2022

Exhibit B:

Resources Photos

Photo 1: View of Wetland W-MR-1 (07/22/2020)

Photo 2: View of Wetland W-MR-2 (07/7/2020)

Photo 3: View of Wetland W-MR-3 (07/08/2020)

Photo 4: View of Wetland W-MR-4 (07/08/2020)

Photo 5: View of Wetland W-MR-5 (07/08/2020)

Photo 6: View of Wetland W-MR-6 (07/10/2020)

Photo 7: View of Wetland W-MR-01 (07/16 and 21/2020)

Photo 8: View of Wetland W-MR-8 (07/10/2020)

Photo 9: View of Wetland W-MR-9 (07/13/2020)

Photo 10: View of Wetland W-MR-10 (07/13/2020)

Photo 11: View of Wetland W-MR-11 (07/13/2020)

Photo 12: View of Wetland W-MR-12 (07/13/2020)

Photo 13: View of Wetland W-MR-13 (07/13/2020)

Photo 14: View of Wetland W-MR-14 (07/13/2020)

Photo 15: View of Wetland W-MR-15 (07/14/2020)

Photo 16: View of Wetland W-MR-16 (07/14/2020)

Photo 17: View of Wetland W-MR-17 (07/14/2020)

Photo 18: View of Wetland W-MR-18 (07/14/2020)

Photo 19: View of Wetland W-MR-19 (07/14/2020)

Photo 20: View of Wetland W-MR-20 (07/14/2020)

Photo 21: View of Wetland W-MR-21 (07/14/2020)

Photo 22: View of Wetland W-MR-22 (08/04/2020)

Photo 23: View of Wetland W-MR-23 (07/15/2020)

Photo 24: View of Wetland W-MR-24 (07/14/2020)

Photo 25: View of Wetland W-MR-25 (07/22/2020)

Photo 26: View of Wetland W-MR-27 (07/23/2020)

Photo 27: View of Wetland W-MR-28 (07/23/2020)

Photo 28: View of Wetland W-MR-31 (08/13/2020)

Photo 29: View of Wetland W-MR-32 (08/13/2020)

Photo 30: View of Wetland W-MR-33 (08/13/2020)

Photo 31: View of Wetland W-MR-34 (08/13/2020)

Photo 32: View of Wetland W-NS-01 (06/30/2020)

Photo 33: View of Wetland W-NS-03 (07/01/2020)

Photo 34: View of Wetland W-NS-05 (07/06/2020)

Photo 35: View of Wetland W-NS-06 (07/06/2020)

Photo 36: View of Wetland W-NS-07 (07/07/2020)

Photo 37: View of Wetland W-NS-10 (08/04/2020)

Photo 38: View of Wetland W-NS-11 (07/13/2020)

Photo 39: View of Wetland W-NS-12 (07/14/2020)

Photo 40: View of Wetland W-NS-13 (07/14/2020)

Photo 41: View of Wetland W-NS-14 (07/14/2020)

Photo 42: View of Wetland W-NS-16 (07/14/2020)

Photo 43: View of Wetland W-NS-18 (07/09/2020)

Photo 44: View of Wetland W-CF-01 (07/14/2020)

Photo 45: View of Wetland W-CF-02 (07/14/2020)

Photo 46: View of Wetland W-CF-03 (07/14/2020)

Photo 47: View of Wetland W-CF-04 (07/14/2020)

Photo 48: View of Wetland W-CF-05 (07/15/2020)

Photo 49: View of Wetland W-CF-07 (07/15/2020)

Photo 50: View of Wetland W-CF-10 (07/15/2020)

Photo 51: View of Wetland W-CF-11 (07/21/2020)

Photo 52: View of Wetland W-CF-13 (07/22/2020)

Photo 53: View of Wetland W-CF-14 (08/03/2020)

Photo 54: View of Wetland W-SK-02 (08/17/2020)

Photo 55: View of Wetland W-SK-03 (08/17/2020)

Photo 56: View of Wetland W-SK-05 (08/17/2020)

Photo 57: View of Wetland W-SK-06 (08/17/2020)

Photo 58: View of Stream S-NS-01 (07/09/2020)

Photo 59: View of Stream S-MR-01 (07/09/2020)

Photo 60: View of Stream S-MR-02 (07/16/2020)

Photo 61: View of Stream S-CF-01 (07/14/2020)

Exhibit C:

NRCS Soil Map

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Kennebec County, Maine

August 25, 2020

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

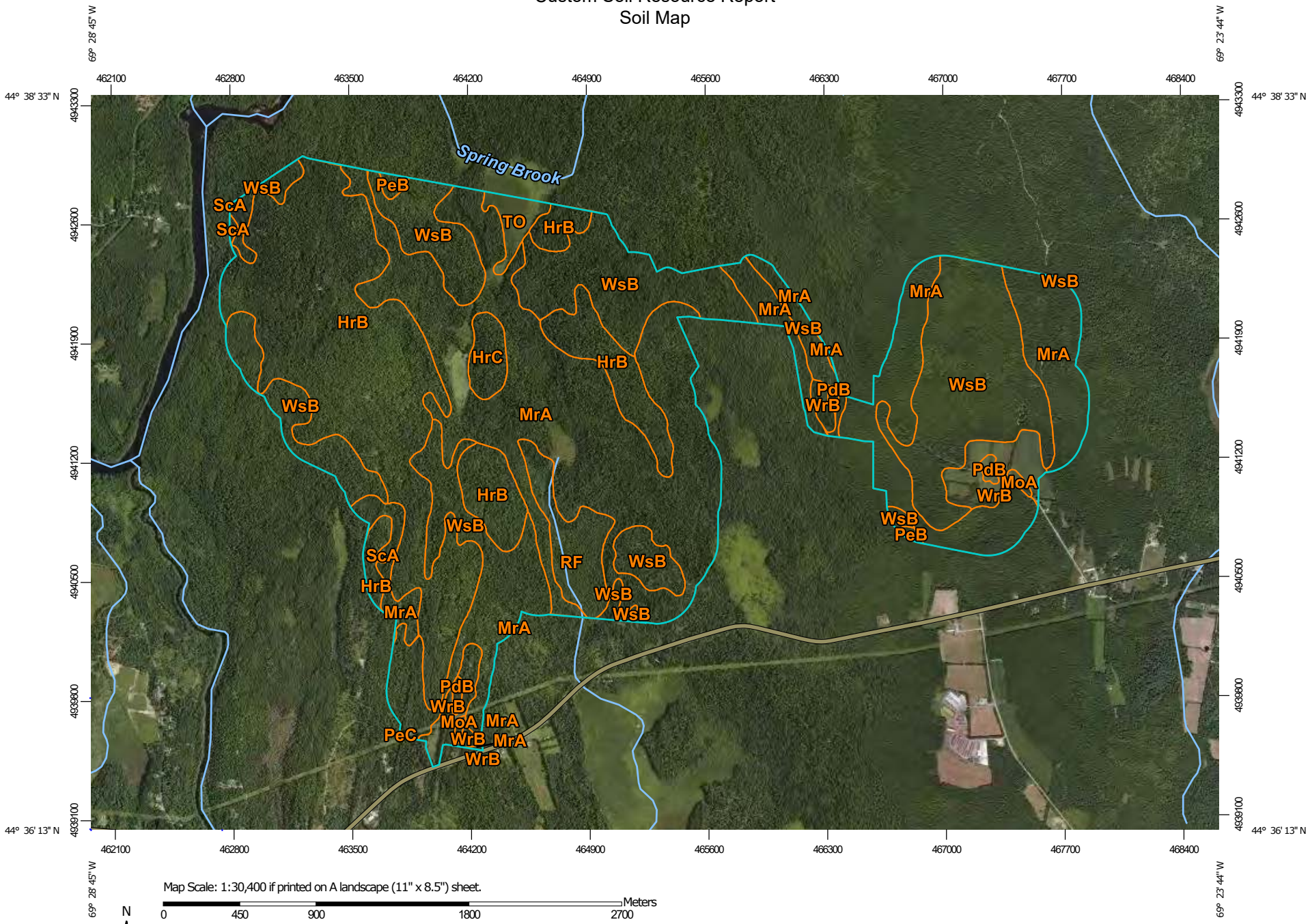
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Kennebec County, Maine
Survey Area Data: Version 19, May 29, 2020

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

Date(s) aerial images were photographed: Jul 17, 2010—Aug 31, 2010

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HrB	Lyman-Tunbridge complex, 0 to 8 percent slopes, rocky	559.0	26.0%
HrC	Lyman-Tunbridge complex, 8 to 15 percent slopes, rocky	23.0	1.1%
MoA	Monarda silt loam, 0 to 3 percent slopes	4.4	0.2%
MrA	Monarda silt loam, 0 to 3 percent slopes, very stony	726.5	33.8%
PdB	Paxton-Charlton fine sandy loams, 3 to 8 percent slopes	7.8	0.4%
PeB	Paxton-Charlton very stony fine sandy loams, 3 to 8 percent slopes	6.2	0.3%
PeC	Paxton-Charlton very stony fine sandy loams, 8 to 15 percent slopes	0.1	0.0%
RF	Rifle mucky peat	56.6	2.6%
ScA	Scantic silt loam, 0 to 3 percent slopes	14.5	0.7%
TO	Togus fibrous peat	19.0	0.9%
WrB	Woodbridge fine sandy loam, 3 to 8 percent slopes	68.3	3.2%
WsB	Woodbridge very stony fine sandy loam, 3 to 8 percent slopes	660.9	30.8%
Totals for Area of Interest		**2,146.4**	**100.0%**

Map Unit Descriptions

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

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion

of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Kennebec County, Maine

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

Map Unit Setting

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

Map Unit Composition

Lyman and similar soils: 50 percent
Tunbridge and similar soils: 30 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lyman

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D

Hydric soil rating: No

Description of Tunbridge

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Ragmuff

Percent of map unit: 10 percent
Landform: Hills, ridges
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Base slope, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Abram

Percent of map unit: 5 percent
Landform: Hills, ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Nose slope, crest

Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Peru

Percent of map unit: 4 percent
Landform: Hills, ridges
Landform position (two-dimensional): Footslope, backslope
Landform position (three-dimensional): Base slope, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent
Landform: Hills, ridges
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Nose slope, crest, free face
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

HrC—Lyman-Tunbridge complex, 8 to 15 percent slopes, rocky

Map Unit Setting

National map unit symbol: 2x1cy
Elevation: 0 to 520 feet
Mean annual precipitation: 36 to 65 inches
Mean annual air temperature: 36 to 52 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Lyman and similar soils: 45 percent
Tunbridge and similar soils: 40 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lyman

Setting

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

Typical profile

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

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.5 percent
Depth to restrictive feature: 11 to 24 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 14.03 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Hydric soil rating: No

Description of Tunbridge

Setting

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

Typical profile

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

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.5 percent
Depth to restrictive feature: 21 to 41 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 14.03 in/hr)
Depth to water table: More than 80 inches

Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Ragmuff

Percent of map unit: 5 percent
Landform: Ridges, hills
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Base slope, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Abram

Percent of map unit: 5 percent
Landform: Ridges, hills
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Nose slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Peru

Percent of map unit: 4 percent
Landform: Ridges, hills
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Base slope, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent
Landform: Ridges, hills
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Nose slope, crest, free face
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

MoA—Monarda silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2t0yk
Elevation: 120 to 2,500 feet
Mean annual precipitation: 34 to 46 inches
Mean annual air temperature: 39 to 45 degrees F
Frost-free period: 80 to 130 days
Farmland classification: Not prime farmland

Map Unit Composition

Monarda and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Monarda

Setting

Landform: Ground moraines
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy lodgment till

Typical profile

Ap - 0 to 6 inches: silt loam
Bw - 6 to 17 inches: gravelly silt loam
Cd - 17 to 65 inches: gravelly silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 12 to 19 inches to densic material
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: D
Hydric soil rating: Yes

Minor Components

Telos

Percent of map unit: 6 percent
Landform: Ground moraines
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Ragmuff

Percent of map unit: 5 percent
Landform: Ground moraines
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Monarda, stone cover > .1 percent

Percent of map unit: 2 percent
Landform: Ground moraines
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Burnham, stone cover > .1 percent

Percent of map unit: 2 percent
Landform: Ground moraines
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

MrA—Monarda silt loam, 0 to 3 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2t0yg
Elevation: 10 to 2,500 feet
Mean annual precipitation: 34 to 55 inches
Mean annual air temperature: 37 to 46 degrees F
Frost-free period: 80 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Monarda and similar soils: 82 percent
Minor components: 18 percent

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

Description of Monarda

Setting

Landform: Ground moraines
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy lodgment till

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 6 inches: silt loam
Bw - 6 to 14 inches: silt loam
Cdg - 14 to 65 inches: silt loam

Properties and qualities

Slope: 0 to 3 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 12 to 27 inches to densic material
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.03 to 0.20 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Hydric soil rating: Yes

Minor Components

Telos

Percent of map unit: 8 percent
Landform: Ground moraines
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Burnham

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

Wonsqueak

Percent of map unit: 3 percent
Landform: Swamps, marshes

Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Chesuncook

Percent of map unit: 2 percent
Landform: Drumlinoid ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

PdB—Paxton-Charlton fine sandy loams, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9k0x
Elevation: 10 to 3,500 feet
Mean annual precipitation: 34 to 50 inches
Mean annual air temperature: 37 to 46 degrees F
Frost-free period: 60 to 160 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Paxton and similar soils: 62 percent
Charlton and similar soils: 27 percent
Minor components: 11 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton

Setting

Landform: Till plains
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Coarse-loamy lodgment till derived from mica schist

Typical profile

H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 31 inches: gravelly fine sandy loam
H3 - 31 to 65 inches: fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 18 to 40 inches to densic material
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)

Depth to water table: About 18 to 26 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C/D
Hydric soil rating: No

Description of Charlton

Setting

Landform: Till plains
Landform position (three-dimensional): Dip
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Coarse-loamy supraglacial meltout till derived from mica schist

Typical profile

H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 30 inches: gravelly fine sandy loam
H3 - 30 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Woodbridge

Percent of map unit: 5 percent
Landform: Till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Hollis

Percent of map unit: 2 percent
Landform: Till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Rise

Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Tunbridge

Percent of map unit: 2 percent
Landform: Till plains
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Paxton, > 8% slopes

Percent of map unit: 1 percent
Landform: Till plains
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Ridgebury

Percent of map unit: 1 percent
Landform: Till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

PeB—Paxton-Charlton very stony fine sandy loams, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9k10
Elevation: 0 to 3,500 feet
Mean annual precipitation: 34 to 50 inches
Mean annual air temperature: 37 to 46 degrees F
Frost-free period: 60 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Paxton and similar soils: 60 percent
Charlton and similar soils: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton

Setting

Landform: Till plains
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Coarse-loamy lodgment till derived from mica schist

Typical profile

H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 31 inches: gravelly fine sandy loam
H3 - 31 to 65 inches: fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 18 to 40 inches to densic material
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: About 18 to 26 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C/D
Hydric soil rating: No

Description of Charlton

Setting

Landform: Till plains
Landform position (three-dimensional): Dip
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Coarse-loamy supraglacial meltout till derived from mica schist

Typical profile

H1 - 0 to 2 inches: fine sandy loam
H2 - 2 to 24 inches: gravelly fine sandy loam
H3 - 24 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Available water capacity: Low (about 5.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Woodbridge

Percent of map unit: 5 percent
Landform: Till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Tunbridge

Percent of map unit: 3 percent
Landform: Till plains
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Ridgebury

Percent of map unit: 2 percent
Landform: Till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Hollis

Percent of map unit: 2 percent
Landform: Till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Paxton, > 8% slopes

Percent of map unit: 2 percent
Landform: Till plains
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Paxton, > 3% stone cover

Percent of map unit: 1 percent
Landform: Till plains

Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

PeC—Paxton-Charlton very stony fine sandy loams, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9k11
Elevation: 10 to 3,500 feet
Mean annual precipitation: 34 to 50 inches
Mean annual air temperature: 37 to 46 degrees F
Frost-free period: 60 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Paxton and similar soils: 60 percent
Charlton and similar soils: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton

Setting

Landform: Drumlins
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Coarse-loamy lodgment till derived from mica schist

Typical profile

H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 31 inches: gravelly fine sandy loam
H3 - 31 to 65 inches: fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 18 to 40 inches to densic material
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: About 18 to 26 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C/D
Hydric soil rating: No

Description of Charlton

Setting

Landform: Drumlins
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Coarse-loamy supraglacial meltout till derived from mica schist

Typical profile

H1 - 0 to 2 inches: fine sandy loam
H2 - 2 to 24 inches: gravelly fine sandy loam
H3 - 24 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 5.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Woodbridge

Percent of map unit: 5 percent
Landform: Drumlins
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Tunbridge

Percent of map unit: 4 percent
Landform: Moraines
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Hollis

Percent of map unit: 2 percent
Landform: Drumlins
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Paxton, > 3% stone cover

Percent of map unit: 1 percent
Landform: Drumlins
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Paxton, > 15 percent slopes

Percent of map unit: 1 percent
Landform: Drumlins
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Paxton, < 8 percent slopes

Percent of map unit: 1 percent
Landform: Drumlins
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Ridgebury

Percent of map unit: 1 percent
Landform: Till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

RF—Rifle mucky peat

Map Unit Setting

National map unit symbol: 9k18

Elevation: 10 to 2,500 feet
Mean annual precipitation: 28 to 55 inches
Mean annual air temperature: 37 to 46 degrees F
Frost-free period: 70 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Rifle and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rifle

Setting

Landform: Swamps
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Organic material

Typical profile

Oe1 - 0 to 12 inches: mucky peat
Oe2 - 12 to 65 inches: mucky peat

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 14.17 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water capacity: Very high (about 20.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

Minor Components

Peacham

Percent of map unit: 5 percent
Landform: Till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Rise, dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Saco

Percent of map unit: 5 percent
Landform: Flood plains
Landform position (two-dimensional): Summit

Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Rifle, < 51 inches of organic

Percent of map unit: 3 percent
Landform: Swamps
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Ridgebury

Percent of map unit: 2 percent
Landform: Till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

ScA—Scantic silt loam, 0 to 3 percent slopes

Map Unit Setting

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

Map Unit Composition

Scantic and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Scantic

Setting

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

Typical profile

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

Cg - 29 to 65 inches: silty clay

Properties and qualities

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

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: D
Hydric soil rating: Yes

Minor Components

Lamoine

Percent of map unit: 8 percent
Landform: River valleys, marine terraces
Landform position (three-dimensional): Riser, rise
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Biddeford

Percent of map unit: 3 percent
Landform: Marine terraces, river valleys
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave, linear
Ecological site: F144BY002ME - Marine Terrace Depression
Hydric soil rating: Yes

Buxton

Percent of map unit: 2 percent
Landform: Marine terraces, river valleys
Landform position (three-dimensional): Riser, rise
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Roundabout

Percent of map unit: 2 percent
Landform: River valleys, marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

TO—Togus fibrous peat

Map Unit Setting

National map unit symbol: 9k1k
Elevation: 10 to 2,800 feet
Mean annual precipitation: 30 to 55 inches
Mean annual air temperature: 37 to 46 degrees F
Frost-free period: 70 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Togus and similar soils: 93 percent
Minor components: 7 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Togus

Setting

Landform: Swamps
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Organic material

Typical profile

Oi1 - 0 to 15 inches: peat
Oi2 - 15 to 36 inches: peat
H3 - 36 to 65 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 14.17 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water capacity: Very high (about 14.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

Minor Components

Peacham

Percent of map unit: 3 percent
Landform: Till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Rise, dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Scarboro

Percent of map unit: 2 percent
Landform: Outwash plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Rise
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Ridgebury

Percent of map unit: 2 percent
Landform: Till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

WrB—Woodbridge fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9k1r
Elevation: 10 to 3,500 feet
Mean annual precipitation: 34 to 50 inches
Mean annual air temperature: 37 to 46 degrees F
Frost-free period: 60 to 160 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Woodbridge and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodbridge

Setting

Landform: Till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf

Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-loamy lodgment till derived from mica schist

Typical profile

H1 - 0 to 7 inches: fine sandy loam
H2 - 7 to 22 inches: fine sandy loam
H3 - 22 to 65 inches: fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 18 to 30 inches to densic material
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: About 16 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C/D
Hydric soil rating: No

Minor Components

Hollis

Percent of map unit: 3 percent
Landform: Till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Tunbridge

Percent of map unit: 3 percent
Landform: Till plains
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Paxton

Percent of map unit: 3 percent
Landform: Till plains
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Dip
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Woodbridge, > 8% slopes

Percent of map unit: 2 percent
Landform: Till plains

Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Ridgebury

Percent of map unit: 2 percent
Landform: Till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Charlton

Percent of map unit: 2 percent
Landform: Till plains
Landform position (three-dimensional): Dip
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

WsB—Woodbridge very stony fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9k1t
Elevation: 10 to 3,500 feet
Mean annual precipitation: 34 to 50 inches
Mean annual air temperature: 37 to 46 degrees F
Frost-free period: 60 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Woodbridge and similar soils: 87 percent
Minor components: 13 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodbridge

Setting

Landform: Till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-loamy lodgment till derived from mica schist

Typical profile

H1 - 0 to 7 inches: fine sandy loam
H2 - 7 to 22 inches: fine sandy loam

H3 - 22 to 65 inches: fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 18 to 30 inches to densic material
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: About 16 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C/D
Hydric soil rating: No

Minor Components

Paxton

Percent of map unit: 4 percent
Landform: Till plains
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Dip
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Tunbridge

Percent of map unit: 3 percent
Landform: Till plains
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Charlton

Percent of map unit: 2 percent
Landform: Till plains
Landform position (three-dimensional): Dip
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Hollis

Percent of map unit: 1 percent
Landform: Till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Ridgebury

Percent of map unit: 1 percent
Landform: Till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Woodbridge, > 3% stone cover

Percent of map unit: 1 percent
Landform: Till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Woodbridge, > 8% slopes

Percent of map unit: 1 percent
Landform: Till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

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Exhibit D:

USACE Forms

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Three corners priority 3 City/County: Kennebec Sampling Date: 07/15/2020 3:12 PM

Applicant/Owner: Longroad State: Maine Sampling Point: PLOT-W-MR-1-UP

Investigator(s): Chad Flinkstrom Section, Township, Range:

Landform (hillslope, terrace, etc.): Hillslope Local relief (Concave, convex, none): Concave

Slope (%): 2 Lat: 44.61688 Long: -69.44562 Datum: WGS84

Soil Map Unit Name: Wood ridge very stony fine sandy loam NWI Classification: PFO

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

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic (If needed, explain any answers in Remarks)

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

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

Remarks: (Explain alternative procedures here or in a separate report.)
Previously logged/ old skidder trails

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? Yes ☐ No ☑ Depth (inches):

(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: PLOT-W-MR-1-UP

Tree Stratum (Plot size: 30 foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
Betula alleghaniensis (Yellow Birch) (FAC)	30	YES	FAC
Pinus strobus (Eastern White Pine) (FACU)	20	YES	FACU
Fagus grandifolia (American Beech) (FACU)	5	NO	
Picea rubens (Red Spruce) (FACU)	5	NO	
Acer rubrum (Red Maple) (FAC)	10	NO	
	70 = Total Cover		

Sapling/Shrub Stratum (Plot size: 15 foot radius)			
Acer rubrum (Red Maple) (FAC)	10	YES	FAC
Fagus grandifolia (American Beech) (FACU)	10	YES	FACU
Picea rubens (Red Spruce) (FACU)	5	YES	FACU
	25 = Total Cover		

Herb Stratum (Plot size: 5 foot radius)			
Cornus canadensis (Canadian Bunchberry) (FAC)	85	YES	FAC
Medeola virginiana (Indian Cucumber-Root) (FACU)	2	NO	
	87 = Total Cover		

Woody Vine Stratum (Plot size: _____)

_____ = Total Cover

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are Obl, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:
OBL species	0	× 1 =	0
FACW species	0	× 2 =	0
FAC species	3	× 3 =	9
FACU species	3	× 4 =	12
UPL species	0	× 5 =	0
Column Totals:	6 (A)		21 (B)

Prevalence Index = B/A = 3.5

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

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

☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☑

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

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 5/3						L	Refusal at 10 inches

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
- ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ☐ Dark Surface (S7) (LRR K, L)
- ☐ Polyvalue Below Surface (S8) (LRR K, L)
- ☐ Thin Dark Surface (S9) (LRR K, L)
- ☐ Iron-Manganese Masses (F12) (LRR K, L, R)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 10

Hydric Soil Present? **Yes** ☐ **No** ☑

Remarks:
Refusal at 10 inches on rock

Location:

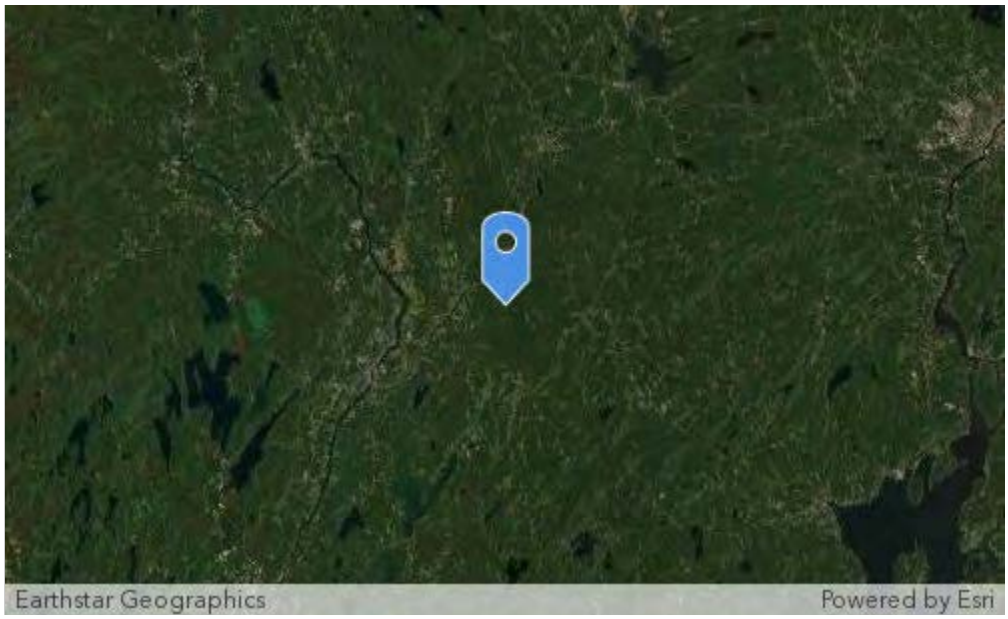

Photo:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Three corners priority 3 City/County: Kennebec Sampling Date: 07/15/2020 3:32 PM

Applicant/Owner: Longroad State: Maine Sampling Point: PLOT-W-MR-1-WET

Investigator(s): Chad Flinkstrom Section, Township, Range:

Landform (hillslope, terrace, etc.): Floodplain Local relief (Concave, convex, none): None

Slope (%): Lat: 44.61688 Long: -69.44562 Datum: WGS84

Soil Map Unit Name: Wood ridge very stony fine sandy loam NWI Classification: PEM/ PFO

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

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic (If needed, explain any answers in Remarks)

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☑ No ☐ Depth (inches): 10

Saturation Present? Yes ☑ No ☐ Depth (inches): 2

(includes capillary fringe)

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: PLOT-W-MR-1-WET

Tree Stratum (Plot size: 30 foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum (Red Maple) (FAC)	5	YES	FAC
Thuja occidentalis (Eastern Arborvitae) (FACW)	3	YES	FACW
	8 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 foot radius)			
Acer rubrum (Red Maple) (FAC)	5	YES	FAC
Alnus incana (Speckled Alder) (FACW)	5	YES	FACW
Picea mariana (Black Spruce) (FACW)	2	NO	
	12 = Total Cover		
Herb Stratum (Plot size: 5 foot radius)			
Impatiens capensis (Spotted Touch-Me-Not) (FACW)	3	NO	
Onoclea sensibilis (Sensitive Fern) (FACW)	5	NO	
Calamagrostis canadensis (Bluejoint) (OBL)	10	NO	
Carex stricta (Uptight Sedge) (OBL)	100	YES	OBL
	118 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
	_____ = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are Obl, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	× 1 = _____
FACW species _____	× 2 = _____
FAC species _____	× 3 = _____
FACU species _____	× 4 = _____
UPL species _____	× 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ Rapid Test for Hydrophytic Vegetation
- ☒ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

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

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

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
- ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ☐ Dark Surface (S7) (LRR K, L)
- ☐ Polyvalue Below Surface (S8) (LRR K, L)
- ☐ Thin Dark Surface (S9) (LRR K, L)
- ☐ Iron-Manganese Masses (F12) (LRR K, L, R)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

Location:

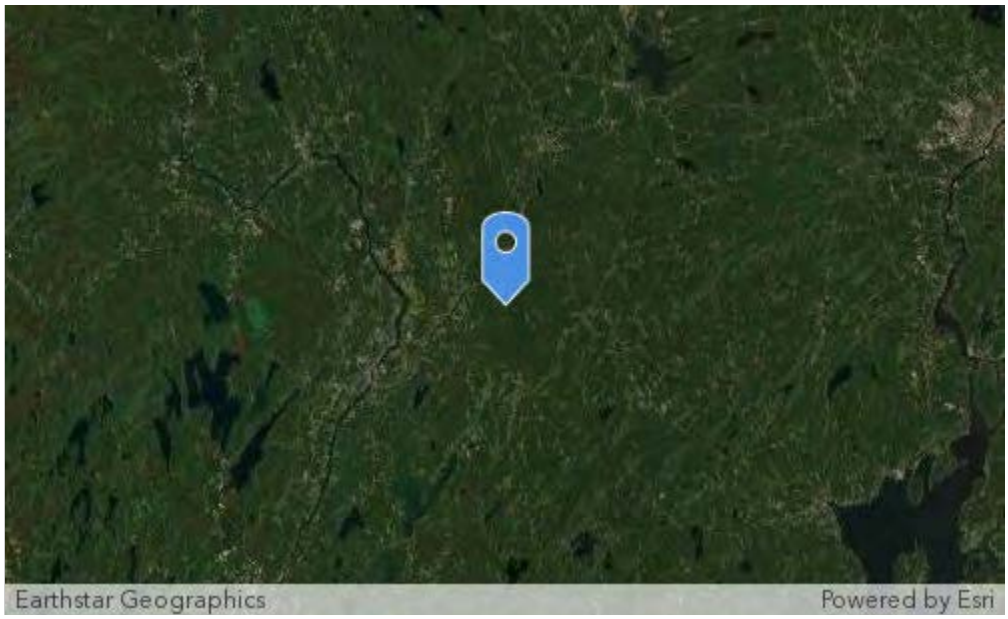

Photo:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 3 CORNERS City/County: UNITY Sampling Date: 07/15/2020 2:11 PM

Applicant/Owner: LONGROAD State: MAINE Sampling Point: PLOT-W-MR-2-UP

Investigator(s): MERRILL READ Section, Township, Range:

Landform (hillslope, terrace, etc.): HILL Local relief (Concave, convex, none): CONCAVE

Slope (%): 2 Lat: 44.61557 Long: -69.45591 Datum: WGS84

Soil Map Unit Name: MONARDA NWI Classification: PFO

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

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic (If needed, explain any answers in Remarks)

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? Yes ☐ No ☑ Depth (inches):

(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: PLOT-W-MR-2-UP

Tree Stratum (Plot size: 30 foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
Pinus strobus (Eastern White Pine) (FACU)	35	YES	FACU
Acer rubrum (Red Maple) (FAC)	40	YES	FAC
Abies balsamea (Balsam Fir) (FAC)	10	NO	
Fraxinus americana (White Ash) (FACU)	10	NO	
	95 = Total Cover		

Sapling/Shrub Stratum (Plot size: 15 foot radius)			
Fagus grandifolia (American Beech) (FACU)	15	NO	
Abies balsamea (Balsam Fir) (FAC)	55	YES	FAC
Acer rubrum (Red Maple) (FAC)	3	NO	
Quercus rubra (Northern Red Oak) (FACU)	5	NO	
Pinus strobus (Eastern White Pine) (FACU)	5	NO	
	83 = Total Cover		

Herb Stratum (Plot size:)			
Maianthemum canadense (False Lily-of-the-Valley) (FACU)	30	YES	FACU
Pteridium aquilinum (Northern Bracken Fern) (FACU)	7	NO	
Veronica prostrata (Prostrate Speedwell) (FAC)	3	NO	
	40 = Total Cover		

Woody Vine Stratum (Plot size:)

= Total Cover

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are Obl, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:
OBL species	0	× 1 =	0
FACW species	0	× 2 =	0
FAC species	2	× 3 =	6
FACU species	2	× 4 =	8
UPL species	0	× 5 =	5
Column Totals:	4 (A)		19 (B)

Prevalence Index = B/A = 4.75

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

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

☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☑

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

SOIL

Sampling Point: PLOT-W-MR-2-UP

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR	4/1					SL	
2-18	7.5YR	5/8					SL	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
- ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ☐ Dark Surface (S7) (LRR K, L)
- ☐ Polyvalue Below Surface (S8) (LRR K, L)
- ☐ Thin Dark Surface (S9) (LRR K, L)
- ☐ Iron-Manganese Masses (F12) (LRR K, L, R)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☐ **No** ☑

Remarks:

Location:

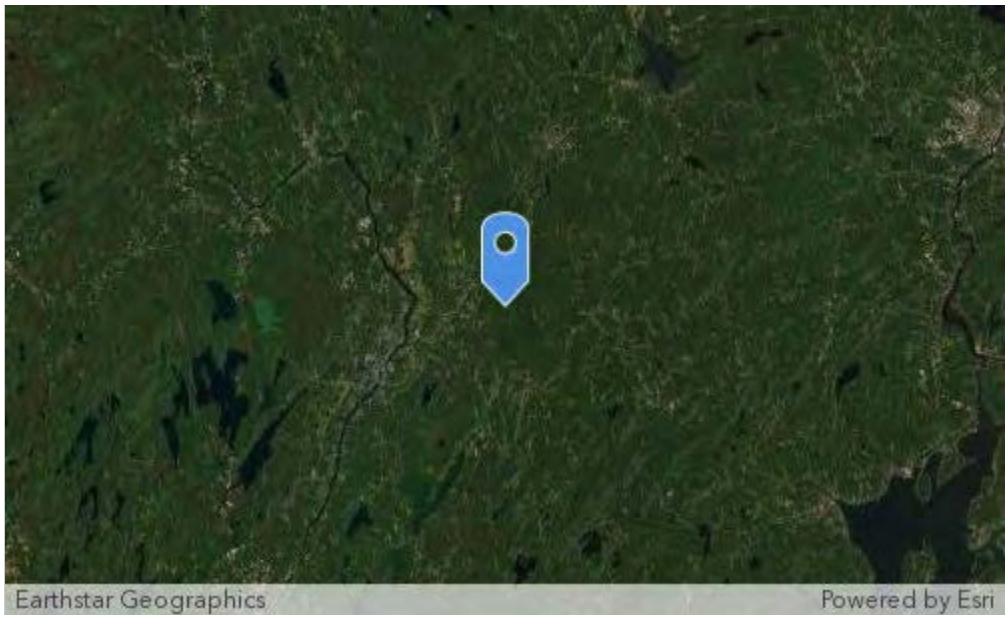

Photo:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 3 CORNERS City/County: UNITY Sampling Date: 07/15/2020 1:39 PM

Applicant/Owner: LONGROAD State: MAINE Sampling Point: PLOT-W-MR-2-WET

Investigator(s): MERRILL READ Section, Township, Range:

Landform (hillslope, terrace, etc.): BASIN Local relief (Concave, convex, none): CONCAVE

Slope (%): 0 Lat: 44.6155 Long: -69.45613 Datum: WGS84

Soil Map Unit Name: MONARDA NWI Classification: PFO

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

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic (If needed, explain any answers in Remarks)

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☑ No ☐ Depth (inches): 0

Water Table Present? Yes ☑ No ☐ Depth (inches): 0

Saturation Present? Yes ☑ No ☐ Depth (inches): 0

(includes capillary fringe)

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: PLOT-W-MR-2-WET

Tree Stratum (Plot size: 30 foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
Tsuga canadensis (Eastern Hemlock) (FACU)	10	YES	FACU
Acer rubrum (Red Maple) (FAC)	25	YES	FAC
Betula alleghaniensis (Yellow Birch) (FAC)	5	YES	FAC
Abies balsamea (Balsam Fir) (FAC)	2	YES	FAC
Fraxinus nigra (Black Ash) (FACW)	10	YES	FACW
Pinus strobus (Eastern White Pine) (FACU)	3	YES	FACU
	55 = Total Cover		

Sapling/Shrub Stratum (Plot size: 15 foot radius)			
Acer rubrum (Red Maple) (FAC)	20	YES	FAC
Abies balsamea (Balsam Fir) (FAC)	30	YES	FAC
Ilex verticillata (Common Winterberry) (FACW)	15	NO	
	65 = Total Cover		

Herb Stratum (Plot size: 5 foot radius)			
Trientalis borealis (Maystar) (FAC)	2	NO	
Osmundastrum cinnamomeum (Cinnamon Fern) (FACW)	20	YES	FACW
Osmunda spectabilis (Royal Fern) (OBL)	5	NO	
Onoclea sensibilis (Sensitive Fern) (FACW)	2	NO	
	29 = Total Cover		

Woody Vine Stratum (Plot size: _____)

_____ = Total Cover

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are Obl, FACW, or FAC: 77.8% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:
OBL species		× 1 =
FACW species		× 2 =
FAC species		× 3 =
FACU species		× 4 =
UPL species		× 5 =
Column Totals:	(A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

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

☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

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

SOIL

Sampling Point: PLOT-W-MR-2-WET

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 2/1						L	ORGANIC
7-14	10YR 2/2						CL	ORGANIC
14-20	10YR 3/2						C	
20-30	Gley 1 4/10y						SiL	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
- ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ☐ Dark Surface (S7) (LRR K, L)
- ☐ Polyvalue Below Surface (S8) (LRR K, L)
- ☐ Thin Dark Surface (S9) (LRR K, L)
- ☐ Iron-Manganese Masses (F12) (LRR K, L, R)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: ROCK

Depth (inches): 30

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

Location:

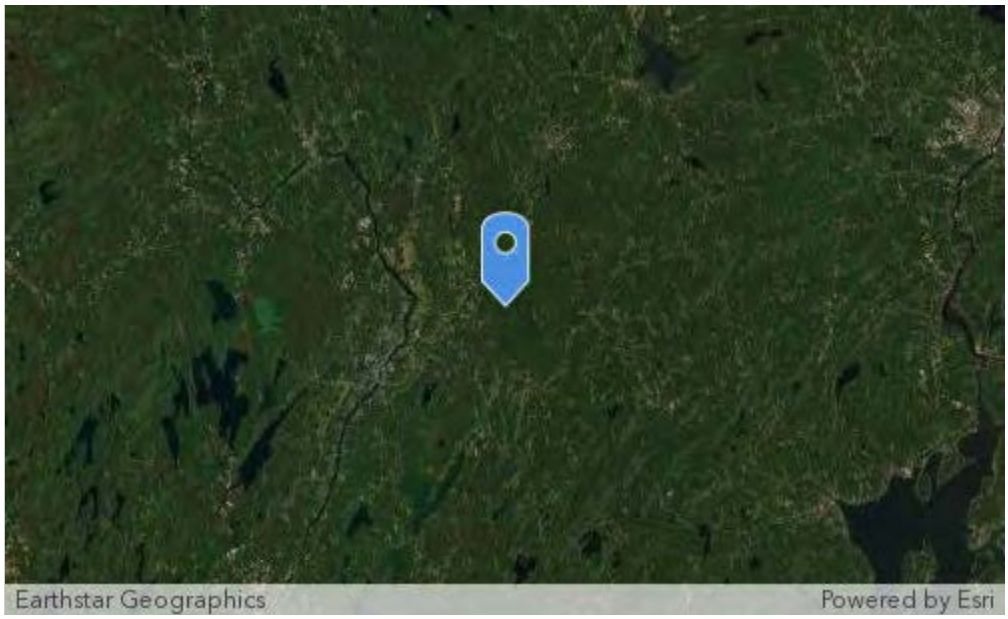

Photo:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 3 CORNERS City/County: UNITY Sampling Date: 07/16/2020 12:46 PM

Applicant/Owner: LONGROAD State: MAINE Sampling Point: PLOT-W-MR-7–UP-1

Investigator(s): MERRILL READ Section, Township, Range:

Landform (hillslope, terrace, etc.): HILLSLOPE Local relief (Concave, convex, none): CONCAVE

Slope (%): 4 Lat: 44.63334 Long: -69.44814 Datum: WGS84

Soil Map Unit Name: MONARDA NWI Classification: PFO

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

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic (If needed, explain any answers in Remarks)

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? Yes ☐ No ☑ Depth (inches):

(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: PLOT-W-MR-7–UP-1

Tree Stratum (Plot size: 30 foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum (Red Maple) (FAC)	10	NO	
Tsuga canadensis (Eastern Hemlock) (FACU)	60	YES	FACU
Pinus strobus (Eastern White Pine) (FACU)	15	NO	
Picea mariana (Black Spruce) (FACW)	3	NO	
Abies balsamea (Balsam Fir) (FAC)	7	NO	
Acer rubrum (Red Maple) (FAC)	2	NO	

97 = Total Cover

Sapling/Shrub Stratum (Plot size: 15 foot radius)			
Acer rubrum (Red Maple) (FAC)	2	NO	
Fagus grandifolia (American Beech) (FACU)	3	YES	FACU
Tsuga canadensis (Eastern Hemlock) (FACU)	5	YES	FACU
Abies balsamea (Balsam Fir) (FAC)	3	YES	FAC

13 = Total Cover

Herb Stratum (Plot size: 5 foot radius)

_____ = Total Cover

Woody Vine Stratum (Plot size: _____)

_____ = Total Cover

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are Obl, FACW, or FAC: 25% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:
OBL species		× 1 =
FACW species		× 2 =
FAC species		× 3 =
FACU species		× 4 =
UPL species		× 5 =
Column Totals:	(A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

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

☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☑

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

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
11-16	7.5YR	2.5/3					L	
1-2.5	10YR	4/4					SL	
2.5-13.5	10YR	5/6					SL	
13.5-22	10YR	4/6					SL	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
- ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ☐ Dark Surface (S7) (LRR K, L)
- ☐ Polyvalue Below Surface (S8) (LRR K, L)
- ☐ Thin Dark Surface (S9) (LRR K, L)
- ☐ Iron-Manganese Masses (F12) (LRR K, L, R)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☐ **No** ☑

Remarks:

Location:

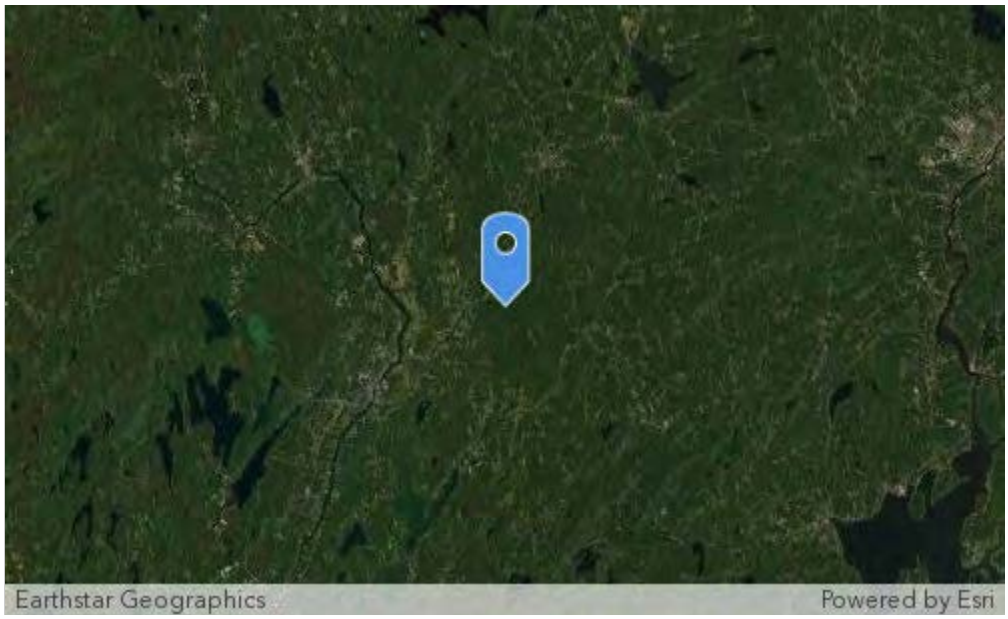

Photo:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 3 CORNERS City/County: UNITY Sampling Date: 07/22/2020 2:11 PM

Applicant/Owner: LONGROAD State: MAINE Sampling Point: PLOT-W-MR-7–UP-2

Investigator(s): MERRILL READ Section, Township, Range:

Landform (hillslope, terrace, etc.): HILLSLOPE Local relief (Concave, convex, none): CONCAVE

Slope (%): 1 Lat: 44.63333 Long: -69.44184 Datum: WGS84

Soil Map Unit Name: WOODBRIDGE NWI Classification: PFO

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

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic (If needed, explain any answers in Remarks)

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? Yes ☐ No ☑ Depth (inches):

(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:
NO HYDRO

VEGETATION – Use scientific names of plants. Sampling Point: PLOT-W-MR-7–UP-2

Tree Stratum (Plot size: 30 foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum (Red Maple) (FAC)	15	NO	
Tsuga canadensis (Eastern Hemlock) (FACU)	20	YES	FACU
Abies balsamea (Balsam Fir) (FAC)	17	YES	FAC
Thuja occidentalis (Eastern Arborvitae) (FACW)	5	NO	
Pinus strobus (Eastern White Pine) (FACU)	25	YES	FACU
Betula populifolia (Gray Birch) (FAC)	3	NO	
	85 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 foot radius)			
Abies balsamea (Balsam Fir) (FAC)	20	YES	FAC
Picea rubens (Red Spruce) (FACU)	2	NO	
	22 = Total Cover		
Herb Stratum (Plot size: 5 foot radius)			
Lycopodium clavatum (Running Ground-Pine) (FAC)	2	YES	FAC
Spinulum annotinum (Interrupted Club-Moss) (FAC)	5	YES	FAC
Maianthemum canadense (False Lily-of-the-Valley) (FACU)	5	YES	FACU
Clintonia borealis (Yellow Bluebead-Lily) (FAC)	7	YES	FAC
Trientalis borealis (Maystar) (FAC)	5	YES	FAC
Pteridium aquilinum (Northern Bracken Fern) (FACU)	8	YES	FACU
Aralia nudicaulis (Wild Sarsaparilla) (FACU)	3	YES	FACU
	35 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
	_____ = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 11 (B)

Percent of Dominant Species That Are Obl, FACW, or FAC: 54.5% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	× 1 =	0
FACW species	0	× 2 =	0
FAC species	6	× 3 =	18
FACU species	5	× 4 =	20
UPL species	0	× 5 =	0
Column Totals:	11 (A)		38 (B)

Prevalence Index = B/A = 3.45

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

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

☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☑

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

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR	5/6					SL	
2-22	10YR	6/6					SL	Gravelly

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
- ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ☐ Dark Surface (S7) (LRR K, L)
- ☐ Polyvalue Below Surface (S8) (LRR K, L)
- ☐ Thin Dark Surface (S9) (LRR K, L)
- ☐ Iron-Manganese Masses (F12) (LRR K, L, R)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** ☐ **No** ☑

Remarks:

Location:

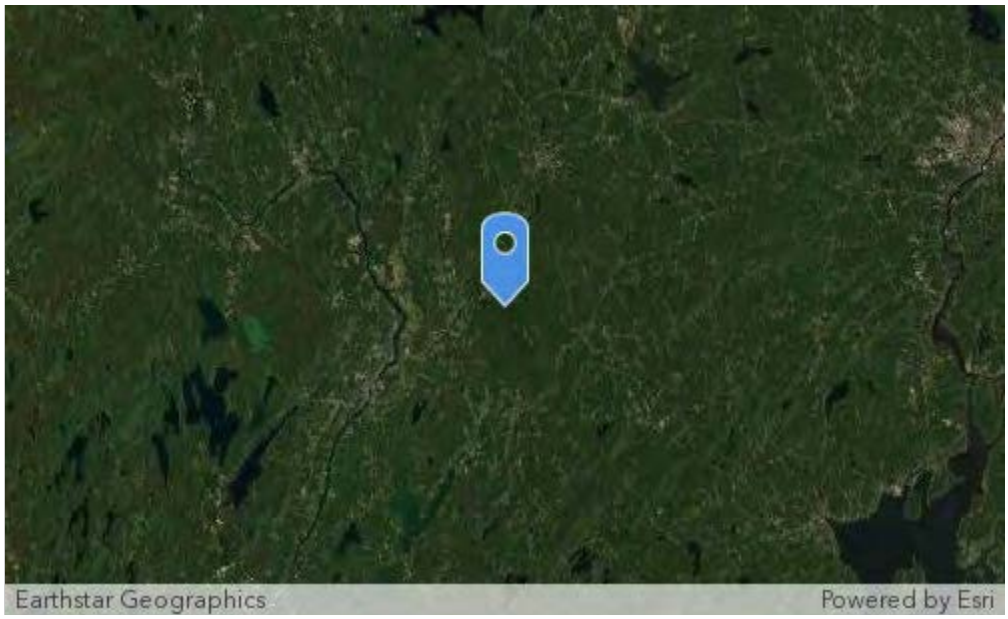

Photo:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 3 CORNERS City/County: UNITY Sampling Date: 07/16/2020 1:30 PM

Applicant/Owner: LONGROAD State: MAINE Sampling Point: PLOT-W-MR-7-WET-1

Investigator(s): MERRILL READ Section, Township, Range:

Landform (hillslope, terrace, etc.): FLOOD PLAIN Local relief (Concave, convex, none): CONCAVE

Slope (%): 0 Lat: 44.63315 Long: -69.44884 Datum: WGS84

Soil Map Unit Name: TOGUS NWI Classification: PSS

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

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic (If needed, explain any answers in Remarks)

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? Yes ☑ No ☐ Depth (inches): 0

(includes capillary fringe)

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: PLOT-W-MR-7-WET-1

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 foot radius)			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 foot radius)			
Alnus incana (Speckled Alder) (FACW)	35	YES	FACW
Salix pedicellaris (Bog Willow) (OBL)	15	YES	OBL
	50 = Total Cover		
Herb Stratum (Plot size: 5 foot radius)			
Spiraea tomentosa (Steeplebush) (FACW)	50	YES	FACW
Rubus idaeus (Common Red Raspberry) (FACU)	2	NO	
Lysimachia terrestris (Swampcandles) (OBL)	5	NO	
	57 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
	____ = Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are Obl, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	____	× 1 =	____
FACW species	____	× 2 =	____
FAC species	____	× 3 =	____
FACU species	____	× 4 =	____
UPL species	____	× 5 =	____
Column Totals:	____ (A)		____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

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

☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

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

SOIL

Sampling Point: PLOT-W-MR-7-WET-1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 2/1						L	ORGANIC
4-13	Gley 1 5/5 GY		7.5YR 5/8	5	C	M	C	
13-23	Gley 1 5/5 GY		10YR 5/8	35	C	M	C	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
- ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ☐ Dark Surface (S7) (LRR K, L)
- ☐ Polyvalue Below Surface (S8) (LRR K, L)
- ☐ Thin Dark Surface (S9) (LRR K, L)
- ☐ Iron-Manganese Masses (F12) (LRR K, L, R)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

Location:

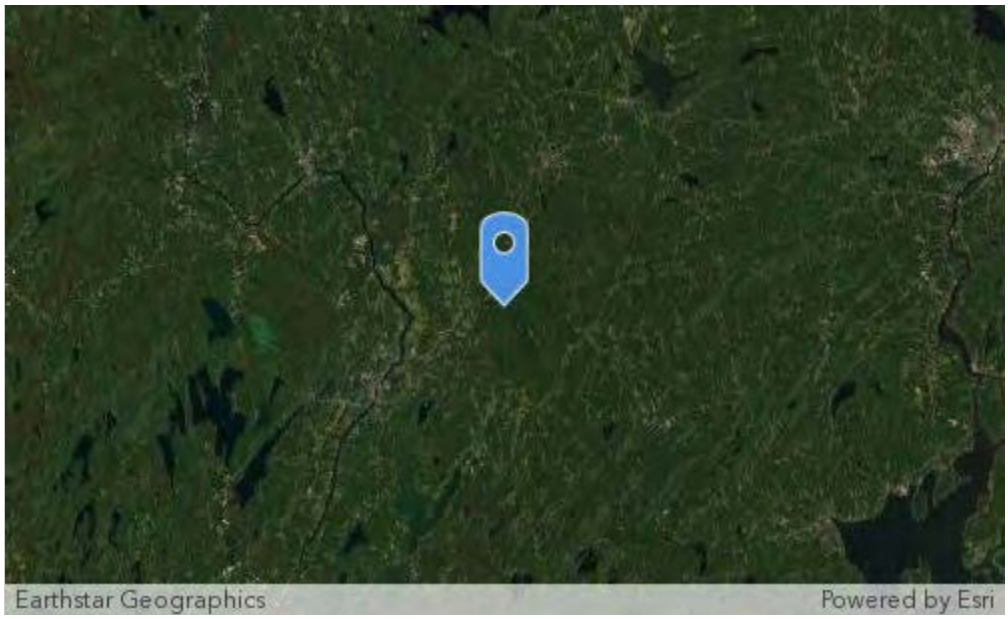

Photo:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 3 CORNERS City/County: UNITY Sampling Date: 07/22/2020 2:46 PM

Applicant/Owner: LONGROAD State: MAINE Sampling Point: PLOT-W-MR-7-WET-2

Investigator(s): MERRILL READ Section, Township, Range:

Landform (hillslope, terrace, etc.): BASIN Local relief (Concave, convex, none): CONCAVE

Slope (%): 0 Lat: 44.63349 Long: -69.44129 Datum: WGS84

Soil Map Unit Name: WOODBRIDGE NWI Classification: PFO/PSS

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

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic (If needed, explain any answers in Remarks)

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☑ No ☐ Depth (inches): 12

Saturation Present? Yes ☑ No ☐ Depth (inches): 0

(includes capillary fringe)

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: PLOT-W-MR-7-WET-2

Tree Stratum (Plot size: 30 foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
Thuja occidentalis (Eastern Arborvitae) (FACW)	10	NO	
Betula papyrifera (Paper Birch) (FACU)	8	NO	
Acer rubrum (Red Maple) (FAC)	35	YES	FAC
Abies balsamea (Balsam Fir) (FAC)	20	YES	FAC
Pinus strobus (Eastern White Pine) (FACU)	3	NO	
	76	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 foot radius)			
Alnus incana (Speckled Alder) (FACW)	35	YES	FACW
Ilex verticillata (Common Winterberry) (FACW)	35	YES	FACW
Abies balsamea (Balsam Fir) (FAC)	20	YES	FAC
	90	= Total Cover	

Herb Stratum (Plot size: 5 foot radius)			
Onoclea sensibilis (Sensitive Fern) (FACW)	50	YES	FACW
Thelypteris palustris (Eastern Marsh Fern) (FACW)	5	NO	
Rubus pubescens (Dwarf Red Raspberry) (FACW)	3	NO	
Galium palustre (Common Marsh Bedstraw) (OBL)	2	NO	
Lycopus virginicus (Virginia Water-Horehound) (OBL)	2	NO	
	62	= Total Cover	

Woody Vine Stratum (Plot size: _____)

_____ = Total Cover

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are Obl, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:
OBL species		× 1 =
FACW species		× 2 =
FAC species		× 3 =
FACU species		× 4 =
UPL species		× 5 =
Column Totals:	(A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

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

☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

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

SOIL

Sampling Point: PLOT-W-MR-7-WET-2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR	2/2					L	ORGANIC
11-28	Gley 1	5/5 GY					LS	FRAGMENTED BEDROCK WITHIN

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
- ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ☐ Dark Surface (S7) (LRR K, L)
- ☐ Polyvalue Below Surface (S8) (LRR K, L)
- ☐ Thin Dark Surface (S9) (LRR K, L)
- ☐ Iron-Manganese Masses (F12) (LRR K, L, R)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: DEGRADED BEDROCK

Depth (inches): 28

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

Location:

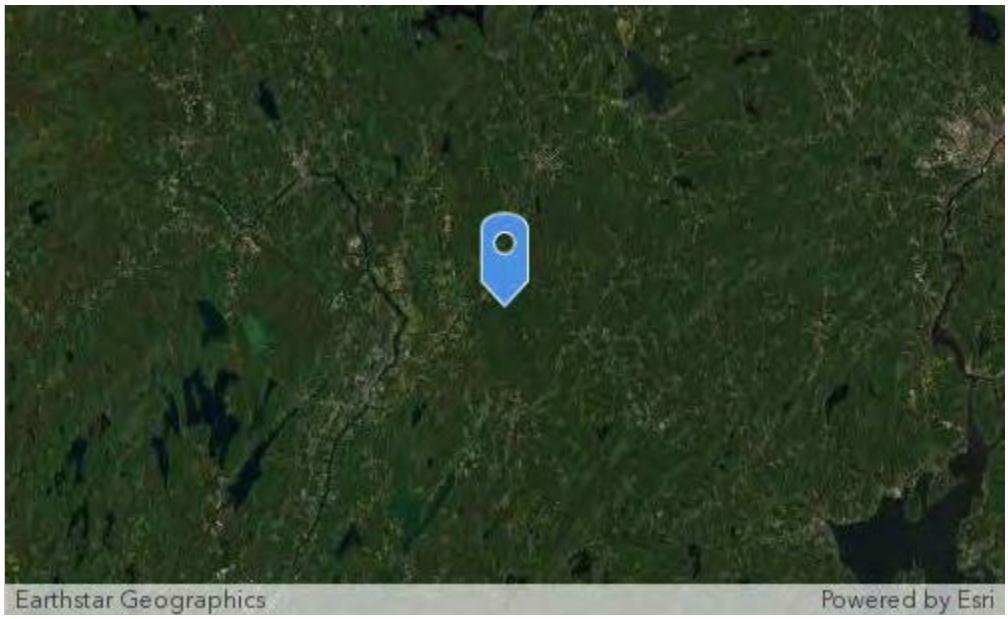

Photo:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 3 CORNERS City/County: UNITY Sampling Date: 07/14/2020 12:03 PM

Applicant/Owner: LONGROAD State: MAINE Sampling Point: PLOT-W-MR-15-UP

Investigator(s): MERRILL READ Section, Township, Range:

Landform (hillslope, terrace, etc.): HILL Local relief (Concave, convex, none): CONCAVE

Slope (%): 2 Lat: 44.62475 Long: -69.46495 Datum: WGS84

Soil Map Unit Name: WOODBRIDGE NWI Classification: PFO

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

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic (If needed, explain any answers in Remarks)

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? Yes ☐ No ☑ Depth (inches):

(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: PLOT-W-MR-15-UP

Tree Stratum (Plot size: 30 foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
Tsuga canadensis (Eastern Hemlock) (FACU)	60	YES	FACU
Betula populifolia (Gray Birch) (FAC)	20	YES	FAC
Thuja occidentalis (Eastern Arborvitae) (FACW)	8	NO	
	88 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 foot radius)			
Fagus grandifolia (American Beech) (FACU)	10	YES	FACU
Abies balsamea (Balsam Fir) (FAC)	8	YES	FAC
	18 = Total Cover		
Herb Stratum (Plot size: 5 foot radius)			
Maianthemum canadense (False Lily-of-the-Valley) (FACU)	3	YES	FACU
Clintonia borealis (Yellow Bluebead-Lily) (FAC)	2	YES	FAC
	5 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
	_____ = Total Cover		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are Obl, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	× 1 =	0
FACW species	0	× 2 =	0
FAC species	3	× 3 =	9
FACU species	3	× 4 =	12
UPL species	0	× 5 =	0
Column Totals:	6 (A)		21 (B)

Prevalence Index = B/A = 3.5

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

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

☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☑

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

SOIL

Sampling Point: PLOT-W-MR-15-UP

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-7	2.5Y	2.5/2					L	
7-11	10YR	7/1					SL	
11-16	7.5YR	2.5/3					L	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
- ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ☐ Dark Surface (S7) (LRR K, L)
- ☐ Polyvalue Below Surface (S8) (LRR K, L)
- ☐ Thin Dark Surface (S9) (LRR K, L)
- ☐ Iron-Manganese Masses (F12) (LRR K, L, R)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: ROCKS

Depth (inches): 16

Hydric Soil Present? **Yes** ☐ **No** ☑

Remarks:

Location:

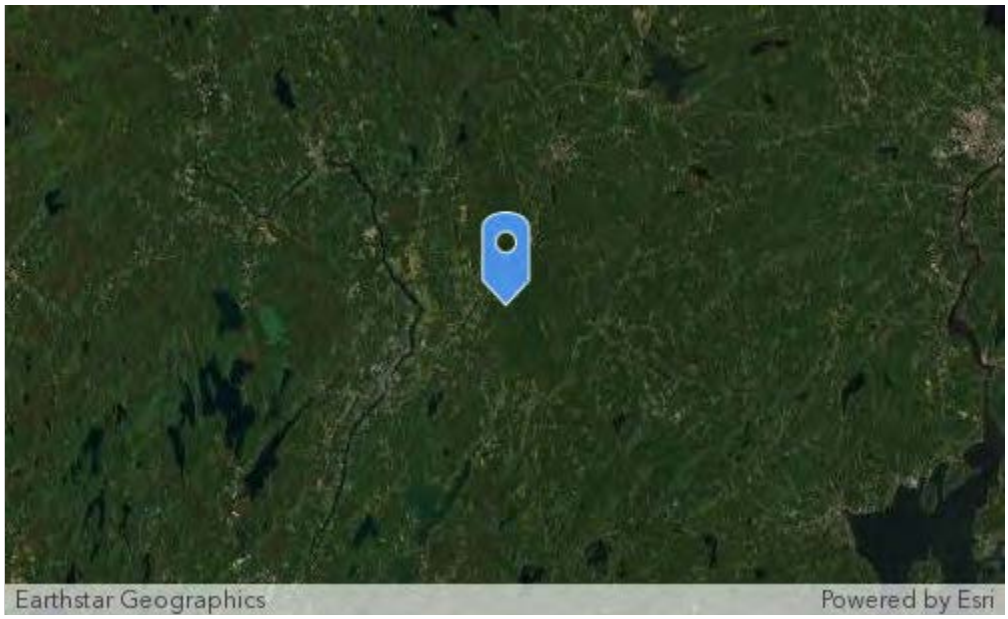

Photo:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 3 CORNERS City/County: UNITY Sampling Date: 07/14/2020 11:34 AM

Applicant/Owner: LONGROAD State: MAINE Sampling Point: PLOT-W-MR-15-WET

Investigator(s): MERRILL READ Section, Township, Range:

Landform (hillslope, terrace, etc.): FLOOD PLAIN Local relief (Concave, convex, none): CONCAVE

Slope (%): 0 Lat: 44.625 Long: -69.46521 Datum: WGS84

Soil Map Unit Name: WOODBRIDGE NWI Classification: PFO

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

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic (If needed, explain any answers in Remarks)

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ☑	No ☐	Depth (inches): 0
Water Table Present?	Yes ☑	No ☐	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: PLOT-W-MR-15-WET

Tree Stratum (Plot size: 30 foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
Thuja occidentalis (Eastern Arborvitae) (FACW)	65	YES	FACW
Abies balsamea (Balsam Fir) (FAC)	3	NO	
Betula alleghaniensis (Yellow Birch) (FAC)	7	NO	
Fraxinus nigra (Black Ash) (FACW)	7	NO	
	82	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 foot radius)			
Abies balsamea (Balsam Fir) (FAC)	25	YES	FAC
Fraxinus nigra (Black Ash) (FACW)	5	NO	
	30	= Total Cover	

Herb Stratum (Plot size:)			
Osmundastrum cinnamomeum (Cinnamon Fern) (FACW)	30	YES	FACW
Coptis trifolia (Three-Leaf Goldthread) (FACW)	20	YES	FACW
Gaultheria hispidula (Creeping-Snowberry) (FACW)	10	NO	
Rubus pubescens (Dwarf Red Raspberry) (FACW)	5	NO	
Aralia nudicaulis (Wild Sarsaparilla) (FACU)	5	NO	
Trientalis borealis (Maystar) (FAC)			
Cornus canadensis (Canadian Bunchberry) (FAC)	10	NO	
	80	= Total Cover	

Woody Vine Stratum (Plot size:)

= Total Cover

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

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

Percent of Dominant Species That Are Obl, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	× 1 =
FACW species	× 2 =
FAC species	× 3 =
FACU species	× 4 =
UPL species	× 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

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

☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

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

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-24	10YR 2/2						L	ORGANIC
24-29+	Gley 1 4/N						C	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
- ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ☐ Dark Surface (S7) (LRR K, L)
- ☐ Polyvalue Below Surface (S8) (LRR K, L)
- ☐ Thin Dark Surface (S9) (LRR K, L)
- ☐ Iron-Manganese Masses (F12) (LRR K, L, R)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

Location:

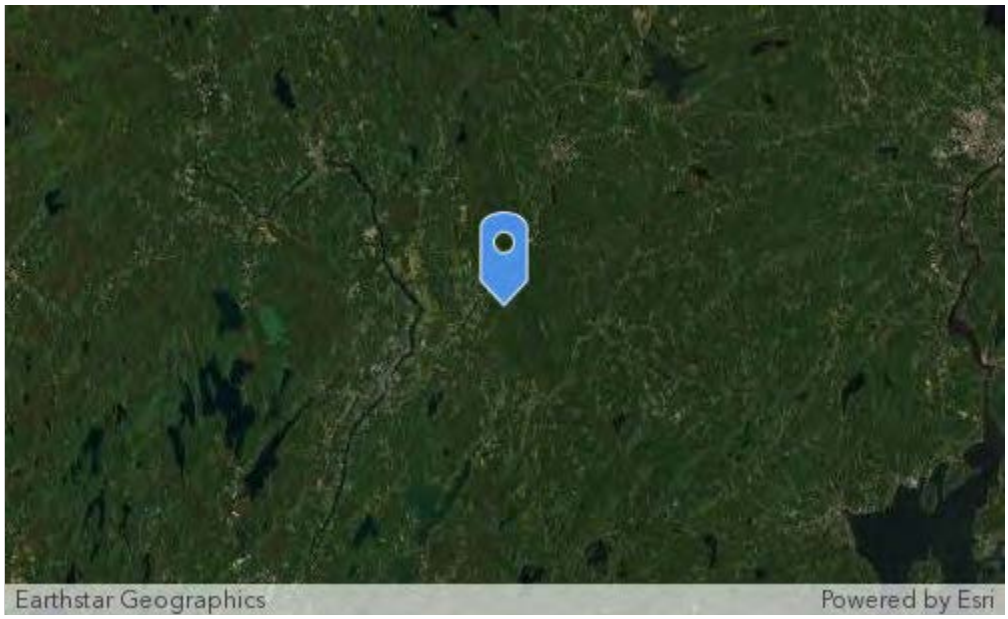

Photo:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Three corners City/County: Kennebeck Sampling Date: 07/07/2020 10:40 AM

Applicant/Owner: Longroad State: Maine Sampling Point: PLOT-W-NS-7-UP

Investigator(s): Nick Smith Section, Township, Range:

Landform (hillslope, terrace, etc.): Pit/Mound Local relief (Concave, convex, none): Concave/convex

Slope (%): 0 Lat: 44.63151 Long: -69.41923 Datum: WGS84

Soil Map Unit Name: Monarda silt loam NWI Classification: PFO

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

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic (If needed, explain any answers in Remarks)

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? Yes ☐ No ☑ Depth (inches):

(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: PLOT-W-NS-7-UP

Tree Stratum (Plot size: 30 foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fagus grandifolia (American Beech) (FACU)	50	YES	FACU
Acer rubrum (Red Maple) (FAC)	15	YES	FAC
Quercus rubra (Northern Red Oak) (FACU)	20	YES	FACU
Abies balsamea (Balsam Fir) (FAC)	10	YES	FAC
Thuja occidentalis (Eastern Arborvitae) (FACW)	10	YES	FACW
Pinus strobus (Eastern White Pine) (FACU)	2	YES	FACU
Tsuga canadensis (Eastern Hemlock) (FACU)	15	YES	FACU
	122 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 foot radius)			
Corylus cornuta (Beaked Hazelnut) (FACU)	1	NO	
Aralia nudicaulis (Wild Sarsaparilla) (FACU)	3	YES	FACU
Abies balsamea (Balsam Fir) (FAC)	10	YES	FAC
	14 = Total Cover		
Herb Stratum (Plot size: 5 foot radius)			
Huperzia lucidula (Shining Fir-Moss) (FAC)	5	YES	FAC
Pteridium aquilinum (Northern Bracken Fern) (FACU)	10	YES	FACU
Trientalis borealis (Maystar) (FAC)	2	NO	
Maianthemum canadense (False Lily-of-the-Valley) (FACU)	2	NO	
	19 = Total Cover		
Woody Vine Stratum (Plot size: 30 foot radius)			
Toxicodendron radicans (Eastern Poison Ivy) (FAC)	2	YES	FAC
	2 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 12 (B)

Percent of Dominant Species That Are Obl, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:	
OBL species	0	× 1 =	0	
FACW species	1	× 2 =	2	
FAC species	5	× 3 =	15	
FACU species	6	× 4 =	24	
UPL species	0	× 5 =	0	
Column Totals:	12	(A)	41	(B)

Prevalence Index = B/A = 3.4

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

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

☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL

Sampling Point: PLOT-W-NS-7-UP

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR							Organic
3-16	10YR	4/6	7.5YR 5/8	10	C	M	SL	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
- ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ☐ Dark Surface (S7) (LRR K, L)
- ☐ Polyvalue Below Surface (S8) (LRR K, L)
- ☐ Thin Dark Surface (S9) (LRR K, L)
- ☐ Iron-Manganese Masses (F12) (LRR K, L, R)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** ☐ **No** ☑

Remarks:

Location:

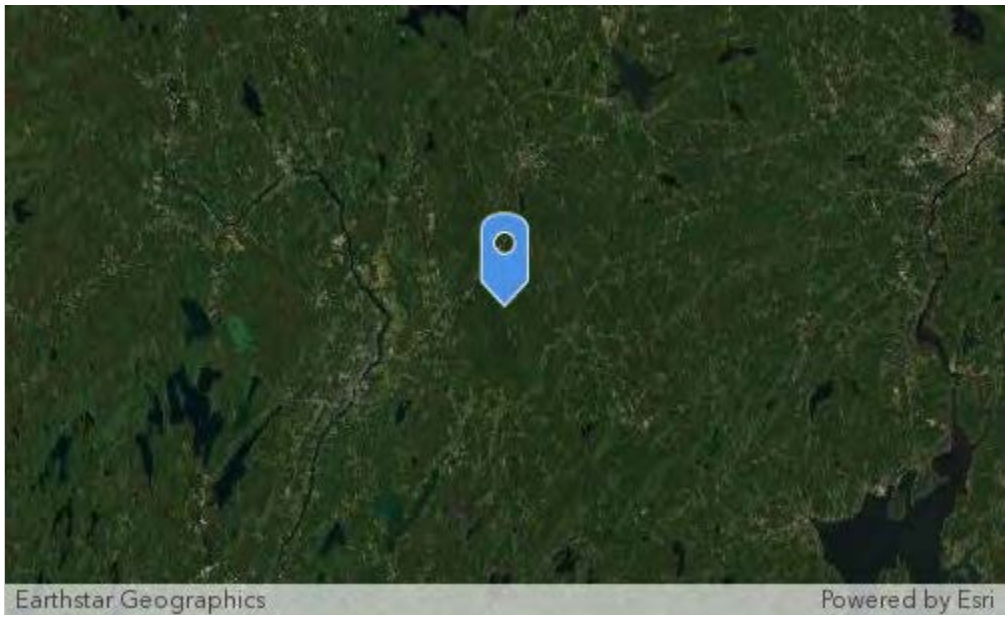

Photo:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Three corners City/County: Kennebeck Sampling Date: 07/07/2020 10:40 AM

Applicant/Owner: Longroad State: Maine Sampling Point: PLOT-W-NS-7-WET

Investigator(s): Nick Smith Section, Township, Range:

Landform (hillslope, terrace, etc.): Basin Local relief (Concave, convex, none): Concave

Slope (%): 1 Lat: 44.63151 Long: -69.41923 Datum: WGS84

Soil Map Unit Name: Monarda silt loam NWI Classification: PFO

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

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic (If needed, explain any answers in Remarks)

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? Yes ☐ No ☑ Depth (inches):

(includes capillary fringe)

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: PLOT-W-NS-7-WET

Tree Stratum (Plot size: 30 foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum (Red Maple) (FAC)	35	YES	FAC
Abies balsamea (Balsam Fir) (FAC)	10	YES	FAC
Thuja occidentalis (Eastern Arborvitae) (FACW)	1	NO	
Fraxinus nigra (Black Ash) (FACW)	3	NO	
	49 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 foot radius)			
Alnus incana (Speckled Alder) (FACW)	25	YES	FACW
Spiraea alba (White Meadowsweet) (FACW)	3	NO	
Ilex verticillata (Common Winterberry) (FACW)	1	NO	
	29 = Total Cover		
Herb Stratum (Plot size: 5 foot radius)			
Calamagrostis canadensis (Bluejoint) (OBL)	5	NO	
Osmundastrum cinnamomeum (Cinnamon Fern) (FACW)	7	NO	
Equisetum pratense (Meadow Horsetail) (FACW)	15	NO	
Onoclea sensibilis (Sensitive Fern) (FACW)	10	NO	
Rubus hispidoides (Bog Dewberry) (FACW)	1	NO	
Carex hystericina (Porcupine Sedge) (OBL)	2	NO	
Carex intumescens (Greater Bladder Sedge) (FACW)	1	NO	
Glyceria striata (Fowl Manna Grass) (OBL)	1	NO	
Scirpus expansus (Woodland Bulrush) (OBL)	80	YES	OBL
	122 = Total Cover		
Woody Vine Stratum (Plot size: 30 foot radius)			
Toxicodendron radicans (Eastern Poison Ivy) (FAC)	2	YES	FAC
	2 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are Obl, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	× 1 =
FACW species	× 2 =
FAC species	× 3 =
FACU species	× 4 =
UPL species	× 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

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

☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ☑ No ☐

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

SOIL

Sampling Point: PLOT-W-NS-7-WET

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/1						SL	
2-16	10YR 4/1		7.5YR 5/8	10	C	M	SL	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
- ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ☐ Dark Surface (S7) (LRR K, L)
- ☐ Polyvalue Below Surface (S8) (LRR K, L)
- ☐ Thin Dark Surface (S9) (LRR K, L)
- ☐ Iron-Manganese Masses (F12) (LRR K, L, R)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

Location:

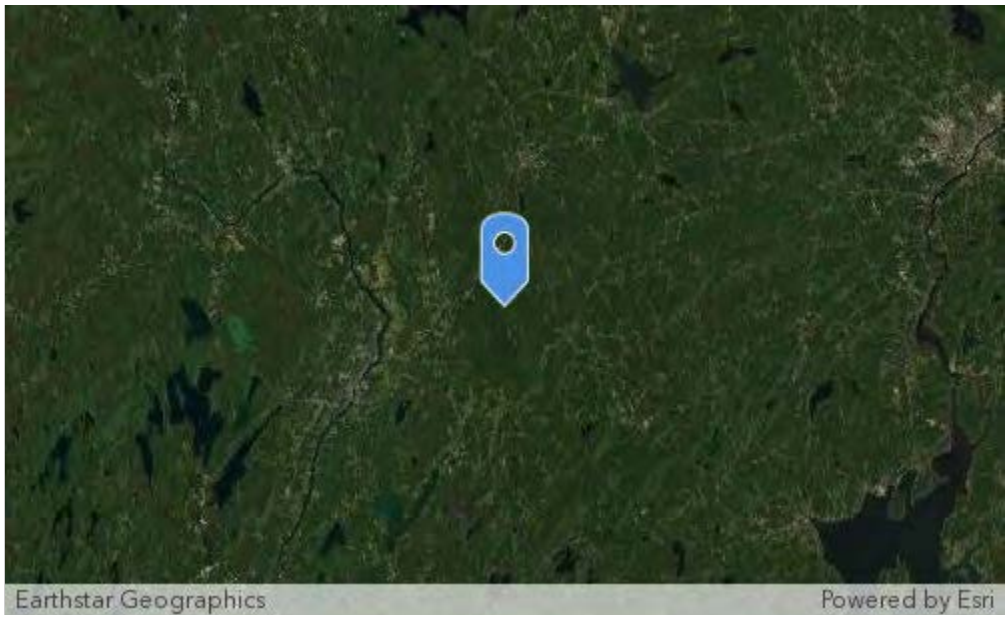

Photo:

BIODIVERSITY RESEARCH INSTITUTE

Exhibit E:

MDIFW Vernal Pool Memo Submittal

BIODIVERSITY RESEARCH INSTITUTE
innovative wildlife science

January 13, 2022

Maine Department of Inland Fisheries and Wildlife
41 State House Station Lane
Augusta, ME 04333-0041

RE: Three Corners Solar Project Vernal Pool Review

Dear Becca,

Kleinschmidt Associates surveyed the Three Corners Project site (see Attachment A) for vernal pools during appropriate seasonal conditions in the spring of 2019 and 2020. During fieldwork a total of 80 features were identified (Attachment B). Based on field collected data, 39 of these features were determined to be of Unnatural origin (i.e., skidder ruts within wetlands). For these features, which are clearly un-natural ruts, data forms were not completed. However, egg mass counts are included in the summary table (Attachment B) and photographs of these features are provided in the download link. Forty-one (41) of the pools were identified as Natural or Natural Modified in origin and data forms were completed for all of these pools. Eighteen (18) of these Natural or Natural Modified pools were determined to be potentially significant, based on state criteria.

As a result of the survey completed in 2020, 12 of the potentially significant pools dried out prior to July 15, 2020. Dry-out dates are descried in Chapter 335 as a means of determining potential significance. Chapter 335 states that "*When a vernal pool habitat has not previously been determined to be significant, and the department or the Maine Department of Inland Fisheries & Wildlife (IF&W) makes a determination concerning whether the vernal pool habitat is significant, either department may determine that the vernal pool habitat is not significant if (b) The vernal pool is located in southern Maine and dries out after filling and before July 15th.*" Given that these pools had completely dried prior to July 15, 2020 we recommend they be classified as non-significant at this time. In the table in Attachment B, pools that dried prior to July 15, 2020 are identified as "potentially significant".

The remaining six (6) pools we have classified as Significant. Attachment B includes a summary of all potentially significant pools identified.

Photographs and data forms collected during fieldwork have been provided as a separate download link, due to the number of photographs and file size. At the request of Longroad Energy, Biodiversity Research Institute is submitting the data collected in 2019 and 2020 for the Maine Department of Inland Fisheries and Wildlife to review, as required for review of collected vernal pool data as well as to confirm determinations made in the field. If you have any questions please contact me at steve.knapp@brienvironmental.org or at 207-570-9462.

Respectfully submitted,

Steve Knapp
Senior Environmental Scientist
BRI Environmental

CC: Jason Czapiga

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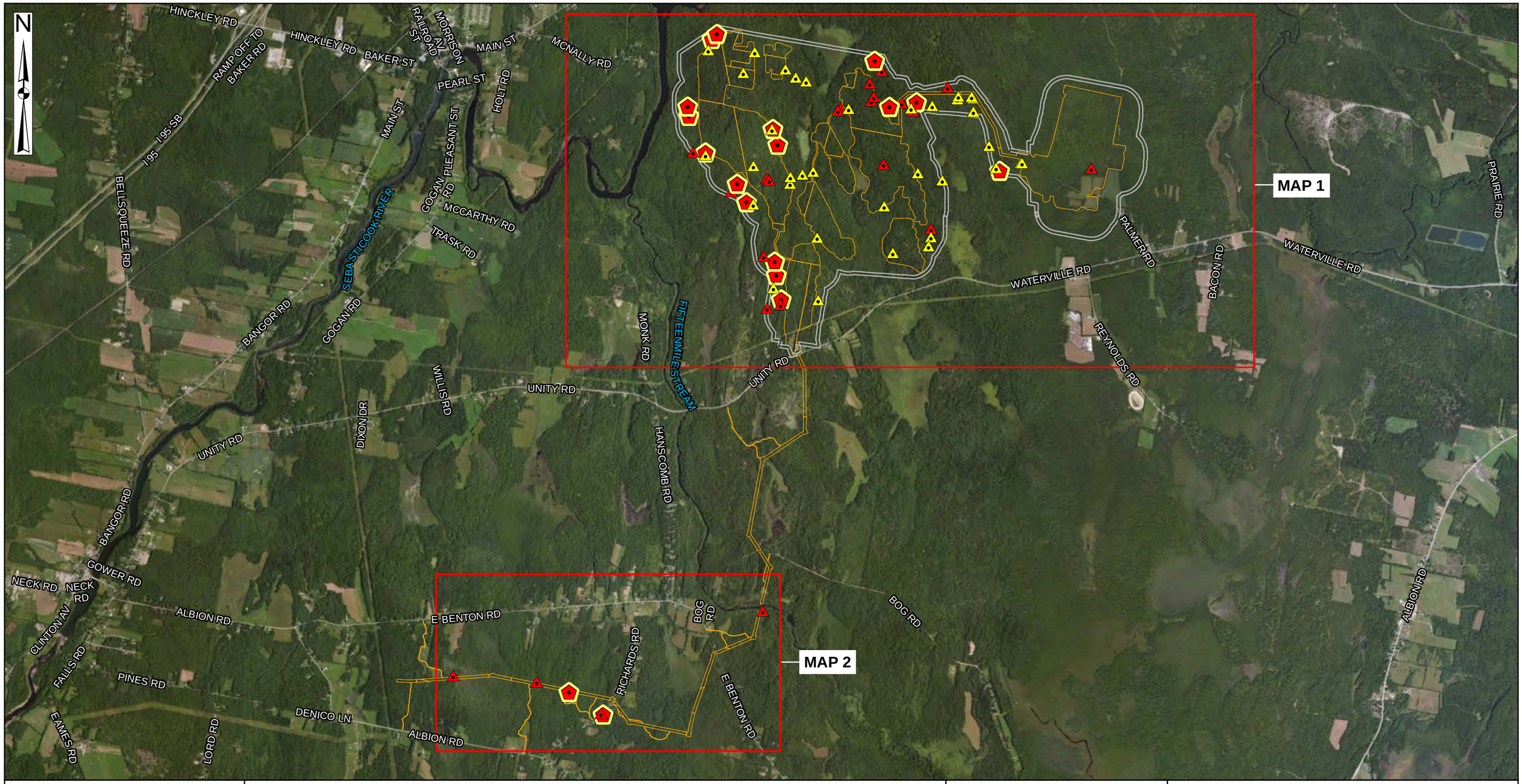
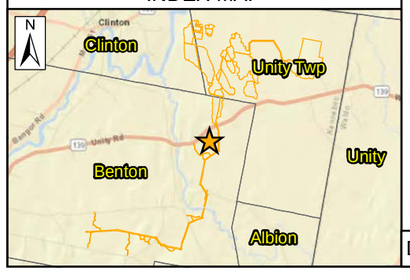
ATTACHMENT A: OVERVIEW MAP



INDEX MAP



LEGEND

- CP - USACE Jurisdictional Pool
- VP - Vernal Pool
- SVP - Potentially Significant Vernal Pool
- Project Survey Boundary
- Project Limit of Disturbance

Data Collected by Kleinschmidt Associates 2019; 2020

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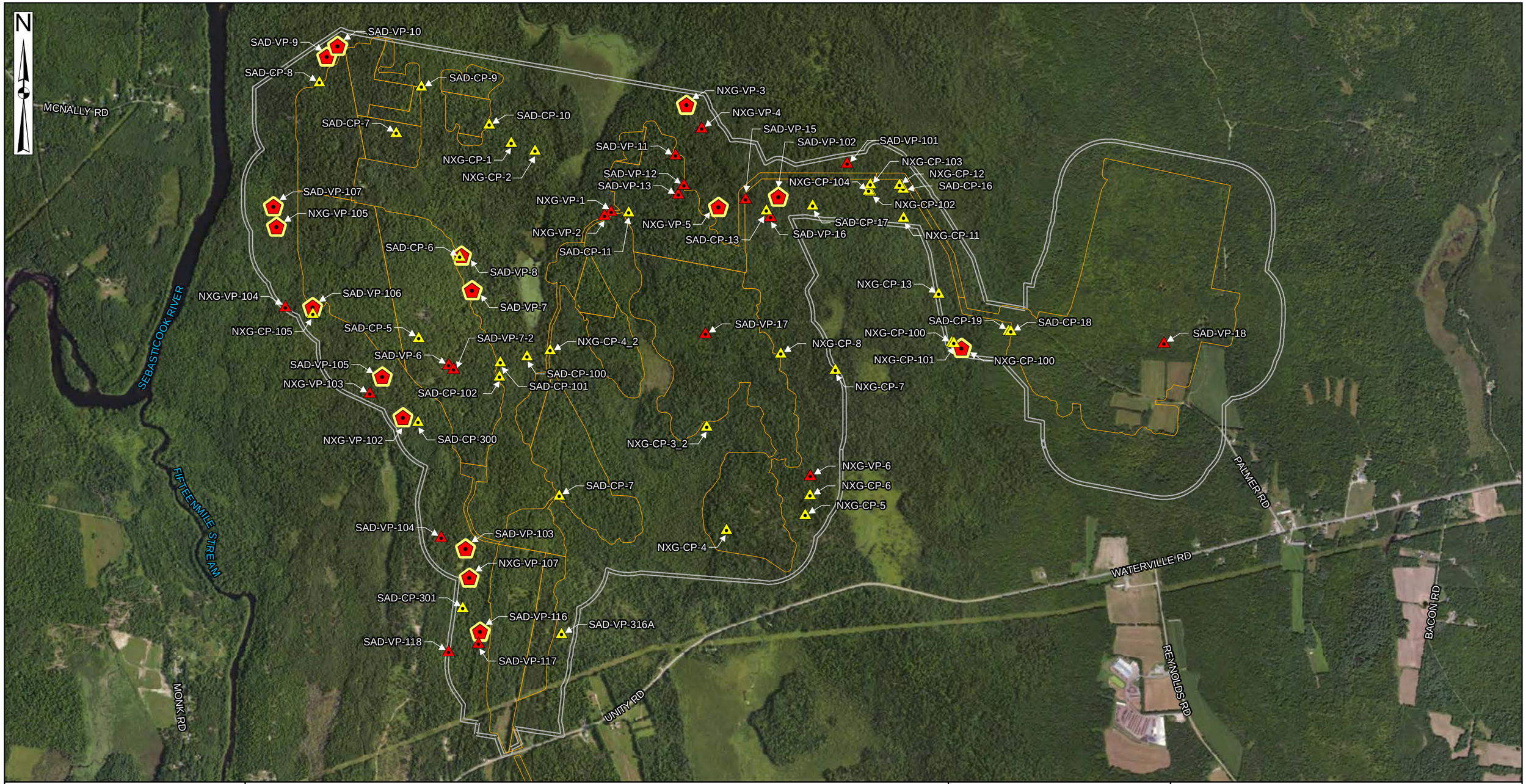
SCALE:

0 3,300 6,600 Feet

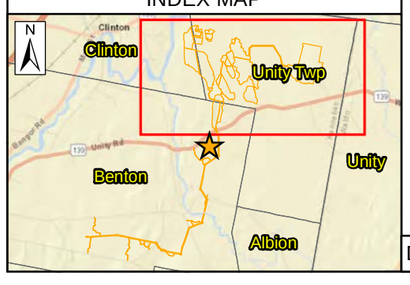
1 inch = 3,300 feet

VERNAL POOL MAP KEY
THREE CORNERS SOLAR SITE: UNITY TWP, MAINE

JANUARY 12, 2022



INDEX MAP



LEGEND

- CP - USACE Jurisdictional Pool
- VP - Vernal Pool
- SVP - Potentially Significant Vernal Pool
- Project Survey Boundary
- Project Limit of Disturbance

Data Collected by Kleinschmidt Associates 2019; 2020

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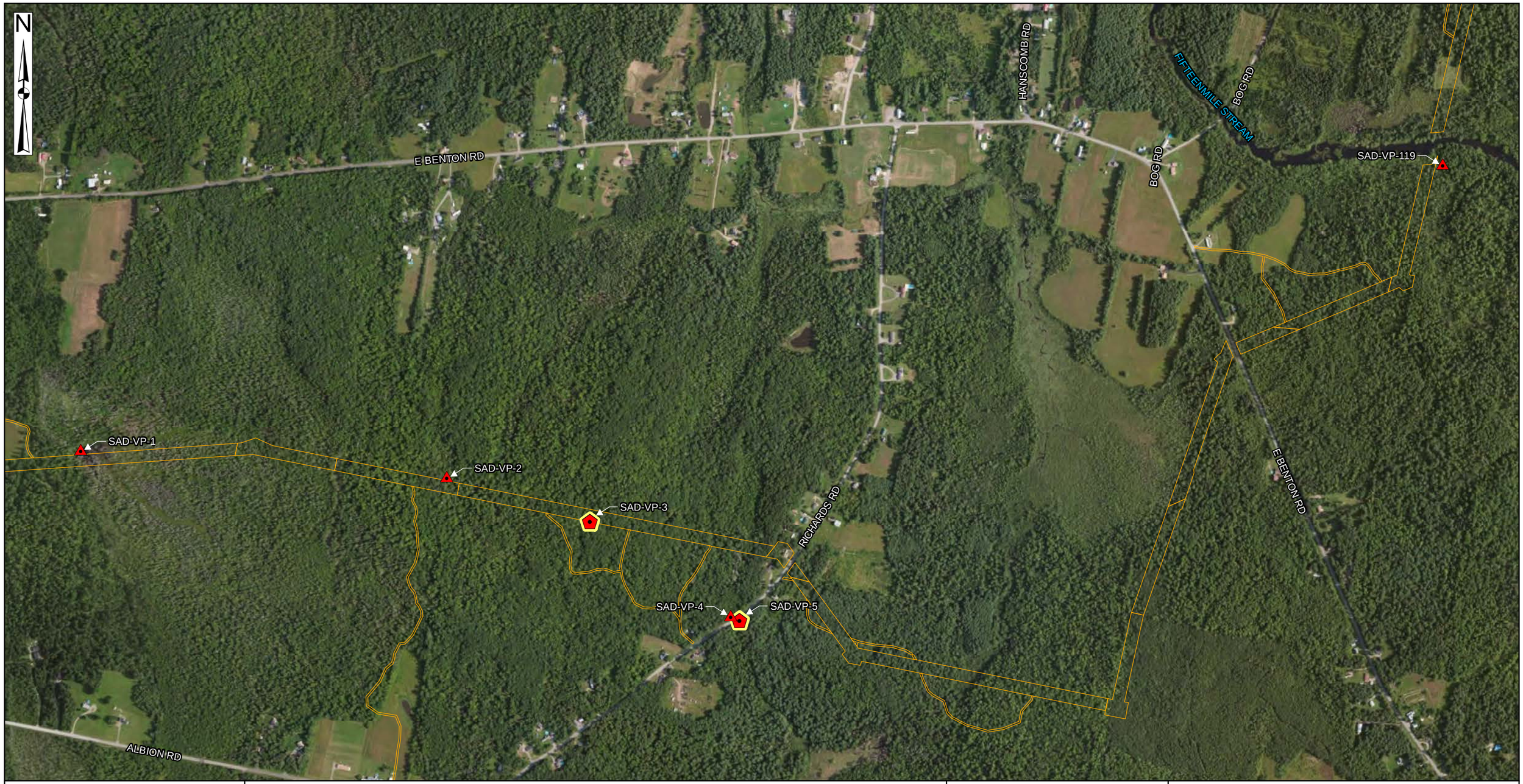
SCALE:

0 1,500 3,000 Feet

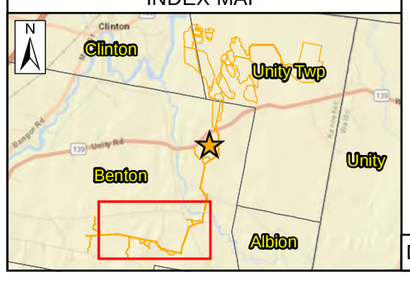
1 inch = 1,500 feet

VERNAL POOL MAP 1 OF 2
THREE CORNERS SOLAR SITE: UNITY TWP, MAINE

JANUARY 12, 2022



INDEX MAP



LEGEND

- CP - USACE Jurisdictional Pool
- VP - Vernal Pool
- SVP - Potentially Significant Vernal Pool
- Project Survey Boundary
- Project Limit of Disturbance

Data Collected by Kleinschmidt Associates 2019; 2020

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SCALE:

0 750 1,500 Feet

1 inch = 750 feet

VERNAL POOL MAP 2 OF 2
THREE CORNERS SOLAR SITE: UNITY TWP, MAINE

JANUARY 12, 2022

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ATTACHMENT B: SUMMARY TABLE

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Pool ID	Origin	Dried by 7/15/2020	Egg Mass Counts											Fairy Shrimp	SVP
			Wood Frog			Spotted Salamander				Blue-Spotted					
			Visit 1 2019	Visit 1 2020	Visit 2 2020	Visit 1 2019	Visit 2 2019	Visit 1 2020	Visit 2 2020	Visit 1 2019	Visit 2 2019	Visit 1 2020	Visit 2 2020		
NXG-CP-1	U	Yes		6				4							No
NXG-CP-100	U	Yes		3				4							No
NXG-CP-101	U	Yes		1				2							No
NXG-CP-102	U	Yes		32											No
NXG-CP-103	U	Yes						2							No
NXG-CP-104	U	Yes		60				17							No
NXG-CP-105	U	Yes		4				81							No
NXG-CP-11	U	Yes		10											No
NXG-CP-12	U	Yes		30				4							No
NXG-CP-13	U	Yes		15				3							No
NXG-CP-2	U	Yes						2							No
NXG-CP-3_2	U	Yes		1											No
NXG-CP-4	U	No		4				5							No
NXG-CP-4_2	U	No						2							No
NXG-CP-5	U	No		5				3							No
NXG-CP-6	U	Yes		5				3							No
NXG-CP-7	U	Yes		1											No
NXG-CP-8	U	Yes						1							No
NXG-VP-1	NM	No		2				2							No
NXG-VP-102	**N**	**Yes**		**52**				**28**							**Potentially**
NXG-VP-103	N	No						8	9						No
NXG-VP-104	NM	Yes		4	1			16	17						No
NXG-VP-105	**N**	**Yes**		**38**										**Yes**	**Potentially**

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Pool ID	Origin	Dried by	Egg Mass Counts												SVP
NXG-VP-107	**N**	**Yes**		**31**				**22**							**Potentially**
NXG-VP-2	NM	No		3				3				3			No
NXG-VP-3	**N**	**Yes**		**46**				**5**							**Potentially**
NXG-VP-4	N	Yes						1	3						No
NXG-VP-5	**N**	**Yes**						**4**	**19**						**Potentially**
NXG-VP-6	NM	Yes		32	1				6						No
SAD-CP-10	U	Yes		30											No
SAD-CP-100	U	Yes				3									No
SAD-CP-101	U	No				5		1							No
SAD-CP-102	U	No				2		3							No
SAD-CP-11	U	Yes				2									No
SAD-CP-13	U	Yes		8		3		11							No
SAD-CP-16	U	Yes	3	39				30							No
SAD-CP-17	U	Yes				1		1							No
SAD-CP-18	U	NA	3												No
SAD-CP-19	U	NA				3									No
SAD-CP-19a	U	NA				6									No
SAD-CP-2	U	No				3		11							No
SAD-CP-300	U	No		16				26							No
SAD-CP-301	U	No		1				16							No
SAD-CP-316A	U	No		0				5							No
SAD-CP-5	U	Yes		21				5							No
SAD-CP-6	U	No		1				20							No
SAD-CP-7	U	No				2									No
SAD-CP-8	U	NA				2									No
SAD-CP-9	U	No		14		9									No
SAD-CP-9a	U	NA				30									No

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Pool ID	Origin	Dried by	Egg Mass Counts												SVP
SAD-VP-1	N	No	6					4	3	7					No
SAD-VP-10	**N**	**Yes**	**6**	**26**		**31**		**35**				**20**			**Potentially**
SAD-VP-100	**N**	**Yes**		**82**											**Potentially**
SAD-VP-101	N	Yes		6					2						No
SAD-VP-102	**N**	**Yes**		**42**											**Potentially**
SAD-VP-103	**N**	**Yes**		**25**	**1**			**5**	**9**				**25**		**Potentially**
SAD-VP-104	N	Yes		17	1			10	8						No
SAD-VP-105	**N**	**No**		**22**				**89**							**Yes**
SAD-VP-106	**NM**	**Yes**		**1**				**37**							**Potentially**
SAD-VP-107	**N**	**Yes**		**48**				**73**							**Potentially**
SAD-VP-11	N	Yes	6	11	12	7		5	15		4				No
SAD-VP-116	**N**	**No**		**0**				**37**							**Yes**
SAD-VP-117	N	No		0	2			2	1						No
SAD-VP-118	NM	No		0				1							No
SAD-VP-119	N	No						16	14						No
SAD-VP-12	N	Yes	1	0		4		4							No
SAD-VP-13	N	No		0		1									No
SAD-VP-15	N	Yes	5	8				2							No
SAD-VP-16	N	No	1						1						No
SAD-VP-17	NM	Yes	3	1	2	1			8						No
SAD-VP-18	N	Yes	10	3				11	18						No
SAD-VP-2	N	No					4	1	9	10					No
SAD-VP-3	**N**	**No**	**27**		**1**		**24**		**25**						**Yes**
SAD-VP-4	N	No	10	1	1		5			3					No
SAD-VP-5	**NM**	**No**	**67**		**40**		**7**	**3**	**26**	**11**					**Yes**
SAD-VP-6	N	No				2	1								No
SAD-VP-7	**N**	**No**		**1**	**1**	**12**	**6**	**23**	**26**		**1**				**Yes**
SAD-VP-7-2	NM	No				2									No
SAD-VP-8	**NM**	**No**	**36**	**2**		**49**		**59**							**Yes**

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Pool ID	Origin	Dried by	Egg Mass Counts												SVP
SAD-VP-9	N	Yes	20	36		20		45							Potentially

Attachment 9-2

Wetland and Watercourse Delineation and Potential Vernal Pool Survey Report: Genlead

Wetland and Watercourse Delineation and Potential Vernal Pool Survey Report

Proposed Transmission Line and Construction Access Routes: Benton, Maine

December 29, 2021

Prepared for:

Three Corners Solar, LLC
30 Danforth Street, Suite 201
Portland, Maine 04101

Prepared by:

Stantec Consulting Services Inc.
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Topsham, ME 04086

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1.0 INTRODUCTION

Three Corners Solar, LLC (Three Corners) contracted Stantec Consulting Services Inc. (Stantec) to perform wetland and watercourse delineations of a proposed transmission line and access routes in Benton, Maine (Project Site) (Appendix A: Figure 1. Project Location Map). Three Corners intends to develop a solar project in Benton, Clinton and Unity Township (Project). Stantec performed the wetland and watercourse delineation for the proposed transmission line and several proposed construction access routes in Benton from July 27 to 31, 2020 and on October 27, 2020. Concurrent with the wetland and watercourse delineation, potential vernal pools (PVPs) were recorded within the Project Site. Several additional areas, totaling approximately 9 acres, adjacent to the Project limits of disturbance were delineated on November 23, 2021. This report summarizes the methods and results of the wetland and watercourse delineation and potential vernal pool survey. Delineated resources are depicted on the attached Wetland and Watercourse Delineation Maps (Appendix A: Figures 2-5).

2.0 METHODS

2.1 WETLAND AND WATERCOURSE DELINEATION

Wetlands and watercourses within the Project Site were identified in accordance with the definitions detailed in Maine State Statute 38 M.R.S.A. Sec. 480-B of the Natural Resources Protection Act[1]. Wetland boundaries were determined using the technical criteria described in the United States Army Corps of Engineers (Corps) *Corps of Engineers Wetlands Delineation Manual*[2] and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)*[3]. Wetland communities were classified according to the *Classification of Wetlands and Deepwater Habitats of the United States*[4]. Hydric soil determinations were made in accordance with the Corps wetland delineation manuals and the *Field Indicators for Identifying Hydric Soils in New England (Version 4)*[5]. Wetlands of Special Significance (WoSS) were identified based on criteria in Chapter 310

[1] Title 38: Waters and Navigation, Chapter 3: Protection and Improvement of Waters, Subchapter 1: Environmental Protection Board, Article 5-a: Natural Resources Protection Act

[2] Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1. U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS.

[3] U.S. Army Corps of Engineers. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0),* ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

[4] *Federal Geographic Data Committee. 2013. Classification of Wetlands and Deepwater Habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC.*

[5] New England Hydric Soils Technical Committee. 2017. Field Indicators for Identifying Hydric Soils in New England (Version 4).

of the Maine Natural Resources Protection Act (NRPA)[6] and Chapter 335 Significant Wildlife Habitat[7]. Identification of WoSS was limited to observable conditions within the Project Site. Wetland delineations were conducted under seasonally appropriate conditions.

Delineated watercourses (e.g., river, stream, or brook) were identified based on the technical guidance available from the Corps on the identification of an Ordinary High Water Mark (OHWM)[8], definition of a tributary as described in the Clean Water Act (CWA)[9], and as detailed in the Maine Department of Environmental Protection (MDEP) watercourse identification guidance document[10]. Data was collected on flow regime, bankfull and OHWM width, dominant substrates, and evidence of biological use.

2.2 POTENTIAL VERNAL POOL SURVEY

A seasonally appropriate vernal pool survey was performed for portions of the Project Site in 2020 by Kleinschmidt Associates (KA) prior to the Stantec wetland delineation fieldwork. While performing the wetland delineation Stantec collected potential vernal pool (PVP) data for site features in areas not surveyed by KA that appear to have the capacity to function as a vernal pool based on field observations. On June 14, 2021, Stantec collected the approximate boundaries of PVPs observed in 2020. This PVP survey was conducted in accordance with the Maine Association of Wetland Scientists' 2014 Vernal Pool Survey Protocol (April 2014), as well as the definitions set forth in Chapter 335, Significant Wildlife Habitat, of the NRPA and the Corps General Permit (GP). These results are considered "potential" because the timing of the survey was not seasonally appropriate to determine vernal pool functionality or significance.

2.3 DATA COLLECTION

Each delineated resource was assigned a unique alpha-numeric code. A Global Positioning System receiver capable of sub-meter accuracy was used to locate the wetland boundaries and watercourse features. Wetland boundaries and watercourses were not flagged in the field. Representative photographs were taken of each feature and are included in Appendix B.

[6] Maine Department of Environmental Protection. 26 January 2009. Natural Resources Protection Act Chapter 310: Wetlands and Waterbodies Protection Rules. Bureau of Land and Water Quality, DEPLW0297-D2009.
[7] Maine Department of Environmental Protection. 7 January 2014. Natural Resources Protection Act Chapter 335: Significant Wildlife Habitat.
[8] U.S. Army Corps of Engineers. 2005. Regulatory Guidance Letter: Ordinary High Water Mark Identification. December 8, 2005. No. 05-05.
[9] U.S. Army Corps of Engineers. 2015. 33 Code of Federal Regulations, Part 328, Waters of the United States. June 29, 2015.
[10] Danielson, T. J. 2018. Natural Resource Protection Act Streams, Rivers, and Brooks. Maine Department of Environmental Protection, Augusta, ME.

3.0 RESULTS

3.1 GENERAL SITE DESCRIPTION

The Project Site is wholly located in Benton, Maine and encompasses approximately 405-acres. It begins at the Albion Road Substation and generally extends to the east approximately 2-miles before turning north for approximately 2.8-miles to its end near an existing transmission line north of Unity Road (State Route 139). The Project Site crosses Richards Road, East Benton Road, Bog Road, Unity Road, and Bessey Lane. Fifteenmile Stream flows from west to east across the central portion of the Project Site.

The topography undulates throughout the Project Site, consisting of numerous knolls and valleys, with elevations ranging from approximately 130-feet (ft) at Fifteenmile Stream to approximately 300-ft in the southeastern corner of the Project Site. Elevations at the southern and northern Project Site terminus are approximately 220-ft.

The Project Site is within a rural setting that is primarily forested, except for a few fields, and rural areas in proximity to streets. Several of the potential access roads are also associated with existing aggregate base, improved roads used to gain access to back land for camps, timber harvest, and agriculture. There are also several large open water and emergent marsh wetland complexes that overlap with the Project Site.

Forested areas are dominated by balsam fir (*Abies balsamea*), red maple (*Acer rubrum*), eastern arborvitae (*Thuja occidentalis*), red spruce (*Picea rubens*), eastern hemlock (*Tsuga canadensis*), eastern white pine (*Pinus strobus*), green ash (*Fraxinus pennsylvanica*), and yellow birch (*Betula alleghaniensis*). Some areas of recent timber harvests have resulted in early successional and regenerating forest communities consisting of saplings and seedlings of the previously listed tree species as well as quaking aspen (*Populus tremuloides*), speckled alder (*Alnus incana*), and red raspberry (*Rubus idaeus*). The herbaceous layer includes bracken fern (*Pteridium aquilinum*), hay scented fern (*Dennstaedtia punctilobula*), lowbush blueberry (*Vaccinium angustifolium*), and Canadian bunchberry (*Cornus canadensis*).

The U.S. Department of Agriculture Soil Survey of Kennebec County, Maine[11] depicts 13 map units within the Project Site. Soil consistent and/or similar to these map units were observed on-site.

3.2 WETLAND/WATERCOURSE DELINEATION AND POTENTIAL VERNAL POOL SURVEY

The wetland and watercourse delineation was conducted in July and October 2020 and November 2021. The ground was free of snow and frost and late season vegetation was identifiable during the October 2020 and November 2021 field efforts. During the on-site delineation fieldwork, Stantec wetland scientists delineated 62 wetlands, 11 watercourses, and 10 PVPs within the Project Site. These results are characterized in Tables 1, 2, and 3, respectively. Delineated wetlands, watercourse, and PVPs are

[11] Web Soil Survey, Natural Resources Conservation Service, United States Department of Agriculture. Available at: http://websoilsurvey.nrcs.usda.gov/. Accessed June 29, 2020.

depicted on the attached Wetland and Watercourse Delineation Maps (Appendix A: Figures 2-5). For reference, the vernal pools identified by KA are presented in Figures 2-5. Summary data and Maine State Vernal Pool Assessment Forms are presented under separate cover by others. Representative photographs of identified natural resources are included in Appendix B. Appendix C includes representative Corps Wetland Determination Data Forms.

Table 1. Summary of Delineated Wetlands

Figure Identifier	Wetland Field Designation	Wetland Classification(s)[1]	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W01	01CFA	PEM	Trees: none Shrub/Saplings: gray willow (*Salix bebbiana*) Herbs: broad-leaf cat-tail (*Typha latifolia*), fringed sedge (*Carex crinita*), common fox sedge (*Carex vulpinoidea*), Canadian goldenrod (*Solidago canadensis*), lamp rush (*Juncus effusus*)	A1: Histosol	Surface Water (A1), High Water Table (A2), Saturation (A3)	No	Small, man-made ditch located north of the Albion Road substation. The wetland extends offsite into large wetland complex to the west.
W02	01CFB	PFO	Trees: balsam fir (*Abies balsamea*), eastern hemlock (*Tsuga canadensis*), red maple (*Acer rubrum*), green ash (*Fraxinus pennsylvanica*) Shrub/Saplings: balsam fir, Morrow's honeysuckle (*Lonicera morrowii*) Herbs: sensitive fern (*Onoclea sensibilis*), interrupted fern (*Osmunda claytonia*), royal fern (*Osmunda spectabilis*)	F3: Depleted Matrix	Saturation (A3), Drainage Patterns (B10)	No	Small portion of larger wetland complex located north of the Albion Road substation.
W03	01RKD/01CFC	PFO/PEM	Trees: balsam fir, red maple, green ash Shrub/Saplings: balsam fir Herbs: sensitive fern, evergreen wood fern (*Dryopteris intermedia*), broad-leaf cat-tail, pointed broom sedge (*Carex scoparia*), yellow green sedge (*Carex flava*), fowl manna grass (*Glyceria striata*), common marsh bedstraw (*Galium palustre*), lamp rush, spotted touch-me-not (*Impatiens capensis*), bluejoint (*Calamagrostis canadensis*), simpler's joy (*Verbena hastata*), eastern poison ivy (*Toxicodendron radicans*), interrupted fern	A11a: Depleted Below Dark Surface	Water Stained Leaves (B9), Drainage Patterns (B10), Geomorphic Position (D2), Microtopographic Relief (D4)	No	The wetland is located east of the Albion Road substation and is bisected by an existing transmission line. The wetland is forested in the natural setting and primarily PEM in the cleared section, with small pockets of shrubs.
W04	01RKC	PFO/PEM	Trees: balsam fir, red maple, green ash Shrub/Saplings: balsam fir Herbs: sensitive fern, evergreen wood fern, broad-leaf cat-tail, pointed broom sedge, yellow green sedge, fowl manna grass, common marsh bedstraw, lamp rush, spotted touch-me-not, bluejoint, simpler's joy, eastern poison ivy, Interrupted fern	A11a: Depleted Below Dark Surface	Water Stained Leaves (B9), Drainage Patterns (B10), Geomorphic Position (D2), Microtopographic Relief (D4)	No	The wetland is located east of the Albion Road substation access road and is bisected by an existing transmission line. The wetland is forested in the natural setting and primarily PEM in the cleared section, with small pockets of shrubs.
W05	01RKB	PFO/PEM	Trees: balsam fir, red maple, green ash Shrubs/Saplings: balsam fir Herbs: sensitive fern, evergreen wood fern, broad-leaf cat-tail, pointed broom sedge, yellow green sedge, fowl manna grass, common marsh bedstraw, lamp rush, spotted touch-me-not, bluejoint, simpler's joy	A11a: Depleted Below Dark Surface	Water Stained Leaves (B9), Drainage Patterns (B10), Geomorphic Position (D2), Microtopographic Relief (D4)	No	The wetland is located east of the Albion Road substation access road and is bisected by an existing transmission line. The wetland is forested in the natural setting and primarily PEM in the cleared section, with small pockets of shrubs.
W06	01RKA	PFO	Trees: balsam fir, red maple Shrub/Saplings: balsam fir Herbs: sensitive fern, evergreen wood fern	A11a: Depleted Below Dark Surface	Water Stained Leaves (B9), Drainage Patterns (B10), Geomorphic Position (D2), Microtopographic Relief (D4)	No	Small, isolated, forested wetland located between the Albion Road substation access road and an existing transmission line to the west. The wetland is upslope of and connects to the access road constructed drainage ditch.

Figure Identifier	Wetland Field Designation	Wetland Classification(s)[1]	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W07	01CFD	PFO	Trees: balsam fir, red maple, green ash Shrub/Saplings: balsam fir, red maple, green ash, speckled alder (*Alnus incana*) Herbs: sensitive fern, cinnamon fern (*Osmundastrum cinnamomeum*), fringed sedge, three-seed sedge (*Carex trisperma*)	F3: Depleted Matrix	Saturation (A3), Drainage Patterns (B10)	No	Linear wetland drainage extends north off-site.
W08	01CFE	PSS/PEM	Trees: red maple Shrub/Saplings: red maple, gray willow, common winterberry (*Ilex verticillata*), broad-leaved meadowsweet (*Spiraea latifolia*) Herbs: sensitive fern, reed canary grass (*Phalaris arundinacea*)	F3: Depleted Matrix	Saturation (A3)	No	Isolated wetland located along proposed access road off East Benton Road.
W09	01RKE	PFO/PSS/PEM	Trees: balsam fir, red maple, black ash, (*Fraxinus nigra*), yellow birch, eastern arborvitae Shrub/Saplings: balsam fir, speckled alder, common winterberry, alternate-leaf dogwood (*Cornus alterniflora*), broad-leaved meadowsweet, steeplebush (*Spiraea tomentosa*) Herbs: sensitive fern, evergreen wood fern, broad-leaf cat-tail, pointed broom sedge, yellow green sedge, fowl manna grass, common marsh bedstraw, lamp rush, spotted touch-me-not, bluejoint, simpler's joy, eastern poison ivy, interrupted fern, three-seed sedge, late goldenrod, (*Solidago gigantia*), eastern marsh fern (*Thelypteris palustris*), cottongrass bulrush (*Scirpus cyperinus*), pickerelweed (*Pontederia cordata*), northern water-horehound (*Lycopus uniflorus*), European bur-reed (*Sparganium emersum*), common duckweed (*Lemna minor*), rice cut grass (*Leersia oryzoides*), arrow-leaf tearthumb (*Persicaria sagittata*), coon's-tail (*Ceratophyllum demersum*), three-leaf goldthread (*Coptis trifolia*), bristly dewberry (*Rubus hispidus*), wrinkle-leaf goldenrod (*Solidago rugosa*), royal fern	A11a: Depleted Below Dark Surface	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Marks (B1), Sediment Deposits (B2), Inundation Visible on Aerial Imagery (B7), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Saturations Visible on Aerial Imagery (C9), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: portions within 25-feet (ft) of a watercourse	This is a large wetland that is a complex of interspersed pockets of emergent, forest and dense shrub thickets, fringed by forested wetland. The wetland contains S02 which flows northerly across the western edge and contains VP01.
W10	01CFI	PSS	Trees: none Shrub/Saplings: red maple, gray willow, quaking aspen (*Populus tremuloides*), gray birch Herbs: broad-leaf cat-tail, fringed sedge	S5: Sandy Redox	Saturation (A3)	No	Wetland is dominated by shrubs on-site within an area recently harvested by logging operations and located along proposed access road north of Albion Road.
W11, W12	01CFH	PSS	Trees: red maple, American larch (*Larix laricina*) Shrub/Saplings: red maple, American larch, gray birch, gray willow, quaking aspen, broad-leaved meadowsweet Herbs: broad-leaf cat-tail, fringed sedge, dark green bulrush (*Scirpus atrovirens*), shallow sedge (*Carex lurida*), Canadian rush (*Juncus canadensis*)	S5: Sandy Redox	Saturation (A3), Water Stained Leaves (B9)	No	Wetland is dominated by shrubs on-site within an area recently harvested by logging operations and located along proposed access road north of Albion Road. Contains PVP01.

Figure Identifier	Wetland Field Designation	Wetland Classification(s)[1]	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W13, W14	01CFG/01GPA	PSS/PUB	Trees: red maple, American larch Shrub/Saplings: red maple, American larch, gray birch, gray willow, quaking aspen, broad-leaved meadowsweet Herbs: broad-leaf cat-tail, fringed sedge, dark green bulrush, shallow sedge, Canadian rush	S5: Sandy Redox	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Stained Leaves (B9), Presence of Reduced Iron (C4)	No	Wetland is dominated by shrubs on-site within an area recently harvested by logging operations and located along proposed access road north of Albion Road. A portion of the wetland contains PVP02. Wetland extends northeast across the corridor into large complex. A farm pond (PUB component) has been created in the field along the eastern edge of the wetland just outside the survey area.
W15	01RKF	PFO	Trees: balsam fir, red maple, black ash, yellow birch, eastern arborvitae Shrub/Saplings: speckled alder Herbs: sensitive fern, broad-leaf cat-tail, eastern poison ivy, three-seed sedge, cottongrass bulrush, common red raspberry (*Rubus idaeus*), royal fern, cinnamon fern	A11a: Depleted Below Dark Surface	Surface Water (A1), High Water Table (A2), Saturation (A3), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	No	This is a forested swale that extends across the site from south to north. The wetland contains a VP02.
W16, W17, W18, W19	01RKG	PFO	Trees: balsam fir, red maple, black ash, yellow birch, eastern arborvitae Shrub/Saplings: speckled alder Herbs: sensitive fern, three-seed sedge, dwarf red raspberry (*Rubus pubescens*), royal fern, cinnamon fern, eastern marsh fern, yellow green sedge, woodland horsetail (*Equisetum sylvaticum*)	A2: Histic Epipedon	High Water Table (A2), Saturation (A3), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Moss Trim LInes (B16), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: portions within 25-ft of a watercourse	This is a forested swale that extends across the site from south to north. The wetland contains S03.
W20	01RKH	PFO	Trees: balsam fir, red maple, black ash Shrub/Saplings: common winterberry Herbs: cinnamon fern, eastern marsh fern, eastern poison ivy, stinging nettle (*Urtica dioica*)	A11a: Depleted Below Dark Surface	Saturation (A3), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Moss Trim LInes (B16), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains SVP03	This is a forested swale that extends across the site from south to north. The wetland contains SVP03.
W21	01EBA	PFO	Trees: eastern arborvitae, balsam fir, black ash Shrub/Saplings: balsam fir, broad-leaved meadowsweet Herbs: sensitive fern, parasol white top (*Doelingeria umbellata*), royal fern, dwarf red raspberry, cinnamon fern	A1: Histosol	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Stained Leaves (B9), Presence of Reduced Iron (C4)	Potentially: contains PSVP11	Wetland depression extending south off-site and containing PSVP11.

Figure Identifier	Wetland Field Designation	Wetland Classification(s)[1]	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W22	01RKI	PFO	Trees: balsam fir, yellow birch, American elm (*Ulmus americana*) Shrub/Saplings: common winterberry, speckled alder, steeplebush Herbs: sensitive fern, broad-leaf cat-tail, yellow green sedge, fowl manna grass, spotted touch-me-not, eastern poison ivy, three-seed sedge, bristly dewberry, interrupted fern, eastern poison ivy, slender wood reed (*Cinna latifolia*)	A11a: Depleted Below Dark Surface	Saturation (A3), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Moss Trim LIne s (B16), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	No	This is a forested swale that extends across the site from south to north; located west of Richards Road.
W23	01RKJ	PFO/PUB	Trees: balsam fir, red maple, black ash, yellow birch Shrub/Saplings: speckled alder, smooth arrow-wood (*Viburnum recognitum*) Herbs: sensitive fern, broad-leaf cat-tail, royal fern, water-horehound, wrinkle-leaf goldenrod, broad-leaved meadowsweet, touch-me-not, bluejoint, interrupted fern	A2: Histic Epipedon	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Marks (B1), Sediment Deposits (B2), Inundation Visible on Aerial Imagery (B7), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Saturations Visible on Aerial Imagery (C9), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains SVP05	This is a forested wetland located along the east side of Richards Road and extends off-site to the south. The wetland contains an apparently man-made pond, S04.
W24	01CFM	PSS	Trees: none Shrub/Saplings: quaking aspen, balsam fir Herbs: sensitive fern, fringed sedge, broad-leaf cat-tail	F3: Depleted Matrix	Saturation (A3)	No	Isolated wetland on south side of survey area east of Richards Road.
W25	01CFJ	PFO	Trees: red maple, balsam fir Shrub/Saplings: red maple, balsam fir, quaking aspen Herbs: sensitive fern, royal fern, interrupted fern, fringed sedge, wrinkle-leaf goldenrod	F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9)	No	Isolated forested wetland located east of Richards Road.
W26	01CFL	PSS	Trees: none Shrub/Saplings: green ash, quaking aspen, balsam fir, speckled alder Herbs: sensitive fern, dark green bulrush, reed canary grass	F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9)	No	Isolated wetland along old roadbed to an existing camp located east of Richards Road.
W27	01CFK	PSS/PFO	Trees: red maple, balsam fir, yellow birch, eastern arborvitae Shrub/Saplings: red maple, balsam fir, yellow birch, eastern arborvitae, speckled alder Herbs: bluejoint, shallow sedge, lakebank sedge (*Carex lacutris*), cinnamon fern, European bur-reed, stinging nettle, cut-leaf water-horehound (*Lycopus americanus*)	S4: Sandy Gleyed Matrix, S5: Sandy Redox	Saturation (A3)	Yes, portions within 25-ft of a watercourse	Wetland complex containing S05.

Figure Identifier	Wetland Field Designation	Wetland Classification(s)[1]	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W28	01CFN	PFO	Trees: eastern arborvitae, black ash, gray birch, yellow birch, quaking aspen, balsam fir, red maple Shrub/Saplings: eastern arborvitae, black ash, gray birch, yellow birch, quaking aspen, balsam fir, red maple Herbs: sensitive fern, interrupted fern, fringed sedge, three-seed sedge, fowl manna grass	F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9), Drainage Patterns (B10)	No	Portion of large forested wetland complex that extends off-site to the northeast and southwest.
W29, W30, W31, W32	01RKL	PFO/PSS/PEM	Trees: balsam fir, red maple, black ash, yellow birch, eastern arborvitae Shrub/Saplings: balsam fir, speckled alder, common winterberry Herbs: dwarf red raspberry, three-seed sedge, northern water-horehound, sensitive fern, interrupted fern, woodland horsetail, fowl manna grass, swamp candles (*Lysimachia terrestris*), bluejoint, broad-leaf cat-tail, royal fern, broad-leaved meadowsweet, yellow green sedge	A2: Histic Epipedon	Surface Water (A1), High Water Table (A2), Saturation (A3), Sediment Deposits (B2), Algae Mat or Crust (B4), Inundation Visible on Aerial Imagery (B8), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains >20,000 square feet (sf) of emergent marsh and PSVP03	This is a large wetland that is a complex of interspersed pockets of emergent, forest and dense shrub thickets, fringed by forested wetland. The wetland begins along the west side of East Benton Road and extends westerly to the large wetland complex off-site. Also contains PSVP03. Note: Two portions of this wetland are small isolated wetlands along the eastern edge of the survey area.
W33, W34	01RKK	PFO	Trees: balsam fir, red maple, black ash Shrub/Saplings: balsam fir Herbs: sensitive fern, eastern poison ivy, dwarf red raspberry, interrupted fern	A11a: Depleted Below Dark Surface	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	No	This is a forested wetland located east of East Benton Road. Small portion of wetland that extends off-site to the east.
W35	01RKM	PFO	Trees: balsam fir, red maple, black ash, green ash, eastern arborvitae Shrub/Saplings: balsam fir, speckled alder, common winterberry Herbs: sensitive fern, royal fern, broad-leaf cat-tail, eastern poison ivy	F3: Depleted Matrix	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	No	This is a large forested wetland with areas of dense shrub understory. The wetland is located along the east side of East Benton Road and extends off-site to the north and south. Connected to W36 off-site to the south.
W36	01RKN/01RKO/ 01CFU/01CFQ/ 01CFS/01CFT	PFO	Trees: balsam fir, red maple, black ash, green ash, eastern arborvitae Shrub/Saplings: balsam fir, speckled alder, common winterberry Herbs: sensitive fern, royal fern, broad-leaf cat-tail, eastern poison ivy	F3: Depleted Matrix	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes, portions within 25-ft of a watercourse	This is a large forested wetland with areas of dense shrub understory. The wetland is located east of East Benton Road and extends off-site to the north and south. Contains S06.
W37	01CFO	PSS	Trees: none Shrub/Saplings: speckled alder, broad-leaved meadowsweet, gray willow, red osier dogwood (*Cornus alba*) Herbs: sensitive fern, common fox sedge, wrinkled-leaf goldenrod	F3: Depleted Matrix, F6: Redox Dark Surface	Saturation (A3)	No	Portion of wetland located east of East Benton Road along proposed access road.

Figure Identifier	Wetland Field Designation	Wetland Classification(s)[1]	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W38	01CFP	PFO	Trees: red maple, green ash Shrub/Saplings: red maple, green ash, black ash, common winterberry Herbs: sensitive fern	F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9)	No	Wetland is located east of East Benton Road along south side of proposed access road and contains PVP04.
W39	01CFQ	PFO	Trees: red maple, green ash Shrub/Saplings: red maple, green ash, black ash, common winterberry Herbs: sensitive fern	F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9)	No	Wetland is located east of East Benton Road along north side of proposed access road.
W40	01CFR	PFO	Trees: black ash, balsam fir, quaking aspen Shrub/Saplings: black ash, balsam fir, speckled alder Herbs: sensitive fern, common fox sedge, fringed sedge	A2: Histic Epipedon, F3: Depleted Matrix	Saturation (A3), Drainage Patterns (B10)	Yes, portions within 25-ft of a watercourse	Wetland is located east of East Benton Road along proposed access road and contains S06.
W41	01RKP	PFO	Tree: balsam fir, yellow birch, green ash Shrub/Saplings: balsam fir, yellow birch Herbs: sensitive fern, wrinkle-leaf goldenrod, three-seed sedge, late goldenrod, woodland horsetail	F3: Depleted Matrix	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	No	This a s narrow side slope groundwater discharge swale that is a portion of a larger wetland that extends off-site to the east.
W42, W43	01RKQ/01RKR/ 01CFV/01CFW	PFO/PSS/PEM/PUB	Trees: balsam fir, red maple, black ash, American elm, yellow birch, eastern arborvitae, gray birch (*Betula populifolia*) Shrub/Saplings: speckled alder, common winterberry Herbs: sensitive fern, broad-leaf cat-tail, pointed broom sedge, yellow green sedge, fowl manna grass, common marsh bedstraw, lamp rush, spotted touch-me-not, bluejoint, simpler's joy, eastern poison ivy, interrupted fern, broad-leaved meadowsweet, three-seed sedge, late goldenrod, steeplebush, eastern marsh fern, cottongrass bulrush, pickerelweed, northern water-horehound, European bur-reed, common duckweed, rice cut grass, arrow-leaf tearthumb, coon's-tail, three-leaf goldthread, bristly dewberry, wrinkle-leaf goldenrod, stinging nettle, royal fern, slender wood reed, three-way sedge (*Dulichium arundinaceum*), lesser bladder sedge (*Carex vesicaria*), shallow sedge, variegated scouring rush (*Equisetum variegatum*), fringed sedge	A2: Histic Epipedon	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Marks (B1), Sediment Deposits (B2), Inundation Visible on Aerial Imagery (B7), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Saturation Visible on Aerial Imagery (C9), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains >20,000 sf of emergent marsh; and portions within 25-ft of a watercourse	This is a large wetland complex riparian to Fifteenmile Stream (S07) and another perennial stream (S08). It is connected to W50 and S09 by a culvert at Bog Road. These are large complexes of interspersed emergent and open water, forested patches, dense shrub thickets, and fringed by forested wetland. The wetland extends off-site to the east and west along Fifteenmile Stream. This wetland contains VP06, south of Fifteenmile Stream.
W44	01RKS	PFO/PSS	Trees: balsam fir, gray birch Shurb/Saplings: speckled alder Herbs: sensitive fern, dwarf red raspberry, fringed sedge	A11a: Depleted Below Dark Surface	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	No	This wetland is a portion of a larger wetland complex that extends off-site to the west; located east of Bog Road. This a groundwater discharge wetland situated at the base of a slope.

Figure Identifier	Wetland Field Designation	Wetland Classification(s)[1]	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W45	01RKT	PSS/PFO	Trees: balsam fir, gray birch Shurb/Saplings: speckled alder Herbs: sensitive fern, dwarf red raspberry, fringed sedge	A11a: Depleted Below Dark Surface	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	No	This wetland is a portion of a larger wetland complex that extends off-site to the west; located along the east side of Bog Road.
W46	01RKU	PSS	Trees: none Shrub/Saplings: speckled alder Herbs: sensitive fern	A11a: Depleted Below Dark Surface	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	No	This wetland is a small, isolated wetland in a saddle at the top of a slope, located east of Bog Road.
W47	02CFA	PFO	Trees: balsam fir, red maple, gray birch, eastern white pine Shrub/Saplings: balsam fir, red maple, gray birch, speckled alder Herbs: sensitive fern, fowl manna grass	F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9), Drainage Patterns (B10)	No	Portion of larger wetland complex along west side of survey area north of Bog Road. Wetland extends northwest off-site.
W48	02CFA	PFO	Trees: balsam fir, red maple, gray birch, eastern white pine Shrub/Saplings: balsam fir, red maple, gray birch, speckled alder Herbs: sensitive fern, fowl manna grass	F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9), Drainage Patterns (B10)	No	Portion of larger wetland complex along west side of survey area north of Bog Road. Wetland extends northwest off-site.
W49	01CFZ	PFO	Trees: balsam fir, gray birch, eastern white pine Shrub/Saplings: balsam fir, speckled alder Herbs: sensitive fern, dwarf red raspberry, evergreen wood fern	F6: Redox Dark Surface	Oxidized Rhizospheres on Living Roots (C3), Drainage Patterns	No	Isolated wetland located north of Bog Road.
W50	02CFY	PFO/PEM/PUB	Trees: balsam fir, red maple, yellow birch, gray birch Shrub/Saplings: balsam fir, red maple, yellow birch, gray birch, speckled alder Herbs: broad-leaf cat-tail, bluejoint, sensitive fern, fringed sedge, lakebank sedge, royal fern	A1: Histosol	Surface Water (A1), High Water Table (A2), Saturation (A3), Inundation Visible on Aerial Imagery (B7), Drainage Patterns (B10)	Yes, contains >20,000 sf of emergent marsh; and portions within 25-ft of a watercourse	Wetland is located north of Bog Road and contains S09 and area of open water and emergent vegetation that extends off-site to the northeast.

Figure Identifier	Wetland Field Designation	Wetland Classification(s)[1]	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W51	02RKA/02RKB/ 02RKC/02RKD/ 02RKE/02RKF/ 02RKG/02CFB/ 02CFD	PFO/PSS/PEM	Trees: balsam fir, red maple, black ash, American elm, yellow birch, eastern arborvitae, gray birch Shrub/Saplings: speckled alder, common winterberry Herbs: sensitive fern, broad-leaf cat-tail, pointed broom sedge, yellow green sedge, fowl manna grass, common marsh bedstraw, lamp rush, spotted touch-me-not, bluejoint, eastern poison ivy, interrupted fern, broad-leaved meadowsweet, three-seed sedge, late goldenrod, steeplebush, eastern marsh fern, cottongrass bulrush, pickerelweed, northern water-horehound, European bur-reed, common duckweed, rice cut grass, arrow-leaf tearthumb, coon's-tail, three-leaf goldthread, bristly dewberry, wrinkle-leaf goldenrod, stinging nettle, royal fern, slender wood reed, three-way sedge, lesser bladder sedge, shallow sedge, variegated scouring rush, fringed sedge	A2: Histic Epipedon	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Marks (B1), Sediment Deposits (B2), Inundation Visible on Aerial Imagery (B7), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Saturation Visible on Aerial Imagery (C9), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains >20,000 sf of emergent marsh and PSVP06	This is a large wetland complex that is located north of Bog Road and extends off-site to the east and west. It is primarily forested on-site, however sections were recently part of an area involved in a timber harvest resulting in harvest roads and open patches within the wetland. Contains PSVP06. On aerial photos it is observed off-site to continue southerly to where it connects to S08/S09 and ultimately Fifteenmile Stream.
W52	02CFB	PFO/PSS/PEM	Trees: balsam fir, red maple, black ash, American elm, yellow birch, eastern arborvitae, gray birch Shrub/Saplings: speckled alder, common winterberry Herbs: sensitive fern, broad-leaf cat-tail, pointed broom sedge, yellow green sedge, fowl manna grass, common marsh bedstraw, lamp rush, spotted touch-me-not, bluejoint, eastern poison ivy, interrupted fern, broad-leaved meadowsweet, three-seed sedge, late goldenrod, steeplebush, eastern marsh fern, cottongrass bulrush, pickerelweed, northern water-horehound, European bur-reed, common duckweed, rice cut grass, arrow-leaf tearthumb, coon's-tail, three-leaf goldthread, bristly dewberry, wrinkle-leaf goldenrod, stinging nettle, royal fern, slender wood reed, three-way sedge, lesser bladder sedge, shallow sedge, variegated scouring rush, fringed sedge	A2: Histic Epipedon	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Marks (B1), Sediment Deposits (B2), Inundation Visible on Aerial Imagery (B7), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Saturation Visible on Aerial Imagery (C9), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains >20,000 sf of emergent marsh (off-site)	This is a portion of a large wetland complex that is located north of Bog Road and extends off-site to the east and west. It is primarily forested on-site.
W53	02CFE	PFO	Trees: balsam fir, red maple Shrub/Saplings: balsam fir, red maple Herbs: cinnamon fern	A2: Histic Epipedon, F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9)	No	Isolated wetland located north of Bog Road surrounded by area of recent logging activities.
W54	01RKV	PEM/PSS	Trees: none Shrub/Saplings: common winterberry, broad-leaved meadowsweet Herbs: cinnamon fern	A11a: Depleted Below Dark Surface	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Moss Trim Lines (B16), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Potentially, contains PSVP07	This wetland is a small, isolated wetland in a saddle near the top of a slope. It is located south of Unity Road and adjacent to an aggregate base timber harvest road within a proposed access road area. This feature is also the boundary of PSVP07.

Figure Identifier	Wetland Field Designation	Wetland Classification(s)[1]	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W55	01RKW	PFO	Trees: balsam fir, red maple Shrub/Saplings: speckled alder, broad-leaved meadowsweet Herbs: bluejoint, dwarf red raspberry, cottongrass bulrush, cinnamon fern, pointed broom sedge, broad-leaf cat-tail, woodland horsetail, sensitive fern	F3: Depleted Matrix	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Presence of Reduced Iron (C4), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains >20,000 sf of emergent marsh	This wetland is a portion of a large wetland complex that extends off-site to the north. It is located south of Unity Road and adjacent to an aggregate base timber harvest road within a proposed access road area. A timber harvest road separates this wetland from W51.
W56	01RKZ/01RKY	PFO/PSS/PEM	Trees: balsam fir, red maple, black ash, American elm, yellow birch, eastern arborvitae, gray birch Shrub/Saplings: speckled alder, common winterberry, broad-leaved meadowseet, steeplebush Herbs: sensitive fern, broad-leaf cat-tail, pointed broom sedge, yellow green sedge, fowl manna grass, common marsh bedstraw, lamp rush, spotted touch-me-not, bluejoint, eastern poison ivy, interrupted fern, three-seed sedge, late goldenrod, eastern marsh fern, cottongrass bulrush, pickerelweed, northern water-horehound, European bur-reed, common duckweed, rice cut grass, arrow-leaf tearthumb, coon's-tail, three-leaf goldthread, bristly dewberry, wrinkle-leaf goldenrod, stinging nettle, royal fern, slender wood reed, three-way sedge, lesser bladder sedge, shallow sedge, variegated scouring rush, fringed sedge	A1: Histosol, F2: Loamy Gleyed Matrix	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Marks (B1), Sediment Deposits (B2), Inundation Visible on Aerial Imagery (B7), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Saturation Visible on Aerial Imagery (C9), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains >20,000 sf of emergent marsh; and portions within 25-ft of a watercourse	This is a large wetland complex riparian to S11. On aerial photos it is observed to continue off-site southerly to where it connects to watercourse S08/S09 and ultimately Fifteenmile Stream. These are large complexes of interspersed emergent and open water, forested patches, dense shrub thickets, and fringed by forested wetland. A timber harvest road separates this wetland from W57.
W57	01RKX	PFO	Trees: balsam fir, red maple Shrub/Saplings: speckled alder, broad-leaved meadowsweet Herbs: bluejoint, dwarf red raspberry, cottongrass bulrush, cinnamon fern, pointed broom sedge, broad-leaf cat-tail, woodland horsetail, sensitive fern	F3: Depleted Matrix	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Marks (B1), Sediment Deposits (B2), Drift Deposits (B3), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains >20,000 sf of emergent marsh; and portions within 25-ft of a watercourse	This riparian wetland is a small portion of a large wetland complex that extends off-site to the north. It is located south of Unity Road and adjacent to an aggregate base timber harvest road within a proposed access road area. The timber harvest road separates this wetland from W56. S10 flows from the large emergent marsh complex southerly through this wetland, under the timber harvest road through culverts and through wetland W56 as watercourse S11.

Figure Identifier	Wetland Field Designation	Wetland Classification(s)[1]	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W58, W59	02RKH/02RKI/02CFG/02CFH	PFO/PSS/PEM	Trees: balsam fir, red maple, black ash, American elm, yellow birch, eastern arborvitae, gray birch Shrubs/Saplings: speckled alder, common winterberry, broad-leaved meadowsweet, steeplebush Herbs: sensitive fern, broad-leaf cat-tail, pointed broom sedge, yellow green sedge, fowl manna grass, common marsh bedstraw, lamp rush, spotted touch-me-not, bluejoint, eastern poison ivy, interrupted fern, three-seed sedge, late goldenrod, eastern marsh fern, cottongrass bulrush, pickerelweed, northern water-horehound, European bur-reed, common duckweed, rice cut grass, arrow-leaf tearthumb, coon's-tail, three-leaf goldthread, bristly dewberry, wrinkle-leaf goldenrod, stinging nettle, royal fern, slender wood reed, three-way sedge, lesser bladder sedge, shallow sedge, variegated scouring rush, fringed sedge	F2: Loamy Gleyed Matrix, F3: Depleted Matrix	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Marks (B1), Sediment Deposits (B2), Inundation Visible on Aerial Imagery (B7), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Saturation Visible on Aerial Imagery (C9), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains >20,000 sf of emergent marsh	This is a large wetland complex that is located south of Unity Road and extends off-site to the northeast and southwest. It is primarily forested on-site, however these are large complexes of interspersed emergent and open water, forested patches, dense shrub thickets, and fringed by forested wetland. Also contains a heron rookery.
W60	02CFI	PFO	Trees: balsam fir, red maple Shrub/Saplings: balsam fir, red maple, gray birch, speckled alder Herbs: broad-leaf cat-tail, fringed sedge, sensitive fern, fowl manna grass	F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9), Drainage Patterns (B10)	No	Isolated wetland south side of Unity Road.
W61	02RKJ	PSS	Trees: red maple, gray birch Shrub/Saplings: common winterberry, broad-leaved meadowsweet Herbs: sensitive fern, royal fern	F3: Depleted Matrix	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Potentially, contains PSVP09	Small, isolated wetland located south of Unity Road. Contains PSVP09.
W62	02CFF	PFO	Trees: balsam fir, red maple, quaking aspen, gray birch Shrub/Saplings: red maple, green ash, common winterberry Herbs: sensitive fern, dwarf red raspberry	F6: Redox Dark Surface	Algal Mat or Crust (B4), Water Stained Leaves (B9), Oxidized Rhizospheres on Living Roots (C3)	No	Isolated wetland depression located north side of Unity Road. Contains a PVP10.

[1] Wetland classification follows Federal Geographic Data Committee. (2013): PFO = Palustrine Forested, PSS = Palustrine Scrub-Shrub, PEM = Palustrine Emergent, PUB = Palustrine Unconsolidated Bottom

Table 2. Summary of Delineated Watercourses

Figure Identifier	Watercourse /Waterbody Field Designation	Flow Type	Bankfull Width (ft)	Ordinary High Water Mark Width (ft)	Dominant Substrates	Jurisdiction	Additional Comments
S01	S01RK	Perennial	8	8	Bedrock, stones, sand	MDEP, Corps	Located east of the Albion Road Substation and flows northerly across the site. Not associated with a wetland on-site. Water striders observed.
S02	S02RK	Perennial	4	4	Sand, stone	MDEP, Corps	Located east of the Albion Road Substation and flows northerly through the western side of wetland W09. Water striders observed.
S03	S03RK	Intermittent	4	4	Stone, gravel	MDEP, Corps	Located east of the Albion Road Substation and flows northerly across a proposed access road into wetland W19.
S04	S04RK	Pond	50	40	Muck, sand	MDEP, Corps	Apparent man-made pond adjacent to the east side of Richards Road. Located in wetland W23 (01RKJ).
S05	S01CF	Perennial	12-24	8-16	Boulder, cobble, gravel, sand	MDEP, Corps	Located east of Richards Road and flows northeast across survey area within wetland W27. Fish and invertebrates were observed within the watercourse at the time of the survey.
S06	S02CF	Intermittent	4-8	3-6	Cobble, gravel, sand	MDEP, Corps	Located east of East Benton Road along proposed access road. Watercourse flows north across survey area from wetland W36 (01CFR) through wetland (01CFS). Invertebrates observed at time of survey.
S07	none	Perennial	50-60	50-60	Silt, boulder	MDEP, Corps	Fifteenmile Stream flows west to east across site through wetlands W42 and W43. Fish observed.
S08	S04RK S03CF	Perennial	5-12	8	Sand, stone, gravel, muck	MDEP, Corps	Begins as a culvert outlet on the north side of Bog Road, flowing southerly within wetland W43. Becomes diffuse in open water habitat along Fifteenmile Stream. Water striders observed.
S09	S03CF	Perennial	6-8	4-6	Muck, gravel, boulder	MDEP, Corps	Perennial stream segment flowing south from ponded area created by beaver activity within watercourse. Open water and emergent wetland W50 extends northeast off-site.
S10	S05RK	Perennial	8	5	Silt, stone	MDEP, Corps	Located southeast of Unity Road and crosses under the existing timber harvest road, and through a proposed access road area. Flows southerly from a large open water/emergent marsh wetland through wetland W57 and into a culvert inlet. The culvert outlet is watercourse S11 and wetland W56. Water striders observed.
S11	S06RK S07RK	Perennial	8-10	4-5	Silt, stone, muck	MDEP, Corps	Located southeast of the Unity Road and crosses under the existing timber harvest road, and through a proposed access road area. Flows southerly from a culvert outlet. The culvert inlet is watercourse S10 and the stream flows through wetland W56. Water striders and fish observed.

Table 3. Summary of Potential Vernal Pools

Figure Identifier	Potential Vernal Pool Field Designation	MDEP Significant Vernal Pool	Origin	Hydrology	Additional Comments
PVP01	PVP02CF	No	Non-natural	Ephemeral	Depression created by logging activities. Located north of Albion Road along proposed access road in wetland W12.
PVP02	PVP01CF	No	Non-natural	Ephemeral	Depression created by logging activities. Located north of Albion Road along proposed access road in wetland W14.
PSVP03	PSVP01RK	Potentially	Natural	Ephemeral	Natural depression located in forested and scrub shrub wetland W32. Considered potentially significant due to natural origin, and ponded water and frog species were observed during the survey.
PVP04	PVP03CF	No	Non-natural	Ephemeral	Impounded by field road. Located within wetland W37 along proposed access road off East Benton Road.
PSVP06	PSVP04RK	Potentially	Natural	Ephemeral	Natural, isolated wetland depression situated. Located south of Unity Road. Also mapped in wetland W51. Considered potentially significant due to natural origin.
PSVP07	PSVP02RK	Potentially	Natural	Ephemeral	Natural, isolated wetland depression situated in forested upland. Located adjacent to timber harvest road in a potential access area south of Unity Road. The pool basin is predominantly devoid of vegetation. Also mapped as wetland W54. Considered potentially significant due to natural origin.
PVP08	PVP03RK	No	Non-natural: borrow pit/excavation	Permanent	Old borrow pit excavation situated in forested upland. Located adjacent to timber harvest road in a potential access area south of Unity Road. Not considered potentially significant due to non-natural origin.
PSVP09	PSVP05RK	Potentially	Natural/Modified	Ephemeral	Isolated wetland depression located in wetland W61 that has been modified by logging activities.
PVP10	PVP05CF	No	Non-natural	Ephemeral	Impounded depression next to Unity Road.
PSVP11	PSVP01EB	Potentially	Natural	Ephemeral	Natural depression located in forested wetland W21. Considered potentially significant due to natural origin and ponded water. No inlet or outlet.

4.0 REGULATORY DISCUSSION

4.1 FEDERAL AND STATE WETLANDS AND WATERCOURSES

The Corps and MDEP regulate the wetlands and watercourses (e.g., streams) identified within the Project Site under the provisions of Section 404 of the CWA. The Corps (Federal Register 1982) and the U.S. Environmental Protection Agency (EPA; Federal Register 1980) jointly define wetlands as:

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

The diagnostic environmental characteristics that are used to identify a wetland are encompassed by a three-factor system: including predominance of hydrophytic vegetation, hydric soil and evidence of wetland hydrology. In Maine, both the Corps and the MDEP utilize this approach to define and identifying wetlands.

4.1.1 Federal Wetland and Watercourse Regulations

On April 21, 2020, the EPA and the Corps published the Navigable Waters Protection Rule to define "waters of the United States" (WoTUS) in the *Federal Register*, which took effect on June 22, 2020. This Rule excludes federal jurisdiction to regulate impact to isolated wetlands, wetlands that do not have a surficial connection to a navigable water (adjacent), or ephemeral watercourses. The Corps regulates dredging or filling of WoTUS, which include Traditional Navigable Waters (TNW) and their tributaries, wetlands abutting TNW and their tributaries, and other waters or wetlands where degradation or destruction could affect interstate or foreign commerce. The Corps issued a GP for the State of Maine that merges the federal and state permit review process for many applications. The delineated wetlands are assumed to be within the Corps jurisdiction however that status can be verified by submitting a formal Jurisdictional Determination to the Corps for individual wetlands.

Under the Corps GP, wetland alterations less than 15,000 square feet (sf) may be eligible for a Corps Category 1 Self Verification Notification Form (SVNF) submittal, provided the project meets the conditions of the GP for SVNF eligibility. If there are wetland impacts and tree clearing is required as part of the project, a Corps Category 2 Pre-Construction Notification (PCN) under the GP will likely be required due to potential impact to northern long-eared bat (*Myotis septentrionalis*)**,** a species listed under the federal Endangered Species Act. Alterations that affect between 15,000 and 43,560 sf (1 acre) of freshwater wetlands are typically eligible for a Corps PCN and require wetland compensation. Projects that do not meet the conditions of the Corps GP may require an Individual Corps Permit.

4.1.2 Maine Wetland and Watercourse Regulations

In Maine, wetlands and waterbodies, as well as other protected natural resources, are regulated by the MDEP under 38 M.R.S.A. §§ 480-A – 480-JJ, the NRPA. Regulated activities include impacts that are in, over, and in some cases adjacent to wetlands, watercourses, and waterbodies. Activities that do not

impact a wetland or that impact less than 4,300 sf of wetland are usually exempt from NRPA Tier permitting requirements. This exemption does not apply if the impact is:

1. In, on, or over a coastal wetland, great pond, river, stream, or brook;
2. Within 25 ft of those resources identified above, or is more than 25 ft and no erosion control is used;
3. In a shoreland zone or a wetland protected by the shoreland zone;
4. Part of a wetland with more than 20,000 sf of open water or emergent vegetation, except artificial impoundments;
5. In a peatland;
6. Part of a larger project; or
7. In Significant Wildlife Habitat.

Typically, projects with cumulative impacts to freshwater wetlands between 4,300 but less 15,000 sf are eligible for review under the NRPA Tier 1 process. Alterations that affect between 15,000 and 43,560 sf (1 acre) of freshwater wetlands are eligible for the NRPA Tier 2 review process, and Projects within this Tier that result in direct wetland impact typically require wetland compensation. Direct impacts do not include shading or indirect impacts. Cumulative freshwater wetland impacts that exceed 1 acre typically require a NRPA Tier 3 review. Impacts to WoSS, rivers, streams and brooks, great ponds, and Significant Wildlife Habitat typically require an Individual NRPA Permit.

4.2 FEDERAL AND STATE VERNAL POOLS

Maine NRPA Chapter 335, Significant Wildlife Habitat, regulates Significant Vernal Pools (SVPs) as Significant Wildlife Habitat. Chapter 335 details specific definitions and standards regarding characterization and protection of SVPs in Maine. Based on KA's data, there are two SVPs, SVP03 and SVP05, located within the Project Site. Four Potentially Significant Vernal Pools (PSVP03, PSVP06, PSVP07, and PSVP09) were identified by Stantec within the Project Site. All SVPs and PSVPs are preliminarily presumed to be SVPs and portions of the associated 250-foot Critical Terrestrial Habitat, as defined by the NRPA, are located within the Project Site. Final determination of significance status will require formal vernal pool season surveys for the PSVPs and submission of Maine State Vernal Pool Assessment forms to MDIFW (PSVPs and SVPs).

Certain development projects in Maine may also be regulated under Chapter 375, Site Location of Development (Site Law). Under Site Law, MDEP may regulate vernal pools that are ecologically significant on a landscape level but do not meet the definition of a SVP. Under some circumstances, MDEP will review and possibly limit development within or beyond 250 feet of these high-functioning vernal pools.

The Corps update to the Maine GP, which went into effect in October 2020, indicates that the Corps would only regulate impacts to vernal pools if the pool is (a) located within a jurisdictional wetland and (b) there is a discharge of dredged or fill material proposed for the vernal pool depression. Only in the case that both (a) and (b) are met would compensatory mitigation potentially be required.

Based on Stantec's vernal pool survey, the identified potential vernal pools meet the Corps' definition of a vernal pool. Pending seasonally appropriate vernal pool surveys, the Corps may regulate impacts to

these potential vernal pools if the vernal pool depression is impacted by dredge or fill activities and the wetland is determined to be a WoTUS.

4.3 LOCAL REGULATIONS

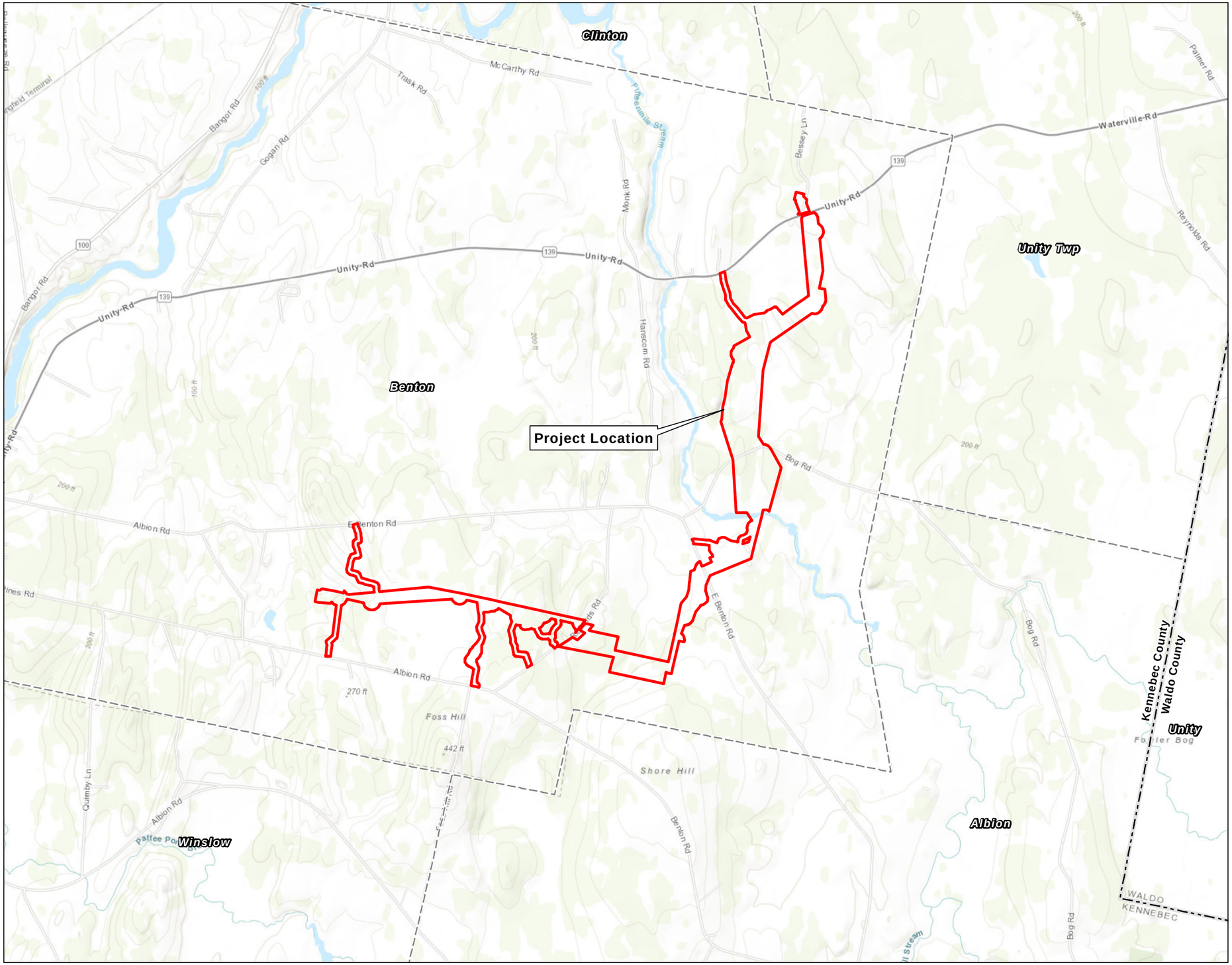
Stantec reviewed the list of ordinances on the municipal website on September 25, 2020 and determined the environmental protection related Town of Benton ordinances is limited to the "Shoreland Zoning Ordinance for the Town of Benton". Watercourses and some wetlands delineated on-site meet the definitions of a "freshwater wetland" and/or "stream" that have a shoreland zone, and therefore, meet the local permitting requirements specific to environmental resources located in mapped shoreland zones.

The Town of Benton Shoreland Zone Ordinance "*applies to all land areas within 250 feet, horizontal distance, of the normal high-water line of great ponds; within 250 feet, horizontal distance, of the normal high-water line of rivers; within 250 feet, horizontal distance, of the upland edge of a freshwater wetland; and within 75 feet, horizontal distance, of the normal high-water line of a stream. This Ordinance also applies to any structure built on, over or abutting a dock, wharf or pier, or other structure extending or located below the normal high-water line of a water body or within a wetland*."

Transmission lines may be allowable as an "Essential Service". Once a transmission layout is established, Stantec recommends further consultation with the Town Code Enforcement Officer to determine what restrictions would be placed on the proposed development within the Project Site.

APPENDICES

APPENDIX A FIGURES



Stantec

Legend

- Project Locaton
- Municipal Boundary
- County Boundary

N

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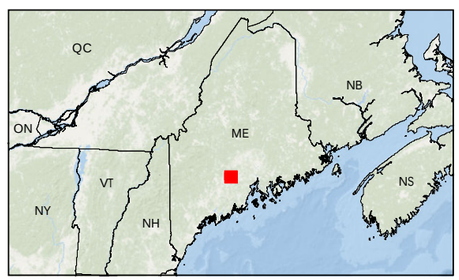
Notes

1. Coordinate System: NAD 1983 UTM Zone 19N
2. Data Sources: Base features obtained from MEGIS
3. Background: ESRI World Topographic Base Map



Project Location
Benton, Maine

Prepared by GC on 2021-11-30
Reviewed by EB on 2021-11-30

Client/Project
195601453
Three Corners Solar Project
Transmission Line Delineation
Benton, Maine

Figure No.
1

Title
USGS Location Map

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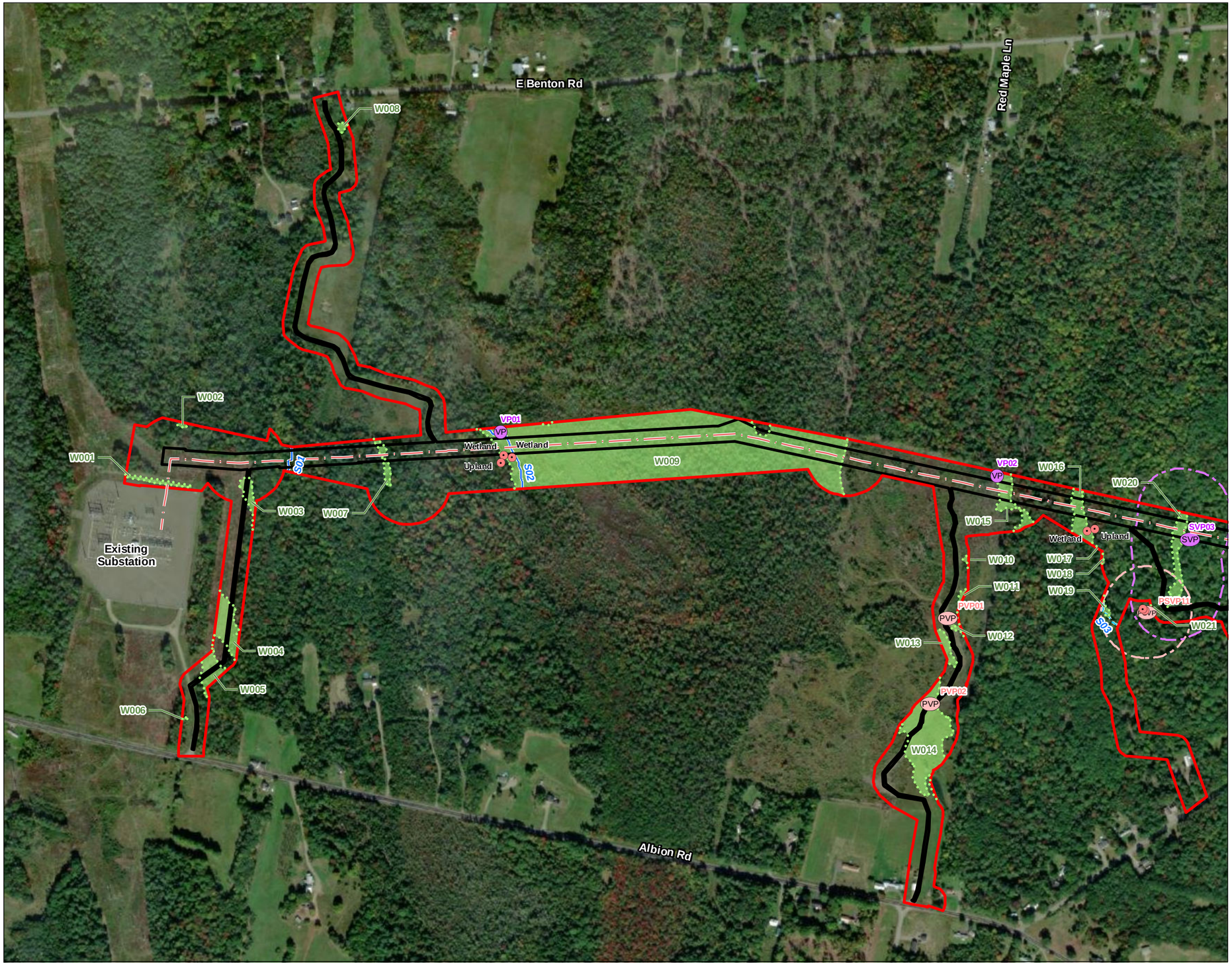

Stantec

Legend

- Army Corps Location Plot
- Potential Significant Vernal Pool
- Potential Vernal Pool
- Delineated Intermittent Stream
- Delineated Perennial Stream
- 250' Significant Vernal Pool Critical Terrestrial Habtat
- 250' Potential Significant Vernal Pool Critical Terrestrial Habtat
- Delineated Wetland
- Open Water Feature
- Delineation Limits
- Limit of Disturbance
- Overhead Transmission Line

N

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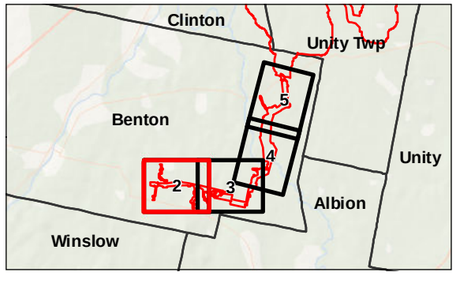
(At original document size of 11x17)
1:7,200

Notes

1. Wetland boundaries delineated in accordance with USACE Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Regional Supplement (Version 2.0).
2. Wetland boundaries and streams were located utilizing a Trimble GeoExplorer Series Receiver. Expected accuracy of GPS data is within 1 meter of actual position.
3. Coordinate System: NAD 1983 UTM Zone 19N FT
4. Data Sources: Base features obtained from MEGIS.
5. Vernal pool data collected by Kleinschmidt and Associates, 2019 and 2020.
6. Background: Aerial imagery provided by ArcGIS Online World Imagery Mapping Services.



Project Location
Benton, Maine

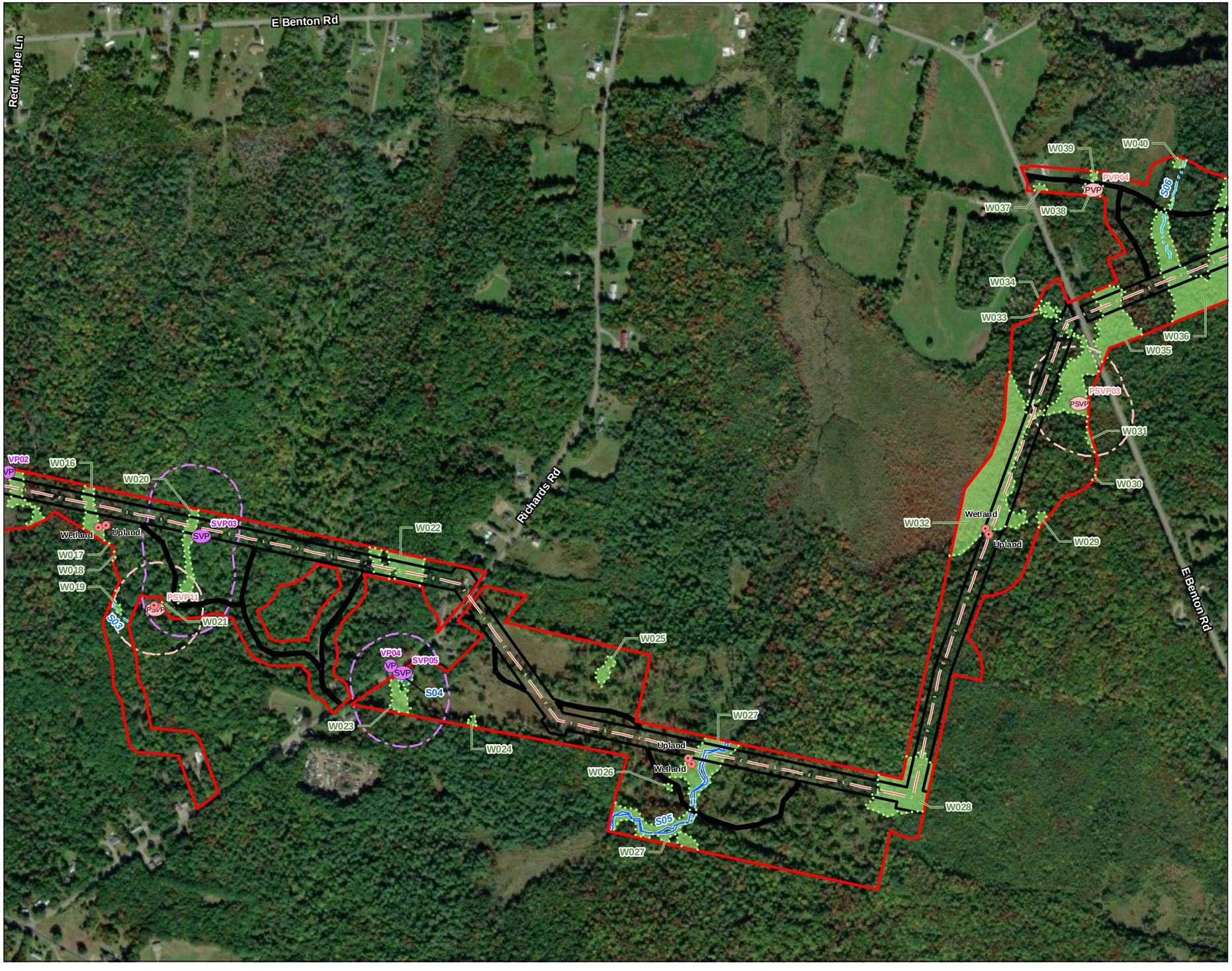
Prepared by GC on 2021-12-16
Reviewed by EB on 2021-12-16

Client/Project
Three Corners Solar Project
Transmission Line Delineation
Benton, Maine

195601453

Figure No.
2 of 5

Title
Wetland and Watercourse Delineation and Vernal Pool Survey Results



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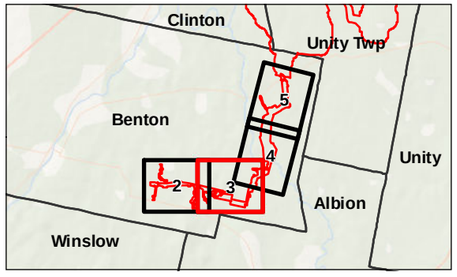


Project Location
Benton, Maine

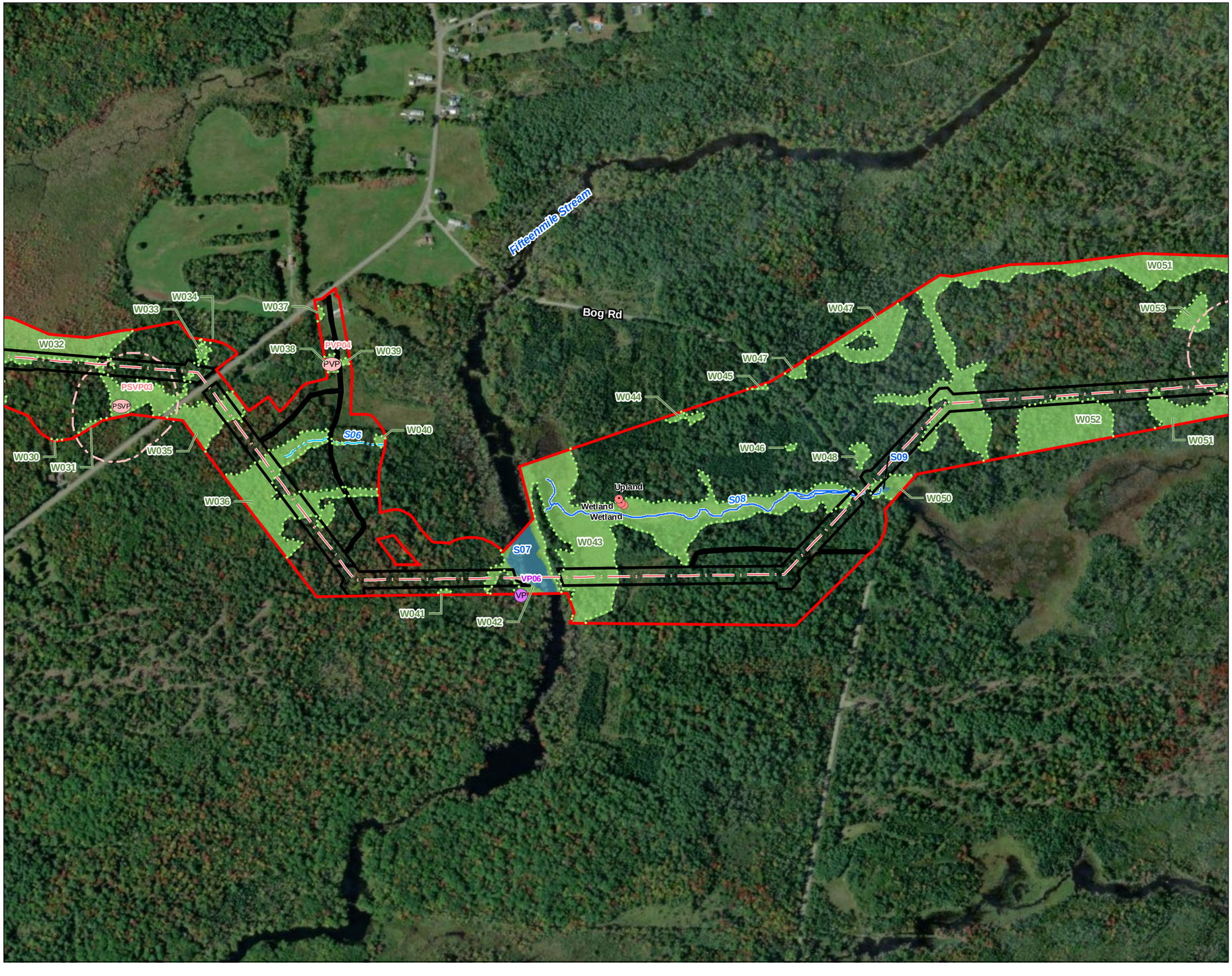
Prepared by GC on 2021-12-16
Reviewed by EB on 2021-12-16

Client/Project
Three Corners Solar Project
Transmission Line Delineation
Benton, Maine

195601453

Figure No.
3 of 5

Title
Wetland and Watercourse Delineation and Vernal Pool Survey Results



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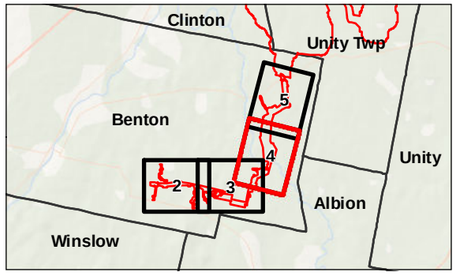

Project Location
Benton, Maine

Prepared by GC on 2021-12-16
Reviewed by EB on 2021-12-16

Client/Project
Three Corners Solar Project
Transmission Line Delineation
Benton, Maine

195601453

Figure No.
4 of 5

Title
Wetland and Watercourse Delineation and Vernal Pool Survey Results

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Stantec

Legend

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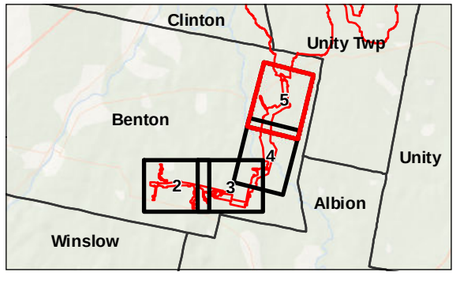

Project Location
Benton, Maine

Prepared by GC on 2021-12-16
Reviewed by EB on 2021-12-16

Client/Project
Three Corners Solar Project
Transmission Line Delineation
Benton, Maine

195601453

Figure No.
5 of 5

Title
Wetland and Watercourse Delineation and Vernal Pool Survey Results

APPENDIX B REPRESENTATIVE PHOTOGRAPHS

Appendix B Representative Photographs

Photo 1: Wetland W07, forested (PFO). Stantec. July 27, 2020.

Photo 2: Wetland W14, scrub-shrub (PSS). Stantec. July 27, 2020.

Photo 3: Wetland W27, forested (PFO) portion. Stantec. July 28, 2020.

Photo 4: Wetland W27, scrub-shrub (PSS) portion. Stantec. July 28, 2020.

Photo 5: Wetland W28, forested (PFO). Stantec. July 28, 2020.

Photo 6: Wetland W36, forested (PFO). Stantec. July 29, 2020.

Photo 7: Wetland W42, forested (PFO) portion. Stantec. July 29, 2020.

Photo 8: Wetland W42, emergent (PEM) portion along south side of Fifteenmile Stream. Stantec. July 29, 2020.

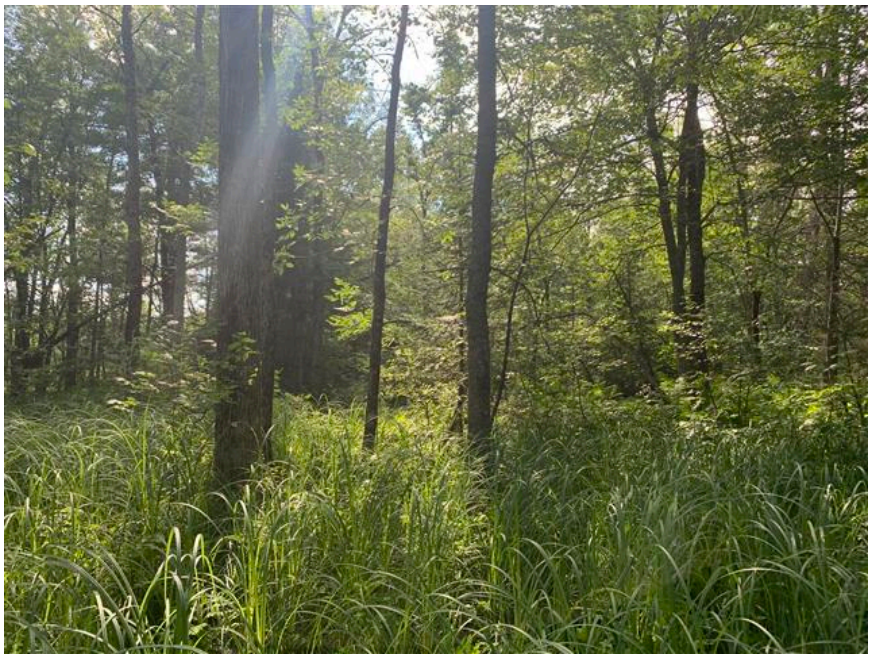

Photo 9: Wetland W43, forested portion, north side of Fifteenmile Stream. Stantec. July 29, 2020.

Photo 10: Wetland W43, scrub-shrub (PSS) and emergent (PEM) portion, north side Fifteenmile Stream. Stantec. July 29, 2020.

Photo 11: Wetland W58/W59, forested (PFO) portion.
Stantec. July 31, 2020.

Photo 12: Wetland W58/W59, emergent (PEM) portion containing an active heron rookery. Stantec. July 31, 2020.

Photo 13: Perennial stream S05. View upstream within forested (PFO) portion of Wetland W22. Stantec. July 28, 2020.

Photo 14: Perennial stream S05. View downstream within scrub-shrub (PSS) portion of Wetland 22. Stantec. July 28, 2020.

Photo 15: Intermittent stream S06. View upstream of channel. Stantec. July 29, 2020.

Photo 16: Perennial stream S08. View downstream from Bog Road. Stantec. July 29, 2020.

Photo 17: Fifteenmile Stream (S07). Looking south across stream channel. Stantec. July 29, 2020.

Photo 18: Fifteeenmile Stream (S07). View east from north side. Stantec. July 29, 2020.

Photo 19: Potential Vernal Pool PVP03, within Wetland W29. Stantec. July 29, 2020.

Photo 20: Looking south along perennial watercourse S02. Stantec. July 27, 2020.

Photo 21: Looking north within the forested (PFO) wetland W20. Stantec. July 28, 2020.

Photo 22: Looking south within the emergent (PEM) and scrub shrub (PSS) wetland W54 and potential significant vernal pool PSVP07. Stantec. July 30, 2020.

Photo 23: Looking south within wetland W51 with recent timber harvest. Stantec. July 30, 2020.

Photo 24: Looking north within the scrub shrub (PSS) portion of wetland W56. Stantec. July 31, 2020.

Photo 25: Looking north within the forested (PFO) portion of wetland W58. Stantec. July 31, 2020.

APPENDIX C REPRESENTATIVE CORPS PAIRED DATA PLOT FORMS

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/27/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Upland-W09

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Footslope Local relief (concave, convex, none): Concave Slope (%) 3 - 8

Subregion (LRR or MLRA): LRR R Lat: 44.575404 Long: -69.500771 Datum: NAD83

Soil Map Unit Name: NWI Classification: UPL

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Surface Water Present? Yes No X Depth (inches)	Wetland Hydrology Present? Yes No X
Water Table Present? Yes No X Depth (inches)	
Saturation Present? Yes No X Depth (inches)	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Upland-W09**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	50	X	FAC
Acer rubrum	30	X	FAC
Thuja occidentalis	10		FACW
Betula alleghaniensis	10		FAC
	100	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	25	X	FAC
Betula alleghaniensis	2		FAC
	27	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Maianthemum canadense	5	X	FACU
Aralia nudicaulis	3	X	FACU
Dendrolycopodium obscurum	2	X	FACU
	10	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

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

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	10	x 2	20	
FAC species	117	x 3	351	
FACU species	10	x 4	40	
UPL species	0	x 5	0	
Column Totals	137	(A)	411	(B)
Prevalence Index = B/A =			3	

Hydrophytic Vegetation Indicators:

- 1- Rapid Test For Hydrophytic Vegetation
- 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

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

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

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **Upland-W09**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-2	7.5YR 2.5/2	100					Peat	
2-3	7.5YR 5/2	100					Sandy Loam	Stony
3-12	7.5YR 3/4	100					Sandy Loam	Stony
12-16	10YR 4/6	100					Sandy Loam	Stony
16-18	2.5Y 4/4	100					Sandy Loam	Stony
18-20	2.5Y 4/4	98	10YR 4/6	2	C	M	Sandy Loam	Stony

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/27/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Wetland-W09

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Floodplain Local relief (concave, convex, none): Linear Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR R Lat: 44.575502 Long: -69.500534 Datum: NAD83

Soil Map Unit Name: NWI Classification: PEM

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	if yes, optional Wetland Site ID: W10
Wetland Hydrology Present?	Yes X	No	

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Surface Water Present?	Yes	No X	Depth (inches)
Water Table Present?	Yes	No X	Depth (inches)
Saturation Present?	Yes X	No	Depth (inches) 0

Wetland Hydrology Present? Yes X No

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-W09**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	10	X	FAC
Fraxinus nigra	2		FACW
	12	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Ilex verticillata	5	X	FACW
	5	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Spiraea latifolia	25	X	FACW
Solidago gigantea	25	X	FACW
Carex trisperma	20	X	OBL
Spiraea tomentosa	20	X	FACW
Glyceria striata	15		OBL
Thelypteris palustris	10		FACW
Carex lurida	3		OBL
Scirpus cyperinus	3		OBL
Typha latifolia	2		OBL
	123	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	43	x 1	43	
FACW species	87	x 2	174	
FAC species	10	x 3	30	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	140	(A)	247	(B)

Prevalence Index = B/A = 1.76

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [X] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

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

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

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **Wetland-W09**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-5	10YR 2.5/1	100					Muck	Very Stony
5-14	2.5Y 4/2	95	10YR 4/6	5	C	M	Sandy Loam	Very Stony

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Stony

Depth (inches): 14

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/27/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Wetland-W09

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Footslope Local relief (concave, convex, none): Linear Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR R Lat: 44.575534 Long: -69.500712 Datum: NAD83

Soil Map Unit Name: NWI Classification: PFO

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	if yes, optional Wetland Site ID: W10
Wetland Hydrology Present?	Yes X	No	

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Surface Water Present? Yes No X Depth (inches)

Water Table Present? Yes No X Depth (inches)

Saturation Present? Yes X No Depth (inches) 0

Wetland Hydrology Present? Yes X No

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-W09**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	50	X	FAC
Fraxinus nigra	15	X	FACW
Acer rubrum	5		FAC
Betula alleghaniensis	5		FAC
	75	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	15	X	FAC
Cornus alternifolia	5	X	FACU
	20	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Solidago rugosa	20	X	FAC
Rubus hispidus	15	X	FACW
Coptis trifolia	15	X	FACW
Osmunda spectabilis	10		OBL
Spiraea latifolia	2		FACW
	62	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7% (A/B)

Prevalence Index Worksheet:

OBL species	10	x 1	10	
FACW species	47	x 2	94	
FAC species	95	x 3	285	
FACU species	5	x 4	20	
UPL species	0	x 5	0	
Column Totals	157	(A)	409	(B)

Prevalence Index = B/A = 2.61

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [X] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

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

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

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **Wetland-W09**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-5	10YR 2.5/1	100					Muck	Very Stony
5-14	2.5Y 4/2	95	10YR 4/6	5	C	M	Sandy Loam	Very Stony

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Rock/Till

Depth (inches): 14

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/28/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Upland-W16

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Side Slope Local relief (concave, convex, none): Convex Slope (%) 8 - 15

Subregion (LRR or MLRA): LRR R Lat: 44.574370 Long: -69.487125 Datum: NAD83

Soil Map Unit Name: NWI Classification: UPL

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Surface Water Present?	Yes	No X	Depth (inches)	
Water Table Present?	Yes	No X	Depth (inches)	Wetland Hydrology Present? Yes No X
Saturation Present?	Yes	No X	Depth (inches)	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Upland-W16**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	45	X	FAC
Acer rubrum	25	X	FAC
Fagus grandifolia	20	X	FACU
Populus tremuloides	10		FACU
	100	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	25	X	FAC
Fagus grandifolia	10	X	FACU
	35	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Maianthemum canadense	4	X	FACU
Aralia nudicaulis	3	X	FACU
Maianthemum racemosum	3	X	FACU
	10	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

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

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 37.5% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	95	x 3	285	
FACU species	50	x 4	200	
UPL species	0	x 5	0	
Column Totals	145	(A)	485	(B)

Prevalence Index = B/A = 3.34

Hydrophytic Vegetation Indicators:

_____ 1- Rapid Test For Hydrophytic Vegetation

_____ 2- Dominance Test is > 50%

_____ 3- Prevalence Index is =< 3.0

_____ 4- Morphological Adaptations

_____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

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

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

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

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

SOIL Sampling Point: **Upland-W16**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-2	7.5YR 2.5/2	100					Peat	
2-3	7.5YR 3/4	100					Fine Sandy Loam	
3-14	7.5YR 4/4	100					Fine Sandy Loam	
14-24	10YR 4/6	100					Sandy Loam	
24-30	10YR 4/6	100					Loamy Sand	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/28/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Wetland-W16

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Convex Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR R Lat: 44.574336 Long: -69.487306 Datum: NAD83

Soil Map Unit Name: NWI Classification: PFO

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	if yes, optional Wetland Site ID: W15
Wetland Hydrology Present?	Yes X	No	

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Surface Water Present? Yes No X Depth (inches)

Water Table Present? Yes X No Depth (inches) 0

Saturation Present? Yes X No Depth (inches) 0

Wetland Hydrology Present? Yes X No

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-W16**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Betula alleghaniensis	30	X	FAC
Abies balsamea	25	X	FAC
Fraxinus nigra	15		FACW
Acer rubrum	15		FAC
Thuja occidentalis	10		FACW
	95	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	25	X	FAC
Thuja occidentalis	5		FACW
Betula alleghaniensis	3		FAC
Fraxinus nigra	2		FACW
	35	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Carex trisperma	50	X	OBL
Rubus pubescens	15		FACW
Osmundastrum cinnamomeum	13		FACW
Thelypteris palustris	7		FACW
Onoclea sensibilis	5		FACW
Carex lurida	3		OBL
Equisetum sylvaticum	2		FACW
	95	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	53	x 1	53	
FACW species	74	x 2	148	
FAC species	98	x 3	294	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	225	(A)	495	(B)

Prevalence Index = B/A = 2.2

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

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

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

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL Sampling Point: **Wetland-W16**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-8	7.5YR 2.5/1	100					Muck	
8-11	2.5Y 5/1	100					Loamy Sand	
11-24	5Y 5/1	100					Loamy Sand	
24-30	5Y 5/1	100					Sand	

Hydric Soil Indicators:

- ___ Histosol (A1)
- X Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/28/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Upland-W27

Investigator(s): Charles Ferris Section, Township, Range:

Landform (hillslope, terrace,etc.): Side Slope Local relief (concave, convex, none): Convex Slope (%) 0 - 2

Subregion (LRR or MLRA): LRR R Lat: 44.570590 Long: -69.473700 Datum: NAD83

Soil Map Unit Name: NWI Classification: UPL

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Surface Water Present?	Yes	No X	Depth (inches)	
Water Table Present?	Yes	No X	Depth (inches)	Wetland Hydrology Present? Yes No X
Saturation Present?	Yes	No X	Depth (inches)	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Upland-W27**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	45	X	FAC
Abies balsamea	15	X	FAC
	60	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	30	X	FAC
Acer rubrum	15	X	FAC
	45	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Dennstaedtia punctilobula	40	X	UPL
	40	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	105	x 3	315	
FACU species	0	x 4	0	
UPL species	40	x 5	200	
Column Totals	145	(A)	515	(B)
Prevalence Index = B/A =			3.55	

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [ ] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

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

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

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **Upland-W27**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-10	10YR 5/4	100					Fine Sandy Loam	
10-20	10YR 5/3	100					Fine Sandy Loam	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/28/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Wetland-W27

Investigator(s): Charles Ferris Section, Township, Range:

Landform (hillslope, terrace,etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%) 1 - 1

Subregion (LRR or MLRA): LRR R Lat: 44.570500 Long: -69.473600 Datum: NAD83

Soil Map Unit Name: NWI Classification: PSS

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present? Yes X No	if yes, optional Wetland Site ID: W22
Wetland Hydrology Present? Yes X No	

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Surface Water Present? Yes No X Depth (inches)	Wetland Hydrology Present? Yes X No
Water Table Present? Yes No X Depth (inches)	
Saturation Present? Yes X No Depth (inches) 0	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-W27**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	15	X	FAC
Abies balsamea	10	X	FAC
	25	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alnus incana	40	X	FACW
	40	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Carex lacustris	90	X	OBL
Lycopus americanus	3		OBL
	93	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	93	x 1	93	
FACW species	40	x 2	80	
FAC species	25	x 3	75	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	158	(A)	248	(B)

Prevalence Index = B/A = 1.57

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [X] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

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

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

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **Wetland-W27**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-4	10YR 2/1	100					Loam	
4-12	10YR 5/2	95	7.5YR 5/6	5	RM	PL	Fine Sandy Loam	
12-20	10Y 5/10Y	90	7.5YR 5/6	10	C	M	Sandy Loam	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/29/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Upland-W32

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Side Slope Local relief (concave, convex, none): Linear Slope (%) 3 - 8

Subregion (LRR or MLRA): LRR R Lat: 45.574321 Long: -69.466865 Datum: NAD83

Soil Map Unit Name: NWI Classification: UPL

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Surface Water Present?	Yes	No X	Depth (inches)	
Water Table Present?	Yes	No X	Depth (inches)	Wetland Hydrology Present? Yes No X
Saturation Present?	Yes	No X	Depth (inches)	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Upland-W32**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Tsuga canadensis	30	X	FACU
Thuja occidentalis	25	X	FACW
Betula alleghaniensis	20	X	FAC
Abies balsamea	10		FAC
Acer rubrum	10		FAC
	95	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	40	X	FAC
Betula alleghaniensis	5		FAC
	45	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Coptis trifolia	30	X	FACW
Maianthemum canadense	25	X	FACU
Trientalis borealis	15	X	FAC
Aralia nudicaulis	5		FACU
	75	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	55	x 2	110	
FAC species	100	x 3	300	
FACU species	60	x 4	240	
UPL species	0	x 5	0	
Column Totals	215	(A)	650	(B)

Prevalence Index = B/A = 3.02

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [ ] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

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

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

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **Upland-W32**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-1	7.5YR 2.5/2	100					Peat	
1-2	10YR 5/2	100					Sandy Loam	Very Stony
2-8	10YR 4/4	100					Sandy Loam	Very Stony
8-12	2.5Y 4/4	95	2.5Y 5/2	5	D	M	Sandy Loam	Very Stony

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/29/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Wetland-W32

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Footslope Local relief (concave, convex, none): Linear Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR R Lat: 44.574401 Long: -69.466934 Datum: NAD83

Soil Map Unit Name: NWI Classification: PFO

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	if yes, optional Wetland Site ID: W24
Wetland Hydrology Present?	Yes X	No	

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Surface Water Present?	Yes	No X	Depth (inches)	
Water Table Present?	Yes X	No	Depth (inches)	0
Saturation Present?	Yes X	No	Depth (inches)	0

Wetland Hydrology Present? Yes X No

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-W32**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Thuja occidentalis	45	X	FACW
Fraxinus nigra	25	X	FACW
Betula alleghaniensis	20	X	FAC
	90	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alnus incana	15	X	FACW
	15	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Onoclea sensibilis	35	X	FACW
Osmunda claytoniana	25	X	FAC
Equisetum sylvaticum	15		FACW
Carex trisperma	10		OBL
Lycopus uniflorus	10		OBL
Glyceria striata	3		OBL
Lysimachia terrestris	2		OBL
	100	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	25	x 1	25	
FACW species	135	x 2	270	
FAC species	45	x 3	135	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	205	(A)	430	(B)

Prevalence Index = B/A = 2.1

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [X] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

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

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

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **Wetland-W32**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-8	7.5YR 2.5/1	100					Muck	
8-12	5G 5/1	100					Silt Loam	
12-16	5GY 5/1	100					Loamy Fine Sand	
16-20	5GY 5/1	100					Silty Clay Loam	

Hydric Soil Indicators:

- ___ Histosol (A1)
- X Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/29/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Upland-W43

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Side Slope Local relief (concave, convex, none): Linear Slope (%) 3 - 8

Subregion (LRR or MLRA): LRR R Lat: 44.583980 Long: -69.459841 Datum: NAD83

Soil Map Unit Name: NWI Classification: UPL

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Surface Water Present? Yes No X Depth (inches)	Wetland Hydrology Present? Yes No X
Water Table Present? Yes No X Depth (inches)	
Saturation Present? Yes No X Depth (inches)	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Upland-W43**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	50	X	FAC
Pinus strobus	35	X	FACU
Prunus serotina	5		FACU
Acer rubrum	5		FAC
	95	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	5	X	FAC
	5	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Veronica officinalis	8	X	FACU
Maianthemum canadense	5	X	FACU
Acer rubrum	2		FAC
	15	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	62	x 3	186	
FACU species	53	x 4	212	
UPL species	0	x 5	0	
Column Totals	115	(A)	398	(B)

Prevalence Index = B/A = 3.46

Hydrophytic Vegetation Indicators:

_____ 1- Rapid Test For Hydrophytic Vegetation

_____ 2- Dominance Test is > 50%

_____ 3- Prevalence Index is =< 3.0

_____ 4- Morphological Adaptations

_____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

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

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

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

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

SOIL Sampling Point: **Upland-W43**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-1	10YR 2.5/1	100					Peat	
1-8	2.5Y 5/3	100					Silt Loam	
8-14	5Y 6/2	95	2.5Y 4/6	5	C	M	Silt Loam	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Bedrock

Depth (inches): 14

Hydric Soil Present? Yes ___ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/29/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Wetland-W43

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Floodplain Local relief (concave, convex, none): Linear Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR R Lat: 44.584041 Long: -69.459674 Datum: NAD83

Soil Map Unit Name: NWI Classification: PEM

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	if yes, optional Wetland Site ID: W35
Wetland Hydrology Present?	Yes X	No	

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes X	No	Depth (inches) 2
Water Table Present?	Yes X	No	Depth (inches) 0
Saturation Present?	Yes X	No	Depth (inches) 0

Wetland Hydrology Present? Yes X No

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-W43**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Betula populifolia	10	X	FAC
Abies balsamea	10	X	FAC
	20	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alnus incana	10	X	FACW
	10	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Equisetum laevigatum	40	X	FACW
Carex vesicaria	40	X	OBL
Dulichium arundinaceum	30	X	OBL
Pontederia cordata	15		OBL
Typha latifolia	10		OBL
Carex lurida	10		OBL
	145	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	105	x 1	105	
FACW species	50	x 2	100	
FAC species	20	x 3	60	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	175	(A)	265	(B)

Prevalence Index = B/A = 1.51

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [X] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

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

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

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **Wetland-W43**

Depth (inches)	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-14	7.5YR 2.5/1	100					Muck	
14-20	10Y 5/1	100					Silty Clay Loam	

Hydric Soil Indicators:

- ___ Histosol (A1)
- X Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/29/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Wetland-W43

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Floodplain Local relief (concave, convex, none): Linear Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR R Lat: 44.584003 Long: -69.460418 Datum: NAD83

Soil Map Unit Name: NWI Classification: PSS

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	if yes, optional Wetland Site ID: W35
Wetland Hydrology Present?	Yes X	No	

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Surface Water Present?	Yes	No X	Depth (inches)
Water Table Present?	Yes X	No	Depth (inches) 0
Saturation Present?	Yes X	No	Depth (inches) 0

Wetland Hydrology Present? Yes X No

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-W43**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	20	X	FAC
Betula populifolia	10	X	FAC
	30	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alnus incana	45	X	FACW
	45	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Carex vesicaria	75	X	OBL
Urtica dioica	20	X	FAC
Spiraea latifolia	3		FACW
Glyceria canadensis	2		OBL
	100	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	77	x 1	77	
FACW species	48	x 2	96	
FAC species	50	x 3	150	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	175	(A)	323	(B)

Prevalence Index = B/A = 1.85

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [X] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

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

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

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **Wetland-W43**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-3	7.5YR 2.5/1	100					Muck	
3-10	10Y 5/1	100					Silty Clay Loam	
10-15	10Y 5/1	90	10YR 4/6	10	C	M	Silty Clay Loam	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- X Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/31/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Upland-W56

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Side Slope Local relief (concave, convex, none): Convex Slope (%) 8 - 15

Subregion (LRR or MLRA): LRR R Lat: 44.596821 Long: -69.456920 Datum: NAD83

Soil Map Unit Name: NWI Classification: UPL

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Surface Water Present?	Yes	No X	Depth (inches)	
Water Table Present?	Yes	No X	Depth (inches)	Wetland Hydrology Present? Yes No X
Saturation Present?	Yes	No X	Depth (inches)	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Upland-W56**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	50	X	FAC
Abies balsamea	40	X	FAC
Populus tremuloides	5		FACU
Betula populifolia	5		FAC
	100	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	15	X	FAC
	15	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Maianthemum canadense	15	X	FACU
Trientalis borealis	15	X	FAC
Parathelypteris noveboracensis	10	X	FAC
Gymnocarpium dryopteris	5		FACU
	45	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	135	x 3	405	
FACU species	25	x 4	100	
UPL species	0	x 5	0	
Column Totals	160	(A)	505	(B)
Prevalence Index = B/A =			3.16	

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [ ] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

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

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

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **Upland-W56**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-1	7.5YR 2.5/1	100					Peaty Muck	
1-4	7.5YR 5/2	100					Sandy Loam	Very Stony
4-10	10YR 4/3	100					Sandy Loam	Very Stony
10-12	2.5Y 5/3	98	10YR 4/4	2	C	M	Sandy Loam	Very Stony

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/31/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Wetland-W56

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Floodplain Local relief (concave, convex, none): Linear Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR R Lat: 44.596620 Long: -69.457286 Datum: NAD83

Soil Map Unit Name: NWI Classification: PEM

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	if yes, optional Wetland Site ID: W50
Wetland Hydrology Present?	Yes X	No	

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Surface Water Present?	Yes	No X	Depth (inches)
Water Table Present?	Yes X	No	Depth (inches) 0
Saturation Present?	Yes X	No	Depth (inches) 0

Wetland Hydrology Present? Yes X No

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-W56**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alnus incana	15	X	FACW
	15	= Total Cover	

Prevalence Index Worksheet:

OBL species	90	x 1	90	
FACW species	15	x 2	30	
FAC species	10	x 3	30	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	115	(A)	150	(B)

Prevalence Index = B/A = 1.3

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Calamagrostis canadensis	90	X	OBL
Urtica dioica	10		FAC
	100	= Total Cover	

Hydrophytic Vegetation Indicators:

- X 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- 4- Morphological Adaptations
- 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

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

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

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

Woody Vines- All woody vines greater than 3.28ft in height.

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **Wetland-W56**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-3	10YR 2.5/1	100					Muck	
3-9	5Y 5/1	90	10YR 4/4	10	C	M	Silt Loam	
9-15	5GY 5/1	80	7.5YR 4/6	20	C	M	Silty Clay Loam	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- X Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/31/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Wetland-W56

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Footslope Local relief (concave, convex, none): Linear Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR R Lat: 44.596799 Long: -69.457070 Datum: NAD83

Soil Map Unit Name: NWI Classification: PFO

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present? Yes X No	if yes, optional Wetland Site ID: W50
Wetland Hydrology Present? Yes X No	

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Surface Water Present? Yes No X Depth (inches)

Water Table Present? Yes No X Depth (inches)

Saturation Present? Yes X No Depth (inches) 0

Wetland Hydrology Present? Yes X No

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-W56**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Abies balsamea	50	X	FAC
Acer rubrum	30	X	FAC
Betula populifolia	17		FAC
Picea mariana	3		FACW
	100	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	15	X	FAC
Abies balsamea	10	X	FAC
	25	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Maianthemum canadense	25	X	FACU
Cinna latifolia	20	X	FACW
Equisetum sylvaticum	17	X	FACW
Parathelypteris noveboracensis	5		FAC
Trientalis borealis	3		FAC
	70	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	40	x 2	80	
FAC species	130	x 3	390	
FACU species	25	x 4	100	
UPL species	0	x 5	0	
Column Totals	195	(A)	570	(B)

Prevalence Index = B/A = 2.92

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [X] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

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

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

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **Wetland-W56**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-3	7.5YR 2.5/1	100					Loam	Stony
3-9	10YR 5/1	100					Silt Loam	
9-12	5Y 5/1	100					Silty Clay Loam	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/31/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Wetland-W56

Investigator(s): Rodney Kelshaw Section, Township, Range:

Landform (hillslope, terrace,etc.): Floodplain Local relief (concave, convex, none): Linear Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR R Lat: 44.596711 Long: -69.456948 Datum: NAD83

Soil Map Unit Name: NWI Classification: PSS

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	if yes, optional Wetland Site ID: W50
Wetland Hydrology Present?	Yes X	No	

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

Surface Water Present?	Yes	No X Depth (inches)
Water Table Present?	Yes X	No Depth (inches) 0
Saturation Present?	Yes X	No Depth (inches) 0

Wetland Hydrology Present? Yes X No

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-W56**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Picea mariana	5	X	FACW
Abies balsamea	5	X	FAC
Acer rubrum	5	X	FAC
	15	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Alnus incana	60	X	FACW
	60	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Calamagrostis canadensis	80	X	OBL
Urtica dioica	7		FAC
Lysimachia terrestris	3		OBL
	90	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	83	x 1	83	
FACW species	65	x 2	130	
FAC species	17	x 3	51	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	165	(A)	264	(B)

Prevalence Index = B/A = 1.6

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [X] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

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

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

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **Wetland-W56**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-3	10YR 2/1	100					Muck	
3-6	10YR 2/1	100					Silt Loam	
6-16	5G 5/1	100					Silty Clay Loam	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- X Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/31/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Upland-W59

Investigator(s): Charles Ferris Section, Township, Range:

Landform (hillslope, terrace,etc.): Side Slope Local relief (concave, convex, none): Convex Slope (%) 0 - 3

Subregion (LRR or MLRA): LRR R Lat: 44.604514 Long: -69.452082 Datum: NAD83

Soil Map Unit Name: NWI Classification: UPL

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Surface Water Present?	Yes	No X	Depth (inches)	
Water Table Present?	Yes	No X	Depth (inches)	Wetland Hydrology Present? Yes No X
Saturation Present?	Yes	No X	Depth (inches)	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Upland-W59**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	10	X	FAC
Fraxinus pennsylvanica	5	X	FACW
	15	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Ostrya virginiana	35	X	FACU
Fraxinus pennsylvanica	25	X	FACW
Lonicera morrowii	15		FACU
Abies balsamea	5		FAC
	80	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	2	X	FACW
Solidago rugosa	2	X	FAC
Polystichum acrostichoides	2	X	FACU
	6	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	32	x 2	64	
FAC species	17	x 3	51	
FACU species	52	x 4	208	
UPL species	0	x 5	0	
Column Totals	101	(A)	323	(B)

Prevalence Index = B/A = 3.2

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [ ] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

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

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

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **Upland-W59**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-1	10YR 2/2	100					Loam	
1-12	10YR 5/3	100					Fine Sandy Loam	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Rock/Till

Depth (inches): 12

Hydric Soil Present? Yes ___ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/31/2020

Applicant/Owner: Three Corners Solar, LLC State: ME Sampling Point: Wetland-W59

Investigator(s): Charles Ferris Section, Township, Range:

Landform (hillslope, terrace,etc.): Side Slope Local relief (concave, convex, none): Concave Slope (%) 1 - 3

Subregion (LRR or MLRA): LRR R Lat: 44.604336 Long: -69.451880 Datum: NAD83

Soil Map Unit Name: NWI Classification: PFO

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	if yes, optional Wetland Site ID: W55
Wetland Hydrology Present?	Yes X	No	

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Surface Water Present?	Yes	No X	Depth (inches)
Water Table Present?	Yes	No X	Depth (inches)
Saturation Present?	Yes X	No	Depth (inches) 0

Wetland Hydrology Present? Yes X No

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-W59**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	20	X	FAC
Abies balsamea	15	X	FAC
Populus tremuloides	10	X	FACU
	45	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	15	X	FAC
Abies balsamea	10	X	FAC
Ostrya virginiana	10	X	FACU
	35	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Onoclea sensibilis	60	X	FACW
Carex crinita	15		OBL
Glyceria striata	15		OBL
	90	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

Prevalence Index Worksheet:

OBL species	30	x 1	30	
FACW species	60	x 2	120	
FAC species	60	x 3	180	
FACU species	20	x 4	80	
UPL species	0	x 5	0	
Column Totals	170	(A)	410	(B)

Prevalence Index = B/A = 2.41

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [X] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

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

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

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

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

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

SOIL Sampling Point: **Wetland-W59**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-12	10YR 2/2	100					Silt Loam	
12-20	10YR 5/2	95	7.5YR 5/6	5	C	M	Sandy Loam	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

Attachment 9-3

Vernal Pool Data Submission to MDIFW

BIODIVERSITY RESEARCH INSTITUTE
innovative wildlife science

January 13, 2022

Maine Department of Inland Fisheries and Wildlife
41 State House Station Lane
Augusta, ME 04333-0041

RE: Three Corners Solar Project Vernal Pool Review

Dear Becca,

Kleinschmidt Associates surveyed the Three Corners Project site (see Attachment A) for vernal pools during appropriate seasonal conditions in the spring of 2019 and 2020. During fieldwork a total of 80 features were identified (Attachment B). Based on field collected data, 39 of these features were determined to be of Unnatural origin (i.e., skidder ruts within wetlands). For these features, which are clearly un-natural ruts, data forms were not completed. However, egg mass counts are included in the summary table (Attachment B) and photographs of these features are provided in the download link. Forty-one (41) of the pools were identified as Natural or Natural Modified in origin and data forms were completed for all of these pools. Eighteen (18) of these Natural or Natural Modified pools were determined to be potentially significant, based on state criteria.

As a result of the survey completed in 2020, 12 of the potentially significant pools dried out prior to July 15, 2020. Dry-out dates are descried in Chapter 335 as a means of determining potential significance. Chapter 335 states that "*When a vernal pool habitat has not previously been determined to be significant, and the department or the Maine Department of Inland Fisheries & Wildlife (IF&W) makes a determination concerning whether the vernal pool habitat is significant, either department may determine that the vernal pool habitat is not significant if (b) The vernal pool is located in southern Maine and dries out after filling and before July 15th.*" Given that these pools had completely dried prior to July 15, 2020 we recommend they be classified as non-significant at this time. In the table in Attachment B, pools that dried prior to July 15, 2020 are identified as "potentially significant".

The remaining six (6) pools we have classified as Significant. Attachment B includes a summary of all potentially significant pools identified.

Photographs and data forms collected during fieldwork have been provided as a separate download link, due to the number of photographs and file size. At the request of Longroad Energy, Biodiversity Research Institute is submitting the data collected in 2019 and 2020 for the Maine Department of Inland Fisheries and Wildlife to review, as required for review of collected vernal pool data as well as to confirm determinations made in the field. If you have any questions please contact me at steve.knapp@brienvironmental.org or at 207-570-9462.

Respectfully submitted,

Steve Knapp
Senior Environmental Scientist
BRI Environmental

CC: Jason Czapiga

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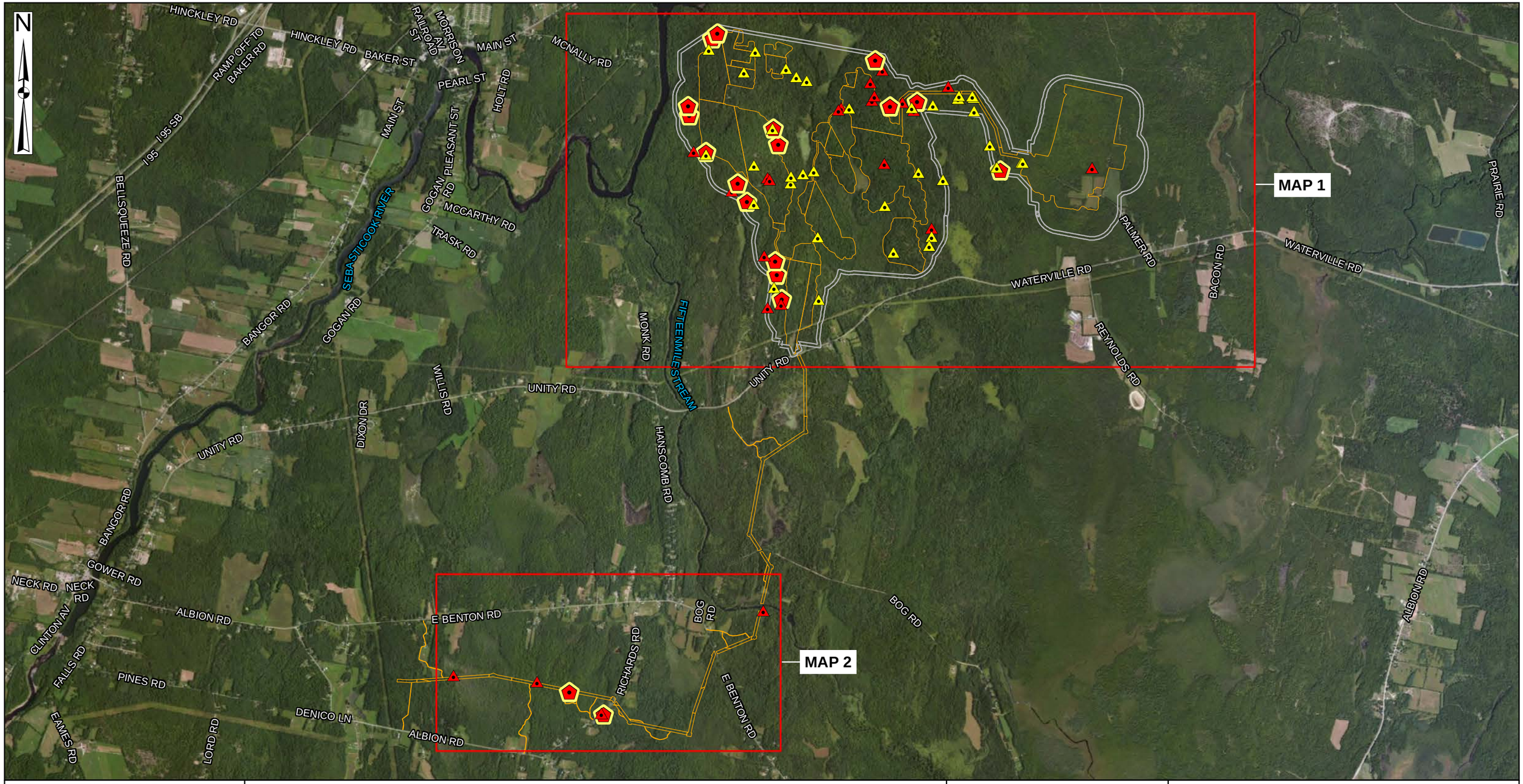
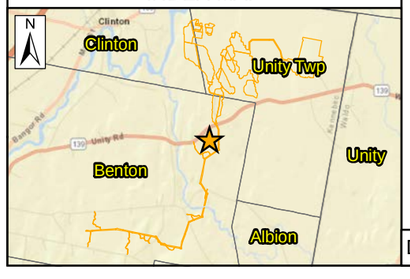
ATTACHMENT A: OVERVIEW MAP



INDEX MAP



LEGEND

- CP - USACE Jurisdictional Pool
- VP - Vernal Pool
- SVP - Potentially Significant Vernal Pool
- Project Survey Boundary
- Project Limit of Disturbance

Data Collected by Kleinschmidt Associates 2019; 2020

bri
Biodiversity Research Institute
innovative wildlife science

longroad ENERGY

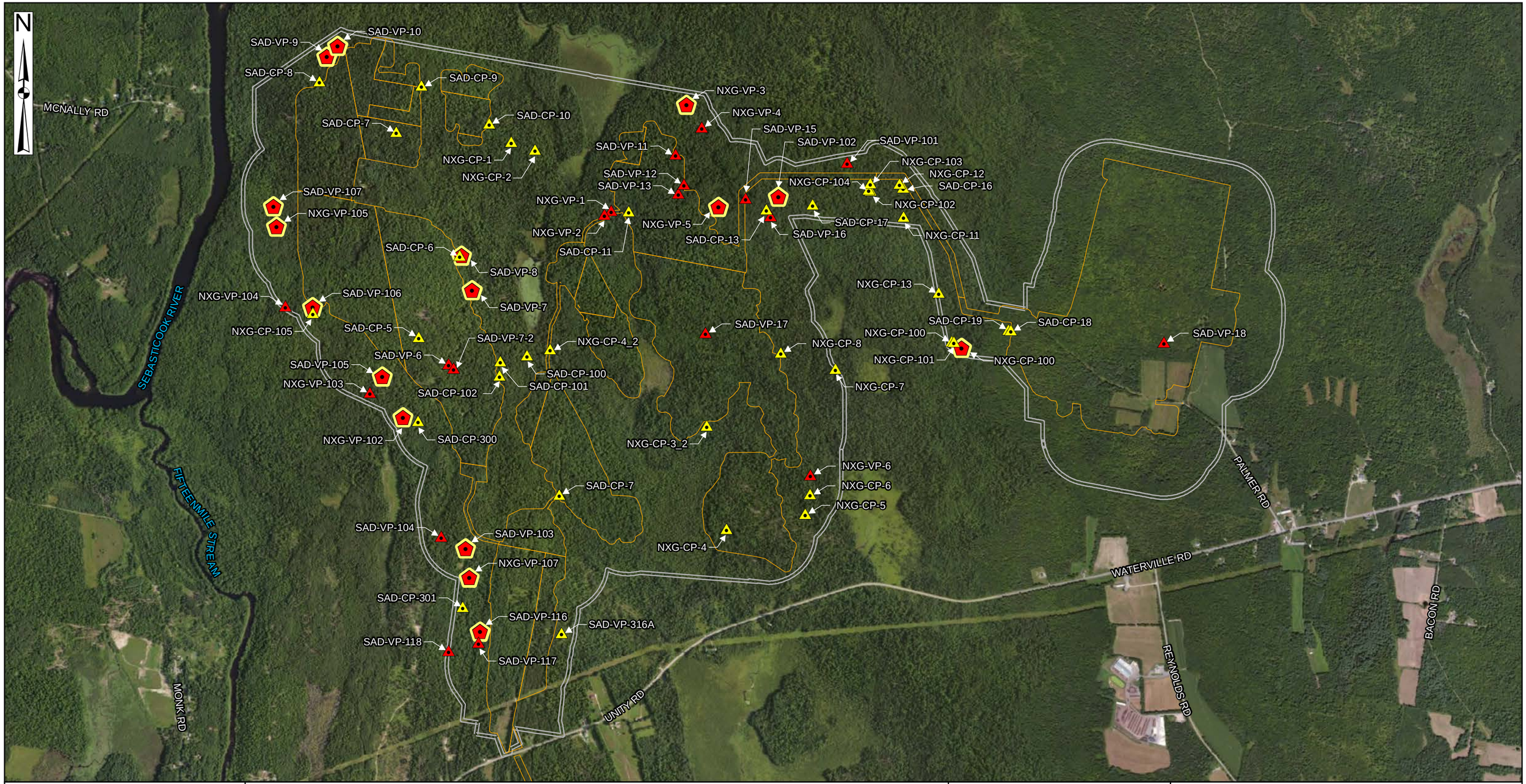
SCALE:

0 3,300 6,600 Feet

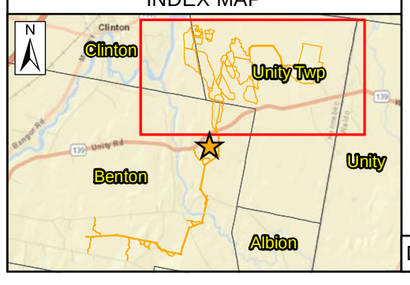
1 inch = 3,300 feet

VERNAL POOL MAP KEY
THREE CORNERS SOLAR SITE: UNITY TWP, MAINE

JANUARY 12, 2022



INDEX MAP



LEGEND

- CP - USACE Jurisdictional Pool
- VP - Vernal Pool
- SVP - Potentially Significant Vernal Pool
- Project Survey Boundary
- Project Limit of Disturbance

Data Collected by Kleinschmidt Associates 2019; 2020

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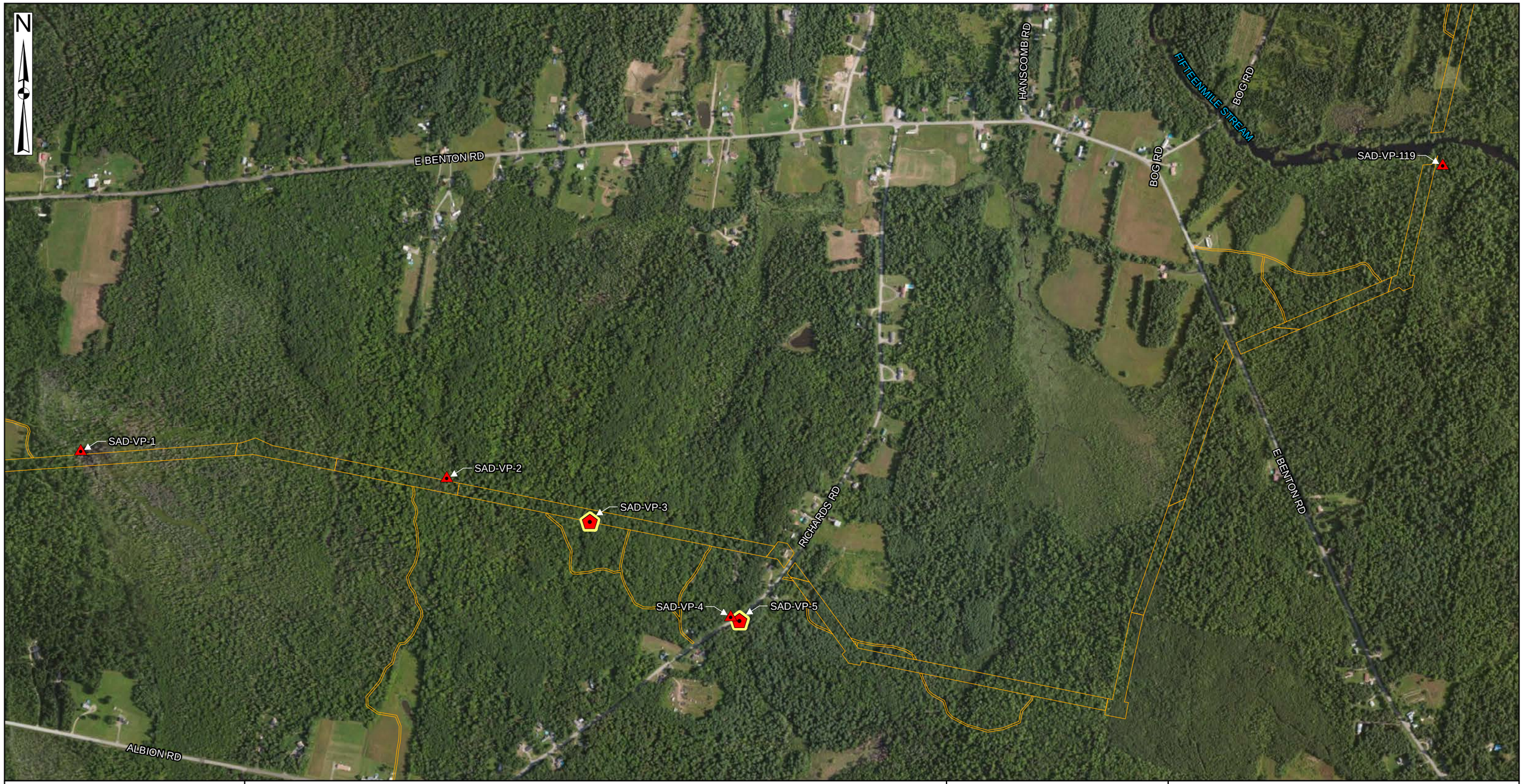
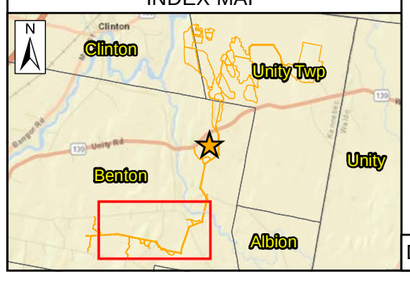
SCALE:
0 1,500 3,000 Feet
1 inch = 1,500 feet

VERNAL POOL MAP 1 OF 2
THREE CORNERS SOLAR SITE: UNITY TWP, MAINE

JANUARY 12, 2022



INDEX MAP



LEGEND

- CP - USACE Jurisdictional Pool
- VP - Vernal Pool
- SVP - Potentially Significant Vernal Pool
- Project Survey Boundary
- Project Limit of Disturbance

Data Collected by Kleinschmidt Associates 2019; 2020

BIODIVERSITY RESEARCH INSTITUTE
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longroad ENERGY

SCALE:

0 750 1,500 Feet

1 inch = 750 feet

VERNAL POOL MAP 2 OF 2
THREE CORNERS SOLAR SITE: UNITY TWP, MAINE

JANUARY 12, 2022

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ATTACHMENT B: SUMMARY TABLE

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Pool ID	Origin	Dried by 7/15/2020	Egg Mass Counts											Fairy Shrimp	SVP
			Wood Frog			Spotted Salamander				Blue-Spotted					
			Visit 1 2019	Visit 1 2020	Visit 2 2020	Visit 1 2019	Visit 2 2019	Visit 1 2020	Visit 2 2020	Visit 1 2019	Visit 2 2019	Visit 1 2020	Visit 2 2020		
NXG-CP-1	U	Yes		6				4							No
NXG-CP-100	U	Yes		3				4							No
NXG-CP-101	U	Yes		1				2							No
NXG-CP-102	U	Yes		32											No
NXG-CP-103	U	Yes						2							No
NXG-CP-104	U	Yes		60				17							No
NXG-CP-105	U	Yes		4				81							No
NXG-CP-11	U	Yes		10											No
NXG-CP-12	U	Yes		30				4							No
NXG-CP-13	U	Yes		15				3							No
NXG-CP-2	U	Yes						2							No
NXG-CP-3_2	U	Yes		1											No
NXG-CP-4	U	No		4				5							No
NXG-CP-4_2	U	No						2							No
NXG-CP-5	U	No		5				3							No
NXG-CP-6	U	Yes		5				3							No
NXG-CP-7	U	Yes		1											No
NXG-CP-8	U	Yes						1							No
NXG-VP-1	NM	No		2				2							No
NXG-VP-102	**N**	**Yes**		**52**				**28**							**Potentially**
NXG-VP-103	N	No						8	9						No
NXG-VP-104	NM	Yes		4	1			16	17						No
NXG-VP-105	**N**	**Yes**		**38**										**Yes**	**Potentially**

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Pool ID	Origin	Dried by	Egg Mass Counts												SVP
NXG-VP-107	**N**	**Yes**		**31**				**22**							**Potentially**
NXG-VP-2	NM	No		3				3				3			No
NXG-VP-3	**N**	**Yes**		**46**				**5**							**Potentially**
NXG-VP-4	N	Yes						1	3						No
NXG-VP-5	**N**	**Yes**						**4**	**19**						**Potentially**
NXG-VP-6	NM	Yes		32	1				6						No
SAD-CP-10	U	Yes		30											No
SAD-CP-100	U	Yes				3									No
SAD-CP-101	U	No				5		1							No
SAD-CP-102	U	No				2		3							No
SAD-CP-11	U	Yes				2									No
SAD-CP-13	U	Yes		8		3		11							No
SAD-CP-16	U	Yes	3	39				30							No
SAD-CP-17	U	Yes				1		1							No
SAD-CP-18	U	NA	3												No
SAD-CP-19	U	NA				3									No
SAD-CP-19a	U	NA				6									No
SAD-CP-2	U	No				3		11							No
SAD-CP-300	U	No		16				26							No
SAD-CP-301	U	No		1				16							No
SAD-CP-316A	U	No		0				5							No
SAD-CP-5	U	Yes		21				5							No
SAD-CP-6	U	No		1				20							No
SAD-CP-7	U	No				2									No
SAD-CP-8	U	NA				2									No
SAD-CP-9	U	No		14		9									No
SAD-CP-9a	U	NA				30									No

BIODIVERSITY RESEARCH INSTITUTE
innovative wildlife science

Pool ID	Origin	Dried by	Egg Mass Counts												SVP
SAD-VP-1	N	No	6					4	3	7					No
SAD-VP-10	**N**	**Yes**	**6**	**26**		**31**		**35**				**20**			**Potentially**
SAD-VP-100	**N**	**Yes**		**82**											**Potentially**
SAD-VP-101	N	Yes		6					2						No
SAD-VP-102	**N**	**Yes**		**42**											**Potentially**
SAD-VP-103	**N**	**Yes**		**25**	**1**			**5**	**9**				**25**		**Potentially**
SAD-VP-104	N	Yes		17	1			10	8						No
SAD-VP-105	**N**	**No**		**22**				**89**							**Yes**
SAD-VP-106	**NM**	**Yes**		**1**				**37**							**Potentially**
SAD-VP-107	**N**	**Yes**		**48**				**73**							**Potentially**
SAD-VP-11	N	Yes	6	11	12	7		5	15		4				No
SAD-VP-116	**N**	**No**		**0**				**37**							**Yes**
SAD-VP-117	N	No		0	2			2	1						No
SAD-VP-118	NM	No		0				1							No
SAD-VP-119	N	No						16	14						No
SAD-VP-12	N	Yes	1	0		4		4							No
SAD-VP-13	N	No		0		1									No
SAD-VP-15	N	Yes	5	8				2							No
SAD-VP-16	N	No	1						1						No
SAD-VP-17	NM	Yes	3	1	2	1			8						No
SAD-VP-18	N	Yes	10	3				11	18						No
SAD-VP-2	N	No					4	1	9	10					No
SAD-VP-3	**N**	**No**	**27**		**1**		**24**		**25**						**Yes**
SAD-VP-4	N	No	10	1	1		5			3					No
SAD-VP-5	**NM**	**No**	**67**		**40**		**7**	**3**	**26**	**11**					**Yes**
SAD-VP-6	N	No				2	1								No
SAD-VP-7	**N**	**No**		**1**	**1**	**12**	**6**	**23**	**26**		**1**				**Yes**
SAD-VP-7-2	NM	No				2									No
SAD-VP-8	**NM**	**No**	**36**	**2**		**49**		**59**							**Yes**

BIODIVERSITY RESEARCH INSTITUTE
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Pool ID	Origin	Dried by	Egg Mass Counts												SVP
SAD-VP-9	N	Yes	20	36		20		45							Potentially

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: NXG-VP-3 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drahozal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ☒ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ○ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longmeadow (3 Corners)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ☒ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: ED Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Township

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.458325 Latitude/Northing: 44.582045

Coordinate system: WGS 84

Check one: ☒ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ☒ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ☒ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ☒ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Leaf litter bottom

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ☒ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ☒ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

NXG-VP-3

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/22/2020; 7

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ⊗ Yes ○ No; what % of entire pool surveyed? ____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	46			2			M								
Spotted Salamander	5			2			M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☒ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Pool dried up by 7/13/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date:____ Initials:____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: UXG-VP-4 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drahozal / Nick Gabrezda

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ⊗ Yes ○ No

b. Landowner's contact information (required)

Name: ED Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Twp

Brief site directions to the pool (using mapped landmarks):

See attached maps

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.446255 Latitude/Northing: 44.631304

Coordinate system: WGS 84

Check one:

⊗ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊗ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ⊗ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

■ Maximum depth at survey: ⊗ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ⊗ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☒ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/22/2020; 5/13/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ◯ Yes ◯ No
- Was the entire pool surveyed for egg masses? ◯ Yes ◯ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog															
Spotted Salamander	1	3		3	3		M	M							
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Pool associated w/ large forested wetland

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ◯ does not meet biological criteria. ◯ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: NXG-VP-5 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Prichard

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ○ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: _____

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ○ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: _____ Phone: _____

Street Address: _____ City: _____ State: _____ Zip: _____

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Township

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: _____ Latitude/Northing: _____

Coordinate system: _____

Check one:

○ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊗ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

leaf litter

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ⊗ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ⊗ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

NXG-VP-95 47

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/22/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog															
Spotted Salamander	4	19		1	1		M	A							
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Pool associated w/ large forested wetland
Pool dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: NXG-VP-6 **MDIFW Poo**

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drohozal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊘ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊘ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ○ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity township

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: _____ Latitude/Northing: _____

Coordinate system: _____

Check one: ⊘ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☒ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ⊗ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

Pool impounded by woods road

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ⊗ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ⊗ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ⊗ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ⊗ No inlet or outlet
- ○ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

NXG - VP-6

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/28/2020 ; 5/13/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ⊗ No
- Was the entire pool surveyed for egg masses? ⊗ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	32	1		1	2		M								
Spotted Salamander	Ø	6			2										
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

large pool that is impounded by woods road
Pool dried up by 7/13/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ Significant ☐ Potentially Significant but lacking critical data ☐ Not Significant due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: NIG VP102 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Nicholas Gabrzda / Sarah Drahozal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ⊗ Yes ○ No

b. Landowner's contact information (required)

Name: ED Bessey & Son Phone: (207) 453-9388

Street Address: 774 Stevenson Rd. City: Unity State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: ~~Unity~~ Clinton

Brief site directions to the pool (using mapped landmarks):

Between Fifteenmile Stream & Bessey Ln, just west of Bessey Ln, Unity

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.460672 Latitude/Northing: 44.622137

Coordinate system: WGS 84

Check one:

⊗ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

⊗ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

2f s.l 52 wf

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ☒ Isolated depression
- ○ Floodplain depression
- ○ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ☒ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ☒ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Not particularly deep, isolated from other wetlands

■ Maximum depth at survey: ☒ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 25 ○ m ☒ ft Length: 75 ○ m ☒ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ☒ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ☒ No inlet or outlet
- ○ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/28/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ⊗ No
- Was the entire pool surveyed for egg masses? ⊗ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	52														
Spotted Salamander	28														
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☒ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Far from roads, most eggs concentrated in one section of pool. Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: NXG VP103 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Nicholas Gabrieli / Sarah Draheral

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ⊗ Yes ○ No

b. Landowner's contact information (required)

Name: ED Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: ~~_____~~ Clinton

Brief site directions to the pool (using mapped landmarks):

Between Fifteenmile Stream & Bessey Ln.
Just west of Bessey Ln, ~~Unity~~ Clinton

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.462043 Latitude/Northing: 44.623204

Coordinate system: WGS 84

Check one:

⊗ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

⊗ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): 4/11

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- [x] Isolated depression
- ○ Floodplain depression
- ○ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

[x] Forested swamp	☐ Wet meadow	☐ Slow stream	☐ Dug pond or borrow pit
☐ Shrub swamp	☐ Lake or pond cove	☐ Floodplain	
☐ Peatland (fen or bog)	☐ Abandoned beaver flowage	☐ Mostly unvegetated pool	☐ Roadside ditch
☐ Emergent marsh	☐ Active beaver flowage	☐ ATV or skidder rut	☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: [x] Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- [x] Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Small in size & depth, isolated from wetland

■ Maximum depth at survey: [x] 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 20 ○ m [x] ft Length: 30 ○ m [x] ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- [x] Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- [x] Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

☐ Fish ☐ Bullfrog or Green Frog tadpoles ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- [x] No inlet or outlet
- ○ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/28/2020, 5/12/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ☒ No
- Was the entire pool surveyed for egg masses? ☒ Yes ○ No; what % of entire pool surveyed? ____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog															
Spotted Salamander	8	9													
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Relatively small, wooded

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: [redacted] NXG VP104 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Nicholas Gabuzda / Sarah Drahovzal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ⊗ Yes ○ No

b. Landowner's contact information (required)

Name: ED Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: [redacted] Clinton

Brief site directions to the pool (using mapped landmarks):

Between Bessey Ln and Sebasticook River

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.467375 Latitude/Northing: 44.627113

Coordinate system: WGS 84

Check one: ○ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

⊗ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

By wf 16 5

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

○ Isolated depression ○ Pool associated with larger wetland complex
○ Floodplain depression ○ Other: _____

■ Check all wetland types that best apply to this pool:

☒ Forested swamp	☐ Wet meadow	☐ Slow stream	☐ Dug pond or borrow pit
☐ Shrub swamp	☐ Lake or pond cove	☐ Floodplain	
☐ Peatland (fen or bog)	☐ Abandoned beaver flowage	☐ Mostly unvegetated pool	☐ Roadside ditch
☐ Emergent marsh	☐ Active beaver flowage	☒ ATV or skidder rut	☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ☒ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

Definitely natural, but old logging road runs through it.

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

○ Permanent ☒ Semi-permanent (drying partially in all years and completely in drought years) ○ Ephemeral (drying out completely in most years) ○ Unknown

Explain:

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ☒ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 50 ○ m ☒ ft Length: 100 ○ m ☒ ft

■ Predominate substrate in order of increasing hydroperiod:

○ Mineral soil (bare, leaf-litter bottom, or upland mosses present) ☒ Organic matter (peat/muck) shallow or restricted to deepest portion
○ Mineral soil (sphagnum moss present) ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
☐ Sphagnum moss (anchored or suspended)
☐ Wet site ferns (e.g. royal fern, marsh fern)
☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
☐ No vegetation in pool

■ Faunal indicators (check all that apply):

☐ Fish ☐ Bullfrog or Green Frog tadpoles ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

☒ No inlet or outlet ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
○ Intermittent inlet or outlet ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/28/2020; 5/12/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ⊗ No
- Was the entire pool surveyed for egg masses? ⊗ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	4	1													
Spotted Salamander	16	17													
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Pool dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.**
- **<u>Clear photographs</u> of a) the pool AND b) the indicators (one example of each species egg mass) are <u>required</u> for all observers.**

Observer's Pool ID: NXG VP105 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Nicholas Gabuzda / Sarah Drahozal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ⊗ Yes ○ No

b. Landowner's contact information (required)

Name: _____ Phone: _____

Street Address: _____ City: _____ State: _____ Zip: _____

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: ~~Benton~~ Clinton

Brief site directions to the pool (using mapped landmarks):

East of Sebasticook River, just northwest of Bessey Ln

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: _____ Latitude/Northing: _____

Coordinate system: _____

Check one:

○ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

⊗ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ☒ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☒ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ☒ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Very wetland like, behaves more like a wetland, very shallow

■ Maximum depth at survey: ☒ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 30 ○ m ☒ ft Length: 200 ○ m ☒ ft

■ Predominate substrate in order of increasing hydroperiod:

- ☒ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ☒ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/28/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ☒ No
- Was the entire pool surveyed for egg masses? ☒ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog															
Spotted Salamander	38														
Blue-spotted Salamander															
Fairy Shrimp[3]	X														

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: NX6-VP-107 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Draheza / Nick Gabrzdka

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊘ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊘ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Long

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ○ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: EP Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hartley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Benton

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.456038 Latitude/Northing: 44.614879

Coordinate system: WGS 84

Check one: ⊘ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☒ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊗ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Leaf litter

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ⊗ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/28/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ⊘ No
- Was the entire pool surveyed for egg masses? ⊘ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	22			M											
Spotted Salamander	31			M											
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☒ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.**
- **<u>Clear photographs</u> of a) the pool AND b) the indicators (one example of each species egg mass) are <u>required</u> for all observers.**

Observer's Pool ID: (Prov 2 pics) SAD-VP-1 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drahozal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longread (3 Corners)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: _____ Phone: _____

Street Address: _____ City: _____ State: _____ Zip: _____

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Benton

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.500735 Latitude/Northing: 44.575922

Coordinate system: WGS84

Check one:

○ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

⊗ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

SAD-VP-1

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☐ Forested swamp
- ☒ Shrub swamp
- ☒ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☒ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊗ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ⊗ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Part of wetland complex near intermittent stream

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ⊗ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 15 ○ m ⊗ ft Length: 30 ○ m ⊗ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ⊗ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☒ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ⊗ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD - VP-1

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/29/2019; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ◉ No
- Was the entire pool surveyed for egg masses? ☒ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	6			3			M			Ø					
Spotted Salamander		4		3			A								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Green frog Revisits 2020; 5/6: ØWFEM 35SEM
5/19: ØWFEM 75SEM

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-2 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Dronhowski

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊘ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longroad (3 Corners)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊘ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: _____ Phone: _____

Street Address: _____ City: _____ State: _____ Zip: _____

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Benton

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: _____ Latitude/Northing: _____

Coordinate system: _____

Check one: ⊘ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

SAP-VP-2

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊘ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ⊘ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

Pool located on the edge of a wetland adjacent to recent clear cut

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊘ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Pool part of forested wetland

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 5 ○ m ⊘ ft Length: 3 ○ m ⊘ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ⊘ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☒ No vegetation in pool
- ☐ Other: _____

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ⊘ No inlet or outlet
- ○ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-2

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/29/2019 ; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ⊗ No
- Was the entire pool surveyed for egg masses? ⊗ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	~~4~~			~~2~~			~~M~~								
Spotted Salamander	4	1		3	3		M	A							
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Pool found in sunny area on the edge of forested wetland

2020 Revisits: 5/6: 0 WFEM 9SSEM 5/19: 0WFEM 10SSEM

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

SAD-VP-3 SUP

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP3 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Draharz

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ☒ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longroad (3 Corners)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ○ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: _____ Phone: _____

Street Address: _____ City: _____ State: _____ Zip: _____

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Benton

Brief site directions to the pool (using mapped landmarks):

See Attached Maps

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: _____ Latitude/Northing: _____

Coordinate system: _____

Check one: ☒ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

SAD-VP-3

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- (⊘) Isolated depression (w/in wetland to South)
- ( ) Floodplain depression
- ( ) Pool associated with larger wetland complex
- ( ) Other: _____

■ Check all wetland types that best apply to this pool:

- [x] Forested swamp
- [ ] Shrub swamp
- [ ] Peatland (fen or bog)
- [ ] Emergent marsh
- [ ] Wet meadow
- [ ] Lake or pond cove
- [ ] Abandoned beaver flowage
- [ ] Active beaver flowage
- [x] Slow stream
- [ ] Floodplain
- [ ] Mostly unvegetated pool
- [ ] ATV or skidder rut
- [ ] Dug pond or borrow pit
- [ ] Roadside ditch
- [ ] Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: (⊘) Natural ( ) Natural-Modified ( ) Unnatural ( ) Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ( ) Permanent
- (⊘) Semi-permanent (drying partially in all years and completely in drought years)
- ( ) Ephemeral (drying out completely in most years)
- ( ) Unknown

Explain:

~ 3 ft @ deepest part

■ Maximum depth at survey: ( ) 0-12" (0-1 ft.) (⊘) 12-36" (1-3 ft.) ( ) 36-60" (3-5 ft.) ( ) >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 30 (⊘) m ( ) ft Length: > 9 (⊘) m ( ) ft

■ Predominate substrate in order of increasing hydroperiod:

- (⊘) Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ( ) Mineral soil (sphagnum moss present)
- ( ) Organic matter (peat/muck) shallow or restricted to deepest portion
- ( ) Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- [x] Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- [x] Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- [ ] Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- [ ] Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- [ ] Sphagnum moss (anchored or suspended)
- [ ] Wet site ferns (e.g. royal fern, marsh fern)
- [ ] Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- [ ] Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- [ ] Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- [ ] Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- [x] No vegetation in pool

■ Faunal indicators (check all that apply):

- [ ] Fish
- [ ] Bullfrog or Green Frog tadpoles
- [x] Other: Newt

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ( ) No inlet or outlet
- (⊘) Intermittent inlet or outlet
- ( ) Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- (⊘) Other or Unknown (explain): pool extends outside boundary

SAD-VP-3

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/29/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ⊘ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ⊘ No; what % of entire pool surveyed? ~70
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	27			1			M			Ø					
Spotted Salamander	24			1			M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☒ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Intermittent inlet on southern side of VP flow through forested wetland into VP surrounded by upland

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-4 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Pechacek

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊘ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊘ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊘ Yes

c. Project Name: Longroad (3 Corners Solar Project)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊘ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: _____ Phone: _____

Street Address: _____ City: _____ State: _____ Zip: _____

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Benton

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.480413 Latitude/Northing: 44.572347

Coordinate system: _____

Check one: ⊘ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

SAD-VP-4

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ⊗ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

Forested wetland impounded by road

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Shallow hollows filled wt water - impounded by rd

■ Maximum depth at survey: ⊗ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 30 ⊗ m ○ ft Length: 80 ⊗ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☒ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☒ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-4

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/29/2019; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ⊗ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ⊗ No; what % of entire pool surveyed? 80
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	10	Ø		1	1		M								
Spotted Salamander	5	Ø		1	1		M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Pool w/i in forest wetland. Impounded by road w/ intermittent inlet from drainage from wetland.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-5 (5A) **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drohovzal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊘ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊘ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longroad (3 Corners)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊘ No If no, was landowner permission obtained for survey? ⊘ Yes ○ No

b. Landowner's contact information (required)

Name: _____ Phone: _____

Street Address: _____ City: _____ State: _____ Zip: _____

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Benton

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.480173 Latitude/Northing: 44.571888

Coordinate system: _____

Check one: ⊘ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

SAD-VP-5 (SA)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ⊗ Isolated depression
- ○ Floodplain depression
- ○ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☐ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☒ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☒ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ⊗ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

Pool impounded by Richard Road

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ⊗ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Deep pool ~4 feet @ max depth

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ⊗ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 40 ○ m ⊗ ft Length: 30 ○ m ⊗ ft

■ Predominate substrate in order of increasing hydroperiod:

- ⊗ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☒ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☒ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ⊗ No inlet or outlet
- ○ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-5 (5A)

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/29/19 ; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ⊘ No
- Was the entire pool surveyed for egg masses? ⊘ Yes ○ No; what % of entire pool surveyed? ____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	67 (32 VP-5A)			2	2		A								
Spotted Salamander	7 (1 VP-5A)	3 (VP-5)		2	2		M	A							
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Deep pool impounded by road
VP5 - VP5A Connected hydrologically by ditch along road

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date:____ Initials:____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

SAD-VP-6 No eggs in 2020

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-6 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drahovzal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longreed (3 Corners Solar Project)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bussey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Twp

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.457129 Latitude/Northing: 44.624515

Coordinate system: _____

Check one:

⊗ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

SAD-VP-6

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ⊗ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

Pool located in wetland in recently logged forest

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Shallow forest pool

■ Maximum depth at survey: ⊗ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 30 ○ m ⊗ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ⊗ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☒ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☒ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☒ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☒ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: 0

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ⊗ No inlet or outlet
- ○ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-6

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/1/2019; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ⊗ No
- Was the entire pool surveyed for egg masses? ⊗ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	0	0													
Spotted Salamander	2	1		3	3		M	A							
Blue-spotted Salamander	0														
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Pool is shallow & will likely dry up in a few weeks

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-7 **MDIFW Pool ID:**

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drahovzal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ○ same as observer ○ other

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ⊗ Yes ○ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Twp

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.455584 Latitude/Northing: 44.62759

Coordinate system: WGS 84

Check one: ⊗ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

SAD-VP-7

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊗ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Shallow water

■ Maximum depth at survey: ⊗ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ⊗ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ⊗ No inlet or outlet
- ○ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-7-1

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/1/2019 ; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog															
Spotted Salamander	12	6		2			M	A							
Blue-spotted Salamander	1	1		2				M							
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Could hear wood frogs calling in nearby wetland. Still some snow on the edge of the wetland

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date:_____ Initials:_____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

SAD-VP-7-2

No eggs in 2020

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-7-2 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drinkwater

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ◉ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longpond

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ○ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: _____ Phone: _____

Street Address: _____ City: _____ State: _____ Zip: _____

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Twp

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.456775 Latitude/Northing: 44.624376

Coordinate system: _____

Check one:

- ◉ GIS shapefile
  - send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)
- ○ The pool perimeter is delineated by multiple GPS points. (Excellent)
  - Include map or spreadsheet with coordinates.
- ○ The above GPS point is at the center of the pool. (Good)
- ○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

SAD-VP-F-2

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ⊗ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

Pool within forested wetland. Pool area possibly caused by old logging road

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Shallow pool w/ leaf litter

■ Maximum depth at survey: ⊗ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 35 ○ m ⊗ ft Length: 15 ○ m ⊗ ft

■ Predominate substrate in order of increasing hydroperiod:

- ⊗ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☒ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☒ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☒ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ⊗ No inlet or outlet
- ○ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-7-2

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/1/2019 ; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog															
Spotted Salamander	2	Ø		3	3		M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

SVP

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP 8 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drahovzal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ◉ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ◉ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longroad (3 Corners)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ◉ No If no, was landowner permission obtained for survey? ◉ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Twp.

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.4569 Latitude/Northing: 44.628853

Coordinate system: _____

Check one:

◉ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

SAD-VP-8

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ⊗ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

Road at N end of impounding wetland

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

■ Maximum depth at survey: ⊗ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 30 ○ m ⊗ ft Length: 100 ○ m ⊗ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ⊗ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☒ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-8

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/1/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ☒ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	36			2			M								
Spotted Salamander	49			2			M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification* P	H	S	CL**	SPECIES	Method of Verification* P	H	S	CL**
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☒ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife: Same unit Complex as SAD-VP-7

Pool impounded by road Separated by small berm. ~ 8" of water in road w/ 27 SS & 5 WF egg masses, Still some snow covering part of open water

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

SVP

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-9 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: SEK/SAD

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longroad (3 Corners)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd City: Hickley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Clinton

Brief site directions to the pool (using mapped landmarks):

See attached maps

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.464547 Latitude/Northing: 44.638161

Coordinate system: WGS 84

Check one:

○ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

⊗ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

SAD-VP-9

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): 5/2

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ◉ Isolated depression
- ○ Floodplain depression
- ○ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ◉ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ◉ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ◉ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 56 ○ m ◉ ft Length: 40 ○ m ◉ ft

■ Predominate substrate in order of increasing hydroperiod:

- ◉ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☒ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ◉ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-9

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/2/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ◉ No
- Was the entire pool surveyed for egg masses? ◉ Yes ○ No; what % of entire pool surveyed? ____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	20			3			A								
Spotted Salamander	20			3			F/M								
Blue-spotted Salamander	Ø														
Fairy Shrimp[3]	Ø														

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☒ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Caddis fly's observed after egg masses.
Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: ____ Initials: ____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

SVP

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-10 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: SCK/SAD

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longreach (3 Corners Solar Project)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ⊗ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Clinton

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.463877 Latitude/Northing: 44.6386 ?

Coordinate system: WGS 84

Check one:

○ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

⊗ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

SAD-VP-10

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ◉ Isolated depression
- ○ Floodplain depression
- ○ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ◉ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ◉ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ◉ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 100 ○ m ◉ ft Length: 165 ○ m ◉ ft

■ Predominate substrate in order of increasing hydroperiod:

- ◉ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ◉ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☒ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ◉ No inlet or outlet
- ○ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-10

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/2/2019; 4/28/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ◉ No
- Was the entire pool surveyed for egg masses? ◉ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	6	26		3	3		F								
Spotted Salamander	31	31		3	3		F/M								
Blue-spotted Salamander	Ø	Ø													
Fairy Shrimp[3]	Ø	Ø													

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

◉ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-11 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Dubord

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ☒ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ☒ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longroad (3 Corners Solar Project)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ○ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hickley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity twp

Brief site directions to the pool (using mapped landmarks):

See attached maps

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.442918 Latitude/Northing: 44.633697

Coordinate system: WGS 84

Check one:
- ○ GIS shapefile
  - send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)
- ○ The pool perimeter is delineated by multiple GPS points. (Excellent)
  - Include map or spreadsheet with coordinates.
- ☒ The above GPS point is at the center of the pool. (Good)
- ○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

SAD-VP-11

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊗ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Leaf litter

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ⊗ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☒ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/6/2019 ; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? ____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	6			3			M								
Spotted Salamander	7			3			M								
Blue-spotted Salamander		4			3			M							
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date:____ Initials:____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-12 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drahovzal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊘ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longroad (3 Corners)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊘ No If no, was landowner permission obtained for survey? ⊘ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Twp.

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.442326 Latitude/Northing: 44.632419

Coordinate system: WGS 84

Check one: ⊘ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊗ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Leaf litter bottom

■ Maximum depth at survey: ⊗ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ⊗ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ⊗ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☒ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/6/2019 ; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	1	0		3	3		M								
Spotted Salamander	4	9		3	3		M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

No eggs 2020

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-13 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drahovzal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longroad (3 corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ⊗ Yes ○ No

b. Landowner's contact information (required)

Name: E. D. Bessey & Son Phone: (207) 453-7388

Street Address: 779 Skowhegan Rd. City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Twp

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.442643 Latitude/Northing: 44.632026

Coordinate system: WGS 84

Check one:

- ○ GIS shapefile
  - send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)
- ○ The pool perimeter is delineated by multiple GPS points. (Excellent)
  - Include map or spreadsheet with coordinates.
- ⊗ The above GPS point is at the center of the pool. (Good)
- ○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊗ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

leaf litter

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ⊗ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ⊗ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☒ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/6/2019; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog															
Spotted Salamander	1	0		3	3		M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-15 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drakovzal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longroad (3 Corners)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ⊗ Yes ○ No

b. Landowner's contact information (required)

Name: _____ Phone: _____

Street Address: _____ City: _____ State: _____ Zip: _____

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Twp

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.4385 Latitude/Northing: 44.631733

Coordinate system: WGS84

Check one:
- ○ GIS shapefile
  - send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)
- ○ The pool perimeter is delineated by multiple GPS points. (Excellent)
  - Include map or spreadsheet with coordinates.
- ○ The above GPS point is at the center of the pool. (Good)
- ○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ☒ Isolated depression
- ○ Floodplain depression
- ○ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☐ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ☒ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ☒ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ☒ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ☒ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ☒ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☒ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☒ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ☒ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/6/2019 ; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ⊗ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	5	Ø		1	1		M								
Spotted Salamander															
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Revisits 2020: 4/22: 8 WFEM 2 SSEM 5/13: Ø
Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-16 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Draharzal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊘ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longroad (3 Corners)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊘ No If no, was landowner permission obtained for survey? ⊘ Yes ○ No

b. Landowner's contact information (required)

Name: E.D Rossey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd City: Hinckley State: Me Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Twp

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.437059 Latitude/Northing: 44.63087

Coordinate system: WGS84

Check one:

○ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

⊘ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊗ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ⊗ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain: leaf litter bottom

■ Maximum depth at survey: ⊗ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ⊗ Mineral soil (sphagnum moss present)
- ⊗ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☒ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☒ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/8/2019; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog															
Spotted Salamander	1	Ø		3	3		M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Revisits 2020: 4/22/2020: Ø 5/19/2020: 1 SSEM

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-17 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Dahuzl

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ☒ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ☒ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longroad (3 Corners)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ☒ No If no, was landowner permission obtained for survey? ☒ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd City: Hockley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Twp

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.441131 Latitude/Northing: 44.625715

Coordinate system: _____

Check one:

☒ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

☒ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

○ Isolated depression ⊗ Pool associated with larger wetland complex
○ Floodplain depression ○ Other: _____

■ Check all wetland types that best apply to this pool:

☒ Forested swamp	☐ Wet meadow	☐ Slow stream	☐ Dug pond or borrow pit
☐ Shrub swamp	☐ Lake or pond cove	☐ Floodplain	
☐ Peatland (fen or bog)	☐ Abandoned beaver flowage	☐ Mostly unvegetated pool	☐ Roadside ditch
☐ Emergent marsh	☐ Active beaver flowage	☐ ATV or skidder rut	☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ⊗ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

○ Permanent ○ Semi-permanent (drying partially in all years and completely in drought years) ⊗ Ephemeral (drying out completely in most years) ○ Unknown

Explain:

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
⊗ Mineral soil (sphagnum moss present)
○ Organic matter (peat/muck) shallow or restricted to deepest portion
○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

☒ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)	☐ Wet site ferns (e.g. royal fern, marsh fern)
☒ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)	☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
☒ Sphagnum moss (anchored or suspended)	☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
	☒ No vegetation in pool

■ Faunal indicators (check all that apply):

☐ Fish ☐ Bullfrog or Green Frog tadpoles ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

○ No inlet or outlet ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
⊗ Intermittent inlet or outlet ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/6/2019; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? ____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	3	Ø		2	2		A								
Spotted Salamander	1	Ø		2	2		M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Results 2020: 4/22: 1 WFEM, 1 SSEM 5/13/2020: 2 WFEM, 8 SSEM
Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: ____ Initials: ____

This pool is: ☐ Significant ☐ Potentially Significant but lacking critical data ☐ Not Significant due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-18 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Draharzel

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ○ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Longroad (3 Corners Solar Project)

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ⊗ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 774 Skowhegan Rd. City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Twp

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.412608 Latitude/Northing: 44.625192

Coordinate system: WGS 84

Check one:

⊗ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

⊗ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ☒ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ☒ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ☒ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Shallow w/ leaf-litter bottom; unvegetated

■ Maximum depth at survey: ☒ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ☒ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ☒ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☒ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☒ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☒ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ☒ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/9/2019; 5/22/2019

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog															
Spotted Salamander	10	0		3	3		M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☒ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Revisits 2020: 9/24/20: 3 WFEM, 11 SSEM 5/13/2020 0 WFEM/8 SSEM
Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-100 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drahozal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ○ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E. D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Stockhegan Rd City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Township

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.432721 Latitude/Northing: 44.633257

Coordinate system: WGS 84

Check one: ⊗ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ⊗ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

Pool found in industrial forest adjacent to recently cut area

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ⊗ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

leaf litter & bare both

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ⊗ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ⊗ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD - VP-100

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/24/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ◉ No
- Was the entire pool surveyed for egg masses? ◉ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	82			2			M								
Spotted Salamander															
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☒ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Dried up by 7/13/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-101 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Drabovzel

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hartley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Township

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.43221 Latitude/Northing: 44.633257

Coordinate system: WGS 84

Check one:

○ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊗ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

leaf litter

■ Maximum depth at survey: ⊗ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ⊗ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-101

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/24/2020, 5/12/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ⊗ No
- Was the entire pool surveyed for egg masses? ⊗ Yes ○ No; what % of entire pool surveyed? ____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	6	0		3			M								
Spotted Salamander	0	2			3			M							
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ Significant ☐ Potentially Significant but lacking critical data ☐ Not Significant due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-102 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Dabouzal

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hickley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Unity Twp

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.436581 Latitude/Northing: 44.631797

Coordinate system: WGS 84

Check one: ⊗ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ☒ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☐ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ☒ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

leaf litter

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ☒ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ☒ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-102

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/24/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? ____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	42			2			M								
Spotted Salamander															
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

VP associated w/ forested wet

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-103 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Dabovral

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Projects

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 771 Skowhegan Rd. City: Hartley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Benton / Unity

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.45629 Latitude/Northing: 44.616228

Coordinate system: WGS 84

Check one: ⊗ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ○ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☒ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ☒ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ☒ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Leaf litter

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ☒ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ☒ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ☒ No inlet or outlet
- ○ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-103

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/28/2020 ; 5/14/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	28	1		2			M								
Spotted Salamander	5	9		2			M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☒ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-104 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Dahowski

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ○ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ○ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 771 Skowhegan Rd. City: Hickley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Clinton

Brief site directions to the pool (using mapped landmarks):

See attached maps

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.457718 Latitude/Northing: 44.616833

Coordinate system: WGS 84

Check one:

○ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊘ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☒ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊘ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊘ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain: leaf litter

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ⊘ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ⊘ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊘ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-109

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/29/2020 ; 5/14/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	17	1		2	2		M	A							
Spotted Salamander	10	8		2	2		M	M							
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☒ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-105 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Dahar[illegible]

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ◉ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ◉ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ◉ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E. D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Stowhegan Rd. City: Hickley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Clifton

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.461326 Latitude/Northing: 44.624046

Coordinate system: WGS 84

Check one: ◉ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ☒ Isolated depression
- ○ Floodplain depression
- ○ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☐ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☒ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ☒ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ☒ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain: Leaf litter

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ☒ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☒ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☒ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ☒ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-105

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/28/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ◯ Yes ◯ No
- Was the entire pool surveyed for egg masses? ◯ Yes ◯ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	22			2			A								
Spotted Salamander	8			2			M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☒ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ◯ does not meet biological criteria. ◯ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP 106 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Donoval

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ● Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ● same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ● No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Clinton

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.465551 Latitude/Northing: 44.626983

Coordinate system: WGS 84

Check one: ● GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☐ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☒ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ⊗ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

Impounded by Woods road. Culvert from road flows to pond

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ⊗ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool): Culvert

- ○ No inlet or outlet
- ○ Intermittent inlet or outlet
- ⊗ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP 106

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/28/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? ____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)						Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]	Egg Mass Maturity[2]		Observed			Confidence Level[1]		
Wood Frog	1			A								
Spotted Salamander	37			M								
Blue-spotted Salamander												
Fairy Shrimp[3]												

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Impounded by road
Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date:____ Initials:____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

SAD-VP-107

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: 120 SAD-VP-107 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Dubord

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ○ Yes ○ No

b. Landowner's contact information (required)

Name: E.D. Bessey & Son Phone: (207) 453-9388

Street Address: 771 Skowhegan Rd. City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Clinton

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.467014 Latitude/Northing: 44.631657

Coordinate system: WGS 84

Check one: ⊗ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ☒ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☒ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ☒ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ☒ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

leaf litter

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ☒ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: SAD-VP-107

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ⊗ Yes ○ No; what % of entire pool surveyed? ____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog	48			2			A								
Spotted Salamander	~~5~~ 73			2			M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

X from NVA-VP-101

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☒ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Dried up by 7/15/2020

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date:____ Initials:____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-11c **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Dahorzel

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ◉ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ◉ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ◉ No If no, was landowner permission obtained for survey? ◉ Yes ○ No

b. Landowner's contact information (required)

Name: ED Bessey & Son Phone: (207) 453-9388

Street Address: 774 Stonehenge Rd. City: Hickley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Benton

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.455359 Latitude/Northing: 44.612445

Coordinate system: WGS 84

Check one: ◉ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ○ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☒ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain: Leaf litter

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ○ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/30/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ◉ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? ____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog															
Spotted Salamander	37			2			M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date:____ Initials:____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-117 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Draheval

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ⊗ Yes ○ No

b. Landowner's contact information (required)

Name: ED Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Benton

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.455362 Latitude/Northing: 44.612042

Coordinate system: WGS 84

Check one: ⊗ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊘ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☒ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊘ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊘ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Leaf litter

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ⊘ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊘ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-117

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/30/2020, 5/14/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ◉ No
- Was the entire pool surveyed for egg masses? ◉ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog		2													
Spotted Salamander	2	1					M								
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☑ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date:_____ Initials:_____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD-VP-119 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Dahovzl

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊘ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊘ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊘ No If no, was landowner permission obtained for survey? ⊘ Yes ○ No

b. Landowner's contact information (required)

Name: ED Bessey & Son Phone: (207) 453-9388

Street Address: 779 Skowhegan Rd. City: Hinckley State: ME Zip: 04944

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Benton

Brief site directions to the pool (using mapped landmarks):

See attached map

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.457307 Latitude/Northing: 44.611589

Coordinate system: WGS 84

Check one: ⊘ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☒ Forested swamp
- ☒ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☐ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☒ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ○ Natural ⊗ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

Woods road running through VP

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ○ Semi-permanent (drying partially in all years and completely in drought years)
- ⊗ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

Leaf litter

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ⊗ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ⊗ Organic matter (peat/muck) shallow or restricted to deepest portion
- ○ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☒ Sphagnum moss (anchored or suspended)
- ☒ Wet site ferns (e.g. royal fern, marsh fern)
- ☒ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ⊗ Intermittent inlet or outlet
- ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

SAD-VP-118

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/30/2020, 5/14/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? ____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog		0													
Spotted Salamander	1	0		M											
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Duck nest Nearby

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: ____ Initials: ____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

Maine State Vernal Pool Assessment Form

INSTRUCTIONS:

- **Complete all 3 pages of form thoroughly. Most fields are required for pool registration.**
- **Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.**

Observer's Pool ID: SAD- VP- 119 **MDIFW Pool ID:** _____

1. PRIMARY OBSERVER INFORMATION

a. Observer name: Sarah Dahorzel

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ⊗ Yes

2. PROJECT CONTACT INFORMATION

a. Contact name: ⊗ same as observer ○ other _____

b. Contact and credentials previously provided? ○ No (submit Addendum 1) ○ Yes

c. Project Name: Three Corners Solar Project

3. LANDOWNER CONTACT INFORMATION

a. Are you the landowner? ○ Yes ⊗ No If no, was landowner permission obtained for survey? ⊗ Yes ○ No

b. Landowner's contact information (required)

Name: [redacted] Phone: [redacted]

Street Address: [redacted] City: [redacted] State: [redacted] Zip: [redacted]

c. ☐ Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Benton

Brief site directions to the pool (using mapped landmarks):

See attached maps

b. Mapping Requirements

i. USGS topographic map OR aerial photograph with pool clearly marked.

ii. GPS location of vernal pool (use Datum NAD83 / WGS84)

Longitude/Easting: -69.458335 Latitude/Northing: 44.582045

Coordinate system: WGS 84

Check one: ⊗ GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.

○ The above GPS point is at the center of the pool. (Good)

○ The center of the pool is approximately _____ m ○ ft ○ in the compass direction of _____ degrees from the above GPS point. (Acceptable)

Maine State Vernal Pool Assessment Form

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

■ Choose the best descriptor for the landscape setting:

- ○ Isolated depression
- ○ Floodplain depression
- ⊗ Pool associated with larger wetland complex
- ○ Other: _____

■ Check all wetland types that best apply to this pool:

- ☐ Forested swamp
- ☐ Shrub swamp
- ☐ Peatland (fen or bog)
- ☐ Emergent marsh
- ☐ Wet meadow
- ☐ Lake or pond cove
- ☐ Abandoned beaver flowage
- ☒ Active beaver flowage
- ☐ Slow stream
- ☐ Floodplain
- ☐ Mostly unvegetated pool
- ☐ ATV or skidder rut
- ☐ Dug pond or borrow pit
- ☐ Roadside ditch
- ☐ Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: ⊗ Natural ○ Natural-Modified ○ Unnatural ○ Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale in box (**required**):

- ○ Permanent
- ⊗ Semi-permanent (drying partially in all years and completely in drought years)
- ○ Ephemeral (drying out completely in most years)
- ○ Unknown

Explain:

■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: _____ ○ m ○ ft Length: _____ ○ m ○ ft

■ Predominate substrate in order of increasing hydroperiod:

- ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- ○ Mineral soil (sphagnum moss present)
- ○ Organic matter (peat/muck) shallow or restricted to deepest portion
- ⊗ Organic matter (peat/muck) deep and widespread

■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- ☐ Sphagnum moss (anchored or suspended)
- ☐ Wet site ferns (e.g. royal fern, marsh fern)
- ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- ☒ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- ☐ No vegetation in pool

■ Faunal indicators (check all that apply):

- ☐ Fish
- ☐ Bullfrog or Green Frog tadpoles
- ☐ Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- ○ No inlet or outlet
- ○ Intermittent inlet or outlet
- ⊗ Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- ○ Other or Unknown (explain): _____

Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/5/2020, 5/19/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No
- Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae[4]					
	Visit #1	Visit #2	Visit #3	Confidence Level[1]			Egg Mass Maturity[2]			Observed			Confidence Level[1]		
Wood Frog															
Spotted Salamander	16	14		2			M	A							
Blue-spotted Salamander															
Fairy Shrimp[3]															

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

SPECIES	Method of Verification*			CL**	SPECIES	Method of Verification*			CL**
	P	H	S			P	H	S	
Blanding's Turtle	☐	☐	☐		Wood Turtle	☐	☐	☐	
Spotted Turtle	☐	☐	☐		Ribbon Snake	☐	☐	☐	
Ringed Boghaunter	☐	☐	☐		Other:	☐	☐	☐	

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

☐ SVP ☐ Potential SVP ☐ Non Significant VP ☐ Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Part of active beaver flowage. Several (5) of the egg masses were above waterline (5/5/2020)

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: ☐ **Significant** ☐ **Potentially Significant** but lacking critical data ☐ **Not Significant** due to: ○ does not meet biological criteria. ○ does not meet MDEP vernal pool criteria.

Comments:

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 1. Unnatural vernal pool NXG-CP-1, 4/21/20.

Photo 2. Unnatural vernal pool NXG-CP-1, 4/21/20.

Photo 3. Spotted salamander (*Ambystoma maculatum*) egg mass in unnatural vernal pool NXG-CP-1, 4/21/20.

Photo 4. Spotted salamander egg mass in unnatural vernal pool NXG-CP-1, 4/21/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

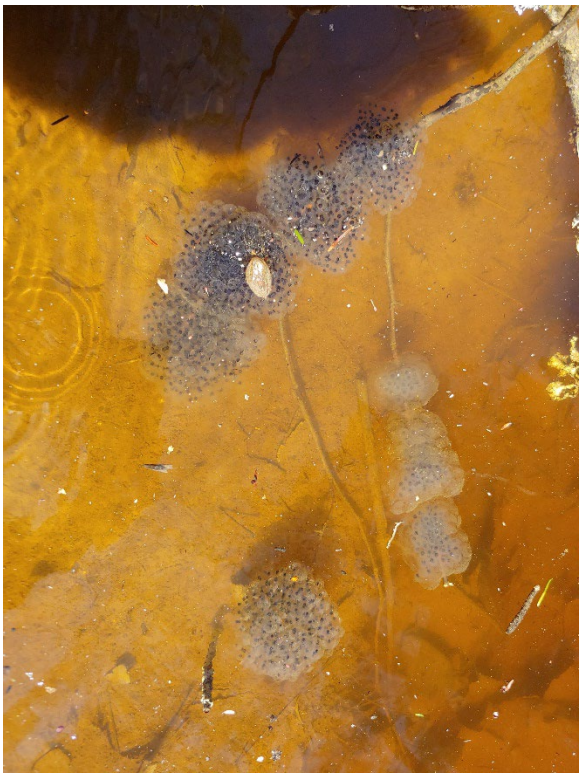

Photo 5. Wood frog (*Lithobates sylvaticus*) egg masses in unnatural vernal pool NXG-CP-1, 4/21/20.

Photo 6. Unnatural vernal pool NXG-CP-6, 4/23/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 7. Wood frog egg masses in unnatural vernal pool NXG-CP-6, 4/23/20.

Photo 8. Unnatural vernal pool NXG-CP-7, 4/23/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 9. Unnatural vernal pool NXG-CP-11, 4/23/20.

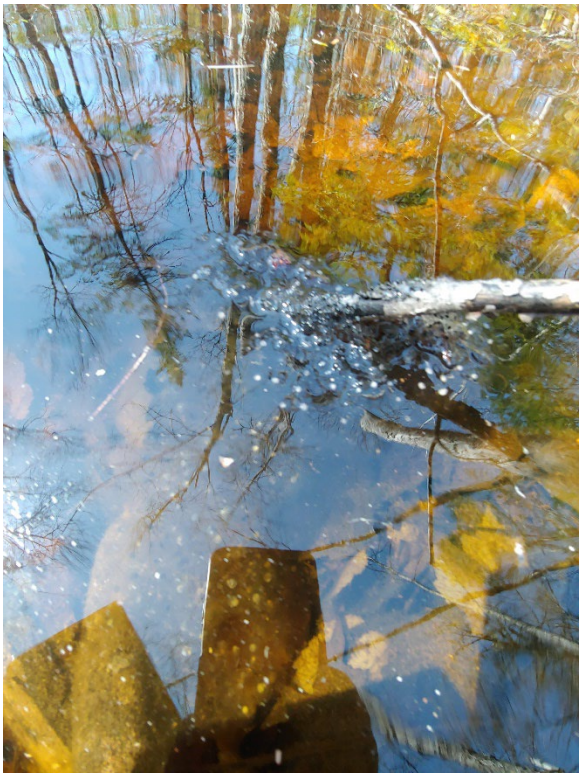

Photo 10. Wood frog egg masses in unnatural vernal pool NXG-CP-11, 4/23/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 11. Unnatural vernal pool NXG-CP-12, 4/23/20.

Photo 12. Spotted salamander egg mass in unnatural vernal pool NXG-CP-12, 4/23/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

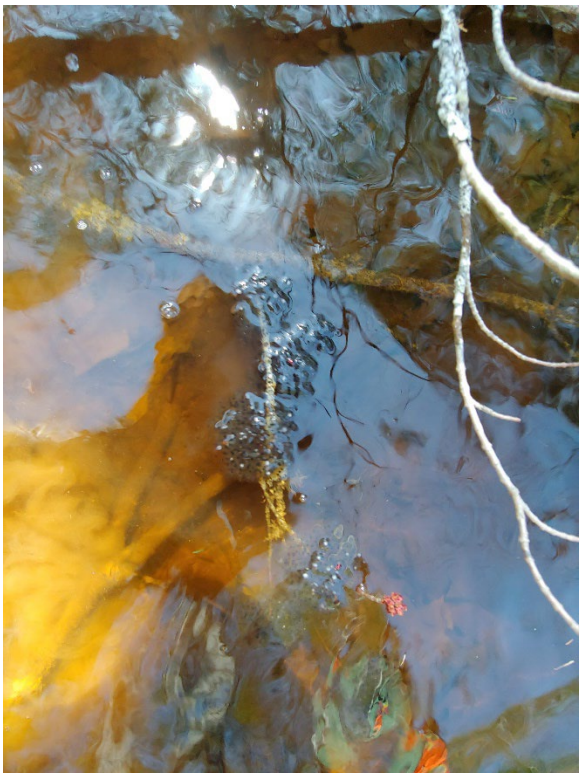

Photo 13. Wood frog egg masses in unnatural vernal pool NXG-CP-12, 4/23/20.

Photo 14. Unnatural vernal pool NXG-CP-13, 4/23/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 15. Spotted salamander egg masses in unnatural vernal pool NXG-CP-13, 4/23/20.

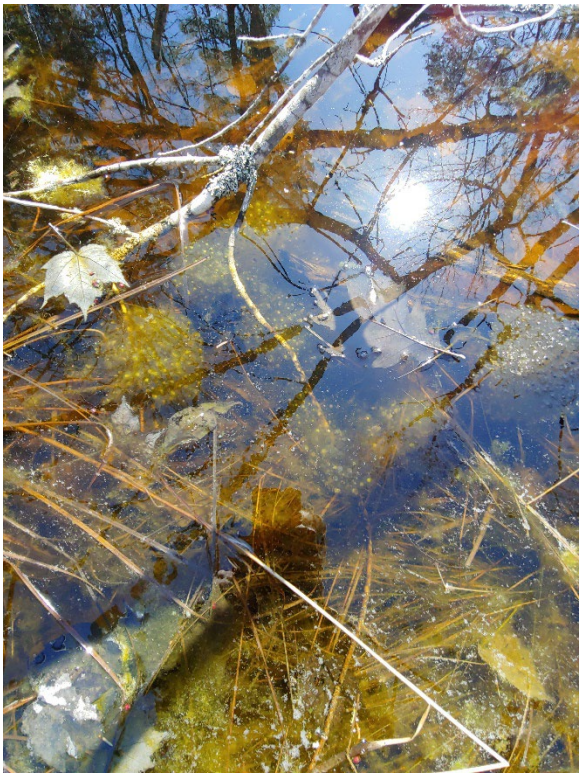

Photo 16. Wood frog egg masses in unnatural vernal pool NXG-CP-13, 4/23/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 17. Natural vernal pool NXG-VP-3, 4/22/20.

Photo 18. Natural vernal pool NXG-VP-3, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 19. Natural vernal pool NXG-VP-3, 4/22/20.

Photo 20. Natural vernal pool NXG-VP-3, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 21. Spotted salamander egg mass in natural vernal pool NXG-VP-3, 4/22/20.

Photo 20. Wood frog egg mass in natural vernal pool NXG-VP-3, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

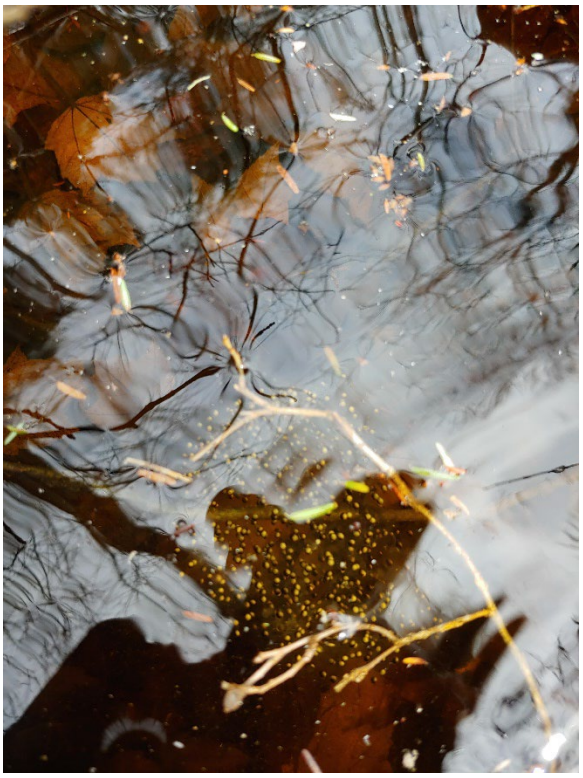

Photo 21. Wood frog egg masses in natural vernal pool NXG-VP-3, 4/22/20.

Photo 22. Wood frog egg masses in natural vernal pool NXG-VP-3, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

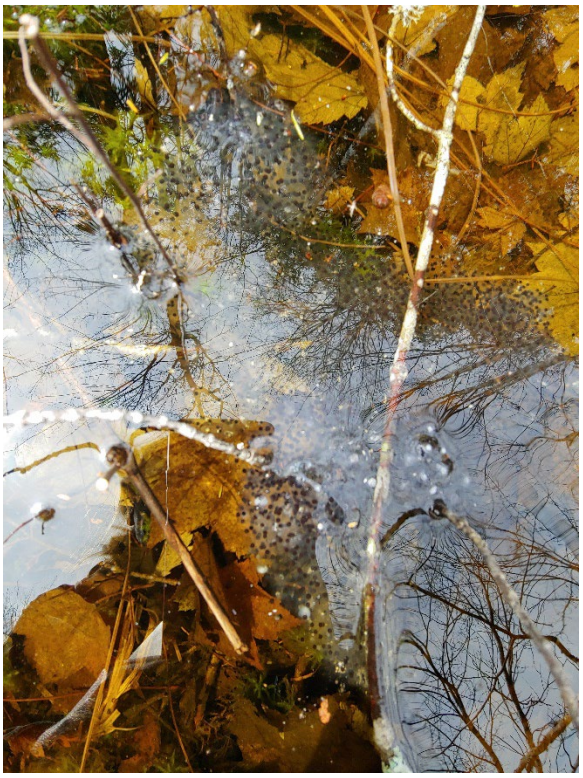

Photo 23. Wood frog egg masses in natural vernal pool NXG-VP-3, 4/22/20.

Photo 24. Natural vernal pool NXG-VP-4, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 25. Spotted salamander egg masses in natural vernal pool NXG-VP-4, 4/22/20.

Photo 26. Natural vernal pool NXG-VP-5, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 27. Natural vernal pool NXG-VP-5, 4/22/20.

Photo 28. Natural vernal pool NXG-VP-5, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 29. Spotted salamander egg mass in natural vernal pool NXG-VP-5, 4/22/20.

Photo 30. Unnatural vernal pool NXG-VP-11, 4/23/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 31. Natural vernal pool NXG-VP-102, 4/28/20.

Photo 32. Spotted salamander egg mass in natural vernal pool NXG-VP-102, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 33. Unnatural vernal pool SAD-CP-7, 4/21/20.

Photo 34. Wood frog egg masses in unnatural vernal pool SAD-CP-7, 4/21/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 35. Unnatural vernal pool SAD-CP-10, 4/21/20.

Photo 36. Wood frog egg masses in unnatural vernal pool SAD-CP-10, 4/21/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 37. Unnatural vernal pool SAD-CP-12, 4/22/20.

Photo 38. Spotted salamander egg masses in unnatural vernal pool SAD-CP-12, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

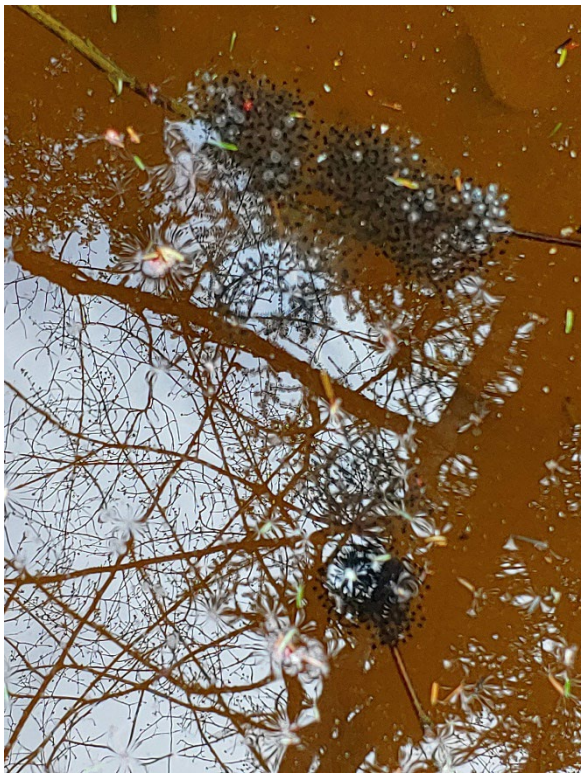

Photo 39. Wood frog egg masses in unnatural vernal pool SAD-CP-12, 4/22/20.

Photo 40. Unnatural vernal pool SAD-CP-13, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

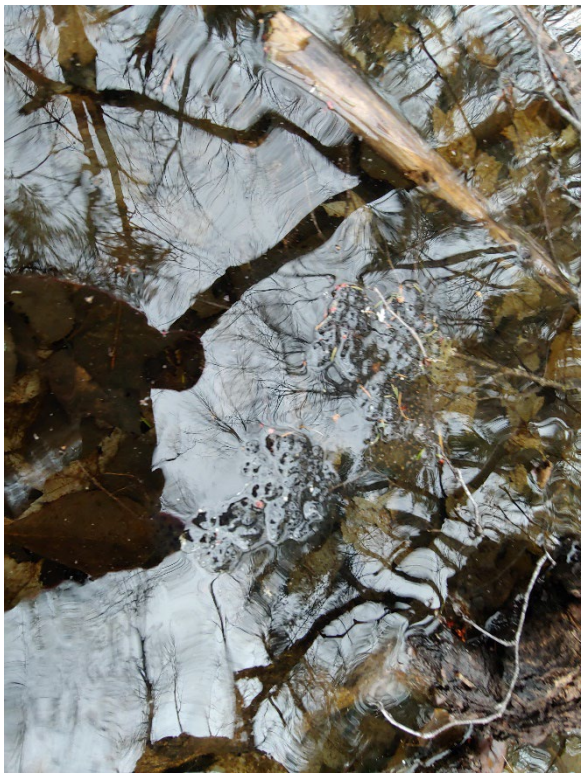

Photo 41. Wood frog egg masses in unnatural vernal pool SAD-CP-13, 4/22/20.

Photo 42. Unnatural vernal pool SAD-CP-16, 4/23/20.

Photo 43. Wood frog egg masses in unnatural vernal pool SAD-CP-16, 4/23/20.

Photo 44. Wood frog egg masses in unnatural vernal pool SAD-CP-16, 4/23/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 45. Unnatural vernal pool SAD-CP-17, 4/23/20.

Photo 46. Unnatural vernal pool SAD-CP-18, 4/23/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 47. Unnatural vernal pool SAD-CP-19, 4/24/20.

Photo 48. Natural vernal pool SAD-VP-1, 5/6/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 49. Spotted salamander egg mass in natural vernal pool SAD-VP-1, 5/6/20.

Photo 50. Spotted salamander egg mass in natural vernal pool SAD-VP-1, 5/6/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 51. Natural vernal pool SAD-VP-6, 4/21/20.

Photo 52. Natural vernal pool SAD-VP-7, 4/21/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 53. Spotted salamander egg masses in natural vernal pool SAD-VP-7, 4/21/20.

Photo 54. Wood frog egg masses in natural vernal pool SAD-VP-7, 4/21/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 55. Wood frog egg masses in natural vernal pool SAD-VP-9, 4/28/20.

Photo 56. Wood frog egg mass in natural vernal pool SAD-VP-9, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 57. Spotted salamander egg masses in natural vernal pool SAD-VP-9, 4/28/20.

Photo 58. Spotted salamander egg mass in natural vernal pool SAD-VP-9, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 59. Spotted salamander egg mass in natural vernal pool SAD-VP-9, 4/28/20.

Photo 60. Natural vernal pool SAD-VP-10, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 61. Natural vernal pool SAD-VP-10, 4/28/20.

Photo 62. Natural vernal pool SAD-VP-10, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 63. Natural vernal pool SAD-VP-10, 4/28/20.

Photo 64. Blue spotted salamander (*Ambystoma laterale*) egg masses in natural vernal pool SAD-VP-10, 4/28/20.

Photo 65. Blue spotted salamander (*Ambystoma laterale*) egg masses in natural vernal pool SAD-VP-10, 4/28/20.

Photo 66. Blue spotted salamander egg masses in natural vernal pool SAD-VP-10, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

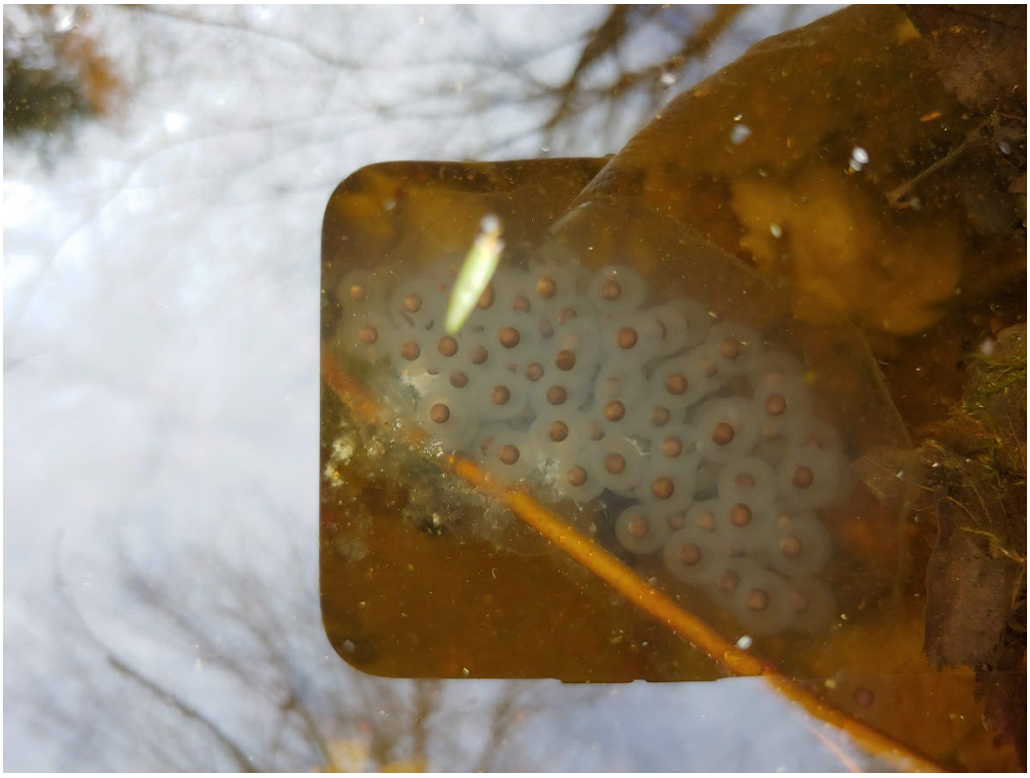

Photo 67. Spotted salamander egg mass in natural vernal pool SAD-VP-10, 4/28/20.

Photo 68. Wood frog egg masses in natural vernal pool SAD-VP-10, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 69. Spotted salamander egg mass in natural vernal pool SAD-VP-11, 4/22/20.

Photo 70. Wood frog egg masses in natural vernal pool SAD-VP-11, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 71. Natural vernal pool SAD-VP-13, 4/22/20.

Photo 72. Spotted salamander egg mass in natural vernal pool SAD-VP-15, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

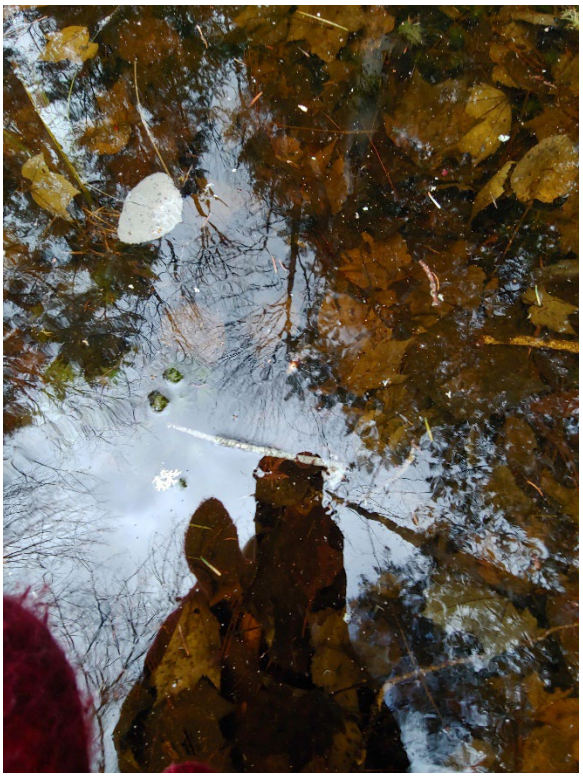

Photo 73. Wood frog egg masses in natural vernal pool SAD-VP-15, 4/22/20.

Photo 74. Natural vernal pool SAD-VP-16, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 75. Natural-modified vernal pool SAD-VP-17, 4/22/20.

Photo 76. Wood frog egg mass in natural-modified vernal pool SAD-VP-17, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 77. Spotted salamander frog egg masses in natural vernal pool SAD-VP-18, 4/24/20.

Photo 78. Natural vernal pool SAD-VP-101, 4/25/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 79. Wood frog egg mass in natural vernal pool SAD-VP-101, 4/24/20.

Photo 80. Wood frog egg mass in natural vernal pool SAD-VP-101, 4/24/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 81. Natural vernal pool SAD-VP-102, 4/25/20.

Photo 82. Natural vernal pool SAD-VP-102, 4/25/20.

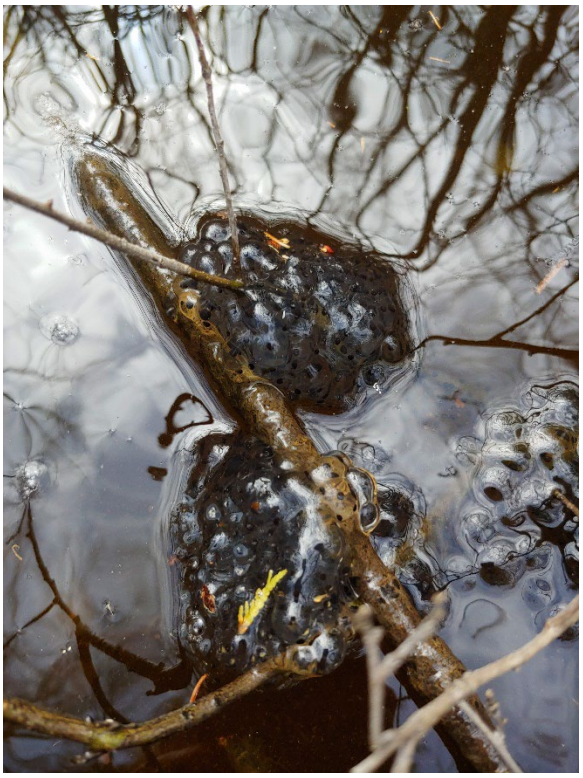

Photo 83. Wood frog egg masses in natural vernal pool SAD-VP-102, 4/25/20.

Photo 84. Wood frog egg masses in natural vernal pool SAD-VP-102, 4/25/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 85. Natural vernal pool SAD-VP-103, 4/28/20.

Photo 86. Spotted salamander egg masses in natural vernal pool SAD-VP-103, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 87. Wood frog egg masses in natural vernal pool SAD-VP-103, 4/28/20.

Photo 88. Natural vernal pool SAD-VP-104, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 89. Spotted salamander egg mass in natural vernal pool SAD-VP-104, 4/28/20.

Photo 90. Wood frog egg masses in natural vernal pool SAD-VP-104, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 91. Wood frog egg mass in natural vernal pool SAD-VP-104, 4/28/20.

Photo 92. Natural vernal pool SAD-VP-105, 4/29/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 93. Natural vernal pool SAD-VP-105, 4/29/20.

Photo 94. Natural vernal pool SAD-VP-105, 4/29/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 95. Natural vernal pool SAD-VP-105, 4/29/20.

Photo 96. Spotted salamander egg mass natural vernal pool SAD-VP-105, 4/29/20.

Photo 97. Wood frog egg masses natural vernal pool SAD-VP-105, 4/29/20.

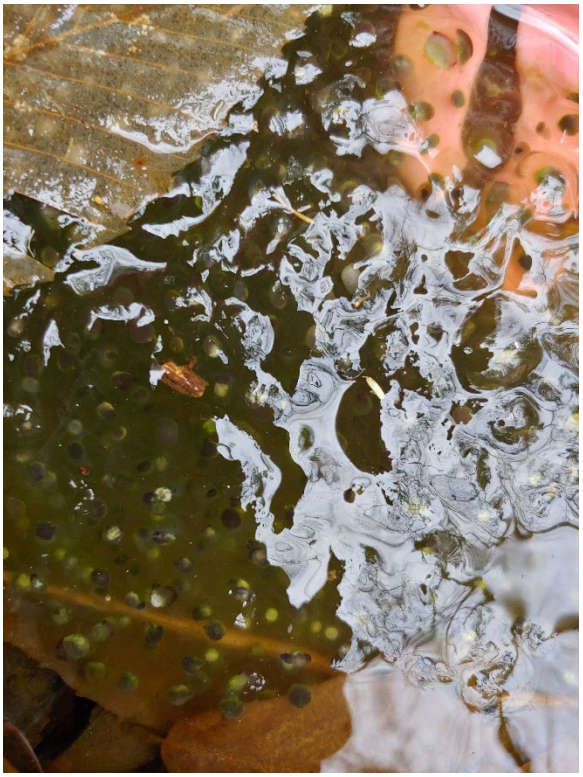

Photo 98. Wood frog egg masses natural vernal pool SAD-VP-105, 4/29/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 99. Natural-modified vernal pool SAD-VP-106, 4/28/20.

Photo 100. Natural-modified vernal pool SAD-VP-106, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 101. Natural-modified vernal pool SAD-VP-106, 4/28/20.

Photo 102. Natural-modified vernal pool SAD-VP-106, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 103. Spotted salamander egg masses in natural-modified vernal pool SAD-VP-106, 4/28/20.

Photo 104. Wood frog egg masses in natural-modified vernal pool SAD-VP-106, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 105. Natural vernal pool SAD-VP-107, 4/28/20.

Photo 106. Natural vernal pool SAD-VP-107, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 107. Spotted salamander egg masses in natural vernal pool SAD-VP-107, 4/28/20.

Photo 108. Spotted salamander egg masses in natural vernal pool SAD-VP-107, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 109. Wood frog egg masses in natural vernal pool SAD-VP-107, 4/28/20.

Photo 110. Wood frog egg masses in natural vernal pool SAD-VP-107, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 111. Natural vernal pool SAD-VP-119, 5/5/20.

Photo 112. Natural vernal pool SAD-VP-119, 5/5/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 113. Spotted salamander egg masses in natural vernal pool SAD-VP-119, 5/5/20.

Photo 114. Spotted salamander egg masses in natural vernal pool SAD-VP-119, 5/5/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 115. Unnatural vernal pool SAD-CP-102, 4/21/20.

Photo 116. Natural vernal pool SAD-VP-2, 5/6/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

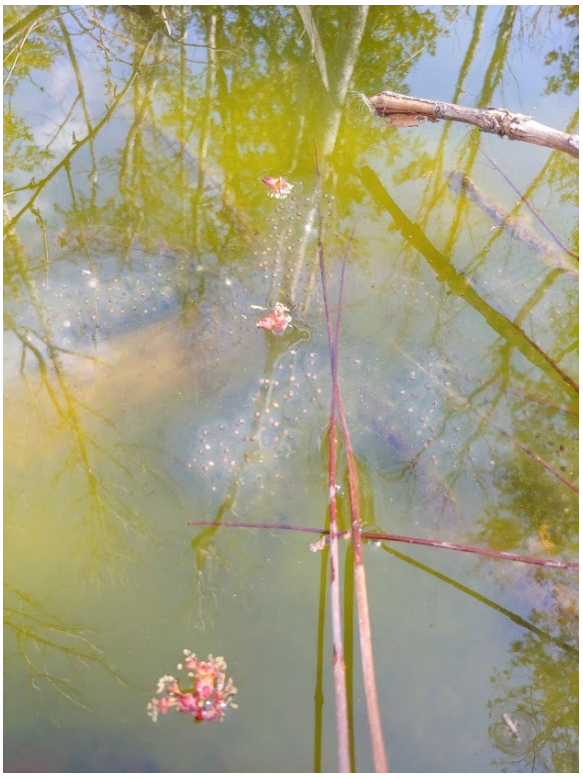

Photo 117. Spotted salamander egg masses in natural vernal pool SAD-VP-2, 5/6/20.

Photo 118. Natural vernal pool SAD-VP-3, 5/6/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 119. Spotted salamander egg masses in natural vernal pool SAD-VP-3, 5/6/20.

Photo 120. Natural vernal pool SAD-VP-4, 5/6/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 121. Natural-modified vernal pool SAD-VP-5, 5/6/20.

Photo 122. Spotted salamander egg mass in natural-modified vernal pool SAD-VP-5, 5/6/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 123. Natural-modified vernal pool SAD-VP-8, 4/21/20.

Photo 124. Spotted salamander egg masses in natural-modified vernal pool SAD-VP-8, 4/21/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 125. Wood frog egg mass in natural-modified vernal pool SAD-VP-8, 4/21/20.

Photo 126. Natural vernal pool SAD-VP-9, 4/28/20.

Photo 127. Spotted salamander egg masses in natural vernal pool SAD-VP-9, 4/28/20.

Photo 128. Wood frog egg mass in natural vernal pool SAD-VP-9, 4/28/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 129. Spotted salamander egg masses in natural vernal pool SAD-VP-13, 4/22/20.

Photo 130. Spotted salamander egg masses in natural vernal pool SAD-VP-16, 4/22/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 131. Natural vernal pool SAD-VP-116, 4/30/20.

Photo 132. Spotted salamander egg masses in natural vernal pool SAD-VP-116, 4/30/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 133. Natural vernal pool SAD-VP-117, 4/30/20.

Photo 134. Spotted salamander egg mass in natural vernal pool SAD-VP-117, 4/30/20.

THREE CORNERS SOLAR – REPRESENTATIVE VERNAL POOL PHOTOS

Photo 135. Natural-modified vernal pool SAD-VP-118, 4/30/20.

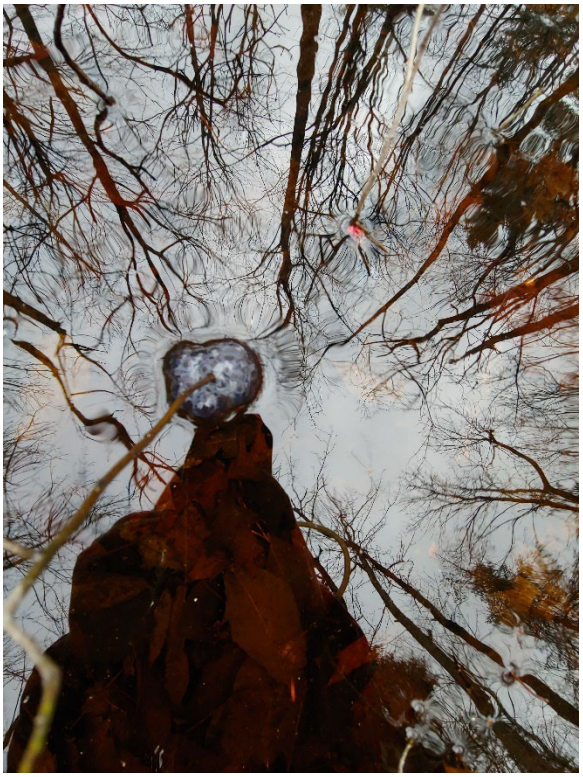

Photo 136. Spotted salamander egg mass in natural-modified vernal pool SAD-VP-118, 4/30/20.