# **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



Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and/or completeness of the data.





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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







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# Exhibits

Exhibit A: Resource Map Exhibit B: Resource Photos Exhibit C: NRCS Soils Map Exhibit D: USACE Forms Exhibit E: MDIFW Vernal Pool Memo Submittal



# 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 major forest types. The ecoregion has a relatively high population density for Maine, with an extensive pattern of settlement and roads.<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> Ecoregions of New England http://ecologicalregions.info/data/vt/new\_eng\_front.pdf









## 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)<sup>2</sup>, Natural Resources Conservation Service (NRCS) Web Soil Survey<sup>3</sup>, Beginning with Habitat data (BWH)<sup>4</sup>, 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<sup>5</sup> and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, v2.0<sup>6</sup>. 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)<sup>7</sup>. 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 alphanumeric 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<sup>8</sup>. 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.

<sup>8</sup> USACE Highway Method

<sup>&</sup>lt;sup>2</sup> U.S. Fish and Wildlife Service National Wetland Inventory Mapper <u>https://www.fws.gov/wetlands/data/mapper.html</u>

<sup>&</sup>lt;sup>3</sup> U.S NRCS Web Soil Survey <u>https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm</u>

<sup>&</sup>lt;sup>4</sup> Maine Beginning with Habitat Online Mapper <u>https://webapps2.cgis-solutions.com/beginningwithhabitat/</u>

<sup>&</sup>lt;sup>5</sup> US Army Corps of Engineers Wetland Delineation Manual (1987)

https://www.nae.usace.army.mil/Portals/74/docs/regulatory/JurisdictionalLimits/wlman87.pdf

<sup>&</sup>lt;sup>6</sup> 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

<sup>&</sup>lt;sup>7</sup> Natural Resource Protection Act, Maine Statute Title 38, Chapter 3, subchapter 1, Article 5-A, §480-B <u>http://www.mainelegislature.org/legis/statutes/38/title38sec480-B.html</u>

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.



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%
то	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%

#### Table 1. NRCS Soil Summary Table

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.



Wetland ID Wetland Type <sup>9</sup> WOSS <sup>10</sup>			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	VR-01 Yes; Contains areas greater than 20,000 sq.ft. of open PFO/PEM water and/or emergent vegetation and Significant Vernal Pool			
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	MR-05 PFO Potentially, wetland falls within mapped Deer Wintering Area-Consultation with MDFIW suggests this is not DWA.		0.42	
W-MR-06	W-MR-06 PFO Potentially, wetland falls within mapped Deer Win Area-Consultation with MDFIW suggests this is not		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	PFO Potentially, wetland falls within mapped Deer Wintering Area-Consultation with MDFIW suggests this is not DWA.		
W-MR-11	R-11         Potentially, wetland falls within mapped Deer Wintering           PFO         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	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	

#### Table 2. Wetland Summary Table

<sup>&</sup>lt;sup>9</sup> PFO-Palustrine Forested Wetland, PSS-Palustrine Scrub-Shrub Wetland, PEM- Palustrine Emergent Wetland (Cowardin et al 1979)

<sup>&</sup>lt;sup>10</sup> WOSS-Wetland of Special Significance as defined in the Natural Resources Protection Act: Chapter 310



Wetland ID	Wetland Type <sup>9</sup>	WOSS <sup>10</sup>	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	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			
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	S Yes; Contains areas greater than 20,000 sq.ft. of open water and/or emergent vegetation			
W-SK-05	PFO/PSS	Yes; Contains areas greater than 20,000 sq.ft. of open water and/or emergent vegetation			
W-SK-06	PFO/PSS	No	0.27		
W-MR-101 PFO/PSS No					
Total Area (Acres) 5					

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).

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

#### Table 2. Stream Summary Table

#### 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.

<sup>&</sup>lt;sup>11</sup> 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** 









# 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)



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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



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



#### 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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## **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.



MAP LEGEND				MAP INFORMATION		
Area of Int	erest (AOI) Area of Interest (AOI)	8	Spoil Area Stony Spot	The soil surveys that comprise your AOI were mapped at 1:20,000.		
Soils	Soil Map Unit Polygons Soil Map Unit Lines	p Unit Polygons Wet Spot Please rely on the b weasurements.	Please rely on the bar scale on each map sheet for map measurements.			
Special	Soil Map Unit Points Point Features	۵ ••	Other Special Line Features	Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)		
() ()	Blowout Borrow Pit	Water Feat	r Features Streams and Canals Maps fr projectic sportation distance	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		
× ◇ ×	Clay Spot Closed Depression Gravel Pit		Rails Interstate Highways	Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.		
: •	Gravelly Spot Landfill	~	US Routes     Major Roads     Local Roads	This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.		
۸. طله	Lava Flow Marsh or swamp	Backgrour	nd Aerial Photography	Survey Area Data: Version 19, May 29, 2020 Soil map units are labeled (as space allows) for map scales		
% 0 0	Mine or Quarry Miscellaneous Water Perennial Water			Date(s) aerial images were photographed: Jul 17, 2010—Aug 31, 2010		
× +	Rock Outcrop Saline Spot			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		
.∴ ⊕ ◊	Severely Eroded Spot	ly Eroded Spot		shifting of map unit boundaries may be evident.		
\$ Ø	Slide or Slip Sodic Spot					

## **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%		
МоА	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%		
ТО	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**
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: <u>Wood ridge very stony fine sandy loam</u>	NWI Classification: PFO
Are climatic/hydrologic conditions on the site typical for this time of year?	/es No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly of	Jisturbed? Are "Normal Circumstances" present? Yes 🗹 No 🗖
Are Vegetation, Soil, or Hydrology naturally prot	olematic (If needed, explain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map showing same	bling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes  No	Is the Sampled Area
Hydric Soil Present? Yes  No	within a Wetland Yes No
Wetland Hydrology Present? Yes D No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.) Previously logged/ old skidder trails	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Le	aves (B9) Drainage Patterns (B10)
High Water Table (A2)	13) <u> </u>
□ Saturation (A3) □ Mari Deposits (B1	Odor (C1)
Sediment Deposits (B2)	pres on Living Roots (C3)
Drift Deposits (B3)	uced Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	uction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5)	e (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) U Other (Explain in	Remarks) Microtopographic Relier (D4)
Field Observations:	
Surface Water Present? Yes No V Depth (inches):	
Water Table Present?     Yes □ No □ □ Depth (inches):       Saturation Present?     Yes □ No □ □ Depth (inches):	Wetland Hydrology Present? Yes D No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	revious inspections), if available:
Remarks:	

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

Tree Stratum (Plot size: <u>30 foot radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
Betula alleghaniensis (Yellow Birch) (FAC) Pinus strobus (Eastern White Pine) (FACU)	<u>30</u> <u>20</u>	<u>YES</u> <u>YES</u>	<u>FAC</u> FACU	Number of Dominant Species That Are OBL, FACW, or FAC:3(A)
Fagus grandifolia (American Beech) (FACU) Picea rubens (Red Spruce) (FACU)	<u>5</u> 5	<u>NO</u> NO		Total Number of Dominant Species Across All Strata:6(B)
Acer rubrum (Red Maple) (FAC)	<u>10</u>	<u>NO</u>		Percent of Dominant Species That Are Obl, FACW, or FAC: <u>50%</u> (A/B)
Sapling/Shrub Stratum (Plot size: 15 foot radius )	<u>70    </u> =	= Total Cov	er	Prevalence Index worksheet:
Acer rubrum (Red Maple) (FAC)	10	YES	FAC	Total % Cover of: Multiply by:
Fagus grandifolia (American Beech) (FACU)	<u>10</u>	YES	FACU	FACW species $0 \times 2 = 0$
Ficea Tuberis (Red Spidle) (FACO)	<u>5</u> 25 -	- Total Cov	<u>r ACO</u>	FAC species 3 $\times 3 = 9$ FACU species 3 $\times 4 = 12$
Herb Stratum (Plot size: 5 foot radius )	=		CI	UPL species $0 \times 5 = 0$
Cornus canadensis (Canadian Bunchberry) (FAC)	85	YES	FAC	Column Totals: <u>6</u> (A) <u>21</u> (B)
Medeola virginiana (Indian Cucumber-Root) (FACU)	2	<u>NO</u>		Prevalence Index = B/A =3.5
	=	= Total Cov	ver	Hydrophytic Vegetation Indicators:
Woody Vine Stratum (Plot size:)				Rapid Test for Hydrophytic Vegetation
	=	= Total Cov	rer	$\Box  \text{Dominance Test is } >50\%$
				Morphological Adaptations <sup>1</sup> (Provide supporting
				data in Remarks or on a separate sheet)
				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 <mark>No </mark>
Remarks: (Include photo numbers here or on a separate s	sheet.)			

OIL												Sampling Point: <u>PLOT-W-MR-1-UP</u>
Profile Des	cription	: (Descri	be to	the dep	oth need	ed to do	ocumen	t the ind	icator or c	onfirm th	e absenc	nce of indicators.)
Depth	0 <del>.</del>	Ma	atrix	0/		- (	Rec	lox Feat		. 2	<del></del> ;	
(inches)	Color	(moist)		%	Colo	<u>r (moist)</u>	)	%	Туре'	Loc	Textur	ure Remarks
)-10	10YR	5/3									L	Refusal at 10 inches
Гуре: С=	Concen	itration, E	D=Dep	oletion,	RM=Re	duced N	Matrix, (	CS=Cove	ered or Co	ated Sa	nd Grains	ns. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Hydric Soi       Histos       Histic       Black       Hydro       Stratif       Deple       Thick       Sandy       Sandy       Stripp       Stripp	il Indica sol (A1) Epiped Histic ( ogen Su fied Lay ted Bel Dark So y Mucky y Gleyee y Redox bed Mati	ators: on (A2) A3) Ifide (A4) ers (A5) ow Dark urface (A / Mineral d Matrix c (S5) rix (S6)	) Surfac (12) (S1) (S4)	ce (A11	)		Polyvalu /ILRA 14 Thin Dar Loamy N Coamy G Depleted Redox D Depleted Redox D	e Below 49B) k Surfac Mucky Mi Sleyed M I Matrix ( ark Surf I Dark S epressic	Surface ( e (S9) (LF neral (F1) atrix (F2) (F3) ace (F6) urface (F7 ons (F8)	S8) (LRF R R, ML (LRR K )	RA .L)	Indicators for Problematic Hydric Soils":  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, Dark Surface (S7) (LRR K, L) Dark Surface (S7) (LRR K, L) Dolyvalue Below Surface (S8) (LRR K, L) Diron-Manganese Masses (F12) (LRR K, L) Diedmont Floodplain Soils (F19) (MLRA 14 Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Others (Fabric 16 and 1
Dark S	of hydr	ophytic v	RR R, vegeta	MLRA	149B) d wetlar	nd hydrc	ology m	ust be pi	esent, un	less dist	urbed or p	Other (Explain in Remarks) r problematic.
Restrictive	Layer (	if observ	ed):									
Type: <u>F</u>	Rock	10				_						Hydric Soil Present? Yes 🗌 No 🔽
Remarks:	10 inch		ck									





Photo:



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 pro	blematic (If needed, explain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map showing sam	oling point locations, transects, important features, etc.
Hydrophytic Vegetation Present?       Yes       No       Image: Constraint of the sector of the se	Is the Sampled Area within a Wetland Yes No If yes, optional Wetland Site ID:
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soli Cracks (B6)
✓     ✓ </td <td>313)</td>	313)
Saturation (A3)	15) Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide	Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2)     Oxidized Rhizosphe     Oxidized Rhizosphe     Drift Deposits (B3)     Presence of Red	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Red	uction in Tilled Soils (C6)
□ Iron Deposits (B5) □ Thin Muck Surfac	ce (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in	Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)  Field Observations:	FAC-Neutral Test (D5)
Surface Water Present? Yes No V Depth (inches):	
Water Table Present? Yes Vo Depth (inches):	
Saturation Present? Yes ✓ No L Depth (inches): (includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	previous inspections), if available:
Remarks:	

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

Tree Stratum (Plot size: 30 foot radius )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
Acer rubrum (Red Maple) (FAC)	5	YES	FAC	Number of Dominant Species	
Thuja occidentalis (Eastern Arborvitae) (FACW)	<u>5</u> 3	YES	FACW	That Are OBL, FACW, or FAC: 5	(A)
	<u>v</u>			Total Number of Dominant	
	8:	= Total Cov	/er	Species Across All Strata: 5	(B)
Sapling/Shrub Stratum (Plot size: <u>15 foot radius</u> )				Percent of Dominant Species	
Acer rubrum (Red Maple) (FAC)	5	YES	FAC	That Are Obl, FACW, or FAC: 100%	(A/B)
Alnus incana (Speckled Alder) (FACW)	5	<u>YES</u>	FACW	Prevalence Index worksheet	
Picea mariana (Black Spruce) (FACW)	<u>2</u>	<u>NO</u>		Total % Cover of: Multiply by	:
	12 =	= Total Cov	ver	OBL species ×1 =	
Herb Stratum (Plot size: 5 feet radius )				FACW species ×2 =	
				FAC species × 3 =	
Impatiens capensis (Spotted Touch-Me-Not) (FACW)	<u>3</u>	NO		FACU species × 4 =	
Onoclea sensibilis (Sensitive Fern) (FACW)	<u>5</u>	NO		UPL species × 5 =	
Carex stricts (Liptight Sedge) (OBL)	<u>10</u>	VES	OBI	Column Totals: (A)	(B)
	<u>100</u>	115		Prevalence Index = $B/A$ =	
	<u>118</u> =	= Total Cov	/er		
Woody Vine Stratum (Plot size:)				Hydrophytic Vegetation Indicators:	
				Rapid Test for Hydrophytic Vegetation	
	·	= Total Cov	/er	$\square$ Dominance Test is >50%	
				$\square \text{ Proveloped Index is } \leq 3.0^1$	
				Morphological Adaptations <sup>1</sup> (Provide supr	orting
				data in Remarks or on a separate sheet)	oning
				Problematic Hydrophytic Vegetation <sup>1</sup> (Exc	olain)
					,
				Indicators of hydric soil and wetland hydrology be present, unless disturbed or problematic.	/ must
				Definitions of Vegetation Strata:	
				Tree – Woody plants 3 in. (7.6 cm) or more in a tbreast height (DBH), regardless of height.	diameter
				Sapling/shrub – Woody plants less than 3 in. D and greater than 3.28 ft (1 m) tall.	ЪВН
				Herb – All herbaceous (non-woody) plants, reg	jardless
					00.41 in
				height.	28 it in
				Hydrophytic	
				Present? Yes <u></u> No <u></u>	_
Remarks: (Include photo numbers here or on a separate s	sheet.)			1	

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)         Depth       Matrix       Redox Features         (inches)       Color (moist)       %       Type <sup>1</sup> Loc <sup>2</sup> Texture         0-20       10YR       2/1       Organics         *       Type:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location         *       Type:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location         Histosol (A1)        Polyvalue Below Surface (S8) (LRR R,        2 cm Muc         Histics Epipedon (A2)       MLRA 149B)        Coast Pra        Coast Pra         Black Histic (A3)	Remarks PL=Pore Lining, M=Matrix. Oblematic Hydric Soils <sup>3</sup> : ( (A10) (LRR K, L, MLRA 149B)
Depth (inches)       Matrix       Redox Features Toyle         0-20       10YR       2/1       Organics         'Type:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.       2Location         'Type:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.       2Location         Histosol (A1)       Polyvalue Below Surface (S8) (LRR R, Histosol (A2)       2 cm Muc Coast Pra         Histosol (A2)       MLRA 149B)       Coast Pra         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1) (LRR K, L)       Dark Surface (S9)         Depleted Below Dark Surface (A11)       Depleted Matrix (F2)       Polyvalue Sufface (F6)         Thic Dark Surface (A12)       Redox Depressions (F8)       Thin Dark Surface (F6)         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F6)       Inon-Mang Piedmont         Sandy Gleyed Matrix (S6)       Redox Depressions (F8)       Mesic Sp	PL=Pore Lining, M=Matrix.
Viscol Color (moist)       %       Color (moist)       %       Type <sup>1</sup> Loc <sup>2</sup> Texture         20       10YR       2/1       Organics         Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location         Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location         Indicators:       Polyvalue Below Surface (S8) (LRR R, 100 Coast Price)       Indicators for Picture)         Histosol (A1)       Polyvalue Below Surface (S8) (LRR R, 100 Coast Price)       Coast Price)         Histosol (A1)       NLRA 149B)       Coast Price)         Black Histic (A3)       Thin Dark Surface (S9) (LRR R, MLRA 5 cr Mucc)       Scr Mucc)         Histosol (A1)       Loamy Mucky Mineral (F1) (LRR K, L)       Dark Surface (S9)         Stratified Layers (A5)       Loamy Mucky Mineral (F1) (LRR K, L)       Dark Surface (A11)         Stratified Layers (A5)       Loamy Gleyed Matrix (F2)       Polyvalue         Thic Dark Surface (A12)       Redox Dark Surface (F6)       Inron-Mang         Thick Dark Surface (A12)       Redox Dark Surface (F7)       Piedmont         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       Piedmont         Sandy Redox (S5)       Redox Depressions (F8)       Mesic Sp         Stripped Matrix (S6)       Very	PL=Pore Lining, M=Matrix.
20       10YR       2/1       Organics         Fype:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location         Fype:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location         Histosol (A1)       Polyvalue Below Surface (S8) (LRR R, HIRA)       2 cm Muc         Histic Epipedon (A2)       Thin Dark Surface (S9) (LRR R, MLRA)       Coast Pra         Black Histic (A3)       Thin Dark Surface (S9) (LRR R, MLRA)       Dark Surface (S9)         Stratified Layers (A5)       Loamy Mucky Mineral (F1) (LRR K, L)       Dark Surface (A11)         Depleted Below Dark Surface (A12)       Redox Dark Surface (F6)       Inform-Marg         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       Piedmont         Sandy Redox (S5)       Redox Depressions (F8)       Mesic Sp         Stratified Layerd Matrix (S4)       Redox Depressions (F8)       Mesic Sp	PL=Pore Lining, M=Matrix.
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location         ydric Soil Indicators:	PL=Pore Lining, M=Matrix.
ydric Soil Indicators:       Indicators for P         Histosol (A1)       Polyvalue Below Surface (S8) (LRR R,       2 cm Muc         Histic Epipedon (A2)       MLRA 149B)       Coast Pra         Black Histic (A3)       Thin Dark Surface (S9) (LRR R, MLRA       5 cm Muc         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1) (LRR K, L)       Dark Surface (A11)         Depleted Below Dark Surface (A11)       Depleted Matrix (F2)       Polyvalue         Thick Dark Surface (A12)       Redox Dark Surface (F6)       Iron-Mang         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       Piedmond         Sandy Redox (S5)       Redox Depressions (F8)       Mesic Sp         Stripped Matrix (S6)       Very Sha       Very Sha	oblematic Hydric Soils <sup>3</sup> : < (A10) (LRR K, L, MLRA 149B)
ydric Soil Indicators:       Indicators for P         Histosol (A1)       Polyvalue Below Surface (S8) (LRR R, 2 cm Muc         Histic Epipedon (A2)       MLRA 149B)       Coast Pra         Black Histic (A3)       Thin Dark Surface (S9) (LRR R, MLRA 5 cm Muc       5 cm Muc         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1) (LRR K, L)       Dark Surface (A11)         Depleted Below Dark Surface (A11)       Depleted Matrix (F2)       Polyvalue         Thick Dark Surface (A12)       Redox Dark Surface (F6)       Iron-Mang         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       Piedmont         Sandy Gleyed Matrix (S4)       Redox Depressions (F8)       Mesic Sp         Sandy Redox (S5)       Very Sha       Very Sha	oblematic Hydric Soils <sup>3</sup> : < (A10) (LRR K, L, MLRA 149B)
ydric Soil Indicators:       Indicators for P         I Histosol (A1)       Polyvalue Below Surface (S8) (LRR R, MLRA 149B)       1 2 cm Muc         Black Histic (A3)       Thin Dark Surface (S9) (LRR R, MLRA       5 cm Muc         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1) (LRR K, L)       Dark Surface         Stratified Layers (A5)       Loamy Gleyed Matrix (F2)       Polyvalue         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)       Thin Dark         Thick Dark Surface (A12)       Redox Dark Surface (F6)       Iron-Mang         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       Piedmont         Sandy Redox (S5)       Redox Depressions (F8)       Mesic Sp         Stripped Matrix (S6)       Very Sha	oblematic Hydric Soils <sup>3</sup> : < (A10) (LRR K, L, MLRA 149B)
Indicators:       Indicators:       Indicators for P         I Histosol (A1)       Polyvalue Below Surface (S8) (LRR R, MLRA 149B)       1 Coast Pra         Black Histic (A3)       Thin Dark Surface (S9) (LRR R, MLRA       5 cm Muc         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1) (LRR K, L)       Dark Surf         Stratified Layers (A5)       Loamy Gleyed Matrix (F2)       Polyvalue         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)       Thin Dark         Stratified Layers (A5)       Redox Dark Surface (F6)       Iron-Mang         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       Piedmont         Sandy Redox (S5)       Redox Depressions (F8)       Mesic Sp         Stripped Matrix (S6)       Very Sha	oblematic Hydric Soils <sup>3</sup> : < (A10) (LRR K, L, MLRA 149B)
Hydric Soil Indicators:       Indicators:       Indicators for P         Histosol (A1)       Polyvalue Below Surface (S8) (LRR R,       2 cm Muc         Histic Epipedon (A2)       MLRA 149B)       Coast Pra         Black Histic (A3)       Thin Dark Surface (S9) (LRR R, MLRA       5 cm Muc         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1) (LRR K, L)       Dark Surface Surface (A11)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)       Thin Dark         Thick Dark Surface (A12)       Redox Dark Surface (F6)       Iron-Mang         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       Piedmont         Sandy Redox (S5)       Redox Depressions (F8)       Mesic Sp         Stripped Matrix (S6)       Very Sha	oblematic Hydric Soils <sup>3</sup> : < (A10) (LRR K, L, MLRA 149B)
Dark Surface (S7) (LRR R, MLRA 149B) Other (Ex	irie Redox (A16) (LRR K, L, R) (y Peat or Peat (S3) (LRR K, L, F ace (S7) (LRR K, L) Below Surface (S8) (LRR K, L) Surface (S9) (LRR K, L) anese Masses (F12) (LRR K, L, Floodplain Soils (F19) (MLRA 14: hdic (TA6) (MLRA 144A, 145, 145 th Material (TF2) ow Dark Surface (TF12) oblain in Remarks)
Restrictive Laver (if observed):	
Type: Hydric Soil Present?	Yes 🗹 No 🗆
Depth (inches):	

I





Photo:



Project/Site: <u>3 CORNERS</u>	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: 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 Ves No
Are Vegetation, Soil, or Hydrology naturally pro	blematic (If needed, explain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map showing sam	oling point locations, transects, important features, etc.
Hydrophytic Vegetation Present?       Yes       No       Image: Constraint of the sector of the se	Is the Sampled Area within a Wetland Yes No No If yes, optional Wetland Site ID:
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
U Surface Water (A1) Water-Stained Lo	3aves (B9) Drainage Patterns (B10)
Saturation (A3)	15)
Water Marks (B1)	Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizosph	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	uced Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Jotion in Tilled Soils (C6) Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Remarks)
□ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes □ No ✓ Depth (inches): Water Table Present? Yes □ No ✓ Depth (inches):	
Saturation Present? Yes No V Depth (inches):	Wetland Hydrology Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, t	
Remarks:	

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

Tree Stratum (Plot size: <u>30 foot radius</u> )	Absolute <u>% Cover</u>	Dominant Species?	Indicator Status	Dominance Test worksheet:
Pinus strobus (Eastern White Pine) (FACU) Acer rubrum (Red Maple) (FAC)	<u>35</u> 40	<u>YES</u> YES	FACU FAC	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
Abies balsamea (Balsam Fir) (FAC) Fraxinus americana (White Ash) (FACU)	<u>10</u> 10	<u>NO</u> NO		Total Number of Dominant Species Across All Strata:4(B)
	= 95=	= Total Co	/er	Percent of Dominant Species That Are Obl, FACW, or FAC: <u>50</u> (A/B)
Sapling/Shrub Stratum       (Plot size: 15 foot radius )         Fagus grandifolia (American Beech) (FACU)         Abies balsamea (Balsam Fir) (FAC)         Acer rubrum (Red Maple) (FAC)         Quercus rubra (Northern Red Oak) (FACU)         Pinus strobus (Eastern White Pine) (FACU)         Herb Stratum       (Plot size:)         Maianthemum canadense (False Lily-of-the-Valley)	<u>15</u> <u>55</u> <u>5</u> <u>5</u> <u>83</u> =	NO YES NO NO NO = Total Cov	FAC /er FACU	Prevalence Index worksheet:Total % Cover of:Multiply by:OBL species $0$ $\times 1 =$ $0$ FACW species $0$ $\times 2 =$ $0$ FAC species $2$ $\times 3 =$ $6$ FACU species $2$ $\times 4 =$ $8$ UPL species $0$ $\times 5 =$ $5$ Column Totals: $4$ (A) $19$ Prevalence Index = B/A = $4.75$
Pteridium aquilinum (Northern Bracken Fern) (FACU) Veronica prostrata (Prostrate Speedwell) (FAC)	7	<u>NO</u> NO		Hydrophytic Vegetation Indicators:
Woody Vine Stratum (Plot size:)	=	= Total Cov	ver ver	<ul> <li>□ Rapid Test for Hydrophytic Vegetation</li> <li>□ Dominance Test is &gt;50%</li> <li>□ Prevalence Index is ≤3.0<sup>1</sup></li> <li>□ Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> <li>□ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)</li> <li><sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</li> <li>Definitions of Vegetation Strata:</li> <li>Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.</li> <li>Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.</li> <li>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</li> <li>Woody vines – All woody vines greater than 3.28 ft in height.</li> </ul>
Remarks: (Include photo numbers here or on a separate s	sheet.)			Hydrophytic Vegetation Present? Yes No <u>/</u>

SOIL	
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Profile D	escription	: (Describe t	the dept	h needed to de	ocument the	indicator or	confirm th	ne absence	of indicator	s.)			
Depth		Matrix			Redox F	eatures	1 . 0						
(inches)	Color (	moist)	%	Color (moist	) %	Туре		<u>T</u> exture			Remarks	6	
0-2	10YR	4/1						SL					
2-18	7.5YR	5/8						SL					
<sup>1</sup> Type: C	C=Concen	tration, D=D	epletion, F	RM=Reduced N	Matrix, CS=C	Covered or C	Coated Sa	nd Grains.	<sup>2</sup> Locati	on: PL=F	ore Lining,	M=Matrix	κ.
Hydric S	Soil Indica	ators:						In	dicators fo	r Problem	natic Hydri	c Soils <sup>3</sup> :	
Hist	tosol (A1)			P	olyvalue Bel	ow Surface	(S8) (LRF	R,	2 cm №	/luck (A10	) (LRR K, L	, MLRA 1	49B)
	tic Epiped	on (A2)		N	ILRA 149B) Thin Dark Su	face (CO) (I		<b>—</b>		Prairie Re	dox (A16)	(LRR K, L	., R)
	CK HISTIC (/	A3) Ifide (A4)			nin Dark Sui oamy Mucky	Mineral (F	_KK K, IVII 1) (I RR K	_KA _	⊃ Cm N □ Dark S	/IUCKy Pea	at of Peat (3 7) /I RR K	53) (LRR	K, L, K)
	atified Lav	ers (A5)			oamv Gleve	d Matrix (F2	2)	, Ľ) _		lue Below	/ Surface (S	58) (LRR	K. L)
	pleted Belo	ow Dark Sur	face (A11)		epleted Mat	rix (F3)	-,	-	$\square$ Thin D	ark Surfa	ce (S9) (LR	R K, L)	., _/
	ck Dark Su	urface (A12)	( )		edox Dark S	Surface (F6)		_	□ Iron-M	anganese	Masses (F	- 12) (LRR	K, L, R
Sar	ndy Mucky	Mineral (S1	)		epleted Darl	k Surface (F	-7)	-	D Piedm	ont Flood	olain Soils (	F19) (MLF	RA 1498
Sar	ndy Gleyed	d Matrix (S4)	)		edox Depres	ssions (F8)				Spodic (T	A6) (MLRA	144A, 14	15, 149E
□ Sar	ndy Redox	: (S5)						_	□ Red Pa	arent Mate	erial (TF2)		
Stri	pped Matr	ix (S6)						_	□ Very S	shallow Da	ark Surface	(TF12)	
Dar	k Surface	(S7) (LRR F	R, MLRA 14	49B)				_	Other	(Explain ir	n Remarks)		
<sup>3</sup> Indicato	rs of hydro	ophytic vege	etation and	wetland hydro	ology must be	e present, u	inless dist	urbed or pr	oblematic.				
Restrictiv	ve Layer (	if observed)	:										
Type:								H	lydric Soil				
Depth	n (inches):							ŀ	resent?	Yes	; <u> </u>	No	Ľ
Remarks	; , , , , , , , , , , , , , , , , , , ,												
rtomante													



Earthstar Geographics

Photo:



Project/Site: <u>3 CORNERS</u>	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: 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 pro	blematic (If needed, explain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map showing sam	oling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes 🔽 No 🗖	Is the Sampled Area
Hydric Soil Present? Yes Ves No	within a Wetland 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:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Le	eaves (B9) Drainage Patterns (B10)
High Water Table (A2)	313)      Moss Trim Lines (B16)       45)      D
Image: Image	Dry-Season Water Table (C2)
□ Sediment Deposits (B2) □ Oxidized Rhizosph	eres on Living Roots (C3)
Drift Deposits (B3)	uced Iron (C4)
Algal Mat or Crust (B4)	uction in Tilled Soils (C6) Geomorphic Position (D2)
□ Iron Deposits (B5) □ Thin Muck Surface	ce (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in	Remarks)  Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	0
Water Table Present? Yes V No Depth (inches):	
Saturation Present? Yes V No Depth (inches):	0 Wetland Hydrology Present? Yes <u>V</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	 previous inspections), if available:
Remarks:	

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

Tree Stratum (Plot size: <u>30 foot radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
<u>Tsuga canadensis (Eastern Hemlock) (FACU)</u> <u>Acer rubrum (Red Maple) (FAC)</u> <u>Betula alleghaniensis (Yellow Birch) (FAC)</u> <u>Abies balsamea (Balsam Fir) (FAC)</u> <u>Fraxinus nigra (Black Ash) (FACW)</u> <u>Pinus strobus (Eastern White Pine) (FACU)</u>	<u>10</u> <u>25</u> <u>2</u> <u>10</u> 3	YES YES YES YES YES YES	FACU FAC FAC FAC FACW FACU	Number of Dominant Species         That Are OBL, FACW, or FAC:       7         Total Number of Dominant         Species Across All Strata:       9         Percent of Dominant Species         That Are Obl, FACW, or FAC:       77.8%
	55 =	= Total Cov	/er	Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: <u>15 foot radius</u> ) <u>Acer rubrum (Red Maple) (FAC)</u> <u>Abies balsamea (Balsam Fir) (FAC)</u> <u>Ilex verticillata (Common Winterberry) (FACW)</u> Herb Stratum (Plot size: 5 foot radius	<u>20</u> <u>30</u> <u>15</u> <u>65</u> =	<u>YES</u> <u>YES</u> <u>NO</u> = Total Cov	FAC FAC	Total % Cover of:         Multiply by:           OBL species         ×1 =           FACW species         ×2 =           FAC species         ×3 =           FACU species         ×4 =           UPL species         ×5 =           Column Totals:         (A)
<u>Trientalis borealis (Maystar) (FAC)</u> <u>Osmundastrum cinnamomeum (Cinnamon Fern)</u> <u>Osmunda spectabilis (Royal Fern) (OBL)</u> <u>Onoclea sensibilis (Sensitive Fern) (FACW)</u>	2 20 5 2	<u>NO</u> YES NO NO	<u>FACW</u>	Prevalence Index = B/A = Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation
Woody Vine Stratum (Plot size:)	<u>_29</u> =	= Total Cov = Total Cov	ver ver	<ul> <li>☑ Dominance Test is &gt;50%</li> <li>☑ Prevalence Index is ≤3.0<sup>1</sup></li> <li>☑ Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> <li>☑ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)</li> <li><sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</li> </ul>
				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 <mark>/</mark> No
Remarks: (Include photo numbers here or on a separate s	heet.)			

SOIL	
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Profile De	escription:	(Describe to	o the dept	h needed to docum	ent the in	dicator or c	onfirm tl	ne absence	of indicators.)				
Depth (inches)	Color (r	Matrix	%	<u> </u>	ledox ⊢ea %	atures Type <sup>1</sup>	$1 \text{ oc}^2$	Toyturo		R	omarks		
0-7	10VR	2/1	70		70	1 <u>ypc</u>		<u>1 CXIUIC</u>	ORGANIC		cinanto		
07	1011	2/1						-	ONGAME				
7-14	10YR	2/2						CL	ORGANIC				
		_/ _											
14-20	10YR	3/2						С					
		-/-						-					
20-30	Glev 1	4/10v						Sil					
20 00	0.07 2	., 201						0.12					
<sup>1</sup> Type: C	=Concent	ration, D=De	epletion, F	RM=Reduced Matri	k, CS=Co	vered or Co	bated Sa	nd Grains.	<sup>2</sup> Location:	PL=Pore	Lining, M	=Matrix	<u>.</u>
Hydric So Histi Histi Histi Histi Hydi Stra Depl Thic Sano Sano Sano Sano Sano Dark	oil Indicat psol (A1) to Epipedo k Histic (A rogen Sulf tified Laye leted Beloo k Dark Su dy Mucky dy Gleyed dy Redox oped Matri: s Surface (	ors: n (A2) 3) ide (A4) rs (A5) w Dark Surf: rface (A12) Mineral (S1) Matrix (S4) (S5) k (S6) S7) (LRR R phytic veget	ace (A11) ) , MLRA 1 tation and	Polyva MLRA Thin D Loam Loam Deple Redo: Redo: Redo: 49B)	alue Belo 149B) Dark Surfa / Mucky N / Gleyed ted Matrix ted Dark Dark Su ted Dark Depress	w Surface ( ace (S9) (LF Mineral (F1) Matrix (F2) < (F3) rface (F6) Surface (F6) Surface (F7 sions (F8)	S8) (LRI RR R, M (LRR K ′)	Ind R R, _RA , L)     urbed or pro	dicators for P 2 cm Muc Coast Pra 5 cm Muc Dark Surf Polyvalue Thin Dark Iron-Mang Piedmont Mesic Sp Red Pare Very Sha Other (Ex oblematic.	roblematic k (A10) (Ll airie Redox ky Peat or ace (S7) (L Below Su c Surface (S ganese Ma Floodplair odic (TA6) nt Material llow Dark S plain in Re	<b>Hydric S</b> RR K, L, M (A16) (LI Peat (S3) RR K, L) fface (S8) S9) (LRR sses (F12 Soils (F1 (MLRA 1- (MLRA 1- (TF2) Surface (T marks)	Soils <sup>3</sup> : MLRA 1 RR K, L ) (LRR I K, L) 2) (LRR 9) (MLF 44A, 14 F12)	49B) , R) K, L, R) K, L, R K, L, R RA 149E 5, 149E
Restrictiv	e Layer (if	observed):							udaio Coil				
Type:	ROCK							P	resent?	Yes	$\checkmark$	No	
Depth	(inches):	30											



<image>

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: 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 pro	blematic (If needed, explain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map showing sam	oling point locations, transects, important features, etc.
Hydrophytic Vegetation Present?       Yes       No       ✓         Hydric Soil Present?       Yes       No       ✓         Wetland Hydrology Present?       Yes       No       ✓	Is the Sampled Area within a Wetland Yes No No If yes, optional Wetland Site ID:
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
☐ Sufface Water Table (A2) ☐ Aquatic Fauna (E	$\frac{1}{313}$ Moss Trim Lines (B16)
Saturation (A3)	15) Dry-Season Water Table (C2)
U Water Marks (B1) Hydrogen Sulfide	Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizosph	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	uction in Tilled Soils (C6) $\Box$ Geomorphic Position (D2)
□ Iron Deposits (B5) □ Thin Muck Surfa	ce (C7) $\Box$ Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in	Remarks)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Surface Water Present? Yes No V Depth (inches):	
Water Table Present? Yes No Ver Depth (inches):	
Saturation Present? Yes Volume No V Depth (inches):	Wetland Hydrology Present? Yes <u></u> No <u>Y</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, j	previous inspections), if available:
Remarks:	

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

Tree Stratum (Plot size: <u>30 foot radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
Acer rubrum (Red Maple) (FAC) Tsuga canadensis (Eastern Hemlock) (FACU) Pinus strobus (Eastern White Pine) (FACU) Picea mariana (Black Spruce) (FACW) Abies balsamea (Balsam Fir) (FAC) Acer rubrum (Red Maple) (FAC)	<u>10</u> <u>60</u> <u>15</u> <u>3</u> <u>7</u> <u>2</u>	<u>NO</u> <u>YES</u> <u>NO</u> <u>NO</u> <u>NO</u>	<u>FACU</u>	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)
	97 =	= Total Cov	er	Prevalence Index worksheet:
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15 foot radius</u> ) <u>Acer rubrum (Red Maple) (FAC)</u> <u>Fagus grandifolia (American Beech) (FACU)</u> <u>Tsuga canadensis (Eastern Hemlock) (FACU)</u> <u>Abies balsamea (Balsam Fir) (FAC)</u> <u>Herb Stratum</u> (Plot size: <u>5 foot radius</u> )	<u>2</u> <u>3</u> <u>5</u> <u>3</u> <u>13</u> =	<u>NO</u> <u>YES</u> <u>YES</u> <u>YES</u>	FACU FACU FAC er	Total % Cover of:         Multiply by:           OBL species         ×1 =           FACW species         ×2 =           FAC species         ×3 =           FACU species         ×4 =           UPL species         ×5 =           Column Totals:         (A)           Prevalence Index = B/A =
Woody Vine Stratum (Plot size:)	=	= Total Cov	er	Hydrophytic Vegetation Indicators:         □       Rapid Test for Hydrophytic Vegetation         □       Dominance Test is >50%         □       Prevalence Index is ≤3.01         □       Morphological Adaptations1 (Provide supporting data in Remarks or on a separate sheet)         □       Problematic Hydrophytic Vegetation1 (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.
Remarks: (Include photo numbers here or on a separate s	heet.)			Hydrophytic Vegetation Present? Yes □ No <u>√</u>

SO	I	L
$\sim \sim$		

Profile De	escription:	(Describe te	o the dept	h needed to	docume	ent the ind	licator or c	onfirm th	ie absen	ce of indicators.)				
Depth	<u> </u>	Matrix			R	edox Feat		1 2	<del></del>					
(Inches)		noist)	%	Color (mol	St)	%	ıype	Loc-	<u>l extu</u>	re	ĸ	emarks		
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					
<sup>1</sup> Type: C	=Concent	ration, D=D	epletion, f	RM=Reduced	d Matrix	, CS=Cov	ered or Co	ated Sa	nd Grain	s. <sup>2</sup> Location:	PL=Pore	Lining, M	l=Matri	х.
Hydric S Hista Hista Hista Hyd Stra Dep Thic San San San San San San A	oil Indicat osol (A1) c Epipedo k Histic (A rogen Sulf tified Laye leted Belo k Dark Su dy Mucky dy Gleyed dy Redox sped Matri c Surface s of hydro	tors: an (A2) (3) fide (A4) ers (A5) w Dark Surf rface (A12) Mineral (S1 Matrix (S4) (S5) x (S6) (S7) (LRR R ophytic vege	ace (A11) ) , MLRA 1 tation and		Polyva MLRA Thin D Loamy Deplete Redox Deplete Redox	lue Below 149B) ark Surfac Mucky M Gleyed M ed Matrix Dark Surf ed Dark S Depression must be p	v Surface (S ineral (F1) Matrix (F2) (F3) face (F6) furface (F7 ons (F8) resent, unl	S8) (LRF R R, ML (LRR K )	R, RA L)	Indicators for Pr 2 cm Muc Coast Pra 5 cm Muc Dark Surf Polyvalue Thin Dark Iron-Mang Piedmont Mesic Spr Red Pare Very Shal Other (Ex problematic.	roblematic k (A10) (Ll irie Redox ky Peat or ace (S7) (L Below Su Surface (S ganese Ma Floodplair odic (TA6) nt Material low Dark S plain in Re	<b>Hydric S</b> RR K, L, (A16) (L Peat (S3 RR K, L) rface (S8 S9) (LRR sses (F1 Soils (F1 (MLRA 1 (MLRA 1 (TF2) Surface (T marks)	Soils <sup>3</sup> : MLRA RR K, I ) (LRR (, L) 2) (LRF 9) (ML 44A, 14 (F12)	149B) _, R) K, L, R) K, L) R K, L, R) RA 149B) 45, 149B)
Restrictiv	e Layer (i	f observed):												
Type:										Hydric Soil Present?	Yes		No	$\checkmark$
Depth	(inches):									r resent.	100 _			
Remarks														



Photo:



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 pro	blematic (If needed, explain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes  No	Is the Sampled Area
Hydric Soil Present? Yes No	within a Wetland Yes <u>No</u>
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:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained L	eaves (B9) Drainage Patterns (B10)
	15) Dry-Season Water Table (C2)
□ Water Marks (B1) □ Hydrogen Sulfide	e Odor (C1)
Sediment Deposits (B2)	eres on Living Roots (C3)
Drift Deposits (B3)	luced Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	uction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5)	ce (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in	Remarks) Microtopographic Relief (D4)
Field Observations:	
Surface Water Present? Yes Depth (inches):	
Water Table Present? Yes No V Depth (inches):	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos,	previous inspections), if available:
Remarks:	

Tree Stratum (Plot size: <u>30 foot radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
Acer rubrum (Red Maple) (FAC)	<u>15</u>	NO		Number of Dominant Species
Tsuga canadensis (Eastern Hemlock) (FACU)	20	<u>YES</u>	FACU	That are OBL, FACW, of FAC: $6$ (A)
Abies balsamea (Balsam Fir) (FAC)	<u>17</u>	YES	<u>FAC</u>	Total Number of Dominant Species Across All Strata: 11 (B)
<u>I huja occidentalis (Eastern Arborvitae) (FACW)</u>	<u>5</u>	NO VES	EACU	
Betula populifolia (Gray Birch) (FAC)	<u>25</u> <u>3</u>	<u>NO</u>	<u>FACU</u>	Percent of Dominant Species That Are Obl, FACW, or FAC: <u>54.5%</u> (A/B)
	85	= Total Cov	rer	Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 15 foot radius)				Total % Cover of: Multiply by:
Abies balsamea (Balsam Fir) (FAC)	00	VES	FAC	OBL species 0 × 1 = 0
Picea rubens (Red Spruce) (FACU)	20	NO	TAC	FACW species $0 \times 2 = 0$
<u> </u>	<u> </u>			FAC species $6 \times 3 = 18$
	22	= Total Cov	rer	FACU species $5 \times 4 = 20$
Herb Stratum (Plot size: <u>5 foot radius</u> )				Column Totals: 11 (A) 38 (B)
Lycopodium clavatum (Running Ground-Pine) (FAC)	<u>2</u>	YES	FAC	
Spinulum annotinum (Interrupted Club-Moss) (FAC)	<u>5</u>	<u>YES</u>	FAC	Prevalence Index = $B/A = 3.45$
Maianthemum canadense (False Lily-of-the-Valley)	<u>5</u>	<u>YES</u>	FACU	
Clintonia borealis (Yellow Bluebead-Lily) (FAC)	<u>7</u>	<u>YES</u>	FAC	Hydrophytic Vegetation Indicators:
<u>Theridium aquilinum (Northern Bracken Fern) (FACU)</u>	<u>5</u>	VES	FAC FACU	
Aralia nudicaulis (Wild Sarsaparilla) (FACU)	<u>8</u> 3	YES	FACU	$\square$ Dominance lest is >50%
	<u> </u>	<u> </u>		Prevalence Index is ≤3.0'
Woody Vino Stratum (Distaire)	35	= Total Cov	rer	☐ Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
		= Total Cov	rer	<sup>1</sup> 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 D No
Remarks: (Include photo numbers here or on a separate s	heet.)			·

SOIL	
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Profile D	escription	: (Describe t	o the depth	needed to do	cument the in	dicator or c	onfirm th	ne absend	ce of indicators.)
Depth		Matrix			Redox Fea	atures	â		
(inches)	) Color (	(moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Textur</u>	re Remarks
0-2	10YR	5/6						SL	
2-22	10YR	6/6						SL	Gravelly
	20111	0,0						01	
<sup>1</sup> Type: C	C=Concen	tration, D=D	epletion, R	M=Reduced M	atrix, CS=Co	vered or Co	bated Sa	nd Grains	s. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Hydric S	<b>Soil Indica</b> tosol (A1) tic Epiped	ators: on (A2)		Pc	) lyvalue Belov _RA 149B)	w Surface (	S8) (LRF	R R,	Indicators for Problematic Hydric Soils <sup>3</sup> : 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)
□ Blac	ck Histic (	A3)		Th	in Dark Surfa	ace (S9) (LF	RR R, MI	_RA	5 cm Mucky Peat or Peat (S3) (LRR K, L, R
Hyd	drogen Su	lfide (A4)			amy Mucky N	Mineral (F1)	) (LRR K	, L)	Dark Surface (S7) (LRR K, L)
	atified Lay	ers (A5)	(A 4 4)		amy Gleyed I	Matrix (F2)			Polyvalue Below Surface (S8) (LRR K, L)
	ok Dork Si	ow Dark Sur	face (A11)		epleted Matrix	((F3) rfaco (E6)			Inin Dark Surface (S9) (LRR K, L)
	ok Dark Si ndv Mucky	Mineral (S1	)		oleted Dark Su	Surface (F0)	7)		Piedmont Floodolain Soils (F19) (MI RA 149
	ndy Glever	d Matrix (S4)	)		dox Depress	ions (F8)	)		Mesic Spodic (TA6) (MI RA 144A 145 149)
San	ndv Redox	(S5)							Red Parent Material (TF2)
	pped Mat	rix (S6)							Verv Shallow Dark Surface (TF12)
Dar	rk Surface	(S7) (LRR F	R, MLRA 14	9B)					☐ Other (Explain in Remarks)
				,					
<sup>3</sup> Indicato	ors of hydr	ophytic vege	etation and	wetland hydrol	ogy must be j	present, un	less dist	urbed or p	problematic.
Destrictio		if abaam (ad)							
Restrictiv	ve Layer (	if observed):							Hydric Soil
Type:				<u> </u>					Present? Yes $\Box$ No $\checkmark$
Depth	h (inches):								
Remarks	s:								

### Location:



<image>

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, conve	ex, none): CONCAVE
Slope (%): _0 Lat: _44.63315	Long: <u>-69.44884</u>	Datum: WGS84
Soil Map Unit Name: <u>TOGUS</u>		NWI Classification: PSS
Are climatic/hydrologic conditions on the site typical for this time of year?	es 🔽 No 🔲 (If r	no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	isturbed? Are "Normal Ci	rcumstances" present? Yes 🗹 No 🗖
Are Vegetation, Soil, or Hydrology naturally pro	lematic (If needed, exp	lain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map showing sam	ling point locations, trar	isects, important features, etc.
Hydrophytic Vegetation Present? Yes Von No	Is the Sampled Area	Yes No
Wetland Hydrology Present?	If yes, optional Wetland Si	te ID:
Remarks: (Explain alternative procedures here or in a separate report.)		
HYDROLOGY		
Wetland Hydrology Indicators:	Se	condary Indicators (minimum of two required)
Primary Indicators (minimum of one is required: check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1)	aves (B9)	Drainage Patterns (B10)
High Water Table (A2)	3)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B	5)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide	Odor (C1)	_ Crayfish Burrows (C8)
	es on Living Roots (C3)	_ Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	rtion in Tilled Soils (C6)	Geomorphic Position (D2)
□ Iron Deposits (B5) □ Thin Muck Surfa	e (C7)	Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in	Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes □ No ✓ Depth (inches):		
Saturation Present? Yes V No Depth (inches):	0 Wetland Hydr	ology Present? Yes 🔽 No 🔲
(includes capillary fringe) Describe Recorded Data (stream dauge, monitoring well, aerial photos, u	evious inspections) if availat	nie.
December recorded Data (cream gauge, menneming wen, achar protes,		
Remarks:		

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

Tree Stratum (Plot size: <u>30 foot radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
	=	= Total Cov	/er	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
Sapling/Shrub Stratum (Plot size: <u>15 foot radius</u> )				Total Number of Dominant Species Across All Strata: 3 (B)
<u>Alnus incana (Speckled Alder) (FACW)</u> Salix pedicellaris (Bog Willow) (OBL)	<u>35</u> <u>15</u>	<u>YES</u> <u>YES</u>	FACW OBL	Percent of Dominant Species
	50 =	= Total Cov	/er	That Are Obl, FACW, or FAC: <u>100%</u> (A/B)
Herb Stratum (Plot size: 5 foot radius )				Prevalence Index worksheet:
Spiraea tomentosa (Steenlehuch) (EACW)	50	VES		Total % Cover of: Multiply by:
Rubus idaeus (Common Red Raspberry) (FACU)	<u>50</u> 2	NO	<u>1 AOM</u>	OBL species ×1 =
Lysimachia terrestris (Swampcandles) (OBL)	<u>∠</u> 5	NO		FACW species <u> </u>
	57	Total Cox	ior.	FACU species ×4 -
	<u> </u>		/ei	UPL species         ×5 =
Woody Vine Stratum (Plot size:)				Column Totals: (A) (B)
	=	Total Cov	/er	Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
				$\square$ Dominance results > 50%
				$\square Prevalence index is \ge 5.0$
				data in Remarks or on a separate sheet)
				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
				<sup>1</sup> Indicators of bydric soil and wetland bydrology 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 <u>V</u> No
Remarks: (Include photo numbers here or on a separate s	sheet.)			

SOIL
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Depth (inches) Color I-4 10YR		•			commu		nce of indicators.)
)-4 10YR	Matrix (moist) %	Color (moist)	Redox Fea	tures	<sup>1</sup> Loc <sup>2</sup>	Tovt	uro Pomorko
J-4 10YR	2/1		70	1 <u>ype</u>	<u></u> 0 <u>_</u>	<u></u>	
	2/1					L	ORGANIC
-13 Gley 1	5/5 GY	7.5YR 5/8	85	С	М	С	
.3-23 Gley 1	5/5 GY	10YR 5/3	8 35	С	М	С	
Type: C=Concer	ntration, D=Depletion	n, RM=Reduced Ma	atrix, CS=Cov	vered or C	Coated Sa	nd Graiı	ns. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<b>Iydric Soil Indic</b> Histosol (A1)         Histic Epiped         Black Histic         Hydrogen St         Stratified Lay         Depleted Be         Thick Dark S         Sandy Muck         Sandy Redo         Stripped May         Dark Surface	ators: don (A2) (A3) ulfide (A4) yers (A5) low Dark Surface (A Surface (A12) y Mineral (S1) d Matrix (S4) x (S5) trix (S6) e (S7) (LRR R, MLR/ rophytic vegetation a	11) A 149B) Po ML Co De Co Re Co Co Co Co Co Co Co Co Co Co	lyvalue Belov RA 149B) in Dark Surfa amy Mucky M amy Gleyed I pleted Matrix dox Dark Su pleted Dark S dox Depress	v Surface ce (S9) (L /ineral (F <sup>-</sup> Matrix (F2 (F3) face (F6) Surface (F6) Surface (F6) ions (F8)	(S8) (LRI LRR R, M 1) (LRR K ) 77)	R R, LRA (, L) urbed o	Indicators for Problematic Hydric Soils <sup>3</sup> : 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)
		,	5,				
Restrictive Layer	(if observed):						Undria Cail
Туре:							Present? Yes V No
Depth (inches)	:						
contants.							

# Location:





Project/Site: <u>3 CORNERS</u>	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 pro	blematic (If needed, explain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map showing same	bling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes 🔽 No 🗆	Is the Sampled Area
Hydric Soil Present? Yes Ves No	within a Wetland Yes No
Wetland Hydrology Present? Yes Vo	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Le	eaves (B9) Drainage Patterns (B10)
High Water Table (A2)	(13) <u> </u>
Image: Saturation (A3)     Image: Mark Deposits (B)       Image: Water Marks (B1)     Image: Hydrogen Sulfide	Odor (C1) □ Cravfish Burrows (C8)
Sediment Deposits (B2)	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	uced Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	uction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5)	xe (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in	Remarks) Microtopographic Relief (D4)
Field Observations:	
Surface Water Present? Yes Depth (inches):	
Water Table Present? Yes Vos Depth (inches):	12 Wetland Hydrology Present? Ves V
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	previous inspections), if available:
Remarks:	

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

Tree Stratum (Plot size: <u>30 foot radius</u> )	Absolute <u>% Cover</u>	Dominant Species?	Indicator Status	Dominance Test worksheet:		
Thuja occidentalis (Eastern Arborvitae) (FACW)	<u>10</u>	NO		Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)		
Betula papyrifera (Paper Birch) (FACU) Acer rubrum (Red Maple) (FAC) Abies balsamea (Balsam Fir) (FAC)	<u>8</u> <u>35</u> <u>20</u>	<u>NO</u> YES YES	FAC FAC	Total Number of Dominant Species Across All Strata:6(B)		
Pinus strobus (Eastern White Pine) (FACU)	<u>3</u>	<u>NO</u>		Percent of Dominant Species		
	76	= Total Cov	/er			
Sapling/Shrub Stratum (Plot size: <u>15 foot radius</u> )				Total % Cover of: Multiply by:		
Alnus incana (Speckled Alder) (FACW)	<u>35</u>	YES	FACW	OBL species         ×1 =		
Ilex verticillata (Common Winterberry) (FACW)	<u>35</u>	<u>YES</u>	FACW	FACW species x2 =		
Adies baisamea (baisam Fil) (FAC)	<u>20</u>	15	FAC	FAC species × 3 =		
	90	= Total Cov	/er	FACU species ×4 =		
Herb Stratum (Plot size: <u>5 foot radius</u> )				Column Totals:         (A)         (B)		
Onoclea sensibilis (Sensitive Fern) (FACW)	<u>50</u>	YES	FACW			
Thelypteris palustris (Eastern Marsh Fern) (FACW)	<u>5</u>	NO		Prevalence Index = B/A =		
Rubus pubescens (Dwarf Red Raspberry) (FACW)	<u>3</u>	NO NO		Hydrophytic Vegetation Indicators:		
Lycopus virginicus (Virginia Water-Horehound) (OBL)	<u>∠</u> 2	NO		Rapid Test for Hydrophytic Vegetation		
	£2	- Total Ca	ior.	Dominance Test is >50%		
	02			Prevalence Index is $\leq 3.0^1$		
Woody Vine Stratum (Plot size:)				Morphological Adaptations <sup>1</sup> (Provide supporting		
		= Total Cov	/er	data in Remarks or on a separate sheet)		
				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)		
				<sup>1</sup> 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 <u>/</u> No <u></u>		
Remarks: (Include photo numbers here or on a separate s	heet.)					

SOIL	
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Profile De	escription	: (Describe to	o the depth	needed to docu	ment the ind	icator or c	onfirm th	e absen	ce of indicators.)	
Depth (inches)	Calar (	Matrix	0/	Color (moiot)	Redox Feat		1002	Taytu	*0	Domortico
(Inches)			70	Color (moist)	70	ıype	LOC	<u></u>		Remarks
0-11	TOAK	2/2						L	ORGANIC	
11-78	Glov 1	5/5 GV						15		
11-20	Oley 1	5/5 01						LJ		
<sup>1</sup> Type: C	=Concen	tration, D=De	epletion, R	M=Reduced Mat	rix, CS=Cove	ered or Co	ated Sar	nd Grain	s. <sup>2</sup> Location: PL=I	Pore Lining, M=Matrix.
Hvdric S	oil Indica	tors:							Indicators for Probler	matic Hydric Soils <sup>3</sup> :
□ Histo	osol (A1)			D Poly	value Below	Surface (	S8) (LRR	R,	2 cm Muck (A10	D) (LRR K, L, MLRA 149B)
✓ Histi	c Epipedo	on (A2)		MLF	RA 149B)				Coast Prairie R	edox (A16) (LRR K, L, R)
Blac	k Histic (A	43)		Thir	Dark Surfac	e (S9) (LF	R R, ML	RA	5 cm Mucky Pe	at or Peat (S3) (LRR K, L, R)
	rogen Sul	fide (A4)		Loa	my Mucky Mi	ineral (F1)	(LRR K,	L)	Dark Surface (S	S7) (LRR K, L)
	tified Laye	ers (A5) ww.Dork Surf	000 (111)		my Gleyed M	atrix (F2)			Polyvalue Belov	W Sufface (S8) (LRR K, L)
	leted Belt	w Dark Sum	ace (ATT)		ox Dark Surf	(F3) 200 (E6)				NOCE (59) (LKK K, L) Noccoc (E12) (LPP K L P
	k Daik St dy Mucky	Mineral (S1)	\		lotod Dark Sull	ace (F0) urface (F7	)			e Masses (F12) (LRR R, L, R Inlain Soile (F19) (MI RA 1491
	dy Glavar	Matrix (S4)	)		ov Depressio		)			[DIAIT SOIIS (1 19) (IVILICA 1491 [A6) (MI RA 144A 145 1491
	dy Redox	(S5)			ov Deblessic	JIIS (I O)			Red Parent Mat	terial (TF2)
	oped Matr	(S6)							Verv Shallow D	ark Surface (TF12)
	Surface	(S7) (LRR R	, MLRA 14	9B)					Other (Explain i	n Remarks)
<sup>3</sup> Indicator	s of hvdro	ophytic vege	tation and	wetland hydrolog	av must be pr	resent. un	ess distu	urbed or	problematic.	
Postriotiv		f obsorved):		inoniana ny arone,	,,					
Restrictiv	DEGRA	DED BEDRC	DCK						Hydric Soil	
Depth	(inches):	28							Present? Yes	s No
Remarks:	:									



Photo:



Project/Site: <u>3 CORNERS</u>	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 Vo D
Are Vegetation, Soil, or Hydrology naturally pro	blematic (If needed, explain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present?       Yes       No       Image: Constraint of the sector of the se	Is the Sampled Area within a Wetland Yes No If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
☐ Sufface Water (A1) ☐ Water Staffed E	313) Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B	15) Dry-Season Water Table (C2)
Water Marks (B1)     Hydrogen Sulfide	⊖ Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizosph	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	uction in Tilled Soils (C6) $\Box$ Geomorphic Position (D2)
□ Iron Deposits (B5) □ Thin Muck Surfa	ce (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes No V Depth (inches)	
Water Table Present? Yes No Ve Depth (inches):	
Saturation Present? Yes No V Depth (inches):	Wetland Hydrology Present? Yes <u>U</u> No <u>Y</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos,	previous inspections), if available:
Remarks:	

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

Tree Stratum (Plot size: <u>30 foot radius</u> )	Absolute <u>% Cover</u>	Dominant Species?	Indicator Status	Dominance Test worksheet:
<u>Tsuga canadensis (Eastern Hemlock) (FACU)</u> Betula populifolia (Gray Birch) (FAC)	<u>60</u> 20	<u>YES</u> YES	FACU FAC	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
Thuja occidentalis (Eastern Arborvitae) (FACW)	<u>8</u>	NO		Total Number of Dominant Species Across All Strata: 6 (B)
	<u>88</u> =	= Total Cov	/er	Porcent of Dominant Species
Sapling/Shrub Stratum (Plot size: <u>15 foot radius</u> )				That Are Obl, FACW, or FAC: <u>50%</u> (A/B)
<u>Fagus grandifolia (American Beech) (FACU)</u> Abies balsamea (Balsam Fir) (FAC)	<u>10</u> 8	<u>YES</u> YES	<u>FACU</u> FAC	Prevalence Index worksheet:
	⊻ 18 -	– Total Cov	/or	OBL species 0 v1 - 0
Herb Stratum (Ploteize: 5 feet radius)	<u> </u>	- 1014100		FACW species $0 \times 2 = 0$
Maianthamum canadanse (Falsa Lily of the Valley)	0	VES	EACU	FAC species <u>3</u> × 3 = <u>9</u>
(FACU)	<u>3</u>	163	FACO	FACU species $3 \times 4 = 12$
Clintonia borealis (Yellow Bluebead-Lily) (FAC)	<u>2</u>	<u>YES</u>	FAC	Column Totals: $6$ (A) $21$ (B)
	<u>5</u> =	= Total Cov	/er	$\frac{1}{2}$
Woody Vine Stratum (Plot size:)				Frevalence index = D/A = 5.5
		= Total Cov	rer	Hydrophytic Vegetation Indicators:         □       Rapid Test for Hydrophytic Vegetation         □       Dominance Test is >50%         □       Prevalence Index is ≤3.0 <sup>1</sup> □       Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)         □       Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> 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.
Remarks: (Include photo numbers here or on a separate s	sheet.)			Hydrophytic Vegetation Present? Yes <u>No</u>
SOIL				
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Profile De	escription	: (Describe Motri	to the dep	th needed to docum	ent the in	dicator or c	onfirm th	the absence of indicators.)
(inches)	Color (	moist)	×	Color (moist)	<u>euux rea</u> %	Tvpe <sup>1</sup>	Loc <sup>2</sup>	Texture Remarks
0-7	2.5Y	2.5/2						L
7-11	10YR	7/1						SL
11-16	7.5YR	2.5/3						t
<sup>1</sup> Type: C	=Concen	tration, D=I	Depletion,	RM=Reduced Matrix	, CS=Co	vered or Co	ated Sa	and Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Hydric So Histo Histo Histo Hydo Strat Depl Thic Sano Sano Sano Strip Dark	oil Indica osol (A1) c Epipeda k Histic (/ rogen Sul tified Laya leted Belo k Dark Su dy Mucky dy Gleyed dy Redox oped Matr c Surface	ttors: on (A2) A3) fide (A4) ers (A5) ow Dark Su urface (A12 Mineral (S d Matrix (S4 (S5) ix (S6) (S7) (LRR	rface (A11 ) 1) I, R, MLRA 1	Polyva MLRA Thin D Loamy Deplet Redox 49B)	lue Belov 149B) ark Surfa Mucky M Gleyed ed Matrix Dark Su Dark Su Depress	w Surface (S Ince (S9) (LF Mineral (F1) Matrix (F2) (F3) rface (F3) rface (F6) Surface (F7 ions (F8)	S8) (LRF R R, MI (LRR K )	Indicators for Problematic Hydric Soils <sup>3</sup> : RR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) MLRA 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) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, F) Piedmont Floodplain Soils (F19) (MLRA 149 Mesic Spodic (TA6) (MLRA 144A, 145, 149 Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
Restrictiv	e Layer (i	f observed	):	weitana nyarology				
Type:	ROCKS							Hydric Soil Present? Yes No 🗸
Depth	(inches):	16						



Photo:



#### WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: <u>3 CORNERS</u>	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 pro	blematic (If needed, explain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map showing same	bling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes Ves No	Is the Sampled Area
Hydric Soil Present? Yes Ves No	within a Wetland Yes No
Wetland Hydrology Present? Yes Vo	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Le	eaves (B9) Drainage Patterns (B10)
High Water Table (A2)	(13)  Image: Moss Trim Lines (B16)
□ Water Marks (B1) □ Hvdrogen Sulfide	Odor (C1)     Cravfish Burrows (C8)
Sediment Deposits (B2)     Oxidized Rhizosphe	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	uced Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	uction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5)	>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
Inundation Visible on Aerial Imagery (B7)     U     Other (Explain in     Sparsely)/egetated Concave Surface (B8)	Remarks) Microtopographic Relief (D4)
Field Observations:	
Surface Water Present? Yes Ves No Depth (inches):	0
Water Table Present? Yes Ves No Depth (inches):	0 Wetland Hydrology Present? Ves V
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	previous inspections), if available:
Remarks:	

#### VEGETATION – Use scientific names of plants.

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

Tree Stratum (Plot size: <u>30 foot radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
Thuja occidentalis (Eastern Arborvitae) (FACW)	<u>65</u>	<u>YES</u>	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
Ables balsamea (Balsam Fir) (FAC) Betula alleghaniensis (Yellow Birch) (FAC) Fraxinus nigra (Black Ash) (FACW)	<u>3</u> <u>7</u> 7	<u>NO</u> NO NO		Total Number of Dominant Species Across All Strata: <u>4</u> (B)
	<u> </u>	= Total Cov	er	Percent of Dominant Species That Are Obl, FACW, or FAC: <u>100%</u> (A/B)
Sapling/Shrub Stratum (Plot size: <u>15 foot radius</u> )				Prevalence Index worksheet:
Abies balsamea (Balsam Fir) (FAC)	<u>25</u>	<u>YES</u>	<u>FAC</u>	Total % Cover of: Multiply by:
Fraxinus nigra (Black Ash) (FACW)	<u>5</u>	<u>NO</u>		OBL species × 1 =
	30 =	= Total Cov	rer	FACW species × 2 =
Herb Stratum (Plot size:)				FAC species × 3 =
Osmundastrum cinnamomeum (Cinnamon Fern)	30	YES	FACW	FACU species ×4 =
Coptis trifolia (Three-Leaf Goldthread) (FACW)	<u>30</u> 20	YES	FACW	$\begin{array}{c} \text{OPL species} \\ \text{Column Totals} \\ \end{array} \qquad \qquad$
Gaultheria hispidula (Creeping-Snowberry) (FACW)	10	NO		
Rubus pubescens (Dwarf Red Raspberry) (FACW)	5	NO		Prevalence Index = B/A =
Aralia nudicaulis (Wild Sarsaparilla) (FACU)	5	NO		
Trientalis borealis (Maystar) (FAC)				Hydrophytic Vegetation Indicators:
Cornus canadensis (Canadian Bunchberry) (FAC)	<u>10</u>	<u>NO</u>		Rapid Test for Hydrophytic Vegetation
	80 =	= Total Cov	rer	Dominance Test is >50%
Woody Vine Stratum (Plot size:				Prevalence Index is $\leq 3.0^1$
				Morphological Adaptations <sup>1</sup> (Provide supporting
	=	= Total Cov	rer	data in Remarks or on a separate sheet)
				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
				<sup>1</sup> 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 <u>/</u> No <u></u>
Remarks: (Include photo numbers here or on a separate s	sheet.)			

SOIL	
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Profile Desci	ription: (Desci	ribe to the depth r	needed to document the indic	ator or confirm th	e absence o	f indicators.)		
Depth (inchos)	N	latrix	Redox Featur		Toxturo		Pomorke	<b>C</b>
<u>(incries)</u> (	$\frac{20101}{110151}$	/0				ORGANIC	Kemark	5
0-24 10	JIK 2/2					UNDANIC		
24.20	a 1				C			
24-29+ G	ley 1 4/ N				L			
<sup>1</sup> Type: C=C	oncentration,	D=Depletion, RM	=Reduced Matrix, CS=Cover	ed or Coated Sar	nd Grains.	<sup>2</sup> Location:	PL=Pore Lining,	M=Matrix.
Hydric Soil	Indicators:				Indi	cators for Pr	oblematic Hydri	c Soils <sup>3</sup> :
Histoso Histic E Black H Hydrog Stratifie Deplete Sandy I Sandy I Sandy I Strippee Dark Su	I (A1) pipedon (A2) listic (A3) en Sulfide (A4 d Layers (A5) d Below Dark ark Surface (A Mucky Minera Gleyed Matrix Redox (S5) d Matrix (S6) urface (S7) (LI	I) Surface (A11) A12) I (S1) (S4) RR R, MLRA 149	Polyvalue Below S MLRA 149B)     Thin Dark Surface     Loamy Mucky Minu     Loamy Gleyed Mari     Depleted Matrix (F     Redox Dark Surface     Depleted Dark Surface     Redox Depression B)	urface (S8) (LRR (S9) (LRR R, ML eral (F1) (LRR K, rrix (F2) 3) ee (F6) face (F7) s (F8)	R, , , , , , , , , , , , , , , , , , ,	2 cm Mucł     Coast Prai     5 cm Mucł     Dark Surfa     Polyvalue     Thin Dark     Iron-Mang     Piedmont I     Mesic Spo     Red Parer     Very Shall     Other (Exp	(A10) (LRR K, I irie Redox (A16) (y Peat or Peat () ace (S7) (LRR K, Below Surface (S Surface (S9) (LR anese Masses (F Floodplain Soils ( dic (TA6) (MLRA th Material (TF2) ow Dark Surface plain in Remarks)	_, MLRA 149B) (LRR K, L, R) S3) (LRR K, L, R L) S8) (LRR K, L) F12) (LRR K, L, I F19) (MLRA 149 (144A, 145, 149 (TF12)
<sup>3</sup> Indicators o	f hydrophytic	vegetation and w	etland hydrology must be pre	sent, unless distu	urbed or prob	lematic.		
Type:		· - ~,·			Hy	dric Soil		-
Depth (in	chae).				Pre	esent?	Yes 🗹	No
Deptil (III								



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.): <u>Pit/Mound</u>	Local relief (Concave, convex, none): Concave/convex
Slope (%): _0 Lat: _44.63151	Long: <u>-69.41923</u> Datum: <u>WGS84</u>
Soil Map Unit Name: <u>Monarda silt Ioam</u>	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 pro	blematic (If needed, explain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map showing samp	bling point locations, transects, important features, etc.
Hydrophytic Vegetation Present?       Yes       No       Image: Constraint of the sector of the se	Is the Sampled Area within a Wetland Yes No No If yes, optional Wetland Site ID:
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	
☐ High Water Table (A2) ☐ Aquatic Fauna (E	$\frac{1}{2}$ Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B	15) Dry-Season Water Table (C2)
Water Marks (B1)	Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2)     Oxidized Rhizosphe     Oxidized Rhizosphe     Drift Deposits (B2)     Drift Deposits (B2)	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
□ Algal Mat or Crust (B4) □ Recent Iron Red	$\square$ Statled of Stressed Fights (D1)
□ Iron Deposits (B5) □ Thin Muck Surface	ce (C7)
Inundation Visible on Aerial Imagery (B7) Other (Explain in	Remarks)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Surface Water Present? Yes No V Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No Y Depth (inches):	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	previous inspections), if available:
Remarks:	

#### VEGETATION – Use scientific names of plants.

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

Tree Stratum (Plot size: <u>30 foot radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
Fagus grandifolia (American Beech) (FACU)	50	YES	FACU	Number of Dominant Species
Acer rubrum (Red Maple) (FAC)	<u>15</u>	YES	FAC	That Are OBL, FACW, or FAC: <u>6</u> (A)
Quercus rubra (Northern Red Oak) (FACU)	20	YES	<u>FACU</u>	Total Number of Dominant
Abies balsamea (Balsam Fir) (FAC)	<u>10</u>	YES	FAC	Species Across All Strata: <u>12</u> (B)
Thuja occidentalis (Eastern Arborvitae) (FACW)	<u>10</u>	YES	FACW	Percent of Dominant Species
Pinus strobus (Eastern White Pine) (FACU)	<u>2</u>	YES	FACU	That Are Obl, FACW, or FAC: (A/B)
Isuga canadensis (Eastern Hemiock) (FACU)	<u>15</u>	<u>YES</u>	FACU	Prevalence Index worksheet:
	<u>122</u> :	= Total Cov	/er	Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: <u>15 foot radius</u> )				OBL species $0 \times 1 = 0$
Corylus cornuta (Beaked Hazelnut) (FACU)	1	NO		FACW species $1 \times 2 = 2$
Aralia nudicaulis (Wild Sarsaparilla) (FACU)	3	<u>YES</u>	<u>FACU</u>	FAC species $5 \times 3 = 15$
<u>Abies balsamea (Balsam Fir) (FAC)</u>	<u>10</u>	YES	FAC	$\frac{1}{1} \frac{1}{1} \frac{1}$
	_14 =	= Total Cov	/er	Column Totals: <u>12</u> (A) <u>41</u> (B)
Herb Stratum (Plot size: <u>5 foot radius</u> )				Prevalence Index = B/A =3.4
Huperzia lucidula (Shining Fir-Moss) (FAC)	<u>5</u>	<u>YES</u>	<u>FAC</u>	
Pteridium aquilinum (Northern Bracken Fern) (FACU)	<u>10</u>	YES	<u>FACU</u>	Hydrophytic Vegetation Indicators:
Trientalis borealis (Maystar) (FAC)	<u>2</u>	NO		Rapid Test for Hydrophytic Vegetation
Maianthemum canadense (False Lily-of-the-Valley)	<u>2</u>	<u>NO</u>		Dominance Test is >50%
	<u>19</u> :	= Total Cov	/er	Prevalence Index is $\leq 3.0^{1}$
Woody Vine Stratum (Plot size: <u>30 foot radius</u> )				data in Remarks or on a separate sheet)
Toxicodendron radicans (Eastern Poison Ivy) (FAC)	<u>2</u>	<u>YES</u>	<u>FAC</u>	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
	2 :	= Total Cov	/er	<sup>1</sup> 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
				height.
				Hydrophytic Vegetation Present? Yes <u>No X</u>
Remarks: (Include photo numbers here or on a separate s	sheet.)			1

Yorlie Decirption: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)       Peedox Features       Redox Features         Inches)       Color (molsi)       %       Color (molsi)       %       Organic         13       107R       Organic       Organic         146       107R       4/6       7.5YR       5/8       10       C       M       SL         Type:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.       *Location: PL=Pore Lining, M=Matrix.         Yupic Soil Indicatore:	Profile Description: (Description: Clearing to depth edgeth cedded to document the indicator or confilm the absence of indicators.)          Depth	SOIL										Sampling Point: PLOT-W-NS-7-UP
Depth      Matrix      Reduce Features      Organic         107R       Organic       Organic       Organic         13       107R       Organic       Organic         1416       107R       4/5       7.57R       5/8       10       C       M       SL         1416       107R       4/5       7.57R       5/8       10       C       M       SL         17ype:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>a</sup> Location: PL=Pore Lining, M=Matrix.         1       MitRA 149B)	Depth       Matrix       Redox Features       Courtie       Remarks         c-3       30%       Organic       Organic         316       10%       4/6       7.5%       5/8       10       C       M       SL         Type:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.       *Location:       PL=Pore Lining, M=Matrix         Hydric Soil Indicators:	Profile De	escription	: (Describe to	o the depth	needed to	docume	ent the ind	dicator or	confirm t	he abse	sence of indicators.)
Indicators:       Indicators: <thindicators:< th=""> <thindit:< th="">       &lt;</thindit:<></thindicators:<>		Depth (inches)	Color (	Matrix (moist)	%	Color (mo	R nist)	edox Fea %	tures Type <sup>1</sup>	Loc <sup>2</sup>	Τον	xture Remarke
10**       4/6       7.5**       5/8       10       C       M       SL         Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.       *Location: PL=Pore Lining, M=Matrix.         Multic Soil Indicators:         Histosol (A1)       Polyvalue Below Surface (S8) (LRR R, MLRA 149B)         Black Histo, (A3)       MLRA 149B)       Black Histo, (A3)         Stratified Layers (A5)       Learny Gleged Matrix (F2)       Polyvalue Below Surface (S9) (LRR R, MLRA 149B)         Stratified Layers (A5)       Learny Gleged Matrix (F2)       Polyvalue Below Surface (F7)         Stratified Layers (A5)       Depleted Matrix (F2)       Polyvalue Below Surface (F7)         Sandy Gleyed Matrix (S1)       Depleted Dark Surface (S9) (LRR K, L)       Polyvalue Below Surface (F7)         Sandy Redve (K5)       Redox Dark Surface (F7)       Pedmorn Thoodphin Solis (F19) (MLRA 144A, 145, 16)         Sandy Redve (K5)       Redox Dark Surface (F7)       Pedmorn Thoodphin Solis (F19) (MLRA 144A, 145, 16)         Dark Surface (S7) (LRR R, MLRA 149B)       Depleted Dark Surface (S7) (LRR R, MLRA 144A, 145, 16)         Dark Surface (S7) (LRR R, MLRA 149B)       Pedmorn Thoodphin Solis (F19) (MLRA 144A, 145, 16)         Dark Surface (S7) (LRR R, MLRA 149B)       Pedmorn Thoodphin Solis (F19) (MLRA 144A, 145, 16)         Dark Surface (S7) (LRR R, MLRA 149B)	10 YR       4/6       7.5 YR       5/8       10       C       M       SL         Type:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.       *Location: PL=Pore Lining, M=Matrix         Yufric Soil Indicators:       Polyvalue Below Surface (SS) (LRR R, Histo Epipedon (X2)       Polyvalue Below Surface (SS) (LRR R, Histo Epipedon (X2)       C m Muck (M10) (LRR K, L, MLRA + Histo Epipedon (X2)       Polyvalue Below Surface (SS) (LRR R, MLRA + Histo Epipedon (X2)       C om Muck (M10) (LRR K, L, MLRA + Histo Epipedon (X2)       Polyvalue Below Surface (SS) (LRR R, MLRA + Histo Epipedon (X16), (LRR K, L)       Sorm Mucky Petor Peat (PS) (LRR K, L)       Sorm Mucky Petor Peat (PS) (LRR K, L)       Sorm Mucky Mucky Misca (SS) (LRR K, L)       Depleted Dark Surface (S7) (LRR K, L)       Polyvalue Below Surface (SS) (LRR K, L)       Polyvalue Below Surface (SS) (LRR K, L)       Sorm Mucky Mucky Misca (SS) (LRR K, L)       Polyvalue Below Surface (SS) (LRR K, L)       Sorm Mucky Mucky Misca (SS) (LRR K, L)       Sorm Mucky Mucky (SS) (LRR K, L)       Polyvalue Below Surface (S	)-3	10YR	moloty	70		noty	70	<u> </u>	200	100	Organic
16       10/R       4/6       7.5/R       5/8       10       C       M       SL         Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.       *Location: PL=Pore Lining, M=Matrix.         Indicators:         Histosol (A1)	10       10       C       M       SL         Type:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.       *Location: PL=Pore Lining, M=Matrix         Type:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.       *Location: PL=Pore Lining, M=Matrix         Histosol (A1)       Polyvalue Below Surface (S9) (LRR R, MLRA 1498)						- 4-		-			
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.         type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.       Indicators for Problematic Hydric Solis <sup>1</sup> :	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.       *Location: PL=Pore Lining, M=Matrix         type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.       Indicators for Problematic Hydric Soils*:	-16	10YR	4/6		7.5YR	5/8	10	С	Μ	SL	
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         Histosol (A1)       Polyvalue Below Surface (S8) (LRR R, MLRA 149B)         Black Histic Epipedon (A2)       MLRA 149B)         Black Histic (A3)       Din Surface (S9) (LRR R, MLRA         Black Histic (A3)       Din Surface (S9) (LRR R, MLRA         Black Histic (A3)       Din Dark Surface (S9) (LRR R, MLRA         Depleted Below Dark Surface (A11)       Depleted Below Dark Surface (S9) (LRR K, L)         Thin Dark Surface (A12)       Redox Dark Surface (F7)         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)         Stripped Mutrix (S4)       Redox Depressions (F8)         Stripped Mutrix (S6)       Dark Surface (T7)         Dark Surface (S7) (LRR R, MLRA 149B)       Other (Explain in Remarks)         Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Restrictive Layer (if observed):       Type:         Type:       No       No         Depth (inches):       No       No	tydric Soil Indicators:       Indicators for Problematic Hydric Soils*;         Histosol (A1)       Polyvalue Below Surface (S8) (LRR R, L MLRA 149B)       2 coast Prairie Redox (A16) (LR K, L MLRA 149B)         Black Histo; (A3)       Thin Dark Surface (S9) (LRR R, MLRA 149B)       5 cn Mucky Peat or Peat (S3) (LRR K, L)         Stratified Layers (A5)       Loamy Gleved Matrix (F3)       Polyvalue Below Surface (S8) (LRR K, L)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)       Thin Dark Surface (S9) (LRR K, L)         Stratified Layers (A5)       Redox Dark Surface (F6)       Inor-Manganee Masses (F12) (LR R, Msarde (K12)         Sandy Mucky Mineral (S1)       Depleted Bark Surface (F7)       Pieleware Matrix (S4)         Sandy Redox (S5)       Redox Dark Surface (F7)       Pieleware Matrix (S4)         Stripped Matrix (S4)       Redox Depressions (F8)       Mesic Spodi (CR6)         Stripped Matrix (S6)       Other (Explain in Remarks)       Other (Explain in Remarks)         Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.       Yes	Туре: С	=Concen	tration, D=De	epletion, RI	M=Reduce	d Matrix	, CS=Cov	vered or C	coated Sa	and Gra	ains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
ydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>2</sup> :         Histosol (A1)       Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2)       Int RA Surface (S9) (LRR R, MLRA         Black Histic (A3)       Thin Dark Surface (S9) (LRR K, L, Stratified Layers (A5)       Coast Praine Redox (A16) (LRR K, L, Dark Surface (S7) (LRR K, L)         Depieted Below Dark Surface (A11)       Depieted Matrix (F2)       Polyvalue Below Surface (S9) (LRR K, L)         Sandy Mudy Mineral (S1)       Depieted Dark Surface (F7)       Prior Managanese Masses (F12) (LRR K, L)         Sandy Gleyed Matrix (S4)       Redox Dark Surface (F7)       Priedmont Floodplain Soils (F19) (MLR A 144A, 145, 1- Sandy Redox (S5)         Stripped Matrix (S4)       Redox Depressions (F8)       Mesic Spodic (TA6) (MLRA 144A, 145, 1- Sandy Redox (S5)         Stripped Matrix (S4)       Redox Narface (F7)       Priedmont Floodplain Soils (F19) (MLRA 144A, 145, 1- Sandy Redox (S5)         Dark Surface (S7) (LRR R, MLRA 149B)       Other (Explain in Remarks)         ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         estrictive Layer (if observed):       Yes       No         Type:	ydric Soil Indicators:											
tydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>2</sup> :         Histosol (A1)       Polyvalue Below Surface (S8) (LRR R, MLRA 149B)         Black Histic (A3)       Thin Dark Surface (S9) (LRR R, MLRA         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1) (LRR K, L)         Depleted Below Dark Surface (A12)       Redox Dark Surface (F7)         Thick Dark Surface (S1)       Depleted Dark Surface (F7)         Sandy Redox (S5)       Redox Depressions (F8)         Stripped Matrix (S6)       Redox Depressions (F8)         Dark Surface (S7) (LRR R, MLRA 149B)         Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Restrictive Layer (if observed):         Type:         Depth (inches):         Depth (inches):	Hydric Soil Indicators:											
Hydric Soli Indicators for Problematic HydricSolis :         Histos (A1)       Polyvalue Below Surface (S8) (LRR R, MLRA 149B)         Black Histic (A3)       Thin Dark Surface (S9) (LRR R, MLRA 149B)         Stratified Layers (A5)       Loamy Mucky Mineral (F1) (LRR K, L)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)         Thick Dark Surface (A12)       Redox Dark Surface (F7)         Sandy Redox (S5)       Depleted Matrix (F3)         Sandy Redox (S5)       Redox Depressions (F8)         Sandy Redox (S5)       Very Shallow Dark Surface (T7)         Stratified Layers (VFR R, MLRA 149B)       Redox Depressions (F8)         Sandy Redox (S5)       Very Shallow Dark Surface (T7)         Stratified Matrix (S4)       Redox Depressions (F8)         Stratified CS7) (LRR R, MLRA 149B)       Merea and Matrix (F12)         Dark Surface (S7) (LRR R, MLRA 1449B)       Merea and Matrix (F12)         Straped Matrix (S6)       Other (Explain in Remarks)         Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Restrictive Layer (if observed)::       Type:         Type:       No         Depth (inches):       No         Remarks:       Hydric Soli	Hydric Soli Indicators:         Polyvalue Below Surface (S8) (LRR R, MLRA 149B)         Polyvalue Below Surface (S8) (LRR R, MLRA 149B)         Polyvalue Below Surface (S9) (LRR R, MLRA Black Histic (A3)         Polyvalue Below Surface (S9) (LRR R, MLRA below Cark Surface (A1)         Depleted Matrix (F2)         Polyvalue Below Surface (S9) (LRR K, L)           Brain Depleted Below Dark Surface (A1)         Depleted Matrix (F2)         Polyvalue Below Surface (S9) (LRR K, L)         Polyvalue Below Surface (S9) (LRR K, L)           Sandy Mucky Mineral (S1)         Depleted Dark Surface (F7)         Polyvalue Below Surface (S1) (LRR K, L)           Sandy Gleyed Matrix (S6)         Polyvalue Below Surface (T7)         Polyvalue Below Surface (T7)           Sandy Gleyed Matrix (S6)         Polyvalue Below Surface (T7)         Polymalue Below Surface (T7)           Stripped Matrix (S6)         Polyvalue Below Surface (T7)         Polymalue Below Surface (T7)           Dark Surface (S7) (LRR R, MLRA 149B)         Polymalue Below Surface (T7)         Polymalue Below Surface (T7)           Stripped Matrix (S6)         Polymalue Below Surface (T7)         Polymalue Surface (T7)         Polymalue Below Surface (T7)           Dark Surface (S7) (LRR R, MLRA 149B)         Polymalue Below Surface (T7)         Polymalue Below Surface (T7)         Polymalue Below Surface (T7)           Dark Surface (S7) (LR R, MLRA 149B)         Polymalue Below Surface (T7)         Polymalue Below											
Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.    Restrictive Layer (if observed):   Type:   Depth (inches):	Andicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Restrictive Layer (if observed):	Histi Histi Histi Histi Histi Stra Dep Thic Sand Sand Sand Sand Sand A	on marce osol (A1) ic Epiped k Histic ( <i>i</i> rogen Sul tified Lay leted Belo k Dark Su dy Mucky dy Gleyed dy Redox oped Matr < Surface	on (A2) A3) Ifide (A4) ers (A5) ow Dark Surf urface (A12) Mineral (S1) d Matrix (S4) (S5) rix (S6) (S7) (LRR R	ace (A11) ) , MLRA 14	9B)	Polyva MLRA Thin D Loamy Loamy Deplet Redox Deplet Redox	lue Belov 149B) ark Surfa Mucky M Gleyed M ed Matrix Dark Sur ed Dark S Depressi	v Surface ce (S9) (L /lineral (F1 Matrix (F2 (F3) face (F6) Surface (F ions (F8)	(S8) (LR RR R, M I) (LRR k ) 7)	R R, ILRA (, L)	2 cm Muck (A10) (LRR K, L, MLRA 149E     Coast Prairie Redox (A16) (LRR K, L, R)     5 cm Mucky Peat or Peat (S3) (LRR K, L)     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, I)     Piedmont Floodplain Soils (F19) (MLRA 1     Mesic Spodic (TA6) (MLRA 144A, 145, 1     Red Parent Material (TF2)     Very Shallow Dark Surface (TF12)     Other (Explain in Remarks)
Acstrictive Layer (if observed):   Type:   Depth (inches):     Remarks:     Hydric Soil   Present?   Yes     No	Restrictive Layer (if observed):     Hydric Soil       Type:     Depth (inches):       Remarks:	<sup>3</sup> Indicator	s of hydro	ophytic vege	tation and	wetland hy	drology	must be p	oresent, u	nless dist	turbed c	or problematic.
Remarks:	Remarks:	Restrictiv Type: <u></u> Depth	(inches):	if observed):								Hydric Soil Present? Yes 🗌 No 🗹
		Remarks										

I

#### 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: <u>-69.41923</u> Datum: <u>WGS84</u>
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 pro	blematic (If needed, explain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes Ves No	Is the Sampled Area
Hydric Soil Present? Yes Ves No	within a Wetland Yes No
Wetland Hydrology Present? Yes V No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	eaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (E	313) <u> </u>
Image: Saturation (A3)     Image: Mark Deposits (B)       Image: Water Marks (B1)     Image: Hydrogen Sulfide	15) Dry-Season Water Table (C2)
Sediment Deposits (B2)	eres on Living Roots (C3)
Drift Deposits (B3)	luced Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	uction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5)	ce (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)     Other (Explain in     Sparsely)/egetated Concave Surface (B8)	Remarks) Microtopographic Relief (D4)
Field Observations:	
Surface Water Present? Yes Depth (inches):	
Water Table Present? Yes Ves Depth (inches):	Wetland Hydrology Present? Ves V
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, j	previous inspections), if available:
Remarks:	

#### VEGETATION – Use scientific names of plants.

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

Tree Stratum (Plot size: <u>30 foot radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
Acer rubrum (Red Maple) (FAC) Abies balsamea (Balsam Fir) (FAC)	<u>35</u>	YES YES	<u>FAC</u> FAC	Number of Dominant Species That Are OBL, FACW, or FAC:5(A)
Thuja occidentalis (Eastern Arborvitae) (FACW) Fraxinus nigra (Black Ash) (FACW)	<u>10</u> <u>1</u> <u>3</u>	<u>NO</u> NO	<u></u>	Total Number of Dominant Species Across All Strata: <u>5</u> (B)
	49	= Total Cov	/er	Percent of Dominant Species That Are Obl, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size: <u>15 foot radius</u> )				Prevalence Index worksheet:
Alnus incana (Speckled Alder) (FACW) Spiraea alba (White Meadowsweet) (FACW)	<u>25</u>	<u>YES</u> NO	FACW	Total % Cover of: Multiply by:
Ilex verticillata (Common Winterberry) (FACW)	<u>5</u> 1	NO		OBL species         ×1 =           FACW species         ×2 =
	29	= Total Cov	/er	FAC species         ×3 =
Herb Stratum (Plot size: <u>5 foot radius</u> )				FACU species ×4 =
Calamagrostis canadensis (Bluejoint) (OBL)	<u>5</u>	NO		OPL species         ×5 =           Column Totals:         (A)
Osmundastrum cinnamomeum (Cinnamon Fern) Equisetum pratense (Meadow Horsetail) (FACW) Onoclea sensibilis (Sensitive Fern) (FACW)	<u>7</u> <u>15</u> 10	<u>NO</u> NO NO		Prevalence Index = B/A =
Rubus hispidoides (Bog Dewberry) (FACW)	<u>10</u>	NO		Hydrophytic Vegetation Indicators:
Carex hystericina (Porcupine Sedge) (OBL) Carex intumescens (Greater Bladder Sedge) (EACW)	2	<u>NO</u>		Rapid Test for Hydrophytic Vegetation
Glyceria striata (Fowl Manna Grass) (OBL)	<u>1</u> 1	NO		$\square$ Dominance Lest is >50%
Scirpus expansus (Woodland Bulrush) (OBL)	<u>80</u>	<u>YES</u>	<u>OBL</u>	Morphological Adaptations <sup>1</sup> (Provide supporting
	122	= Total Cov	/er	data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size: <u>30 foot radius</u> )				
Toxicodendron radicans (Eastern Poison Ivy) (FAC)	2	YES	FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	<u> </u>		/er	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 <u>/</u> No <u></u>
Remarks: (Include photo numbers here or on a separate s	heet.)			

SOIL
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Profile De	escription	: (Describe	to the dep	th needed to	docume	ent the ind	dicator or o	confirm t	ne abse	ence of indicators.)
Uepth (inches)	Color (	moist)	<u>1X</u> %	Color (mo	st)	<u>edox ⊢ea</u> %	Tvne <sup>1</sup>	Loc <sup>2</sup>	Text	ture Remarks
0_2	10VR	2/1	/0		σtj	/0	1 <u>7po</u>		<u> </u>	no nomeno
0-2	TOLL	2/1							JL	
					- 1-					
2-16	10YR	4/1		7.5YR	5/8	10	C	М	SL	
<sup>1</sup> Type: C	=Concen	tration, D=	Depletion,	RM=Reduce	d Matrix	, CS=Cov	rered or Co	bated Sa	nd Grai	ns. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<b>-lydric S</b> o Histo □Histo	oil Indica osol (A1)	ators:			Polyva	lue Below 149B)	v Surface (	S8) (LR	R R,	Indicators for Problematic Hydric Soils <sup>3</sup> : 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)
Blac	k Histic (	A3)			Thin D	ark Surfa	ce (S9) (Ll	RR R, M	LRA	$\square$ 5 cm Mucky Peat or Peat (S3) (LRR K, L,
⊥_ Hydi	rogen Su	lfide (A4)			Loamy	Mucky N	lineral (F1	) (LRR K	K, L)	Dark Surface (S7) (LRR K, L)
Strat	tified Lay	ers (A5)			Loamy	Gleyed N	Matrix (F2)			Polyvalue Below Surface (S8) (LRR K, L)
	leted Bel	ow Dark Su	urface (A11	) 🔽	Deplet	ed Matrix	(F3)			Thin Dark Surface (S9) (LRR K, L)
	K Dark Si	ufface (A12 Minoral (S	<u>()</u> (1)		Redox	Dark Sur	Tace (F6)	7)		Iron-Manganese Masses (F12) (LRR K, L,
San	dy Mucky	d Matrix (S	4)		Redox	Denressi	ons (F8)	()		Mesic Spodic (TA6) (MLRA 144A 145 14
	dy Redox	(S5)			Redux	Depiessi	013 (1 0)			Red Parent Material (TF2)
Strip	oped Mati	ix (S6)								Very Shallow Dark Surface (TF12)
Dark	k Surface	(S7) (LRR	R, MLRA	149B)						Other (Explain in Remarks)
	rs of hydr	onhytic ver	netation an	d wetland by	hology	must ha r	vresent ur	loss dist	turbed o	
Postrictiv		if obsorved			liology					
	e Layer (	n observed	ŋ.							Hydric Soil
Type:										Present? Yes 🖌 No 🗆
Depth	(inches):									
Remarks:									•	

#### Location:



Photo:





# Exhibit E:

MDIFW Vernal Pool Memo Submittal



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



### ATTACHMENT A: OVERVIEW MAP



Data Collected by Kleinschmidt Associates 2019; 2020

**JANUARY 12, 2022** 











**ATTACHMENT B: SUMMARY TABLE** 



	Origin	Dried by	Egg Mass Counts												
			,	Wood Fro	g	S	Spotted Sa	lamander			Blue-S	potted			SVP
Pool ID		7/15/2020	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	Fairy Shrimp	
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	Ν	Yes		38										Yes	Potentially



Pool ID	Origin	Dried by					Egg	Mass Cou	ints				SVP
NXG-VP-107	N	Yes		31				22					Potentially
NXG-VP-2	NM	No		3				3			3		No
NXG-VP-3	Ν	Yes		46				5					Potentially
NXG-VP-4	N	Yes						1	3				No
NXG-VP-5	Ν	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



Pool ID	Origin	Dried by		Egg Mass Counts									SVP	
SAD-VP-1	Ν	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	Ν	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	Ν	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



Pool ID	Origin	Dried by		Egg Mass Counts							SVP			
SAD-VP-9	Ν	Yes	20	36		20		45						Potentially

Three Corners Solar Project MDEP Natural Resources Protection Act Permit Application ATTACHMENT 9. NATURAL RESOURCES REPORT

## 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. 30 Park Drive 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<sup>1</sup>. Wetland boundaries were determined using the technical criteria described in the United States Army Corps of Engineers (Corps) Corps of Engineers Wetlands Delineation Manual<sup>2</sup> and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)<sup>3</sup>. Wetland communities were classified according to the Classification of Wetlands and Deepwater Habitats of the United States<sup>4</sup>. 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)<sup>5</sup>. Wetlands of Special Significance (WoSS) were identified based on criteria in Chapter 310

<sup>&</sup>lt;sup>5</sup> New England Hydric Soils Technical Committee. 2017. Field Indicators for Identifying Hydric Soils in New England (Version 4).



<sup>&</sup>lt;sup>1</sup> Title 38: Waters and Navigation, Chapter 3: Protection and Improvement of Waters, Subchapter 1: Environmental Protection Board, Article 5-a: Natural Resources Protection Act

<sup>&</sup>lt;sup>2</sup> 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.

<sup>&</sup>lt;sup>3</sup> 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.

<sup>&</sup>lt;sup>4</sup> 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.

of the Maine Natural Resources Protection Act (NRPA)<sup>6</sup> and Chapter 335 Significant Wildlife Habitat<sup>7</sup>. 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)<sup>8</sup>, definition of a tributary as described in the Clean Water Act (CWA)<sup>9</sup>, and as detailed in the Maine Department of Environmental Protection (MDEP) watercourse identification guidance document<sup>10</sup>. 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.

<sup>&</sup>lt;sup>10</sup> Danielson, T. J. 2018. Natural Resource Protection Act Streams, Rivers, and Brooks. Maine Department of Environmental Protection, Augusta, ME.



<sup>&</sup>lt;sup>6</sup> 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.

<sup>&</sup>lt;sup>7</sup> Maine Department of Environmental Protection. 7 January 2014. Natural Resources Protection Act Chapter 335: Significant Wildlife Habitat.

<sup>&</sup>lt;sup>8</sup> U.S. Army Corps of Engineers. 2005. Regulatory Guidance Letter: Ordinary High Water Mark Identification. December 8, 2005. No. 05-05.

<sup>&</sup>lt;sup>9</sup> U.S. Army Corps of Engineers. 2015. 33 Code of Federal Regulations, Part 328, Waters of the United States. June 29, 2015.

WETLAND AND WATERCOURSE DELINEATION AND POTENTIAL VERNAL POOL SURVEY REPORT

## 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<sup>11</sup> 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

<sup>&</sup>lt;sup>11</sup> Web Soil Survey, Natural Resources Conservation Service, United States Department of Agriculture. Available at: http://websoilsurvey.nrcs.usda.gov/. Accessed June 29, 2020.



# WETLAND AND WATERCOURSE DELINEATION AND POTENTIAL VERNAL POOL SURVEY REPORT

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) <sup>1</sup>	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	
W01	01CFA	PEM	Trees: none Shrub/Saplings: gray willow ( <i>Salix bebbiana</i> ) Herbs: broad-leaf cat-tail ( <i>Typha latifolia</i> ), fringed sedge ( <i>Carex crinita</i> ), common fox sedge ( <i>Carex vulpinoidea</i> ), Canadian goldenrod ( <i>Solidago canadensis</i> ), lamp rush ( <i>Juncus effusus</i> )	A1: Histosol	Surface Water (A1), High Water Table (A2), Saturation (A3)	No	S T
W02	01CFB	PFO	Trees: balsam fir ( <i>Abies balsamea</i> ), eastern hemlock ( <i>Tsuga canadensis</i> ), red maple ( <i>Acer rubrum</i> ), green ash ( <i>Fraxinus pennsylvanica</i> ) Shrub/Saplings: balsam fir, Morrow's honeysuckle ( <i>Lonicera morrowii</i> ) Herbs: sensitive fern ( <i>Onoclea sensibilis</i> ), interrupted fern ( <i>Osmunda claytonia</i> ), royal fern ( <i>Osmunda spectabilis</i> )	F3: Depleted Matrix	Saturation (A3), Drainage Patterns (B10)	No	S F
W03	01RKD/01CFC	PFO/PEM	Trees: balsam fir, red maple, green ash Shrub/Saplings: balsam fir Herbs: sensitive fern, evergreen wood fern ( <i>Dryopteris</i> <i>intermedia</i> ), broad-leaf cat-tail, pointed broom sedge ( <i>Carex</i> <i>scoparia</i> ), yellow green sedge ( <i>Carex flava</i> ), fowl manna grass ( <i>Glyceria striata</i> ), common marsh bedstraw ( <i>Galium</i> <i>palustre</i> ), lamp rush, spotted touch-me-not ( <i>Impatiens</i> <i>capensis</i> ), bluejoint ( <i>Calamagrostis canadensis</i> ), simpler's joy ( <i>Verbena hastata</i> ), eastern poison ivy ( <i>Toxicodendron</i> <i>radicans</i> ), interrupted fern	A11a: Depleted Below Dark Surface	Water Stained Leaves (B9), Drainage Patterns (B10), Geomorphic Position (D2), Microtopographic Relief (D4)	No	T b ti s
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	T r is
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	T r is s
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	s v c



#### **Additional Comments**

Small, man-made ditch located north of the Albion Road substation. The wetland extends offsite into large wetland complex to the west.

Small portion of larger wetland complex located north of the Albion Road substation.

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.

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.

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.

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) <sup>1</sup>	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	
W07	01CFD	PFO	Trees: balsam fir, red maple, green ash Shrub/Saplings: balsam fir, red maple, green ash, speckled alder ( <i>Alnus incana</i> ) Herbs: sensitive fern, cinnamon fern ( <i>Osmundastrum</i> <i>cinnamomeum</i> ), fringed sedge, three-seed sedge ( <i>Carex</i> <i>trisperma</i> )	F3: Depleted Matrix	Saturation (A3), Drainage Patterns (B10)	No	L
W08	01CFE	PSS/PEM	Trees: red maple Shrub/Saplings: red maple, gray willow, common winterberry ( <i>Ilex verticillata</i> ), broad-leaved meadowsweet ( <i>Spiraea</i> <i>latifolia</i> ) Herbs: sensitive fern, reed canary grass ( <i>Phalaris</i> <i>arundinacea</i> )	F3: Depleted Matrix	Saturation (A3)	No	I: E
W09	01RKE	PFO/PSS/PEM	Trees: balsam fir, red maple, black ash, ( <i>Fraxinus nigra</i> ), yellow birch, eastern arborvitae Shrub/Saplings: balsam fir, speckled alder, common winterberry, alternate-leaf dogwood ( <i>Cornus alterniflora</i> ), broad-leaved meadowsweet, steeplebush ( <i>Spiraea tomentosa</i> ) 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, ( <i>Solidago gigantia</i> ), eastern marsh fern ( <i>Thelypteris palustris</i> ), cottongrass bulrush ( <i>Scirpus cyperinus</i> ), pickerelweed ( <i>Pontederia cordata</i> ), northern water-horehound ( <i>Lycopus uniflorus</i> ), European bur-reed ( <i>Sparganium emersum</i> ), common duckweed ( <i>Lemna minor</i> ), rice cut grass ( <i>Leersia oryzoides</i> ), arrow-leaf tearthumb ( <i>Persicaria sagittata</i> ), coon's-tail ( <i>Ceratophyllum demersum</i> ), three-leaf goldthread ( <i>Coptis trifolia</i> ), bristly dewberry ( <i>Rubus hispidus</i> ), wrinkle- leaf goldenrod ( <i>Solidago rugosa</i> ), 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	T e v v
W10	01CFI	PSS	Trees: none Shrub/Saplings: red maple, gray willow, quaking aspen ( <i>Populus tremuloides</i> ), gray birch Herbs: broad-leaf cat-tail, fringed sedge	S5: Sandy Redox	Saturation (A3)	No	V F a
W11, W12	01CFH	PSS	Trees: red maple, American Iarch ( <i>Larix Iaricina</i> ) Shrub/Saplings: red maple, American Iarch, gray birch, gray willow, quaking aspen, broad-leaved meadowsweet Herbs: broad-leaf cat-tail, fringed sedge, dark green bulrush ( <i>Scirpus atrovirens</i> ), shallow sedge ( <i>Carex Iurida</i> ), Canadian rush ( <i>Juncus canadensis</i> )	S5: Sandy Redox	Saturation (A3), Water Stained Leaves (B9)	No	V F a



Linear wetland drainage extends north off-site.

Isolated wetland located along proposed access road off East Benton Road.

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.

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.

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) <sup>1</sup>	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	
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	V F C f
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 ( <i>Rubus idaeus</i> ), 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	۲ r
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 ( <i>Rubus pubescens</i> ), royal fern, cinnamon fern, eastern marsh fern, yellow green sedge, woodland horsetail ( <i>Equisetum</i> <i>sylvaticum</i> )	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	r
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 ( <i>Urtica dioica</i> )	A11a: Depleted Below Dark Surface	Saturation (A3), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Moss Trim Llnes (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	۲ r
W21	01EBA	PFO	Trees: eastern arborvitae, balsam fir, black ash Shrub/Saplings: balsam fir, broad-leaved meadowsweet Herbs: sensitive fern, parasol white top ( <i>Doelingeria</i> <i>umbellata</i> ), 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	\ F

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.

This is a forested swale that extends across the site from south to north. The wetland contains a VP02.

This is a forested swale that extends across the site from south to north. The wetland contains S03.

This is a forested swale that extends across the site from south to north. The wetland contains SVP03.

Wetland depression extending south off-site and containing PSVP11.

Figure Identifier	Wetland Field Designation	Wetland Classification(s) <sup>1</sup>	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	
W22	01RKI	PFO	Trees: balsam fir, yellow birch, American elm ( <i>Ulmus americana</i> ) 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 ( <i>Cinna latifolia</i> )	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)	No	r
W23	01RKJ	PFO/PUB	Trees: balsam fir, red maple, black ash, yellow birch Shrub/Saplings: speckled alder, smooth arrow-wood ( <i>Viburnum recognitum</i> ) 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	
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	1
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	I
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	l e
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 ( <i>Carex</i> <i>lacutris</i> ), cinnamon fern, European bur-reed, stinging nettle, cut-leaf water-horehound ( <i>Lycopus americanus</i> )	S4: Sandy Gleyed Matrix, S5: Sandy Redox	Saturation (A3)	Yes, portions within 25-ft of a watercourse	,

This is a forested swale that extends across the site from south to north; located west of Richards Road.

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.

Isolated wetland on south side of survey area east of Richards Road.

Isolated forested wetland located east of Richards Road.

Isolated wetland along old roadbed to an existing camp located east of Richards Road.

Wetland complex containing S05.

Figure Identifier	Wetland Field Designation	Wetland Classification(s) <sup>1</sup>	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	
			Trees: eastern arborvitae, black ash, gray birch, yellow birch, quaking aspen, balsam fir, red maple				
W28	01CFN	PFO	Shrub/Saplings: eastern arborvitae, black ash, gray birch, yellow birch, quaking aspen, balsam fir, red maple	F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9), Drainage Patterns (B10)	No	P th
			Herbs: sensitive fern, interrupted fern, fringed sedge, three- seed sedge, fowl manna grass				
			Trees: balsam fir, red maple, black ash, yellow birch, eastern arborvitae		Surface Water (A1), High Water Table (A2), Saturation (A3), Sediment Deposits (B2), Algae Mat or Crust (B4),		
W29, W30,	018KI	PEO/PSS/PEM	Shrub/Saplings: balsam fir, speckled alder, common winterberry	A2: Histic	Inundation Visible on Aerial Imagery (B8), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves	Yes: contains >20,000 square feet (sf) of emergent marsh and PSVP03 is	T e w
W31, W32			Herbs: dwarf red raspberry, three-seed sedge, northern water-horehound, sensitive fern, interrupted fern, woodland horsetail, fowl manna grass, swamp candles ( <i>Lysimachia</i> <i>terrestris</i> ), bluejoint, broad-leaf cat-tail, royal fern, broad- leaved meadowsweet, yellow green sedge	Epipedon	Season Water Table (C2), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC- Neutral Test (D5)		R A is
			Trees: balsam fir, red maple, black ash	A11a:	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Betterne (B10), Dry Season		
W33, W34	01RKK	PFO	Shrub/Saplings: balsam fir Herbs: sensitive fern, eastern poison ivy, dwarf red raspberry, interrupted fern	Depleted Below Dark Surface	Water Table (C2), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	No	Т р
	01RKM	PFO	Trees: balsam fir, red maple, black ash, green ash, eastern arborvitae		Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9),		
W35			Shrub/Saplings: balsam fir, speckled alder, common winterberry	F3: Depleted Matrix	Drainage Patterns (B10), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Misster example Relief (D4), EAC	No	u B C
			Herbs: sensitive fern, royal fern, broad-leaf cat-tail, eastern poison ivy		Neutral Test (D5)		
			Trees: balsam fir, red maple, black ash, green ash, eastern arborvitae		Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9),		
W36	01RKN/01RKO/ 01CFU/01CFQ/ 01CFS/01CFT	PFO	Shrub/Saplings: balsam fir, speckled alder, common winterberry	F3: Depleted Matrix	Drainage Patterns (B10), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3),	Yes, portions within 25-ft of a watercourse	T u e
			Herbs: sensitive fern, royal fern, broad-leaf cat-tail, eastern poison ivy		Nicrotopographic Relief (D4), FAC- Neutral Test (D5)		
			I rees: none	E2: Depleted			
W37	01CFO	D PSS	Shrub/Saplings: speckled alder, broad-leaved meadowsweet, gray willow, red osier dogwood ( <i>Cornus alba</i> )	Matrix, F6: Redox Dark	Saturation (A3)	No	P p
			Herbs: sensitive fern, common fox sedge, wrinkled-leaf goldenrod	Surrace			

Portion of large forested wetland complex that extends off-site to
the northeast and southwest.

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.

This is a forested wetland located east of East Benton Road. Small portion of wetland that extends off-site to the east.

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.

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.

Portion of wetland located east of East Benton Road along proposed access road.

Figure Identifier	Wetland Field Designation	Wetland Classification(s) <sup>1</sup>	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	
W38	01CFP	PFO	Trees: red maple, green ash Shrub/Saplings: red maple, green ash, black ash, common winterberry	F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9)	No	Ņ
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	1
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	N a
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	L L
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 ( <i>Betula populifolia</i> ) 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 ( <i>Dulichium arundinaceum</i> ), lesser bladder sedge ( <i>Carex vesicaria</i> ), shallow sedge, variegated scouring rush ( <i>Equisetum variegatum</i> ), 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	
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	

Additional	Comments
/ taantional	•••••••••

Wetland is located east of East Benton Road along south side of proposed access road and contains PVP04.

Wetland is located east of East Benton Road along north side of proposed access road.

Wetland is located east of East Benton Road along proposed access road and contains S06.

This a s narrow side slope groundwater discharge swale that is a portion of a larger wetland that extends off-site to the east.

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.

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) <sup>1</sup>	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	
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	۲ c
W46	01RKU	PSS	Trees: none       A11a:         Shrub/Saplings: speckled alder       Depleter         Terbs: sensitive fern       Below D         Surface       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	T s
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	F
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	F
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	ŀ
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	V c r

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.

This wetland is a small, isolated wetland in a saddle at the top of a slope, located east of Bog Road.

Portion of larger wetland complex along west side of survey area north of Bog Road. Wetland extends northwest off-site.

Portion of larger wetland complex along west side of survey area north of Bog Road. Wetland extends northwest off-site.

Isolated wetland located north of Bog Road.

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) <sup>1</sup>	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	
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	t t
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)	ר E f
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	l
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 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 onsite, 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 offsite to continue southerly to where it connects to S08/S09 and ultimately Fifteenmile Stream.

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.

Isolated wetland located north of Bog Road surrounded by area of recent logging activities.

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) <sup>1</sup>	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	
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	
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	- i 1 1
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 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.

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.

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) <sup>1</sup>	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	
W58, W59	02RKH/02RKI/0 2CFG/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	T aft iii s F
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	ŀ
W61	51 02RKJ PSS Shrub Herbs		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	S F
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	   

<sup>1</sup>Wetland classification follows Federal Geographic Data Committee. (2013): PFO = Palustrine Forested, PSS = Palustrine Scrub-Shrub, PEM = Palustrine Emergent, PUB = Palustrine Unconsolidated Bottom

### **Additional Comments**

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.

Isolated wetland south side of Unity Road.

Small, isolated wetland located south of Unity Road. Contains PSVP09.

Isolated wetland depression located north side of Unity Road. Contains a PVP10.

### 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 assoc
S02	S02RK	Perennial	4	4	Sand, stone	MDEP, Corps	Located east of the Albion Road Substation and flows northerly through the western side of
S03	S03RK	Intermittent	4	4	Stone, gravel	MDEP, Corps	Located east of the Albion Road Substation and flows northerly across a proposed access
S04	S04RK	Pond	50	40	Muck, sand	MDEP, Corps	Apparent man-made pond adjacent to the east side of Richards Road. Located in wetland
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 W2 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 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 ob
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 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 with 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 large open water/emergent marsh wetland through wetland W57 and into a culvert inlet. T 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, a from a culvert outlet. The culvert inlet is watercourse S10 and the stream flows through we

iated with a wetland on-site. Water striders observed.

of wetland W09. Water striders observed.

s road into wetland W19.

I W23 (01RKJ).

27. Fish and invertebrates were observed within the

across survey area from wetland W36 (01CFR) through

bserved.

W43. Becomes diffuse in open water habitat along Fifteenmile

in watercourse. Open water and emergent wetland W50

I through a proposed access road area. Flows southerly from a The culvert outlet is watercourse S11 and wetland W56. Water

and through a proposed access road area. Flows southerly etland 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 acc
PVP02	PVP01CF	No	Non-natural	Ephemeral	Depression created by logging activities. Located north of Albion Road along proposed acc
PSVP03	PSVP01RK	Potentially	Natural	Ephemeral	Natural depression located in forested and scrub shrub wetland W32. Considered potential 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
PSVP06	PSVP04RK	Potentially	Natural	Ephemeral	Natural, isolated wetland depression situated. Located south of Unity Road. Also mapped ir natural origin.
PSVP07	PSVP02RK	Potentially	Natural	Ephemeral	Natural, isolated wetland depression situated in forested upland. Located adjacent to timbe The pool basin is predominantly devoid of vegetation. Also mapped as wetland W54. Consi
PVP08	PVP03RK	No	Non-natural: borrow pit/excavation	Permanent	Old borrow pit excavation situated in forested upland. Located adjacent to timber harvest ro 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 activ
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

ess road in wetland W12.

ess road in wetland W14.

Ily significant due to natural origin, and ponded water and frog

t Benton Road.

n wetland W51. Considered potentially significant due to

er harvest road in a potential access area south of Unity Road. idered potentially significant due to natural origin.

bad in a potential access area south of Unity Road. Not

vities.

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 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





Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of the data.





Legend				
•	Army Corps Location Plot			
PSVP	Potential Significant Vernal Pool			
PVP	Potential Vernal Pool			
	Delineated Intermittent Stream			
—	Delineated Perennial Stream			
C11	250' Significant Vernal Pool Critical Terrestrial Habtat			
C11	250' Potential Significant Vernal Pool Critical Terrestrial Habtat			
	Delineated Wetland			
	Open Water Feature			
	Delineation Limits			
	Limit of Disturbance			
<u> </u>	Overhead Transmission Line			



600 Feet (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.

Clinton Unity T Benton Unity Albion Winslow Project Location Benton, Maine Prepared by GC on 2021-12-16 Reviewed by EB on 2021-12-16

195601453

Client/Project Three Corners Solar Project Transmission Line Delineation

Benton, Maine

Figure No.

2 of 5 Title

### Wetland and Watercourse Delineation and Vernal Pool Survey Results



Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.









**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.



Appendix B Representative Photographs



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.

Appendix B Representative Photographs



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.



Appendix B Representative Photographs



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.

Appendix B Representative Photographs



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.



Appendix B Representative Photographs



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.



Appendix B Representative Photographs



Photo 25: Looking north within the forested (PFO) portion of wetland W58. Stantec. July 31, 2020.

## APPENDIX C REPRESENTATIVE CORPS PAIRED DATA PLOT FORMS


Project/Site: Three Corners Solar Project	City/County: Benton/Ke	nebec Sampling Date: 7/27/20	20
Applicant/Owner: Three Corners Solar, LLC		_State: <u>ME</u> Sampling Point: <u>Uplan</u>	nd-W09
Investigator(s): Rodney Kelshaw	2:		
Landform (hillslope, terrace,etc.): Footslope	Local relief (concave, conve	, none): <u>Concave</u> Slope (%) <u>3 - 8</u>	
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 typic	al for this time of year? Yes X	o (if no, explain in Remarks.)	
Are Vegetation , Soil , or Hydrology	significantly disturbed? Are "Norma	Circumstances" present? Yes X No	
Are Vegetation , Soil , or Hydrology	naturally problematic? (if needed, e	vplain any answers in Remarks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X Yes Yes	No NoX NoX	Is the Sampled Area within a Wetland? if yes, optional Wetland Site ID:	Yes	NoX
Remarks: (Explain alternative procedures l	nere or in a sep	varate report.)			

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two require	
Primary Indicators (minimum of one is required: ch	neck all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2)	Aquatic Fauna (B13)	Moss Trim Lines (B16)
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 Livi	ng Roots (C3) Saturation Visible in Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tille	d Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsley Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)
Surface Water Present? Yes No X	Depth (inches)	
Water Table Present? Yes No X	Depth (inches)	Wetland Hydrology Present? Yes NoX
Saturation Present? Yes No X		

Remarks:

Tree Stratum	(Plot Size:	30'radius )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test V	Vorksheet:			
Abias balasmas	(110001201	/		v		Number of Domi	nant Specie	!S	2	( ^ )
Ables balsamea			50	X X	FAC	That Are OBL, FA	CW, or FAC	.:	3	(A)
Acer rubrum Thuia accidentalic				X		Total Numbe	r of Domina	ant		
Betula alleghaniensis			10			Species Ac	ross All Stra	ta:	6	(B)
Detula allegitamensis			100	- Total Cov		Percent of Don	ninant Spec	ies		
			100			That Are OBL, I	FACW, or FA	4C:	50%	(A/B)
						Prevalence Index \	Worksheet:			
			Absolute	Dominant	Indicator	OBL species	0	x 1_	0	
Shrub Stratum	(Plot Size:	15'radius )	% Cover	Species?	Status	FACW species	10	x 2_	20	
Abies balsamea			25	Х	FAC	FAC species	117	х З	351	
Betula alleghaniensis			2		FAC	FACU species	10	x 4	40	
			27	= Total Cov	/er	UPL species	0	x 5	0	
						Column Totals	137	(A)	411	(B)
						Prevalenc	e Index = B,	/A =	3	
						Hydrophytic Vege	tation Indic	ators	:	
			Absolute	Dominant	Indicator	1- Rapid Tes	t For Hydro	phyti	c Vegeta	tion
Herb Stratum	(Plot Size:	5'radius )	% Cover	Species?	Status	2- Dominand	e Test is > !	50%		
Maianthemum canade	ense		5	Х	FACU		- 1			
Aralia nudicaulis			3	Х	FACU	X 3- Prevalenc	e index is =	< 3.0		
Dendrolycopodium ob	scurum		2	Х	FACU	4- Morpholo	gical Adapt	ation	s	
			10	= Total Cov	ver	5- Problema	tic Hydroph	iytic V	/egetatio	n
						Definitions of Vegeta	ation Strata:			
						Tree- Woody plants 3	3 in. (7.6cm)	or mo	re in diam	neter at
						breast height (DBH),	regardless of	f heigh	nt.	
						Sapling/Shrub- Wood greater than or equa	ly plants less I to 3.28ft (1	than 3 m) tall	3 in. DBH	and
						Herb- All herbaceous	(non-woody	/) nlan	ts regard	less of
						size, and woody plan	ts less than 3	3.28ft 1	tall.	
Woody Vine Stratum	(Plot Size:	30'radius )	Absolute % Cover	Dominant Species?	Indicator Status	Woody Vines- All wo height.	ody vines gre	eater t	han 3.28f	t in
				= Total Cov	ver	Hydroph Vegeta Prese	nytic tion ent? Yes 1	x	Νο	
								<u> </u>		
Remarks: (Include photo nu	umbers here	or on a sep	arate shee	et.)						

Depth	Matrix				Redo	ox Featu	ires			
(inches	Color	%	Color	%	Туре	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	С	Μ	Sandy Loam	Stony		
Hvdric S	oil Indicators:							Indicators for Problematic Soils:		
His	stosol (A1)				Polyvalu	e Below	Surface (B15)	2 cm Muck (A10)		
His	stic Epipedon (/	A2)			Thin Dar	k Surface	e (S9)	Coast Prarie Redox (A16)		
Bla	ack Histic (A3)				Loamy N	/lucky Mi	ineral (F1)	5 cm Mucky Peat or Peat (S3)		
Ну	drogen Sulfide	lfide (A4) Loamy Gleyed Matric (F2)				ileyed M	atric (F2)	Dark Surface (S7)		
Stratified Layers (A5)De				Depleted	d Matrix	(F3)	Polyvalue Below Surface (S8)			
Depleted Below Dark Surface (A11)					Redox D	ark Surfa	ace (F6)	Thin Dark Surface (S9)		
Th	ick Dark Surfac	e (A12)			Depleted	d Dark Su	urface (F7)	Iron-Manganese Masses (F12)		
Sa	ndy Mucky Mir	neral (S	1)		Redox D	epressio	ns (F8)	Piedmont Floodplain Soils (F19)		
Sa	ndy Gleyed Ma	trix (S4	-)					Mesic Spodic (TA6)		
	nay Redox (55) rinnod Matrix (	56)						Red Parent Material (F21)		
Da	ark Surface (S7)	30)						Other (Explain in Remarks)		
Restrict	ive Layer (if obse	erved):								
		Туре:					Нус	lric Soil Present? Yes No X		
	Depth (in	ches):								
Remark	(5:									

Project/Site: Three Corners Solar Project	City/County:	Benton/Kenneb	ec	Sampling Date: 7/	27/2020
Applicant/Owner: Three Corners Solar, LLC		Sta	ate: ME	Sampling Point:	Wetland-W09
Investigator(s): Rodney Kelshaw	Section, Tow	nship, Range:			
Landform (hillslope, terrace,etc.): Floodplain	_Local relief (cond	ave, convex, nor	ne): <u>Linear</u>	Slope (%)	0 - 3
Subregion (LRR or MLRA): LRR R Lat: 4	14.575502	Long: <u>-69</u> .	500534	Datum: N	AD83
Soil Map Unit Name:			NWI Classif	fication: PEM	
Are climatic / hyrologic conditions on the site typical for thi	s time of year? Ye	s <u>X</u> No	(if no, e	explain in Remarks.	)
Are Vegetation , Soil , or Hydrology signific	cantly disturbed?	Are "Normal Cir	cumstances'	" present? Yes X	No
Are Vegetation , Soil , or Hydrology natura	lly problematic?	(if needed, explain	n any answers	s in Remarks.)	

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

Hydrophytic Vegetation Present?YesXNoHydric Soil Present?YesXNoWetland Hydrology Present?YesXNo	Is the Sampled Area within a Wetland? Yes X No if yes, optional Wetland Site ID: W10
Remarks: (Explain alternative procedures here or in a separate report.)	1

HYDROLOGY				
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)			
Primary Indicators (minimum of one is required:	check all that apply)	Surface Soil Cracks (B6)		
Surface Water (A1)	Water-Stained Leaves (B9)	X Drainage Patterns (B10)		
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)	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)	Shallow Aquitard (D3)		
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	 Microtopographic Relief (D4)		
Sparsley Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)		
Surface Water Present? Yes No X	Depth (inches)			
Water Table Present? Yes No X	Depth (inches) Wetland	Hydrology Present? Yes X No		
Saturation Present? Yes X No	Depth (inches) 0			
Describe Recorded Data (stream gauge, mor	itoring well, aerial photos, previous inspectio	ns), if available:		
Remarks:				

Tree Stratum	(Plot Size:	30'radius )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:		
Abios balsamoa	(	,	10	v	EAC	Number of Dominant Species	١	
Eravinus nigra			2	Λ		That Are OBL, FACW, OF FAC: 6 (A	)	
			12	= Total Co	ver	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:		
			Abcoluto	Dominant	Indicator	OBL species 43 x 1 43		
Shrub Stratum	(Plot Size:	15'radius )	% Cover	Species?	Status	FACW species 87 x 2 174	_	
llex verticillata			5	Х	FACW	FAC species 10 x 3 30		
			5	= Total Co	ver	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:		
			Absolute	Dominant	Indicator	1- Rapid Test For Hydrophytic Vegetation	ı	
Herb Stratum	(Plot Size:	5'radius )	% Cover	Species?	Status	X 2- Dominance Test is > 50%		
Spiraea latifolia			25	Х	FACW			
Solidago gigantea			25	Х	FACW	X 3- Prevalence Index is =< 3.0		
Carex trisperma			20	Х	OBL	4- Morphological Adaptations		
Spiraea tomentosa			20	Х	FACW	5- Problematic Hydrophytic Vegetation		
<u>Glyceria striata</u>			15		OBL			
Carex Jurida			2			Definitions of Vegetation Strata:		
			<u> </u>			Tree- Woody plants 3 in. (7.6cm) or more in diameter		
Typha latifolia			2			breast height (DBH), regardless of height.		
			123	= Total Co	ver	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 size, and woody plants less than 3.28ft tall.	of	
Woody Vine Stratum	(Plot Size:	30'radius )	Absolute % Cover	Dominant Species?	Indicator Status	Woody Vines- All woody vines greater than 3.28ft in height.		
				= Total Co	ver	Hydrophytic Vegetation		
						Present? Yes X No		
Remarks: (Include photo n	umbers here	or on a sep	arate shee	t.)		·		

Depth	Matrix				Redo	ox Featu	res			
(inches	Color	%	Color	%	Туре	Loc	Texture	Remarks		
0-5	10YR 2.5/1	100					Muck	Very Stony		
5-14	2.5Y 4/2	95	10YR 4/6	5	С	М	Sandy Loam	Very Stony		
Hydric S	oil Indicators:							Indicators for Problematic Soils:		
His	stosol (A1)				Polyvalu	e Below S	Surface (B15)	2 cm Muck (A10)		
Hi	stic Epipedon (	A2)			Thin Dar	k Surface	e (S9)	Coast Prarie Redox (A16)		
Bla	ack Histic (A3)				Loamy N	lucky Mi	neral (F1)	5 cm Mucky Peat or Peat (S3)		
Hy	drogen Sulfide	(A4)			Loamy G	ileyed Ma	atric (F2)	Dark Surface (S7)		
Sti	ratified Layers	A5)			Depleted	d Matrix (	(F3)	Polyvalue Below Surface (S8)		
X De	epleted Below [	Dark Su	rface (A11)		Redox D	ark Surfa	ce (F6)	Thin Dark Surface (S9)		
Th	ick Dark Surfac	e (A12)			Depleted	d Dark Su	rface (F7)	Iron-Manganese Masses (F12)		
Sa	ndy Mucky Mir	neral (S	1)		Redox D	epressior	ns (F8)	Piedmont Floodplain Soils (F19)		
Sa	ndy Gleyed Ma	trix (S4	.)				-	Mesic Spodic (TA6)		
Sa	ndy Redox (S5)							Red Parent Material (F21)		
Sti	ripped Matrix (	50)						Other (Eveloin in Remarks)		
Da	irk Surface (S7)									
Restrict	ive Layer (if obs	erved):								
		Type:	Stony				Hydric S	Soil Present? Yes X No		
	Depth (in	ches):	14				,			
Remark	ks:									

Project/Site: Three Corners Solar Project	City/County:	Benton/Kenneb	ec	Sampling Date: 7/	27/2020
Applicant/Owner: Three Corners Solar, LLC		Sta	ate: ME	Sampling Point:	Wetland-W09
Investigator(s): Rodney Kelshaw	Section, Tow	nship, Range:			
Landform (hillslope, terrace,etc.): <u>Footslope</u>	Local relief (cond	cave, convex, nor	ne): <u>Linear</u>	Slope (%)	0 - 3
Subregion (LRR or MLRA): LRR R Lat: 44	.575534	Long:69.	500712	Datum: N	AD83
Soil Map Unit Name:			NWI Classif	ication: PFO	
Are climatic / hyrologic conditions on the site typical for this	time of year? Ye	s <u>X</u> No	(if no, e	explain in Remarks.	)
Are Vegetation , Soil , or Hydrology significant	ntly disturbed?	Are "Normal Cire	cumstances'	' present?Yes	( No
Are Vegetation , Soil , or Hydrology naturally	y problematic?	(if needed, explain	n any answers	in Remarks.)	

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

Hydrophytic Vegetation Present?YesXNoHydric Soil Present?YesXNoWetland Hydrology Present?YesXNo	Is the Sampled Area within a Wetland? Yes X No if yes, optional Wetland Site ID: W10
Remarks: (Explain alternative procedures here or in a separate report.)	

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)			
Primary Indicators (minimum of one is required	Surface Soil Cracks (B6)			
Surface Water (A1)	Water-Stained Leaves (B9)	X Drainage Patterns (B10)		
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)	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)	XGeomorphic Position (D2)		
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow Aquitard (D3)		
Inundation Visible on Aerial Imagery (B7)	Microtopographic Relief (D4)			
Sparsley Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)		
Surface Water Present? Yes No	X Depth (inches)			
Water Table Present? Yes No	X Depth (inches) Wetland H	Hydrology Present? Yes X No		
Saturation Present? Yes X No	Depth (inches) 0			
Describe Recorded Data (stream gauge, mo	nitoring well, aerial photos, previous inspection	ns), if available:		
Remarks:				

Trop Stratum	(Plot Size:	30'radius )	Absolute % Cover	Dominant	Indicator Status	Dominance Test V	Vorksheet:			
	(1101 5120.			Species.	510105	Number of Domi	nant Species	S	-	( • )
Abies balsamea			50	X	FAC	That Are OBL, FA	CW, or FAC:	:	6	(A)
Fraxinus nigra				Х	FACW	Total Numbe	r of Domina	nt		
Acer rubrum			<u> </u>		FAC	Species Ac	ross All Strat	a:	7	(B)
Betula allegnaniensis			5	Tabal Ca	FAC	Percent of Don	ninant Speci	es		
			/5	_= 10tal Cov	ver	That Are OBL,	FACW, or FA	.C:	85.7%	(A/B)
						Prevalence Index \	Norksheet:			
			Absolute	Dominant	Indicator	OBL species	10	x 1_	10	
Shrub Stratum	(Plot Size:	15'radius )	% Cover	Species?	Status	FACW species	47	x 2_	94	
Abies balsamea			15	Х	FAC	FAC species	95	х 3	285	
Cornus alternifolia			5	Х	FACU	FACU species	5	x 4	20	
			20	= Total Cov	ver		0	× 5	0	
						Column Totals		× 3	100	(D)
						Column Totals	157	(A)	409	(B)
						Prevalenc	e Index = B/	A =	2.61	
						Hydrophytic Vege	tation Indica	ators	:	
			Absolute	Dominant	Indicator	1- Rapid Tes	t For Hydrop	ohytio	c Vegeta <sup>.</sup>	tion
Herb Stratum	(Plot Size:	5'radius )	% Cover	Species?	Status	X 2- Dominano	ce Test is > 5	0%		
Solidago rugosa			20	Х	FAC					
Rubus hispidus			15	Х	FACW	X 3- Prevalenc	e Index is =<	< 3.0		
Coptis trifolia			15	Х	FACW	4- Morpholo	gical Adapta	ation	s	
Osmunda spectabilis			10		OBL	5- Problema	tic Hydroph	vtic V	egetatio	n
Spiraea latifolia			2		FACW			,	-8	
			62	_= Total Cov	ver	Definitions of Vegeta	ation Strata:			
						Tree- Woody plants 3 breast height (DBH),	3 in. (7.6cm) c regardless of	or mo heigh	re in diam It.	neter at
						Sapling/Shrub- Wood	ly plants less	than 3	3 in. DBH	and
						greater than or equa	10 3.2011 (11)	ing can	•	
						Herb- All herbaceous	(non-woody)	plan 28ft (	ts, regard	less of
			Absolute	Dominant	Indicator			.2011	lan.	
Woody Vine Stratum	(Plot Size:	30'radius )	% Cover	Species?	Status	Woody Vines- All wo height.	ody vines grea	ater t	han 3.28f	t in
				= Total Cov	ver	Hydroph	nytic			
						Vegeta	tion			
						Pies	entr Yes	<u>X</u>	NO	_
Remarks: (Include photo n	umbers here	or on a sep	arate shee	t.)						

Depth	Matrix				Redo	ox Featu	res	
(inches	Color	%	Color	%	Туре	Loc	Texture	Remarks
0-5	10YR 2.5/1	100					Muck	Very Stony
5-14	2.5Y 4/2	95	10YR 4/6	5	С	Μ	Sandy Loam	Very Stony
Hydric S	oil Indicators:							Indicators for Problematic Soils:
His	stosol (A1)				Polyvalu	e Below	Surface (B15)	2 cm Muck (A10)
His	stic Epipedon (	A2)			Thin Dar	k Surface	e (S9)	Coast Prarie Redox (A16)
Bla	ack Histic (A3)				Loamy N	/lucky Mi	neral (F1)	5 cm Mucky Peat or Peat (S3)
Ну	drogen Sulfide	e (A4)			Loamy G	ileyed M	atric (F2)	Dark Surface (S7)
Sti	ratified Layers	(A5)			Depleted	d Matrix	(F3)	Polyvalue Below Surface (S8)
X De	epleted Below [	Dark Su	rface (A11)		Redox D	ark Surfa	ce (F6)	Thin Dark Surface (S9)
Th	ick Dark Surfac	e (A12)			Depleted	d Dark Su	rface (F7)	Iron-Manganese Masses (F12)
Sa	ndy Mucky Mir	neral (S	1)		Redox D	epressio	ns (F8)	Piedmont Floodplain Soils (F19)
Sa	ndy Gleyed Ma	atrix (S4	.)					Mesic Spodic (TA6)
Sa	ndy Redox (S5)	)						Red Parent Material (F21)
Sti	ripped Matrix (	S6)						Very Shallow Dark Surface (TF12)
Da	irk Surface (S7)							Other (Explain in Remarks)
Restrict	ive Layer (if obs	erved):						
		Type:	Rock/Till				Hydri	r Soil Present? Ves X No
	Depth (in	ches):	14				riyari	
	-1 (							
Remark	<s:< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></s:<>							

Project/Site: Three C	Corners Sola	nr Project	City/County:	Benton/Kenne	bec	Sampling Date: 7/28/2	020
Applicant/Owner: T	hree Cornei	s Solar, LLC		S	itate: ME	Sampling Point: Upl	and-W16
Investigator(s): Rod	ney Kelshav	v	Section, Tow	vnship, Range:			
Landform (hillslope, t	terrace,etc.	: Side Slope	Local relief (con	cave, convex, no	one): <u>Conve</u> x	Slope (%) <u>8 - 2</u>	15
Subregion (LRR or MI	LRA): LRR	R	Lat: 44.574370	Long: -69	9.487125	Datum: NAD83	3
Soil Map Unit Name:					NWI Classif	ication: UPL	
Are climatic / hyrolog	gic conditio	ns on the site typ	ical for this time of year? Ye	es <u>X</u> No	(if no, e	explain in Remarks.)	
Are Vegetation	, Soil	, or Hydrology	significantly disturbed?	Are "Normal C	ircumstances'	'present? Yes X No	C
Are Vegetation	, Soil	, or Hydrology	naturally problematic?	(if needed, expla	ain any answers	in Remarks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No X No X No X	Is the Sampled Area within a Wetland? if yes, optional Wetland Site ID:	Yes	NoX
Remarks: (Explain alternative procedures l	nere or in a se	eparate report.)			

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)			
Primary Indicators (minimum of one is required: ch	Surface Soil Cracks (B6)			
Surface Water (A1)	Water-Stained Leaves (B9)	Drainage Patterns (B10)		
High Water Table (A2)	Aquatic Fauna (B13)	Moss Trim Lines (B16)		
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)	Saturation Visible in Aerial Imagery (C9)		
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)		
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)		
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow Aquitard (D3)		
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)		
Sparsley Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)		

Surface Water Present?	Yes	No	Х	Depth (inches)				
Water Table Present?	Yes	No	Х	Depth (inches)	Wetland Hydrology Present?	Yes	No	Х
Saturation Present?	Yes	No	Х	Depth (inches)				

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Tree Stratum	(Plot Size:	30'radius )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
Abias halasusas	(1101 5120.		70 COVCI	species.	510105	Number of Dominant Species	( )
Abies balsamea			<u>45</u>	X X	FAC	Inat Are OBL, FACW, or FAC: 3	(A)
Eagus grandifolia			25	^ X		Total Number of Dominant	
Populus tremuloides			10	A	FACU	Species Across All Strata: 8	(B)
			100	= Total Cov	ver	Percent of Dominant Species	
						That Are OBL, FACW, or FAC: 37.5%	(A/B)
						Prevalence Index Worksheet:	
			Absolute	Dominant	Indicator	OBL species 0 x 1 0	
Shrub Stratum	(Plot Size:	15'radius )	% Cover	Species?	Status	FACW species 0 x 2 0	
Abies balsamea			25	Х	FAC	FAC species 95 x 3 285	5
Fagus grandifolia			10	X	FACU	FACU species 50 x 4 200	)
			35	_= Total Co	ver	UPL species 0 x 5 0	
						Column Totals <u>145</u> (A) 48	5 (B)
						Prevalence Index = B/A = 3.3	4
						Hydrophytic Vegetation Indicators:	
			Absolute	Dominant	Indicator	1- Rapid Test For Hydrophytic Veget	ation
Herb Stratum	(Plot Size:	5'radius )	% Cover	Species?	Status	2- Dominance Test is > 50%	
Maianthemum canad	ense		4	Х	FACU	2. Drovolonco Indovis – < 2.0	
Aralia nudicaulis			3	Х	FACU		
Maianthemum racem	osum		3	Х	FACU	4- Morphological Adaptations	
			10	= Total Co	ver	5- Problematic Hydrophytic Vegetat	ion
						Definitions of Vegetation Strata:	
						Tree- Woody plants 3 in. (7.6cm) or more in dia	imeter at
						breast height (DBH), regardless of height.	
						Sapling/Shrub- Woody plants less than 3 in. DB greater than or equal to 3.28ft (1m) tall.	H and
						Herb- All herbaceous (non-woody) plants, rega	rdless of
						size, and woody plants less than 3.28ft tall.	
Woody Vine Stratum	(Plot Size:	30'radius )	Absolute % Cover	Dominant Species?	Indicator Status	Woody Vines- All woody vines greater than 3.2 height.	8ft in
				= Total Co	ver	Hydrophytic	
						Vegetation	
						Present? Yes No>	(
Remarks: (Include photo n	umbers here	or on a sep	arate shee	t.)			

Depth	Matrix				Redo	ox Featu	res	
(inches	Color	%	Color	%	Туре	Loc	Textu	ure Remarks
0-2	7.5YR 2.5/2	100					Pea	at
2-3	7.5YR 3/4	100					Fine Sand	ly Loam
3-14	7.5YR 4/4	100					Fine Sand	ly Loam
14-24	10YR 4/6	100					Sandy L	Loam
24-30	10YR 4/6	100					Loamy	Sand
24-30	10111 4/0	100					Loanny	Janu
Hydric S	oil Indicators:							Indicators for Problematic Soils:
Hi	stosol (A1)				Polyvalue	e Below	Surface (B15)	2 cm Muck (A10)
Hi	stic Epipedon (/	42)			Thin Dar	k Surface	e (S9)	Coast Prarie Redox (A16)
Bla	ack Histic (A3)				Loamy N	1ucky Mi	neral (F1)	5 cm Mucky Peat or Peat (S3)
Ну	/drogen Sulfide	(A4)			Loamy G	leyed M	atric (F2)	Dark Surface (S7)
Sti	ratified Layers (	A5)		Depleted Matrix (F3)				Polyvalue Below Surface (S8)
De	epleted Below [	Dark Su	rface (A11)	Redox Dark Surface (F6)				Thin Dark Surface (S9)
Th	iick Dark Surfac	e (A12)	)		Depleted	l Dark Su	irface (F7)	Iron-Manganese Masses (F12)
Sa	ndy Mucky Mir	neral (S	51)		Redox De	epressio	ns (F8)	Piedmont Floodplain Soils (F19)
Sa	ndy Gleyed Ma	trix (S4	t)					Mesic Spodic (TA6)
Sa	ndy Redox (S5)							Red Parent Material (F21)
Sti	ripped Matrix (	S6)						Very Shallow Dark Surface (TF12)
Da	ark Surface (S7)							Other (Explain in Remarks)
Restrict	ive Layer (if obse	erved):						
		Type:						Hydric Soil Present? Yes No X
	Depth (in	ches):						·
Remark	<s:< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></s:<>							

Project/Site: Three Corners Solar Project	City/County: Benton/Ken	nnebec	Sai	mpling Date: 7/2	28/2020
Applicant/Owner: <u>Three Corners Solar, LLC</u>		State:	ME	Sampling Point:	Wetland-W16
Investigator(s): <u>Rodney Kelshaw</u>	Section, Township, Range	e:			
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex,	, none):	Convex	Slope (%)	0 - 3
Subregion (LRR or MLRA): LRR R	Lat: 44.574336 Long:	-69.4873	306	Datum: NA	AD83
Soil Map Unit Name:		NW	/I Classifica	tion: PFO	
Are climatic / hyrologic conditions on the site typ	ical for this time of year? Yes X N	lo	(if no, exp	lain in Remarks.)	
Are Vegetation , Soil , or Hydrology	significantly disturbed? Are "Norma	al Circum	stances" pr	resent? Yes X	No
Are Vegetation , Soil , or Hydrology	naturally problematic? (if needed, ex	xplain any	answers in	Remarks.)	

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

Hydrophytic Vegetation Present?YesXNoHydric Soil Present?YesXNoWetland Hydrology Present?YesXNo	Is the Sampled Area within a Wetland? Yes X No if yes, optional Wetland Site ID: W15
Remarks: (Explain alternative procedures here or in a separate report.)	

Wetland Hydrology Indicators:								
Prim	nary Indicators (minimum of one is required:	check	all that apply)					
	_Surface Water (A1)	Х	Water-Stained Leaves (B9)					
Х	_High Water Table (A2)		Aquatic Fauna (B13)					
Х	_Saturation (A3)		Marl Deposits (B15)					
	_Water Marks (B1)		Hydrogen Sulfide Odor (C1					
	Sediment Deposits (B2)		Oxidized Rhizospheres on I					
	_Drift Deposits (B3)	Х	Presence of Reduced Iron (					

Х	High Water Table (A2)		Aquatic Fauna (B13)	-	Х	_Moss Trim Lines (B16)
Х	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 L	iving Roots (C3)		Saturation Visible in Aerial Imagery (C9)
	Drift Deposits (B3)	Х	Presence of Reduced Iron (	C4)	Х	Stunted or Stressed Plants (D1)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Ti	led Soils (C6)	Х	Geomorphic Position (D2)
	Iron Deposits (B5)		Thin Muck Surface (C7)	-		_Shallow Aquitard (D3)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)	_	Х	_Microtopographic Relief (D4)
Х	Sparsley Vegetated Concave Surface (B8)			-	Х	FAC-Neutral Test (D5)
Surfa	ace Water Present? Yes No X	D	epth (inches)			
Wat	er Table Present? Yes X No	D	epth (inches) 0	Wetland H	ydro	logy Present? Yes X No
Satu	ration Present? Yes X No	D	epth (inches) 0			

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

Remarks:

HYDROLOGY

Secondary Indicators (minimum of two required)

Surface Soil Cracks (B6)

X Drainage Patterns (B10)

Tree Stratum	(Plot Size:	30'radius )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test V	Vorkshee	et:		
	,	/	20	. v	FAC.	Number of Dom	nant Spe	CIES	4	( ^ )
Abios balsamoa			<u> </u>	×		That Are OBL, FA	ACVV, OF F	AC:	4	(A)
Eravinus nigra			15	^		Total Numbe	r of Dom	inant		(-)
			<u> </u>			Species Ac	ross All St	trata:	4	_(B)
Thuia occidentalis			10		FACW	Percent of Dor	ninant Sp	ecies		
			95	= Total Cov	/er	That Are OBL,	FACW, or	FAC:	100%	(A/B)
						Prevalence Index	Workshee	et:		
						OBL species	53	x 1	53	
Shruh Stratum	(Plot Size:	15'radius)	Absolute % Cover	Dominant Species?	Indicator Status	FACW species	74	x 2	148	
	(110101201	/		opeoleo.						
Abies balsamea			25	X	FAC	FAC species	98	x 3	294	
Thuja occidentalis			5		FACW	FACU species	0	x 4	0	
Betula alleghaniensis			3		FAC	·	•			
Fraxinus nigra			2		FACW	UPL species	0	x 5	0	
			35	= Total Cov	/er	Column Totals	225	(A)	495	(B)
						Prevalenc	e Index =	B/A =	2.2	
						Hydrophytic Vege	tation In	dicator	s:	
			Absolute	Dominant	Indicator	1- Ranid Tes	t For Hyd	Ironhvt	ic Vegeta	tion
Herb Stratum	(Plot Size:	5'radius )	% Cover	Species?	Status	X 2- Dominan	ce Test is	> 50%	ie vegetu	
Carex trisperma			50	Х	OBL					
Rubus pubescens			15		FACW	X 3- Prevalence	te Index is	s =< 3.0	)	
Osmundastrum cinna	momeum		13		FACW	4- Morpholo	ogical Ada	aptation	ns	
Thelypteris palustris			7		FACW	E Brobloma	tic Uvdro	nhytic	Vogotatio	20
Onoclea sensibilis			5		FACW			priytic	vegetatic	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Carex lurida			3		OBL	Definitions of Veget	ation Strat	ta·		
Equisetum sylvaticum			2		FACW	Deminitions of Veget				
			95	= Total Cov	ver	Tree- Woody plants breast height (DBH),	3 in. (7.6cr regardless	m) or mo s of heig	ore in dian ht.	neter at
						Sapling/Shrub- Wood	dy plants le	ess than	3 in. DBH	and
						greater than or equa	l to 3.28ft	(1m) ta	II.	
						Herb- All herbaceous	s (non-woo	ody) plai	nts, regard	less of
			Absolute	Dominant	Indicator	size, and woody plan		11 5.2011	. lall.	
Woody Vine Stratum	(Plot Size:	30'radius )	% Cover	Species?	Status	Woody Vines- All wo height.	ody vines	greater	than 3.28f	t in
		,		= Total Cov	/er	Hydrop	nvtic			
				_		Vegeta	tion			
						Pres	ent? Yes	s <u>X</u>	No	
Remarks: (Include photo n	umbers here	or on a sep	arate shee	et.)						

Depth	Matrix				Redo	ox Featu	res	
(inches	Color	%	Color	%	Туре	Loc	Texture	Remarks
0-8	7.5YR 2.5/1	100					Muck	
8-11	2.5Y 5/1	100					Loamy Sand	ł
11-24	5Y 5/1	100					Loamv Sand	ł
24-30	5V 5/1	100					Sand	
24-30	51 5/1	100					Sanu	
Hydric So	oil Indicators:							Indicators for Problematic Soils:
His	stosol (A1)				Polyvalu	e Below	Surface (B15)	2 cm Muck (A10)
X His	stic Epipedon (/	42)			Thin Dar	k Surface	e (S9)	Coast Prarie Redox (A16)
Bla	ack Histic (A3)				Loamy N	1ucky Mi	ineral (F1)	5 cm Mucky Peat or Peat (S3)
Ну	drogen Sulfide	(A4)			Loamy G	leyed M	atric (F2)	Dark Surface (S7)
Str	atified Layers (	A5)			Depleted	d Matrix	(F3)	Polyvalue Below Surface (S8)
De	pleted Below D	Dark Su	rface (A11)		Redox D	ark Surfa	ice (F6)	Thin Dark Surface (S9)
Th	ick Dark Surfac	e (A12)	1		Depleted	d Dark Su	urface (F7)	Iron-Manganese Masses (F12)
Sai	ndy Mucky Mir	neral (S	1)		Redox Depressions (F8)			Piedmont Floodplain Soils (F19)
Sai	ndy Gleyed Ma	trix (S4	.)					Mesic Spodic (TA6)
Sai	ndy Redox (S5)							Red Parent Material (F21)
Str	ipped Matrix (S	S6)						Very Shallow Dark Surface (TF12)
Da	rk Surface (S7)							Other (Explain in Remarks)
Restricti	ive Layer (if obse	erved):						
	-	Type						
	Dauth (in						Нус	dric Soil Present? Yes X No
	Depth (in	cnes):						
Remark	s:							

Project/Site: Three Corners Solar Project	City/County: B	enton/Kennebec	Sampling Date: 7/28/2020
Applicant/Owner: Three Corners Solar, LLC		State:	MESampling Point: Upland-W27
Investigator(s): Charles Ferris	Section, Towns	ship, Range:	
Landform (hillslope, terrace, etc.): Side Slope	Local relief (conca	ve, convex, none):	<u>Convex</u> Slope (%) <u>0 - 2</u>
Subregion (LRR or MLRA): LRR R	Lat: 44.570590	Long:69.4737	00 Datum: NAD83
Soil Map Unit Name:		NW	Classification: UPL
Are climatic / hyrologic conditions on the site typ	ical for this time of year? Yes	X No	(if no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology	significantly disturbed? A	re "Normal Circums	tances" present? Yes X No
Are Vegetation , Soil , or Hydrology	naturally problematic? (i	f needed, explain any	answers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X Yes Yes	No NoX NoX	Is the Sampled Area within a Wetland? if yes, optional Wetland Site ID:	Yes	NoX
Remarks: (Explain alternative procedures l	nere or in a sep	arate report.)			

Wetland Hydrology Indicators:				Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one	is required: cl	neck all that apply)		Surface Soil Cracks (B6)
Surface Water (A1)		Water-Stained Leaves (B9)		Drainage Patterns (B10)
High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)
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 I	iving Roots (C3)	Saturation Visible in Aerial Imagery (C9)
Drift Deposits (B3)		Presence of Reduced Iron (	C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	_	Recent Iron Reduction in T	illed Soils (C6)	Geomorphic Position (D2)
Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
Inundation Visible on Aerial Im	agery (B7)	Other (Explain in Remarks)		Microtopographic Relief (D4)
Sparsley Vegetated Concave Su	urface (B8)			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 monit	toring well aerial photos pre	vious inspectio	ns) if available:
	Sudge, morm	toring wen, aeriai priotos, pre		

Remarks:

Tree Stratum	(Plot Size:	30'radius )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:		
Acer rubrum	,	/	45	X	FAC	Number of Dominant Species	Л	(A)
Abies balsamea			15	X	FAC		4	_('')
<u></u>			60	= Total Cov	ver	Species Across All Strata:	5	(B)
						Percent of Dominant Species That Are OBL, FACW, or FAC:	80%	_(A/B)
						Prevalence Index Worksheet:		
			Absolute	Dominant	Indicator	OBL species 0 x 1	0	
Shrub Stratum	(Plot Size:	15'radius )	% Cover	Species?	Status	FACW species 0 x 2	0	
Abies balsamea			30	Х	FAC	FAC species 105 x 3	315	
Acer rubrum			15	Х	FAC	FACU species 0 x 4	0	
			45	_= Total Cov	ver	UPL species 40 x 5	200	
						Column Totals 145 (A)	515	(B)
						Prevalence Index = B/A =	3.55	(-)
						Hydrophytic Vegetation Indicators:	:	
			Absolute	Dominant	Indicator	1- Rapid Test For Hydrophytic	Vegeta	tion
Herb Stratum	(Plot Size:	5'radius )	% Cover	Species?	Status	X 2- Dominance Test is > 50%		
Dennstaedtia punctilo	bula		40	X	UPL	3- Prevalence Index is =< 3.0		
			40	_= Total Cov	/er			
						5- Problematic Hydronbytic V	, ogotatic	מר
							egetatic	лі 
						Definitions of Vegetation Strata:		
						Tree- Woody plants 3 in. (7.6cm) or mor breast height (DBH), regardless of height	e in dian t.	neter at
						Sapling/Shrub- Woody plants less than 3 greater than or equal to 3.28ft (1m) tall.	in. DBH	and
						Herb- All herbaceous (non-woody) plant size, and woody plants less than 3.28ft t	s, regard all.	lless of
Woody Vine Stratum	(Plot Size:	30'radius )	Absolute % Cover	Dominant Species?	Indicator Status	Woody Vines- All woody vines greater th height.	1an 3.28f	ft in
				= Total Cov	ver	Hydrophytic Vegetation Present? Voc. X	No	
Remarks: (Include photo n	umbers here	or on a sep	arate shee	t.)		Present? Yes X	No	

### Sampling Point: Upland-W27

Depth	Matrix	[			Redo	ox Featur	es		
(inches	Color	%	Color	%	Туре	Loc	Text	ure	Remarks
0-10	10YR 5/4	100					Fine Sand	ly Loam	
10-20	10YR 5/3	100					Fine Sand	ly Loam	
Hydric So	oil Indicators:							In	dicators for Problematic Soils:
His	tosol (A1)				Polyvalu	e Below S	urface (B15)		2 cm Muck (A10)
His	tic Epipedon (	A2)			Thin Dar	k Surface	(S9)		Coast Prarie Redox (A16)
Bla	ck Histic (A3)	(			Loamy N	Aucky Mir	eral (F1)		5 cm Mucky Peat or Peat (S3)
Hyd	drogen Sulfide	e (A4)			Loamy G	leyed Ma	tric (F2)		Dark Surface (S7)
Stra	atified Layers	(A5)	<b>(</b> )))		Depleted	d Matrix (I	-3)		Polyvalue Below Surface (S8)
Dep	oleted Below	Dark Su	rface (A11)		Redox D	ark Surfac	e (F6)		Ihin Dark Surface (S9)
I	CK Dark Surra	ce (AIZ)	1)			a Dark Sur	Tace (F7)		Iron-Manganese Masses (F12)
San	idy Mucky Mi	neral (S	1) \		Redux D	epression	5 (F8)		Pleamont Floodplain Solis (F19)
3di	dy Beday (S5	atrix (34 )	)						Nesic Spould (TAG) Red Parent Material (E21)
	inned Matrix (	) (SE)							Very Shallow Dark Surface (TE12)
	rk Surface (S7)	30)							Other (Explain in Remarks)
Dui	K Surface (S7)	)						—	
Restrictiv	ve Layer (if obs	erved):							
		Type							
	Deveth /iv							Hydric Soi	Il Present? Yes No X
	Depth (Ir	icnes):							
Remarks	<u>.</u>								
nemark									

eID: 20200917113918

Project/Site: Three Corners Solar Project	City/County: Benton/Ker	nnebec	Sampling Date: 7/28/2020
Applicant/Owner: Three Corners Solar, LLC		State: ME	Sampling Point: <u>Wetland-W</u> 27
Investigator(s): Charles Ferris	Section, Township, Range	e:	
Landform (hillslope, terrace,etc.): Floodplain	Local relief (concave, convex	, none): <u>Conca</u>	aveSlope (%) <u>1 - 1</u>
Subregion (LRR or MLRA): LRR R	Lat: 44.570500 Long:	-69.473600	Datum: NAD83
Soil Map Unit Name:		NWI Class	ification: PSS
Are climatic / hyrologic conditions on the site typi	cal for this time of year? Yes X N	No(if no,	, explain in Remarks.)
Are Vegetation , Soil , or Hydrology	significantly disturbed? Are "Norma	al Circumstance	s" present? Yes X No
Are Vegetation , Soil , or Hydrology	naturally problematic? (if needed, e	xplain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present?YesXNoHydric Soil Present?YesXNoWetland Hydrology Present?YesXNo	Is the Sampled Area within a Wetland? Yes X No if yes, optional Wetland Site ID: W22
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY			Consultant la diastant (minimum of two mousined)		
			Secondary indicators (minimum of two required)		
Primary Indicators (minimum of one is required	d: c	heck all that apply)	Surface Soil Cracks (B6)		
Surface Water (A1)		Water-Stained Leaves (B9)	Drainage Patterns (B10)		
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)	Saturation Visible in Aerial Imagery (C9)		
X Drift Deposits (B3)	-	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)	Shallow Aquitard (D3)		
Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)	Microtopographic Relief (D4)		
Sparsley Vegetated Concave Surface (B8)			FAC-Neutral Test (D5)		
Surface Water Present? Yes No	Х	Depth (inches)			
Water Table Present? Yes No	х	Depth (inches) Wetland	Hydrology Present? Yes X No		
Saturation Present? Yes X No		Depth (inches) 0			
Describe Recorded Data (stream gauge, m	oni	toring well, aerial photos, previous inspectio	ns). if available:		
	-				
Remarks:					

	15 10 25 Absolute % Cover 40 40	X X = Total Cov Dominant Species? X = Total Cov	FAC FAC /er Indicator Status FACW /er	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/I)         Prevalence Index Worksheet:         OBL species       93       x 1       93         FACW species       40       x 2       80         FAC species       25       x 3       75
)	15 10 25 Absolute % Cover 40 40	X 	FAC FAC /er Indicator Status FACW /er	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/I         Prevalence Index Worksheet:       0BL species       93       x 1       93         FACW species       40       x 2       80         FAC species       25       x 3       75
_15'radius_)	Absolute % Cover 40 40	_= Total Cov Dominant Species? X _= Total Cov	Indicator Status FACW rer	Total Number of Dominant         Species Across All Strata:       4       (B)         Percent of Dominant Species         That Are OBL, FACW, or FAC:       100%       (A/I)         Prevalence Index Worksheet:         OBL species       93       x 1       93         FACW species       40       x 2       80         FAC species       25       x 3       75
_15'radius_)	Absolute % Cover 40 40	Dominant Species? <u>X</u> = Total Cov	Indicator Status FACW ver	Percent of Dominant Species         That Are OBL, FACW, or FAC:       100%       (A/I         Prevalence Index Worksheet:         OBL species       93       x 1       93         FACW species       40       x 2       80         FAC species       25       x 3       75
_15'radius_)	Absolute % Cover <u>40</u> 40	Dominant Species? <u>X</u> _= Total Cov	Indicator Status FACW ver	Prevalence Index Worksheet:OBL species93x 193FACW species40x 280FAC species25x 375
_15'radius_)	Absolute % Cover <u>40</u> 40	Dominant Species? X = Total Cov	Indicator Status FACW ver	OBL species         93         x 1         93           FACW species         40         x 2         80           FAC species         25         x 3         75
15'radius )	% Cover 40 40	Species? X = Total Cov	Status FACW ver	FACW species         40         x 2         80           FAC species         25         x 3         75
	<u>40</u> 40	X _= Total Cov	FACW ver	FAC species 25 x 3 75
	40	_= Total Cov	ver	
				FACU species 0 x 4 0
				UPL species 0 x 5 0
				Column Totals 158 (A) 248 (
				Prevalence Index = B/A = 1.57
				Hydrophytic Vegetation Indicators:
	Absolute	Dominant	Indicator	1- Rapid Test For Hydrophytic Vegetation
5'radius )	% Cover	Species?	Status	X 2- Dominance Test is > 50%
	<u>90</u> 3	Х	OBL	X 3- Prevalence Index is =< 3.0
	93	= Total Cov	ver	4- Morphological Adaptations
		_		5- Problematic Hydrophytic Vegetation
				Definitions of Vegetation Strata:
				Tree- Woody plants 3 in. (7.6cm) or more in diameter 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 o size, and woody plants less than 3.28ft tall.
30'radius)	Absolute % Cover	Dominant Species?	Indicator Status	Woody Vines- All woody vines greater than 3.28ft in height.
		_= Total Cov	ver	Hydrophytic Vegetation Present? Yes X No
			5'radius       Absolute       Dominant         90       X         3       93         93       = Total Cov         30'radius       % Cover         30'radius       % Cover         5'radius       = Total Cov         30'radius       = Total Cov         30'radius       = Total Cov	S'radius       Absolute       Dominant       Indicator         90       X       OBL         3       OBL       OBL         93       = Total Cover         30'radius       % Cover       Species?         30'radius       % Cover       Species?         30'radius       % Cover       Species?         Status       Status       Status         30'radius       % Cover       Species?         Status       Species       Status         So'radius       % Cover       Species?         Status       Species       Status

Depth	Matrix				Redo	ox Featu	ires				
(inches	Color	%	Color	%	Туре	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	С	М	Sandy Loam				
Hydric So	oil Indicators:							Indicators for Problematic Soils:			
His	tosol (A1)				Polyvalu	e Below	Surface (B15)	2 cm Muck (A10)			
His	tic Epipedon (	A2)			Thin Dar	k Surface	e (S9)	Coast Prarie Redox (A16)			
Bla	ick Histic (A3)	(			Loamy N	/lucky Mi	ineral (F1)	5 cm Mucky Peat or Peat (S3)			
Hyo	drogen Sulfide	e (A4)			Loamy G	leyed M	atric (F2)	Dark Surface (S7)			
Stratified Layers (A5)							(F3)	Polyvalue Below Surface (S8)			
X Depleted Below Dark Surface (A11)				Redox D	ark Surra	rface (FD)	Iron-Manganese Masses (F12)				
Thick Dark Surface (A12)				Peday D	a Dark St	n (F8)	 Piedmont Floodplain Soils (F12)				
Sar	ndy Gleved Ma	atrix (SA	1) .)		Neu0x D	epressio	113 (1 0)	Mesic Spodic (TA6)			
Sar	ndy Redox (S5)		7					Red Parent Material (F21)			
Str	ipped Matrix (	56)						Very Shallow Dark Surface (TE12)			
Da	rk Surface (S7)	)						Other (Explain in Remarks)			
Restricti	ve Layer (if obs	erved):									
		Type:					Hvdric	Soil Present? Yes X No			
	Depth (in	ches):					,	· · · <u></u> · · · <u></u>			
		_									
Remark	S:										

Project/Site: Three Corners Solar Project	City/County: Benton/Ken	nebec	Sampling Date: <u>7/29/2020</u>		
Applicant/Owner: Three Corners Solar, LLC		State: ME	Sampling Point: <u>Upland-W3</u> 2		
Investigator(s): Rodney Kelshaw	Section, Township, Range	:			
Landform (hillslope, terrace, etc.): Side Slope	eLocal relief (concave, convex,	none): Linear	Slope (%) <u>3 - 8</u>		
Subregion (LRR or MLRA): LRR R	Lat: _45.574321Long:	69.466865	Datum: NAD83		
Soil Map Unit Name:		NWI Classi	fication: UPL		
Are climatic / hyrologic conditions on the site	typical for this time of year? Yes X No	o(if no, (	explain in Remarks.)		
Are Vegetation , Soil , or Hydrology	y significantly disturbed? Are "Normal	Circumstances	" present? Yes X No		
Are Vegetation , Soil , or Hydrolog	y naturally problematic? (if needed, ex	plain any answer	s in Remarks.)		

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X Yes Yes	No NoX NoX	Is the Sampled Area within a Wetland? if yes, optional Wetland Site ID:	Yes	NoX
Remarks: (Explain alternative procedures	nere or in a sep	arate report.)			

		Wetland Hydrology Indicators:								
Primary Indicators (minimum of one is	required: ch	neck all that apply)		Surface Soil Cracks (B6)						
Surface Water (A1)		Water-Stained Leaves (B9	)	Drainage Patterns (B10)						
High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)						
Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)						
Water Marks (B1)		Hydrogen Sulfide Odor (C	1)	Crayfish Burrows (C8)						
Sediment Deposits (B2)	_	Oxidized Rhizospheres on	Living Roots (C3)	Saturation Visible in Aerial Imagery (C9)						
Drift Deposits (B3)		Presence of Reduced Iron	(C4)	Stunted or Stressed Plants (D1)						
Algal Mat or Crust (B4)	_	Recent Iron Reduction in T	Tilled Soils (C6)	Geomorphic Position (D2)						
Iron Deposits (B5)	_	Thin Muck Surface (C7)		Shallow Aquitard (D3)						
Inundation Visible on Aerial Imag	gery (B7)	Other (Explain in Remarks	5)	Microtopographic Relief (D4)						
Sparsley Vegetated Concave Surf	ace (B8)			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)								

Remarks:

Trop Stratum	(Plot Size:	30'radius )	Absolute % Cover	Dominant	Indicator Status	Dominance Test V	Vorksheet:	:		
	(1101 5120.			Species:	510105	Number of Domi	nant Speci	es	_	()
Tsuga canadensis			30	X	FACU	That Are OBL, FA	ACW, or FA	C: _	5	(A)
Thuja occidentalis			25	<u> </u>	FACW	Total Numbe	r of Domin	ant		
Betula alleghaniensis			20	Х	FAC	Species Ac	ross All Stra	ata:	7	(B)
Ables balsamea			10		FAC	Percent of Dor	ninant Spe	cies		
Acer rubrum				<b>T</b> 1 1 C	FAC	That Are OBL,	FACW, or F	AC:	71.4%	(A/B)
			95	_= Total Cov	/er					
						Prevalence Index	Worksheet	::		
			Absolute	Dominant	Indicator	OBL species	0	_ x 1	0	
Shrub Stratum	(Plot Size:	15'radius )	% Cover	Species?	Status	FACW species	55	x 2	110	
Abies balsamea			40	Х	FAC	FAC species	100	x 3	300	
Betula alleghaniensis			5		FAC	FACU species	60	x 4	240	
			45	_= Total Cov	/er	UPL species	0		0	
						Column Totals	215	(A)	650	(B)
						Prevalenc	e Index = B	_ ` ´- 3/A =	3.02	( )
						Hydronhytic Vege	tation Indi	ícator	·c•	
			Absolute	Dominant	Indicator	1- Rapid Tes	t For Hydro	onhyt	s. ic Veretat	ion
Herb Stratum	(Plot Size:	5'radius )	% Cover	Species?	Status		a Teaties		ic vegeta	.1011
Coptis trifolia			30	х	FACW	X 2- Dominand	ce l'est is >	50%		
Maianthemum canad	ense		25	X	FACU	3- Prevalenc	e Index is =	=< 3.0	)	
Trientalis borealis			15	Х	FAC	4- Morpholo	ogical Adap	tatio	าร	
Aralia nudicaulis			5		FACU	F. Drahlama	tic Undrop	butic	Vogotatio	~
			75	= Total Cov	/er	5- Problema	пс пуштор	nytic	vegetatio	n
						Definitions of Veget	ation Strata	:		
						Tree- Woody plants : breast height (DBH),	3 in. (7.6cm) regardless c	) or mo of heig	ore in diam ht.	eter at
						Sapling/Shrub- Wood	dy plants les	s than	3 in. DBH	and
						greater than or equa	l to 3.28ft (1	Lm) ta	II.	
						Herb- All herbaceous size, and woody plan	s (non-wood its less than	y) plaı 3.28ft	nts, regard tall.	less of
Woody Vine Stratum	(Plot Size:	30'radius )	Absolute % Cover	Dominant Species?	Indicator Status	Woody Vines- All wo height.	ody vines gr	eater	than 3.28f	t in
				= Total Cov	ver	Hydroph	nytic			
						Vegeta	ition			
						Pres	ent? Yes_	Х	No	_
Remarks: (Include photo n	umbers here	or on a sep	arate shee	t.)		I				

Depth	Matrix				Redo	ox Featu	ires			
(inches	Color	%	Color	%	Туре	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	М	Sandy Loam	Very Stony		
Hydric S	oil Indicators:							Indicators for Problematic Soils:		
Hi	stosol (A1)	4.2.)			Polyvalu	e Below	Surface (B15)	2 cm Muck (A10)		
Hi	stic Epipedon (	A2)			Thin Dar	k Surface	e (S9) 	Coast Prarie Redox (A16)		
Black Histic (A3)						loved M	ineral (F1)	5 cm Mucky Peat or Peat (S3)		
Hydrogen Sumde (A4)					Denleter	d Matrix	(F3)	Polyvalue Below Surface (S8)		
Depleted Below Dark Surface (A11)					Redox D	ark Surfa		Thin Dark Surface (S9)		
Thick Dark Surface (A12)					Depleted	d Dark Su	urface (F7)	Iron-Manganese Masses (F12)		
Sa	ndy Mucky Mir	neral (S:	1)		Redox D	epressio	ns (F8)	Piedmont Floodplain Soils (F19)		
Sa	ndy Gleyed Ma	trix (S4	)		-			Mesic Spodic (TA6)		
Sa	ndy Redox (S5)						-	Red Parent Material (F21)		
St	ripped Matrix (	S6)					-	Very Shallow Dark Surface (TF12)		
Da	ark Surface (S7)						-	Other (Explain in Remarks)		
Restrict	ive Layer (if obs	erved):								
		Type:					Hydric S	oil Present? Yes No X		
	Depth (in	ches):								
Remark	<s:< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></s:<>									

Project/Site: Three Corners Solar Project	City/County: Benton/Ken	nebec	Sampling Date: 7/29/2020		
Applicant/Owner: Three Corners Solar, LLC		State: ME	Sampling Point: <u>Wetland-W</u> 32		
Investigator(s): <u>Rodney Kelshaw</u>	Section, Township, Range	:			
Landform (hillslope, terrace,etc.): <u>Footslope</u>	Local relief (concave, convex,	none): Linear	Slope (%) <u>0 - 3</u>		
Subregion (LRR or MLRA): LRR R	Lat: _44.574401Long:	-69.466934	Datum: NAD83		
Soil Map Unit Name:		NWI Classi	fication: PFO		
Are climatic / hyrologic conditions on the site typi	cal for this time of year? Yes X N	o(if no,	explain in Remarks.)		
Are Vegetation , Soil , or Hydrology	significantly disturbed? Are "Norma	l Circumstances	" present? Yes X No		
Are Vegetation , Soil , or Hydrology	naturally problematic? (if needed, ex	plain any answer	s in Remarks.)		

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

Hydrophytic Vegetation Present?YesXNoHydric Soil Present?YesXNoWetland Hydrology Present?YesXNo	Is the Sampled Area         within a Wetland?       Yes X No         if yes, optional Wetland Site ID:       W24
Remarks: (Explain alternative procedures here or in a separate report.)	

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required: c	heck all that apply)	Surface Soil Cracks (B6)		
Surface Water (A1)	Water-Stained Leaves (B9)	Drainage Patterns (B10)		
X High Water Table (A2)	Aquatic Fauna (B13)	X Moss Trim Lines (B16)		
X Saturation (A3)	Marl Deposits (B15)	Dry-Season Water Table (C2)		
Water Marks (B1)	X 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)		
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	X Microtopographic Relief (D4)		
Sparsley Vegetated Concave Surface (B8)		X FAC-Neutral Test (D5)		
Surface Water Present? Yes No X	Depth (inches)			
Water Table Present? Yes X No	Depth (inches) 0 Wetland	Hydrology Present? Yes X No		
Saturation Present? Yes X No	Depth (inches) 0			
Describe Recorded Data (stream gauge, mon	itoring well, aerial photos, previous inspection	ons), if available:		

Remarks:

(Plot Size:	30'radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test V	Vorkshee	et:		
(	,	15	v		Number of Domi	nant Spe	cies	6	(A)
		<u>45</u>	^ X		That Are Obl, PA		AC	0	(A)
		20	X X	FAC	Total Numbe Species Act	r of Dom ross All St	inant trata:	6	(B)
		90		/er	Percent of Don That Are OBL, I	ninant Sp FACW, or	ecies FAC:	100%	_(A/B)
					Prevalence Index \	Norkshee	et:		
		Absolute	Dominant	Indicator	OBL species	25	x 1	25	
(Plot Size:	15'radius )	% Cover	Species?	Status	FACW species	135	x 2	270	
		15	Х	FACW	FAC species	45	x 3	135	
		15	= Total Cov	/er	FACU species	0	x 4	0	
					UPL species	0	x 5	0	
					Column Totals	205	(A)	430	(B)
					Prevalenc	e Index =	B/A =	2.1	(-)
					Hydrophytic Vege	tation In	dicator	s:	
		Absolute	Dominant	Indicator	1- Rapid Tes	t For Hyd	rophyt	ic Vegeta	tion
(Plot Size:	5'radius )	% Cover	Species?	Status	X 2- Dominand	, ce Test is	> 50%	0	
		35	Х	FACW					
		25	Х	FAC	X 3- Prevalence	e maex is	5 =< 3.0		
		15		FACW	4- Morpholo	gical Ada	ptatior	ıs	
		10		OBL	5- Problema	tic Hydro	phytic '	Vegetatio	n
		2							
		2			Definitions of Vegeta	ation Strat	ta:		
		100	= Total Cov	/er	Tree- Woody plants 3 breast height (DBH),	3 in. (7.6cr regardless	n) or mo s of heig	ore in diam ht.	eter at
					Sapling/Shrub- Wood greater than or equa	ly plants le l to 3.28ft	ess than (1m) tal	3 in. DBH	and
					Herb- All herbaceous size, and woody plan	(non-woo ts less tha	ody) plar n 3.28ft	nts, regard tall.	less of
(Plot Size:	30'radius )	Absolute % Cover	Dominant Species?	Indicator Status	Woody Vines- All wo height.	ody vines	greater	than 3.28f	t in
			_= Total Cov	/er	Hydroph Vegeta Pres	iytic tion ent? Ver	×	Νο	
	(Plot Size:	(Plot Size: <u>30'radius</u> ) (Plot Size: <u>15'radius</u> ) (Plot Size: <u>5'radius</u> ) (Plot Size: <u>30'radius</u> )	(Plot Size: <u>30'radius</u> ) % Cover <u>45</u> 25 20 90 90 (Plot Size: <u>15'radius</u> ) Absolute (Plot Size: <u>5'radius</u> ) % Cover <u>15</u> 15 15 10 10 10 3 22 15 10 10 10 3 2 10 10 3 2 10 10 3 2 10 10 3 2 10 10 10 3 2 10 10 10 10 10 10 10 10 10 10	(Plot Size: 30'radius)       % Cover Species?         45       X         25       X         20       X         90       = Total Cov         90       = Total Cov         15       X         15       X         15       X         15       15         15       X         15       15         25       X         15       15         15       X         25       X         15       10         10       3         2       100         100       3         2       100         100       = Total Cov         (Plot Size: 30'radius)       Absolute Dominant         % Cover Species?	(Plot Size: 30'radius)       % Cover Species? Status         45       X       FACW         25       X       FACW         20       X       FAC         90       = Total Cover         (Plot Size: 15'radius)       Absolute Dominant Indicator         % Cover Species?       Status         15       X         15       X         15       X         15       T         15       FACW         15       T         15       T         15       T         25       X         15       T         15       T         25       X         25       X         10       OBL         10       OBL         2       OBL         100       = Total Cover	(Plot Size:       30'radius       % Cover       Species?       Status         45       X       FACW         25       X       FACW         20       X       FAC         90       = Total Cover       Percent of Dominant Indicator         90       = Total Cover       Percent of Dominant Indicator         (Plot Size:       15       X         15       X       FACW         16       35       X         25       X       FACW         25       X       FACW         25       X       FACW         20       0BL       10       0BL         3       0BL       5- Problema         100       = Total Cover       Saping/Shrub- Wood         100       = Total Cover       Herb- All herbaceous         (Plot Size:       30'radius       % Cover       Species? Status         100       = Total Cover       Herb- All herbaceous         Size,	Plot Size:       30'radius       % Cover       Species?       Status         45       X       FACW         20       X       FAC         20       X       FACW         215       Total Cover       FAC species         45       X       FAC         25       X       FAC         25       X       FAC         25       X       FAC         26       X       FACW         215       FACW       S         22       OBL	Plot Size:       30'radius       % Cover       Species?       Status         45       X       FACW         20       X       FAC         20       X       FAC         90       = Total Cover       Total Number of Dominant Species         90       = Total Cover       Total Number of Dominant Species         90       = Total Cover       Total Number of Dominant Species         90       = Total Cover       Percent of Dominant Species         15       X       FACW         15       X       FACW         15       X       FACW         15       Total Cover       Prevalence Index Worksheet:         OBL species       05       X 1         FAC species       135       X 2         FAC species       0       X 3         Prevalence Index = B/A =       Hydrophytic Vegetation Indicator         10       OBL       3         22       X       FACW         23       OBL       3         100       = Total Cover         100       = Total Cover         100       = Total Cover         100       = Total Cover         Absolute       Dominant	Plot Size:       30'radius       % Cover       Species?       Status         % Cover       Species?       Status       Number of Dominant Species         20       X       FACW       Total Number of Dominant       6         20       X       FAC       90       = Total Cover       Total Number of Dominant       6         90       = Total Cover       90       = Total Cover       Fac.       6         90       = Total Cover       % Cover Species?       Status       Fac.       9         15       X       FACW       FAC Species       135       x 2       270         % Cover       Species?       Status       FAC Species       135       x 2       270         15       X       FACW       FAC Species       135       x 2       270         FAC Uspecies       0       x 4       0       UPL species       0       x 4       0         15       S       FACW       Solute       0       UPL species       0       x 4       0         (Plot Size:       5'radius       35       X       FACW       2       0       10       0       12       12       13       0       12       14

Depth	Matrix				Redo	ox Feat	ures					
(inches	Color	%	Color	%	Туре	Loc	-	Texture	Remarks			
0-8	7.5YR 2.5/1	100						Muck				
8-12	5G 5/1	100					S	ilt Loam				
12-16	5GY 5/1	100					Loam	ny Fine Sand				
16-20	, 567 5/1	100					Silty	, Clav Loam				
10-20	501 5/1	100					Sirry					
Hydric S	oil Indicators:								Indicators for Problematic Soils:			
His	stosol (A1)				Polyvalu	e Below	v Surface (	B15)	2 cm Muck (A10)			
<u> </u>	stic Epipedon (/	42)			Thin Dar	k Surta	ce (S9)	,	Coast Prarie Redox (A16)			
Bla	ack Histic (A3)	( )			Loamy N	lucky N	Aineral (F1	)	5 cm Mucky Peat or Peat (\$3)			
Ну	/drogen Sulfide	(A4)			Loamy G	leyed N	vlatric (F2)		Dark Surface (S7)			
Sti	ratified Layers (	A5)	<b>5</b> ( <b>111</b> )		Depleted	Matrix	x (F3)		rolyvalue below Sufface (S8)			
X Depleted Below Dark Surface (A11)					Redox D	ark Suri	face (F6)	•	Thin Dark Surface (S9)			
Ih	Thick Dark Surface (A12) Depleted Dark					d Dark S	Surface (F7	)	Iron-Wanganese Wasses (F12)			
Sa	ndy Mucky Mir	neral (S	51) •		Redox D	epressio	ons (F8)		Piedmont Floodplain Solis (F19)			
Sa	ndy Gleyed Ma	trix (S <sup>2</sup>	1)						Mesic Spodic (TA6)			
Sa	ndy Redox (S5)								Red Parent Material (F21)			
Sti	ripped Matrix (	56)							Very Shallow Dark Surface (TF12)			
Da	ark Surface (S7)								Other (Explain in Remarks)			
Restrict	ive Layer (if obse	erved):										
		Type:						Hydric	Soil Present? Ves X No			
	Depth (in	ches).						Tryune .				
	Depth (m	-										
Remark	<s:< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></s:<>											

Project/Site: Three Corners Sol	ar Project	City/County:	Benton/Kennebe	с	Sampling Date: 7/	/29/2020	
Applicant/Owner: Three Corne	rs Solar, LLC		Stat	te: ME	Sampling Point:	Upland-W43	
Investigator(s): Rodney Kelsha	w	Section, Tow	nship, Range:				
Landform (hillslope, terrace, etc	.): Side Slope	Local relief (con	cave, convex, non	e): <u>Linea</u>	rSlope (%)	3 - 8	
Subregion (LRR or MLRA): _LRR	R	Lat: 44.583980	Long:69.4	59841	Datum: N	AD83	
Soil Map Unit Name:				NWI Class	ification: UPL		
Are climatic / hyrologic condition	ns on the site typi	cal for this time of year? Ye	es <u>X</u> No	(if no,	explain in Remarks.	)	
Are Vegetation , Soil	, or Hydrology	significantly disturbed?	Are "Normal Circ	umstance	s" present? Yes X	No	
Are Vegetation , Soil	, or Hydrology	naturally problematic?	(if needed, explain	any answe	rs in Remarks.)		

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No X No X No X	Is the Sampled Area within a Wetland? if yes, optional Wetland Site ID:	Yes	NoX
Remarks: (Explain alternative procedures l	nere or in a se	eparate report.)			

Vetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
rimary Indicators (minimum of one is required: ch	eck all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2)	Aquatic Fauna (B13)	Moss Trim Lines (B16)
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)	Saturation Visible in Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsley Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)

Water Table Present?	Yes	No	Х	Depth (inches)	Wetland Hydrology Present?	Yes	No	Х
Saturation Present?	Yes	No	Х	Depth (inches)				

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

Remarks:

HYDROLOGY

Tree Stratum	(Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
Abios balsamoa	(	50	v	EAC	Number of Dominant Species	
ADIES Daisarried		25	X		$\frac{1}{2}$	
Prunus serotina		5	Λ	FACU	Total Number of Dominant	
Acer rubrum		5		FAC	Species Across All Strata: 5 (B)	
		95	= Total Cov	/er	Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/I	B)
					Prevalence Index Worksheet:	
		Absolute	Dominant	Indicator	OBL species 0 x 1 0	
Shrub Stratum	(Plot Size: 15'radius )	% Cover	Species?	Status	FACW species 0 x 2 0	
Abies balsamea		5	Х	FAC	FAC species 62 x 3 186	
		5	= Total Cov	/er	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:	
		Absolute	Dominant	Indicator	1- Rapid Test For Hydrophytic Vegetation	
Herb Stratum	(Plot Size: 5'radius )	% Cover	Species?	Status	2- Dominance Test is > 50%	
Veronica officinalis		8	Х	FACU		
Maianthemum canac	lense	5	Х	FACU		
Acer rubrum		2		FAC	4- Morphological Adaptations	
		15	= Total Cov	/er	5- Problematic Hydrophytic Vegetation	
					Definitions of Vegetation Strata:	
					Tree- Woody plants 3 in. (7.6cm) or more in diameter a breast height (DBH), regardless of height.	at
					Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.	
						¢
					size, and woody plants less than 3.28ft tall.	T
Woody Vine Stratum	(Plot Size: <u>30'radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Woody Vines- All woody vines greater than 3.28ft in height.	
			_= Total Cov	ver	Hydrophytic Vegetation	
					Present? Yes NoX	
Remarks: (Include photo n	numbers here or on a sep	arate shee	t.)		_ <b>I</b>	

Depth	Matrix				Redo	ox Featu	res	
(inches	Color	%	Color	%	Туре	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	С	М	Silt Loam	
			·					
Hydric So	oil Indicators:							Indicators for Problematic Soils:
His	stosol (A1)				Polyvalu	e Below	Surface (B15)	2 cm Muck (A10)
His	stic Epipedon (	A2)			Thin Dar	k Surface	e (S9)	Coast Prarie Redox (A16)
Bla	ack Histic (A3)				Loamy N	/lucky Mi	neral (F1)	5 cm Mucky Peat or Peat (S3)
Hy	drogen Sulfide	(A4)			Loamy G	ileyed M	atric (F2)	Dark Surface (S7)
Str	atified Layers	ayers (A5) Depleted Matrix (F			d Matrix	rix (F3) Polyvalue Below Surface (S8)		
De	pleted Below [	Dark Su	rface (A11)		Redox D	ark Surfa	ce (F6)	Thin Dark Surface (S9)
Th	ick Dark Surfac	e (A12)			Depleted Dark Surface (F7)			Iron-Manganese Masses (F12)
Sai	ndy Mucky Mir	neral (S	1)	Redox Depressions (F8)			ns (F8)	Piedmont Floodplain Soils (F19)
Sai	ndy Gleyed Ma	itrix (S4	.)					Mesic Spodic (TA6)
Sai	ndy Redox (S5)							Red Parent Material (F21)
Str	ipped Matrix (	S6)						Very Shallow Dark Surface (TF12)
Da	rk Surface (S7)							Other (Explain in Remarks)
Restricti	ive Layer (if obs	erved):						
		Type:	Bedrock				Hydr	ic Soil Present? Yes No X
	Depth (in	ches):	14					
Remark	S:							

Project/Site: Three Corners Solar Project Cit	ty/County: Benton/Kennebec Sampling Date: 7/29/2020
Applicant/Owner: Three Corners Solar, LLC	State: <u>ME</u> Sampling Point: <u>Wetland-W</u> 43
Investigator(s): Rodney Kelshaw Se	ection, Township, Range:
Landform (hillslope, terrace,etc.): Floodplain Local	relief (concave, convex, none): Linear Slope (%) 0 - 3
Subregion (LRR or MLRA): LRR R Lat: 44.5840	)41 Long:69.459674 Datum: NAD83
Soil Map Unit Name:	NWI Classification: PEM
Are climatic / hyrologic conditions on the site typical for this time c	of year? Yes X No (if no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly di	listurbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally prob	plematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?YesXNoHydric Soil Present?YesXNoWetland Hydrology Present?YesXNo	Is the Sampled Area         within a Wetland?       Yes X No         if yes, optional Wetland Site ID:       W35
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required: o	heck all that apply)	Surface Soil Cracks (B6)	
X Surface Water (A1)	Water-Stained Leaves (B9)	X Drainage Patterns (B10)	
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)	
Surface Water Present? Yes X No	Depth (inches)2		
Water Table Present? Yes X No	Depth (inches) 0 Wetland	d Hydrology Present? Yes X No	
Saturation Present? Yes X No	Depth (inches) 0		
Describe Recorded Data (stream gauge, mon	itoring well, aerial photos, previous inspecti	ons), if available:	
Remarks:			

Tree Stratum	(Plot Size: 30'radius	Absolute ) % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:		
Betula populifolia		10	х	FAC	That Are OBL, FACW, or FAC: 6 (A)	I	
Abies balsamea		10 20	X _= Total Co	FAC ver	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:		
Chrub Stratum	(Plot Size: 15'radius	Absolute	Dominant	Indicator Status	OBL species         105         x 1         105           EACW species         50         x 2         100		
		/ 70 COVEI	Species:				
<u>Alnus incana</u>		10	X	FACW	FAC species 20 x 3 60		
		10		vei	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:		
		Absolute	Dominant	Indicator	1- Rapid Test For Hydrophytic Vegetation		
Herb Stratum	(Plot Size: 5'radius	) % Cover	Species?	Status	X = 2		
Equisetum laevigatun	n	40	х	FACW			
Carex vesicaria		40	Х	OBL	X 3- Prevalence Index is =< 3.0		
Dulichium arundinace	eum	30	Х	OBL	4- Morphological Adaptations		
<u>Pontederia cordata</u> Typha latifolia		15			5- Problematic Hydrophytic Vegetation		
Carex lurida		10		OBL	Definitions of Vegetation Strates		
		145	= Total Co	ver	Definitions of vegetation strata:		
					Tree- Woody plants 3 in. (7.6cm) or more in diameter breast height (DBH), regardless of height.	at	
					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.	of	
Woody Vine Stratum	(Plot Size: 30'radius	Absolute ) % Cover	Dominant Species?	Indicator Status	Woody Vines- All woody vines greater than 3.28ft in height.		
			= Total Co	ver	Hydrophytic Vegetation Present? Yes <u>X</u> No		
Remarks: (Include photo n	umbers here or on a se	parate shee	et.)				

Depth Matrix	Redox Features			
(inches Color % Color	% Type Loc	Texture Re	emarks	
0-14 7.5YR 2.5/1 100		Muck		
14-20 10Y 5/1 100	Silt	v Clav Loam		
		,,		
lydric Soil Indicators:		Indicato	ors for Problematic Soils:	
Histosol (A1)	Polyvalue Below Surface	(B15)2 o	cm Muck (A10)	
X Histic Epipedon (A2)	Thin Dark Surface (S9)	Cc	oast Prarie Redox (A16)	
Black Histic (A3)	Loamy Mucky Mineral (F	L)5 (	cm Mucky Peat or Peat (S3)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matric (F2	)Da	ark Surface (S7)	
Stratified Layers (A5)	Depleted Matrix (F3)	Pc	blyvalue Below Surface (S8)	
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	Th	in Dark Surface (S9)	
Thick Dark Surface (A12)	Depleted Dark Surface (F	7)Irc	on-Manganese Masses (F12)	
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	Pi	edmont Floodplain Soils (F19)	
Sandy Gleyed Matrix (S4)	Mesic Spodic (TA6)			
Sandy Redox (S5)		Re	ed Parent Material (F21)	
Stripped Matrix (S6)		Ve	ery Shallow Dark Surface (TF12)	
Dark Surface (S7)		Ot	her (Explain in Remarks)	
Restrictive Layer (if observed):				
Туре:		Hydric Soil Pres	ent? Yes X No	
Depth (inches):		inguite soil i res		
Remarks:				

Project/Site: Three Corners Solar Project City/C	County: Benton/Kennebec Sampling Date: 7/29/2020
Applicant/Owner: Three Corners Solar, LLC	State: <u>ME</u> Sampling Point: <u>Wetland-W</u> 43
Investigator(s): Rodney Kelshaw Section	on, Township, Range:
Landform (hillslope, terrace,etc.): Floodplain Local rel	ief (concave, convex, none): Linear Slope (%) <u>0 - 3</u>
Subregion (LRR or MLRA): LRR R Lat: 44.584003	Long: <u>-69.460418</u> Datum: NAD83
Soil Map Unit Name:	NWI Classification: PSS
Are climatic / hyrologic conditions on the site typical for this time of y	ear? Yes X No (if no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly distu	Irbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally probler	natic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?YesXNoHydric Soil Present?YesXNoWetland Hydrology Present?YesXNo	Is the Sampled Area within a Wetland? Yes X No if yes, optional Wetland Site ID: W35
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY					
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required: o	Surface Soil Cracks (B6)				
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)			
Surface Water Present? Yes NoX	Depth (inches)				
Water Table Present? Yes X No	Depth (inches) 0 Wetland	Hydrology Present? Yes X No			
Saturation Present? Yes X No	Depth (inches)0				
Describe Recorded Data (stream gauge, mon	itoring well, aerial photos, previous inspectio	ns), if available:			
Remarks:					
Nethans.					

Trop Stratum	(Plot Sizo:	30'radius )	Absolute % Cover	Dominant	Indicator	Dominance Test V	Vorkshee	t:		
	(FIOL 512C.		/0 COVE	Species:	518105	Number of Domi	nant Spe	cies	_	<i>(</i> <b>•</b> )
Abies balsamea			20	X	FAC	That Are OBL, FA	CW, or F	AC:	5	_(A)
Betula populitolia			30	 = Total Cov	ver	Total Numbe Species Ac	r of Domi ross All St	inant :rata:	5	(B)
						Percent of Dor That Are OBL,	ninant Sp FACW, or	ecies FAC:	100%	(A/B)
						Prevalence Index	Workshee	et:		
			Absolute	Dominant	Indicator	OBL species	77	x 1	77	
Shrub Stratum	(Plot Size:	15'radius )	% Cover	Species?	Status	FACW species	48	x 2	96	
Alnus incana			45	х	FACW	FAC species	50	x 3	150	
			45	= Total Cov	ver	FACU species	0	x 4	0	
						UPL species	0	x 5	0	
						Column Totals	175	(A)	323	(B)
						Prevalenc	e Index =	B/A =	1.85	
						Hydrophytic Vege	tation Ind	dicator	s:	
			Absolute	Dominant	Indicator	1- Rapid Tes	t For Hyd	rophyt	ic Vegeta	tion
Herb Stratum	(Plot Size:	5'radius )	% Cover	Species?	Status	X 2- Dominan	ce Test is	> 50%		
Carex vesicaria			75	<u>X</u>	OBL	X 3- Prevalenc	e Index is	5 =< 3.0	)	
Spiraea latifolia			20	Λ		4- Morphole	ogical Ada	intation	15	
Glyceria canadensis			2	Tatal Ca	OBL	5- Problema	tic Hydro	phytic	Vegetatic	on
			100		ver	Definitions of Veget	ation Strat	· . ·		
						Tree- Woody plants	$\frac{1}{2}$ in $(7.6$ cm	.a.	are in dian	notor at
						breast height (DBH),	regardless	of heig	ht.	neter at
						Sapling/Shrub- Wood greater than or equa	dy plants le l to 3.28ft	ess than (1m) ta	3 in. DBH ll.	and
						Herb- All herbaceous size, and woody plan	s (non-woc its less tha	ody) plaı n 3.28ft	nts, regard tall.	lless of
Woody Vine Stratum	(Plot Size:	30'radius )	Absolute % Cover	Dominant Species?	Indicator Status	Woody Vines- All wo height.	ody vines	greater	than 3.28f	ft in
				_= Total Cov	ver	Hydropł Vegeta Pres	nytic Ition ent? Yes	s X	No	
Remarks: (Include photo n	umbers here	or on a sep	arate shee	_= Total Cov t.)	ver	Hydroph Vegeta Pres	nytic ition ent? Yes	5 <u>X</u>	_ No	

Depth	Matrix			Redox Features						
(inches	Color	%	Color	%	Туре	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	М	Silty Clay Loam			
10 15	101 3/1	50	10111 1/0	10	C		Sinty Clay Louin			
Hydric S	oil Indicators:							Indicators for Problematic Soils		
Hi	stosol (A1)				Polyvalu	e Below S	Surface (B15)	2 cm Muck (A10)		
Hi	stic Epipedon (	A2)			Thin Dar	k Surface	e (S9)	Coast Prarie Redox (A16)		
Bla	ack Histic (A3)	-			Loamy N	/lucky Mi	neral (F1)	5 cm Mucky Peat or Peat (S3)		
Ну	/drogen Sulfide	(A4)		Х	Loamy G	leyed Ma	atric (F2)	Dark Surface (S7)		
St	ratified Layers	(A5)			Depleted	d Matrix (	(F3)	Polyvalue Below Surface (S8)		
Depleted Below Dark Surface (A11)			Redox Dark Surface (F6)				Thin Dark Surface (S9)			
Thick Dark Surface (A12)				Depleted	d Dark Su	irface (F7)	Iron-Manganese Masses (F12)			
Sandy Mucky Mineral (S1)				Redox D	epressior	ns (F8)	Piedmont Floodplain Soils (F19)			
Sandy Gleyed Matrix (S4)							Mesic Spodic (TA6)			
Sa	Sandy Redox (S5)							Red Parent Material (F21)		
St	ripped Matrix (	S6)					Very Shallow Dark Surface (TF12)			
Da	ark Surface (S7)							Other (Explain in Remarks)		
Restrict	ive Layer (if obs	erved):								
	, .	Typo								
	Dauth (in	Type.					Hydric	Soil Present? Yes X No		
	Depth (in	ches):								
Remark	«s.									
neman										
Project/Site: Three Corners Solar Project	City/County: Benton/Kenr	ebec Sampling Date: 7/31/2020								
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Applicant/Owner: <u>Three Corners Solar, LLC</u>		State: ME Sampling Point: Upland-W5								
Investigator(s): Rodney Kelshaw	Section, Township, Range:									
Landform (hillslope, terrace, etc.): Side Slope	Local relief (concave, convex,	none): <u>Convex</u> Slope (%) <u>8 - 15</u>								
Subregion (LRR or MLRA): LRR R	Lat: _44.596821Long:	59.456920 Datum: NAD83								
Soil Map Unit Name:		NWI Classification: UPL								
Are climatic / hyrologic conditions on the site t	ypical 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, exp	lain any answers in Remarks.)								

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X Yes Yes	No NoX NoX	Is the Sampled Area within a Wetland? if yes, optional Wetland Site ID:	Yes	NoX
Remarks: (Explain alternative procedures	nere or in a sep	arate report.)			

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two require					
Primary Indicators (minimum of one	Surface Soil Cracks (B6)					
Surface Water (A1)		Water-Stained Leaves (B9)	1	Drainage Patterns (B10)		
High Water Table (A2)	_	Aquatic Fauna (B13)		Moss Trim Lines (B16)		
Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)		
Water Marks (B1)		Hydrogen Sulfide Odor (C1	L)	Crayfish Burrows (C8)		
Sediment Deposits (B2)	_	Oxidized Rhizospheres on	Living Roots (C3)	Saturation Visible in Aerial Imagery (C9)		
Drift Deposits (B3)		Presence of Reduced Iron	(C4)	Stunted or Stressed Plants (D1)		
Algal Mat or Crust (B4)	_	Recent Iron Reduction in T	illed Soils (C6)	Geomorphic Position (D2)		
Iron Deposits (B5)		Thin Muck Surface (C7)		Shallow Aquitard (D3)		
Inundation Visible on Aerial Im	agery (B7)	Other (Explain in Remarks)	)	Microtopographic Relief (D4)		
Sparsley Vegetated Concave Su	urface (B8)			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				
Saturation Present? Yes	No X	Depth (inches)				
Describe Recorded Data (stream	gauge, moni	toring well, aerial photos, pre	evious inspection	ns), if available:		

Remarks:

Sampling Point: Upland-W56

Tree Stratum	(Plot Size:	30'radius )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test V	Vorkshee	t:		
Acer rubrum	·	,	50	X	FAC	That Are OBLEA	nant Spe	cies AC·	5	(Δ)
Abies balsamea			40	X	FAC				J	_(~)
Populus tremuloides			5	Λ	FACU	Total Numbe	r of Dom	inant	C	(D)
Betula populifolia			5		FAC	Species Ac	ross All St	rata:	6	(D)
			100	= Total Cov	/er	Percent of Dor That Are OBL,	ninant Sp FACW, or	ecies FAC:	83.3%	(A/B)
						Prevalence Index V	Norkshee	et:		
			Absolute	Dominant	Indicator	OBL species	0	x 1	0	
Shrub Stratum	(Plot Size:	15'radius )	% Cover	Species?	Status	FACW species	0	x 2	0	
<u>Acer rubrum</u>			15	X	FAC	FAC species	135	x 3	405	
			15	_= Total Cov	/er	FACU species	25	x 4	100	
						UPL species	0	x 5	0	
						Column Totals	160	(A)	505	(B)
						Prevalenc	e Index =	B/A =	3.16	
						Hydrophytic Vege	tation In	dicato	rs:	
			Absolute	Dominant	Indicator	1- Rapid Tes	t For Hyd	rophyt	ic Vegeta	tion
Herb Stratum	(Plot Size:	5'radius )	% Cover	Species?	Status	X 2- Dominan	ce Test is	> 50%		
Maianthemum canad	ense		15	X	FACU	3- Prevalenc	e Index is	s =< 3.0	)	
Trientalis borealis			15	<u>X</u>	FAC					
Parathelypteris noved	oracensis		<u> </u>	X		4- Morphological Adaptations				
			45	= Total Cov	/er	5- Problema	tic Hydro	phytic	Vegetatic	on
						Definitions of Veget	ation Strat	ta:		
						Tree- Woody plants : breast height (DBH),	3 in. (7.6cr regardless	n) or m s of heig	ore in diam sht.	neter at
						Sapling/Shrub- Wood greater than or equa	ly plants le	ess thar (1m) ta	n 3 in. DBH II.	and
						Herb- All herbaceous	(non-woo	ody) pla	nts, regard	less of
			Absolute	Dominant	Indicator	size, and woody plan	ts less tha	n 3.28n	t tall.	
Woody Vine Stratum	(Plot Size:	30'radius )	% Cover	Species?	Status	Woody Vines- All wo height.	ody vines	greater	than 3.28f	t in
				= Total Cov	/er	Hydropł	nytic			
						Vegeta	tion			
						Pres	ent? Yes	5 <u>X</u>	No	
Remarks: (Include photo n	umbers here	or on a sep	arate shee	t.)						

#### SOIL

### Sampling Point: Upland-W56

Depth	Matrix				Redo	ox Featu	res			
(inches	Color	%	Color	%	Туре	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	Μ	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)				Polyvalu Thin Dar Loamy N Loamy G Depleted Redox D	e Below : k Surface Jucky Mi ileyed Ma d Matrix ( ark Surfa	Surface (B15) e (S9) neral (F1) atric (F2) (F3) ice (F6)	ndicators 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)			
Thick Dark Surface (A12)				Depleted	d Dark Su	irface (F7)	Iron-Manganese Masses (F12)			
Sa	ndy Mucky Mir	neral (S	1)	Redox Depressions (F8)				Piedmont Floodplain Soils (F19)		
Sa	ndy Gleyed Ma	ıtrix (S4	)		-			Mesic Spodic (TA6)		
Sa	ndy Redox (S5)				Red Parent Mate			Red Parent Material (F21)		
Sti	ripped Matrix (	S6)						Very Shallow Dark Surface (TF12)		
Da	ark Surface (S7)						-	Other (Explain in Remarks)		
Restrict	ive Layer (if obso	erved):								
		Type:					Hydric S	Soil Present? Yes No X		
	Depth (in	ches):								
Remark	(S:									

Project/Site: Three Corners Solar Project	City/County: Be	nton/Kennebec	Sampling Date: 7/31/2020		
Applicant/Owner: Three Corners Solar, LLC		State:	ME Samp	oling Point:	Wetland-W56
Investigator(s): Rodney Kelshaw	Section, Townsh	nip, Range:			
Landform (hillslope, terrace,etc.): Floodplain	Local relief (concave	e, convex, none):	Linear	_Slope (%)	0 - 3
Subregion (LRR or MLRA): LRR R Lat: 44	596620	Long:69.4572	286	Datum: N	AD83
Soil Map Unit Name:		NV	/I Classification:	PEM	
Are climatic / hyrologic conditions on the site typical for this	ime of year? Yes	X No	(if no, explain i	in Remarks.)	)
Are Vegetation , Soil , or Hydrology significa	ntly disturbed? Are	e "Normal Circum	stances" presen	nt? Yes X	No
Are Vegetation , Soil , or Hydrology naturally	problematic? (if	needed, explain any	answers in Rema	arks.)	

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

Hydrophytic Vegetation Present?YesXNoHydric Soil Present?YesXNoWetland Hydrology Present?YesXNo	Is the Sampled Area         within a Wetland?       Yes X No         if yes, optional Wetland Site ID:       W50
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY				
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)			
Primary Indicators (minimum of one is required: c	Surface Soil Cracks (B6)			
Surface Water (A1)	Drainage Patterns (B10)			
X High Water Table (A2)	Aquatic Fauna (B13)	Moss Trim Lines (B16)		
X Saturation (A3)	Marl Deposits (B15)	X 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)		
Surface Water Present? Yes No X	Depth (inches)			
Water Table Present? Yes X No	Depth (inches) 0 Wetland I	Hydrology Present? Yes X No		
Saturation Present? Yes X No	Depth (inches) 0			
Describe Recorded Data (stream gauge, mon	itoring well, aerial photos, previous inspection	ns), if available:		
Remarks:				

Tree Stratum	(Plot Size: <u>30'radius</u> )	Absolute Dominant Indicat % Cover Species? Status	or S Dominance Test Worksheet: Number of Dominant Species That Are OBL EACW, or EAC: 2 (A)
		= Total Cover	Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
<b>Shrub Stratum</b> Alnus incana	(Plot Size: <u>15'radius</u> )	Absolute Dominant Indicat % Cover Species? Status <u>15 X FACW</u> <u>15</u> = Total Cover	Prevalence Index Worksheet:OBL species90x 190sFACW species15x 230FAC species10x 330FACU species0x 40UPL species0x 50
			Column Totals         115         (A)         150         (B)           Prevalence Index = B/A =         1.3
Herb Stratum <u>Calamagrostis canade</u> Urtica dioica	(Plot Size: <u>5'radius</u> ) ensis	AbsoluteDominantIndicate% CoverSpecies?Status90XOBL10FAC100= Total Cover	Hydrophytic Vegetation Indicators:         or       X       1- Rapid Test For Hydrophytic Vegetation         S       X       2- Dominance Test is > 50%         X       3- Prevalence Index is =< 3.0
		Absolute Dominant Indicat	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.or
Woody Vine Stratum	(Plot Size: <u>30'radius</u> )	% Cover Species? Status	S Woody Vines- All woody vines greater than 3.28ft in height.
			Vegetation Present? Yes X No
Remarks: (Include photo n	umbers here or on a sep	parate sheet.)	1

#### SOIL

Depth	Matrix		_		Redo	ox Featu	ires			
(inches	Color	%	Color	%	Туре	Loc	Texture	Remarks		
0-3	10YR 2.5/1	100					Muck			
3-9	5Y 5/1	90	10YR 4/4	10	С	М	Silt Loam			
9-15	5GY 5/1	80	7.5YR 4/6	20	С	М	Silty Clay Loam			
	,		- 1-				,,			
Hydric S	oil Indicators:							Indicators for Problematic Soils:		
His	stosol (A1)				Polyvalu	e Below	Surface (B15)	2 cm Muck (A10)		
His	stic Epipedon (/	A2)			Thin Dar	k Surface	e (S9)	Coast Prarie Redox (A16)		
Bla	ack Histic (A3)				Loamy N	/lucky Mi	ineral (F1)	5 cm Mucky Peat or Peat (S3)		
Hy	drogen Sulfide	(A4)		Х	Loamy G	ileyed M	atric (F2)	Dark Surface (S7)		
Str	ratified Layers (	(A5)			Depleted	d Matrix	(F3)	Polyvalue Below Surface (S8)		
De	epleted Below [	Dark Su	rface (A11)		Redox D	ark Surfa	ace (F6)	Thin Dark Surface (S9)		
Th	ick Dark Surfac	e (A12)			Depleted	d Dark Su	urface (F7)	Iron-Manganese Masses (F12)		
Sa	ndy Mucky Mir	neral (S	1)		Redox D	epressio	ns (F8)	Piedmont Floodplain Soils (F19)		
Sa	ndy Gleyed Ma	trix (S4	.)					Mesic Spodic (TA6)		
Sa	ndy Redox (S5)	)						Red Parent Material (F21)		
Str	ripped Matrix (	56)						Very Shallow Dark Surface (TF12)		
Da	irk Surface (S7)							Other (Explain in Remarks)		
Restrict	ive Layer (if obse	erved):								
		Type:					Hydrid	Soil Present? Yes X No		
l	Depth (in	ches):					,	· · · · · · · · · · · · · · · · · · ·		
Remark	<s:< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></s:<>									
1										
1										

Project/Site: Three Corners Solar Project	City/County: Benton/Ken	nebec	Sampling Date: 7/31/2020
Applicant/Owner: Three Corners Solar, LLC		State: ME	Sampling Point: <u>Wetland-W</u> 56
Investigator(s): Rodney Kelshaw	Section, Township, Range	:	
Landform (hillslope, terrace, etc.): Footslope	Local relief (concave, convex,	none): Linear	Slope (%) <u>0 - 3</u>
Subregion (LRR or MLRA): LRR R	Lat: 44.596799 Long: -	69.457070	Datum: NAD83
Soil Map Unit Name:		NWI Classif	ication: PFO
Are climatic / hyrologic conditions on the site t	ypical for this time of year? Yes <u>X</u> N	o(if no, e	explain in Remarks.)
Are Vegetation , Soil , or Hydrology	significantly disturbed? Are "Norma	Circumstances'	' present? Yes X No
Are Vegetation , Soil , or Hydrology	naturally problematic? (if needed, ex	plain any answers	in Remarks.)

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

Hydrophytic Vegetation Present?YesXNoHydric Soil Present?YesXNoWetland Hydrology Present?YesXNo	Is the Sampled Area within a Wetland? Yes X No if yes, optional Wetland Site ID: W50
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required: c	heck all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	X Water-Stained Leaves (B9)	X Drainage Patterns (B10)
High Water Table (A2)	Aquatic Fauna (B13)	Moss Trim Lines (B16)
X Saturation (A3)	Marl Deposits (B15)	X Dry-Season Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	Saturation Visible in Aerial Imagery (C9)
Drift Deposits (B3)	X Presence of Reduced Iron (C4)	X 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)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	X Microtopographic Relief (D4)
Sparsley Vegetated Concave Surface (B8)		X FAC-Neutral Test (D5)
Surface Water Present? Yes No _ X	Depth (inches)	
Water Table Present? Yes No _ X	Depth (inches) Wetland	Hydrology Present? Yes X No
Saturation Present? Yes X No	Depth (inches) 0	
Describe Recorded Data (stream gauge, mon	toring well, aerial photos, previous inspectio	ns), if available:

Remarks:

Tree Stratum <u>Abies balsamea</u>	(Plot Size:	30'radius )	Absolute % Cover 50	Dominant Species? X	Indicator Status FAC	Dominance Test Worksheet:         Number of Dominant Species         That Are OBL, FACW, or FAC:       6         (A)	
Betula populifolia			<u> </u>	^	FAC FAC	Total Number of Dominant	
Picea mariana			3		FACW	Species Across All Strata: 7 (B)	
<u></u>			100	= Total Cov	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7% (A/E	3)
						Prevalence Index Worksheet:	
			Absolute	Dominant	Indicator	OBL species 0 x 1 0	
Shrub Stratum	(Plot Size:	15'radius )	% Cover	Species?	Status	FACW species 40 x 2 80	
Acer rubrum			15	Х	FAC	FAC species 130 x 3 390	
Abies balsamea			<u> </u>		FAC	FACU species 25 x 4 100	
			25			UPL species 0 x 5 0	
						Column Totals 195 (A) 570 (	B)
						Prevalence Index = B/A = 2.92	
						Hydrophytic Vegetation Indicators:	
			Absolute	Dominant	Indicator	1- Rapid Test For Hydrophytic Vegetation	
Herb Stratum	(Plot Size:	5'radius )	% Cover	Species?	Status	X 2- Dominance Test is > 50%	
<u>Maianthemum canac</u>	lense		<u>25</u> 20	<u> </u>	FACU FACW	X 3- Prevalence Index is =< 3.0	
Equisetum sylvaticum	า		17	X	FACW	4- Morphological Adaptations	
Parathelypteris novel	boracensis		5		FAC	5. Problematic Hydrophytic Vegetation	
Trientalis borealis			3		FAC		
			70	= Total Cov	ver	Definitions of Vegetation Strata:	
						Tree- Woody plants 3 in. (7.6cm) or more in diameter a breast height (DBH), regardless of height.	at
						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 or size, and woody plants less than 3.28ft tall.	f
Woody Vine Stratum	(Plot Size:	30'radius )	Absolute % Cover	Species?	Indicator Status	Woody Vines- All woody vines greater than 3.28ft in height.	
				_= Total Cov	ver	Hydrophytic Vegetation Present? Yes <u>X</u> No	
Remarks: (Include photo n	numbers here	or on a sep	arate shee	t.)			

Depth	Matrix				Redo	ox Feature	es	
(inches	Color	%	Color	%	Туре	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	1
_	,						,,	
Hydric S	oil Indicators:							Indicators for Problematic Soils:
His	stosol (A1)				Polyvalu	e Below Si	urface (B15)	2 cm Muck (A10)
His	stic Epipedon (A	A2)			Thin Dar	k Surface	(S9)	Coast Prarie Redox (A16)
Bla	ack Histic (A3)				Loamy N	/lucky Min	eral (F1)	5 cm Mucky Peat or Peat (S3)
Hy	drogen Sulfide	(A4)			Loamy G	Bleyed Mat	tric (F2)	Dark Surface (S7)
Str	ratified Layers (	(A5)			Deplete	d Matrix (F	-3)	Polyvalue Below Surface (S8)
X De	epleted Below [	Dark Su	rface (A11)		Redox D	ark Surfac	e (F6)	Thin Dark Surface (S9)
Th	ick Dark Surfac	e (A12)	)	_	Deplete	d Dark Sur	face (F7)	Iron-Manganese Masses (F12)
Sa	ndy Mucky Mir	neral (S	1)		Redox D	epressions	s (F8)	Piedmont Floodplain Soils (F19)
Sa	ndy Gleyed Ma	itrix (S4	L)					Mesic Spodic (TA6)
Sa	ndy Redox (S5)							Red Parent Material (F21)
Str	ripped Matrix (	S6)						Very Shallow Dark Surface (TF12)
Da	irk Surface (S7)							Other (Explain in Remarks)
Restrict	ive Layer (if obse	erved):						
		Type:					Hvdri	ic Soil Present? Yes X No
	Depth (in	ches):					,	
Remark	<s:< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></s:<>							

Project/Site: Three Corners Solar Project	City/County: Benton/Ken	inebec	Sampling Date: 7/31/2020
Applicant/Owner: Three Corners Solar, LLC		State: ME	Sampling Point: <u>Wetland-W</u> 56
Investigator(s): <u>Rodney Kelshaw</u>	Section, Township, Range	2:	
Landform (hillslope, terrace,etc.): Floodplain	Local relief (concave, convex,	, none): <u>Linea</u>	rSlope (%) <u>0 - 3</u>
Subregion (LRR or MLRA): LRR R	Lat: 44.596711 Long:	-69.456948	Datum: NAD83
Soil Map Unit Name:		NWI Class	ification: PSS
Are climatic / hyrologic conditions on the site type	ical for this time of year? Yes X N	lo(if no,	explain in Remarks.)
Are Vegetation , Soil , or Hydrology	significantly disturbed? Are "Norma	ll Circumstance	s" present? Yes X No
Are Vegetation , Soil , or Hydrology	naturally problematic? (if needed, e>	kplain any answe	rs in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes X No
Wetland Hydrology Present?	Yes X No	if yes, optional Wetland Site ID:	W50
Remarks: (Explain alternative procedures he	ere or in a separate report.)		

HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required:	check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2)	Aquatic Fauna (B13)	Moss Trim Lines (B16)
X Saturation (A3)	Marl Deposits (B15)	X 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)
Surface Water Present? Yes No X	Depth (inches)	
Water Table Present? Yes X No	Depth (inches) 0 Wetland	Hydrology Present? Yes X No
Saturation Present? Yes X No	Depth (inches) 0	
Describe Recorded Data (stream gauge, mon	itoring well, aerial photos, previous inspection	ns), if available:
Remarks:		

Tree Stratum	(Plot Size:	30'radius )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test W	orksheet:		
Picea mariana			5	х	FACW	That Are OBL, FAC	CW, or FAC:	5	(A)
Abies balsamea			5	Х	FAC	Total Number	of Dominant	-	_ ` `
Acer rubrum			5	Х	FAC	Species Acro	oss All Strata:	5	(B)
			15	= Total Cov	ver	Percent of Domi	inant Snecies		_``
						That Are OBL, F	ACW, or FAC:	100%	(A/B)
						Prevalence Index W	/orksheet:		
			Absolute	Dominant	Indicator	OBL species	83 x 1	83	
Shrub Stratum	(Plot Size:	15'radius )	% Cover	Species?	Status	FACW species	65 x 2	130	
Alnus incana			60	Х	FACW	FAC species	17 x 3	51	
			60	= Total Co	ver	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 Vegeta	ation Indicator	rs:	
			Absolute	Dominant	Indicator	1- Rapid Test	For Hydrophyt	ic Vegeta:	tion
Herb Stratum	(Plot Size:	5'radius )	% Cover	Species?	Status	X 2- Dominance	e Test is > 50%		
Calamagrostis canade	nsis		80	Х	OBL	X 3- Prevalence	Index is =< 3 (	)	
Urtica dioica			7		FAC				
<u>Lysimachia terrestris</u>			<u> </u>	- Total Co	UBL	4- Morpholog	gical Adaptatio	ns	
					vei	5- Problemati	ic Hydrophytic	Vegetatio	on
						Definitions of Vegetat	tion Strata:		
						Tree- Woody plants 3 breast height (DBH), re	in. (7.6cm) or me egardless of heig	ore in dian sht.	neter at
						Sapling/Shrub- Woody greater than or equal t	v plants less than to 3.28ft (1m) ta	n 3 in. DBH III.	and
						Herb- All herbaceous ( size, and woody plants	non-woody) pla s less than 3.28ft	nts, regard t tall.	lless of
Woody Vine Stratum	(Plot Size:	30'radius )	Absolute % Cover	Dominant Species?	Indicator Status	Woody Vines- All woo height.	dy vines greater	than 3.28f	ft in
				_= Total Cov	ver	Hydrophy Vegetat Prese	/tic ion nt? Yes <u>X</u>	_ No	
Remarks: (Include photo n	umbers here	or on a sep	arate shee	t.)		1			

Depth	Matrix	(			Redo	ox Featur	es	
(inches	Color	%	Color	%	Туре	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 So	oil Indicators:							Indicators for Problematic Soils:
His	tosol (A1)				Polyvalu	ie Below S	urface (B15)	2 cm Muck (A10)
His	tic Epipedon (	(A2)			Thin Dar	rk Surface	(S9)	Coast Prarie Redox (A16)
Bla	ck Histic (A3)				Loamy N	Aucky Mir	neral (F1)	5 cm Mucky Peat or Peat (S3)
Нус	drogen Sulfide	e (A4)		Х	Loamy G	Gleyed Ma	tric (F2)	Dark Surface (S7)
Stra	atified Layers	(A5)			Deplete	d Matrix (	F3)	Polyvalue Below Surface (S8)
Dep	pleted Below	Dark Su	Surface (A11) Redox Dark Su		ark Surfac	e (F6)	Thin Dark Surface (S9)	
Thi	ck Dark Surfa	ce (A12)			Deplete	d Dark Sui	face (F7)	Iron-Manganese Masses (F12)
San	ndy Mucky Mi	neral (S	1)		Redox D	epression	s (F8)	Piedmont Floodplain Soils (F19)
San	ndy Gleyed Ma	atrix (S4	.)					Mesic Spodic (TA6)
San	ndy Redox (S5	)						Red Parent Material (F21)
Stri	ipped Matrix (	(S6)						Very Shallow Dark Surface (TF12)
Dar	rk Surface (S7	)						Other (Explain in Remarks)
Restrictiv	ve Layer (if obs	erved):						
		Type						
	Denth (in						Hydric	Soil Present? Yes X No
	Depth (ir	iches):						
Remarks	<u>.</u>							
nemana								

Project/Site: Three	Corners So	ar Project		City/County:	Benton/Ken	nebec	Sampling Date: 7/	31/2020
Applicant/Owner:	Three Corne	rs Solar, LLC				State: ME	Sampling Point:	Upland-W59
Investigator(s): Cha	arles Ferris			Section, Tow	nship, Range	:		
Landform (hillslope,	terrace,etc	.): Side Slope		Local relief (con	cave, convex,	none): Conve	exSlope (%)	0 - 3
Subregion (LRR or N	ILRA): LRR	R	Lat:	44.604514	Long: -	69.452082	Datum: N	AD83
Soil Map Unit Name						NWI Class	ification: UPL	
Are climatic / hyrolo	ogic conditio	ons on the site typ	ical for th	is time of year? Ye	es <u>X</u> No	o(if no,	explain in Remarks.	)
Are Vegetation	, Soil	, or Hydrology	signifi	cantly disturbed?	Are "Normal	Circumstance	s" present? Yes >	(No
Are Vegetation	, Soil	, or Hydrology	natura	ally problematic?	(if needed, ex	plain any answe	rs in Remarks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X Yes Yes	No NoX NoX	Is the Sampled Area within a Wetland? if yes, optional Wetland Site ID:	Yes	NoX
Remarks: (Explain alternative procedures l	nere or in a sep	arate report.)			

wetiand frydrology mulcators.				Secondary Indicators (minimum of two required			
Primary Indicators (minimum of one		Surface Soil Cracks (B6)					
Surface Water (A1)	_	Water-Stained Leaves	(B9)	Drainage Patterns (B10)			
High Water Table (A2)	_	Aquatic Fauna (B13)		Moss Trim Lines (B16)			
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)	Saturation Visible in Aerial Imagery (C9)			
Drift Deposits (B3)	_	Presence of Reduced Ir	on (C4)	Stunted or Stressed Plants (D1)			
Algal Mat or Crust (B4)	_	Recent Iron Reduction	in Tilled Soils (C6)	Geomorphic Position (D2)			
Iron Deposits (B5)	_	Thin Muck Surface (C7)	)	Shallow Aquitard (D3)			
Inundation Visible on Aerial Im	agery (B7)	Other (Explain in Rema	rks)	Microtopographic Relief (D4)			
Sparsley Vegetated Concave Su	rface (B8)			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	auge monit	toring well aerial photos	previous inspectio	ns) if available:			
	2026, 110110		previous inspectio				

Remarks:

Sampling Point: Upland-W59

Tree Stratum	(Plot Size:	30'radius )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
Acer rubrum			10	х	FAC	That Are OBL, FACW, or FAC: 5 (A)
Fraxinus pennsylvanica	a		5	Х	FACW	Total Number of Dominant
			15	= Total Cov	/er	Species Across All Strata: 7 (B)
						Percent of Dominant Species
						That Are OBL, FACW, or FAC: 71.4% (A/B)
						Prevalence Index Worksheet:
			Absolute	Dominant	Indicator	OBL species 0 x 1 0
Shrub Stratum	(Plot Size:	15'radius )	% Cover	Species?	Status	FACW species 32 x 2 64
Ostrya virginiana			35	х	FACU	FAC species 17 x 3 51
Fraxinus pennsylvanic	а		25	Х	FACW	FACU species 52 x 4 208
Lonicera morrowii			15		FACU	
Abies balsamea			5	<b>T</b> 1 1 C	FAC	UPL species 0 x 5 0
			80	= Total Cov	/er	Column Totals <u>101</u> (A) <u>323</u> (B)
						Prevalence Index = B/A =3.2
						Hydrophytic Vegetation Indicators:
			Absolute	Dominant	Indicator	1- Rapid Test For Hydrophytic Vegetation
Herb Stratum	(Plot Size:	5'radius )	% Cover	Species?	Status	X = 2
Fraxinus pennsylvanic	а		2	х	FACW	
Solidago rugosa			2	Х	FAC	3- Prevalence Index is =< 3.0
Polystichum acrostich	oides		2	Х	FACU	4- Morphological Adaptations
			6	= Total Cov	/er	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 Vine Stratum	(Plot Size:	30'radius )	Absolute % Cover	Dominant Species?	Indicator Status	Woody Vines- All woody vines greater than 3.28ft in height.
				= Total Cov	/er	Hydrophytic
						Present? Yes X No
Remarks: (Include photo n	umbers here	or on a sep	arate shee	t.)		

# SOIL

Sampling Point: Upland-W59	
	-

Depth	Matrix				Redo	ox Feature	es	
inches	Color	%	Color	%	Туре	Loc	Texture	Remarks
0-1	10YR 2/2	100					Loam	
1-12	10YR 5/3	100					Fine Sandy Loam	n
Hvdric So	il Indicators:							Indicators for Problematic Soils:
Hist	tosol (A1)				Polyvalu	e Below Su	urface (B15)	2 cm Muck (A10)
Hist	tic Epipedon (	A2)			Thin Dar	k Surface	(S9)	Coast Prarie Redox (A16)
Bla	ck Histic (A3)				Loamy N	/lucky Min	eral (F1)	5 cm Mucky Peat or Peat (S3)
Нус	drogen Sulfide	e (A4)			Loamy G	leyed Mat	ric (F2)	Dark Surface (S7)
Stra	atified Layers	(A5)			Deplete	d Matrix (F	3)	Polyvalue Below Surface (S8)
Dep	pleted Below I	Dark Sui	rface (A11)		Redox D	ark Surfac	e (F6)	Thin Dark Surface (S9)
Thi	ck Dark Surfac	ce (A12)			Deplete	d Dark Sur	face (F7)	Iron-Manganese Masses (F12)
San	idy Mucky Mii	neral (S	1)		Redox D	epressions	5 (F8)	Piedmont Floodplain Soils (F19)
San	dy Gleyed Ma	atrix (S4	)					Mesic Spodic (TA6)
San	dy Redox (S5)	)						Red Parent Material (F21)
Stri	pped Matrix (	S6)						Very Shallow Dark Surface (TF12)
Dar	k Surface (S7)							Other (Explain in Remarks)
Restrictiv	ve Layer (if obs	erved):						
		Туре: І	Rock/Till				Hydrid	c Soil Present? Yes No X
	Depth (in	iches):	12					
Remarks	5:							

Project/Site: Three Corners Solar Project	City/County: Benton/Ken	nnebec	Sa	31/2020	
Applicant/Owner: <u>Three Corners Solar, LLC</u>		State:	ME	Sampling Point:	Wetland-W59
Investigator(s): Charles Ferris	Section, Township, Range	e:			
Landform (hillslope, terrace, etc.): Side Slope	Local relief (concave, convex,	, none):	Concave	Slope (%)	1 - 3
Subregion (LRR or MLRA): LRR R	Lat: _44.604336Long: _	-69.451	880	Datum: NA	D83
Soil Map Unit Name:		NV	VI Classifica	tion: PFO	
Are climatic / hyrologic conditions on the site typ	pical for this time of year? Yes X N	lo	(if no, exp	lain in Remarks.)	
Are Vegetation , Soil , or Hydrology	significantly disturbed? Are "Norma	al Circum	nstances" pi	resent? Yes X	No
Are Vegetation , Soil , or Hydrology	naturally problematic? (if needed, ex	xplain an	y answers in	Remarks.)	

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

Hydrophytic Vegetation Present?YesXNoHydric Soil Present?YesXNoWetland Hydrology Present?YesXNo	Is the Sampled Area within a Wetland? Yes X No if yes, optional Wetland Site ID: W55
Remarks: (Explain alternative procedures here or in a separate report.)	

Netland Hydi	rology Indicators:		Secondary Indicators (minimum of two required
Primary Indica	ators (minimum of one is required:	check all that apply)	Surface Soil Cracks (B6)
Surface	Water (A1)	X Water-Stained Leaves (B9)	X Drainage Patterns (B10)
High Wa	ter Table (A2)	Aquatic Fauna (B13)	Moss Trim Lines (B16)
X Saturatio	on (A3)	Marl Deposits (B15)	Dry-Season Water Table (C2)
Water N	1arks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sedimer	it Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	Saturation Visible in Aerial Imagery (C9)
Drift De	posits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Ma	at or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)
Iron Dep	oosits (B5)	Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundati	on Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsley	Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)

Water Table Present? Yes No X Depth (inches)

Yes X No

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

0

Remarks:

Saturation Present?

HYDROLOGY

Wetland Hydrology Present? Yes X No

Tree Stratum	(Plot Size:	30'radius )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test V	Vorkshee	et:		
Acer rubrum		·	20	x	FAC	That Are OBL FA	CW or F		5	(A)
Abies balsamea			15	X	FAC	Total Numbo	r of Dom	inont	5	_(,,)
Populus tremuloides			10	Х	FACU	Species Ac	ross All St	trata:	7	(B)
			45	= Total Cov	ver	Percent of Don	ninant Sn			_``
						That Are OBL,	FACW, or	FAC:	71.4%	(A/B)
						Prevalence Index \	Norkshee	et:		
			Absolute	Dominant	Indicator	OBL species	30	x 1	30	
Shrub Stratum	(Plot Size:	15'radius )	% Cover	Species?	Status	FACW species	60	x 2	120	
Acer rubrum			15	Х	FAC	FAC species	60	x 3	180	
Abies balsamea			10	Х	FAC	EACLI species	20		80	
Ostrya virginiana			10	Х	FACU	TACO species	20	^4_	80	
			35	= Total Cov	/er	UPL species	0	x 5	0	
						Column Totals	170	(A)	410	(B)
						Prevalenc	e Index =	= B/A =	2.41	
						Hydrophytic Vege	tation In	dicator	5:	
			Absolute	Dominant	Indicator	1- Rapid Tes	t For Hyd	Irophyti	c Vegeta	tion
Herb Stratum	(Plot Size:	5'radius )	% Cover	Species?	Status	X 2- Dominan	, Tost is	> 50%	Ū	
Onoclea sensibilis			60	Х	FACW			> 5070		
Carex crinita			15		OBL	X 3- Prevalenc	e Index is	s =< 3.0		
Glyceria striata			15		OBL	4- Morpholo	ogical Ada	aptation	IS	
			90	= Total Cov	ver	5- Problema	tic Hydro	ophytic	Vegetatio	n
						Definitions of Vegeta	ation Strat	ta:		
						Tree- Woody plants 3	3 in. (7.6cr	m) or mo	ore in diam	neter at
						breast height (bbri),	regulates	o neigi		
						Sapling/Shrub- Wood greater than or equa	ly plants le l to 3.28ft	ess than (1m) tal	3 in. DBH I.	and
						Herb- All herbaceous	(non-woo	ody) plar	nts, regard	less of
			Abaaluta	Deminent	Indiantan	size, and woody plan	ts less tha	ın 3.28ft	tall.	
Woody Vine Stratum	(Plot Size:	30'radius )	% Cover	Species?	Status	Woody Vines- All wo height.	ody vines	greater	than 3.28f	t in
				_= Total Cov	/er	Hydroph	nytic			
						Vegeta	tion		N	
						FIES	ent: Yes	s <u>x</u>	NO	_
Remarks: (Include photo n	umbers here	or on a sep	arate shee	t.)						

#### SOIL

Depth	Matrix	[			Redo	ox Featur	res	
inches	Color	%	Color	%	Туре	Loc	Texture	Remarks
0-12	10YR 2/2	100					Silt Loam	
L2-20	10YR 5/2	95	7.5YR 5/6	5	С	Μ	Sandy Loam	
lydric So	il Indicators:							Indicators for Problematic Soils:
His	tosol (A1)				Polyvalu	ie Below S	Surface (B15)	2 cm Muck (A10)
His	tic Epipedon (	A2)			Thin Dar	rk Surface	(S9)	Coast Prarie Redox (A16)
Bla	ck Histic (A3)				Loamy N	Aucky Mir	neral (F1)	5 cm Mucky Peat or Peat (S3)
Нус	drogen Sulfide	e (A4)			Loamy G	Bleyed Ma	atric (F2)	Dark Surface (S7)
Stra	atified Layers	(A5)		Х	Deplete	d Matrix (	F3)	Polyvalue Below Surface (S8)
Dep	pleted Below	Dark Su	rface (A11)		Redox D	ark Surfa	ce (F6)	Thin Dark Surface (S9)
Thi	ck Dark Surfa	ce (A12)			Deplete	d Dark Su	rface (F7)	Iron-Manganese Masses (F12)
San	idy Mucky Mi	neral (S	1)		Redox D	epression	ns (F8)	Piedmont Floodplain Soils (F19)
San	ndy Gleyed Ma	atrix (S4	-)					Mesic Spodic (TA6)
San	dy Redox (S5	)						Red Parent Material (F21)
Stri	pped Matrix (	(S6)						Very Shallow Dark Surface (TF12)
Dar	k Surface (S7)	)						Other (Explain in Remarks)
Restrictiv	ve Layer (if obs	erved):						
		Type:					Hydric	Soil Present? Ves X No
	Depth (ir	iches):					Tryanc	
omarka								
Cerrial K								

Three Corners Solar Project MDEP Natural Resources Protection Act Permit Application ATTACHMENT 9. NATURAL RESOURCES REPORT

# Attachment 9-3

Vernal Pool Data Submission to MDIFW



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



ATTACHMENT A: OVERVIEW MAP



Data Collected by Kleinschmidt Associates 2019; 2020















**ATTACHMENT B: SUMMARY TABLE** 



			Egg Mass Counts														
		Dried by	,	Wood Fro	g	9	Spotted Sa	lamander			Blue-S	potted					
Pool ID	Origin	7/15/2020	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	Fairy Shrimp	SVP		
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	Ν	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	Ν	Yes		38										Yes	Potentially		



Pool ID	Origin	Dried by	Egg Mass Counts										SVP	
NXG-VP-107	Ν	Yes		31				22						Potentially
NXG-VP-2	NM	No		3				3				3		No
NXG-VP-3	Ν	Yes		46				5						Potentially
NXG-VP-4	Ν	Yes						1	3					No
NXG-VP-5	Ν	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				1				No



Pool ID	Origin	Dried by					Egg	g Mass Cou	unts					SVP
SAD-VP-1	Ν	No	6					4	3	7				No
SAD-VP-10	Ν	Yes	6	26		31		35				20		Potentially
SAD-VP-100	Ν	Yes		82										Potentially
SAD-VP-101	Ν	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	Ν	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	Ν	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



Pool ID	Origin	Dried by		Egg Mass Counts									SVP	
SAD-VP-9	Ν	Yes	20	36		20		45						Potentially





INSTRUCTIONS:
<ul> <li>Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.</li> <li><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.</li> </ul>
Observer's Pool ID: <u>NXG - VP-3</u> MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: <u>Sovab Drahovza</u> b. Contact and credentials previously provided? O No (submit Addendum 1) Yes
2. PROJECT CONTACT INFORMATION
a. Contact name: O same as observer O other
b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes
c. Project Name: Longrand (3 Corners)
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? OYes $ig Q$ No $$ If no, was landowner permission obtained for survey? OYes ONo
b. Landowner's contact information (required)
Name: <u>ED Bessey &amp; Srn</u> Phone: (207) 453-9388
Street Address: 779 Stomhan Rd. City: Hinckleg State: ME Zip: 04944
c. 🔲 Large Projects: check if separate project landowner data file submitted
4. VERNAL POOL LOCATION INFORMATION
a. Location Township: Onthe Township
Brief site directions to the pool (using mapped landmarks):
See altached map
b. Mapping Requirements
i. USGS topographic map OR aerial photograph with pool clearly marked.
<sup>ii.</sup> GPS location of vernal pool (use Datum NAD83 / WGS84)
Longitude/Easting: Latitude/Northing:
Coordinate system: 1165 84
Check one: GIS shapefile - send to Jason.Czapiga@maine.gov: observer has reviewed shape accuracy (Best)
<ul> <li>O The pool perimeter is delineated by multiple GPS points. (Excellent)</li> <li>- Include map or spreadsheet with coordinates.</li> </ul>
$m{O}$ The above GPS point is at the center of the pool. (Good)
O The center of the pool is approximately mO ft O in the compass direction of degrees from the above GPS point. (Acceptable)

A A A A A A A A A A A A A A A A A A A	

# **Maine State Vernal Pool Assessment Form**

5. VERNAL POOL HABITAT INFORMATION  a. Habitat survey dates (only if different from indicator survey dates on page 3):  b. Wetland habitat characterization  Choose the bast descriptor for the landscape setting: Choose the bast descriptor for the landscape settin		141 C 100										
a. Habitat survey date (only If differing from indicator survey dates on page 3): b. Wetland habitat characterization Choose the best descriptor for the landscape setting: Osolated depression Choose the best descriptor for the landscape setting: Osolated depression Choose the best descriptor for the landscape setting: Choose the best descriptor of the landscape setting: Choose the best descriptor descripto	5. VERNAL POOL HABITAT INFORMATION											
b. Wetland habitat characterization <ul> <li>Choose the best descriptor for the landscape setting:</li></ul>	a. Habitat survey date ( <u>only if different</u> from indicator survey dates on page 3):											
• Choose the best descriptor for the landscape setting: • Isolated depression • Other: • Choodplain depression • Other: • Output: • Choodplain depression • Output: • Choodplain depression • Output: • Output: • Choodplain depression • Output: • Output:<	b. Wetland habitat characterization											
○ Other:         • Check all wetland types that best apply to this pool:         ○ Floodplain dypes that best apply that best from othis	Choose the best descriptor for the landscape setting: O Isolated depression Ø Pool associated with larger wetland complex											
<ul> <li>Check all wetland types that best apply to this pool:</li> <li></li></ul>	O Floodplain depression O ther:											
∠ Forested swamp       □ Lake or pond cove       □ Glogplain       □ Durgw pit         □ 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:         i. Pool Origin:       ○ Natural:       ○ Natural:       ○ Natural:       ○ Unknown         If modified, unnatural or unknown, describe any modem or historic human impacts to the pool (required):       ○ Unknown         (drying partially in all years and (drying partially in all years and (drying partially in all years)       ○ Unknown         Explain:       □ Maximum depth at survey:       ○ 0-12° (0-1 ft.)       ○ 12° 36° (1-3 ft.)       ○ 36° (>3-5 ft.)       ○ 40° (>5 ft.)         • Approximate size of pool (at spring highwater):       Width:       Om Of t       Length:       Om Of t         • Predominate soil (bare, leaf-litter bottom, or upland mosse present)       ○ Organic matter (peat/muck) deep and widespread       ○ Organic matter (peat/muck) deep and widespread         • Pool vegetation indicators in order of increasing hydroperiod (dreck all that apply):       □ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)       ○ Organic matter (peat/muck) deep and widespread	■ Check all wetland types that best apply to this pool:											
□       □	Image: Wet meadow     Image: Slow stream     Image: Dug pond or       Image: Shrub swamp     Image: Lake or pond cove     Image: Floodplain     borrow pit											
□ Berregent marsh       □ Active beaver flowage       □ ATV or skidder rut       □ Other:	Peatland (fen or bog) Abandoned beaver flowage Mostly unvegetated pool Roadside ditch											
<ul> <li>c. Vernal pool status under the Natural Resources Protection Act (NRPA)</li> <li>i. Pool Origin: Natural O Natural O Unknown</li> <li>If modified, unnatural or unknown, describe any modem or historic human impacts to the pool (required):</li> <li>ii. Pool Hydrology</li> <li>Select the pool's <u>estimated</u> hydroperiod AND <u>provide rationale</u> in box (required):</li> <li>OPermanent O Semi-permanent (drying partially in all years and completely in drought years)</li> <li>Explain:</li> <li>Leaf I: In both Jorney: O -12" (0-1 ft.) Q12-36" (1-3 ft.) O 36-60" (3-5 ft.) O &gt;60" (&gt;5 ft.)</li> <li>Approximate size of pool (at spring highwater): Width: O m O ft Length: O m O ft</li> <li>Predominate substrate in order of increasing hydroperiod</li> <li>Of Mineral soil (kaphagnum moss present)</li> <li>Pool vegetation indicators in order of increasing hydroperiod (check all that apply):</li> <li>Dray site ferns (e.g. spinulose wood fern, interrupted fern, New York fern)</li> <li>Moist site vasculars (e.g. skunk cabbage, jewdweed, blue flag iris, swamp candle)</li> <li>Sphagnum moss (anchored or suspended)</li> <li>Faunal indicators (check all that apply):</li> <li>Faunal indicators (check all that apply):</li> <li>Fish Bullfrog or Green Frog tadpoles</li> <li>Mo inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):</li> <li>No inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):</li> <li>No inlet or outlet (a permanent inlet or outlet (channel with well-defined banks and permanent flow)</li> </ul>	Emergent marsh	ATV or skidder rut										
I. Pool Origin: QNatural O Natural O Unknown         If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required):         Image: Select the pool's <u>estimated</u> hydroperiod AND <u>provide rationale</u> in box (required):         OPermanent       O Semi-permanent (drying partially in all years and completely in drought years)       O Unknown         Explain:       Use of the body	c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)										
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):         O Permanent       Semi-permanent         (drying partially in all years and completely in drought years)       O Unknown         Explain:       Image: Completely in drought years)       O Unknown         Maximum depth at survey: O 0-12* (0-1 ft.)       Q12-36* (1-3 ft.)       O 36-60* (3-5 ft.)       O >60* (>5 ft.)         Approximate size of pool (at spring highwater): Width:       O m O ft       Length:       O m O ft       Length:       O m O ft         Predominate substrate in order of increasing hydroperiod:       O Organic matter (peat/muck) shallow or restricted to deepest portion       O Organic matter (peat/muck) deep and widespread         Mineral soil (bare, leaf-litter bottom, or upland mosses present)       O Organic matter (peat/muck) deep and widespread         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):       Organic matter (peat/muck) deep and widespread         Pool vegetation indicators word fern, interrupted fern, New York fern)       Wet site ferms (e.g. solutose wood fern, interrupted fern, New York fern)         Moist site rems (e.g. schunk cabbage, jewiwed, bladderwort)       Quatic vascular spp. (e.g. pickerelweed, arrowhead)         Sphagnum moss (anchored or suspended)       Aquatic vascu	i. Pool Origin: 🕅 Natural O Natural-Modified O L	Jnnatural OUnknown										
ii. Pool Hydrology         Select the pool's <u>estimated</u> hydroperiod AND <u>provide rationale</u> in box (required):         O Permanent       O Semi-permanent (drying partially in all years and completely in drought years)       O Unknown         Explain:       Left for the bottom       O 12" (0-1 ft.)       12-36" (1-3 ft.)       O 36-60" (3-5 ft.)       O >60" (>5 ft.)         Maximum depth at survey:       O -12" (0-1 ft.)       12-36" (1-3 ft.)       O 36-60" (3-5 ft.)       O >60" (>5 ft.)         Approximate size of pool (at spring highwater):       Width:       O m O ft       Length:       O m O ft         Predominate substrate in order of increasing hydroperiod:       O m O ft       Length:       O m O ft         Mineral soil (brae, leaf-litter bottom, or upland mosses present)       O Organic matter (peat/muck) shallow or restricted to deepest portion       O Organic matter (peat/muck) deep and widespread         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):       Organic matter (peat/muck) deep and widespread         Pool vegetation indicators spinulose wood fern, lady fern, bracken fern)       Wet site ferns (e.g. spinulose wood fern, lady fern, bracken fern)       Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)         Maxis tist eferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)       Aquatic vascular spp. (e.g. pickkerelweed, arrowhead)       Dauter spield, pond weed, bladderwort)	If modified, unnatural or unknown, describe any mo	dern or historic human impacts to the pool ( <b>required</b> ):										
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)       ○ Unknown         Explain:       ○ Luch output       ○ Unknown         ▲ Af I: & & Hore       ○ Unknown         ▲ 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:       O m O ft       Length:       O m O 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       ○ Organic matter (peat/muck) deep and widespread         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):       ○ Organic matter (peat/muck) deep and widespread         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):       ○ Wet site ferms (e.g. orgal fern, marsh fern)         ↓ witherberry, mountain holly       ↓ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)         ↓ forn, bracken fern)       ↓ Moxis site vasculars (e.g. such cabbage. igwelweed, blue flag iris, swamp candle)         ↓ Sphagnum moss (anchored or suspended)       ↓ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)												
<ul> <li>Select the pool's <u>estimated</u> hydroperiod AND <u>provide rationale</u> in box (required): <ul> <li>○ Permanent</li> <li>○ Semi-permanent</li> <li>○ (drying partially in all years and completely in drought years)</li> </ul> </li> <li>Explain: <ul> <li>Laf [i:h: b:Horm</li> </ul> </li> <li>Maximum depth at survey: O 0-12" (0-1 ft.) [212-36" (1-3 ft.) O 36-60" (3-5 ft.) O &gt;60" (&gt;5 ft.)</li> <li>Approximate size of pool (at spring highwater): Width: O m O ft Length: O m O ft</li> <li>Predominate substrate in order of increasing hydroperiod:</li> <li>Mineral soil (bare, leaf-litter bottom, or upland mosse present)</li> <li>O Mineral soil (bare, leaf-litter bottom, or upland mosse present)</li> <li>Pool vegetation indicators in order of increasing hydroperiod (check all that apply):</li> <li>□ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)</li> <li>□ Dry site ferms (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)</li> <li>□ Moist site vasculars (e.g. stunk cabbage, jewelweed, blue flag iris, swamp candle)</li> <li>■ Faunal indicators (check all that apply):</li> <li>□ Fish □ Bullfrog or Green Frog tadpoles</li> <li>0 Other:</li></ul>	ii. Pool Hydrology											
O Permanent (drying partially in all years and completely in drought years)       O Unknown         Explain:       Image: Completely in most years)       O Unknown         Image: Completely in drought years)       Image: Completely in most years)       Image: Completely in most years)         Image: Completely in drought years)       Image: Completely in most years)       Image: Completely in most years)         Image: Completely in drought years)       Image: Completely in most years)       Image: Completely in most years)         Image: Completely in drought years)       Image: Completely in most years)       Image: Completely in most years)         Image: Completely in most years)       Image: Completely in most years)       Image: Completely in most years)         Image: Completely in most years)       Image: Completely in most years)       Image: Completely in most years)         Image: Completely in drought years)       Image: Completely in most years)       Image: Completely in most years)         Image: Completely in drought years)       Image: Completely in most years)       Image: Completely in most years)         Image: Completely in drought years)       Image: Completely in most years)       Image: Completely in most years)         Image: Completely in drought years)       Image: Completely in most years)       Image: Completely in most years)         Image: Completely in drought years)       Image: Completely in most years)       Image: Com	Select the pool's <u>estimated</u> hydroperiod AND provid	<u>le rationale</u> in box ( <b>required</b> ):										
(drying partially in all years and completely in drought years)       "(drying out completely in most years)         Explain:       (drying out completely in most years)         Maximum depth at survey: 0 0-12" (0-1 ft.)       (1-3 ft.)       0 36-60" (3-5 ft.)       0 >60" (>5 ft.)         Approximate size of pool (at spring highwater):       Width: Om Oft       Length: Om Oft         Predominate substrate in order of increasing hydroperiod:       O m Oft       Organic matter (peat/muck) shallow or restricted to deepest portion         O Mineral soil (bare, leaf-litter bottom, or upland mosses present)       O Organic matter (peat/muck) deep and widespread         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):       Organic matter (peat/muck) deep and widespread         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):       Wet site ferns (e.g. royal fern, marsh fern)         Moist site ferns (e.g. spinulose wood fern, interrupted fern, New York fern)       Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)         Sphagnum moss (anchored or suspended)       Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)         Moist site rasculars (check all that apply):       Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)         Sphagnum moss (anchored or suspended)       Sphagnum moss (anchored or suspended)       Sphagnum mose (anchored or suspended)	O Permanent O Semi-permanent	Cephemeral O Unknown										
Explain:       Lenf life bottoom         Lenf life bottoom         Maximum depth at survey: O 0-12" (0-1 ft.)       Q12-36" (1-3 ft.)       O 36-60" (3-5 ft.)         Approximate size of pool (at spring highwater):       Width: O m O ft Length: O m O ft         Predominate substrate in order of increasing hydroperiod:       O m O ft Length: O m O ft         O more that soil (bare, leaf-litter bottom, or upland mosses present)       O organic matter (peat/muck) shallow or restricted to deepest portion         O Mineral soil (sphagnum moss present)       O organic matter (peat/muck) deep and widespread         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):       Organic matter (peat/muck) deep and widespread         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):       Wet site ferms (e.g. g. royal ferm, marsh fern)         Moist site ferms (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)       Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)         Wet site graminoids (e.g. pickerelweed, arrowhead)       Hoatig for submerged aquatics (e.g. water file, water shield, pond weed, bladderwort)         Moist site ferms (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)       Hoatig for submerged aquatics (e.g. water file, water shield, pond weed, bladderwort)         Predominate subfrog or Green Frog tadpoles       O ther:	(drying partially in all years ar completely in drought years)	id (drying out completely in most years)										
Lanf Like bottom         • Maximum depth at survey: O 0-12" (0-1 ft.) Pla-36" (1-3 ft.) O 36-60" (3-5 ft.) O >60" (>5 ft.)         • Approximate size of pool (at spring highwater): Width: O m O ft Length: O m O 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): Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)       • Wet site ferns (e.g. royal fern, marsh fern)         • Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)       • Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)         • Faunal indicators (check all that apply): Fish	Explain:											
<ul> <li>Maximum depth at survey: O 0-12" (0-1 ft.) (12-36" (1-3 ft.) O 36-60" (3-5 ft.) O &gt;60" (&gt;5 ft.)</li> <li>Approximate size of pool (at spring highwater): Width: O m O ft Length: O m O ft</li> <li>Predominate substrate in order of increasing hydroperiod:</li> <li>Mineral soil (bare, leaf-litter bottom, or upland mosses present)</li> <li>O Mineral soil (sphagnum moss present)</li> <li>Pool vegetation indicators in order of increasing hydroperiod (check all that apply):</li> <li>□ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)</li> <li>□ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)</li> <li>□ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)</li> <li>○ Sphagnum moss (anchored or suspended)</li> <li>■ Faunal indicators (check all that apply):</li> <li>□ Fish □ Bullfrog or Green Frog tadpoles</li> <li>□ No inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):</li> <li>○ No inlet or outlet ○ Other or Unknown (explain):</li> </ul>	Leaf like bottom											
<ul> <li>Approximate size of pool (at spring highwater): Width: O m O ft Length: O m O ft</li> <li>Predominate substrate in order of increasing hydroperiod:</li> <li>Mineral soil (bare, leaf-litter bottom, or upland mosses present)</li> <li>O Mineral soil (bare, leaf-litter bottom, or upland mosses present)</li> <li>O Mineral soil (sphagnum moss present)</li> <li>Pool vegetation indicators in order of increasing hydroperiod (check all that apply):</li> <li>□ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)</li> <li>□ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)</li> <li>□ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)</li> <li>□ Faunal indicators (check all that apply):</li> <li>□ Faunal indicators (check all that apply):</li> <li>□ Fish □ Bullfrog or Green Frog tadpoles</li> <li>I Inlet/Outlet Flow Permanency</li> <li>Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):</li> <li>○ No inlet or outlet</li> <li>○ Other or Unknown (explain):</li> </ul>	Maximum depth at survey: $\bigcap 0.12"(0.1 \text{ ft})$	$2_{-36"}(1_{-3} \text{ ft}) = 0.36_{-60"}(3_{-5} \text{ ft}) = 0.560" (>5 \text{ ft})$										
<ul> <li>Approximate size of pool (at spring highwater): witch: O'n O'n Lengh: O'n O'n O'n O'n O'n O'n D'n O'n D'n O'n D'n O'n D'n O'n D'n O'n O'n D'n O'n D'n D'n</li></ul>												
<ul> <li>Predominate substrate in order of increasing hydroperiod:</li> <li>Mineral soil (bare, leaf-litter bottom, or upland mosses present)</li> <li>Mineral soil (sphagnum moss present)</li> <li>Pool vegetation indicators in order of increasing hydroperiod (check all that apply): <ul> <li>Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)</li> <li>Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)</li> <li>Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)</li> <li>Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)</li> <li>Sphagnum moss (anchored or suspended)</li> </ul> </li> <li>Faunal indicators (check all that apply): <ul> <li>Fish</li> <li>Bullfrog or Green Frog tadpoles</li> </ul> </li> <li>Intermittent inlet or outlet</li> <li>Other or Unknown (explain):</li> </ul>	Approximate size of pool (at spring highwater). With											
<ul> <li>O Mineral soli (bare, leal-litter bottom, or upland mosses present)</li> <li>O Mineral soli (sphagnum moss present)</li> <li>Pool vegetation indicators in order of increasing hydroperiod (check all that apply): <ul> <li>Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)</li> <li>Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)</li> <li>Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)</li> <li>Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)</li> <li>Faunal indicators (check all that apply):</li> <li>Fish Bullfrog or Green Frog tadpoles</li> </ul> </li> <li>Fish Bullfrog or Green Frog tadpoles</li> <li>O Other or Unknown (explain):</li></ul>	Predominate substrate in order of increasing hydro Mineral asil (here, leaf little better, equal and											
O Mineral soil (sphagnum moss present)       O Organic matter (peat/muck) deep and widespread         ■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):	mosses present)	Organic matter (peat/muck) shallow or restricted to deepest portion										
<ul> <li>Pool vegetation indicators in order of increasing hydroperiod (check all that apply):         <ul> <li>Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)</li> <li>Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)</li> <li>Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)</li> <li>Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)</li> <li>Sphagnum moss (anchored or suspended)</li> </ul> </li> <li>Faunal indicators (check all that apply):         <ul> <li>Fish</li> <li>Bullfrog or Green Frog tadpoles</li> <li>Other:</li> </ul> </li> <li>iii. Inlet/Outlet Flow Permanency         <ul> <li>Ype of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):</li> <li>No inlet or outlet</li> <li>Other or Unknown (explain):</li> </ul> </li> </ul>	O Mineral soil (sphagnum moss present)	O Organic matter (peat/muck) deep and widespread										
<ul> <li>□ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)</li> <li>□ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)</li> <li>□ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)</li> <li>□ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)</li> <li>□ Faunal indicators (check all that apply):</li> <li>□ Fish □ Bullfrog or Green Frog tadpoles</li> <li>□ Other:</li> <li><b>iii. Inlet/Outlet Flow Permanency</b></li> <li>Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):</li> <li>○ No inlet or outlet</li> <li>○ Other or Unknown (explain):</li> <li>□ Other or Unknown (explain):</li> </ul>	Pool vegetation indicators in order of increasing hydrogeneous	droperiod (check all that apply):										
<ul> <li>moss, lycopodium spp.)</li> <li>Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)</li> <li>Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)</li> <li>Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)</li> <li>Sphagnum moss (anchored or suspended)</li> <li>Faunal indicators (check all that apply):</li> <li>Fish Bullfrog or Green Frog tadpoles</li> <li>iii. Inlet/Outlet Flow Permanency</li> <li>Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):</li> <li>No inlet or outlet</li> <li>Other or Unknown (explain):</li> </ul>	🔲 Terrestrial nonvascular spp. (e.g. haircap	Wet site ferns (e.g. royal fern, marsh fern)										
<ul> <li>is by one tends (org. opinication word tend, and provide tend, bill, billing or submerged aquatics (e.g. bille-joint grass, tussock sedge, cattail, bulrushes)</li> <li>Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)</li> <li>Aquatic vascular spp. (e.g. pickerelweed, arrowhead)</li> <li>Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)</li> <li>No vegetation in pool</li> <li>Faunal indicators (check all that apply):</li> <li>Fish Bullfrog or Green Frog tadpoles</li> <li>No inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):</li> <li>No inlet or outlet</li> <li>Other or Unknown (explain):</li> </ul>	moss, iycopodium spp.)	Wet site shrubs (e.g. highbush blueberry, maleberry,										
<ul> <li>Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)</li> <li>Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)</li> <li>Sphagnum moss (anchored or suspended)</li> <li>Faunal indicators (check all that apply):</li> <li>Fish Bullfrog or Green Frog tadpoles</li> <li>Other:</li> <li>Other:</li> <li>Other or Unknown (explain):</li> <li>Other or Unknown (explain):</li> </ul>	lady fern, bracken fern)	winterberry, mountain holly)										
<ul> <li>Aquatic vascular spp. (e.g. pickerelweed, arrowhead)</li> <li>Aquatic vascular spp. (e.g. pickerelweed, arrowhead)</li> <li>Aquatic vascular spp. (e.g. pickerelweed, arrowhead)</li> <li>Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)</li> <li>Sphagnum moss (anchored or suspended)</li> <li>Faunal indicators (check all that apply):</li> <li>Fish Bullfrog or Green Frog tadpoles</li> <li>Other:</li> <li>No vegetation in pool</li> </ul> iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool): <ul> <li>No inlet or outlet</li> <li>Other or Unknown (explain):</li> </ul>	Moist site ferns (e.g. sensitive fern, cinnamon	sedge, cattail, bulrushes)										
<ul> <li>institute the value of the valu</li></ul>	tern, interrupted tern, New York tern)	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)										
<ul> <li>Sphagnum moss (anchored or suspended) water shield, pond weed, bladderwort)         <ul> <li>No vegetation in pool</li> </ul> </li> <li>Faunal indicators (check all that apply):             <ul> <li>Fish</li> <li>Bullfrog or Green Frog tadpoles</li> <li>Other:</li> </ul> </li> <li>iii. Inlet/Outlet Flow Permanency         Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):             <ul> <li>No inlet or outlet</li> <li>Permanent inlet or outlet (channel with well-defined banks and permanent flow)</li> <li>Other or Unknown (explain):</li> </ul> </li> </ul>	jewelweed, blue flag iris, swamp candle)	Floating or submerged aquatics (e.g. water lily,										
<ul> <li>Faunal indicators (check all that apply):</li> <li>Fish Bullfrog or Green Frog tadpoles Other:</li> <li>Inlet/Outlet Flow Permanency</li> <li>Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):</li> <li>No inlet or outlet</li> <li>O Permanent inlet or outlet (channel with well-defined banks and permanent flow)</li> <li>O Other or Unknown (explain):</li> </ul>	Sphagnum moss (anchored or suspended)	water shield, pond weed, bladderwort)										
<ul> <li>Fish Bullfrog or Green Frog tadpoles Other:</li> <li>iii. Inlet/Outlet Flow Permanency</li> <li>Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):</li> <li>No inlet or outlet</li> <li>Permanent inlet or outlet (channel with well-defined banks and permanent flow)</li> <li>Other or Unknown (explain):</li> </ul>	Faunal indicators (check all that apply):											
<ul> <li>iii. Inlet/Outlet Flow Permanency</li> <li>Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):</li> <li>No inlet or outlet</li> <li>Permanent inlet or outlet (channel with well-defined banks and permanent flow)</li> <li>O Other or Unknown (explain):</li> </ul>	Fish Bullfrog or Green Frog tadpoles	Other:										
<ul> <li>Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):</li> <li>No inlet or outlet</li> <li>Permanent inlet or outlet (channel with well-defined banks and permanent flow)</li> <li>O Other or Unknown (explain):</li> </ul>	iii. Inlet/Outlet Flow Permanencv											
<ul> <li>No inlet or outlet</li> <li>Permanent inlet or outlet (channel with well-defined banks and permanent flow)</li> <li>Intermittent inlet or outlet</li> <li>O Other or Unknown (explain):</li></ul>	Type of inlet or outlet (a seasonal or permanent cha	nnel providing water flowing into or out of the pool):										
O Other or Unknown (explain):	○ No inlet or outlet O Permanent inlet or outlet	et (channel with well-defined banks and permanent flow)										
	Intermittent inlet O Other or Unknown (exp or outlet	lain):										

NXG-112-3

	Maine	State	Vernal	Pool	Assessment	Form
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### 6. VERNAL POOL INDICATOR INFORMATION

4/22 a. Indicator survey dates:

#### b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? O Yes O No
- Was the entire pool surveyed for egg masses? ØYes ONo; what % of entire pool surveyed?\_\_\_\_

20201

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.

		E	Tadpoles/Larvae <sup>4</sup>									
SPECIES	Visit #1	Visit #2	Visit #3	Confide	nce Level <sup>1</sup>	Egg Ma	ass Maturity <sup>2</sup>	Ob	served	Confidence Level <sup>1</sup>		
Wood Frog	46			2		M						
Spotted Salamander	5			2		M						
Blue-spotted Salamander												
Fairy Shrimp <sup>3</sup>												

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

🖾 SVP

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Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

	Method of Verification*			CI **	01 **		Method of Verification*				
SPECIES	Р	н	S	0L	SPECIES	Р	н	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:

Potential SVP
 INon 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 Revie	wed by MDIFW Date:	Initials: operations and the second
This pool is: Significant	Potentially Significant but lacking critical data	Not Significant due to: O does not meet biological criteria. O does not meet MDEP vernal pool criteria.
Comments:		

DEPLW0897-82008 04/18/2017

Print 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 <u>required</u> for all observers.
Observer's Pool ID: MXG - VP - 4 MDIFW Pool ID:
<b>1. PRIMARY OBSERVER INFORMATION</b> a. Observer name: <u>Sach Dahaval</u> //Vick Gaboada b. Contact and credentials previously provided? ONo (submit Addendum 1) QYes
2. PROJECT CONTACT INFORMATION
a. Contact name: 🗑 same as observer 🔘 other
b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes c. Proiect Name: Three Conners Splan Project
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? Offes who if no, was landowner permission obtained for survey?
D. Landowner's contact information (required)
Name: <u>C// Bessey z John</u> Filone. <u>(2017133 1960)</u>
Street Address. <u>779 SKOW high KA</u> Oily. <u>High Kith</u> State. <u>1110</u> Lip. <u>0179</u>
C. Large Projects, check il separate project landowner data me submitted
4. VERNAL POOL LOCATION INFORMATION
a Location Township: Unite Time
Brief site directions to the pool (using mapped landmarks):
See alteched 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: <u>-69, 446255</u> Latitude/Northing: <u>44, 63/364</u>
Coordinate system: UGS 84
Check one:
<ul> <li>The pool perimeter is delineated by multiple GPS points. (Excellent)</li> <li>Include map or spreadsheet with coordinates.</li> </ul>
O 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 P	ool Assessment Form						
5. VERNAL POOL HABITAT INFORMATION							
a. Habitat survey date ( <u>only if different</u> from indicato	r survey dates on page 3):						
b. Wetland habitat characterization							
<ul> <li>Choose the best descriptor for the landscape setting:</li> <li>Isolated depression</li> <li>Floodplain depression</li> <li>Other:</li> </ul>	sociated with larger wetland complex						
<ul> <li>Check all wetland types that best apply to this pool:</li> <li>Forested swamp</li> <li>Wet meadow</li> <li>Shrub swamp</li> <li>Lake or pond cove</li> <li>Peatland (fen or bog)</li> <li>Abandoned beaver flowage</li> </ul>	☐ Slow stream ☐ Dug pond or ☐ Floodplain borrow pit age ☐ Mostly unvegetated pool ☐ Roadside ditch ☐ ATV or skidder rut ☐ Other:						
c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)						
i. Pool Origin: 🔍 Natural O Natural-Modified O L	Innatural OUnknown						
If modified, unnatural or unknown, describe any mo	dern or historic human impacts to the pool ( <b>required</b> ):						
ii. Pool Hydrology							
Select the pool's estimated bydroperiod AND provid	la rationala in hav (required):						
O Permanent O Permanent (drying partially in all years ar completely in drought years) Explain:	O Ephemeral O Unknown d (drying out completely in most years)						
<ul> <li>Maximum depth at survey: O 0-12" (0-1 ft.) O 12</li> <li>Approximate size of pool (at spring highwater): Wide</li> </ul>	2-36" (1-3 ft.)						
Predominate substrate in order of increasing hydro	period:						
O Mineral soil (bare, leaf-litter bottom, or upland mosses present)	Organic matter (peat/muck) shallow or restricted to deepest portion						
O Mineral soil (sphagnum moss present)	old O Organic matter (peat/muck) deep and widesprea						
Pool vegetation indicators in order of increasing hydrogeneity	droperiod (check all that apply):						
🔲 Terrestrial nonvascular spp. (e.g. haircap	Wet site ferns (e.g. royal fern, marsh fern)						
Dry site ferns (e.g. spinulose wood fern,	₩Vet 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,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)						
jewelweed, blue flag iris, swamp candle)	Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)						
■ Faunal indicators (check all that apply):	☐ No vegetation in pool						
Fish Bullfrog or Green Frog tadpoles	Other:						
iii. Inlet/Outlet Flow Permanency							
Type of inlet or outlet (a seasonal or permanent cha	nnel providing water flowing into or out of the pool):						
$\bigcirc$ No inlet or outlet $\bigcirc$ Permanent inlet or outle	et (channel with well-defined banks and permanent flow)						
Intermittent inlet O Other or Unknown (exp or outlet	lain):						





# 6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: \_\_\_\_4/22\_/2020 : 2020

#### b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? O Yes O 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.

	Egg Masses (or adult Fairy Shrimp)										Tadpoles/Larvae <sup>4</sup>				
SPECIES	Visit #1	Visit #2	Visit #3	Conf	idence	_evel <sup>1</sup>	Egg Mass Maturity <sup>2</sup>			Observed			Confidence Level <sup>1</sup>		
Wood Frog															
Spotted Salamander		3		3	3		M	M							
Blue-spotted Salamander															
Fairy Shrimp <sup>3</sup>															

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 Veri	ication*	CL **		Method	of Veri	fication*	CL**			
		Р	Н	S	ΟĽ	SPECIES	Р	Н	S	<u> </u>			
	Blanding's Turtle					Wood Turtle							
	Spotted Turtle					Ribbon Snake							
	Ringed Boghaunter					Other:							
	*Method of verificat **CL - Confidence I	tion: P = level in	= Photo species	graphe s deterr	d, H = Ha nination:	andled, S = Seen 1= <60%, 2= 60-95%, 3= >95%							
d. (	d. Optional observer recommendation:												
Se	Pool associated will 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; <u>larger projects must be mailed as hard copies</u> .													
For M	DIFW use only Re	eviewed	by MDII	W Dat	e:	Initials:							
This pool is: Significant Potentially Significant but lacking critical data Odoes not meet biological criteria.													
Comm	ients:												
DEPL	V0897-82008 04/1	8/2017					Print F	orm	<u></u>	Page 3 of 3			




INSTRUCTIONS:		
<ul> <li>Complete all 3 pages of for</li> <li><u>Clear photographs</u> of a) the egg mass) are <u>required</u> for</li> </ul>	m thoroughly. Most fields are <u>requir</u> e pool AND b) the indicators (one exa all observers.	ed for pool registration. Ample of each species
Observer's Pool ID://XG -\	12-5 MDIFW Pool ID:	
1. PRIMARY OBSERVER INFORMA a. Observer name: <u>Sarah</u> b. Contact and credentials previou	NTION  Isly provided? O No (submit Addendum 1)   €	) Yes
2. PROJECT CONTACT INFORMAT	<b>FION</b>	
a. Contact name: O same as obs	erver O other	
b. Contact and credentials previou	sly provided? O No (submit Addendum 1)	) Yes
c. Project Name:		-
3. LANDOWNER CONTACT INFOR	MATION	
a. Are you the landowner? OYes	ONo If no, was landowner permission obtain	ed for survey? OYes ONo
b. Landowner's contact information	required)	
Name:	Phone:	
Street Address:	City:	State: Zip:
c. 🔲 Large Projects: check if sepa	rate project landowner data file submitted	
4. VERNAL POOL LOCATION INFO	RMATION	
a. Location Township:	ty lownship	
Brief site directions to the pool (t	ising mapped landmarks):	
b. Mapping Requirements		
i. USGS topographic map OR a	erial photograph with pool clearly marked.	
ii. GPS location of vernal pool	(use Datum NAD83 / WGS84)	
ongitude/Fasting	Latitude/Northing:	
Coordinate system:		
Check one: O GIS shapefile - send to Jase	n.Czapiga@maine.gov; observer has reviewed shap	e accuracy (Best)
O The pool perin - Include map	neter is delineated by multiple GPS points. (Exc or spreadsheet with coordinates.	cellent)
O The above GF	יאס point is at the center of the pool. (Good)	
O The center of degree	the pool is approximately $\_\_\mO$ ft O in t as from the above GPS point. (Acceptable)	the compass direction of

MAINE
S And

. Habitat survey date ( <u>only if different</u> from indicato	or survey dates on page 3):
. Wetland habitat characterization	
Choose the best descriptor for the landscape setting: O Isolated depression O Floodplain depression O Cher:	ssociated with larger wetland complex
<ul> <li>Check all wetland types that best apply to this pool:</li> <li>Forested swamp</li> <li>Wet meadow</li> <li>Shrub swamp</li> <li>Lake or pond cove</li> <li>Peatland (fen or bog)</li> <li>Abandoned beaver flow</li> <li>Emergent marsh</li> <li>Active beaver flowage</li> <li>Vernal pool status under the Natural Resources P</li> <li>i. Pool Origin: QNatural O Natural-Modified O U</li> <li>If modified, unnatural or unknown, describe any modified</li> </ul>	□ Slow stream       □ Dug pond or borrow pit         □ Floodplain       borrow pit         /age       □ Mostly unvegetated pool       □ Roadside ditch         □ ATV or skidder rut       □ Other:         Protection Act (NRPA)         Unnatural       ○ Unknown         odern or historic human impacts to the pool (required):
<ul> <li>ii. Pool Hydrology</li> <li>■ Select the pool's <u>estimated</u> hydroperiod AND provid O Permanent</li> <li>O Semi-permanent (drying partially in all years an completely in drought years)</li> </ul>	de rationale in box ( <b>required</b> ): Ephemeral Nd (drying out completely in most years)
<ul> <li>lea( li le-</li> <li>Maximum depth at survey: O 0-12" (0-1 ft.) Q1</li> <li>Approximate size of pool (at spring highwater): Wi</li> </ul>	2-36" (1-3 ft.) O 36-60" (3-5 ft.) O >60" (>5 ft.) idth: O m O ft Length: O m O ft
<ul> <li>Predominate substrate in order of increasing hydro</li> <li>Mineral soil (bare, leaf-litter bottom, or upland mosses present)</li> <li>Mineral soil (onbognum mass present)</li> </ul>	Period:  Organic matter (peat/muck) shallow or restricted to deepest portion
O Mineral soil (sphaghum moss present)	O Organic matter (peat/muck) deep and widespread
<ul> <li>Pool vegetation indicators in order of increasing hy         <ul> <li>Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)</li> <li>Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)</li> <li>Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)</li> <li>Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)</li> <li>Sphagnum moss (anchored or suspended)</li> </ul> </li> </ul>	<ul> <li>droperiod (check all that apply):</li> <li>Wet site ferns (e.g. royal fern, marsh fern)</li> <li>Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)</li> <li>Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)</li> <li>Aquatic vascular spp. (e.g. pickerelweed, arrowhead</li> <li>Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)</li> <li>No vegetation in pool</li> </ul>
Faunal indicators (check all that apply):     Eich	
□ Fish □ Bullifrog or Green Frog tadpoles	Other:
iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent cha	annel providing water flowing into or out of the pool):
○ No inlet or outlet ○ Permanent inlet or outlet	et (channel with well-defined banks and permanent flow)
🛇 Intermittent inlet 🛛 🔿 Other or Unknown (exp	olain):

S SEIE
*
115-5
5 Mar 19

# MXG - VP-, 95 Maine State Vernal Pool Assessment Form

#### 6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 4/72/2020

#### b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? O Yes O 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 r	nass matu	irity. Sepa	arate cells are provid	ed for separate surv	ey dates.	
		E	gg Masses	s (or adult Fairy Shrim	p)	Tadpole	s/Larvae <sup>4</sup>
SPECIES	Visit #1	Visit #2	Visit #3	Confidence Level <sup>1</sup>	Egg Mass Maturity <sup>2</sup>	Observed	Confidence

	#1	#2	#3	Com	laence	Level	⊑gg w	Idss IVia	aunty	Observed			l	Level	
Wood Frog															
Spotted Salamander	4	19		l	1		M	A							
Blue-spotted Salamander									-						•
Fairy Shrimp <sup>3</sup>															

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.

		Method of Verification*		Method of Verification*			C1 **			
	SPECIES	Р	н	S	0L	SPECIES	Р	Н	s	01
	Blanding's Turtle					Wood Turtle				
	Spotted Turtle					Ribbon Snake				
	Ringed Boghaunter					Other:				
d. C	*Method of verificat **CL - Confidence I <b>)ptional observe</b>	ion: P = evel in s e <b>r reco</b> l	Photo species mmen	graphe detern dation	d, H = Ha nination: :	ndled, S = Seen 1= <60%, 2= 60-95%, 3= >95%				
e. G	SVP Pot	ential S ool cor	SVP nmen	⊡ No ts and/	n Signifi <b>′or obse</b>	cant VP Indicator Breeding Area				
	Pool associa Pool di	fed	(م) م	i la, by	rge t	Grester with and 415/2020				
Ser NOTE	id completed form	and si sion (to	upport o Jase	ing doc on.Cza	cumenta piga@n	tion to: Maine Dept. of Inland Fisherie Attn: Vernal Pools 650 State Street, Bangor, ME naine.gov) of vernal pool field forms	es and 04401 s and p	Wildlif	e graphs	is only
								neu a	5 11/21/0	<u></u> .
For MD	IFW use only Re	viewed b	y MDIF	W Date	:	Initials:				
This po	ol is: 🔲 Significant		otentia ut lacki	Illy Sign	ificant I data	■ Not Significant due to: O does not meet bi O does not meet M	ological DEP ver	criteria. nal poo	l criteria.	
Comme	ents:									





INSTRUCTIONS:		
<ul> <li>Complete all 3 pages of form thor</li> <li><u>Clear photographs</u> of a) the pool and egg mass) are <u>required</u> for all observe</li> </ul>	roughly. Most fields are <u>required</u> AND b) the indicates (one exam servers.	<u>l</u> for pool registration. Iple of each species
Observer's Pool ID: <u>//xg-vp- 6</u>	MDIFN Floc	
1. PRIMARY OBSERVER INFORMATION a. Observer name: <u>Sara in Dra hov</u> b. Contact and credentials previously provi	/ 2 <u>~_/</u> ded? ONo (submit Å dendum 1) ⊂ N	Yes
2. PROJECT CONTACT INFORMATION a. Contact name: Same as observer O b. Contact and credentials previously provid c. Project Name: <u>Three Corners</u>	other ded? O No (submit Addendum 1) So lar Proyect	Yes
<ul> <li>3. LANDOWNER CONTACT INFORMATION <ul> <li>a. Are you the landowner? OYes ONo</li> <li>b. Landowner's contact information (require Name: <u>ED, Bessey &amp; Son</u>Street Address: <u>779</u> Showhearn</li> <li>c. Large Projects: check if separate proj</li> </ul> </li> <li>4. VERNAL POOL LOCATION INFORMATION <ul> <li>a. Location Township: <u>Uhith for</u>Brief site directions to the pool (using main See a thicked map)</li> </ul> </li> </ul>	If no, was landowner permission obtained :d) Phone: (207) 453 	d for survey? OYes ONo <u>3 - 938</u> State: <u>ME</u> Zip: <u>0494</u> 4
<ul> <li>b. Mapping Requirements</li> <li>i. USGS topographic map OR aerial phot</li> <li>ii. GPS location of vernal pool (use Dat Longitude/Easting:</li></ul>	tograph with pool clearly marked. <b>tum NAD83 / WGS84)</b> Latitude/Northing: a@maine.gov; observer has reviewed shape a delineated by multiple GPS points. (Excel lsheet with coordinates. is at the center of the pool. (Good) is approximately mO ft O in the the above GPS point. (Acceptable)	accuracy (Best) llent) e compass direction of

Maine State Vernal F	Pool Assessment Form
5. VERNAL POOL HABITAT INFORMATION a. Habitat survey date (only if different from indicate	or survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting: O Isolated depression O Floodplain depression	ssociated with larger wetland complex
<ul> <li>Check all wetland types that best apply to this pool:</li> <li>Forested swamp</li> <li>Wet meadow</li> <li>Shrub swamp</li> <li>Lake or pond cove</li> <li>Peatland (fen or bog)</li> <li>Abandoned beaver flow, 3</li> </ul>	□ Slow stream       □ Dug pond or         □ Floodplain       borrow pit         vage       □ Mostly unvegetated pool       □ Roadside ditch         □ ATV or skidder rut       □ Other:
c. Vernal pool status under the Natural Resources	Protection Act (NRPA)
i. Pool Origin: ONatural Natural-Modified O If modified, unnatural or unknown, describe any me	Unnatural OUnknown odern or historic human impacts to the pool ( <b>required</b> ):
Pool Impounded by woods ro	rad
<ul> <li>Select the pool's <u>estimated</u> hydroperiod AND <u>provi</u></li> <li>O Permanent</li> <li>(drying partially in all years a completely in drought years)</li> </ul>	ide rationale in box ( <b>required</b> ): O Ephemeral O Unknown and (drying out completely ) in most years)
<ul> <li>Maximum depth at survey: O 0-12" (0-1 ft.) Q1</li> <li>Approximate size of pool (at spring highwater): W</li> <li>Predominate substrate in order of increasing hydro</li> <li>O Mineral soil (bare, leaf-litter bottom, or upland measure present)</li> </ul>	12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.) /idth: ○ m ○ ft Length: ○ m ○ ft operiod: ○ Organic matter (peat/muck) shallow or
Mineral soil (sphagnum moss present)	O Organic matter (peat/muck) deep and widespread
Pool vegetation indicators in order of increasing hyperbolic structures in order of increasing hyperbolic structures.	vdroperiod (check all that apply):
Terrestrial nonvascular spp. (e.g. haircap	Wet site ferns (e.g. roval fern, marsh fern)
moss, lycopodium spp.)  Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
<ul> <li>Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)</li> </ul>	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
<ul> <li>Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)</li> <li>Sphagnum moss (anchored or suspended)</li> </ul>	<ul> <li>Aquatic vascular spp. (e.g. pickerelweed, arrownead)</li> <li>Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)</li> </ul>
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 ch	annel providing water flowing into or out of the pool):
○ No inlet or outlet	let (channel with well-defined banks and permanent flow)
Intermittent inlet O Other or Unknown (ex or outlet	plain):

6



# NXG - VP-6 **Maine State Vernal Pool Assessment Form**



# 6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: <u>4/28/2020</u>; 5/13/2020

#### b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? O Yes XO No
- Was the entire pool surveyed for egg masses? QYes ONo; 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.

		Egg Masses (or adult Fairy Shrimp)											Tadpoles/Larvae <sup>4</sup>				
SPECIES	Visit #1	Visit #2	Visit #3	Confi	Confidence Level <sup>1</sup> Egg Mass Maturity <sup>2</sup>			Ob	serv	ed	Confidence Level <sup>1</sup>		nce				
Wood Frog	32	1			2		M										
Spotted Salamander	Ø	6			2												
Blue-spotted Salamander	/																
Fairy Shrimp <sup>3</sup>																	

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.

		Method	of Veri	fication*	CL **		Method	fication*	CI **	
	SPECIES	Р	Н	S		SPECIES	Р	н	S	
	Blanding's Turtle					Wood Turtle				
	Spotted Turtle					Ribbon Snake				
	Ringed Boghaunter					Other:				
	*Method of verificat	tion: P =	Photo	graphe dotorn	d, H = Ha	andled, S = Seen				
	CL - Confidence	ievei in :	specie	suelen	ninauon.	1-<00%, 2-00-95%, 3- 295%				
d. C	Optional observe	er reco	mmer	dation	1:					
	SVP Pot	ential S	SVP	🗆 No	n Signifi	icant VP 🛛 Indicator Breeding Are	а			
	Seneral vernal p	nol cor	nmen	ts and	or obse	ervations of other wildlife:				
Г	laces Das		that	k l	An DAV N	ded he woods and		0.000 <del>00</del>		
	10000 000	' /	) * <b> </b> &\	13 1	ripan	, , y would read				
	Pool de	ied i	<u></u>	by	_7/	13/2020				
Sar	d completed form	anda	vonad		oumonto	tion to: Maine Dent, of Inland Fisher	ioe and	Mildlif	fo	
Ser	id completed iom	i anu s	uppon	ung uod	Jumenta	Attn: Vernal Pools		v virum	C	
						650 State Street, Bangor, M	E 04401	l		
NOTE	: Digital submis	sion (t	o Jas	on.Cza	piga@r	naine.gov) of vernal pool field forn	is and	photo	graphs	is only
	acceptable for	projec	ts wit	h 3 or f	iewer as	ssessed pools; larger projects mus	t be ma	ailed a	s hard	copies.
For MD			NATOLE			Initiala				
	- Re	i beweive		-vv Date	ə:					
This po	ol is: Significant		Potentia out lacki	ally Sign ing critica	al data	Not Significant due to: O does not meet	biological MDEP ve	mal poc	l criteria.	
Comme	ents:									
	L									
DEATW	/0897-82008 04/1	8/2017					Print F	orm		rage 5 01.





INSTRUCTIONS:
<ul> <li>Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.</li> <li><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.</li> </ul>
Observer's Pool ID: MG_ VPIO2 MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: <u>Micholar</u> Gaber da /Swa h Da hovzel b. Contact and credentials previously provided? O No (submit Addendum 1) OXYes
2. PROJECT CONTACT INFORMATION
a. Contact name:
b. Contact and credentials previously provided? O No (submit Addendum 1)
c. Project Name: Three Corners Solar Projet
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? OYes 🖉 No If no, was landowner permission obtained for survey? 🖉 Yes ONo
b. Landowner's contact information (required)
Name: $ED$ <u>Resserve Son</u> Phone: $(207)453-7388$
Street Address: <u>779 Strowneg an Kol</u> , City: <u>HMcKlo</u> State: <u>Mt</u> Zip: <u>0194</u> 4
c. Large Projects: check if separate project landowner data file submitted
4. VERNAL POOL LOCATION INFORMATION
a Location Township: Marca (lip for
Brief site directions to the pool (using mapped landmarks):
Kehnen Fifteonnile Strenn + Bessey LN, just west of
DEDSAY Ch, Vhity
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: <u>-69, 466677</u> Latitude/Northing: <u>44,622,13</u> 7 Coordinate system: <u>W65 84</u>
Check one: Ø GIS shapefile
S - send to Jason Czapiga@maine.gov; observer has reviewed shape accuracy (Best)
The pool perimeter is delineated by multiple GPS points. (Excellent)
$\sim$ - include map of spreadsheet with cool diffates. $\bigcirc$ The above GPS point is at the center of the pool (Good)
$\Omega$ The center of the pool is approximately $M \Omega$ in the compass direction of
degrees from the above GPS point. (Acceptable)

/ERNAL POOL HABITAT INFORMATION	
a. Habitat survey date ( <u>only if different</u> from indicato	r survey dates on page 3):
Wetland habitat characterization	
Choose the best descriptor for the landscape setting:	sociated with larger wetland complex
OFloodplain depression Other:	
■ Check all wetland types that best apply to this pool:	
💢 Forested swamp 🛛 🗌 Wet meadow	Slow stream
☐ Shrub swamp ☐ Lake or pond cove	Floodplain borrow pit
<ul> <li>Peatland (fen or bog)</li> <li>Abandoned beaver flowa</li> <li>Emergent marsh</li> <li>Active beaver flowage</li> </ul>	age Mostly unvegetated pool Roadside ditch ATV or skidder rut Other:
. Vernal pool status under the Natural Resources P	rotection Act (NRPA)
i. Pool Origin: XNatural ONatural-Modified OL	Jnnatural OUnknown
If modified, unnatural or unknown, describe any mo	dern or historic human impacts to the pool (required):
ii. Pool Hydrology	
Select the pool's <u>estimated</u> hydroperiod AND <u>provid</u>	de rationale in box ( <b>required</b> ):
O Permanent (drving partially in all years ar	O Ephemeral O Unknown od (drving out completely
completely in drought years)	in most years)
Explain:	
Not particularly deep, isolate.	d from ether wellands
■ Maximum depth at survey: Ø 0-12" (0-1 ft.) 012	2-36" (1-3 ft.) O 36-60" (3-5 ft.) O >60" (>5 ft.)
Approximate size of pool (at spring highwater): Wide	dth: <u></u> Om ∅(ft Length: <u>_}</u> Om ∅ ft
<ul> <li>Approximate size of pool (at spring highwater): Wid</li> <li>Predominate substrate in order of increasing hydrogeneity</li> </ul>	dth: $25$ O m $4$ ft Length: $75$ O m $4$ ft period:
<ul> <li>Approximate size of pool (at spring highwater): Wide</li> <li>Predominate substrate in order of increasing hydrog</li> <li>Mineral soil (bare, leaf-litter bottom, or upland</li> </ul>	dth:O m ♀ ft Length:O m ∅ ft period: O Organic matter (peat/muck) shallow or
<ul> <li>Approximate size of pool (at spring highwater): Wide</li> <li>Predominate substrate in order of increasing hydrop</li> <li>O Mineral soil (bare, leaf-litter bottom, or upland mosses present)</li> </ul>	dth: <u>2.5</u> O m
<ul> <li>Approximate size of pool (at spring highwater): Wide</li> <li>Predominate substrate in order of increasing hydrop</li> <li>O Mineral soil (bare, leaf-litter bottom, or upland mosses present)</li> <li>Mineral soil (sphagnum moss present)</li> </ul>	dth: <u></u> O m
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MANE			Mair	ne Sta	ate Ve	rnal P	ool As	ssess	ment	t Form	ı					A CHARLES CONTRACT
6. VE			DR INF			20										
а.	Indicator survey	dates:		$\Pi \mathcal{L} \mathcal{L}$	1/20	20										
b.	Indicator abunda	ance cr	iteria	and po	ool surv	ey effo	rt			) of a c						
	Is pool depress	ion bise	ected I	oy 2 ow	nership	s (strad	dler poo	ol)? O	Yes	Q No				40		
	■ 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.															
	For Masses (or adult Fairy Shrimp) Tadnoles/Lanae <sup>4</sup>											<sup>4</sup>				
	INDICATOR -	Visit		/isit	Visit		idonco I			lace Mat	urity <sup>2</sup>	Oh			Confid	ence
		#1		#2	#3			-evei	Egg iv						Lev	el'
	Wood Frog	25				_										
	Spotted Salamander	ZЯ														
	Blue-spotted	<u> </u>														
	Salamander					-										
	Fairy Shrimp															
	2-Egg mass maturit Hatching	1 = <60% y: F= Fre	%,	0-95%, 3 4 hrs), M	8 = >95%  = Mature (	(round en	nbryos), A	∖= Advai	nced (loc	ose matrix,	, curved	emb	oryos),	H= Ha	atched	or
	3-Fairy shrimp: X = 4-Tadpoles/larvae: 2	present X = prese	ent													
<b>c.</b>	Rarity criteria															
=	Note any rare spe	ecies as	ssocia	ted wit	h vernal	pools.	Observa	ations	should	be acco	mpani	ed l	by pł	notogi	raphs	
		Method	of Veri	fication*	CI **						Meth	nod c	of Veri	ficatior	ו* כ	**
	SPECIES	Р	н	S		SPECIE	S				Р		Н	S		-
	Blanding's Turtle					Wood T	urtle					]				
	Spotted Turtle					Ribbon S	Snake					]				
	Ringed Boghaunter					Other:						]				
	*Method of verifica	tion: P =	Photo	ographe s detern	d, H = Ha	andled, S	S = Seen	05% 3	- >05%							
	CL - Coniidence		specie	Suctern	milauon.	1	), <u>2</u> – 00-	·33 /0, 3	- 2007	,						
d. (	Optional observe	er reco	mmer	ndation	1:		_									
		tential S	SVP	🗌 No	n Signifi	cant VF	, ∏ı	ndicat	or Bree	eding Are	ea					
e. (	General vernal p	ool cor	nmen	ts and	/or obse	ervatior	is of ot	her wi	ildlife:	<u></u>						
	for from	the Point	alg.	must	t pj	fs c	oncen	cate	Jiv	i on	re 1	°ec	ha	1		
ļ	07 191	N	pool	ł	Drie	<u>d up</u>	k	<u>y</u>	7/1	5/20	40					
Sei	nd completed forn	n and s	uppor	ting doo	cumenta	tion to:	Maine Attn: V 650 St	Dept. /ernal l ate Sti	of Inlar Pools reet, Ba	nd Fishe angor, N	ries ar 1E 044	nd V 01	Vildlif	fe		
NOTE	E: Digital submis acceptable for	sion (te project	o Jas ts wit	on.Cza h 3 or f	ipiga@n fewer as	naine.g sessec	ov) of v I pools	vernal ; <u>large</u>	pool f er proje	ield forr ects mus	ms an st be r	d pl nail	hoto led a	grapł <u>s har</u>	ns is d co	only <u>pies</u> .
For MI	DIFW use only Re	eviewed b	y MDIF	W Date	ə:		nitials:									
This po	ool is: Significant	F F	Potentia out lack	ally Sign	ificant al data	Not S	ignifican	t due to	: Odoe	s not meet s not meet	t biologi t MDFP	cal c vern	riteria.	ol criter	ia.	
Comm	ents:															

Print Form

Page 3 of 3





WINNER OF MAN
INSTRUCTIONS:
<ul> <li>Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.</li> <li><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.</li> </ul>
Observer's Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: <u>Micholas</u> Gabuzda/Sunh Duhoval b. Contact and credentials previously provided? O No (submit Addendum 1) QYes
2. PROJECT CONTACT INFORMATION
a. Contact name: 🔯 same as observer 🔘 other
b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes
c. Project Name: Three Corners Slar Projet
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? OYes 🕉 No If no, was landowner permission obtained for survey? 📎 Yes ONo
b. Landowner's contact information (required)
Name: <u>ED Besseg &amp; Sin</u> Phone: <u>(207)</u> 453-9388
Street Address: <u>779 Skowhegon Rd.</u> City: <u>Hinck len</u> State: <u>ME</u> Zip: <u>D1994</u>
c. 🔲 Large Projects: check if separate project landowner data file submitted
4. VERNAL POOL LOCATION INFORMATION
a. Location Township:
Brief site directions to the pool (using mapped landmarks):
Reparent Elemente de la la
Just west of Berry Lin Longity alinks
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. 46243 Latitude/Northing:
Coordinate system: 4165 84
Check one: 🖉 GIS shapefile
- send to Jason. Czapiga@maine.gov; observer has reviewed shape accuracy (Best)
<ul> <li>Include map or spreadsheet with coordinates.</li> </ul>
$\bigcirc$ The above GPS point is at the center of the pool. (Good)
I ne center of the pool is approximately mO it O in the compass direction of degrees from the above GPS point. (Acceptable)

Maine State Vernal P	ool Assessment Form
5. VERNAL POOL HABITAT INFORMATION	in .
a. Habitat survey date ( <u>only if different</u> from indicato	r survey dates on page 3):
b. Wetland habitat characterization	
<ul> <li>Choose the best descriptor for the landscape setting:</li> <li>Solated depression</li> <li>Pool as</li> <li>Ploodplain depression</li> <li>Other:</li> </ul>	sociated with larger wetland complex
<ul> <li>Check all wetland types that best apply to this pool:</li> <li>Forested swamp</li> <li>Wet meadow</li> <li>Shrub swamp</li> <li>Lake or pond cove</li> <li>Peatland (fen or bog)</li> <li>Abandoned beaver flowage</li> </ul>	□ Slow stream       □ Dug pond or         □ Floodplain       borrow pit         age       □ Mostly unvegetated pool       □ Roadside ditch         □ ATV or skidder rut       □ Other:
c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)
i. Pool Origin: 🕅 Natural O Natural-Modified O L	Jnnatural OUnknown
If modified, unnatural or unknown, describe any mo	dern or historic human impacts to the pool (required):
ii. Pool Hydrology	
Select the pool's <u>estimated</u> hydroperiod AND <u>provid</u>	le rationale in box ( <b>required</b> ):
O Permanent Semi-permanent (drying partially in all years ar completely in drought years)	O Ephemeral O Unknown id (drying out completely in most years)
Explain:	
Small in size + Jeelh,	Ischled from wellow by
■ Maximum depth at survey: 😿0-12" (0-1 ft.) O12	2-36" (1-3 ft.) ◎ 36-60" (3-5 ft.) ◎ >60" (>5 ft.)
Approximate size of pool (at spring highwater): Wie	dth: <u>ک0</u> Om 👷 ft Length: <u>∑0</u> Om 🐼 ft
Predominate substrate in order of increasing hydro	period:
O Mineral soil (bare, leaf-litter bottom, or upland	O Organic matter (peat/muck) shallow or
Mineral soil (sphagnum moss present)	restricted to deepest portion O Organic matter (peat/muck) deep and widespread
Pool vegetation indicators in order of increasing hydrogeneous	droperiod (check all that apply):
Terrestrial nonvascular spp. (e.g. haircap	☐ Wet site ferns (e.g. royal fern, marsh fern)
<ul> <li>moss, lycopodium spp.)</li> <li>Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)</li> </ul>	Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
<ul> <li>Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)</li> </ul>	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
🗌 Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) 🕅 Sphagnum moss (anchored or suspended)	Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
= Found indicators (shack all that apply):	☐ No vegetation in pool
Fish Bullfrog or Green Frog tadpoles	□ Other:
iii. Inlet/Outlet Flow Permanency	
Type of inlet or outlet (a seasonal or permanent cha	nnel providing water flowing into or out of the pool):
ℜNo inlet or outlet O Permanent inlet or outlet	et (channel with well-defined banks and permanent flow)
O Intermittent inlet O Other or Unknown (exp or outlet	lain):

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100 C
Pinnis"

6. VERNAL POOL INDICATOR INFORMATION

4/2 \$ 12020.5/12/2020 a. Indicator survey dates:

#### b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? O Yes X No
- Was the entire pool surveyed for egg masses? YYYes ONo; 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.

	Egg Masses (or adult Fairy Shrimp)											Tadpoles/Larvae <sup>4</sup>				
SPECIES	Visit #1	Visit #2	Visit #3	Confi	dence	Level <sup>1</sup>	Egg N	lass Ma	aturity <sup>2</sup>	Oł	oserv	′ed	Confidence Level <sup>1</sup>			
Wood Frog																
Spotted Salamander	8	9														
Blue-spotted Salamander																
Fairy Shrimp <sup>3</sup>																

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. <u>Observations should be accompanied by photographs</u>.

	0050/50		thod of Verification*		CI **			Method of Verification*					
SPEC	CIES	Р	Н	S	OL .	SPECIES	Р	Н	S				
Bland	Blanding's Turtle					Wood Turtle							
Spotte	ed Turtle					Ribbon Snake							
Ringe	d Boghaunter					Other:							
*Meth **CL -	*Method of verification: P = Photographed, H = Handled, S = Seen **CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%												
d. Option	nal observe	r reco	mmen	datior	1: 								
	SVP Devential SVP 🛱 Non Significant VP D Indicator Breeding Area												
e. Gener	e. General vernal pool comments and/or observations of other wildlife:												
R	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; <u>larger projects must be mailed as hard copies</u> .													
For MDIFW u	se only Re	viewed b	y MDIF	W Date	e:	Initials:							
This pool is:	This pool is: Significant Potentially Significant but lacking critical data												
Comments:													
DEPLW0897-	82008 04/18	3/2017				Π	Print Fo	orm	F	Page 3 of 3			





- ATE OF WWW
INSTRUCTIONS:
<ul> <li>Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.</li> <li><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.</li> </ul>
Observer's Pool ID: MXG_VP104 MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: <u>Michilas Gabuzla</u> /Swah Dahoval b. Contact and credentials previously provided? ONo (submit Addendum 1) QYes
2. PROJECT CONTACT INFORMATION
a. Contact name: 🖉 same as observer 🔘 other
b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes
c. Project Name: Three Corners, Solar Projet
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? OYes 🐹No 🛛 If no, was landowner permission obtained for survey? 👌 Yes ONo
b. Landowner's contact information (required)
Name: <u>ED Brssch &amp; San</u> Phone: (207) 453-9388
Street Address: 779 Stowhear Rd. City: Hinckley State: ME Zip: 04944
c. 🗌 Large Projects: check if separate project landowner data file submitted
a Location Township:
Brief site directions to the pool (using manned landmarks):
Reference and the pool (doing mapped landmarks).
DEtween Dessey Ln and Jelasticook 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: <u>-69. 467375</u> Latitude/Northing: <u>44. 427//3</u> Coordinate system: <u>W65. 84</u>
Check one: O 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)
O The center of the pool is approximately mO ft O in the compass direction of degrees from the above GPS point. (Acceptable)

the we want the s	Stractor Stra
Maine State Vernal Pe	ool Assessment Form
5. VERNAL POOL HABITAT INFORMATION a. Habitat survey date ( <u>only if different</u> from indicator b. Wetland habitat characterization	r survey dates on page 3):
O Isolated depression O Pool as O Floodplain depression O ther:	sociated with larger wetland complex
<ul> <li>Check all wetland types that best apply to this pool:</li> <li>Forested swamp</li> <li>Wet meadow</li> <li>Shrub swamp</li> <li>Lake or pond cove</li> <li>Peatland (fen or bog)</li> <li>Abandoned beaver flowage</li> </ul>	□ Slow stream       □ Dug pond or         □ Floodplain       borrow pit         age       □ Mostly unvegetated pool       □ Roadside ditch         ↓       ATV or skidder rut       □ Other:
c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)
If modified, unnatural or unknown, describe any model If modified, unnatural or unknown, describe any model Definitely natural, but old log	Innatural OUnknown dern or historic human impacts to the pool (required): Jmy read runs Jhrafh 1.J.
<ul> <li>Select the pool's <u>estimated</u> hydroperiod AND <u>provid</u></li> <li>O Permanent</li> <li>C Permanent</li> <li>C C Permanent</li> <li>C P</li></ul>	l <u>e rationale</u> in box ( <b>required</b> ): O Ephemeral O Unknown nd (drying out completely in most years)
■ Maximum depth at survey: O 0-12" (0-1 ft.) X12 ■ Approximate size of pool (at spring highwater): Wid	2-36" (1-3 ft.) O 36-60" (3-5 ft.) O >60" (>5 ft.) dth: ∫(∫Om og ftLength: ∫(∫Om og ft
<ul> <li>Predominate substrate in order of increasing hydrop</li> <li>O Mineral soil (bare, leaf-litter bottom, or upland mosses present)</li> <li>O Mineral soil (sphagnum moss present)</li> </ul>	oeriod: Organic matter (peat/muck) shallow or restricted to deepest portion O Organic matter (peat/muck) deep and widespread
<ul> <li>Pool vegetation indicators in order of increasing hyde</li> <li>Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)</li> <li>Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)</li> <li>Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)</li> <li>Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)</li> <li>Sphagnum moss (anchored or suspended)</li> </ul>	<ul> <li>droperiod (check all that apply):</li> <li>Wet site ferns (e.g. royal fern, marsh fern)</li> <li>Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)</li> <li>Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)</li> <li>Aquatic vascular spp. (e.g. pickerelweed, arrowhead)</li> <li>Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)</li> </ul>
<ul> <li>Faunal indicators (check all that apply):</li> <li>Fish  Bullfrog or Green Frog tadpoles</li> </ul>	Other:
<ul> <li>iii. Inlet/Outlet Flow Permanency</li> <li>Type of inlet or outlet (a seasonal or permanent cha</li> <li>No inlet or outlet</li> <li>Permanent inlet or outlet</li> <li>Intermittent inlet</li> <li>O Other or Unknown (exp or outlet</li> </ul>	nnel providing water flowing into or out of the pool): et (channel with well-defined banks and permanent flow) lain):





a. Indicator survey dates: 4/28/2020; 5/12/2026

#### b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? O Yes 🕱 No
- Was the entire pool surveyed for egg masses? Yes ONo; 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.

	Egg Masses (or adult Fairy Shrimp)											Tadpoles/Larvae <sup>4</sup>				
SPECIES	Visit #1	Visit #2	Visit #3	Confidence Level <sup>1</sup>			Egg Mass Maturity <sup>2</sup>			Observed			Confidence Level <sup>1</sup>			
Wood Frog	4	1														
Spotted Salamander	16	17						:				-				
Blue-spotted Salamander																
Fairy Shrimp <sup>3</sup>																

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. <u>Observations should be accompanied by photographs</u>.

		Method of Verification*		C1 **		Method	CI **						
	SPECIES	Р	H	S	UL	SPECIES	Р	н	S				
	Blanding's Turtle					Wood Turtle							
	Spotted Turtle					Ribbon Snake							
	Ringed Boghaunter					Other:							
d. (	<ul> <li>*Method of verification: P = Photographed, H = Handled, S = Seen</li> <li>**CL - Confidence level in species determination: 1= &lt;60%, 2= 60-95%, 3= &gt;95%</li> <li><b>d. Optional observer recommendation:</b></li> <li>SVP  Potential SVP  Non Significant VP  Indicator Breeding Area</li> </ul>												
e. (	e. General vernal pool comments and/or observations of other wildlife: Pool dried up by 7/15/2020												
Ser NOTE	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; <u>larger projects must be mailed as hard copies</u> .												
For ME	NFW use only Re	viewed I	y MDIF	W Date	ə:	Initials:							
This po	ol is: 🔲 Significant		Potentia out lacki	ally Sign	ificant al data	Not Significant due to: O does not meet b O does not meet N	iological IDEP vei	criteria. rnal poc	ol criteria.				
Comme	ents:												
	0897-82008 04/1	8/2017					Durian A IT a			Page 3 of 3			





INSTRUCTIONS:			
<ul> <li>Complete all 3 pages of form thoroughly</li> <li><u>Clear photographs</u> of a) the pool AND b) egg mass) are <u>required</u> for all observers.</li> </ul>	. Most fields are <u>rec</u> the indicators (one	<u>quired</u> for pool re example of eact	egistration. ı species
Observer's Pool ID: MG VP105	MDIFW Pool ID:		
1. PRIMARY OBSERVER INFORMATION a. Observer name: Michalas Gabuzd b. Contact and credentials previously provided? Of	ig <i>Sarch Dahov</i> No (submit Addendum 1)	QYES	
2. PROJECT CONTACT INFORMATION a. Contact name: Q same as observer Q other b. Contact and credentials previously provided? O N c. Project Name:	lo (submit Addendum 1) Solar Project	O Yes	
<ul> <li><b>3. LANDOWNER CONTACT INFORMATION</b> <ul> <li>a. Are you the landowner? OYes No</li> <li>b. Landowner's contact information (required)</li> <li>Name:</li> </ul> </li> </ul>	s landowner permission ob Phone:	otained for survey?	Yes ONo
Street Address:	City:	State:	Zip:
4. VERNAL POOL LOCATION INFORMATION a. Location Township: Brief site directions to the pool (using mapped land East of Sebusticoch River, ju	ton dmarks): st nuchwest	of Bessey Lr	k
b. Mapping Requirements			
i. USGS topographic map OR aerial photograph v	vith pool clearly marked.		
ii. GPS location of vernal pool (use Datum NAD Longitude/Easting: Latitu Coordinate system:	983 / WGS84) de/Northing:		
Check one: O GIS shapefile - send to Jason.Czapiga@maine The pool perimeter is delineated - Include map or spreadsheet with O The above GPS point is at the o O The center of the pool is approx degrees from the above	gov; observer has reviewed s d by multiple GPS points. coordinates. center of the pool. (Good) imately mO ft C GPS point. (Acceptable)	shape accuracy (Best) (Excellent) ) in the compass dire	ection of

MAINE	
S. S	

S'			
VERNAL POOL HABITAT	INFORMATION		
a. Habitat survey date (on	<u>ly if different</u> from indicator s	urvey dates on page 3):	
b. Wetland habitat charact	terization		
<ul> <li>Choose the best descripte</li> <li>O Isolated depression</li> <li>O Floodplain depression</li> </ul>	or for the landscape setting: Pool asso Other:	ciated with larger wetland compl	ex
■ Check all wetland types the	hat best apply to this pool:		
X Forested swamp X Shrub swamp □ Peatland (fen or bog) X Emergent marsh	<ul> <li>Wet meadow</li> <li>Lake or pond cove</li> <li>Abandoned beaver flowage</li> <li>Active beaver flowage</li> </ul>	<ul> <li>Slow stream</li> <li>Floodplain</li> <li>Mostly unvegetated pool</li> <li>ATV or skidder rut</li> </ul>	<ul> <li>Dug pond or borrow pit</li> <li>Roadside ditch</li> <li>Other:</li> </ul>
c. Vernal pool status unde	er the Natural Resources Prot	tection Act (NRPA)	
i. Pool Origin: 🏹 Natur	al ONatural-Modified OUnr	natural OUnknown	
If modified, unnatural o	r unknown, describe any mode	rn or historic human impacts to t	he pool ( <b>required</b> ):
	annan - 200 - 20	·	
ii. Pool Hydrology			
Select the pool's estimate	ated hydroperiod AND provide	rationale in box ( <b>required</b> ):	
$\bigcirc$ Permanent $\bigcirc$ S	Semi-permanent	O Enhemeral	OUnknown
(i	drying partially in all years and	(drying out completely	Oliniowi
, (	completely in drought years)	in most years)	
Explain:			
VAN Welland	like, behaves muce	like a wetland, very	Shallow
<ul> <li>Approximate size of po</li> <li>Predominate substrate</li> <li>Mineral soil (bare, lo mosses present)</li> <li>O Mineral soil (sphage</li> </ul>	in order of increasing hydrope eaf-litter bottom, or upland	riod: O Organic matter (peat/muck) restricted to deepest portion O Organic matter (peat/muck)	shallow or n deep and widespread
Pool vegetation indicat	ors in order of increasing hydro	operiod (check all that apply):	
🗌 Terrestrial nonvasc	ular spp. (e.g. haircap	Wet site ferns (e.g. royal fern,	marsh fern)
moss, lycopodium s Dry site ferns (e.g. lady fern, bracken	spp.) spinulose wood fern,	Wet site shrubs (e.g. highbush winterberry, mountain holly)	n blueberry, maleberry,
Moist site ferns (e. fern, interrupted fer	g. sensitive fern, cinnamon	Vet site graminoids (e.g. blue sedge, cattail, bulrushes)	-joint grass, tussock
Moist site vasculars	s (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pic	kerelweed, arrowhead)
jewelweed, blue fla	g iris, swamp candle) [ inchored or suspended)	Floating or submerged aquation water shield, pond weed, blad	cs (e.g. water lily, lderwort)
■ Faunal indicators (obco	k all that apply):	No vegetation in pool	
	g or Green Frog tadpoles	Other:	
iii. Inlet/Outlet Flow Perm	nanency	al providing water flowing into a	out of the neelly
o = 0	Seasonal of permanent chann     O Democratical democratica	ter providing water nowing into or	out of the pool):
		channel with well-defined banks	and permanent flow)
or outlet	Other or Unknown (explaining)	n):	



## 6. VERNAL POOL INDICATOR INFORMATION 4/28/2020

a. Indicator survey dates:

#### b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? O Yes
  Was the entire pool surveyed for egg masses? Yes O 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.

	Egg Masses (or adult Fairy Shrimp)										Tadpoles/La				
SPECIES	Visit #1	Visit #2	Visit #3	Confidenc	Confidence Level <sup>1</sup> Egg Mass Maturity <sup>2</sup>		Ok	oserv	'ed	Coi	nfide _eve	e <sup>4</sup> Jence 'el <sup>1</sup>			
Wood Frog															
Spotted Salamander	38														
Blue-spotted Salamander															
Fairy Shrimp <sup>3</sup>	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.

	Method of Verification*		CI **		Method of Verification*			CI **	
SPECIES	Р	н	S		SPECIES	Р	н	S	
Blanding's Turtle					Wood Turtle				
Spotted Turtle					Ribbon Snake				
Ringed Boghaunter					Other:				
*Method of verificat	ion: P =	Photo	graphe	d, H = Ha	andled, $S = Seen$		-		······
d. Optional observe	er reco ential S pol cor	mmen SVP nmen	dation	n Signifi <b>(or obse</b>	icant VP Indicator Breeding Area	a 			
Send completed form NOTE: Digital submis acceptable for	n and s sion (t projec	upport o Jaso ts with	ing doo on.Cza n 3 or f	cumenta piga@r ewer as	ation to: Maine Dept. of Inland Fisher Attn: Vernal Pools 650 State Street, Bangor, Mi maine.gov) of vernal pool field form ssessed pools; <u>larger projects mus</u>	es and E 04401 s and   t be ma	Wildli ohoto iiled a	fe graphs s hard	is only copies.
For MDIFW use only Re	viewed I	oy MDIF	W Date	ə:	Initials:				
This pool is: Significant		Potentia out lacki	nlly Sign	ificant I data	Not Significant due to: O does not meet	oiological MDEP ve	criteria mal poo	ol criteria.	
Comments:									
DEPLW0897-82008 04/1	8/2017				[	Print Fo	orm		Page 3 of





INSTRUCTIONS:
Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.
Clear photographs of a) the pool AND b) the indicators (one example of each species equived for all observers.
Observer's Pool ID:         //X6 - 1/ P - 107         MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION
a. Observer name: $\sum_{erc} h \frac{1/e hor 2c}{1/e hor 2c}   1/Vic K GAbu Zd K$
2. PROJECT CONTACT INFORMATION
a. Contact name: 🖉 same as observer 🔿 other
b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes
c. Project Name: Three Corners Long
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? OYes ONo If no, was landowner permission obtained for survey? OYes ONo
b. Landowner's contact information (required)
Name: <u>ED Bessey 2 Son</u> Phone: (207) 453-9388
Street Address: 779 Skoubegan Rd. City: Hunching 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 altached map
V V
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: <u>-69.456038</u> Latitude/Northing: <u>44.6/4979</u>
Coordinate system: UKS 84
Check one: GIS shapefile
<ul> <li>Send to Jason.Czapiga@maine.gov; observer has reviewed snape accuracy (best)</li> <li>The pool perimeter is delineated by multiple GPS points. (Excellent)</li> </ul>
- Include map or spreadsheet with coordinates.
O The above GPS point is at the center of the pool. (Good)
O The center of the pool is approximately mO ft O in the compass direction of degrees from the above GPS point. (Acceptable)

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in.			*** (E CE 18)*
VERNAL POOL HABITAT IN	FORMATION		
a. Habitat survey date (only	<u>if different</u> from indicator	survey dates on page 3):	
b. Wetland habitat characte	erization		
<ul> <li>Choose the best descripton</li> <li>O Isolated depression</li> <li>O Floodplain depression</li> </ul>	r for the landscape setting: O∕Pool ass ◯ Other:	sociated with larger wetland comp	lex
Check all wetland types the	at best apply to this pool:		
Forested swamp	☐ Wet meadow	Slow stream	Dug pond or
🔀 Shrub swamp	Lake or pond cove	Floodplain	borrow pit
Peatland (fen or bog) Emergent marsh	Abandoned beaver flowa Active beaver flowage	ige ∠⊇ Mostly unvegetated pool	Roadside ditch     Other:
c. Vernal pool status unde	r the Natural Resources Pr	rotection Act (NRPA)	
i. Pool Origin: QNatura	I ONatural-Modified OU	nnatural OUnknown	
If modified, unnatural or	unknown, describe any mod	dern or historic human impacts to	the pool ( <b>required</b> ):
	08-1906	ten internationalistic and a second second	
II. Pool Hydrology	te di baadaan ania di AND amaa id		
• Select the pools estimate $O$ Bermanant $O$ Select the pool s estimate $O$ Select the pool	<u>lea</u> nyaroperioa AND <u>provia</u> mi normanant	<u>e rationale</u> in box ( <b>required</b> ):	
d Permanent (d	rving partially in all years and	d (drving out completely	Unknown
C	ompletely in drought years)	in most years)	
Explain:	· · · · · · ·		
Leal lift	tr		
Maximum depth at surv	ey: O 0-12" (0-1 ft.) O 12	-36" (1-3 ft.) O 36-60" (3-5 ft.)	O >60" (>5 ft.)
Approximate size of poor	ol (at spring highwater): Wid	th: Om Oft Length:	Om Oft
■ Predominate substrate i	n order of increasing bydron	period:	
Mineral soil (bare le	af litter bottom, or upland	Morganic matter (neat/muck)	shallow or
mosses present)		restricted to deepest portio	n
O Mineral soil (sphagn	um moss present)	O Organic matter (peat/muck)	deep and widespread
Pool vegetation indicato	rs in order of increasing hyd	roperiod (check all that apply):	
Terrestrial nonvascu	lar spp. (e.g. haircap	Wet site ferns (e.g. royal fern	, marsh fern)
moss, lycopodium sp Dry site ferns (e.g. s lady fern, bracken fr	op.) spinulose wood fern, arn)	Wet site shrubs (e.g. highbus winterberry, mountain holly)	h blueberry, maleberry,
☐ Moist site ferns (e.g	. sensitive fern, cinnamon	Wet site graminoids (e.g. blue sedge, cattail, bulrushes)	e-joint grass, tussock
iem, interrupted tem	i, ivew fork iem) (e.g. skunk cabbage	Aquatic vascular spp. (e.g. pi	ckerelweed, arrowhead
jewelweed, blue flag	iris, swamp candle)	Floating or submerged aquat	ics (e.g. water lily,
Sphagnum moss (ar	nchored or suspended)	water shield, pond weed, blac	dderwort)
Faunal indicators (check	all that apply):		
Fish Bullfrog	or Green Frog tadpoles	Other:	
iii. Inlet/Outlet Flow Perma	anency		
Type of inlet or outlet (a	seasonal or permanent char	nnel providing water flowing into o	r out of the pool):
○ No inlet or outlet	O Permanent inlet or outle	t (channel with well-defined banks	and permanent flow)
X Intermittent inlat	O Other or Linkneyin (aval		. ,





#### 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)? O Yes X No
- Was the entire pool surveyed for egg masses? Yes ONo; 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 <sup>4</sup>				
	Visit #1	Visit #2	Visit #3	Confi	dence L	evel <sup>1</sup>	Egg M	lass Ma	aturity <sup>2</sup>	Ok	serv	ed	Cor L	nfide .evel	nce	
Wood Frog	22			M												
Spotted Salamander	31			N												
Blue-spotted Salamander																
Fairy Shrimp <sup>3</sup>																

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. <u>Observations should be accompanied by photographs</u>.

		Method	of Veri	fication*	<u> </u>		Method	of Veri	fication*	CI **
	SPECIES		н	s	UL.	SPECIES	Р	Н	S	
	Blanding's Turtle					Wood Turtle				
	Spotted Turtle					Ribbon Snake				
	Ringed Boghaunter					Other:				
	*Method of verificat **CL - Confidence	tion: P = level in :	Photospecies	graphe s deterr	d, H = Ha nination:	andled, S = Seen 1= <60%, 2= 60-95%, 3= >95%				
d. ( e. (	Optional observe ∭SVP □ Pot General vernal po	er reco ential S col cor	mmen SVP mmen	Idation No ts and	n: In Signifi /or obse	icant VP Indicator Breeding Area	l			
	Pried U	je b	5	7-/14	5/202	20				
Sei	nd completed form	n and s	upport	ing do	cumenta	ation to: Maine Dept. of Inland Fisheri Attn: Vernal Pools 650 State Street, Bangor, ME	es and 04401	Wildlif	e	is only
NUTE	acceptable for	sion (t projec	o Jas ts witl	h 3 or 1	fewer as	ssessed pools; <u>larger projects must</u>	be ma	iled a	s hard	<u>copies</u> .
For M	DIFW use only Re	viewed I	oy MDIF	W Date	e:	Initials:			-	
This po	ool is: 🔲 Significant		Potentia but lacki	ally Sigr	nificant al data	Not Significant due to: O does not meet b O does not meet M	iological 1DEP ve	criteria. mal poo	l criteria.	
Comm	ents:									
DEPLV	V0897-82008 04/1	8/2017					Print Fo	orm		Page 3 of 3





NSTRUCTIONS:	inimenen er en den kennen men <u>er i Er sit i 2</u> 000 kom disken er en inimen er en er		
Complete all 3 pages of form thoroughly. Clear photographs of a) the pool AND b) egg mass) are <u>required</u> for all observers.	Most fields are <u>rec</u> the indicators (one	<u>quired</u> for pool r example of each	egistration ı species
(Prbr 2 Pics) bserver's Pool ID: <u>SAD - VP - 1</u>	MDIFW Pool ID:		
. PRIMARY OBSERVER INFORMATION a. Observer name: <u>Sareh Dra howza (</u> b. Contact and credentials previously provided? ON	lo (submit Addendum 1)	O Yes	
PROJECT CONTACT INFORMATION			
a. Contact name: Q same as observer Q other b. Contact and credentials previously provided? O No c. Project Name: Longread (3 Corner	o (submit Addendum 1)	O Yes	
LANDOWNER CONTACT INFORMATION a. Are you the landowner? OYes QNo If no, was b. Landowner's contact information (required)	landowner permission ol	otained for survey?	OYes ONo
Name:	Phone:	<u></u>	
VERNAL POOL LOCATION INFORMATION a. Location Township: <u>Ben forn</u> Brief site directions to the pool (using mapped land See a Hached map	marks):		
<ul> <li>b. Mapping Requirements</li> <li>i. USGS topographic map OR aerial photograph w</li> <li>ii. GPS location of vernal pool (use Datum NADA Longitude/Easting: <u>-69,500735</u> Latitude</li> <li>Coordinate system: <u>106584</u></li> <li>Check one: O GIS shapefile <ul> <li>send to Jason.Czapiga@maine.g</li> <li>O The pool perimeter is delineated</li> <li>Include map or spreadsheet with</li> </ul> </li> </ul>	ith pool clearly marked. 83 / WGS84) de/Northing: <u>44.57</u> gov; observer has reviewed I by multiple GPS points. coordinates.	5922shape accuracy (Best) (Excellent)	)
<ul> <li>The above GPS point is at the c</li> <li>The center of the pool is approxi</li> <li>degrees from the above</li> </ul>	enter of the pool. (Good) imately mO ft € GPS point. (Acceptable)	) in the compass dire	ection of

	1aine State Vernal Po	ol Assessment Form	and the second s
<ul> <li>5. VERNAL POOL HABITAT II</li> <li>a. Habitat survey date (only</li> <li>b. Wetland habitat characte</li> <li>Choose the best descripto</li> <li>O Isolated depression</li> <li>O Floodplain depression</li> </ul>	NFORMATION <u>y if different</u> from indicator serization r for the landscape setting:	survey dates on page 3): ociated with larger wetland comp	lex
<ul> <li>Check all wetland types th</li> <li>□ Forested swamp</li> <li>☑ Shrub swamp</li> <li>☑ Peatland (fen or bog)</li> <li>□ Emergent marsh</li> </ul>	at best apply to this pool: Wet meadow Lake or pond cove Abandoned beaver flowage Active beaver flowage	⊠ Slow stream ☐ Floodplain ge ☐ Mostly unvegetated pool ☐ ATV or skidder rut	□ Dug pond or borrow pit □ Roadside ditch □ Other:
i. Pool Origin:	I O Natural-Modified O Un unknown, describe any mode ted hydroperiod AND provide emi-permanent lrying partially in all years and ompletely in drought years)	natural OUnknown ern or historic human impacts to t rationale in box ( <b>required</b> ): O Ephemeral (drying out completely in most years)	the pool ( <b>required</b> ):
Fur f of Wetland ■ Maximum depth at surv ■ Approximate size of poo	· <i>Complex</i> in <i>Car</i> inform. 	<i>iHcn.</i> √ 5 Trann 36" (1-3 ft.)	◯ >60" (>5 ft.)
<ul> <li>Predominate substrate</li> <li>O Mineral soil (bare, le mosses present)</li> </ul>	in order of increasing hydrope af-litter bottom, or upland	h: <u>I∽</u> O m Ø ft Length: _ eriod: Ø Organic matter (peat/muck) restricted to deepest portio	<u>3a</u> Om ♥ft shallow or n
<ul> <li>Predominate substrate         <ul> <li>Mineral soil (bare, le mosses present)</li> <li>Mineral soil (sphagn</li> </ul> </li> <li>Pool vegetation indicator         <ul> <li>Terrestrial nonvascumoss, lycopodium sj</li> <li>Dry site ferns (e.g. slady fern, bracken fern, bracken fern, interrupted ferr</li> <li>Moist site vasculars jewelweed, blue flagg</li> <li>Sphagnum moss (ar</li> </ul> </li> <li>Faunal indicators (checked)</li> </ul>	in order of increasing hydrope af-litter bottom, or upland um moss present) ors in order of increasing hydro ilar spp. (e.g. haircap pp.) spinulose wood fern, ern) J. sensitive fern, cinnamon I, New York fern) (e.g. skunk cabbage, J iris, swamp candle) nchored or suspended) : all that apply): or Green Frog tadpoles	h: <u>I</u> Om Øft Length: _ eriod: Ø Organic matter (peat/muck) restricted to deepest portio O Organic matter (peat/muck) operiod (check all that apply): Wet site ferns (e.g. royal fern Wet site shrubs (e.g. highbush winterberry, mountain holly) Wet site graminoids (e.g. blue sedge, cattail, bulrushes) Aquatic vascular spp. (e.g. pic Floating or submerged aquati water shield, pond weed, blac No vegetation in pool	<i>3₀</i> Om Øft shallow or n deep and widespread , marsh fern) h blueberry, maleberry, e-joint grass, tussock ckerelweed, arrowhead) ics (e.g. water lily, dderwort)



2			INDICATOR	INFORMATION	
э.	VERINAL	FUUL	INDICATOR		

4/29/2019;5/22/2014 a. Indicator survey dates:

#### b. Indicator abundance criteria and pool survey effort

- |s pool depression bisected by 2 ownerships (straddler pool)? Yes **Ø**No
- Was the entire pool surveyed for egg masses? Xes ONo; 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.

		E	gg Masse	s (or ad	ult Fairy	/ Shrim	p)			Tadpole	s/Lar	vae <sup>4</sup>	
SPECIES	Visit #1	Visit #2	Visit #3	Confi	idence	_evel <sup>1</sup>	Egg M	lass Maturity <sup>2</sup>	Ob	served	Co	nfide _evel	nce I <sup>1</sup>
Wood Frog	6			3			M		Ø				
Spotted Salamander		4		3			A						
Blue-spotted Salamander													
Fairy Shrimp <sup>3</sup>													

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.

Γ		Method	of Veri	fication*	CI **		Method	of Veri	fication*	CL**
	SPECIES	Р	Н	S	01	SPECIES	Р	Н	S	
Ĩ	Blanding's Turtle					Wood Turtle				
	Spotted Turtle					Ribbon Snake				
	Ringed Boghaunter					Other:				
d. C	*Method of verificat **CL - Confidence I Optional observe	ion: P = evel in : er reco	Photo species mmen	graphe s detern idation	d, H = Ha nination: <b>1:</b>	andled, S = Seen 1= <60%, 2= 60-95%, 3= >95%				×
e. G	SVP Pot	ential S pol cor	SVP nmen	₩No ts and	n Signifi /or obse	ervations of other wildlife:				
	Green frog			Revi	isi ts	2020; 5/6: ØWFE, 5/19: ØWFE,	ю : И Т	355E 7551	m Sv	
Ser	nd completed forn : Digital submis acceptable for	n and s sion (t projec	upport o Jase ts witt	ting doo on.Cza h 3 or 1	cumenta apiga@r fewer as	ition to: Maine Dept. of Inland Fisheric Attn: Vernal Pools 650 State Street, Bangor, ME naine.gov) of vernal pool field form ssessed pools; <u>larger projects must</u>	es and 04401 s and   <u>be ma</u>	Wildlin photog	fe graphs <u>s hard</u>	is only <u>copies</u> .
For ME	DIFW use only Report	eviewed	oy MDIF Potentia out lack	W Date ally Sigr	e: nificant al data	Initials: Not Significant due to: O does not meet b O does not meet M	iological IDEP ve	criteria rnal poo	ol criteria	
Comme	ents:									

**Print Form** 





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INSTRUCTIONS:
<ul> <li>Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.</li> <li><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.</li> </ul>
Observer's Pool ID: <u>5A() - VP - 2</u> MDIFW Pool ID:
<b>1. PRIMARY OBSERVER INFORMATION</b> a. Observer name: <u>Samh Dro hav 2</u> b. Contact and credentials previously provided? ONo (submit Addendum 1) OYes
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: Langrand (3 Corners)
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? OYes ONo If no, was landowner permission obtained for survey? OYes ONo
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: <u>Benton</u>
Brief site directions to the pool (using mapped landmarks):
See a Hacked 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)
O The pool perimeter is delineated by multiple GPS points. (Excellent) - Include map or spreadsheet with coordinates.
O 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)

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SAP-	VP-2
Maine State Vernal	Pool Assessment Form
5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date ( <u>only if different</u> from indica	tor survey dates on page 3):
b. Wetland habitat characterization	
<ul> <li>Choose the best descriptor for the landscape setting</li> <li>O Isolated depression</li> <li>O Floodplain depression</li> <li>O O O O O O O O O O O O O O O O O O O</li></ul>	g: associated with larger wetland complex r:
Check all wetland types that best apply to this pool:	•,
Forested swamp	☐ Slow stream ☐ Dug pond or
<ul> <li>Shrub swamp</li> <li>Lake or pond cove</li> <li>Peatland (fen or bog)</li> <li>Abandoned beaver flowage</li> <li>Emergent marsh</li> <li>Active beaver flowage</li> </ul>	wage  Mostly unvegetated pool  Roadside ditch ATV or skidder rut
c. Vernal pool status under the Natural Resources	Protection Act (NRPA)
i. Pool Origin: ONatural ONatural-Modified	
If modified, unnatural or unknown, describe any m	nodern or historic human impacts to the pool (required):
Post Iscafed on the edge of recent cler cut	of a wething adjacant to
ii. Pool Hydrology	
Select the pool's <u>estimated</u> hydroperiod AND prov prov	<u>vide rationale</u> in box ( <b>required</b> ):
O Permanent O Semi-permanent (drying partially in all years completely in drought years	© Ephemeral O Unknown and (drying out completely
Explain:	
. Pool part of forested metra	1
<ul> <li>Maximum depth at survey: O 0-12" (0-1 ft.) O</li> <li>Approximate size of pool (at spring highwater): V</li> </ul>	12-36" (1-3 ft.) $\bigcirc$ 36-60" (3-5 ft.) $\bigcirc$ >60" (>5 ft.) Vidth: 5 <sup></sup> $\bigcirc$ m $\oslash$ ft Length: -2 <sup></sup> $\bigcirc$ m $\oslash$ ft
Predominate substrate in order of increasing hydr	operiod:
O Mineral soil (bare, leaf-litter bottom, or upland	O Organic matter (peat/muck) shallow or
O Mineral soil (sphagnum moss present)	Restricted to deepest portion
Pool vegetation indicators in order of increasing h	ydroperiod (check all that apply):
Terrestrial nonvascular spp. (e.g. haircap	∑ Wet site ferns (e.g. royal fern, marsh fern)
Dry site ferns (e.g. spinulose wood fern,	Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
Moist site ferns (e.g. sensitive fern, cinnamon	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle)	Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
Faunal indicators (check all that apply)	No vegetation in pool
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
iii. Inlet/Outlet Flow Permanency	
I ype of inlet or outlet (a seasonal or permanent ch	nannel providing water flowing into or out of the pool):
<ul> <li>☑ NO INIET OF OUTLET</li> <li>☑ Intermittent inlet</li> <li>☑ Of ther or Unknown (or the second sec</li></ul>	tlet (channel with well-defined banks and permanent flow)
or outlet	рипту

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4/21/2019; 5/22/204

6.	VERNAL	POOL	INDICAT	OR IN	<b>IFORMA</b>	TION

- a. Indicator survey dates:

#### b. Indicator abundance criteria and pool survey effort

- Was the entire pool surveyed for egg masses? ②Yes ONo; 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.

		E	Egg Masse	s (or adı	ult Fairy	/ Shrim	ip)				Tad	poles	s/Lar	vae <sup>4</sup>	
SPECIES	Visit #1	Visit #2	Visit #3	Confi	dence l	Level <sup>1</sup>	Egg N	lass Ma	aturity <sup>2</sup>	Oł	oserv	/ed	Coi	nfide .eve	nce
Wood Frog	Ø			Ø			Ø								
Spotted Salamander	4	1		3	3		M	A							
Blue-spotted Salamander	5	,													
Fairy Shrimp <sup>3</sup>					-										

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

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Note any rare species associated with vernal pools. Observations should be accompanied by photographs.

	Method	l of Veri	fication*	CL **			Method	of Veri	fication*	CI **
SPECIES	Р	н	S	0L	SPECIES	*	Р	,H	S	01
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 Detential SVP

🕅 Non Significant VP 🛛 🛛 Indicator Breeding Area

#### e. General vernal pool comments and/or observations of other wildlife:

2020 REVISITS: 5/6: O WEEM	The loge of Forested Wiland 155Em 5/19: OWFER 1055En
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.g acceptable for projects with 3 or fewer assessed	ov) of vernal pool field forms and photographs is only pools; <u>larger projects must be mailed as hard copies</u> .
For MDIFW use only Reviewed by MDIFW Date:	itials:
For MDIFW use only       Reviewed by MDIFW       Date:       In         This pool is:       Significant       Potentially Significant       Not S         but lacking critical data	itials: gnificant due to: O does not meet biological criteria. O does not meet MDEP vernal pool criteria.

DEPLW0897-82008 04/18/2017

Print Form

Page 3 of 3

SAD-VP-3







	- COP BA
<ul> <li>Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration</li> <li><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.</li> </ul>	on. s
Observer's Pool ID: <u>SAD-VP3</u> MDIFW Pool ID:	
1. PRIMARY OBSERVER INFORMATION a. Observer name: <u>Sava h Dra have</u> b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes	
2. PROJECT CONTACT INFORMATION	
a. Contact name: 🗑 same as observer 🔿 other	
b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes c. Project Name: <u>Longroad</u> ( <u>3</u> Corners)	
3. LANDOWNER CONTACT INFORMATION	
a. Are you the landowner? OYes ONo If no, was landowner permission obtained for survey? OYes O	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: Ban Ion	
Brief site directions to the pool (using mapped landmarks):	
See Altrehad 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)	
<ul> <li>The pool perimeter is delineated by multiple GPS points. (Excellent)</li> <li>Include map or spreadsheet with coordinates.</li> </ul>	
O The above GPS point is at the center of the pool. (Good)	
O The center of the pool is approximately mO ft O in the compass direction of degrees from the above GPS point. (Acceptable)	

*a* 

# SAD-VP-3

<u></u>	Maine State Vernal F	Pool Assessment Form
VERNAL POOL HA	BITAT INFORMATION	
a. Habitat survey d	ate ( <u>only if different</u> from indicate	or survey dates on page 3):
o. Wetland habitat	characterization	
Choose the best	descriptor for the landscape setting:	:
Ø Isolated depre O Floodplain dep	ression (wifn withwath OPool a Oother:	associated with larger wetland complex
Check all wetland	types that best apply to this pool:	
Forested swar	np 🔲 Wet meadow	⊠ Slow stream □ Dug pond or
Shrub swamp	Lake or pond cove	☐ Floodplain borrow pit
Emergent mar	or bog) 📋 Abandoned beaver flow sh 👘 🗍 Active beaver flowage	vage Mostly unvegetated pool Roadside ditch
i Bool Originu		Protection Act (NRPA)
	Natural ONatural-Modified O	Unnatural OUnknown
If modified, unn	atural or unknown, describe any mo	odern or historic human impacts to the pool ( <b>required</b> ):
ii. Pool Hydrolog	y	
■ Select the pool	s <u>estimated</u> hydroperiod AND <u>provi</u>	ide rationale in box ( <b>required</b> ):
OPermanent	(drving nartially in all years a	O Ephemeral O Unknown
	completely in drought years)	in most vears)
Explain:		
~ 3 fl	a) deepest prot	
Maximum depth	n at survey: 🔘 0-12'' (0-1 ft.) 🛛 🕺 1	2-36" (1-3 ft.) 0 36-60" (3-5 ft.) 0 >60" (>5 ft.)
Approximate size	ze of nool (at spring highwater): Mi	
	ze or poor (at spring mynwater). VVI	idth: タン Øm Oft Length:>7 Øm Oft
Predominate su	ubstrate in order of increasing hydro	idth: <u> </u>
■ Predominate su ⊘ Mineral soil	ubstrate in order of increasing hydro (bare, leaf-litter bottom, or upland	idth: $\underline{30}$ Øm Oft Length: $\underline{>7}$ Øm Oft operiod: O Organic matter (neat/muck) shallow or
Predominate su O Mineral soil mosses pre	Ibstrate in order of increasing hydro (bare, leaf-litter bottom, or upland sent)	idth: <u>3</u> ∂ Ǿm Óft Length: <u>&gt; 7</u> Ǿm Óft operiod: O Organic matter (peat/muck) shallow or restricted to deepest portion
<ul> <li>Predominate su Ø Mineral soil mosses pre O Mineral soil         </li> </ul>	ubstrate in order of increasing hydro (bare, leaf-litter bottom, or upland esent) (sphagnum moss present)	idth: <u></u>
<ul> <li>Predominate su</li> <li>Mineral soil mosses pre</li> <li>Mineral soil</li> <li>Pool vegetation</li> </ul>	ibstrate in order of increasing hydro (bare, leaf-litter bottom, or upland sent) (sphagnum moss present)	idth: <u>3</u> ∂ Øm Oft Length: <u>&gt; 7</u> Øm Oft operiod: O Organic matter (peat/muck) shallow or restricted to deepest portion O Organic matter (peat/muck) deep and widespread vdroperiod (check all that apply):
<ul> <li>Predominate su Ø Mineral soil mosses pre Ø Mineral soil     </li> <li>Pool vegetation D Terrestrial n     </li> </ul>	ubstrate in order of increasing hydro (bare, leaf-litter bottom, or upland esent) (sphagnum moss present) indicators in order of increasing hy onvascular spp. (e.g. haircap	idth: <u></u>
<ul> <li>Predominate su Mineral soil mosses pre O Mineral soil     </li> <li>Pool vegetation D Terrestrial n moss, lycop Dry site ferm     </li> </ul>	ubstrate in order of increasing hydro (bare, leaf-litter bottom, or upland sent) (sphagnum moss present) i indicators in order of increasing hy onvascular spp. (e.g. haircap odium spp.) is (e.g. spinulose wood fern,	idth: <u>30</u> Øm Oft Length: <u>&gt; 7</u> Øm Oft operiod: O Organic matter (peat/muck) shallow or restricted to deepest portion O Organic matter (peat/muck) deep and widespread vdroperiod (check all that apply): ☐ Wet site ferns (e.g. royal fern, marsh fern) ☐ Wet site shrubs (e.g. highbush blueberry, maleberry winterborny, mountain bally)
<ul> <li>Predominate su Ø Mineral soil mosses pre O Mineral soil     </li> <li>Pool vegetation Drol vegetation Terrestrial n moss, lycop Dry site ferm lady fern, b Moist site ferm     </li> </ul>	ubstrate in order of increasing hydro (bare, leaf-litter bottom, or upland sent) (sphagnum moss present) indicators in order of increasing hy ionvascular spp. (e.g. haircap odium spp.) is (e.g. spinulose wood fern, racken fern) erns (e.g. sensitive fern, cinnamon	<ul> <li>idth: <u>30</u> Øm Oft Length: <u>&gt; 7</u> Øm Oft</li> <li>period:</li> <li>Organic matter (peat/muck) shallow or restricted to deepest portion</li> <li>O Organic matter (peat/muck) deep and widespread</li> <li>ordroperiod (check all that apply):</li> <li>□ Wet site ferns (e.g. royal fern, marsh fern)</li> <li>□ Wet site shrubs (e.g. highbush blueberry, maleberry winterberry, mountain holly)</li> <li>□ Wet site graminoids (e.g. blue-joint grass, tussock</li> </ul>
<ul> <li>Predominate su Mineral soil mosses pre O Mineral soil         <ul> <li>Pool vegetation</li> <li>Terrestrial n moss, lycop</li> <li>Dry site ferm lady fern, b</li> <li>Moist site ferm fern, interrup</li> </ul> </li> </ul>	ubstrate in order of increasing hydro (bare, leaf-litter bottom, or upland sent) (sphagnum moss present) indicators in order of increasing hy ionvascular spp. (e.g. haircap odium spp.) is (e.g. spinulose wood fern, racken fern) rns (e.g. sensitive fern, cinnamon oted fern, New York fern)	<ul> <li>idth: <u>30</u> Øm Oft Length: <u>&gt; 7</u> Øm Oft</li> <li>organic matter (peat/muck) shallow or restricted to deepest portion</li> <li>O Organic matter (peat/muck) deep and widespread</li> <li>ordroperiod (check all that apply):</li> <li>□ Wet site ferns (e.g. royal fern, marsh fern)</li> <li>□ Wet site shrubs (e.g. highbush blueberry, maleberry winterberry, mountain holly)</li> <li>□ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)</li> </ul>
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<ul> <li>Predominate su Mineral soil mosses pre O Mineral soil Pool vegetation Pool vegetation Terrestrial n moss, lycop Dry site ferm lady fern, bi Moist site ferm, interrup Moist site va jewelweed, Sphagnum u     </li> <li>Faunal indicator Fish []     </li> </ul>	<ul> <li>abstrate in order of increasing hydro (bare, leaf-litter bottom, or upland esent)</li> <li>(sphagnum moss present)</li> <li>indicators in order of increasing hydro odium spp.)</li> <li>is (e.g. spinulose wood fern, racken fern)</li> <li>erns (e.g. sensitive fern, cinnamon pted fern, New York fern)</li> <li>asculars (e.g. skunk cabbage, blue flag iris, swamp candle)</li> <li>moss (anchored or suspended)</li> <li>s (check all that apply):</li> <li>Bullfrog or Green Frog tadpoles</li> </ul>	<ul> <li>idth: <u>30</u> Øm Oft Length: <u>&gt; 7</u> Øm Oft</li> <li>organic matter (peat/muck) shallow or restricted to deepest portion</li> <li>O Organic matter (peat/muck) deep and widespread</li> <li>ordroperiod (check all that apply):</li> <li>Wet site ferns (e.g. royal fern, marsh fern)</li> <li>Wet site shrubs (e.g. highbush blueberry, maleberry winterberry, mountain holly)</li> <li>Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)</li> <li>Aquatic vascular spp. (e.g. pickerelweed, arrowhead</li> <li>Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)</li> <li>No vegetation in pool</li> <li>Ø Other:</li> </ul>
<ul> <li>Predominate su Mineral soil mosses pre O Mineral soil Pool vegetation Pool vegetation Terrestrial n moss, lycop Dry site fern lady fern, b Moist site fer fern, interrup Moist site fer fern, interrup Moist site va jewelweed, Sphagnum     </li> <li>Faunal indicator Fish</li></ul>	<ul> <li>a bot (at spring highwater). We ubstrate in order of increasing hydro (bare, leaf-litter bottom, or upland esent)</li> <li>(sphagnum moss present)</li> <li>indicators in order of increasing hydronvascular spp. (e.g. haircap odium spp.)</li> <li>is (e.g. spinulose wood fern, racken fern)</li> <li>erns (e.g. sensitive fern, cinnamon pted fern, New York fern)</li> <li>asculars (e.g. skunk cabbage, blue flag iris, swamp candle)</li> <li>moss (anchored or suspended)</li> <li>s (check all that apply):</li> <li>Bullfrog or Green Frog tadpoles</li> </ul>	<ul> <li>idth: <u>30</u> Øm Oft Length: <u>&gt; 7</u> Øm Oft</li> <li>organic matter (peat/muck) shallow or restricted to deepest portion</li> <li>Organic matter (peat/muck) deep and widespread</li> <li>ordroperiod (check all that apply):</li> <li>Wet site ferns (e.g. royal fern, marsh fern)</li> <li>Wet site shrubs (e.g. highbush blueberry, maleberry winterberry, mountain holly)</li> <li>Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)</li> <li>Aquatic vascular spp. (e.g. pickerelweed, arrowhead</li> <li>Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)</li> <li>No vegetation in pool</li> <li>Ø Other: <u>Mark</u></li> </ul>
<ul> <li>Predominate su Mineral soil mosses pre O Mineral soil Pool vegetation Pool vegetation Terrestrial n moss, lycop Dry site fern lady fern, bi Moist site fern, interrup Moist site va jewelweed, Sphagnum u     </li> <li>Faunal indicator Fish Iii. Inlet/Outlet Flow Type of inlet or or Sphagnum u     </li> </ul>	<ul> <li>a both (at spring highwater). We ubstrate in order of increasing hydro (bare, leaf-litter bottom, or upland esent)</li> <li>(sphagnum moss present)</li> <li>indicators in order of increasing hydro onvascular spp. (e.g. haircap odium spp.)</li> <li>is (e.g. spinulose wood fern, racken fern)</li> <li>erns (e.g. sensitive fern, cinnamon pted fern, New York fern)</li> <li>asculars (e.g. skunk cabbage, blue flag iris, swamp candle)</li> <li>moss (anchored or suspended)</li> <li>s (check all that apply):</li> <li>Bullfrog or Green Frog tadpoles</li> <li>w Permanency</li> <li>butlet (a seasonal or permanent chamber of the seasonal</li></ul>	<ul> <li>idth: <u>30</u> Øm Oft Length: <u>&gt; 7</u> Øm Oft</li> <li>organic matter (peat/muck) shallow or restricted to deepest portion</li> <li>O Organic matter (peat/muck) deep and widespread</li> <li>ordroperiod (check all that apply):</li> <li>Wet site ferns (e.g. royal fern, marsh fern)</li> <li>Wet site shrubs (e.g. highbush blueberry, maleberry winterberry, mountain holly)</li> <li>Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)</li> <li>Aquatic vascular spp. (e.g. pickerelweed, arrowhead</li> <li>Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)</li> <li>No vegetation in pool</li> <li>Ø Other: <u>Mark</u></li> </ul>
<ul> <li>Predominate su Mineral soil mosses pre O Mineral soil Pool vegetation Terrestrial n moss, lycop Dry site fern lady fern, b Moist site fern, interrup Moist site va jewelweed, Sphagnum n     </li> <li>Faunal indicator Fish Iii. Inlet/Outlet Floor Type of inlet or out No inlet or out     </li> </ul>	<ul> <li>a bot (at spining highwater). We ubstrate in order of increasing hydro (bare, leaf-litter bottom, or upland esent)</li> <li>(sphagnum moss present)</li> <li>indicators in order of increasing hydro odium spp.)</li> <li>(e.g. spinulose wood fern, racken fern)</li> <li>erns (e.g. sensitive fern, cinnamon pted fern, New York fern)</li> <li>asculars (e.g. skunk cabbage, blue flag iris, swamp candle)</li> <li>moss (anchored or suspended)</li> <li>(check all that apply):</li> <li>Bullfrog or Green Frog tadpoles</li> <li>w Permanency</li> <li>putlet (a seasonal or permanent character)</li> </ul>	<ul> <li>idth: <u>30</u> Øm Oft Length: <u>&gt; 7</u> Øm Oft</li> <li>operiod:</li> <li>Organic matter (peat/muck) shallow or restricted to deepest portion</li> <li>O Organic matter (peat/muck) deep and widespread</li> <li>odroperiod (check all that apply):</li> <li>Wet site ferns (e.g. royal fern, marsh fern)</li> <li>Wet site shrubs (e.g. highbush blueberry, maleberry winterberry, mountain holly)</li> <li>Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)</li> <li>Aquatic vascular spp. (e.g. pickerelweed, arrowhead</li> <li>Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)</li> <li>No vegetation in pool</li> <li>Other: <u>max</u></li> </ul>



SAD-VP-3



## 6. VERNAL POOL INDICATOR INFORMATION

4/29/2019 a. Indicator survey dates:

#### b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? Ø Yes O No
- Was the entire pool surveyed for egg masses? OYes  $\mathcal{Q}$ No; what % of entire pool surveyed?  $\mathcal{N}$
- 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.

		E	gg Masses	s (or adult	Fairy Shrim	p)			Tadpole	s/Lar	vae <sup>4</sup>	
SPECIES	Visit #1	Visit #2	Visit #3	Confide	ence Level <sup>1</sup>	Egg N	/lass Maturity <sup>2</sup>	Ob	served	Cor L	nfide .evel	nce
Wood Frog	27			1		M		Ø				
Spotted Salamander	24			/		M		Í				
Blue-spotted Salamander												
Fairy Shrimp <sup>3</sup>												

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.

Γ		Method	of Veri	fication*	0.111		Method	of Veri	fication*	CI **
	SPECIES	Р	Н	S	GL	SPECIES	Р	н	S	
	Blanding's Turtle					Wood Turtle				
	Spotted Turtle					Ribbon Snake				
	Ringed Boghaunter					Other:				
d. C e. C	*Method of verificat **CL - Confidence   Dptional observe SVP □ Pot	tion: P = level in : e <b>r reco</b> cential \$	Photo species mmen SVP mmen	graphe s deterr datior No ts and	d, H = Ha nination: n: on Signifi /or obse	andled, S = Seen 1= <60%, 2= 60-95%, 3= >95% cant VP	I			
Ser	In to milking through Aceste nd completed form	in het we n and s	le t Han <i>e</i> upport	ting do	South( // IP 	tion to: Maine Dept. of Inland Fisheri Attn: Vernal Pools	es and	Wildli	fe	
NOTE For ME This pc Comm	E: Digital submis acceptable for DIFW use only Re bol is: Significant	sion (t projec	ts with by MDIF Potenti but lack	on.Cza h 3 or f -W Dat ally Sign	apiga@r fewer as e: hificant al data	Initials:	iological	photo ailed a criteria rnal poc	graphs <u>is hard</u> ol criteria	is only <u>copies</u> .
										Page 3 of :

DEPLW0897-82008 04/18/2017

| Print Form |





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INSTRUCTIONS:		
<ul> <li>Complete all 3 pages of form thoroughly</li> <li><u>Clear photographs</u> of a) the pool AND b) egg mass) are <u>required</u> for all observers.</li> </ul>	. Most fields are <u>required</u> for pool re the indicators (one example of each	egistration. species
Observer's Pool ID: <u>SAD-VP-4</u>	MDIFW Pool ID:	
1. PRIMARY OBSERVER INFORMATION a. Observer name: <u>Same Drahov Cal</u> b. Contact and credentials previously provided? Of	No (submit Addendum 1) 🛛 👰 Yes	
2. PROJECT CONTACT INFORMATION a. Contact name: Same as observer O other b. Contact and credentials previously provided? N c. Project Name: Lorgroad (3 Con	lo (submit Addendum 1) ØYes ners Solar Projet)	
3. LANDOWNER CONTACT INFORMATION		
a. Are you the landowner? OYes $igodot$ No $$ If no, was	a landowner permission obtained for survey?	OYes ONo
b. Landowner's contact information (required)	č.	
Name:	Phone:	
Street Address:	City: State:	Zip:
c. 🔲 Large Projects: check if separate project lando	wner data file submitted	
4. VERNAL POOL LOCATION INFORMATION a. Location Township: <u>Bentan</u> Brief site directions to the pool (using mapped land See A Hached Map	dmarks):	
b. Mapping Requirements		
i. USGS topographic map OR aerial photograph v	vith pool clearly marked.	
<ul> <li>ii. GPS location of vernal pool (use Datum NAE Longitude/Easting: <u>- 69, 480413</u> Latitu Coordinate system:</li> <li>Check one: Ø GIS shapefile - send to Jason Czapiga@maine.</li> <li>O The pool perimeter is delineate - Include map or spreadsheet with O The above GPS point is at the O The center of the pool is approximate degrees from the above</li> </ul>	283 / WGS84) de/Northing: <u>44, 57, 2347</u> gov; observer has reviewed shape accuracy (Best) d by multiple GPS points. (Excellent) coordinates. center of the pool. (Good) cimately <u> </u>	ection of
degrees from the above	GPS point. (Acceptable)	

SUMME <sup>2</sup>
Section 8
100
100

# SADーVP- 4 Maine State Vernal Pool Assessment Forn

Maine State Verna	I Pool Assessment Form
5. VERNAL POOL HABITAT INFORMATION a. Habitat survey date ( <u>only if different</u> from indic b. Wetland habitat characterization	ator survey dates on page 3):
<ul> <li>Choose the best descriptor for the landscape settir</li> <li>Isolated depression</li> <li>Floodplain depression</li> <li>Other</li> </ul>	ng: I associated with larger wetland complex er:
<ul> <li>Check all wetland types that best apply to this pool</li> <li>Forested swamp</li> <li>Shrub swamp</li> <li>Lake or pond cove</li> <li>Peatland (fen or bog)</li> <li>Abandoned beaver flowage</li> </ul>	I: Slow stream Dug pond or Floodplain borrow pit Iowage Mostly unvegetated pool Roadside ditch ge ATV or skidder rut Other:
c. Vernal pool status under the Natural Resource	s Protection Act (NRPA)
i. Pool Origin: ONatural ØNatural-Modified	O Unnatural O Unknown
If modified, unnatural or unknown, describe any For is field with land impounded to	modern or historic human impacts to the pool ( <b>required</b> ):
ii. Pool Hydrology	
Select the pool's <u>estimated</u> hydroperiod AND <u>pressure</u>	ovide rationale in box ( <b>required</b> ):
O Permanent O Semi-permanent (drying partially in all years completely in drought yea	Ephemeral O Unknown s and (drying out completely
Explain:	
Shallow hollows filled wit	water - impounded by rd
■ Maximum depth at survey: 💢 0-12" (0-1 ft.) 🕻	◯ 12-36" (1-3 ft.)  〇 36-60" (3-5 ft.)  〇 >60" (>5 ft.)
Approximate size of pool (at spring highwater):	Width: 30 Øm Oft Length: 80 Øm Oft
Predominate substrate in order of increasing by	droperiod:
O Mineral soil (bare, leaf-litter bottom, or upland	d Organic matter (peat/muck) shallow or
mosses present)	restricted to deepest portion
O Mineral soil (sphagnum moss present)	O 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	🕅 Wet site ferns (e.g. royal fern, marsh fern)
moss, lycopodium spp.) 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, cinnamc fern, interrupted fern, New York fern)	DN Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	🔲 Aquatic vascular spp. (e.g. pickerelweed, arrowhead
jewelweed, blue flag iris, swamp candle)	☐ Floating or submerged aquatics (e.g. water lily,
En Spragnum moss (anchored or suspended)	Water shield, pond weed, bladderwort)
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 o	channel providing water flowing into or out of the pool):
○ No inlet or outlet ○ Permanent inlet or o	outlet (channel with well-defined banks and permanent flow)
Intermittent inlet O Other or Unknown (e or outlet	explain):

and and

## SAD - VP - 4Maine State Vernal Pool Assessment Form

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)? Ø Yes O No
- Was the entire pool surveyed for egg masses? OYes ØNo; 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.

		E	gg Masses	s (or adu	ult Fairy	/ Shrim	p)			-	Tadp	oles	s/Lar	vae <sup>4</sup>	
SPECIES	Visit #1	Visit #2	Visit #3	Confi	dence l	Level <sup>1</sup>	Egg N	/lass M	aturity <sup>2</sup>	Ob	serv	ed	Cor L	nfide .evel	nce
Wood Frog	10	Ø		/	1		M								
Spotted Salamander	5	Ø		1	1		M								
Blue-spotted Salamander													;		
Fairy Shrimp <sup>3</sup>															

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. <u>Observations should be accompanied by photographs</u>.

	Method	of Veri	fication*	CI **	<b></b>	Method	of Veri	fication*	CI **
SPECIES	Р	н	S	01	SPECIES	Р	н	S	ΟĽ
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 will in forest wetland. inlet from drainage from we	Impounded by road w/ intermitten f
Send completed form and supporting documenta	ation to: Maine Dept. of Inland Fisheries and Wildlife Attn: Vernal Pools 650 State Street Bangor ME 04401
IOTE: Digital submission (to Jason.Czapiga@i acceptable for projects with 3 or fewer as	maine.gov) of vernal pool field forms and photographs is only ssessed pools; <u>larger projects must be mailed as hard copies</u>
IOTE: Digital submission (to Jason.Czapiga@i acceptable for projects with 3 or fewer as or MDIFW use only Reviewed by MDIFW Date:	maine.gov) of vernal pool field forms and photographs is only ssessed pools; <u>larger projects must be mailed as hard copies</u>
IOTE: Digital submission (to Jason.Czapiga@i acceptable for projects with 3 or fewer as or MDIFW use only Reviewed by MDIFW Date: his pool is: Significant Potentially Significant but lacking critical data	Initials:
IOTE: Digital submission (to Jason.Czapiga@i acceptable for projects with 3 or fewer as for MDIFW use only Reviewed by MDIFW Date: This pool is: Significant Potentially Significant but lacking critical data	Initials: Mot Significant due to: O does not meet biological criteria. O does not meet MDEP vernal pool criteria.

DEPLW0897-82008 04/18/2017

Print Form





INSTRUCTIONS:
<ul> <li>Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.</li> <li><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.</li> </ul>
Observer's Pool ID: <u>SAD-VP-5 (5A</u> MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: <u>Sara h Drahov za</u> b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes
2. PROJECT CONTACT INFORMATION a. Contact name: same as observer of other b. Contact and credentials previously provided? No (submit Addendum 1) O Yes c. Project Name: Longroad (3 Corners)
<ul> <li>3. LANDOWNER CONTACT INFORMATION         <ul> <li>a. Are you the landowner? OYes ONo</li> <li>b. Landowner's contact information (required)</li> <li>Name: Phone:</li> </ul> </li> </ul>
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       a Hached         Map
b. Mapping Requirements
i. USGS topographic map OR aerial photograph with pool clearly marked.
<ul> <li>ii. GPS location of vernal pool (use Datum NAD83 / WGS84)</li> <li>Longitude/Easting: <u>-69, 480/73</u> Latitude/Northing: <u>44, 57/888</u></li> <li>Coordinate system:</li> </ul>
Check one: 《 GIS shapefile - send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)
<ul> <li>The pool perimeter is delineated by multiple GPS points. (Excellent)</li> <li>Include map or spreadsheet with coordinates.</li> </ul>
$oldsymbol{O}$ The above GPS point is at the center of the pool. (Good)
O The center of the pool is approximately mO ft O in the compass direction of degrees from the above GPS point. (Acceptable)

	SAD-VP-5	(5A)	. (\$17.75%)
	Maine State Vernal Pool	Assessment Form	Date (19)
VERNAL POOL HABITAT a. Habitat survey date (on b. Wetland habitat charac ■ Choose the best descript ⊗ Isolated depression	INFORMATION Iv if different from indicator sub terization for for the landscape setting: O Pool associ	rvey dates on page 3): ated with larger wetland comp	lex
<ul> <li>Check all wetland types t</li> <li>Forested swamp</li> <li>Shrub swamp</li> <li>Peatland (fen or bog)</li> <li>Emergent marsh</li> <li>C. Vernal pool status under</li> <li>i. Pool Origin: ONatu</li> </ul>	→ Other: <u>→</u> hat best apply to this pool: □ Wet meadow □ Lake or pond cove □ Abandoned beaver flowage □ Active beaver flowage er the Natural Resources Prote ral QNatural-Modified O Unna	<ul> <li>☐ Slow stream</li> <li>☐ Floodplain</li> <li>☑ Mostly unvegetated pool</li> <li>☐ ATV or skidder rut</li> <li>ction Act (NRPA)</li> <li>tural OUnknown</li> </ul>	□ Dug pond or borrow pit □ Roadside ditch □ Other:
If modified, unnatural of Pool Impound,	or unknown, describe any modern ed by Richard Rong	or historic human impacts to t	the pool ( <b>required</b> ):
Explain: Deep ipool Maximum depth at sur	completely in drought years) $\sim 4$ feet @ max depth vey: $00-12'' (0-1 \text{ ft.}) 012-36'$	(drying out completely in most years) ' (1-3 ft.) (\$ 36-60" (3-5 ft.)	© >60" (>5 ft.)
<ul> <li>Approximate size of point</li> <li>Predominate substrate</li> <li>Mineral soil (bare, l mosses present)</li> <li>Mineral soil (sphag</li> </ul>	ool (at spring highwater): Width: e in order of increasing hydroperic leaf-litter bottom, or upland num moss present)	<u></u> O m Ø ft Length: _ od: O Organic matter (peat/muck) restricted to deepest portio O Organic matter (peat/muck)	30 O m O ft shallow or n deep and widespread
<ul> <li>Pool vegetation indication</li> <li>Terrestrial nonvasor</li> <li>moss, lycopodium</li> <li>Dry site ferns (e.g., lady fern, bracken</li> <li>Moist site ferns (e fern, interrupted fer</li> <li>Moist site vascular jewelweed, blue flat</li> <li>Sphagnum moss (a</li> </ul>	tors in order of increasing hydrop cular spp. (e.g. haircap spp.) . spinulose wood fern, fern) .g. sensitive fern, cinnamon rn, New York fern) s (e.g. skunk cabbage, ag iris, swamp candle) anchored or suspended)	eriod (check all that apply): Wet site ferns (e.g. royal fern Wet site shrubs (e.g. highbus winterberry, mountain holly) Wet site graminoids (e.g. blue sedge, cattail, bulrushes) Aquatic vascular spp. (e.g. pi Floating or submerged aquati water shield, pond weed, blac	, marsh fern) h blueberry, maleberry, e-joint grass, tussock ckerelweed, arrowhead ics (e.g. water lily, dderwort)
■ Faunal indicators (cheo □ Fish □ Bullfro	ck all that apply): g or Green Frog tadpoles   □	No vegetation in pool Other:	
iii. Inlet/Outlet Flow Perm Type of inlet or outlet (a	nanency a seasonal or permanent channel O Permanent inlet or outlet (cl O Other or Unknown (explain)	providing water flowing into o nannel with well-defined banks :	r out of the pool): and permanent flow)

MAL<sup>®</sup>



SAD-VP-5(5A)



#### 6. VERNAL POOL INDICATOR INFORMATION

'20/A a. Indicator survey dates: 4/29/ 19

#### b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? O Yes No
- Was the entire pool surveyed for egg masses? ↓Yes ONo; 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.

	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae <sup>4</sup>					
SPECIES	Visit #1	Visit _#2	Visit #3	Confi	dence l	_evel <sup>1</sup>	Egg Mass Maturity <sup>2</sup>			Observed			Confidence Level <sup>1</sup>		
Wood Frog	67(32	5A)	<u>_</u>	2	2		A								
Spotted Salamander	7(1)	2-5A)3(	vp-5)	2	2		M	A							
Blue-spotted Salamander		•													
Fairy Shrimp <sup>3</sup>															

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. <u>Observations should be accompanied by photographs</u>.

		Method of Verification*		CI **		Method	CI **					
	SPECIES	Р	Н	S			Р	Н	s			
	Blanding's Turtle					Wood Turtle						
	Spotted Turtle					Ribbon Snake						
	Ringed Boghaunter					Other:						
d. (	*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:											
е. (	SVP Potential SVP MNon Significant VP Indicator Breeding Area											
e. General vertical pool comments and/or observations of other wildlife: Deep pool Impounded by road VP5 - VP5A Connated 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; <u>larger projects must be mailed as hard copies</u> .												
For MDIFW use only Reviewed by MDIFW Date: Initials:												
This pool is: Significant Potentially Significant but lacking critical data Not Significant due to: O does not meet biological criteria. Comments:												
	Ne <u>re Villerian.</u> S								adeka N Vecesia			
SAD-VP-6



No 6555 in 2020 Maine State Vernal Pool Assessment Form



INSTRUCTIONS: Complete all 3 pages of form thoroughly. Mos	t fields are <u>required</u> for pool registration.
Clear photographs of a) the pool AND b) the in egg mass) are <u>required</u> for all observers.	dicators (one example of each species
Observer's Pool ID: <u>SAD-VP-C</u>	ADIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: <u>Same b</u> Drahov al b. Contact and credentials previously provided? O No (sub	mit Addendum 1) 🔗 Yes
2. PROJECT CONTACT INFORMATION a. Contact name: Q same as observer O other b. Contact and credentials previously provided? O No (subr c. Project Name: Longround (3 Corners	nit Addendum 1) OYes Solar Proje F)
3. LANDOWNER CONTACT INFORMATION a. Are you the landowner? OYes ONo If no, was landow b. Landowner's contact information (required) Name: <u>E, D, Bessey &amp; Son</u> Street Address: <u>774 Skawhegen Bd</u> c. □ Large Projects: check if separate project landowner da	vner permission obtained for survey? $\bigcirc$ Yes $\bigcirc$ No Phone: (207) 453-9388 City: <u>Hinck/cg</u> State: <u>ME</u> Zip: <u>04944</u> ata file submitted
4. VERNAL POOL LOCATION INFORMATION a. Location Township: <u>Unity Twp</u> Brief site directions to the pool (using mapped landmarks) Sec attached map	<u> </u>
<ul> <li>b. Mapping Requirements</li> <li>i. USGS topographic map OR aerial photograph with pool</li> <li>ii. GPS location of vernal pool (use Datum NAD83 / W( Longitude/Easting:</li></ul>	l clearly marked. <b>3S84)</b> hing: <u>44, (245/5</u>
Check one: O GIS shapefile - send to Jason.Czapiga@maine.gov; obs O The pool perimeter is delineated by mu - Include map or spreadsheet with coordina O The above GPS point is at the center o O The center of the pool is approximately 	erver has reviewed shape accuracy (Best) Itiple GPS points. (Excellent) ates. f the pool. (Good) mO ft O in the compass direction of oint. (Acceptable)

<b>A</b>	D-UP-6		Willing.
Maine State	Vernal Pool	Assessment Form	
5. VERNAL POOL HABITAT INFORMATION a. Habitat survey date ( <u>only if different</u> from b. Wetland habitat characterization	m indicator su	rvey dates on page 3):	
Choose the best descriptor for the landsca	ipe setting:		
O Isolated depression O Floodplain depression	Ø Pool associ O Other:	ated with larger wetland comp	lex
Check all wetland types that best apply to	this pool:		
Forested swamp	v	Slow stream	Dug pond or
Shrub swamp 🔲 Lake or pon	d cove	∐ Floodplain	borrow pit
Emergent marsh     Active beave	beaver flowage er flowage	Mostly unvegetated pool ATV or skidder rut	☐ Roadside ditch ☐ Other:
c. Vernal pool status under the Natural R	esources Prote	ction Act (NRPA)	
i. Pool Origin: ONatural 👰 Natural-Mo	odified OUnnat	tural OUnknown	
If modified, unnatural or unknown, desc	ribe any modern	or historic human impacts to t	the pool ( <b>required</b> ):
Psol located in wetland i	n recently	logged forest	
ii. Pool Hydrology			
Select the pool's <u>estimated</u> hydroperiod	AND provide rat	tionale in box ( <b>required</b> ):	
O Permanent O Semi-permanent (drying partially in completely in dro Explain:	all years and ught years)	Ephemeral (drying out completely in most years)	O Unknown
Shallow forest pool	с с С		
■ Maximum depth at survey: Ø 0-12" (0-	1 ft.) O 12-36"	' (1-3 ft.) ①36-60" (3-5 ft.)	○ >60" (>5 ft.)
■ Approximate size of pool (at spring high	water): Width:	<u>30</u> Om ⊗ft Length:_	O m O ft
Predominate substrate in order of increase	asing hydroperio	d:	
O Mineral soil (bare, leaf-litter bottom,	or upland (	Organic matter (peat/muck)	shallow or
Mineral soil (sphagnum moss preser	nt) 🕻	Organic matter (peat/muck)	deep and widespread
Pool vegetation indicators in order of indicators in order of indicators.	reasing hydrone	eriod (check all that apply):	
$\nabla$ Terrestrial nonvascular spp. (e.g. ha	ircap	Met site ferns (e.a. roval fern	marsh forn)
<ul> <li>✓moss, lycopodium spp.)</li> <li>☑ Dry site ferns (e.g. spinulose wood</li> </ul>	fern,	Wet site shrubs (e.g. highbush winterberry mountain bolly)	h blueberry, maleberry,
ady fern, bracken fern) ☑ Moist site ferns (e.g. sensitive fern, fern, interrunted fern, New York fern	cinnamon	Wet site graminoids (e.g. blue sedge, cattail, bulrushes)	e-joint grass, tussock
Moist site vasculars (e.g. skunk cab	bage.	Aquatic vascular spp. (e.g. pi	ckerelweed, arrowhead)
jewelweed, blue flag iris, swamp car	ndle)	Floating or submerged aquati	cs (e.g. water lily,
💢 Sphagnum moss (anchored or susp	ended)	water shield, pond weed, blac	Iderwort)
Faunal indicators (check all that apply):	. Ц	No vegetation in pool	
☐ Fish ☐ Bullfrog or Green Frog t	adpoles 🗌	Other:	
		<u>_</u>	
III. INIET/OUTIET Flow Permanency Type of inlet or outlet (a seasonal or per	manent channel	providing water flowing into or	out of the pool)
No inlet or outlet	inlet or outlet (ch	annel with well-defined banks	and permanent flow)
$\bigcirc \text{ Intermittent inlet} \bigcirc \bigcirc$	known (explain)		and permanent now)
or outlet		· · · · · · · · · · · · · · · · · · ·	1

3



### SAD -VP-6

#### Maine State Vernal Pool Assessment Form



5/1/2019: 5/22/2019 a. Indicator survey dates:

#### b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? O Yes
- Was the entire pool surveyed for egg masses? ØYes ONo; 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		Egg Masses (or adult Fairy Shrimp)										Tadpoles/Larvae <sup>4</sup>				
SPECIES	Visit #1	Visit #2	Visit #3	Confi	idence l	Level <sup>1</sup>	Egg N	lass Ma	aturity <sup>2</sup>	Oł	oserv	ed	Cor L	nfide .evel	nce	
Wood Frog	Ø	ø														
Spotted Salamander	2			3	3		M	A								
Blue-spotted Salamander	Ø															
Fairy Shrimp <sup>3</sup>																

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. <u>Observations should be accompanied by photographs</u>.

		Method	Method of Verification*				Method	CI **					
	SPECIES	Р	н	S	01		Р	н	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 observe	er reco	mmer	dation	1:								
	SVP Pot	ential S	SVP	Ì⊠′No	n Sianifi	cant VP 🔲 Indicator Breeding Area	l						
				~ (	Ū	5							
е. (	General vernal po	ool coi	mmen	ts and	or obse	ervations of other wildlife:							
	Pool is the	Rllov	1	wil]	11/1	y dry up in a few w	eks	4					
Sei OTE	nd completed form E: Digital submis acceptable for	n and s sion (t projec	o Jase ts with	ing doo on.Cza n 3 or f	cumenta piga@n ewer as	tion to: Maine Dept. of Inland Fisheria Attn: Vernal Pools 650 State Street, Bangor, ME naine.gov) of vernal pool field forms sessed pools; <u>larger projects must</u>	es and 04401 s and j <u>be ma</u>	Wildlif photog illed a	fe graphs <u>s hard</u>	is only <u>copies</u> .			
or Mi	DIFW use only Re	viewed I	by MDIF	W Date		Initials:							
nis po	ool is: 🔲 Significant		Potentia out lacki	ally Sign ng critica	ificant Il data	Not Significant due to: O does not meet b O does not meet M	iological IDEP ve	criteria. rnal poo	I criteria.				
omm	ents:	in dir Sector											
a to to	n de <mark>l'acteur de l'acteur de la company de la company</mark>									<u>e Vertand C</u>			
DUM	0007 00000 0444	0/0047				F 2	_			Joan 2 of			

DEPLW0897-82008 04/18/2017

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C

Print Form





Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration. Clear photographs of a) the pool AND b) the indicators (one example of each species)
eaa mass) are required for all observers.
Observer's Pool ID: MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION
a. Observer name: Sarah Drahov Zel
b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes
2. PROJECT CONTACT INFORMATION
a. Contact name: O same as observer O other
b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes
c. Project Name: <u>Solhree Or Cannes</u> Solar Project
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? 🖉 Yes $O$ No $$ If no, was landowner permission obtained for survey? $$ O Yes $$ O No $$
b. Landowner's contact information (required)
Name: <u>E.D. Bessien 7 Son</u> 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 🤍
<b>a. Location</b> Township: $U_{hi} H_{i} = H_{i} p$
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: <u>-69, 455584</u> Latitude/Northing: <u>44.62759</u>
Coordinate system: <u>WGS 84</u>
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.
O The above GPS point is at the center of the pool. (Good)
O The center of the pool is approximately mO ft O in the compass direction ofdegrees from the above GPS point. (Acceptable)

-8%

SAD-VP-7 Maine State Vernal Pc	ool Assessment Form	SCH CONVERT
<ul> <li>5. VERNAL POOL HABITAT INFORMATION         <ul> <li>a. Habitat survey date (only if different from indicator</li> <li>b. Wetland habitat characterization</li> <li>Choose the best descriptor for the landscape setting:</li></ul></li></ul>	r survey dates on page 3): sociated with larger wetland complex	
<ul> <li>Check all wetland types that best apply to this pool:</li> <li>Forested swamp</li> <li>Wet meadow</li> <li>Shrub swamp</li> <li>Lake or pond cove</li> <li>Peatland (fen or bog)</li> <li>Abandoned beaver flowage</li> <li>Emergent marsh</li> <li>Active beaver flowage</li> <li>C. Vernal pool status under the Natural Resources Pr</li> <li>i. Pool Origin: Natural Nodified</li> <li>U</li> <li>If modified, unnatural or unknown, describe any mod</li> </ul>	☐ Slow stream ☐ Dug pond or ☐ Floodplain borrow pit age ☐ Mostly unvegetated pool ☐ Roadside ditch ☐ ATV or skidder rut ` ☐ Other: rotection Act (NRPA) Innatural O Unknown dern or historic human impacts to the pool ( <b>required</b> )	n 
ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provide</u> O Permanent O Semi-permanent (drying partially in all years and completely in drought years) Explain: Shallow Wafter	<u>e rationale</u> in box ( <b>required</b> ): Ø Ephemeral O Unknown d (drying out completely in most years)	]
<ul> <li>Maximum depth at survey: O-12" (0-1 ft.) O 12</li> <li>Approximate size of pool (at spring highwater): Wid</li> <li>Predominate substrate in order of increasing hydrop</li> <li>O Mineral soil (bare, leaf-litter bottom, or upland mosses present)</li> <li>O Mineral soil (sphagnum moss present)</li> <li>Pool vegetation indicators in order of increasing hyd</li> <li>Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)</li> <li>Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)</li> <li>Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)</li> <li>Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)</li> <li>Sphagnum moss (anchored or suspended)</li> </ul>	<ul> <li>36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ &gt;60" (&gt;5 ft.)</li> <li>htt: ○ m ○ ft Length: ○ m ○ ft ceriod:</li> <li>○ Organic matter (peat/muck) shallow or restricted to deepest portion Ø Organic matter (peat/muck) deep and widesprotroperiod (check all that apply):</li> <li>○ Wet site ferns (e.g. royal fern, marsh fern)</li> <li>○ Wet site shrubs (e.g. highbush blueberry, maleb winterberry, mountain holly)</li> <li>○ Wet site graminoids (e.g. blue-joint grass, tusso sedge, cattail, bulrushes)</li> <li>○ Aquatic vascular spp. (e.g. pickerelweed, arrow</li> <li>○ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)</li> <li>○ No vegetation in pool</li> </ul>	read berry, bock /head)
<ul> <li>Faunal indicators (check all that apply):</li> <li>Fish Bullfrog or Green Frog tadpoles</li> <li>iii. Inlet/Outlet Flow Permanency</li> <li>Type of inlet or outlet (a seasonal or permanent char</li> <li>No inlet or outlet</li> <li>Permanent inlet or outlet</li> <li>Intermittent inlet</li> <li>Other or Unknown (explant or outlet)</li> </ul>	Other: Other: nnel providing water flowing into or out of the pool): et (channel with well-defined banks and permanent flo	ow)



5/22/2019

#### 6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates:

#### b. Indicator abundance criteria and pool survey effort

■ Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes **O**No

5/1/2019

- Was the entire pool surveyed for egg masses? OYes ONo; 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.

		Egg Masses (or adult Fairy Shrimp)										Tadpoles/Larvae <sup>4</sup>				
SPECIES	Visit #1	Visit #2	Visit #3	Confi	dence l	_evel <sup>1</sup>	Egg N	lass Ma	aturity <sup>2</sup>	Ok	Observed			Confiden Level <sup>1</sup>		
Wood Frog																
Spotted Salamander	12	6		2			M	A								
Blue-spotted Salamander		1		2				M								
Fairy Shrimp <sup>3</sup>																

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. <u>Observations should be accompanied by photographs</u>.

	Method	l of Veri	fication*	01**		Method	l of Veri	fication*	CI **
SPECIES	Р	Н	S		SPECIES	Р	н	S	
Blanding's Turtle					Wood Turtle				
Spotted Turtle					Ribbon Snake				
Ringed Boghaunter					Other:				
*Method of verifica	tion: P =	Photo	graphe	d, H = Ha	andled, S = Seen		,		
d. Optional observe SVP Pot e. General vernal po Could hav Some Sno Send completed form	er reco reential \$ cool cor W w ວະ n and s	mmer SVP <u>mmen</u> bood n M	idation X No ts and frog: ne ea	n: In Signifi (or obse 5 Ca. (ge o cumenta	tion to: Maine Dept. of Inland Fisheri Attn: Vernal Pools	s∱'// es and	Wildlin		
NOTE: Digital submis acceptable for For MDIFW use only Re This pool is: Significant Comments:	sion (t projec viewed t	o Jase ts with by MDIF Potentia but lacki	on.Cza n 3 or f W Date ally Sign ng critica	ipiga@n iewer as : : : : ificant al data	naine.gov) of vernal pool field form sessed pools; <u>larger projects mus</u> Initials: Not Significant due to: Odoes not meet l Odoes not meet l	s and ( t be ma biological ADEP ve	ohotog <u>iiled a</u> criteria. rnal poo	graphs <u>s hard</u> I criteria.	is only <u>copies</u> .
DEPLW0897-82008 04/1	8/2017			in din n		Print Fo	orm	<u>na kin bibin</u>	Page 3 of 3

5/AD-VP-7-2



# No eggs in Port Form 2020 Maine State Vernal Pool Assessment Form



INSTRUCTIONS: Complete all 3 pages of form thoroughly.	Most fields are required for pool r	egistration.
<ul> <li><u>Clear photographs</u> of a) the pool AND b) t egg mass) are <u>required</u> for all observers.</li> </ul>	the indicators (one example of eac	h species
Observer's Pool ID: <u>SAD-VP-7-2</u>		
1. PRIMARY OBSERVER INFORMATION a. Observer name: <u>Same h Dra hav a/</u> b. Contact and credentials previously provided? ON	lo (submit Addendum 1) 🛛 🔿 Yes	
2. PROJECT CONTACT INFORMATION a. Contact name: Same as observer O other b. Contact and credentials previously provided? O No c. Project Name:	o (submit Addendum 1)	
<ul> <li><b>3. LANDOWNER CONTACT INFORMATION</b> <ul> <li>a. Are you the landowner? OYes ONo If no, was</li> <li>b. Landowner's contact information (required)</li> <li>Name:</li> </ul> </li> </ul>	landowner permission obtained for survey? Phone:	OYes ONo
Street Address:	City: State:	Zip:
c. ☐ Large Projects: check if separate project landow <b>4. VERNAL POOL LOCATION INFORMATION</b> <b>a. Location</b> Township: <u>Unity</u> Twp Brief site directions to the pool (using mapped landor See a Hached map	wner data file submitted 	
b. Mapping Requirements	ith pool clearly marked	
<ul> <li>ii. GPS location of vernal pool (use Datum NAD8 Longitude/Easting: <u>-69, 456775</u> Latitud Coordinate system: Check one: Ø GIS shapefile - send to Jason.Czapiga@maine.g</li> <li>O The pool perimeter is delineated - Include map or spreadsheet with o</li> <li>O The above GPS point is at the coordinate of the pool is approxiting degrees from the above of the pool of the</li></ul>	<b>83 / WGS84)</b> de/Northing: <u>44,624376</u> gov; observer has reviewed shape accuracy (Bes d by multiple GPS points. (Excellent) coordinates. enter of the pool. (Good) imately m $O$ ft $O$ in the compass di GPS point. (Acceptable)	t) rection of

Solution       Maine State Vernal Pool Assessment Form         Solution       Alabitat survey date (only if different from indicator survey dates on page 3):	•	SAD-UP:	-2	Sanda and
5. VERNAL POOL HABITAT INFORMATION         a. Habitat survey date (only if different from indicator survey dates on page 3):	M	aine State Vernal Po	ol Assessment Form	A CALL OF A CALL
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:         Olsolated depression       OPol associated with larger wetland complex         Floodplain depression       Other:         Check all wetland types that best apply to this pool:       Dug pond or borrow pit         Pecket all wetland types that best apply to this pool:       Slow stream         Pettand (fen or bog)       Abandoned beaver flowage       Mostly unvegetated pool         Pettand (fen or bog)       Abandoned beaver flowage       Mostly unvegetated pool       Roadside ditch         is Peol Origin:       ONatural @ Natural-Modified O Unnatural OUnknown       Other:       Other:         If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required):       Pool within forested with all years and completely in drought years)       OUnknown         If. Pool Hydrology       Select the pool's estimated hydroperiod AND provide rationale in box (required):       O Unknown         (drying partially in all years and completely in drought years)       Cup and to the deaver for any other as substrate in order of increasing hydroperiod:       O Unknown         If modified by dual       I/a/       I/a/       I/a/       O Unknown         If modified unnatural or unknown, describe any modern or historic h	5. VERNAL POOL HABITAT IN	FORMATION	· ·	
b. Wetland habitat characterization         Choose the best descriptor for the landscape setting:         O Isolated depression	a. Habitat survey date ( <u>onlv</u>	if different from indicator	survey dates on page 3):	
<ul> <li>Choose the best descriptor for the landscape setting: Olsolated depression O Other: Check all wetland types that best apply to this pool: Forested swamp U Wet meadow Slow stream Dug pond or Shrub swamp U Lake or pond cove Floodplain Dorrow pit Peatland (fen or bog) Abandoned beaver flowage Mostly unvegetated pool Roadside ditch Emergent marsh Active beaver flowage Mostly unvegetated pool Cother: c. Vernal pool status under the Natural Resources Protection Act (NRPA) i. Pool Origin: O Natural O Natural-Modified O Unnatural O Unknown If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required): Pool within forested, wethand. Pool area possibly Caused by ald fogging road ii. Pool Hydrology Select the pool's estimated hydroperiod AND provide rationale in box (required): O Permanent O Semi-permanent (drying partially in all years and completely in drought years) Explain: Shultaw Paol W Ind Ind Infor Maximum depth at survey: Q0-12" (0-1 ft.) O 12-36" (1-3 ft.) O 36-60" (3-5 ft.) O &gt;60" (&gt;5 ft.) Approximate size of pool (at spring highwater): Width: <u>S</u> O m Øft Length: <u>I's</u> O m Øft Predominate substrate in order of increasing hydroperiod: Ø Mineral soil (bare, leaf-litter bottom, or upland O Organic matter (peat/muck) shallow or</li> </ul>	b. Wetland habitat character	rization		· · · · · · · · · · · · · · · · · · ·
Of Solated depression	Choose the best descriptor	for the landscape setting:		
<ul> <li>Check all wetland types that best apply to this pool:</li> <li> Forested swamp Use the meadow Shrub swamp Lake or pond cove Floodplain Dug pond or borrow pit Peatland (fen or bog) Abandoned beaver flowage Mostly unvegetated pool Roadside ditch Emergent marsh Active beaver flowage Active beaver flowage ATV or skidder rut Other: C. Vernal pool status under the Natural Resources Protection Act (NRPA) i. Pool Origin: Natural Nodified O Unknown If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required): <i>Vool Vool Vool</i></li></ul>	O Isolated depression O Floodplain depression	Q Pool ass ○ Other:	ociated with larger wetland comp	lex
<ul> <li>Porested swamp □ Wet meadow □ Slow stream □ Dug pond or borrow pit</li> <li>Shrub swamp □ Lake or pond cove □ Floodplain □ borrow pit</li> <li>Peatland (fen or bog) □ Abandoned beaver flowage □ Mostly unvegetated pool □ Roadside ditch</li> <li>Emergent marsh □ Active beaver flowage □ ATV or skidder rut □ Other:</li> <li>c. Vernal pool status under the Natural Resources Protection Act (NRPA)</li> <li>i. Pool Origin: O Natural ⓒ Natural ⓒ Natural O Unnatural O Unknown</li> <li>If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required):</li> <li>Pool Within forested Wethhol. Pool or possibly Caused by</li> <li>ald fogging voed</li> <li>ii. Pool Hydrology</li> <li>Select the pool's estimated hydroperiod AND provide rationale in box (required):</li> <li>O Permanent O Semi-permanent (drying partially in all years and completely in drought years)</li> <li>Explain:</li> <li>Shalter Pool Within forested I the</li> <li>Maximum depth at survey: '@ 0-12" (0-1 ft.) O 12-36" (1-3 ft.) O 36-60" (3-5 ft.) O &gt;60" (&gt;5 ft.)</li> <li>Approximate size of pool (at spring highwater): Width: 3 ≤ O m Ø ft Length: 1/5 O m Ø ft</li> <li>Predominate substrate in order of increasing hydroperiod:</li> <li>Ø Mineral soil (bare, leaf-litter bottom, or upland O O Organic matter (peat/muck) shallow or</li> </ul>	■ Check all wetland types tha	it best apply to this pool:		
<ul> <li>☐ Sindb swalip</li> <li>☐ Lake of point cove</li> <li>☐ Prodoplain</li> <li>☐ Dorow pit</li> <li>☐ Peatland (fen or bog)</li> <li>☐ Abandoned beaver flowage</li> <li>☐ Mostly unvegetated pool</li> <li>☐ Roadside ditch</li> <li>☐ Emergent marsh</li> <li>☐ Active beaver flowage</li> <li>☐ ATV or skidder rut</li> <li>☐ Other:</li> <li></li></ul>	Forested swamp		Slow stream	Dug pond or
<ul> <li>□ Found (and or body)</li> <li>□ Active beaver flowage</li> <li>□ ATV or skidder rut</li> <li>□ Other:</li> <li>□ C. Vernal pool status under the Natural Resources Protection Act (NRPA)</li> <li>i. Pool Origin: O Natural © Natural @ Natural-Modified O Unnatural O Unknown</li> <li>If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required):</li> <li>□ Pool within forested wet hand Pool area possibly Cabled by</li> <li>i. Pool Hydrology</li> <li>i. Pool Hydrology</li> <li>i. Select the pool's estimated hydroperiod AND provide rationale in box (required):</li> <li>○ Permanent O Semi-permanent (drying partially in all years and completely in drought years)</li> <li>Explain:</li> <li>□ Shellow pool W leaf lither</li> <li>I. Maximum depth at survey: @ 0-12" (0-1 ft.) O 12-36" (1-3 ft.) O 36-60" (3-5 ft.) O &gt;60" (&gt;5 ft.)</li> <li>I. Approximate size of pool (at spring highwater): Width: 3 ≤ O m Ø ft Length: 15 O m Ø ft</li> <li>I. Predominate substrate in order of increasing hydroperiod:</li> <li>Ø Mineral soil (bare, leaf-litter bottom, or upland</li> </ul>	Peatland (fen or bog)	Abandoned beaver flowar	The Mostly unvegetated pool	E Roadside diteb
<ul> <li>c. Vernal pool status under the Natural Resources Protection Act (NRPA)</li> <li>i. Pool Origin: ONatural ONatural ONatural OUnknown</li> <li>If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required):</li> <li>Pool within forested wothend. Pool were Possibly Caused by ald togging yourd</li> <li>ii. Pool Hydrology</li> <li>Select the pool's estimated hydroperiod AND provide rationale in box (required):</li> <li>O Permanent O Semi-permanent (drying partially in all years and completely in drought years)</li> <li>Explain:</li> <li>Maximum depth at survey: O-12" (0-1 ft.) O 12-36" (1-3 ft.) O 36-60" (3-5 ft.) O &gt;60" (&gt;5 ft.)</li> <li>Approximate size of pool (at spring highwater): Width: 3 ≤ O m O(ft Length: 1/5 O m O ft</li> <li>Predominate substrate in order of increasing hydroperiod:</li> <li>O Mineral soil (bare, leaf-litter bottom, or upland O Organic matter (peat/muck) shallow or</li> </ul>	Emergent marsh	Active beaver flowage	ATV or skidder rut	Other:
<ul> <li>i. Pool Origin: ONatural ONatural ONatural OUnknown</li> <li>If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required):</li> <li> Pool within forested wethand. Pool are possibly caused by eld togsing road </li> <li>ii. Pool Hydrology  Select the pool's <u>estimated</u> hydroperiod AND provide rationale in box (required): O Permanent O Semi-permanent (drying partially in all years and completely in drought years) Explain: Shallow pool by tog tog tog tog tog tog tog tog tog tog</li></ul>	c. Vernal pool status under	the Natural Resources Pro	otection Act (NRPA)	
If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required): Pool within forested wethand. Pool were possibly caused by ald fogging road ii. Pool Hydrology Select the pool's estimated hydroperiod AND provide rationale in box (required): O Permanent O Semi-permanent (drying partially in all years and completely in drought years) Explain: Shellow pool within forest of pool (at spring highwater): Width: 3 < 0 m Øft Length: 1/5 0 m Øft Predominate substrate in order of increasing hydroperiod: Ø Mineral soil (bare, leaf-litter bottom, or upland O Organic matter (peat/muck) shallow or	i. Pool Origin: ONatural	Natural-Modified OUn	natural OUnknown	
<ul> <li><i>Pool within forested wethind. Pool even possibly caused by</i></li> <li><i>ii. Pool Hydrology</i></li> <li>Select the pool's <u>estimated hydroperiod AND provide rationale</u> in box (required): <ul> <li>O Permanent</li> <li>O Semi-permanent</li> <li>(drying partially in all years and completely in drought years)</li> </ul> </li> <li>Explain: <ul> <li><i>Shullew pool within forestid for the formation of the format</i></li></ul></li></ul>	lf modified, unnatural or ι	unknown, describe any mode	ern or historic human impacts to t	the pool ( <b>required)</b> :
<ul> <li>ii. Pool Hydrology</li> <li>Select the pool's <u>estimated</u> hydroperiod AND <u>provide rationale</u> in box (required): <ul> <li>○ Permanent</li> <li>○ Semi-permanent</li> <li>(drying partially in all years and completely in drought years)</li> <li>Explain:</li> </ul> </li> <li>Explain: <ul> <li>Shallow pool</li> <li>Waimum depth at survey: Q0-12" (0-1 ft.)</li> <li>○ 12-36" (1-3 ft.)</li> <li>○ 36-60" (3-5 ft.)</li> <li>○ &gt;60" (&gt;5 ft.)</li> </ul> </li> <li>Approximate size of pool (at spring highwater): Width: 3 ≤ 0 m Q(ft Length: 15 0 m Q ft</li> <li>Predominate substrate in order of increasing hydroperiod:</li> <li>Q Mineral soil (bare, leaf-litter bottom, or upland</li> <li>○ Organic matter (peat/muck) shallow or</li> </ul>	Pool within Old togging ri	forested wet land.	Pool evra possibly caus	ical by
<ul> <li>Select the pool's <u>estimated hydroperiod AND provide rationale</u> in box (required):         <ul> <li>O Permanent</li> <li>O Semi-permanent</li> <li>(drying partially in all years and completely in drought years)</li> </ul> </li> <li>Explain:         <ul> <li>Shultow pool</li> <li>Maximum depth at survey: Q 0-12" (0-1 ft.)</li> <li>O 12-36" (1-3 ft.)</li> <li>O 36-60" (3-5 ft.)</li> <li>&gt;60" (&gt;5 ft.)</li> </ul> </li> <li>Approximate size of pool (at spring highwater): Width: <u>3 5</u> O m Q ft Length: <u>/5</u> O m Q ft</li> <li>Predominate substrate in order of increasing hydroperiod:</li> <li>Mineral soil (bare, leaf-litter bottom, or upland</li> <li>O Organic matter (peat/muck) shallow or</li> </ul>	ii. Pool Hydrology			
<ul> <li>O Permanent (drying partially in all years and completely in drought years)</li> <li>Explain:</li> <li>Shallow pool with long long long long long long long long</li></ul>	Select the pool's estimate	<u>ed</u> hydroperiod AND <u>provide</u>	<u>rationale</u> in box ( <b>required</b> ):	
(drying partially in all years and completely in drought years)       (drying out completely in most years)         Explain:       Shellow pool with the fiber         Shellow pool with the fiber       Maximum depth at survey: Q0-12" (0-1 ft.) 012-36" (1-3 ft.) 036-60" (3-5 ft.) 0>60" (>5 ft.)         Maximum depth at survey: Q0-12" (0-1 ft.) 012-36" (1-3 ft.) 036-60" (3-5 ft.) 0>60" (>5 ft.)         Approximate size of pool (at spring highwater): Width: 3 < 0 m 0 ft Length: 1/5 0 m 0 ft	O Permanent O Ser	mi-permanent	© Ephemeral	O Unknown
Explain:       Shellow pool with a long high years)         Shellow pool with a survey: $\bigcirc 0-12"$ (0-1 ft.) $\bigcirc 12-36"$ (1-3 ft.) $\bigcirc 36-60"$ (3-5 ft.) $\bigcirc >60"$ (>5 ft.)         Maximum depth at survey: $\bigcirc 0-12"$ (0-1 ft.) $\bigcirc 12-36"$ (1-3 ft.) $\bigcirc 36-60"$ (3-5 ft.) $\bigcirc >60"$ (>5 ft.)         Approximate size of pool (at spring highwater): Width: $3 \le 0$ m $\oslash$ ft         Predominate substrate in order of increasing hydroperiod: $\oslash$ Mineral soil (bare, leaf-litter bottom, or upland $\bigcirc$ Organic matter (peat/muck) shallow or	(dr) co	ying partially in all years and moletely in drought years)	(drying out completely in most years)	
Shillow pool will lead littler Maximum depth at survey: Q0-12" (0-1 ft.) O12-36" (1-3 ft.) O36-60" (3-5 ft.) O>60" (>5 ft.) Approximate size of pool (at spring highwater): Width: <u>35</u> O m Qft Length: <u>/5</u> O m Qft Predominate substrate in order of increasing hydroperiod: Q Mineral soil (bare, leaf-litter bottom, or upland O Organic matter (peat/muck) shallow or	Explain:		in most yearsy	
<ul> <li>Maximum depth at survey: Q0-12" (0-1 ft.) 012-36" (1-3 ft.) 036-60" (3-5 ft.) 0&gt;60" (&gt;5 ft.)</li> <li>Approximate size of pool (at spring highwater): Width: 35 0 m Qft Length: /5 0 m 0 ft</li> <li>Predominate substrate in order of increasing hydroperiod: Q Mineral soil (bare, leaf-litter bottom, or upland 0 Organic matter (peat/muck) shallow or</li> </ul>	Shillow pool	will leaf litter		
<ul> <li>Maximum depth at survey: 0.12" (0-1 ft.) 0 12-36" (1-3 ft.) 0 36-60" (3-5 ft.) 0 &gt;60" (&gt;5 ft.)</li> <li>Approximate size of pool (at spring highwater): Width: 3 0 m 0 ft Length: /5 0 m 0 ft</li> <li>Predominate substrate in order of increasing hydroperiod:</li> <li>Mineral soil (bare, leaf-litter bottom, or upland 0 Organic matter (peat/muck) shallow or</li> </ul>				
<ul> <li>Approximate size of pool (at spring highwater): Width: <u>35</u> O m Øft Length: <u>/5</u> O m Øft</li> <li>Predominate substrate in order of increasing hydroperiod:</li> <li>Ø Mineral soil (bare, leaf-litter bottom, or upland O Organic matter (peat/muck) shallow or</li> </ul>	Maximum depth at surver	y: '௸0-12'' (0-1 ft.)	36" (1-3 ft.) O 36-60" (3-5 ft.)	O >60" (>5 ft.)
<ul> <li>Predominate substrate in order of increasing hydroperiod:</li> <li>Mineral soil (bare, leaf-litter bottom, or upland</li> <li>O Organic matter (peat/muck) shallow or</li> </ul>	Approximate size of pool	(at spring highwater): Width	$n: \underline{35}$ O m $O$ ft Length:	<u>/S</u> Om ⊗ft
Mineral soil (bare, leaf-litter bottom, or upland Organic matter (peat/muck) shallow or	Predominate substrate in	order of increasing hydrope	eriod:	
	Mineral soil (bare, lea	f-litter bottom, or upland	O Organic matter (peat/muck)	shallow or
Mineral soil (sphagpum moss present) Organic matter (post/muck) doop and wideepree	Mineral soil (sphagpu	m moss present)	restricted to deepest portio	n doon and wideenrood
Post vegetetion is diseters in order of is encoded to be be and widesprea	Pool ve setetion in diseter	nim noss presenty		deep and widespread
Pool vegetation indicators in order of increasing hydroperiod (check all that apply): Terrestrial nonvascular spp. (e.g. baircap	Pool vegetation indicators M Terrestrial popyascul;	s in order of increasing hydro	operiod (check all that apply):	
moss, lycopodium spp.)	moss, lycopodium sp	p.)	VVet site ferns (e.g. royal fern,	marsh fern)
Dry site ferns (e.g. spinulose wood fern, winterberry, maleberry, maleberry, maleberry)	Dry site ferns (e.g. sp	binulose wood fern,	VVet site shrubs (e.g. highbusi winterberry, mountain holly)	h blueberry, maleberry,
Moist site ferns (e.g. sensitive fern, cinnamon fern interrunted fern New York fern)	Moist site ferns (e.g.	m) sensitive fern, cinnamon	<ul> <li>Wet site graminoids (e.g. blue sedge, cattail, bulrushes)</li> </ul>	e-joint grass, tussock
Moist site vasculars (e.g. skunk cabbage.	Moist site vasculars (	e.g. skunk cabbage.	🗌 Aquatic vascular spp. (e.g. pi	ckerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle)	jewelweed, blue flag i	iris, swamp candle)	Floating or submerged aquati	cs (e.g. water lily,
Sphagnum moss (anchored or suspended) water shield, pond weed, bladderwort)	Sphagnum moss (and	chored or suspended)	water shield, pond weed, blac	lderwort)
■ Faunal indicators (check all that apply):	Faunal indicators (check a)	all that apply) <sup>.</sup>	No vegetation in pool	
Fish Bullfrog or Green Frog tadpoles Other:	☐ Fish ☐ Bullfrog o	or Green Frog tadpoles	] Other:	
	_ 0			
III. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or normanont channel providing water flowing into an out of the seasonal				
No inject or outlet $\sim$ $\sim$ Dermanant inject or outlet (channel with well defined banks and $\sim$ $\sim$ $\sim$	iii. Inlet/Outlet Flow Permar Type of inlet or outlet (o co	nency easonal or pormanent share	al providing water flowing into	out of the peoble
O Intermittent inlet or outlet	iii. Inlet/Outlet Flow Permar Type of inlet or outlet (a se	nency easonal or permanent chanr	nel providing water flowing into or	out of the pool):

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### 5AD-VP-7-2

### **Maine State Vernal Pool Assessment Form**



#### 6. VERNAL POOL INDICATOR INFORMATION

2019 5/1/20h 5/22 a. Indicator survey dates:

#### 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? OYes ONo; 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.

		Egg Masses (or adult Fairy Shrimp)										Tadpoles/Larvae <sup>4</sup>				
SPECIES	Visit #1	Visit #2	Visit #3	Confi	dence l	_evel <sup>1</sup>	Egg M	lass Ma	aturity <sup>2</sup>	Ob	oserv	ed	Cor L	nfide .evel	nce	
Wood Frog																
Spotted Salamander	2	Ø		3	3	<i></i>	M									
Blue-spotted Salamander																
Fairy Shrimp <sup>3</sup>																

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. <u>Observations should be accompanied by photographs</u>.

		Method	of Veri	fication*	CI **		Method	l of Veri	fication*	CI **
	SPECIES	Р	Н	S		SPECIES	Р	н	S	
	Blanding's Turtle					Wood Turtle				
	Spotted Turtle					Ribbon Snake				
	Ringed Boghaunter					Other:				
	*Method of verifica **CL - Confidence	tion: P = level in	Photospecies	graphe s detern	d, H = Ha nination:	andled, S = Seen 1= <60%, 2= 60-95%, 3= >95%				
d. (	Dptional observe	er reco ential s col cor	mmer SVP mmen	Idation	n: n Signifi /or obse	cant VP Indicator Breeding Area	1			
Ser	nd completed forn	n and s	upport	ing doo	cumenta	tion to: Maine Dept. of Inland Fisheri Attn: Vernal Pools 650 State Street, Bangor, MB	es and : 04401	Wildlif	e	
NOTE	: Digital submis acceptable for	sion (t projec	o Jas ts witl	on.Cza 13 or f	ipiga@r iewer as	naine.gov) of vernal pool field form ssessed pools; <u>larger projects mus</u> t	s and   : be ma	ohotog uiled a	graphs s hard	is only <u>copies</u> .
For ME	DIFW use only Re	viewed I	by MDIF	W Date	ə:	Initials:				
This po	ol is: 🔲 Significant		Potentia but lacki	ally Sign ng critica	nificant al data	Not Significant due to: O does not meet t	iological IDEP ve	criteria. rnal poo	I criteria.	
Comme	ents:									
DEPLW	/0897-82008 04/1	8/2017					Print Fo	orm		Page 3 of 3





~	Sheer
INS	STRUCTIONS:
= ( = (	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.
Ob	server's Pool ID: <u>SAD-VP-8</u> MDIFW Pool ID:
1. I a t	PRIMARY OBSERVER INFORMATION a. Observer name: <u>Sara h Dra hov み l</u> o. Contact and credentials previously provided? ONo (submit Addendum 1)
2. F	PROJECT CONTACT INFORMATION
a	a. Contact name: 🙋 same as observer 🔿 other
ł	b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes
	c. Project Name: <u>/ongroad (3 Corners)</u>
3. L	ANDOWNER CONTACT INFORMATION
a	a. Are you the landowner? OYes $\bigotimes$ No If no, was landowner permission obtained for survey? $\bigotimes$ Yes ONo
b	b. Landowner's contact information (required)
	Name: <u>E.D. Bessey &amp; Son</u> Phone: (207) 453-9388
	Street Address: 779 Skowhegen Rd. City: <u>Hinck/cy</u> State: <u>ME</u> Zip: <u>04994</u>
с	e. 🔲 Large Projects: check if separate project landowner data file submitted 🤍
4. \	/ERNAL POOL LOCATION INFORMATION
а	Location Township: Unity Two
	Brief site directions to the pool (using mapped landmarks):
	See althoched map
b	D. 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:45 601 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.
	$m{O}$ The above GPS point is at the center of the pool. (Good)
	O The center of the pool is approximately mO ft O in the compass direction of degrees from the above GPS point. (Acceptable)

SAD-	112	2
PINE	V F-	()

Ma	ine State Vernal Po	ol Assessment Form	AND
5 VERNAL POOL HABITAT INF			<sup>94</sup> 96 cr
a. Habitat survey date (only if	different from indicator	survey dates on nade 3):	
b. Wetland habitat characteri	zation	••••••••••••••••••••••••••••••••••••••	
Choose the best descriptor fr	or the landscape setting:		
O Isolated depression O Floodplain depression	Ø Pool ass ○ Other: _	ociated with larger wetland comp	lex
Check all wetland types that	best apply to this pool:		
🕅 Forested swamp 🛛 🗌	Wet meadow	Slow stream	Dug pond or
📈 Shrub swamp 🛛 🗌	Lake or pond cove	Floodplain	borrow pit
Peatland (fen or bog)	Abandoned beaver flowa	ge Mostly unvegetated pool	Roadside ditch
	Active beaver flowage	ATV or skidder rut	Other:
c. Vernal pool status under t	he Natural Resources Pro	otection Act (NRPA)	
i. Pool Origin: ONatural	XNatural-Modified OUr	natural OUnknown	
If modified, unnatural or ur	nknown, describe any mod	ern or historic human impacts to	the pool ( <b>required</b> ):
Road at N	end of impound	ing wetland	
	······································	an a	
ii. Pool Hydrology			
com Explain:	pletely in drought years)	in most years)	
<ul> <li>Maximum depth at survey</li> <li>Approximate size of pool (</li> </ul>	: 0-12" (0-1 ft.) 012- at spring highwater): Widt	36" (1-3 ft.)	O >60" (>5 ft.) / <u>∕∕∕</u> O m Ò∕tt
Predominate substrate in e	order of increasing hydrop	eriod:	
O Mineral soil (bare, leaf-	litter bottom, or upland	O Organic matter (peat/muck)	) shallow or
O Mineral soil (sphagnum	n moss present)	Organic matter (peat/muck)	) deep and widespread
Pool vegetation indicators	in order of increasing hydr	operiod (check all that apply):	
🔲 Terrestrial nonvascular	r spp. (e.g. haircap	Wet site ferns (e.g. roval fern	. marsh fern)
moss, lycopodium spp. □ Dry site ferns (e.g. spi	.) nulose wood fern.	Wet site shrubs (e.g. highbus	h blueberry, maleberry
lady fern, bracken ferr □ Moist site ferns (e.g. s	n) ensitive fern, cinnamon	Winterberry, mountain holly)	e-joint grass, tussock
fern, interrupted fern, N	New York fern)	sedge, cattail, bulrushes)	
Moist site vasculars (e	.g. skunk cabbage,	Aquatic vascular spp. (e.g. pi	ckerelweed, arrowhead
jewelweed, blue flag iri X Sphagnum moss (anch	is, swamp candle) nored or suspended)	Floating or submerged aquat water shield, pond weed, black	ics (e.g. water lily, dderwort)
– Comolin di ostore (de ostore)	11 dl. d	☑ No vegetation in pool	
■ Faunal Indicators (check al	Green Frog tadpoles	☐ Other:	
iii. Inlet/Outlet Flow Perman	ency		
Type of inlet or outlet (a se	asonal or permanent chan	nel providing water flowing into o	r out of the pool):
$\bigcirc$ No inlet or outlet $\bigcirc$	Permanent inlet or outlet	(channel with well-defined banks	and permanent flow)
Ø Intermittent inlet O or outlet	) Other or Unknown (expla	ain):	



### SAP-VP-8

### **Maine State Vernal Pool Assessment Form**



#### 6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: <u>5///2019</u>

#### b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? O Yes O No
- Was the entire pool surveyed for egg masses? ØYes ONo; 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.

		Tadpoles/Larvae <sup>4</sup>												
SPECIES	Visit #1	Visit #2	Visit #3	Confi	dence Level	Egg N	Aass Ma	turity <sup>2</sup>	Ob	serv	ed	Cor L	nfide .evel	nce 1
Wood Frog	36			2		M								
Spotted Salamander	49			2		M								
Blue-spotted Salamander														
Fairy Shrimp <sup>3</sup>														

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. <u>Observations should be accompanied by photographs</u>.

	0050150	Method of Verification*		CI **			Method of Verification*		CL**		
	SPECIES	Р	н	S	OL	SPECIES	Р	н	S		
	Blanding's Turtle					Wood Turtle					
	Spotted Turtle					Ribbon Snake					
	Ringed Boghaunter					Other:					
	*Method of verificat	tion: P = evel in	Photo	graphe detern	d, H = Ha	andled, S = Seen 1= <60% 2= 60-95% 3= >95%					
a. (	Jptional observe	er reco	mmer		l: ;						
		enuar	SVP		n Signin	cant VP LI Indicator Breeding Area					
e. (	General vernal po	ool cor	nmen	ts and	or obse	ervations of other wildlife: Same	un	L Con	nples	as SAC.	-vp-7
	Pool impor	under	1 6.	y roc	201 5	Separated by Small ber	N.	$\sim$	8 ''		
	of water in	road	1 1	0/22	55	25 OWF Pag MASSE	St	×11 .	Some	SMAR	
L				1 41		1000, 000,	Cove	eringi	owto	Foren	
Sei	nd completed form	n and s	uppor	ing do	cumenta	tion to: Maine Dept. of Inland Fisherie	s and	Wildlif	e hh	ter	
	1		• •	Ŭ		Attn: Vernal Pools					
						650 State Street, Bangor, ME	04401				
NOTE	: Digital submis acceptable for	sion (t projec	o Jas ts wit	on.Cza h 3 or f	piga@r ewer as	naine.gov) of vernal pool field forms sessed pools; <u>larger projects must</u>	and p be ma	photog	raphs s hard	is only <u>copies</u> .	
For MI	DIFW use only Re	viewed I	oy MDIF	W Date	<b>.</b>	Initials:					
This po	ool is: 🔲 Significant		otenti	ally Sign	ificant	Not Significant due to: Odoes not meet bi	ological	criteria.			
			but lack	ng critica	ai data	Odoes not meet M	DEP ver	mal poo	l criteria.		
Comm	ents:										
가 있는데 다 같은데 다 같은 다											
DEPLV	V0897-82008 04/1	8/2017				n na serie de la company d La company de la company de	Print Fo	orm	253 AG 1 1929 - 19	Page 3 of 3	





SUP

INSTRUCTIONS:	
<ul> <li>Complete all 3 pages of form thoroughly. M</li> <li><u>Clear photographs</u> of a) the pool AND b) the egg mass) are <u>required</u> for all observers.</li> </ul>	lost fields are <u>required</u> for pool registration. e indicators (one example of each species
Observer's Pool ID: <u>5</u> AD -1/P - 9	MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: <u>SER/SAD</u> b. Contact and credentials previously provided? ONo (	submit Addendum 1)
2. PROJECT CONTACT INFORMATION	
a. Contact name: 🛿 same as observer 🔿 other	
b. Contact and credentials previously provided? O No (s	ubmit Addendum 1) 🛛 🔿 Yes
c. Project Name: Longroad ( 3 Corne	
3. LANDOWNER CONTACT INFORMATION	
a. Are you the landowner? OYes 👰No 🛛 If no, was lan	downer permission obtained for survey? OYes ONo
b. Landowner's contact information (required)	
Name: E.D. Bessey 3 Son	Phone: (207) 453-9388
Street Address: 779 Skowheaan Rd	City: <u>Hick len</u> State: <u>Mic</u> Zip: <u>04944</u>
c. 🔲 Large Projects: check if separate project landowne	er data file submitted
a. Location Township: <u>Clinton</u>	
Brief site directions to the pool (using mapped landma	rks):
See allached 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: -(A.464547 Latitude/	Northing: 44.638161
Coordinate system: $MG \le 84$	
Check one: O GIS shapefile - send to Jason Czapiga@maine.gov:	observer has reviewed shape accuracy (Best)
O The pool perimeter is delineated by	rdinates
$\mathcal{O}$ The above GPS point is at the cent	er of the pool (Good)
O The center of the pool is approxima degrees from the above GP	tely mO ft O in the compass direction of S point. (Acceptable)

•	AD - VP - 9							
N	1aine State Vernal Po	ol Assessment Form	and the second second					
<ul> <li>5. VERNAL POOL HABITAT IN <ul> <li>a. Habitat survey date (only)</li> <li>b. Wetland habitat character</li> <li>Choose the best descriptor</li> <li>lsolated depression</li> <li>Floodplain depression</li> <li>Check all wetland types the</li> <li>Forested swamp</li> <li>Shrub swamp</li> <li>Peatland (fen or bog)</li> <li>Emergent marsh</li> </ul> </li> <li>c. Vernal pool status under</li> <li>i. Pool Origin: Natural</li> </ul>	VFORMATION  ( if different from indicator  r for the landscape setting:  O Pool ass O Other:  at best apply to this pool:  Wet meadow  Lake or pond cove  Abandoned beaver flowage  r the Natural Resources Proval O Natural-Modified O Un	survey dates on page 3): <u>5/2</u> ociated with larger wetland comp Slow stream Floodplain Ge Mostly unvegetated pool ATV or skidder rut	lex Dug pond or borrow pit Roadside ditch Other:					
ii. Pool Hydrology Select the pool's <u>estimar</u> O Permanent O Se (d Explain: Maximum depth at surv	<ul> <li>ii. Pool Hydrology</li> <li>Select the pool's <u>estimated</u> hydroperiod AND <u>provide rationale</u> in box (required):         <ul> <li>○ Permanent</li> <li>○ Semi-permanent</li> <li>○ Ephemeral</li> <li>○ Unknown (drying partially in all years and (drying out completely completely in drought years)</li> <li>in most years)</li> </ul> </li> <li>Explain:</li> <li>■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ &gt;60" (&gt;5 ft.)</li> </ul>							
<ul> <li>Predominate substrate if</li> <li>Mineral soil (bare, le mosses present)</li> <li>Mineral soil (sphagn)</li> <li>Pool vegetation indicator</li> <li>Terrestrial nonvascumoss, lycopodium signation of the second se</li></ul>	in order of increasing hydrope af-litter bottom, or upland um moss present) ors in order of increasing hydr ilar spp. (e.g. haircap pp.) spinulose wood fern, ern) g. sensitive fern, cinnamon h, New York fern) (e.g. skunk cabbage, g iris, swamp candle) nchored or suspended) c all that apply): or Green Frog tadpoles	eriod: O Organic matter (peat/muck) restricted to deepest portio O Organic matter (peat/muck) roperiod (check all that apply): Wet site ferns (e.g. royal fern Wet site shrubs (e.g. highbus winterberry, mountain holly) Wet site graminoids (e.g. blue sedge, cattail, bulrushes) Aquatic vascular spp. (e.g. pi Floating or submerged aquati water shield, pond weed, blac No vegetation in pool	) shallow or on ) deep and widespread , marsh fern) h blueberry, maleberry, e-joint grass, tussock ckerelweed, arrowhead) ics (e.g. water lily, dderwort)					
<ul> <li>iii. Inlet/Outlet Flow Perma Type of inlet or outlet (a</li> <li>○ No inlet or outlet</li> <li>⑩ Intermittent inlet or outlet</li> </ul>	anency seasonal or permanent chan O Permanent inlet or outlet O Other or Unknown (expla	nel providing water flowing into o (channel with well-defined banks ain):	r out of the pool): and permanent flow)					



#### 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)? O Yes No
- 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.

	Egg Masses (or adult Fairy Shrimp)											Tadpoles/Larvae <sup>4</sup>			
SPECIES	Visit #1	Visit #2	Visit #3	Confi	dence l	_evel <sup>1</sup>	Egg N	lass Ma	aturity <sup>2</sup>	Oł	oserv	/ed	Coi l	nfide .evel	nce
Wood Frog	20	-		3			A								
Spotted Salamander	20			3			F/m								
Blue-spotted Salamander	Ø														
Fairy Shrimp <sup>3</sup>	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. <u>Observations should be accompanied by photographs</u>.

		Method of Ver		fication*			Method of Verification*			CI **
	SPECIES	Р	Н	S	UL	SPECIES	Р	Н	S	Ű.
	Blanding's Turtle					Wood Turtle				
	Spotted Turtle					Ribbon Snake				
	Ringed Boghaunter					Other:				
	*Method of verificat	tion: P =	Photo	graphe	d, H = Ha	ndled, S = Seen				
	**CL - Confidence I	evel in	species	s detern	nination:	1= <60%, 2= 60-95%, 3= >95%				
d. (	Optional observe	er reco	mmer	datior	1:					
	SVP 🗌 Pot	ential S	SVP	🗆 No	n Signifi	cant VP 🛛 Indicator Breeding Area				
_ /				to and	lor obor	protions of other wildlife				
е. с	seneral vernal po		nmen	is and	or obse					
	Caddis fly's obsecred rafag egg masses.									
	Dried Up by 7/15/2026									
-										
									_	

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 Not Significant due to: Ubut lacking critical data	) does not meet biological criteria. ) does not meet MDEP vernal pool criteria.
Comments:	
DEPLW0897-82008 04/18/2017	Print Form Page 3 of 3





INSTRUCTIONS:				
Complete all 3 pages of f	orm thoroughly. Mo	ost fields are required	for pool regis	tration.
Clear photographs of a) the second	the pool AND b) the	indicators (one examp	le of each spe	ecies
egg mass) are <u>required</u> f	or all observers.			
Observer's Pool ID: <u>S</u> AQ-V₽	- 10	MDIFW Pool ID:		
1. PRIMARY OBSERVER INFORM				
b. Contact and credentials previ	uously provided? ONo (si	ubmit Addendum 1) 🕅 Ye	s	
		X.		
2. PROJECT CONTACT INFORM	ATION			
a. Contact name: 🔞 same as o	bserver O other			
b. Contact and credentials previ	ously provided? 🔿 No (su	bmit Addendum 1) 🗧 🔿 Ye	s	
c. Project Name: <u>Longro</u>	od (3 Corners	Solar Projet)		
3. LANDOWNER CONTACT INFO			~ <b>.</b>	•
a. Are you the landowner? Ove	es WNO If no, was land	owner permission obtained for	or survey? QYe	s ONo
b. Landowner's contact informati	on (required)	- (207) 100	6200	
Name: <u>E.D. Bessed</u>	<u>son</u>	Phone: $(207) 453$	- 7388	·
Street Address: $\underline{+ + + -} \leq$	Kowpegan	City: <u>HICK/en</u>	State: <u>Mt</u> Z	ip: <u>0494</u> 4
C. Large Projects: check it se	parate project landowner	data file submitted		
4. VERNAL POOL LOCATION INF	ORMATION	$(a_{ij})_{ij} = (a_{ij})_{ij} = (a_{ij})_{ij$		
a. Location Township:	in tan			Ху
Brief site directions to the pool	(using mapped landmark	s):		
See a Hachod M	an	,		
	V			
			1	
b. Mapping Requirements				
i. USGS topographic map OR	aerial photograph with po	ool clearly marked.		
ii. GPS location of vernal po	ol (use Datum NAD83 / \	NGS84)		
Longitude/Easting:	463877_ Latitude/No	orthing: <u>44.1386</u>		
Coordinate system:	5 84			
Check one: O GIS shaped	file ason Czanica@maine.cov: o	hearver has reviewed shane acc	curacy (Best)	
O The pool pe	erimeter is delineated by r	nultiple GPS points. (Exceller	nt)	
The above	GPS point is at the center	of the pool. (Good)		
O The center dea	of the pool is approximate rees from the above GPS	bly mO ft O in the c	compass direction	of
009				

SAD-VP	-10
Maine State Vernal Po	ool Assessment Form
5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date ( <u>only if different</u> from indicator	r survey dates on page 3):
b. Wetland habitat characterization	
Choose the best descriptor for the landscape setting:	
<ul> <li>● Isolated depression</li> <li>● Floodplain depression</li> <li>● Other:</li> </ul>	sociated with larger wetland complex
Check all wetland types that best apply to this pool:	
📓 Forested swamp 🛛 🗌 Wet meadow	☐ Slow stream ☐ Dug pond or
Shrub swamp   Image: Lake or pond cove	Floodplain borrow pit
<ul> <li>Peatland (fen or bog)</li> <li>Abandoned beaver flowa</li> <li>Emergent marsh</li> <li>Active beaver flowage</li> </ul>	age ☐ Mostly unvegetated pool ☐ Roadside ditch ☐ ATV or skidder rut ☐ Other:
c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)
i. Pool Origin: <a>Onatural</a> Natural-Modified OU	Innatural OUnknown
If modified, unnatural or unknown, describe any mo	dern or historic human impacts to the pool ( <b>required</b> ):
ii. Pool Hydrology	
Select the pool's estimated hydroperiod AND provid	e rationale in box ( <b>required</b> ):
O Permanent  Semi-permanent	O Ephemeral O Unknown
(drying partially in all years an	d (drying out completely
completely in drought years)	in most years)
<ul> <li>Maximum depth at survey: O 0-12" (0-1 ft.) Ø 12</li> <li>Approximate size of pool (at spring highwater): Wig</li> </ul>	$\frac{1}{36}$ (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)
Predominate substrate in order of increasing hydror	period:
Mineral soil (bare, leaf-litter bottom, or upland mosses present)	Organic matter (peat/muck) shallow or restricted to deconst portion
O Mineral soil (sphagnum moss present)	O Organic matter (neat/muck) deep and widespread
Pool vegetation indicators in order of increasing hydrogeneous	Iroperiod (check all that apply):
I errestrial nonvascular spp. (e.g. naircap 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,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle)	Floating or submerged aquatics (e.g. water lily,
Sphagnum moss (anchored or suspended)	water shield, pond weed, bladderwort)
Faunal indicators (check all that apply).	
☐ Fish ☐ Bullfrog or Green Frog tadpoles	☐ Other:
iii. Inlet/Outlet Flow Permanency	
I ype of inlet or outlet (a seasonal or permanent cha	nnel providing water flowing into or out of the pool):
So inlet or outlet O Permanent inlet or outlet	et (channel with well-defined banks and permanent flow)
O Intermittent inlet O Other or Unknown (explored or outlet)	lain):



19/2020

SAD - VP-10



6. VERNAL POOL INDICATOR INFORMATION 5/2/2019: a. Indicator survey dates:

#### 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? 

   Was the entire pool surveyed for egg masses?
   Was the 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.

		E	igg Masses	s (or ad	lult Fair	/ Shrim	p)			Tadpoles/Larvae <sup>4</sup>					
SPECIES	Visit #1	Visit #2	Visit #3	Conf	idence	Level <sup>1</sup>	Egg Mass Maturity <sup>2</sup>			Observed			Confidence Level <sup>1</sup>		
Wood Frog	6	26		3	3		F								
Spotted Salamander	31	3 /		3	3		F/M								
Blue-spotted Salamander	Ø	Ø	11 - <b>1</b> 4												
Fairy Shrimp <sup>3</sup>	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. <u>Observations should be accompanied by photographs</u>.

	Method of Verification*			CI **		Method	CI **		
SPECIES	Р	Н	S	UL.	SPECIES	Р	Н	S	0L
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 Detential SVP

Non Significant VP Indicator Breeding Area

#### e. General vernal pool comments and/or observations of other wildlife:

7/15/2020 Dried up by 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: Potentially Significant Not Significant due to: O does not meet biological criteria. This pool is: Significant but lacking critical data Odoes not meet MDEP vernal pool criteria. Comments:

DEPLW0897-82008 04/18/2017





INSTRUCTIONS:
<ul> <li>Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.</li> <li><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.</li> </ul>
Observer's Pool ID:         SAD-VP-11         MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: <u>Scent Decharted</u> b. Contact and credentials previously provided? ONo (submit Addendum 1) ØYes
2. PROJECT CONTACT INFORMATION
a Contact name: $\Omega$ same as observer $\Omega$ other
b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes
Designed Name: Annual 2 Courses Solar Point
C. Project Name. Longroad (5 Corners John Project)
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? OYes ONo If no, was landowner permission obtained for survey? OYes ONo
b. Landowner's contact information (required)
Name: E. D. Ressen 's Son Phone: $(207)$ 453-9388
Street Address: 779 Skowhean Rd. City: Hicklen State: ME Zip: 0494
c. C Large Projects: check if separate project landowner data file submitted
4. VERNAL POOL LOCATION INFORMATION
a. Location Township: On the two
Brief site directions to the pool (using mapped landmarks):
See altached maps
V
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: <i>69. 44 Z9/8</i> Latitude/Northing: <u>44. 633697</u>
Coordinate system: UKS 84
Check one: O GIS shapefile - send to Jason Czapiga@maine.gov; observer has reviewed shape accuracy (Best)
<ul> <li>The pool perimeter is delineated by multiple GPS points. (Excellent)</li> <li>Include map or spreadsheet with coordinates.</li> </ul>
🗭 The above GPS point is at the center of the pool. (Good)
O The center of the pool is approximately mO ft O in the compass direction of degrees from the above GPS point. (Acceptable)

	SAD-VP-11		1981 <sup>755896</sup> 22
	Maine State Vernal Pool	Assessment Form	
5. VER	RNAL POOL HABITAT INFORMATION		45 G W.
а. п b. W	Netland habitat characterization	vey dates on page 3):	•
■ CI	choose the best descriptor for the landscape setting:		
C	Isolated depression     Isolated depression       Floodplain depression     Other:	ated with larger wetland comp	ex
■ ÇI	check all wetland types that best apply to this pool:		
Ľ Ę	Forested swamp	Slow stream	Dug pond or
	Shrub swamp Lake or pond cove	☐ Floodplain	
	Peatiand (fen or bog)       I Abandoned beaver flowage         Emergent marsh       I Active beaver flowage	Mostly unvegetated pool ATV or skidder rut	Other:
<b>c.</b> V	/emal pool status under the Natural Resources Protect	ction Act (NRPA)	
i.	. Pool Origin: 🕅 Natural O Natural-Modified O Unnat	tural OUnknown	
	If modified, unnatural or unknown, describe any modern	or historic human impacts to t	he pool ( <b>required</b> ):
	<b></b>	· · · · · · · · · · · · · · · · · · ·	
II. =	. Pool Hydrology	is a station in the second	
-	O Permanent O Semi-permanent	ionale in box (required):	
	(drying partially in all years and	(drying out completely	UTIKHOWH
	completely in drought years)	in most years)	
		. <u></u>	
	Lent 11 Her		
_			
	Maximum depth at survey: O 0-12" (0-1 ft.) O 12-36"	(1-3 ft.) (O 36-60" (3-5 ft.)	◯ >60" (>5 ft.)
	Approximate size of pool (at spring highwater): Width: _	OmOft Length:_	O m O ft
	Predominate substrate in order of increasing hydroperio	d:	
	Mineral soil (bare, leaf-litter bottom, or upland mosses present)	Organic matter (peat/muck) restricted to deepest portio	shallow or n
	O Mineral soil (sphagnum moss present)	Organic matter (peat/muck)	deep and widespread
	Pool vegetation indicators in order of increasing hydrope	eriod (check all that apply):	
	Terrestrial nonvascular spp. (e.g. haircap	Wet site ferns (e.g. royal fern,	marsh fern)
	Dry site ferns (e.g. spinulose wood fern,	Wet site shrubs (e.g. highbusl winterberry, mountain holly)	n blueberry, maleberry,
	☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue sedge, cattail, bulrushes)	-joint grass, tussock
	$\square$ Moist site vasculars (e.g. skunk cabbage, $\square$	Aquatic vascular spp. (e.g. pie	ckerelweed, arrowhead)
	jewelweed, blue flag iris, swamp candle)	Floating or submerged aquati	cs (e.g. water lily,
	Sphagnum moss (anchored or suspended)	water shield, pond weed, blac	derwort)
-	Faunal indicators (check all that apply):	no vegetation in pool	
	☐ Fish ☐ Bullfrog or Green Frog tadpoles ☐	Other:	
;:::	Inlot/Outlet Flow Remanancy		
III.	Type of inlet or outlet (a seasonal or nermanent channel	providing water flowing into or	out of the pool):
	$\bigcirc$ No inlet or outlet $\bigcirc$ Permapent inlet or outlet (ab	annel with well_defined banks	and normanant flow)
	Intermittent inlet		and permanent livw)
	or outlet	· · · · · · · · · · · · · · · · · · ·	





#### 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)? O Yes O No
- Was the entire pool surveyed for egg masses? OYes ONo; 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.

		E	gg Masses	(or ad	ult Fairy	Shrim	p)			Tadpoles/Larvae <sup>4</sup>					
SPECIES	Visit #1	Visit #2	Visit #3	Confidence Level <sup>1</sup>			Egg Mass Maturity <sup>2</sup>			Observed			Confidence Level <sup>1</sup>		
Wood Frog	10			3			M								
Spotted Salamander	7			3			Μ								
Blue-spotted Salamander		4			3			M							
Fairy Shrimp <sup>3</sup>															

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. <u>Observations should be accompanied by photographs</u>.

		Method of Verification*		CI **		Method	CL**				
	SPECIES	Р	Н	S	<u> </u>	SPECIES	Р	н	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 observe	r reco	mmen	dation	:						
	SVP Pot	ential S	SVP	⊠ No	n Signifi	cant VP 🛛 Indicator Breeding Area					
				<i>/</i> ·	Ū						
e. (	Beneral vernal po	ool con	nmen	ts and/	or obse	ervations of other wildlife:					
-	Dried	g b	ŗg	7/1	5/20	20					
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											
For MDIFW use only Reviewed by MDIFW Date: Initials:											
This po	This pool is: Significant Potentially Significant Not Significant due to: Odoes not meet biological criteria.										
Comme	ents:										
		20047	a ya a a a a a a a a a a a a a a a a a	a da garta dos Ari Antes da constantes Antes da constantes da se	en en her her som Se en som som				<u></u>	]	

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Print Form

Page 3 of 3





INSTRUCTIONS:
<ul> <li>Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.</li> <li><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.</li> </ul>
Observer's Pool ID: <u>SAD - VP - 12</u> MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: <u>Sarah Drahov Za(</u> b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes
2. PROJECT CONTACT INFORMATION         a. Contact name: Ø same as observer O other         b. Contact and credentials previously provided? O No (submit Addendum 1)         C. Project Name: Longroad
<ul> <li>3. LANDOWNER CONTACT INFORMATION <ul> <li>a. Are you the landowner? OYes QNo If no, was landowner permission obtained for survey? QYes ONo</li> <li>b. Landowner's contact information (required) <ul> <li>Name: <u>E.D. Bessey &amp; Son</u></li> <li>Street Address: <u>779</u></li> <li>Skowhegen</li> <li>City: <u>Hhuckley</u> State:<u>ME</u> Zip: <u>D4944</u></li> <li>c. Large Projects: check if separate project landowner data file submitted</li> </ul> </li> <li>4. VERNAL POOL LOCATION INFORMATION <ul> <li>a. Location Township: <u>Unity</u> Twp.</li> <li>Brief site directions to the pool (using mapped landmarks):</li> </ul> </li> </ul></li></ul>
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:      64.442326         Longitude/Easting:      64.442326         Coordinate system:      116_5         B4

	Maine State Ver	nal Pool Assessment Form	
5. VERNAL POO	L HABITAT INFORMATION	adjector survey dates on page 2).	
a. Habitat Surv	bitet characterization	Idicator survey dates on page 3):	
	Shat characterization	atting	
O Isolated d O Floodplair	lepression $O$	etung: Pool associated with larger wetland complex Other:	
Check all we	tland types that best apply to this r	pool:	
🙀 Forested	swamp 🛛 🗌 Wet meadow	☐ Slow stream ☐ Dug pond or	
🗌 Shrub sw	amp 🔄 Lake or pond cov	ve 🔲 Floodplain borrow pit	
☐ Peatland ☐ Emergen	(fen or bog)	ver flowage I Mostly unvegetated pool Roadside ditch wage ATV or skidder rut Other:	
c. Vernal pool	status under the Natural Resou	Irces Protection Act (NRPA)	
i. Pool Orig	in: 🕅 Natural O Natural-Modifie	ed OUnnatural OUnknown	
If modified	unnatural or unknown describe	any modern or historic human impacts to the pool (required):	
		any modern of motorio namen impacts to the poor (required).	
ii. Pool Hyd	rology		
■ Select the	pool's estimated hydroperiod ANF	) provide rationale in hox (required)	
O Permai	nent O Semi-permanent	$\bigotimes$ Ephemeral $\bigotimes$ Unknown	
O T Officia	(drying partially in all y	vears and (drying out completely	
Entrie	completely in drought	years) in most years)	
Explain:			
Leaf	11 Her BO HOPPI		
L			
Maximum	depth at survey: 💢 0-12" (0-1 ft.)	) O 12-36" (1-3 ft.) O 36-60" (3-5 ft.) O >60" (>5 ft.)	
Approximation	ate size of pool (at spring highwate	er):Width: OmOft Length: OmOft	
■ Predomin	ate substrate in order of increasing	a bydroperiod:	
Ninera	I soil (bare leaf-litter bottom or ur	pland Organic matter (neat/muck) shallow or	
mosse	es present)	restricted to deepest portion	
O Minera	l soil (sphagnum moss present)	Ø Organic matter (peat/muck) deep and widespre	ead
Pool vege	tation indicators in order of increas	sing hydroperiod (check all that apply):	
🟹 Terres	trial nonvascular spp. (e.g. haircar	$^{\circ}$ $\Box$ Wet site ferns (e.g. roval fern, marsh fern)	
∕`moss,	lycopodium spp.)	Wet site shrubs (e.g. highbush blueberry, malebe	arny
∐ Dry sit	e ferns (e.g. spinulose wood fern,	winterberry, mountain holly)	, iry,
☐ Moist s	site ferns (e.g. sensitive fern, cinn	amon Wet site graminoids (e.g. blue-joint grass, tussoc sedge, cattail, bulrushes)	:k
iern, ir	iterrupted tern, New York tern)	Aquatic vascular spp. (e.g. pickerelweed, arrowh	ead)
jewelw	veed, blue flag iris, swamp candle)	Floating or submerged aguatics (e.g. water life	,
 Sphag	num moss (anchored or suspende	ed) water shield, pond weed, bladderwort)	
		No vegetation in pool	
Faunal ind	icators (check all that apply):		
L Fish	□ Buimog or Green Frog tadpo	bies [] Other:	
iii. In let/Outle	t Flow Permanency		
Type of inl	et or outlet (a seasonal or perman	ent channel providing water flowing into or out of the pool):	
⊖ No inle	t or outlet O Permanent inlet	or outlet (channel with well-defined banks and permanent flow	w)
🗴 Intermit	tent inlet O Other or Unknov	wn (explain):	.,
∫ `or outle	t	· · · · · · · · · · · · · · · · · · ·	
DEPLW0897-82008	04/18/2017	Page	2 of 3





#### 6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates:

5/6/2019; 5/22/204

#### b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? Yes O 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.

		Egg Masses (or adult Fairy Shrimp)												Tadpoles/Larvae <sup>4</sup>					
SPECIES	Visit #1	Visit #2	Visit #3	Confi	dence l	_evel <sup>1</sup>	Egg Mass Maturity <sup>2</sup>			Observed			Confidence Level <sup>1</sup>						
Wood Frog	1	Ø		3	3		M												
Spotted Salamander	4	Ý		3	3		M												
Blue-spotted Salamander					60000 <sup>000</sup>														
Fairy Shrimp <sup>3</sup>																			

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. <u>Observations should be accompanied by photographs</u>.

		Method	lethod of Verific		C1 **		Method	CI **		
	SPECIES	Р	Н	S	<b>V</b> L	SPECIES	Р	Н	S	01
	Blanding's Turtle					Wood Turtle				
	Spotted Turtle					Ribbon Snake				
	Ringed Boghaunter					Other:				
d. ( e. (	*Method of verificat **CL - Confidence I <b>Optional observe</b> SVP	ion: P = evel in s r reco ential \$ ool cor	Photo species mmen SVP	graphe s detern idation X No ts and	d, H = Ha nination: i: n Signifi /or obse	ndled, S = Seen 1= <60%, 2= 60-95%, 3= >95% cant VP □ Indicator Breeding Area ervations of other wildlife:				
Ser	Dried up by 7/15/2020         Send completed form and supporting documentation to:         Maine Dept. of Inland Fisheries and Wildlife Attn: Vernal Pools									
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       Not Significant due to: Odoes not meet biological criteria.										
Comme	ents:		iut iacki		11 U2(2)	Odoes not meet M	DEP vei	nal poo	l criteria.	

DEPLW0897-82008 04/18/2017

**Print Form** 

No eggs 2020





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 <u>required</u> for all observers.
Observer's Pool ID: <u>SAD-VP-L3</u> MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: Sara h Dra hov Zul
b. Contact and credentials previously provided? O No (submit Addendum 1)
2. PROJECT CONTACT INFORMATION
a. Contact name: 💓 same as observer 🔿 other
b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes
c. Project Name: Longroad (3 corners Solar Project
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? OYes 🖉No If no, was landowner permission obtained for survey? 🏼 ONo
b. Landowner's contact information (required)
Name: <u>E, D, Bessey &amp; Son</u> Phone: (207) 453-7388
Street Address: <u>779 Skowheyn</u> Rd. City: <u>Hincklen</u> State: <u>ME</u> Zip: <u>04944</u>
c. 🔲 Large Projects: check if separate project landowner data file submitted
4. VERNAL POOL LOCATION INFORMATION
a. Location Township: <u>(/h, fy /w)</u>
Brief site directions to the pool (using mapped landmarks):
See a Hached map
h Manning Poquiroments
i. LISCS tonographic man OB parial photograph with pack dearly marked
1. USGS topographic map OR aenal photograph with poor clearly marked.
ii. GPS location of vernal pool (use Datum NAD83 / WGS84)
Longitude/Easting: <u>-69, 442(43</u> Latitude/Northing: <u>44, 632626</u>
Coordinate system://S
Check one: O GIS shapefile - send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)
O 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)
O The center of the pool is approximately mO ft O in the compass direction of degrees from the above GPS point. (Acceptable)

MAINE .	
A BOARD	

	Mame State Vernal PC	or Assessment i onn	Party of Mary
5. VERNAL POOL HABITAT a. Habitat survey date (on	INFORMATION ly if different from indicator	survey dates on page 3):	
b. Wetland habitat charact	terization		
<ul> <li>Choose the best descripte</li> <li>O Isolated depression</li> <li>O Floodplain depression</li> </ul>	or for the landscape setting: Ø Pool ass O Other: _	ociated with larger wetland compl	ex
<ul> <li>Check all wetland types the provident of the</li></ul>	hat best apply to this pool: Wet meadow Lake or pond cove Abandoned beaver flowa Active beaver flowage the Natural Resources Pr al ONatural-Modified OU r unknown, describe any mod	☐ Slow stream ☐ Floodplain ge ☐ Mostly unvegetated pool ☐ ATV or skidder rut otection Act (NRPA) matural OUnknown ern or historic human impacts to t	☐ Dug pond or borrow pit ☐ Roadside ditch ☐ Other: he pool ( <b>required</b> ):
ii. Pool Hydrology ■ Select the pool's <u>estima</u> O Permanent O S (n Explain:	ated hydroperiod AND <u>provide</u> Semi-permanent drying partially in all years and completely in drought years)	e <u>rationale</u> in box ( <b>required</b> ): © Ephemeral d (drying out completely in most years)	O Unknown
<ul> <li>Maximum depth at sum</li> <li>Approximate size of po</li> <li>Predominate substrate</li> <li>Mineral soil (bare, logged)</li> </ul>	vey: O 0-12" (0-1 ft.) Q 12 ool (at spring highwater): Wid in order of increasing hydrop eaf-litter bottom, or upland	-36" (1-3 ft.)	O >60'' (>5 ft.) O m O ft shallow or
mosses present)		restricted to deepest portion	1
O Mineral soil (sphagr	num moss present)	O Organic matter (peat/muck)	deep and widespread
Pool vegetation indicat	ors in order of increasing hyd	roperiod (check all that apply):	
L∐ Terrestrial nonvasc	ular spp. (e.g. haircap	☐ Wet site ferns (e.g. royal fern,	marsh fern)
Dry site ferns (e.g. lady fern, bracken	spinulose wood fern, fern)	Wet site shrubs (e.g. highbush winterberry, mountain holly)	blueberry, maleberry,
Moist site ferns (e.	g. sensitive fern, cinnamon	sedge, cattail, bulrushes)	-joint grass, tussock
Moist site vascular	s (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pic	kerelweed, arrowhead)
jewelweed, blue fla ☐ Sphagnum moss (a	g iris, swamp candle) anchored or suspended)	Floating or submerged aquation water shield, pond weed, black	cs (e.g. water lily, derwort)
		No vegetation in pool	
■ Faunal indicators (chec □ Fish □ Bullfrog	g or Green Frog tadpoles	Other:	
iii. Inlet/Outlet Flow Perm	nanency	inel providing water flowing into or	out of the pool?
$\bigcirc No inlet or outlet (a$	O Dormonont inlot or outlo	t (chapped with well defined here	and norman ant flour)
$\bigotimes$ Intermittent inlet	O Other or Unknown (expl	ain):	anu permanent now)





#### 6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/4/2019 5/22/2019

#### b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? O Yes O No
- Was the entire pool surveyed for egg masses? OYes ONo; 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.

		E	gg Masses	s (or adu	ult Fairy	/ Shrim	p)			Tadpoles/Larvae <sup>4</sup>					
SPECIES	Visit #1	Visit #2	Visit #3	Confi	dence l	_evel <sup>1</sup>	Egg Mass Maturity <sup>2</sup>			Observed			Confidence Level <sup>1</sup>		
Wood Frog															
Spotted Salamander	1	0		3	3		Μ								
Blue-spotted Salamander															
Fairy Shrimp <sup>3</sup>															

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.

		Method	of Veri	fication*	CL **			l of Veri	fication*	CI **
SF	PECIES	Р	Н	S	02		Р	н	S	
Bla	anding's Turtle					Wood Turtie				
Sp	otted Turtle					Ribbon Snake				
Rin	nged Boghaunter					Other:				
*M	ethod of verificat	ion: P =	Photo	graphe	d, H = Ha	andled, S = Seen	1			
d. Opt	tional observe SVP ロPot neral vernal po	er reco ential S pol cor	mmen SVP nmen	ts and	n Signifi /or obse	cant VP Indicator Breeding Area	a			
Send	completed form	n and s	y upport	ing doo	cumenta	tion to: Maine Dept. of Inland Fisheri Attn: Vernal Pools 650 State Street, Bangor, ME	es and E 04401	Wildlif	ē	
NOTE: D ad <u>For MDIFV</u> This pool is	Digital submiss cceptable for <u>Vuse only</u> Re s: Significant	sion (te project viewed t	b Jaso ts with by MDIF Potentia	on.Cza n 3 or f W Date	piga@n ewer as : ificant	naine.gov) of vernal pool field form sessed pools; <u>larger projects mus</u> Initials: Not Significant due to: Odoes not meet l	s and j t be ma	ohotog <u>iled a</u> criteria.	graphs <u>s hard</u>	is only <u>copies</u> .
Comments			ut lacki		al data	Odoes not meet l	IDEP ve	rnal poo	l criteria.	
DEPLVV08	97-82008 04/18	3/2017					Print Fo	orm	ł	rage 3 of





INSTRUCTIONS:		)
<ul> <li>Complete all 3 pages of form thoroughly. Most</li> <li>Clear photographs of a) the pool AND b) the inc</li> </ul>	fields are <u>required</u> fo licators (one example	or pool registration.
egg mass) are <u>required</u> for all observers.	, i	•
Observer's Pool ID: <u>SAD-VP-15</u> M	DIFW Pool ID:	
a. Observer name: <u>Sarah</u> Drahov Zul		
b. Contact and credentials previously provided? $igodot$ No (subm	it Addendum 1) 🛛 🔿 Yes	
2. PROJECT CONTACT INFORMATION		
a. Contact name: 🕺 same as observer 🕥 other		
b. Contact and credentials previously provided? 🔿 No (subm	t Addendum 1) 🛛 🔿 Yes	
c. Project Name: Longroad (3 Corners	)	
3. LANDOWNER CONTACT INFORMATION		
a. Are you the landowner? OYes 闷 No 🛛 If no, was landowr	er permission obtained for	survey? ØYes ONo
b. Landowner's contact information (required)		4
Name: F	hone:	
Street Address: 0	Sity:	State: Zip:
c. 🔲 Large Projects: check if separate project landowner dat	a file submitted	
4. VERNAL POOL LOCATION INFORMATION		
a. Location Township: <u>Unity Twp</u>		
Brief site directions to the pool (using mapped landmarks):		
See a Hacked map		
b. Mapping Requirements		
i. USGS topographic map OR aerial photograph with pool	clearly marked.	
ii. GPS location of vernal pool (use Datum NAD83 / WG	S84)	
Longitude/Easting: <u>- (<i>A</i>. 4385</u> Latitude/North	ng: <u>44,63/733</u>	
Coordinate system: <u>W6584</u>		
Check one: O GIS shapefile - send to Jason.Czapiga@maine.gov; obse	ver has reviewed shape accu	racy (Best)
O The pool perimeter is delineated by mult - Include map or spreadsheet with coordinat	ple GPS points. (Excellent	)
O The above GPS point is at the center of	the pool. (Good)	
O The center of the pool is approximately degrees from the above GPS point	mO ft O in the co nt. (Acceptable)	mpass direction of

-	
TAGO INCL.	
Several E	
G.A.B.	
and the second second	
Sec. 19	
Cherry Cherry	

#### 8.4 . . ä ..... 1/ ~ I A

	maine State vernal Po	oor Assessment Form	Prints of Mark
5. VERNAL POOL HABITAT	INFORMATION		
a. Habitat survey date ( <u>on</u>	ly if different from indicato	r survey dates on page 3):	
b. Wetland habitat charac	terization	· · · · · · · · · · · · · · · · · · ·	<u>·</u>
Choose the best descript	or for the landscape setting:		
<ul> <li>O Floodplain depression</li> </ul>	O Pool as ⊖ Other:	sociated with larger wetland comp	lex
Check all wetland types t	hat best apply to this pool:		
Forested swamp	U Wet meadow	Slow stream	Dug pond or
Shrub swamp	Lake or pond cove	🔲 Floodplain	borrow pit
Peatland (fen or bog) Emergent marsh	<ul> <li>Abandoned beaver flowa</li> <li>Active beaver flowage</li> </ul>	age Mostly unvegetated pool	☐ Roadside ditch ☐ Other:
c. Vernal pool status und	er the Natural Resources Pr	rotection Act (NRPA)	
i. Pool Origin: 🚫 Natur	al ONatural-Modified OU	Innatural OUnknown	
If modified, unnatural o	r unknown, describe any mo	dern or historic human impacts to	the pool ( <b>required</b> ):
· · · · · · · · · · · · · · · · · · ·			
ii. Pool Hydrology			
Select the pool's estimation	ated hydroperiod AND provid	<u>e rationale</u> in box ( <b>required</b> ):	
O Permanent 🛛 े ६	Semi-permanent	🛇 Ephemeral	O Unknown
(	drying partially in all years an	d C (drying out completely	
Evoloin:	completely in drought years)	in most years)	
		n	
Maximum depth at sur	vey: O 0-12" (0-1 ft.) 🛛 🕅 12	2-36" (1-3 ft.) O 36-60" (3-5 ft.)	O >60" (>5 ft.)
Approximate size of po	ool (at spring highwater): Wic	lth:OmOft Length:_	O m O ft
Predominate substrate	in order of increasing hydror	period:	
Mineral soil (bare 1	eaf-litter bottom or upland	O Organic matter (neat/muck)	shallow or
mosses present)	car mer bottom, or aplana	restricted to deepest portion	n
🕅 Mineral soil (sphag	num moss present)	O Organic matter (peat/muck)	deep and widespread
₽ Pool vegetation indicat	ors in order of increasing by	troperiod (check all that apply):	
A Terrestrial nonvaso	ular spp. (e.g. haircap	$\square$ Wet site forms (e.g. revel form	march form)
moss, lycopodium	spp.)	Vvet site terns (e.g. royal tern	, marsh iern)
Dry site ferns (e.g.	spinulose wood fern,	Winterberry mountain holly)	h blueberry, maleberry,
lady fern, bracken	fern)	$\square$ Wet site graminoids (e.g. blue	e-ioint grass tussock
Moist site terns (e.	g. sensitive fern, cinnamon	sedge, cattail, bulrushes)	s joint grade, tabevor
Moist site vascular	n, new tork lenn)	Aquatic vascular spp. (e.g. pi	ckerelweed, arrowhead)
jewelweed, blue fla	g iris, swamp candle)	Floating or submerged aguat	ics (e.g. water lilv.
Sphagnum moss (a	anchored or suspended)	water shield, pond weed, black	dderwort)
Faunal indicators (cheo	k all that apply):		
🗌 Fish 🛛 🗌 Bullfrog	g or Green Frog tadpoles	Other:	
iii Inlet/Qutlet Flow Pom	nanency	- · ·	
Type of inlet or outlet (a	a seasonal or permanent cha	nnel providing water flowing into o	r out of the pool):
No inlet or outlet	O Permanent inlet or outle	et (channel with well-defined banks	and permanent flow)
Ø Intermittent inlet	O Other or Unknown (evo	lain).	
$\checkmark$ or outlet			ан на суру и мари и на село село село село село село село село





#### 6. VERNAL POOL INDICATOR INFORMATION

22/2014 5 5 6/201 a. Indicator survey dates:

#### b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? O Yes XNo
- Was the entire pool surveyed for egg masses? OYes ONo; 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.

		Egg Masses (or adult Fairy Shrimp)										Tadpoles/Larvae <sup>4</sup>				
SPECIES	Visit #1	Visit #2	Visit #3	Confidence Level <sup>1</sup>			Egg Mass Maturity <sup>2</sup>			Observed			Confidence Level <sup>1</sup>			
Wood Frog	5	Ø			l		M									
Spotted Salamander		l														
Blue-spotted Salamander																
Fairy Shrimp <sup>3</sup>																

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. <u>Observations should be accompanied by photographs</u>.

OPEOIES		Method	of Veri	fication*	CI **		Method	l of Veri	fication*	CL**			
	SPECIES	Р	Н	S		SPECIES	Р	н	S				
	Blanding's Turtle					Wood Turtle							
	Spotted Turtle					Ribbon Snake							
	Ringed Boghaunter					Other:							
d. (	<ul> <li>*Method of verification: P = Photographed, H = Handled, S = Seen</li> <li>**CL - Confidence level in species determination: 1= &lt;60%, 2= 60-95%, 3= &gt;95%</li> <li><b>d. Optional observer recommendation:</b></li> <li>□ SVP □ Potential SVP ☑ Non Significant VP □ Indicator Breeding Area</li> </ul>												
e. (	e. General vernal pool comments and/or observations of other wildlife: Revisits 2020: 4/22: 8 WFEM 2 55EM 5/13: D Drind up by 7/15/2020												
Ser NOTE	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 MI		viewed b		344 Det		Taitala				Setter			
This po	ents:		<b>Potenti</b> i Sut lacki	ally Sign	ificant Il data	Not Significant due to: O does not meet b	iological IDEP ve	criteria. rnal poo	I criteria.				

DEPLW0897-82008 04/18/2017

Print Form



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INSTRUCTIONS:
<ul> <li>Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.</li> <li><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.</li> </ul>
Observer's Pool ID: MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: <u>Sarah Draharza</u> b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes
2. PROJECT CONTACT INFORMATION         a. Contact name: Ø same as observer O other         b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes         c. Project Name: Longround (3 Corners)
<ul> <li>3. LANDOWNER CONTACT INFORMATION <ul> <li>a. Are you the landowner? OYes No</li> <li>b. Landowner's contact information (required)</li> <li>Name: <u>E, D</u> <u>Resserver &amp; Sm</u></li> <li>Street Address: <u>779</u> Skowhegen Rd</li> <li>City: <u>Hindelen</u> State: <u>Mc</u> Zip:<u>04944</u></li> <li>c. Large Projects: check if separate project landowner data file submitted</li> </ul> </li> <li>4. VERNAL POOL LOCATION INFORMATION <ul> <li>a. Location Township: <u>Unity</u> Twp</li> <li>Brief site directions to the pool (using mapped landmarks):</li> </ul> </li> </ul>
b. Mapping Requirements
<ul> <li>ii. GPS location of vernal pool (use Datum NAD83 / WGS84) <ul> <li>Longitude/Easting: <u>-69.437059</u></li> <li>Latitude/Northing: <u>44. 63089</u></li> <li>Coordinate system: <u>WGS 84</u></li> </ul> </li> <li>Check one: O GIS shapefile <ul> <li>send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)</li> <li>O The pool perimeter is delineated by multiple GPS points. (Excellent) <ul> <li>Include map or spreadsheet with coordinates.</li> </ul> </li> <li>Q The above GPS point is at the center of the pool. (Good)</li> <li>O The center of the pool is approximately mO ft O in the compass direction of degrees from the above GPS point. (Acceptable)</li> </ul> </li> </ul>

Maine State Vernal Po	ool Assessment Form
5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date ( <u>only if different</u> from indicator	r survey dates on page 3):
b. Wetland habitat characterization	
<ul> <li>Choose the best descriptor for the landscape setting:</li> <li>O Isolated depression</li> <li>O Floodplain depression</li> <li>O Other:</li> </ul>	sociated with larger wetland complex
<ul> <li>Check all wetland types that best apply to this pool:</li> <li>Forested swamp</li> <li>Wet meadow</li> <li>Shrub swamp</li> <li>Lake or pond cove</li> <li>Peatland (fen or bog)</li> <li>Abandoned beaver flowage</li> </ul>	□ Slow stream       □ Dug pond or         □ Floodplain       borrow pit         age       □ Mostly unvegetated pool       □ Roadside ditch         □ ATV or skidder rut       □ Other:
c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)
i. Pool Origin: `@Natural ONatural-Modified OU	Jnnatural OUnknown
If modified unnatural or unknown, describe any mo	dern or historic human impacts to the pool ( <b>required</b> ):
ii. Pool Hydrology	
Select the pool's estimated hydroperiod AND provid	te rationale in box ( <b>required</b> ):
O Permanent Ø Semi-permanent	O Ephemeral O Unknown
(drying partially in all years ar	nd (drying out completely
completely in drought years)	in most years)
Explain:	
leaf lifter bottom	
■ Maximum depth at survey: 🖄 0-12" (0-1 ft.) 012	2-36" (1-3 ft.) O 36-60" (3-5 ft.) O >60" (>5 ft.)
■ Approximate size of pool (at spring highwater): Wig	dth: Om Oft Length: Om Oft
	0 0
Predominate substrate in order of increasing hydro	period:
Mineral soil (bare, leaf-litter bottom, or upland mosses present)	restricted to deepest portion
Mineral soil (sphagnum moss present)	O Organic matter (peat/muck) deep and widespread
De al a se della sindia dere in order of increasing bu	drenewied (sheek all that apply):
Pool vegetation indicators in order of increasing hyperate in a pairway of the pairway of t	
moss lycopodium spp. (e.g. naircap	Wet site ferns (e.g. royal fern, marsh fern)
Dry site ferns (e.g. spinulose wood fern,	Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
<ul> <li>Iady fern, bracken fern)</li> <li>Moist site ferns (e.g. sensitive fern, cinnamon</li> </ul>	Wet site graminoids (e.g. blue-joint grass, tussock
fern, interrupted fern, New York fern)	seage, cattall, bullrusnes)
Moist site vasculars (e.g. skunk cabbage,	
jewelweed, blue flag iris, swamp candle)	Hoating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
Sphagnum moss (anchored or suspended)	$\square$ 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 cha	annel providing water flowing into or out of the pool):
O No inlet or outlet O Permanent inlet or outlet	et (channel with well-defined banks and permanent flow)
$igodoldsymbol{igo$	plain):





#### 6. VERNAL POOL INDICATOR INFORMATION

2011 2019 a. Indicator survey dates: 5/8/

#### b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? O Yes O<sub>No</sub>
- 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.

		Egg Masses (or adult Fairy Shrimp)										Tadpoles/Larvae <sup>4</sup>					
SPECIES	Visit #1	Visit #2	Visit #3	Confi	Confidence Level <sup>1</sup> Egg Mass Maturity <sup>2</sup>				Ot	oserv	red	Confidence Level <sup>1</sup>					
Wood Frog																	
Spotted Salamander	1	Ø		3	3		M										
Blue-spotted Salamander				-													
Fairy Shrimp <sup>3</sup>																	

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. <u>Observations should be accompanied by photographs</u>.

	Met	hod of Ve	ification*	CI **		Method	l of Veri	fication*	CI **				
SPECIES	F	• н	s		SPECIES	Р	Н	S					
Blanding's "	Turtle	ם   נ			Wood Turtle								
Spotted Tur	rtle C	]   []			Ribbon Snake								
Ringed Bogl	naunter	]   []			Other:								
*Method of **CL - Con d. Optional o	<ul> <li>*Method of verification: P = Photographed, H = Handled, S = Seen</li> <li>**CL - Confidence level in species determination: 1= &lt;60%, 2= 60-95%, 3= &gt;95%</li> <li><b>d. Optional observer recommendation:</b></li> <li>SVP  Potential SVP  Non Significant VP  Indicator Breeding Area</li> </ul>												
Revis,	Revisits 2020; 4/22/2020; 0 \$5/13/2020; 155EM												
Send complet	ted form an	d suppo	rting do	cumenta	tion to: Maine Dept. of Inland Fisher Attn: Vernal Pools 650 State Street, Bangor, Mi	es and E 04401	Wildlif	e					
NOTE: Digital s acceptal	submissior ble for proj	n (to Jas ects wi	ion.Cza th 3 or 1	apiga@r fewer as	naine.gov) of vernal pool field form ssessed pools; <u>larger projects mus</u>	s and j t be ma	photog	graphs s hard	is only <u>copies</u> .				
For MDIFW use on	y Review	ed by MD	FW Dat	e:	Initials:								
This pool is: 🔲 Sig	gnificant [	<b>Potent</b> but lac	ially Sigr	n <b>ificant</b> al data	Not Significant due to: O does not meet	oiological MDEP ve	criteria. rnal poc	l criteria.					
Comments:													
DEPLW0897-8200	08 04/18/20	17			Γ	Print Fo	orm		Page 3 of 3				





Maine State Vernal	Pool Assessment Form
5. VERNAL POOL HABITAT INFORMATION	and E Bar
a. Habitat survey date ( <u>only if different</u> from indicat	or survey dates on page 3):
b. Wetland habitat characterization	
Choose the best descriptor for the landscape setting	í.
O Isolated depression	associated with larger wetland complex
O Floodplain depression O Other	· · · · · · · · · · · · · · · · · · ·
Check all wetland types that best apply to this pool:	
😡 Forested swamp 🛛 🔲 Wet meadow	Slow stream
🗍 Shrub swamp 👘 🔲 Lake or pond cove	Floodplain borrow pit
Peatland (fen or bog) Abandoned beaver flow Emergent marsh	wage  Mostly unvegetated pool  Roadside ditch ATV or skidder rut Other
c Vomal pool atotus under the Natural Decomposition	
i Pool Original Objective Objective Status	Protection Act (NRPA)
I. Pool Origin: ONatural @Natural-Modified O	Unnatural OUnknown
If modified, unnatural or unknown, describe any m	odern or historic human impacts to the pool ( <b>required</b> ):
	· · · · · · · · · · · · · · · · · · ·
ii. Pool Hydrology	
Select the pool's estimated hydroperiod AND prov	ide rationale in box (required):
O Permanent O Semi-permanent	© Ephemeral O Unknown
(drying partially in all years a	and (drying out completely
completely in drought years	) in most years)
■ Maximum depth at survey; × O 0-12" (0-1 ft.) O	12-36" (1-3 ft.) 〇 36-60" (3-5 ft.) 〇 >60" (>5 ft.)
Approximate size of pool (at spring highwater): W	/idth:OmOft Length: OmOft
Predominate substrate in order of increasing hydro	operiod:
O Mineral soil (bare leaf-litter bottom or upland	O organic matter (neat/muck) shallow or
mosses present)	restricted to deepest portion
🖉 Mineral soil (sphagnum moss present)	O Organic matter (peat/muck) deep and widespread
Pool vegetation indicators in order of increasing by	udroporiod (shaek all that any hit)
Terrestrial nonvascular snn (e.g. baircan	ydropenod (check all that apply):
moss, lycopodium spp.)	Wet site ferns (e.g. royal fern, marsh fern)
Dry site ferns (e.g. spinulose wood fern,	♂ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
<ul> <li>Moist site ferns (e.g. sensitive fern, cinnamon fern, interrunted fern, New York fern)</li> </ul>	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
$\square$ Moist site vasculars (e.g. skunk cabbage	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle)	Eloating or submerged aquatics (e.g. water lily
Sphagnum moss (anchored or suspended)	water shield, pond weed, bladderwort)
Faunal indicators (check all that apply):	
Fish Bullfrog or Green Frog tadpoles	Other:
iii Inlet/Outlet Flow Permananay	
Type of inlet or outlet (a seasonal or permanent ch	annel providing water flowing into or out of the neets
$\bigcirc$ No inlet or outlet $\bigcirc$ Dormonont inlet as suit	the channel with well defined have and service and services of the bar
O Intermittent inlet	der (original will well-delined banks and permanent llow)
or outlet	ріант). 

<b>Maine State</b>	Vernal	Pool	Assessment	Form
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#### 6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates:	5/16	12019	; 51	122	2019

#### b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? O Yes O No
- Was the entire pool surveyed for egg masses? OYes ONo; 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.

	Egg Masses (or adult Fairy Shrimp)										Tadpoles/Larvae <sup>4</sup>				
SPECIES	Visit #1	Visit #2	Visit #3	Confi	Confidence Level <sup>1</sup> Egg Mass Maturity <sup>2</sup>			Observed		Confidence		nce			
Wood Frog	3	Ø		2	2		A								
Spotted Salamander	1	Ø		2	2		Μ								
Blue-spotted Salamander															
Fairy Shrimp <sup>3</sup>															

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.

M		Method	l of Verit	fication*	CI **	GL** ODEOLES		Method of Verification*		
	SPECIES	Р	н	S	ŰL.	SPECIES		н	S	<u> </u>
	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, (	d. Optional observer recommendation:									
	SVP Potential SVP Non Significant VP Indicator Breeding Area									
		ornaar (			ii oiginn					
				المحدية م		metions of other wildlife.				
e. (	3. General vernal pool comments and/or observations of other wildlife:									
	Keusits 2020; 4/22: MUFEM, 1 SSEM 5/13/2020: 2WFEM, 8555M									
	Dried u	12 k	»M	7/15	12020					

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: O does not meet biologic O does not meet MDEP v	al criteria. ernal pool criteria.
Comments:		ann ann ann de an Anna

DEPLW0897-82008 04/18/2017

Page 3 of 3


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INSTRUCTIONS:
<ul> <li>Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.</li> <li><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.</li> </ul>
Observer's Pool ID: <u>SAD-VP-/8</u> MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: <u>Skrach Dra hov ze (</u> b. Contact and credentials previously provided? O No (submit Addendum 1) OYes
2. PROJECT CONTACT INFORMATION
a. Contact name: 🔿 same as observer 🔿 other
b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes
c. Project Name: Longroad (3 Corners Solar Project)
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? OYes $\grave{ar{Q}}$ No $$ If no, was landowner permission obtained for survey? $\grave{ar{Q}}$ Yes ONo
b. Landowner's contact information (required)
Name: E.D. Bessey 2, Son Phone: (207) 453-9388
Street Address: 779 Skowhegen Rd, City: Hinckey State: ME Zip: 04944
c. 🗌 Large Projects: check if separate project landowner data file submitted
a Logation Township: // / / /
Brief site directions to the pool (using mapped landmarks):
See a Hached 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: <u>-69. 4/2608</u> Latitude/Northing: <u>44, 625/62</u> Coordinate system: <u>W65 84</u>
Check one: of GIS shapefile
<ul> <li>Send to basin. Ozapiga@maine.gov, observer has reviewed shape accuracy (Dest)</li> <li>O The pool perimeter is delineated by multiple GPS points. (Excellent)</li> <li>Include map or spreadsheet with coordinates.</li> </ul>
The above GPS point is at the center of the pool. (Good)
O The center of the pool is approximately mO ft O in the compass direction ofdegrees from the above GPS point. (Acceptable)

Maine State Vernal Po	ool Assessment Form
<ul> <li>5. VERNAL POOL HABITAT INFORMATION         <ul> <li>a. Habitat survey date (only if different from indicator</li> <li>b. Wetland habitat characterization</li> <li>Choose the best descriptor for the landscape setting:</li> <li>O Isolated depression</li> <li>Q Pool as</li> <li>Q Other</li> </ul> </li> </ul>	r survey dates on page 3):
Check all wetland types that best apply to this pool:  Forested swamp Shrub swamp Peatland (fen or bog) Kative beaver flowage Kative beaver flowage	□ Slow stream □ Dug pond or □ Floodplain borrow pit age □ Mostly unvegetated pool □ Roadside ditch □ ATV or skidder rut □ Other:
i. Pool Origin: 'XNatural O Natural-Modified O U If modified, unnatural or unknown, describe any mod	Innatural OUnknown dern or historic human impacts to the pool ( <b>required</b> ):
ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provid</u> O Permanent O Semi-permanent (drying partially in all years an completely in drought years) Explain: Shκ flow Wf Icaf - life bottom; ι	le rationale in box ( <b>required</b> ): © Ephemeral O Unknown Id (drying out completely in most years) Vn Vege field
<ul> <li>Maximum depth at survey: 0 0-12" (0-1 ft.) 012</li> <li>Approximate size of pool (at spring highwater): Wid</li> <li>Predominate substrate in order of increasing hydrog</li> <li>Mineral soil (bare, leaf-litter bottom, or upland mosses present)</li> </ul>	2-36" (1-3 ft.) O 36-60" (3-5 ft.) O >60" (>5 ft.) dth: O m O ft Length: O m O ft period: Organic matter (peat/muck) shallow or restricted to deepest portion
<ul> <li>Pool vegetation indicators in order of increasing hyd</li> <li>Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)</li> <li>Dry site ferns, (e.g. spinulose wood fern</li> </ul>	<ul> <li>Organic matter (peat/muck) deep and widespread</li> <li>droperiod (check all that apply):</li> <li>Wet site ferns (e.g. royal fern, marsh fern)</li> <li>Wet site shrubs (e.g. highbush blueberry, maleberry,</li> </ul>
<ul> <li>Introduction of the second seco</li></ul>	<ul> <li>winterberry, mountain holly)</li> <li>Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)</li> <li>Aquatic vascular spp. (e.g. pickerelweed, arrowhead)</li> <li>Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)</li> <li>No vegetation in pool</li> </ul>
<ul> <li>Faunal indicators (check all that apply):</li> <li>Fish Bullfrog or Green Frog tadpoles</li> <li>iii. Inlet/Outlet Flow Permanency</li> <li>Type of inlet or outlet (a seasonal or permanent cha</li> </ul>	Other: O
V Intermittent inlet O Other or Unknown (exp or outlet	lain):

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5/g/20K; 5/22/20A a. Indicator survey dates:

# b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? O Yes O No
- Was the entire pool surveyed for egg masses? OYes ONo; 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.

		E	gg Masse	s (or ad	ult Fairy	Shrim	p)			Tad	poles	s/Lar	/ae <sup>4</sup>	
SPECIES	Visit #1	Visit #2	Visit #3	Conf	idence l	_evel <sup>1</sup>	Egg M	ass Maturity <sup>2</sup>	0	bserv	/ed	Cor L	nfide .evel	nce
Wood Frog														
Spotted Salamander	10	0		3	31		M							
Blue-spotted Salamander														
Fairy Shrimp <sup>3</sup>														

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. <u>Observations should be accompanied by photographs</u>.

	Method of Verification*		Method of Verification*			CL** Annual Method of Verifi				CI **
	SPECIES	Р	Н	S	UL	SPECIES	Р	Н	S	
	Blanding's Turtle					Wood Turtle				
:	Spotted Turtle					Ribbon Snake				
	Ringed Boghaunter					Other:				
d. (	*Method of verificat **CL - Confidence I <b>Optional observe</b> SVP D Pot	tion: P = level in : er reco ential S	Photo species <b>mmer</b>	graphe detern datior	d, H = Ha nination: <b>1:</b> n Signifi	andled, S = Seen 1= <60%, 2= 60-95%, 3= >95% icant VP □ Indicator Breeding Area				
e. (	General vernal po Reuists 2020;	201 cor 7/2	nmen 4 /20 :	ts and 3 WF	/or obse	ervations of other wildlife:	M13	55£9	1	
Sei NOTE	et Digital submis	n and s sion (t projec	upport o Jase ts with	ting doo on.Cza h 3 or 1	cumenta piga@r fewer as	tion to: Maine Dept. of Inland Fisheria Attn: Vernal Pools 650 State Street, Bangor, ME naine.gov) of vernal pool field forms ssessed pools; <u>larger projects must</u>	es and 04401 s and   be ma	Wildlif photog	e graphs s hard	is only copies.
For MI This po Comm	DIFW use only Re pol is: Significant	eviewed I	oy MDIF Potentia out lacki	W Data ally Sign ing critica	e: lificant al data	Initials: Not Significant due to: O does not meet b O does not meet M	iological IDEP ve	criteria rnal poc	ol criteria.	
										Dere 2 of (

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	): 2 manual of forms the second	hhu Maatfialda ara ram	uirad far naal rag	ietration
<ul> <li>Complete all</li> <li><u>Clear photog</u> egg mass) are</li> </ul>	s pages of form thoroug <u>raphs</u> of a) the pool ANE e <u>required</u> for all observ	D b) the indicators (one e ers.	example of each s	species
Observer's Pool IE	D: _SAD-VP-100	MDIFW Pool ID:		us internet
1. PRIMARY OBSE a. Observer nam b. Contact and c	e: <u>Sava b</u> <u>Dra hourza</u> / redentials previously provided?	/ ? O No (submit Addendum 1)	O Yes	
2. PROJECT CON a. Contact name b. Contact and cl c. Project Name:	TACT INFORMATION : Øsame as observer O othe redentials previously provided? : <u>Three</u> <u>Carners</u> S	er ? O No (submit Addendum 1) SolwProj.o.H	∕ģYes	
<ul> <li><b>3. LANDOWNER C</b></li> <li>a. Are you the lar</li> <li>b. Landowner's construction</li> <li>Name:</li></ul>	CONTACT INFORMATION ndowner? OYes ONo If no ontact information (required) $D_{required}$	was landowner permission ob Phone: (207) Ra City: <u>Hinck lea</u> landowner data file submitted Ship d landmarks):	tained for survey? <b>○</b> <u>453-9388</u> State: <u>ME</u>	Yes <b>O</b> No Zip: <u>0494</u> ≉
<ul> <li>b. Mapping Requ</li> <li>i. USGS topog</li> <li>ii. GPS locatic</li> <li>Longitude/E</li> <li>Coordinate s</li> <li>Check one:</li> </ul>	uirements graphic map OR aerial photogra on of vernal pool (use Datum asting: <u>-64, 432 21</u> system: <u>W66 84</u> GIS shapefile - send to Jason.Czapiga@m O The pool perimeter is delin - Include map or spreadshee O The above GPS point is at O The center of the pool is ap degrees from the a	aph with pool clearly marked. <b>NAD83 / WGS84)</b> Latitude/Northing: <u>44,633 2</u> naine.gov; observer has reviewed s neated by multiple GPS points. to the center of the pool. (Good) pproximately <u>    mO</u> ft O above GPS point. (Acceptable)	shape accuracy (Best) (Excellent)	tion of

Maine State Vernal F	Pool Assessment Form
5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date ( <u>only if different</u> from indicate	or survey dates on page 3):
b. Wetland habitat characterization	
<ul> <li>Choose the best descriptor for the landscape setting:</li> <li>Isolated depression</li> <li>Floodplain depression</li> <li>Other:</li> </ul>	ssociated with larger wetland complex
<ul> <li>Check all wetland types that best apply to this pool:</li> <li>Forested swamp</li> <li>Wet meadow</li> <li>Shrub swamp</li> <li>Lake or pond cove</li> <li>Peatland (fen or bog)</li> <li>Abandoned beaver flow</li> <li>Emergent marsh</li> <li>Active beaver flowage</li> </ul>	□ Slow stream       □ Dug pond or         □ Floodplain       borrow pit         vage       □ Mostly unvegetated pool       □ Roadside ditch         □ ATV or skidder rut       □ Other:
c. Vernal pool status under the Natural Resources F	Protection Act (NRPA)
i. Pool Origin: ONatural 🖗 Natural-Modified OI	Unnatural OUnknown
If modified, unnatural or unknown, describe any mo	odern or historic human impacts to the pool (required):
Pool found in Industrial forest	adjacent to recently cut crean
ii. Pool Hydrology	
(drying partially in all years a completely in drought years) Explain:	nd (drying out completely in most years)
<ul> <li>Maximum depth at survey: O 0-12" (0-1 ft.) Ø 1</li> <li>Approximate size of pool (at spring highwater): Wi</li> </ul>	2-36" (1-3 ft.)
Predominate substrate in order of increasing hydro	period:
<ul> <li>Mineral soil (bare, leaf-litter bottom, or upland mosses present)</li> </ul>	Organic matter (peat/muck) shallow or restricted to deepest portion
$\bigotimes$ Mineral soil (sphagnum moss present)	O Organic matter (peat/muck) deep and widespread
Pool vegetation indicators in order of increasing hy	droperiod (check all that apply):
Terrestrial nonvascular spp. (e.g. haircap	Wet site ferns (e.g. royal fern, marsh fern)
moss, lycopodium spp.) ☐ 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)	Vet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage, issue bus et al. a.g. skunk cabbage.	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)
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 cha	Innel providing water flowing into or out of the pool):
○ No inlet or outlet ○ Permanent inlet or outlet	et (channel with well-defined banks and permanent flow)
✓ Intermittent inlet or outlet O Other or Unknown (exp	lain):



SAD-VP-100



# 6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates:  $\frac{4/24/2020}{2020}$ 

# b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? O Yes QNo
- Was the entire pool surveyed for egg masses? Over ONo; 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.

		E	gg Masses	s (or adu	ult Fairy	Shrim	p)				Tad	poles	s/Larvae4		
SPECIES	Visit #1	Visit #2	Visit #3	Confi	dence l	_evel <sup>1</sup>	Egg N	lass Ma	aturity <sup>2</sup>	Oł	oserv	red	Cor L	nfide .evel	nce
Wood Frog	82			2			M								
Spotted Salamander															
Blue-spotted Salamander															
Fairy Shrimp <sup>3</sup>															

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. <u>Observations should be accompanied by photographs</u>.

		Method	of Veri	fication*	0.44			Method	of Veri	fication*	tion*	
	SPECIES	Р	н	s	CL	SPECIES		Р	н	S	GL	
	Blanding's Turtle					Wood Turtle						
	Spotted Turtle					Ribbon Snake	*#					
	Ringed Boghaunter					Other:						
d	*Method of verifica **CL - Confidence	tion: P = level in	= Photo species	ographe s deterr	d, H = Ha nination:	andled, S = Seen 1= <60%, 2= 60-95%, 3= >95%						
u.		Freco	mmen			_						
	USVP KIPot	ential S	SVP	🗆 No	n Signifi	icant VP 🛛 🖾 Indicator Breeding	Area					
e.	General vernal p	ool cor	nmen	ts and	/or obse	ervations of other wildlife:						
	$\square$	1		-1 /10	1000	2 AL						
	Ured up	6	9	F113	1202	40						
	1											
Se	end completed forn	n and s	upport	ing do	cumenta	ation to: Maine Dept. of Inland Fi Attn: Vernal Pools	sherie	es and	Wildlif	e		
						650 State Street, Bango	r, ME	04401				
NOT	E: Digital submis acceptable for	sion (t projec	o Jaso ts witl	on.Cza h 3 or i	ipiga@r fewer as	naine.gov) of vernal pool field ssessed pools; <u>larger projects</u>	forms must	s and p be ma	ohotog iled a	graphs s hard	is only <u>copies</u> .	
For M	DIFW use only Re	eviewed I	by MDIF	W Dat	e:	Initials:						
This n	ool is: 🔲 Significant		Potentia	ally Sigr	ificant	Not Significant due to: O does not	meet bi	ological	criteria.			
1110 0			out lacki	ng critica	al data	Odoes not	meet M	DEP vei	nal poo	l criteria.		
Comr	nents										]	
Comm												
	M0907 92009 04/4	0/0017						)			Page 3 of	
DEPLI	/1009/-02000 04/1	0/2017					۱F	mnt r c	rm j	1	490 0 01	





INSTRUCTIONS:
<ul> <li>Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.</li> <li><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.</li> </ul>
Observer's Pool ID:          MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: <u>Same Denhov ze (</u> b. Contact and credentials previously provided? ONo (submit Addendum 1) OVes
2. PROJECT CONTACT INFORMATION         a. Contact name:       Q same as observer ○ other
<ul> <li>3. LANDOWNER CONTACT INFORMATION <ul> <li>a. Are you the landowner? OYes QNo If no, was landowner permission obtained for survey? OYes ONo</li> <li>b. Landowner's contact information (required)</li> <li>Name: <u>E, D. Bessey &amp; Son</u> Phone: <u>(207)</u> 453 - 9388</li> <li>Street Address: <u>777</u> Skowhagan Ka. City: <u>Hick Ica</u> State: <u>ME</u> Zip: <u>0494</u> A</li> <li>c. Large Projects: check if separate project landowner data file submitted</li> </ul> </li> <li>4. VERNAL POOL LOCATION INFORMATION <ul> <li>a. Location Township: <u>Une for Township</u></li> <li>Brief site directions to the pool (using mapped landmarks):</li> </ul> </li> </ul>
<ul> <li>b. Mapping Requirements <ol> <li>USGS topographic map OR aerial photograph with pool clearly marked.</li> </ol> </li> <li>ii. GPS location of vernal pool (use Datum NAD83 / WGS84) <ul> <li>Longitude/Easting: <u>-69.4322</u>/ Latitude/Northing: <u>A4.633257</u></li> <li>Coordinate system: <u>JW4584</u></li> <li>Check one: O GIS shapefile <ul> <li>send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)</li> <li>O The pool perimeter is delineated by multiple GPS points. (Excellent) <ul> <li>Include map or spreadsheet with coordinates.</li> </ul> </li> <li>O The above GPS point is at the center of the pool. (Good)</li> <li>O The center of the pool is approximately mO ft O in the compass direction of degrees from the above GPS point. (Acceptable)</li> </ul> </li> </ul></li></ul>

Maine State Vernal	Pool Assessment Form
5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date ( <u>only if different</u> from indicat	tor survey dates on page 3):
b. Wetland habitat characterization	
<ul> <li>Choose the best descriptor for the landscape setting</li> <li>Isolated depression</li> <li>Floodplain depression</li> <li>Other</li> </ul>	ן: associated with larger wetland complex י:
<ul> <li>Check all wetland types that best apply to this pool:</li> <li>Forested swamp</li> <li>Wet meadow</li> <li>Shrub swamp</li> <li>Lake or pond cove</li> <li>Peatland (fen or bog)</li> <li>Abandoned beaver flowage</li> </ul>	□ Slow stream       □ Dug pond or         □ Floodplain       borrow pit         wage       □ Mostly unvegetated pool       □ Roadside ditch         □ ATV or skidder rut       □ Other:
c. Vernal pool status under the Natural Resources	Protection Act (NRPA)
i. Pool Origin: 🖉 Natural 🔘 Natural-Modified 🔘	Unnatural OUnknown
If modified, unnatural or unknown, describe any m	nodern or historic human impacts to the pool (required):
ii. Pool Hydrology	
O Permanent O Semi-permanent (drying partially in all years a completely in drought years Explain:	C Ephemeral     C Unknown     drying out completely     in most years)
Leaf lifter ■ Maximum depth at survey: Ø0-12" (0-1 ft.) O	12-36" (1-3 ft.) ① 36-60" (3-5 ft.) ① >60" (>5 ft.)
■ Approximate size of pool (at spring highwater): W	/idth:OmOft Length:OmOft
Predominate substrate in order of increasing hydr	operiod:
<ul> <li>Mineral soil (bare, leaf-litter bottom, or upland mosses present)</li> <li>Mineral soil (sphagpum moss present)</li> </ul>	<ul> <li>Organic matter (peat/muck) shallow or restricted to deepest portion</li> <li>Organic matter (neat/muck) does and wides and wides</li></ul>
<ul> <li>Registration in disetors in order of increasing to be</li> </ul>	O Organic matter (peatrindex) deep and widespread
<ul> <li>Fool vegetation indicators in order of increasing most of the string most of</li></ul>	<ul> <li>Wet site ferns (e.g. royal fern, marsh fern)</li> <li>Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)</li> <li>Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, burushes)</li> </ul>
<ul> <li>Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)</li> <li>Sphagnum moss (anchored or suspended)</li> </ul>	<ul> <li>Aquatic vascular spp. (e.g. pickerelweed, arrowhead)</li> <li>Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)</li> </ul>
Equipal indiactors (shack all that are have	☐ No vegetation in pool
Fish Bullfrog or Green Frog tadpoles	Other:
<ul> <li>iii. Inlet/Outlet Flow Permanency</li> <li>Type of inlet or outlet (a seasonal or permanent ch</li> <li>○ No inlet or outlet</li> <li>○ Permanent inlet or out</li> <li>○ Other or Unknown (exonomic or outlet</li> </ul>	annel providing water flowing into or out of the pool): let (channel with well-defined banks and permanent flow) plain):

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SAD-VP-101 Maine State Vernal Pool Assessment Form 6. VERNAL POOL INDICATOR INFORMATION a. Indicator survey dates: 4/24/2020, 5/12/2026b. Indicator abundance criteria and pool survey effort Ø No ■ Is pool depression bisected by 2 ownerships (straddler pool)? O Yes ■ 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. Egg Masses (or adult Fairy Shrimp) Tadpoles/Larvae\* INDICATOR Confidence Visit Visit Visit SPECIES Confidence Level<sup>1</sup> Observed Egg Mass Maturity<sup>2</sup> Level #1 #2 #3 N Wood Frog 6 ()2 Spotted 3 2 Salamander n Blue-spotted Salamander Fairy Shrimp<sup>3</sup> 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. Method of Verification\* Method of Verification\* CL\*\* CL\*\* SPECIES SPECIES Ρ Н Р Н s s Wood Turtle  $\Box$ Blanding's Turtle  $\square$ Spotted Turtle **Ribbon Snake** П  $\Box$ Other: **Ringed Boghaunter** \*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
 INon Significant VP Indicator Breeding Area e. General vernal pool comments and/or observations of other wildlife: 7/15/2020 Dried up by 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 Initials: Reviewed by MDIFW Date: Potentially Significant Not Significant due to: O does not meet biological criteria. This pool is: Significant but lacking critical data Odoes not meet MDEP vernal pool criteria. Comments:





INSTRUCTIONS:
<ul> <li>Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.</li> <li><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.</li> </ul>
Observer's Pool ID: MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: <u>Sarah Dahowza</u> ( b. Contact and credentials previously provided? O No (submit Addendum 1) OYes
2. PROJECT CONTACT INFORMATION
a. Contact name: 🖄 same as observer 🔘 other
b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes
c. Project Name: Three Corners Solar Project
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? OYes 🕅 No If no, was landowner permission obtained for survey? OYes ONo
b. Landowner's contact information (required)
Name: <u>E.D. Brssen &amp; Son</u> Phone: <u>(207)</u> 453-9388
Street Address: <u>779 Skowlegan Rd</u> City: <u>Hick ley</u> State: <u>ME</u> Zip: <u>0494</u> 4
c. 🗌 Large Projects: check if separate project landowner data file submitt <del>e</del> d
a Location Township: //a h. Tuta
Rief site directions to the pool (using manned landmarks).
See a Heched 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:
Coordinate system: WGS 84
Check one: 🖄 GIS shapefile - send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)
<ul> <li>The pool perimeter is delineated by multiple GPS points. (Excellent)</li> <li>Include map or spreadsheet with coordinates.</li> </ul>
O The above GPS point is at the center of the pool. (Good)
O The center of the pool is approximately mO ft O in the compass direction of degrees from the above GPS point. (Acceptable)

NAL POOL HABITAT INFORMATION         abitat survey date (only if different from indicator survey dates on page 3):	Ma	ine State Vernal Poo	ol Assessment Form	
abata survey date on page 3):         defailed habitat characterization         hoose the best descriptor for the landscape setting:         Stoods and opression         Other:         Procedsandepression         Other:         Procedsandepression         Other:         Procedsandepression         Other:         Procedsandepression         Procedsandepression         Other:         Procedsandepression         Procedsandepression         Other:         Procedsandepression         Other:	VERNAL POOL HABITAT INF	ORMATION		
Periodic nature Characterization         Decode the descriptor for the landscape setting:         Decode descriptor for the landscape setting:         Decoded depression         Other:         Deck all wetland types that best apply to this pool:         Forested swamp       Lake or pond cove         Ploadplain depression       Dug pond or         Borb swamp       Lake or pond cove         Peatland (fen or boj)       Abandoned beaver flowage         Partiand (fen or boj)       Abandoned beaver flowage         Pool Origin:       Qhadnohed beaver flowage         Pool origin:       Qhatural O Natural Modified O Unnatural O Unknown         If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required):         Pool Hydrology         Solect the pool's estimated hydroperiod AND provide rationale in box (required):         OPermanent       O Semi-permanent         (drying partially in all years and         Maximum depth at survey:       0 -12" (0-1 ft.)         O Iza'' (drying partially in all years and         O Mineral sol (bare, leaf-litter bottom, or upland or mosses present)       Or m O ft         Predominate substrate in order of increasing hydroperiod:       O'mod a condicate the pool' (>5 ft.)         O vegetation indecators in order of increasing hydroperiod (check all that apply	a. Habitat survey date ( <u>only li</u> h. Wetland hebitat shorestori	<u>amerent</u> from indicator s	survey dates on page 3):	. <u></u>
Diolated depression       Other:         Piolated depression       Other:         Floodplain depression       Other:         Floodplain depression       Other:         Procested swamp       Uxt meadow         Shub weating       Wet meadow         Procested swamp       Lake or pond cove         Browster       Anv or skidder rut         Other:       Other:         emal pool status under the Natural Resources Protection Act (NRPA)         Pool Origin:       Natural         Oscillated protein       Oscillated protein         Operament       Oscillated protein         Operament       Oscillated protein         (drying partially in all years and completely in drought years)       Out the completely in drought years)         Explain:       ////////////////////////////////////	<ul> <li>Wettand habitat characterit</li> <li>Chapped the best descriptor from the second se</li></ul>			
heck all wetland types that best apply to this pool:       Forested swamp       Dug pond or         Forested swamp       Lake or pond cove       Floodplain       Dug pond or         bhub swamp       Lake or pond cove       Floodplain       Dug pond or         Peatland (fen or bog)       Abandoned beaver flowage       Mostly unvegetated pool       Roadside ditch         Pend Origin:       Matural O Natural-Modified       Unnatural O Unknown       If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required):         Pool Hydrology       Select the pool's estimated hydroperiod AND provide rationale in box (required):       O Unknown         (drying partially in all years and completely in drought years)       Ephemeral       Unknown         Explain:       (drying out completely in drought years)       O m O ft       Length:       O m O ft         Maximum depth at survey:       0 -12° (0-1 ft.)       0 12·36° (1-3 ft.)       0 36-60° (3-5 ft.)       > >60° (>5 ft.)         Approximate size of pool (at spring highwater):       Wither       O m O ft       Length:       O m O ft         Predominate substrate in order of increasing hydroperiod:       O organic matter (peat/muck) shallow or restricted to deepest portion moss, prosoptium spp. (e.g. spinulose wood fern, interrupted fern, New York fern)       O Organic matter (peat/muck) shallow or setticted to deepest portion       O dynanice matter (g	O Isolated depression O Floodplain depression	Ø Pool asso ♥ Pool asso ○ Other:	ociated with larger wetland comp	lex
If orested swamp       Wet meadow       □ Blow stream       □ Dug pond or         Shub swamp       □ Lake or pond cove       □ Floodplain       □ Durrow pit         Peatland (fen or bog)       □ Active beaver flowage       □ Mosty unvegetated pool       □ Roadside ditch         Prool Origin:       ○ Natural O Natural-Modified       ○ Unnatural       ○ Unknown         If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required):       ○         Pool Hydrology       Select the pool's estimated hydroperiod AND provide rationale in box (required):       ○ Unknown         O Permanent       O Semi-permanent       Ø Ephemeral       ○ Unknown         (drying partially in all years and completely in drought years)       ○ N of t       □ Do of t       ○ Unknown         Explain:       /(ar/       /(ar/       ○ Unknown       ○ Unknown       ○ Unknown         Maximum depth at survey:       0 -12" (0-1 ft.)       0 12-36" (1-3 ft.)       0 36-60" (3-5 ft.)       0 >60" (>5 ft.)         Approximate size of pool (at spring highwater):       Width:       O m O ft       Length:       O m O ft         Predominate substrate in order of increasing hydroperiod (check all that apply):       □ Cresticate forms (e.g. point mars fem)       ○ Organic matter (peat/muck) shallow or resticated to deepest portion       ○ Organic matter (peat/muck) shallower, me	Check all wetland types that	best apply to this pool:		
Peatland (fen or bog)       Abandoned beaver flowage       Mostly unvegetated pool       Roadside ditch         Emergent marsh       Active beaver flowage       ATV or skidder rut       Other:         emal pool status under the Natural Resources Protection Act (NRPA)         Pool Origin:       Natural -Modified O Unnatural O Unknown         If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required):         Pool Hydrology         Select the pool's estimated hydroperiod AND provide rationale in box (required):         O Permanent       O Semi-permanent         (drying partially in all years and completely in drought years)       O Unknown         Explain:       //cr.f.       //f.f.f.         Maximum depth at survey:       0 0.12° (0-1 ft.)       0 12-36° (1-3 ft.)       0 36-60° (3-5 ft.)       0 >60° (>5 ft.)         Approximate size of pool (at spring highwater):       Width:	□ Forested swamp □ □ Shrub swamp □	Wet meadow   Lake or pond cove	☐ Slow stream ☐ Floodplain	Dug pond or borrow pit
emal pool status under the Natural Resources Protection Act (NRPA)         Pool Origin:       Natural O Natural-Modified O Unnatural OUnknown         If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required):         Pool Hydrology         Select the pool's estimated hydroperiod AND provide rationale in box (required):         O Permanent       Semi-permanent (drying partially in all years and completely in drought years)       O Unknown         Explain:	Peatland (fen or bog)     Emergent marsh	Abandoned beaver flowag Active beaver flowage	e Mostly unvegetated pool	☐ Roadside ditch ☐ Other:
Prool Origin:       Natural O Natural-Modified O Unnatural O Unknown         If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required):         If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required):         Pool Hydrology         Select the pool's estimated hydroperiod AND provide rationale in box (required):         O Permanent       Semi-permanent         (drying partially in all years and completely in drought years)       O Unknown (drying out completely in most years)         Explain:	Versel neel status under th	ha Natural December Dec		
Pool Urgin:       QNatural O Natural-Modified       QUnnatural       QUnnatural         If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required):         Pool Hydrology         Select the pool's estimated hydroperiod AND provide rationale in box (required):       Quarterial       Quarterial         Pool Hydrology         Select the pool's estimated hydroperiod AND provide rationale in box (required):       Quarterial       Quarterial         Pool Hydrology         Select the pool's estimated hydroperiod AND provide rationale in box (required):       Quarterial       Quarterial         Pool Hydrology         Select the pool's estimated hydroperiod AND provide rationale in box (required):       Quarterial       Quarterial         Pool Hydrology       Semi-permanent       Quarterial       Quarterial         Maximum depth at survey:       Qo-12" (0-1 ft.)       O12-36" (1-3 ft.)       Qs6-60" (3-5 ft.)       Q>60" (>5 ft.)         Approximate size of pool (at spring highwater):       With:		ne Natural Resources Pro	dection Act (NRPA)	
If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required):         Pool Hydrology         Select the pool's estimated hydroperiod AND provide rationale in box (required):         OPermanent       O Semi-permanent (drying partially in all years and completely in drought years)       O Unknown (drying out completely in most years)         Explain:       Image: Completely in drought years)       O Unknown (drying out completely in most years)         Maximum depth at survey:       O -12" (0-1 ft.)       O 12-36" (1-3 ft.)       O 36-60" (3-5 ft.)         Approximate size of pool (at spring highwater):       Width:       O m O ft       Length:       O m O ft         Predominate substrate in order of increasing hydroperiod:       O mo ft       Length:       O m O ft         O Mineral soil (bare, leaf-litter bottom, or upland mosses present)       O organic matter (peat/muck) shallow or restricted to deepest portion       O organic matter (peat/muck) deep and widespread         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):       Organic matter (peat/muck) deep and widespread         Pool wegetation indicators in order of increasing hydroperiod (check all that apply):       Wet site ferms (e.g. spinulose wood fern, interrupted fern, New York fern)       Wet site ferms (e.g. spinulose wood fern, interrupted fern, New York fern)       Wet site graminoids (e.g. blue-joint grass, tussock sedge, catall, bulrushes)         Sphagnum moss (anchored or su	I. Pool Origin: QNatural	O Natural-Modified O Uni	natural OUnknown	
Pool Hydrology         Select the pool's estimated hydroperiod AND provide rationale in box (required):         O Permanent       O Semi-permanent (drying partially in all years and completely in drought years)       O Unknown         Explain:	If modified, unnatural or ur	ıknown, describe any mode	ern or historic human impacts to t	the pool ( <b>required</b> ):
Pool Hydrology         Select the pool's estimated hydroperiod AND provide rationale in box (required):         O Permanent       O Semi-permanent         (drying partially in all years and completely in drought years)       O Unknown         Explain:       ////////////////////////////////////				· · · · · · · · · · · · · · · · · · ·
Pool Hydrology         Select the pool's estimated hydroperiod AND provide rationale in box (required):         O Permanent       O Semi-permanent (drying partially in all years and completely in drought years)       O Unknown         Explain:				
Select the pool's estimated hydroperiod AND provide rationale in box (required):       O Unknown         OPermanent       O Semi-permanent (drying partially in all years and completely in drought years)       O Unknown         Explain:       Image: Completely in drought years)       O Unknown         Explain:       // a-f       Image: Completely in drought years)       O Unknown         Maximum depth at survey:       O -12" (0-1 ft.)       O 12-36" (1-3 ft.)       O 36-60" (3-5 ft.)       O >60" (>5 ft.)         Approximate size of pool (at spring highwater):       Width:       O m O ft       Length:       O m O ft         Predominate substrate in order of increasing hydroperiod:       O m O ft       Corganic matter (peat/muck) shallow or restricted to deepest portion         Ø Mineral soil (sphagnum moss present)       O Organic matter (peat/muck) deep and widespread         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):       Organic matter (peat/muck) deep and widespread         Pool vegetation indicators (e.g. skink cabbage, jewelweed, blue flag iris, swamp candle)       Wet site ferns (e.g. royal fem, marsh fem)         Moist site vasculars (e.g. skink cabbage, jewelweed, blue flag iris, swamp candle)       Aquatic vascular spp. (e.g. pickerelweed, arrowhead)         Faunal indicators (check all that apply):       Fish       Bullfog or Green Frog tadpoles         Fishe       Bullfog or Green Frog tadpoles	ii. Pool Hydrology			
OPermanent       O Semi-permanent (drying partially in all years and completely in drought years)       O Unknown         Explain:	Select the pool's estimated	hydroperiod AND provide	rationale in box ( <b>required</b> ):	
(drying partially in all years and completely in drought years)       (drying out completely in most years)         Explain:       (drying out completely in most years)         Maximum depth at survey:       0 -12" (0-1 ft.)       0 12-36" (1-3 ft.)       0 36-60" (3-5 ft.)         Approximate size of pool (at spring highwater):       Width: O m O ft Length: O m O ft       O m O ft         Predominate substrate in order of increasing hydroperiod:       O m O ft Length: O m O ft       O m O ft         O Mineral soil (bare, leaf-litter bottom, or upland mosses present)       O organic matter (peat/muck) shallow or restricted to deepest portion       O organic matter (peat/muck) deep and widespread         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):       O reganic matter (peat/muck) deep and widespread         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):       Wet site ferns (e.g. royal fern, marsh fern)         O Ty 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, jewekweed, blue flag iris, swamp candle)       Aquatic vascular spp. (e.g. pickerelweed, arrowhead)         Faunal indicators (check all that apply):       Fish       Bullfrog or Green Frog tadpoles       Other:	OPermanent O Sem	ii-permanent	© Ephemeral	
Explain:       in most years)         Explain:       //a.f.//iffer         Maximum depth at survey:       0 -12" (0-1 ft.)       0 12-36" (1-3 ft.)       0 36-60" (3-5 ft.)       0 >60" (>5 ft.)         Approximate size of pool (at spring highwater):       Width:        0 m O ft       Length:        0 m O ft         Predominate substrate in order of increasing hydroperiod:       O mo ft       Length:        0 m O ft         Mineral soil (bare, leaf-litter bottom, or upland mosses present)       O Organic matter (peat/muck) shallow or restricted to deepest portion       O Organic matter (peat/muck) deep and widespread         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):	(dryi	ng partially in all years and	(drying out completely	O Onknown
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Image: Intervention of the terms of the terms of the terms of the terms of terms of terms of the terms of t	Explain:			······
Maximum depth at survey:       0 -12" (0-1 ft.)       0 12-36" (1-3 ft.)       0 36-60" (3-5 ft.)       0 >60" (>5 ft.)         Approximate size of pool (at spring highwater):       Width:       0 m 0 ft       Length:       0 m 0 ft         Predominate substrate in order of increasing hydroperiod:       0 Organic matter (peat/muck) shallow or restricted to deepest portion       0 Organic matter (peat/muck) shallow or restricted to deepest portion         Ø Mineral soil (sphagnum moss present)       0 Organic matter (peat/muck) deep and widespread         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):       0 Organic matter (peat/muck) deep and widespread         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):       Wet site ferns (e.g. royal fern, marsh fern)         Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)       Wet site ferns (e.g. highbush blueberry, maleberry, winterberry, mountain holly)         Moist site terns (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)       Quatic 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       No vegetation in pool         Fish       Builfrog or Green Frog tadpoles       Other:	harf lifter			
Maximum depth at survey:       0 -12" (0-1 ft.)       0 12-36" (1-3 ft.)       0 36-60" (3-5 ft.)       0 >60" (>5 ft.)         Approximate size of pool (at spring highwater):       Width:       0 m 0 ft       Length:       0 m 0 ft         Predominate substrate in order of increasing hydroperiod:       0 m 0 ft       Length:       0 m 0 ft         Mineral soil (bare, leaf-litter bottom, or upland mosses present)       0 Organic matter (peat/muck) shallow or restricted to deepest portion       0 Organic matter (peat/muck) deep and widespread         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):       0 Organic matter (peat/muck) deep and widespread         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):       Wet site ferms (e.g. orgal fern, marsh fern)         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. mater lily, water shield, pond weed, bladderwort)         Shagnum moss (anchored or suspended)       Fish       Bullfrog or Green Frog tadpoles       Other:				
Approximate size of pool (at spring highwater): Width: O m O ft Length: O m O ft         Predominate substrate in order of increasing hydroperiod:         Mineral soil (bare, leaf-litter bottom, or upland mosses present)       O Organic matter (peat/muck) shallow or restricted to deepest portion         Mineral soil (sphagnum moss present)       O Organic matter (peat/muck) deep and widespread         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):       O Organic matter (peat/muck) deep and widespread         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):       O Organic matter (peat/muck) deep and widespread         Pool vegetation indicators (e.g. spinulose wood fern, lady fern, bracken fern)       O Wet site ferns (e.g. highbush blueberry, maleberry, winterberry, mountain holly)         Moist site rems (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)       O Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)         Sphagnum moss (anchored or suspended)       Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)         Fish       Bullfrog or Green Frog tadpoles       Other:	Maximum depth at survey	: O 0-12" (0-1 ft.) O 12-3	36" (1-3 ft.) O 36-60" (3-5 ft.)	O >60" (>5 ft.)
Predominate substrate in order of increasing hydroperiod:       Organic matter (peat/muck) shallow or restricted to deepest portion         O Mineral soil (bare, leaf-litter bottom, or upland mosses present)       O Organic matter (peat/muck) shallow or restricted to deepest portion         O Mineral soil (sphagnum moss present)       O Organic matter (peat/muck) deep and widespread         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):       O Organic matter (peat/muck) deep and widespread         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):       Vet 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, 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)         Sphagnum moss (anchored or suspended)       Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)         Wate site flow Permanency       No vegetation in pool         Fish       Bullfrog or Green Frog tadpoles       Other:         No inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):       O ther or Unknown (explain):         No inlet or outlet       O ther or Unknown (explain):       O ther or Unknown (explain):	Approximate size of pool (	at spring highwater); Width	n: Om Oft Length:	OmOft
<ul> <li>Organic matter (peat/muck) shallow or restricted to deepest portion</li> <li>Organic matter (peat/muck) shallow or restricted to deepest portion</li> <li>Organic matter (peat/muck) deep and widespread</li> <li>Organic matter (peat/muck) deep and widespread</li> <li>O Organic matter (peat/muck) deep and widespread</li> <li>O Wet site ferns (e.g. royal fern, marsh fern)</li> <li>Wet site ferns (e.g. highbush blueberry, maleberry, winterberry, mountain holly)</li> <li>Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)</li> <li>Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)</li> <li>No vegetation in pool</li> </ul> Floating or offene Frog tadpoles <ul> <li>Other:</li> <li>Other:</li> </ul> Intet/Outlet Flow Permanents O Other or	<ul> <li>Dradaminata substrata in .</li> </ul>			
Organic matter (peat/muck) shallow or restricted to deepest portion         Mineral soil (sphagnum moss present)       O Organic matter (peat/muck) shallow or restricted to deepest portion         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):       O Organic matter (peat/muck) deep and widespread         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):       O Organic matter (peat/muck) deep and widespread         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):       O Organic matter (peat/muck) deep and widespread         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):       O Organic matter (peat/muck) deep and widespread         Pool vegetation indicators in order of increasing hydroperiod (check all that apply):       O Organic matter (peat/muck) deep and widespread         Image: the struct of the pool increasing hydroperiod (check all that apply):       Wet site ferns (e.g. not increasing hydroperiod (check all that apply)         Image: the fern increase of the pool increasing hydroperiod (check all that apply):       Wet site ferns (e.g. not increase, tussock sedge, cattail, bulrushes)         Image: the fern increase of the point or suspended       Pool weed, blue flag iris, swamp candle)         Image: the fern increase of the pool increas	Predominate substrate in (     Minoral asil (bara loof)	Sider of increasing hydrope		
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Pool vegetation indicators in order of increasing hydroperiod (check all that apply): <ul> <li>Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)</li> <li>Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)</li> <li>Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)</li> <li>Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)</li> <li>Sphagnum moss (anchored or suspended)</li> <li>Fish</li> <li>Bullfrog or Green Frog tadpoles</li> <li>Met or outlet</li> <li>Other or Unknown (explain):</li> <li>Other or Unk</li></ul>	Mineral soil (sphagnum	1 moss present)	• Organic matter (neat/muck)	ll 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)         Faunal indicators (check all that apply):         Fish         Bullfrog or Green Frog tadpoles         Inlet/Outlet Flow Permanency         Type of inlet or outlet         O ther or Unknown (explain):				deep and widespread
<ul> <li>I errestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)</li> <li>Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)</li> <li>Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)</li> <li>Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)</li> <li>Sphagnum moss (anchored or suspended)</li> <li>Faunal indicators (check all that apply):</li> <li>Fish Bullfrog or Green Frog tadpoles</li> <li>Moter or outlet</li> <li>Permanent inlet or outlet</li> <li>O ther or Unknown (explain):</li> </ul>	Pool vegetation indicators	in order of increasing hydro	operiod (check all that apply):	
<ul> <li>Indes, hydopoldin spp./</li> <li>Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)</li> <li>Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)</li> <li>Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)</li> <li>Sphagnum moss (anchored or suspended)</li> <li>Faunal indicators (check all that apply):</li> <li>Fish Bullfrog or Green Frog tadpoles</li> <li>Inlet/Outlet Flow Permanency</li> <li>Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):</li> <li>No inlet or outlet</li> <li>Other or Unknown (explain):</li> </ul>	i errestrial nonvascular	spp. (e.g. haircap	⊠ Wet site ferns (e.g. royal fern,	, marsh fern)
<ul> <li>Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)</li> <li>Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)</li> <li>Sphagnum moss (anchored or suspended)</li> <li>Faunal indicators (check all that apply):</li> <li>Fish</li> <li>Bullfrog or Green Frog tadpoles</li> <li>Inlet/Outlet Flow Permanency</li> <li>Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):</li> <li>No inlet or outlet</li> <li>Other or Unknown (explain):</li> </ul>	Dry site ferns (e.g. spi	nulose wood fern,	Wet site shrubs (e.g. highbusk winterberry, mountain holly)	h blueberry, maleberry,
<ul> <li>Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)</li> <li>Sphagnum moss (anchored or suspended)</li> <li>Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)</li> <li>No vegetation in pool</li> <li>Fish Bullfrog or Green Frog tadpoles</li> <li>Other:</li> <li>Inlet/Outlet Flow Permanency</li> <li>Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):</li> <li>No inlet or outlet</li> <li>Other or Unknown (explain):</li> </ul>	Moist site ferns (e.g. s fern interrupted forn	ensitive fern, cinnamon	Wet site graminoids (e.g. blue sedge, cattail, bulrushes)	e-joint grass, tussock
jewelweed, blue flag iris, swamp candle)       □       Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)         Sphagnum moss (anchored or suspended)       □       Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)         Faunal indicators (check all that apply):       □       No vegetation in pool         Fish       □       Bullfrog or Green Frog tadpoles       □         Inlet/Outlet Flow Permanency       □       Other:       □         Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):       ○       Permanent inlet or outlet (channel with well-defined banks and permanent flow)         ○       Intermittent inlet or outlet       ○       Other or Unknown (explain):       □	□ Moist site vasculare (e	a skunk cabhage	🗌 Aquatic vascular spp. (e.g. pi	ckerelweed, arrowhead)
Sphagnum moss (anchored or suspended)       water shield, pond weed, bladderwort)         No vegetation in pool         Faunal indicators (check all that apply):         Fish       Bullfrog or Green Frog tadpoles         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)         Other or Unknown (explain):	jewelweed, blue flag iri	s, swamp candle)	Floating or submerged aquati	cs (e.g. water lilv
No vegetation in pool     Faunal indicators (check all that apply):	Sphagnum moss (anch	nored or suspended)	water shield, pond weed, blac	lderwort)
Faunal indicators (check all that apply):         Fish       Bullfrog or Green Frog tadpoles         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       Other or Unknown (explain):		. , [	No vegetation in pool	
□ Fish       □ Bullfrog or Green Frog tadpoles       □ Other:         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       ○ Other or Unknown (explain):	Faunal indicators (check al Faunal indicators)	I that apply):		
Inlet/Outlet Flow Permanency         Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):         O No inlet or outlet       O Permanent inlet or outlet (channel with well-defined banks and permanent flow)         O Intermittent inlet       O Other or Unknown (explain):	☐ Fish ☐ Bullfrog or	Green Frog tadpoles [	Other:	
Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool): O No inlet or outlet O Permanent inlet or outlet (channel with well-defined banks and permanent flow) O Other or Unknown (explain): O Other or Unknown (explain):	iii Inlot/Outlat Elaw Damasa	000V		
No inlet or outlet     O Permanent inlet or outlet (channel with well-defined banks and permanent flow)     O Other or Unknown (explain):     O Other or Unknown (explain):	Type of inlet or outlet (a se	ency asonal or permanent chann	nel providing water flowing into o	rout of the pools
O Permanent flow)     O Other or Unknown (explain):     O Other or Unknown (explain):	$\bigcirc \text{ No inlet or outlet} \qquad \qquad$	Dormonent inlet ar and the	(chonnol with well defend to a	and normalized and the
or outlet	Intermittent inlet	Permanent inlet or outlet (	channel with well-defined banks	and permanent flow)
	or outlet	) Other or Unknown (explain	n):	



AND DE LEVER

# 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)? O Yes O 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.

		Egg Masses (or adult Fairy Shrimp)											Tadpoles/Larvae <sup>4</sup>					
SPECIES	Visit #1	Visit #2	Visit #3	Confi	dence l	_evel <sup>1</sup>	Egg Mass Maturity <sup>2</sup>			Observed			Confidence Level <sup>1</sup>					
Wood Frog	42			2			M											
Spotted Salamander																		
Blue-spotted Salamander																		
Fairy Shrimp <sup>3</sup>																		

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.

		Method	of Verit	ication*	CI **		Method	l of Veril	fication*	CI **
	SPECIES	Р	Н	S	OL .	SPECIES	Р	н	S	0L
	Blanding's Turtle					Wood Turtle				
	Spotted Turtle					Ribbon Snake				
	Ringed Boghaunter					Other:				
, d. C	*Method of verificat **CL - Confidence I Optional observe	ion: P = evel in s <b>r reco</b> l	Photo species	graphe detern	d, H = Ha nination: *	ndled, S = Seen 1= <60%, 2= 60-95%, 3= >95%				
[	SVP Pot	ential S	SVP	□ No	n Signifi	cant VP 🔲 Indicator Breeding Area				
e. G	eneral vernal po	ol cor	nmen	ts and	or obse	rvations of other wildlife:				
	VP AS	so cita	tid	$\omega$	fore	shed wet				
Sen	d completed form	and s	upport	ing doc	cumental	tion to: Maine Dept. of Inland Fisherie Attn: Vernal Pools 650 State Street, Bangor, ME	es and 04401	Wildlif	9	
NOTE	: Digital submiss acceptable for p	sion (te project	o Jaso ts with	on.Cza n 3 or f	piga@n ewer as	naine.gov) of vernal pool field forms sessed pools; <u>larger projects must</u>	and p be ma	hotog iled as	raphs s hard	is only copies.
For MD	IFW use only Rev	viewed b	y MDIF	W Date		Initials:				
This poo	bl is: 🔲 Significant	F [] b	Potentia out lackii	Ily Sign ng critica	ificant I data	Not Significant due to: O does not meet bio O does not meet M	o <mark>log</mark> ical DEP ver	criteria. nal pool	criteria.	
Comme	nts:									





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 <u>required</u> for all observers.
Observer's Pool ID: MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION
a. Observer name: Strah Drahoval
b. Contact and credentials previously provided? ONo (submit Addendum 1) ØYes
2. PROJECT CONTACT INFORMATION
a. Contact name: 🙊 same as observer 🔘 other
b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes
c. Project Name: Three Corners Soler Proje ts
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? OYes $ otin No If no, was landowner permission obtained for survey? OYes ONo$
b. Landowner's contact information (required)
Name: <u>E, D. Bessey z. Son</u> Phone: <u>(207)</u> 45 3-93 88
Street Address: 771 Skonhegen Rol. City: Hicksley State: ME Zip: Organ
c. 🗌 Large Projects: check if separate project landowner data file submitted
+. VERNAL POOL LOCATION INFORMATION
a. Location Township: <u>Bin Pon / Vn Hz</u>
Brief site directions to the pool (using mapped-landmarks):
See altached 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: <u>-69, 456229</u> Latitude/Northing: <u>44, 676 228</u>
Coordinate system: <u>WGS 84-</u>
Check one: O GIS shapefile
O The pool perimeter is delineated by multiple GPS points. (Excellent)
• The above GPS point is at the center of the pool (Good)
O The center of the pool is approximately $mO$ ft O in the compass direction of
degrees from the above GPS point. (Acceptable)

Maine State Vernal Po	ol Assessment Form
<ul> <li>5. VERNAL POOL HABITAT INFORMATION <ul> <li>a. Habitat survey date (only if different from indicator is b. Wetland habitat characterization</li> <li>Choose the best descriptor for the landscape setting:</li> <li>O Isolated depression</li> <li>O Pool ass</li> </ul> </li> </ul>	survey dates on page 3):
<ul> <li>Floodplain depression</li> <li>Check all wetland types that best apply to this pool:</li> <li>Forested swamp</li> <li>Wet meadow</li> <li>Shrub swamp</li> <li>Lake or pond cove</li> <li>Peatland (fen or bog)</li> <li>Abandoned beaver flowage</li> <li>c. Vernal pool status under the Natural Resources Procession</li> </ul>	□ Slow stream □ Dug pond or □ Floodplain borrow pit ge □ Mostly unvegetated pool □ Roadside ditch □ ATV or skidder rut □ Other: rotection Act (NRPA)
i. Pool Origin: Natural O Natural-Modified O Ur If modified, unnatural or unknown, describe any mod	nnatural OUnknown lern or historic human impacts to the pool ( <b>required</b> ):
<ul> <li>ii. Pool Hydrology</li> <li>■ Select the pool's <u>estimated</u> hydroperiod AND <u>provide</u></li> <li>O Permanent</li> <li>O Semi-permanent (drying partially in all years and completely in drought years)</li> <li>Explain:</li> </ul>	<u>e rationale</u> in box ( <b>required</b> ):
<ul> <li>Lent Utter</li> <li>Maximum depth at survey: O 0-12" (0-1 ft.) X12</li> <li>Approximate size of pool (at spring highwater): Wid</li> <li>Predominate substrate in order of increasing hydror</li> </ul>	2-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.) ith: ○ m ○ ft Length: ○ m ○ ft period:
<ul> <li>Mineral soil (bare, leaf-litter bottom, or upland mosses present)</li> <li>Mineral soil (sphagnum moss present)</li> </ul>	<ul> <li>Organic matter (peat/muck) shallow or restricted to deepest portion</li> <li>Organic matter (peat/muck) deep and widespread</li> </ul>
<ul> <li>Pool vegetation indicators in order of increasing hyde</li> <li>Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)</li> <li>Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)</li> <li>Moist site ferns (e.g. sensitive fern, cinnamon</li> </ul>	<ul> <li>droperiod (check all that apply):</li> <li>Wet site ferns (e.g. royal fern, marsh fern)</li> <li>Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)</li> <li>Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)</li> </ul>
fern, interrupted fern, New York fern) ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) ☑ Sphagnum moss (anchored or suspended) ■ Faunal indicators (check all that apply):	<ul> <li>Aquatic vascular spp. (e.g. pickerelweed, arrowhead)</li> <li>Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)</li> <li>No vegetation in pool</li> </ul>
<ul> <li>Fish Bullfrog or Green Frog tadpoles</li> <li>iii. Inlet/Outlet Flow Permanency</li> <li>Type of inlet or outlet (a seasonal or permanent character)</li> </ul>	Other:
<ul> <li>No inlet or outlet</li> <li>No inlet or outlet</li> <li>Intermittent inlet</li> <li>O Other or Unknown (exponent)</li> </ul>	et (channel with well-defined banks and permanent flow) blain):

.



# 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)? O Yes O 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.

		E	Tadpoles/Larvae <sup>4</sup>										
SPECIES	Visit #1	Visit #2	Visit #3	Confi	dence Level <sup>1</sup>	Egg N	0	Observed			Confidence Level <sup>1</sup>		
Wood Frog	25	1		2		M							
Spotted Salamander	5	9		2		M							
Blue-spotted Salamander													
Fairy Shrimp <sup>3</sup>													

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.

		Method	of Veri	fication*	<u>~</u> 1 **		Method	CI **		
	SPECIES	Р	Н	S	UL.	SPECIES	Р	Н	S	
	Blanding's Turtle					Wood Turtle				
	Spotted Turtle					Ribbon Snake				
	Ringed Boghaunter					Other:				
	*Method of verificate**CL - Confidence	tion: P = level in	Photospecies	graphe s detern	d, H = Ha nination:	andled, S = Seen 1= <60%, 2= 60-95%, 3= >95%				
d. (	Optional observe □SVP \\Pot	e <b>r reco</b> ential ६	mmer SVP	ndation No	n: n Signif	icant VP Indicator Breeding Area	1			
e. (	General vernal p		nmen	$\frac{1}{2}$		ervations of other whulle.				
	Dried by	> \$	57	4/15/	2020					
Se	nd completed form	n and s	uppor	ting do	cumenta	ation to: Maine Dept. of Inland Fisheri Attn: Vernal Pools 650 State Street, Bangor, ME	es and E 04401	Wildli	fe	
ΝΟΤΙ	E: Digital submis acceptable for	sion (t projec	o Jas ts wit	on.Cza h 3 or f	apiga@i fewer as	maine.gov) of vernal pool field form ssessed pools; <u>larger projects mus</u> t	s and   be ma	photo ailed a	graphs is hard	is only copies.
For M	DIFW use only Re	viewed	by MDIF	-W Dat	e:	Initials:				
This p	ool is: 🔲 Significant		Potenti out lack	ally Sigr ing critic	nificant al data	Not Significant due to: O does not meet to O does not meet to	oiological MDEP ve	criteria	ol criteria	
Comm	nents:				<u></u>					
DEPL	W0897-82008 04/1	8/2017					Print F	orm		Page 3 of





INSTRUCTIONS:
<ul> <li>Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.</li> <li><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.</li> </ul>
Observer's Pool ID: MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: <u>Sweb Da hovza</u> b. Contact and credentials previously provided? ONo (submit Addendum 1) OYes
2. PROJECT CONTACT INFORMATION a. Contact name: Same as observer O other b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes c. Project Name: <u>Three Cornes</u> Solar Project
<ul> <li>3. LANDOWNER CONTACT INFORMATION <ul> <li>a. Are you the landowner? OYes ONo</li> <li>b. Landowner's contact information (required)</li> <li>Name: <u>E. D. Bessen &amp; Son</u> Phone: <u>(207)</u> 453-4388</li> <li>Street Address: <u>771</u> <u>Skawhegan Rd</u>. City: <u>Hicklen</u> State: <u>ME</u> Zip: <u>04444</u></li> <li>c. Large Projects: check if separate project landowner data file submitted</li> </ul> </li> <li>4. VERNAL POOL LOCATION INFORMATION <ul> <li>a. Location Township: <u>Clin fon</u></li> <li>Brief site directions to the pool (using mapped landmarks):</li> </ul> </li> </ul>
<ul> <li>b. Mapping Requirements <ol> <li>USGS topographic map OR aerial photograph with pool clearly marked.</li> <li>GPS location of vernal pool (use Datum NAD83 / WGS84)</li> <li>Longitude/Easting: <u>-(A, 4577/k</u> Latitude/Northing: <u>44, 6/(833</u>)</li> <li>Coordinate system: <u>WGS 84</u></li> </ol> </li> <li>Check one: O GIS shapefile <ul> <li>send to Jason Czapiga@maine.gov; observer has reviewed shape accuracy (Best)</li> <li>The pool perimeter is delineated by multiple GPS points. (Excellent) <ul> <li>Include map or spreadsheet with coordinates.</li> </ul> </li> <li>O The above GPS point is at the center of the pool. (Good)</li> <li>O The center of the pool is approximately mO ft O in the compass direction of degrees from the above GPS point. (Acceptable)</li> </ul> </li> </ul>

Maine State Vernal P	ool Assessment Form
5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date ( <u>only if different</u> from indicato	r survey dates on page 3):
b. Wetland habitat characterization	
<ul> <li>Choose the best descriptor for the landscape setting:</li> <li>O Isolated depression</li> <li>O Floodplain depression</li> <li>O Other:</li> </ul>	ssociated with larger wetland complex
<ul> <li>Check all wetland types that best apply to this pool:</li> <li>Forested swamp</li> <li>Wet meadow</li> <li>Shrub swamp</li> <li>Lake or pond cove</li> <li>Peatland (fen or bog)</li> <li>Abandoned beaver flow</li> <li>Emergent marsh</li> <li>Active beaver flowage</li> </ul>	☐ Slow stream ☐ Dug pond or ☐ Floodplain borrow pit age ☑ Mostly unvegetated pool ☐ Roadside ditch ☐ ATV or skidder rut ☐ Other:
c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)
i. Pool Origin: QNatural ONatural-Modified OL	Innatural OUnknown
If modified, unnatural or unknown, describe any mo	dern or historic human impacts to the pool (required):
ii. Pool Hydrology	
Select the pool's <u>estimated</u> hydroperiod AND provides a select the pool's <u>estimated</u> hydroperiod AND provides a select the pool of th	<u>le rationale</u> in box ( <b>required</b> ):
O Permanent O Semi-permanent	Ephemeral O Unknown
(drying partially in all years ar completely in drought years)	id (drying out completely
Explain:	in most years)
leaf litter	
■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ◎12	$2-36"(1-3 \text{ ft})  \bigcirc 36-60"(3-5 \text{ ft})  \bigcirc >60"(>5 \text{ ft})$
Approximate size of pool (at spring highwater): Wie	dth: Om Oft Length: Om Oft
Predominate substrate in order of increasing hydro	period:
O Mineral soil (bare, leaf-litter bottom, or upland	O Organic matter (peat/muck) shallow or
mosses present)	restricted to deepest portion
	O Organic matter (peat/muck) deep and widespread
Pool vegetation indicators in order of increasing hyperbolic states and the second states and the second states are second states and the second states are second states a	droperiod (check all that apply):
Terrestrial nonvascular spp. (e.g. haircap	☐ Wet site ferns (e.g. royal fern, marsh fern)
moss, iycopodium spp.) □ 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,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
Faunal indicators (check all that apply):	No vegetation in pool
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
III. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent cha	nnel providing water flowing into or out of the people
$\bigcirc$ No inlet or outlet $\bigcirc$ $\bigcirc$ Permanent inlet or outlet	the providing water nowing into or out of the pool.
Intermittent inlet O Other or Unknown (exp or outlet	lain):



SAD-VP-104



# 6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: <u>4/28/2020</u>; 5/14/2020

## b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? O Yes **O**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.

		Egg Masses (or adult Fairy Shrimp)											Tadpoles/Larvae <sup>4</sup>					
SPECIES	Visit #1	Visit #2	Visit #3	Confi	Confidence Level <sup>1</sup>			Egg Mass Maturity <sup>2</sup>			Observed			Confidence Level <sup>1</sup>				
Wood Frog	17			2	2		M	A										
Spotted Salamander	10	8		2	2		M	М										
Blue-spotted Salamander																		
Fairy Shrimp <sup>3</sup>																		

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.

	0050150	Method of Verification*		CI **	PRECIES		Method of Verification*			
	SPECIES	Р	Н	S	~L	SPECIES	Р	Н	S	
	Blanding's Turtle					Wood Turtle				
	Spotted Turtle					Ribbon Snake				
	Ringed Boghaunter					Other:				
d. (	*Method of verifica **CL - Confidence Dptional observe SVP X Pot	tion: P = evel in s er reco ential \$	Photo species mmen SVP	graphe s detern dation	d, H = Ha nination: I <b>:</b> n Signifi	andled, S = Seen 1= <60%, 2= 60-95%, 3= >95% cant VP	l			
e. (	Seneral vernal p		nmen hau	ts and	or obse	ervations of other wildlife:				
	Viez	op	9	apar		2820				
Ser NOTE	nd completed forn	n and s sion (t	upport o Jase	ing doo on.Cza	piga@r	tion to: Maine Dept. of Inland Fisheric Attn: Vernal Pools 650 State Street, Bangor, ME naine.gov) of vernal pool field form	es and 04401 s and p	Wildlif	e graphs	is only
	acceptable for	projec	ts witl	n 3 or f	ewer as	ssessed pools; <u>larger projects must</u>	be ma	iled a	s hard	<u>copies</u> .
For M	DIFW use only Re	viewed l	y MDIF	W Date	e:	Initials:				
This po	ool is: 🔲 Significant		Potentia out lacki	ally Sign ng critica	ificant al data	Not Significant due to: O does not meet b O does not meet N	iological IDEP ve	criteria. mal poo	l criteria.	
Comm	ents:									
	0897-82008 04/1	8/2017				Γ	Drint Ec	rm		Pade 3 of





Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.
Clear photographs of a) the poor AND b) the indicators (one example or each species and mass) are required for all observers.
egg mass) are required for an esservere.
Observer's Pool ID:          MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION
a. Observer name: Shah Uta havita 1
b. Contact and credentials previously provided? ONo (submit Addendum 1)
2. PROJECT CONTACT INFORMATION
a. Contact name: 😡 same as observer 🔘 other
b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes
c. Project Name: Three Corners Solar Projet
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? OYes QNo If no, was landowner permission obtained for survey? OYes ONo
b. Landowner's contact information (required)
Name: <u>E. D. Bessurg &amp; Son</u> Phone: <u>(207)</u> 453-9388
Street Address: 779 Skowhagan Rd. City: <u>Hick kap</u> State: <u>ME</u> Zip: <u>04944</u>
c. 🔲 Large Projects: check if separate project landowner data file submitted 🦯
4. VERNAL POOL LOCATION INFORMATION
a Location Township: (lin frm
Brief site directions to the pool (using mapped landmarks):
See a Hachald man
b. Mapping Requirements
i. USGS topographic map OR aerial photograph with pool clearly marked.
<sup>ii.</sup> GPS location of vernal pool (use Datum NAD83 / WGS84)
Longitude/Easting: <u>-69. 46/326</u> Latitude/Northing: <u>44, 624046</u>
Coordinate system: W6S 84
Check one: GIS shapefile
O The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsneet with coordinates.
$\Omega$ The center of the pool is approximately m $\Omega$ ft $\Omega$ in the compass direction of
degrees from the above GPS point. (Acceptable)

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W Scinte

	And Far Marsh
5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date ( <u>only if different</u> from indicato	or survey dates on page 3):
b. Wetland habitat characterization	
<ul> <li>Choose the best descriptor for the landscape setting:</li> <li>Isolated depression</li> <li>Floodplain depression</li> <li>Other:</li> </ul>	ssociated with larger wetland complex
Check all wetland types that best apply to this pool:	
Forested swamp Wet meadow	Slow stream
Shrub swamp	☐ Floodplain borrow pit
<ul> <li>Peatland (fen or bog)</li> <li>Abandoned beaver flow</li> <li>Emergent marsh</li> <li>Active beaver flowage</li> </ul>	rage ☐ Mostly unvegetated pool ☐ Roadside ditch ☐ ATV or skidder rut ☐ Other:
c. Vernal pool status under the Natural Resources P	Protection Act (NRPA)
i. Pool Origin: 🖉 Natural O Natural-Modified O U	Jnnatural OUnknown
If modified, unnatural or unknown, describe any mo	odern or historic human impacts to the pool (required):
ii. Pool Hydrology	
Select the pool's <u>estimated</u> hydroperiod AND <u>provid</u>	de rationale in box ( <b>required</b> ):
OPermanent O Semi-permanent (drying partially in all years ar	nd (drying out completely
completely in drought years)	in most years)
Let little	
<ul> <li>Approximate size of pool (at spring highwater): Wide</li> <li>Predominate substrate in order of increasing hydro</li> <li>Mineral soil (bare, leaf-litter bottom, or upland mosses present)</li> <li>Mineral soil (sphagnum moss present)</li> <li>Pool vegetation indicators in order of increasing hydro</li> <li>Mineral nonvascular spp. (e.g. haircap moss, lycopodium spp.)</li> <li>Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)</li> </ul>	<pre>dth: O m O ft Length: O m O ft period:</pre>
Moist site ferns (e.g. sensitive fern, cinnamon	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbade.	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle)	☐ Floating or submerged aquatics (e.g. water lily,
Sphagnum moss (anchored or suspended)	water shield, pond weed, bladderwort)
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 cha	nnel providing water flowing into or out of the pool):
○ No inlet or outlet ○ Permanent inlet or outle	et (channel with well-defined banks and permanent flow)
Supervision of the termittent inlet O Other or Unknown (exp or outlet	lain):



# SAD-VP-105

# **Maine State Vernal Pool Assessment Form**



# 6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates:

# b. Indicator abundance criteria and pool survey effort

■ Is pool depression bisected by 2 ownerships (straddler pool)? O Yes O No

4/28/2020

- 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.

	1		igg Masses	s (or adult	Fairy Shrim	p)		Tadpoles/Larvae <sup>4</sup>					
SPECIES	Visit #1	Visit #2	Visit #3	Confide	nce Level <sup>1</sup>	Egg N	lass Maturity <sup>2</sup>	Ok	Observed		Cor L	nce	
Wood Frog	22			2		A							
Spotted Salamander	87			2		M							
Blue-spotted Salamander	1												
Fairy Shrimp <sup>3</sup>													

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.

		Method of Ve		nod of Verification*			Method	of Veri	fication*	C1 **		
	SPECIES	Р	Н	S	CL	SPECIES	Р	Н	S	01		
	Blanding's Turtle					Wood Turtle						
	Spotted Turtle					Ribbon Snake						
	Ringed Boghaunter					Other:						
1.	*Method of verification: $P = Photographed$ , $H = Handled$ , $S = Seen$											
	**CL - Confidence I	level in	specie	s detern	nination:	1= <60%, 2= 60-95%, 3= >95%						
d. (	Optional observe	er reco	mmer	ndatior	<b>i</b> :							
	⊠ SVP □ Pot	ential S	SVP	🗆 No	n Signifi	icant VP 🛛 Indicator Breeding Area	a					
	· · · ·				/ <b>.</b>							
е. С	Seneral vernal p		mmen	ts and	or obse	ervations of other wildlife:				]		
								1.0.4				
Ser	nd completed form	n and s	uppor	ting do	cumenta	ation to: Maine Dept. of Inland Fisheri	es and	Wildli	fe			
						Attn: Vernal Pools 650 State Street Bangor MF	= 04401					
NOTE	: Digital submis	sion (t	o Jas	on.Cza	piga@r	maine.gov) of vernal pool field form	s and	ohoto ulad a	graphs s bard	is only		
	acceptable for	projec	ts wit	n 3 or 1	rewer as	ssessed pools; larger projects musi			is naru	copies.		
For MD	DIFW use only Re	eviewed	by MDI	-W Dat	e:	Initials:						
This po	ol is: 🔲 Significant		Potenti	ally Sigr	nificant	Not Significant due to: Odoes not meet to	oiological	criteria	•			
			but lack	ing critic	al data	O does not meet l	MDEP ve	rnal poo	ol criteria			
Comme	ents:											
L DEPLV	/0897-82008 04/1	8/2017					Print Fo	orm		Page 3 of 3		



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INSTRUCTIONS:
<ul> <li>Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.</li> <li><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.</li> </ul>
Observer's Pool ID: MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION
a. Observer name: Sarah Druhoval
b. Contact and credentials previously provided? ONo (submit Addendum 1) OYes
2. PROJECT CONTACT INFORMATION
a. Contact name: 🔯 same as observer 🔿 other
b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes
c. Project Name: Three Corners Solar Projet
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? OYes $ otin No $ If no, was landowner permission obtained for survey? OYes ONo
b. Landowner's contact information (required)
Name: <u>E.D. Bessey if Son</u> Phone: (207) 453-9388
Street Address: <u>779 Skowhegan Rd.</u> City: <u>Hickey</u> State: <u>ME</u> Zip: <u>0194</u>
c. 🔲 Large Projects: check if separate project landowner data file submitted
4. VERNAL POOL LOCATION INFORMATION
a Location Township: Alia tax
Brief site directions to the pool (using mapped landmarks):
See a Hached man
b. Mapping Requirements
i. USGS topographic map OR aerial photograph with pool clearly marked.
<sup>ii.</sup> GPS location of vernal pool (use Datum NAD83 / WGS84)
Longitude/Easting:Latitude/Northing:
Coordinate system: <u>W6S_84</u>
Check one: O-GIS shapefile
<ul> <li>The pool perimeter is delineated by multiple GPS points. (Excellent)</li> <li>Include map or spreadsheet with coordinates.</li> </ul>
O The above GPS point is at the center of the pool. (Good)
O The center of the pool is approximately mO ft O in the compass direction of degrees from the above GPS point. (Acceptable)

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Maine State Vernal Pool A	
5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date ( <u>only if different</u> from indicator surve	ey dates on page 3):
b. Wetland habitat characterization	
<ul> <li>Choose the best descriptor for the landscape setting:</li> <li>O Isolated depression</li> <li>O Floodplain depression</li> <li>O Other:</li> </ul>	ed with larger wetland complex
<ul> <li>Check all wetland types that best apply to this pool:</li> <li>Forested swamp</li> <li>Wet meadow</li> <li>Shrub swamp</li> <li>Lake or pond cove</li> <li>Peatland (fen or bog)</li> <li>Abandoned beaver flowage</li> <li>Emergent marsh</li> <li>Active beaver flowage</li> </ul>	☐ Slow stream ☐ Dug pond or ☐ Floodplain borrow pit ☐ Mostly unvegetated pool ☐ Roadside ditch ☐ ATV or skidder rut ☐ Other:
c. Vernal pool status under the Natural Resources Protecti	on Act (NRPA)
If medified uppeturel or unknown describe any medern of	
I modified, dimatural of unknown, describe any modern of Tmpouvoluct by from road floars	Woods road. Glvort
ii. Pool Hydrology	,
<ul> <li>Select the pool's <u>estimated</u> hydroperiod AND <u>provide ratio</u></li> <li>O Permanent</li> <li>O Semi-permanent</li> <li>(drying partially in all years and completely in drought years)</li> <li>Explain:</li> </ul>	nale in box ( <b>required</b> ): C Ephemeral O Unknown (drying out completely in most years)
	N. S.
	1-3 II.) U 30-80 (3-5 II.) U >60 (>5 II.)
Approximate size of pool (at spring highwater): Width:	Om Oft Length: Om Oft •
<ul> <li>Predominate substrate in order of increasing hydroperiod:</li> <li>O Mineral soil (bare, leaf-litter bottom, or upland</li> </ul>	Organic matter (peat/muck) shallow or
mosses present)	restricted to deepest portion
Winneral soli (sphagnum moss present)	Organic matter (peat/muck) deep and widespread
Pool vegetation indicators in order of increasing hydroperion	od (check all that apply):
moss, lycopodium spp.)	/et site ferns (e.g. royal fern, marsh fern)
□ Dry site ferns (e.g. spinulose wood fern, ↓ ₩ lady fern, bracken fern)	interberry, mountain holly)
☐ Moist site ferns (e.g. sensitive fern, cinnamon	/et site graminoids (e.g. blue-joint grass, tussock edge, cattail, bulrushes)
$\square$ Moist site vasculars (e.g. skunk cabbage, $\square$ A	quatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle)	oating or submerged aquatics (e.g. water lily,
Sphagnum moss (anchored or suspended)	o vegetation in pool
<ul> <li>Faunal indicators (check all that apply):</li> <li>Fish</li> <li>Bullfrog or Green Frog tadpoles</li> <li>Of</li> </ul>	ther:
iii. Inlet/Outlet Flow Permanency	
Type of inlet or outlet (a seasonal or permanent channel pr	roviding water flowing into or out of the pool):
<ul> <li>No inlet or outlet</li> <li>No inlet or outlet</li> <li>Intermittent inlet or outlet</li> <li>O Other or Unknown (explain):</li> </ul>	nnel with well-defined banks and permanent flow)



# 5AD-UP-106

# Maine State Vernal Pool Assessment Form

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: (4/2R)/(202n)

# b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? O Yes O 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.

		Egg Masses (or adult Fairy Shrimp)											Tadpoles/Larvae <sup>4</sup>					
SPECIES	Visit #1	Visit #2	Visit #3	Confi	dence L	.evel <sup>1</sup>	Egg Mass Maturity <sup>2</sup> Observe			ed	d Confidenc		nce					
Wood Frog	- And			A														
Spotted Salamander	37			M														
Blue-spotted Salamander				3														
Fairy Shrimp <sup>3</sup>																		

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. <u>Observations should be accompanied by photographs</u>.

	Method of V		thod of Verification*		CI **		Method	l of Veri	fication*	CI **			
	SPECIES	Р	Н	S		SPECIES	Р	Н	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	specie	s deterr	nination:	1= <60%, 2= 60-95%, 3= >95%							
d. 1	Optional observe	er reco	mmer	ndatior	า:								
		tential S	SVP	🗆 No	n Signifi	icant VP 🛛 Indicator Breeding Area	3						
	0			ام م م م	laraha	mustions of other wildlife.							
e. 9			nmen	ts and	or obse	ervations of other wildlife:							
	Impounded by read												
	Dried U	NG	24	7/15	1202	6							
	i nal an unulata diferen		V V	انسم مام		tion to: Maine Dont of Inland Fisher	oo ood	Milalif	io.				
Se	na completea forn	n and s	uppor	ung ao	cumenta	Attn: Vernal Pools	es anu	Vanam	C				
						650 State Street, Bangor, ME	E 04401						
	E: Digital submis	sion (t	o Jas	on.Cza	piga@r	naine.gov) of vernal pool field form	s and p	photog	graphs	is only			
	acceptable for	projec	ts wit	h 3 or f	fewer as	ssessed pools; larger projects must	<u>be ma</u>	iled a	s hard	copies.			
For M				34/ 12-04		Initiala							
			Dy WDIr	-W Dati	e	Initials	iologioal	oritorio					
This p	ool is: Significant		otentia out lacki	ing critica	al data		IDEP ve	rnal poo	l criteria.				
Comm	ents:							· · · ·					
										I			
DEPLV	V0897-82008 04/1	8/2017					Print Fo	orm l	ł	rage 3 of 3			

5AD-VP-107





INSTRUCTIONS:
<ul> <li>Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.</li> <li><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.</li> </ul>
Observer's Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: <u>Sarah Dahovza</u> / b. Contact and credentials previously provided? ONo (submit Addendum 1) & Yes
2. PROJECT CONTACT INFORMATION
a. Contact name: 🔯 same as observer 🔘 other
b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes
c. Project Name: Three Corners Sola Project
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? OYes $\bigotimes$ No If no, was landowner permission obtained for survey? OYes ONo
b. Landowner's contact information (required)
Name: E, D. Bessey 4 Son Phone: (207) 453-9388
Street Address: 779 Stowhean Rd. City: Hicklen State: ME Zip: 04944
c. 🗌 Large Projects: check if separate project landowner data file submitted
4. VERNAL POOL LOCATION INFORMATION
a. Location Township: <u>Clin ton</u>
Brief site directions to the pool (using mapped landmarks):
See allached map
ŕ
h Manning Requirements
i USGS topographic map OR aerial photograph with pool clearly marked
ii. GPS location of vernal pool (use Datum NAD83 / WGS84)
Longitude/Easting: $-09, 46, 40, 4$ Latitude/Northing: $44, 63/65 = 1$
Coordinate system: <u>////////////////////////////////////</u>
Check one: OGIS shapefile - send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)
<ul> <li>The pool perimeter is delineated by multiple GPS points. (Excellent)</li> <li>Include map or spreadsheet with coordinates.</li> </ul>
O The above GPS point is at the center of the pool. (Good)
O The center of the pool is approximately mO ft O in the compass direction of degrees from the above GPS point. (Acceptable)

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	State 1 April
ERNAL POOL HABITAT INFORMATION	
. Habitat survey date ( <u>only if different</u> from inc	dicator survey dates on page 3):
. Wetland habitat characterization	<i></i>
O Isolated depression	etting: <sup>S</sup> ool associated with larger wetland complex Other:
■ Check all wetland types that best apply to this p	Image       Slow stream       Image       Dug pond or borrow pit         Image       Image       Mostly unvegetated pool       Image       Roadside ditch         Image       Image       ATV or skidder rut       Image       Other:       Image
Vernal pool status under the Natural Resou	rces Protection Act (NRPA)
i. Pool Origin: 🛛 Natural O Natural-Modified	d 🔿 Unnatural 🔿 Unknown
If modified, unnatural or unknown, describe a	any modern or historic human impacts to the pool (required):
ii. Pool Hydrology	
O Permanent (drying partially in all ye completely in drought Explain:	ears and (drying out completely years) in most years)
l'eaf litter	
■ Maximum depth at survey: O 0-12" (0-1 ft.)	 ◯ 12-36" (1-3 ft.) ◯ 36-60" (3-5 ft.) ◯ >60" (>5 ft.)
<ul> <li>Maximum depth at survey: O 0-12" (0-1 ft.)</li> <li>Approximate size of pool (at spring highwate</li> </ul>	$\bigcirc$ 12-36" (1-3 ft.) $\bigcirc$ 36-60" (3-5 ft.) $\bigcirc$ >60" (>5 ft.)
<ul> <li>Maximum depth at survey: O 0-12" (0-1 ft.)</li> <li>Approximate size of pool (at spring highwate</li> <li>Predominate substrate in order of increasing</li> </ul>	O 12-36" (1-3 ft.) O 36-60" (3-5 ft.) O >60" (>5 ft.) er): Width:O m O ft Length:O m O ft
<ul> <li>Maximum depth at survey: O 0-12" (0-1 ft.)</li> <li>Approximate size of pool (at spring highwate</li> <li>Predominate substrate in order of increasing</li> <li>O Mineral soil (bare, leaf-litter bottom, or up mosses present)</li> <li>O Mineral soil (sphagnum moss present)</li> </ul>	O 12-36" (1-3 ft.) O 36-60" (3-5 ft.) O >60" (>5 ft.) er): Width: O m O ft Length: O m O ft hydroperiod: and O Organic matter (peat/muck) shallow or restricted to deepest portion O Organic matter (peat/muck) deep and widespread
<ul> <li>Maximum depth at survey: O 0-12" (0-1 ft.)</li> <li>Approximate size of pool (at spring highwate</li> <li>Predominate substrate in order of increasing O Mineral soil (bare, leaf-litter bottom, or up mosses present)</li> <li>O Mineral soil (sphagnum moss present)</li> <li>Pool vegetation indicators in order of increasing</li> </ul>	O 12-36" (1-3 ft.) O 36-60" (3-5 ft.) O >60" (>5 ft.) er): Width: O m O ft Length: O m O ft hydroperiod: eland O Organic matter (peat/muck) shallow or restricted to deepest portion O Organic matter (peat/muck) deep and widespread sing hydroperiod (check all that apply):
<ul> <li>Maximum depth at survey: O 0-12" (0-1 ft.)</li> <li>Approximate size of pool (at spring highwate</li> <li>Predominate substrate in order of increasing</li> <li>O Mineral soil (bare, leaf-litter bottom, or up mosses present)</li> <li>O Mineral soil (sphagnum moss present)</li> <li>Pool vegetation indicators in order of increas</li> <li>□ Terrestrial nonvascular spp. (e.g. haircap)</li> </ul>	<ul> <li>O 12-36" (1-3 ft.) O 36-60" (3-5 ft.) O &gt;60" (&gt;5 ft.)</li> <li>br): Width: O m O ft Length: O m O ft</li> <li>hydroperiod:</li> <li>bland O Organic matter (peat/muck) shallow or restricted to deepest portion</li> <li>O Organic matter (peat/muck) deep and widespread</li> <li>bing hydroperiod (check all that apply):</li> <li>C Wet site ferns (e.g. royal fern, marsh fern)</li> </ul>
<ul> <li>Maximum depth at survey: O 0-12" (0-1 ft.)</li> <li>Approximate size of pool (at spring highwate</li> <li>Predominate substrate in order of increasing         <ul> <li>Mineral soil (bare, leaf-litter bottom, or up mosses present)</li> <li>Mineral soil (sphagnum moss present)</li> </ul> </li> <li>Pool vegetation indicators in order of increas         <ul> <li>Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)</li> <li>Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)</li> </ul> </li> </ul>	<ul> <li>O 12-36" (1-3 ft.) O 36-60" (3-5 ft.) O &gt;60" (&gt;5 ft.)</li> <li>ar): Width: O m O ft Length: O m O ft</li> <li>bland O Organic matter (peat/muck) shallow or restricted to deepest portion</li> <li>O Organic matter (peat/muck) deep and widespread</li> <li>bing hydroperiod (check all that apply):</li> <li>C Wet site ferns (e.g. royal fern, marsh fern)</li> <li>Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)</li> </ul>
<ul> <li>Maximum depth at survey: O 0-12" (0-1 ft.)</li> <li>Approximate size of pool (at spring highwate</li> <li>Predominate substrate in order of increasing O Mineral soil (bare, leaf-litter bottom, or up mosses present)</li> <li>O Mineral soil (sphagnum moss present)</li> <li>Pool vegetation indicators in order of increas <ul> <li>Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)</li> <li>Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)</li> <li>Moist site ferns (e.g. sensitive fern, cinna fern, interrupted fern, New York fern)</li> </ul> </li> </ul>	<ul> <li>O 12-36" (1-3 ft.) O 36-60" (3-5 ft.) O &gt;60" (&gt;5 ft.)</li> <li>ar): Width: O m O ft Length: O m O ft</li> <li>and O Organic matter (peat/muck) shallow or restricted to deepest portion</li> <li>O Organic matter (peat/muck) deep and widespread</li> <li>O Organic matter (peat/muck) deep and widespread</li> <li>Sing hydroperiod (check all that apply):</li> <li>Wet site ferns (e.g. royal fern, marsh fern)</li> <li>Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)</li> <li>Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)</li> </ul>
<ul> <li>Maximum depth at survey: O 0-12" (0-1 ft.)</li> <li>Approximate size of pool (at spring highwate</li> <li>Predominate substrate in order of increasing</li> <li>O Mineral soil (bare, leaf-litter bottom, or up mosses present)</li> <li>O Mineral soil (sphagnum moss present)</li> <li>Pool vegetation indicators in order of increas</li> <li>Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)</li> <li>Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)</li> <li>Moist site ferns (e.g. sensitive fern, cinnafern, interrupted fern, New York fern)</li> <li>Moist site vasculars (e.g. skunk cabbage</li> </ul>	<ul> <li>O 12-36" (1-3 ft.) O 36-60" (3-5 ft.) O &gt;60" (&gt;5 ft.)</li> <li>ar): Width: O m O ft Length: O m O ft</li> <li>bland O Organic matter (peat/muck) shallow or restricted to deepest portion</li> <li>O Organic matter (peat/muck) deep and widespread</li> <li>bing hydroperiod (check all that apply):</li> <li>Wet site ferns (e.g. royal fern, marsh fern)</li> <li>Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)</li> <li>Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)</li> <li>Aquatic vascular spp. (e.g. pickerelweed, arrowhead)</li> </ul>
<ul> <li>Maximum depth at survey: O 0-12" (0-1 ft.)</li> <li>Approximate size of pool (at spring highwate</li> <li>Predominate substrate in order of increasing <ul> <li>Mineral soil (bare, leaf-litter bottom, or up mosses present)</li> <li>Mineral soil (sphagnum moss present)</li> </ul> </li> <li>Pool vegetation indicators in order of increasing moss, lycopodium spp.) <ul> <li>Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)</li> <li>Moist site ferns (e.g. sensitive fern, cinnafern, interrupted fern, New York fern)</li> <li>Moist site vasculars (e.g. skunk cabbage jewelweed, blue flag iris, swamp candle)</li> </ul> </li> </ul>	<ul> <li>O 12-36" (1-3 ft.) O 36-60" (3-5 ft.) O &gt;60" (&gt;5 ft.)</li> <li>er): Width: O m O ft Length: O m O ft</li> <li>hydroperiod:</li> <li>bland O Organic matter (peat/muck) shallow or restricted to deepest portion</li> <li>O Organic matter (peat/muck) deep and widespread</li> <li>sing hydroperiod (check all that apply):</li> <li>Wet site ferns (e.g. royal fern, marsh fern)</li> <li>Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)</li> <li>amon Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)</li> <li>Aquatic vascular spp. (e.g. pickerelweed, arrowhead)</li> <li>Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)</li> </ul>
<ul> <li>Maximum depth at survey: O 0-12" (0-1 ft.)</li> <li>Approximate size of pool (at spring highwate</li> <li>Predominate substrate in order of increasing O Mineral soil (bare, leaf-litter bottom, or up mosses present)</li> <li>O Mineral soil (sphagnum moss present)</li> <li>Pool vegetation indicators in order of increas</li> <li>Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)</li> <li>Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)</li> <li>Moist site ferns (e.g. sensitive fern, cinna- fern, interrupted fern, New York fern)</li> <li>Moist site vasculars (e.g. skunk cabbage jewelweed, blue flag iris, swamp candle)</li> <li>Sphagnum moss (anchored or suspender</li> </ul>	<ul> <li>O 12-36" (1-3 ft.) O 36-60" (3-5 ft.) O &gt;60" (&gt;5 ft.)</li> <li>br): Width: O m O ft Length: O m O ft</li> <li>hydroperiod:</li> <li>bland O Organic matter (peat/muck) shallow or restricted to deepest portion</li> <li>O Organic matter (peat/muck) deep and widespread</li> <li>bing hydroperiod (check all that apply):</li> <li>O Wet site ferns (e.g. royal fern, marsh fern)</li> <li>Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)</li> <li>Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)</li> <li>Aquatic vascular spp. (e.g. pickerelweed, arrowhead)</li> <li>G Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)</li> <li>No vegetation in pool</li> </ul>
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# 6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: <u>SAD-VP-107</u>

# b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? O Yes O 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.

		Egg Masses (or adult Fairy Shrimp)											Tadpoles/Larvae <sup>4</sup>				
SPECIES	Visit #1	Visit #2	Visit #3	Confi	dence L	evel <sup>1</sup>	Egg N	lass Ma	aturity <sup>2</sup>	Observed		Confiden Level <sup>1</sup>		nce I <sup>1</sup>			
Wood Frog	48			2			A										
Spotted Salamander	SAR	-73		2			Μ										
Blue-spotted Salamander																	
Fairy Shrimp <sup>3</sup>																	

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.

		Method of Verification*				Method	Method of Verification*						
	SPECIES	Р	н	S	CL.	SPECIES	Р	Н	S	CL			
	Blanding's Turtle					Wood Turtle							
	Spotted Turtle					Ribbon Snake							
	Ringed Boghaunter	Boghaunter											
*	*Method of verification: P = Photographed, H = Handled, S = Seen **CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%												
d. 0	d. Optional observer recommendation:												
Ĭ	a. Optional observer recommendation:												
					0	°							
e.G	eneral vernal p	ool coi	mmen	ts and	or obse	ervations of other wildlife:							
	Dried up by 7/15/2020												
	F	S											
						····							
Sen	d completed form	n and s	upport	ing doo	cumenta	tion to: Maine Dept. of Inland Fisher	es and	Wildlif	e				
						Attn: Vernal Pools 650 State Street Bangor ME	= 04401						
			_	_									
NOTE:	Digital submis	sion (t	o Jase te witt	on.Cza	ipiga@r	naine.gov) of vernal pool field form	s and <b>j</b>	ohotog ilod a	graphs s bard	is only			
		projec		13011	eweras	saesseu pools, <u>targer projects mus</u>		ineu a	5 11010	<u>copics</u> .			
For MD	FW use only Re	eviewed I	by MDIF	W Date	e:	Initials:							
This poo	ol is: 🔲 Significant		Potentia	ally Sign	ificant	Not Significant due to: O does not meet b	biological	criteria.					
0	- 4 F					Odoes not meet I	MDEP ve	mal poo	l criteria.				
Comme	nts.												
DEPLW	0897-82008 04/1	8/2017					Print Fo	orm		Dage 3 of 3			





1/2 (FW)
INSTRUCTIONS:
<ul> <li>Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.</li> <li><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.</li> </ul>
Observer's Pool ID: <u>SAD -VP-1/k</u> MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: <u>Sva h</u> <u>Da hov ze</u> b. Contact and credentials previously provided? O No (submit Addendum 1) OYes
2. PROJECT CONTACT INFORMATION
a. Contact name: 🖉 same as observer 🔘 other
b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes
c. Project Name: Three Corners Solar Projet
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? OYes ONo If no, was landowner permission obtained for survey? OYes ONo
b. Landowner's contact information (required)
Name: <u>ED Bessey &amp; Son</u> Phone: (207) 45 3-9388
Street Address: <u>777</u> Strown begin Red, City: <u>Hick ley</u> State: <u>ME</u> Zip: <u>0494</u>
c. 🔲 Large Projects: check if separate project landowner data file submitted
a Location Township: Ba kara
Brief site directions to the pool (using mapped landmarks)
See a Hached Maa
and the Of Preserver and the
b. Mapping Requirements
i. USGS topographic map OR aerial photograph with pool clearly marked.
<sup>ii.</sup> GPS location of vernal pool (use Datum NAD83 / WGS84)
Longitude/Easting: <u>-(6, 455359</u> Latitude/Northing: <u>44, 672445</u>
Coordinate system: <u>WGS 84</u>
Check one: OCGIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)
<ul> <li>I ne pool perimeter is delineated by multiple GPS points. (Excellent)</li> <li>Include map or spreadsheet with coordinates.</li> </ul>
O The above GPS point is at the center of the pool. (Good)
O The center of the pool is approximately mO ft O in the compass direction of
degrees from the above GPS point. (Acceptable)

Maine State V	ernal Pool	Assessment	Form
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Maine State vernal P	ool Assessment Form
5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicate	or survey dates on page 3):
b. Wetland habitat characterization	
<ul> <li>Choose the best descriptor for the landscape setting:</li> <li>O Isolated depression</li> <li>O Floodplain depression</li> <li>O Other:</li> </ul>	ssociated with larger wetland complex
<ul> <li>Check all wetland types that best apply to this pool:</li> <li>Forested swamp</li> <li>Wet meadow</li> <li>Shrub swamp</li> <li>Lake or pond cove</li> <li>Peatland (fen or bog)</li> <li>Abandoned beaver flow</li> <li>Emergent marsh</li> <li>Active beaver flowage</li> </ul>	□ Slow stream □ Dug pond or □ Floodplain borrow pit age □ Mostly unvegetated pool □ Roadside ditch □ ATV or skidder rut □ Other: Profection Act (NPPA)
i Pool Origin: ONetwork O Network Medified O	
If modified, unnatural or unknown, describe any mo	odern or historic human impacts to the pool ( <b>required</b> ):
ii. Pool Hydrology	
Select the pool's estimated hydroperiod AND provid	de rationale in box ( <b>required</b> ):
O Permanent O Semi-permanent (drying partially in all years ar completely in drought years)	O Unknown     (drying out completely     in most years)
Explain: Leaf lifer	
Maximum depth at survey: $\Omega = 12^{\circ} (0.1 \text{ ft}) = \Omega = 12^{\circ}$	$2_{-36"}(1_{-3} \pm 1)$ $\bigcirc$ $36_{-60"}(3_{-5} \pm 1)$ $\bigcirc$ $>60"(>5_{-5} \pm 1)$
Approximate size of pool (at spring highwater): With	dth:OmOft Length:OmOft
Predominate substrate in order of increasing hydro	period:
<ul> <li>Mineral soil (bare, leaf-litter bottom, or upland mosses present)</li> </ul>	Organic matter (peat/muck) shallow or restricted to deepest portion
O Mineral soil (sphagnum moss present)	O Organic matter (peat/muck) deep and widespread
Pool vegetation indicators in order of increasing hydrogeneous	droperiod (check all that apply):
📋 Terrestrial nonvascular spp. (e.g. haircap	Wet site ferns (e.g. royal fern, marsh fern)
moss, lycopodium spp.)  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,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle)	Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
■ Faunal indicators (check all that apply):	L No vegetation in pool
Fish Bullfrog or Green Frog tadpoles	Other:
iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent cha	nnel providing water flowing into or out of the pool):
O No inlet or outlet O Permanent inlet or outle	et (channel with well-defined banks and permanent flow)
O Other or Unknown (exp or outlet	lain):

# MAINE

# **Maine State Vernal Pool Assessment Form**



# 6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates:

## b. Indicator abundance criteria and pool survey effort

■ Is pool depression bisected by 2 ownerships (straddler pool)? O Yes O No

4/30/2020

- Was the entire pool surveyed for egg masses? OYes ONo; 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 <sup>4</sup>				
	Visit #1	Visit #2	Visit #3	Confi	dence l	_evel <sup>1</sup>	Egg Mass Maturity <sup>2</sup>			Observed			Confidence Level <sup>1</sup>				
Wood Frog																	
Spotted Salamander	37			2			-11										
Blue-spotted Salamander																	
Fairy Shrimp <sup>3</sup>	-																

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. <u>Observations should be accompanied by photographs</u>.

	Method of Verification*		C1 **		Method	CI **												
SPECIES	Р	Н	S		SPECIES	Р	н	S										
Blanding's Turtle					Wood Turtle													
Spotted Turtle					Ribbon Snake													
Ringed Boghaunter					Other:													
*Method of verificat **CL - Confidence	tion: P = level in	Photo Photo	ographe s deterr	d, H = Ha nination:	andled, S = Seen 1= <60%, 2= 60-95%, 3= >95%													
d. Optional observe	er reco	mmer	ndatior	า:														
SVP Det	ential S	SVP	□ No	on Signifi	icant VP 🛛 Indicator Breeding Area	1												
			.*															
e. General vernal po	ool cor	nmen	ts and	/or obse	ervations of other wildlife:													
Send completed form	n and s	upport	ting do	cumenta	tion to: Maine Dept. of Inland Fisheri	es and	Wildlife	e										
·			-		Attn: Vernal Pools													
					650 State Street, Bangor, ME	04401												
NOTE: Digital submis	sion (t	o Jas	on.Cza	npiga@n	naine.gov) of vernal pool field form	s and <b>j</b>	photog	<b>Jraphs</b>	is only									
acceptable for	projec	ts witl	h 3 or f	fewer as	ssessed pools; <u>larger projects must</u>	be ma	iled as	<u>s hard</u>	<u>copies</u> .									
For MDIFW use only Re	viewed l	ov MDIE	-W Date	<b>a</b> •	Initials		بەلۋرىغا ئورىس	Spolaatie	as est defe									
This pool is:		Potentia	ally Sign	nificant	Not Significant due to: O does not meet h	iological	criteria											
	<b>-</b> 1	out lacki	ing critica	al data	Odoes not meet N	IDEP ve	rnal pool	l criteria.										
Comments:								<u>en en en</u>										





INSTRUCTIONS:
<ul> <li>Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.</li> <li>Clear photographs of a) the pool AND b) the indicators (one example of each species)</li> </ul>
egg mass) are <u>required</u> for all observers.
Observer's Pool ID: <u>SAD-VP-117</u> MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION
b. Contact and credentials previously provided? O No (submit Addendum 1) Yes
2. PROJECT CONTACT INFORMATION
a. Contact name: 🗡 same as observer 🕐 other
b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes c. Project Name: Three Geners Solar Projet
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? OYes ONo If no, was landowner permission obtained for survey? OYes ONo
b. Landowner's contact information (required)
Name: <u>ED Bessey &amp; Son</u> Phone: (207) 453-9388
Street Address: <u>779 Skowhegan Rd.</u> City: <u>Hickley</u> State: <u>ME</u> Zip: <u>0494</u>
c. 🔲 Large Projects: check if separate project landowner data file submitted
4. VERNAL POOL LOCATION INFORMATION
a. Location Township: Ben fam
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: <u>69,455367</u> Latitude/Northing: <u>44, 612042</u>
Coordinate system: WGS 84
Check one: Or GIS shapefile - send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)
O The pool perimeter is delineated by multiple GPS points. (Excellent) - Include map or spreadsheet with coordinates.
$igtonumber {O}$ The above GPS point is at the center of the pool. (Good)
O The center of the pool is approximately mO ft O in the compass direction of degrees from the above GPS point. (Acceptable)

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MANNE .	Maine State Vernal Pool Assessment Form	ALL CALL
5. VEF	RNAL POOL HABITAT INFORMATION	
a. H	labitat survey date ( <u>only if different</u> from indicator survey dates on page 3):	
b. W	Vetland habitat characterization	
	hoose the best descriptor for the landscape setting: Disolated depression Disolated depression Disolated depression Disolated depression Disolated with larger wetland complex Disolated with larger wetland complex Disolated with larger wetland complex Disolated depression Disolated depression Disola	
	Check all wetland types that best apply to this pool:       Image: Solution of the system       Image: Solu	1
c. V i.	/emal pool status under the Natural Resources Protection Act (NRPA) . Pool Origin: Natural O Natural-Modified O Unnatural O Unknown If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required)	:
ii. ■	Pool Hydrology     Select the pool's <u>estimated</u> hydroperiod AND <u>provide rationale</u> in box ( <b>required</b> ):     O Permanent     O Semi-permanent     (drying partially in all years and     completely in drought years)     in most years)     Explain:	<b>.</b>
•	Uaf       II HU?         Maximum depth at survey:       0 0-12" (0-1 ft.)       0 12-36" (1-3 ft.)       0 36-60" (3-5 ft.)       0 >60" (>5 ft.)         Approximate size of pool (at spring highwater):       Width:       0 m 0 ft       Length:       0 m 0 ft	
-	<ul> <li>Predominate substrate in order of increasing hydroperiod:</li> <li>O Mineral soil (bare, leaf-litter bottom, or upland mosses present)</li> <li>O Mineral soil (sphagnum moss present)</li> <li>O Mineral soil (sphagnum moss present)</li> <li>O Organic matter (peat/muck) shallow or restricted to deepest portion</li> <li>O Organic matter (peat/muck) deep and widespiced of the state of the</li></ul>	read
•	<ul> <li>Pool vegetation indicators in order of increasing hydroperiod (check all that apply):</li> <li>Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)</li> <li>Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)</li> <li>Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)</li> <li>Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)</li> <li>Sphagnum moss (anchored or suspended)</li> <li>Wet site shrubs (e.g. nighbush blueberry, malet winterberry, mountain holly)</li> <li>Wet site graminoids (e.g. blue-joint grass, tusso sedge, cattail, bulrushes)</li> <li>Aquatic vascular spp. (e.g. pickerelweed, arrow bluebage, jewelweed, blue flag iris, swamp candle)</li> <li>Sphagnum moss (anchored or suspended)</li> </ul>	oerry, ck head)
-	Faunal indicators (check all that apply):	
iii.	<b>Inlet/Outlet Flow Permanency</b> Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):	
	<ul> <li>No inlet or outlet</li> <li>Permanent inlet or outlet (channel with well-defined banks and permanent floor outlet</li> <li>Other or Unknown (explain):</li> </ul>	ow)

•





# 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 (stradder pool)? O Yes ON
- Was the entire pool surveyed for egg masses? ØYes ONo; 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 <sup>4</sup>				
	Visit #1	Visit #2	Visit #3	Confidence Level <sup>1</sup>			Egg Mass Maturity <sup>2</sup>			Observed			Confidence Level <sup>1</sup>				
Wood Frog		2															
Spotted Salamander	2	1					M										
Blue-spotted Salamander																	
Fairy Shrimp <sup>3</sup>																	

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.

	Method of Ve		of Verification*			Method	CL**					
SPECIES	Р	Н	S		SPECIES	Р	Н	S	<u> </u>			
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 Annotation.												
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; <u>larger projects must be mailed as hard copies</u> .												
For MDIFW use only Re	viewed	by MDIF	W Date	ə:	Initials:							
This pool is: Significant		Potentia out lacki	ally Sign	nificant al data	Not Significant due to: O does not meet t	iological IDEP ve	criteria. rnal poo	I criteria.				
Comments:												
DEPLW0897-82008 04/1	8/2017	ann i A fhirinn	an an Arth	94,10,794,104,		Print Fo	orm	Right for an Arrison Arrison	Page 3 of			





INSTRUCTIONS:
<ul> <li>Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.</li> <li><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.</li> </ul>
Observer's Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: <u>Swah</u> b. Contact and credentials previously provided? O No (submit Addendum 1) ØYes
2. PROJECT CONTACT INFORMATION
a. Contact name: 🖉 same as observer 🔿 other
b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes
c. Project Name: Three Corners Solar Project
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? OYes ONo If no, was landowner permission obtained for survey? OYes ONo
b. Landowner's contact information (required)
Name: <u>ED Besseg &amp; Son</u> Phone: (207) 453-9388
Street Address: 779 Skowhegen Rd, City: Hickley State: ME Zip: 04944
c. 🔲 Large Projects: check if separate project landowner data file submitted 🇹
a. Location Township: <u>Ben fon</u>
See a that at many a
See a madred and p
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: $-(69, 457367)$ Latitude/Northing: $44$ , $(.11589)$
Coordinate system: <u>WGS 8'4-</u>
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)
O The pool perimeter is delineated by multiple GPS points. (Excellent) - Include map or spreadsheet with coordinates.
O 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 ofdegrees from the above GPS point. (Acceptable)

Maine State Vernal P	ool Assessment Form
5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date ( <u>only if different</u> from indicato	or survey dates on page 3):
b. Wetland habitat characterization	
<ul> <li>Choose the best descriptor for the landscape setting:</li> <li>O Isolated depression</li> <li>O Floodplain depression</li> <li>O Other:</li> </ul>	ssociated with larger wetland complex
Check all wetland types that best apply to this pool:	
Forested swamp	☐ Slow stream ☐ Dug pond or
Shrub swamp 🛛 Lake or pond cove	Floodplain borrow pit
<ul> <li>Peatland (fen or bog)</li> <li>Abandoned beaver flow</li> <li>Emergent marsh</li> <li>Active beaver flowage</li> </ul>	rage Ŋ Mostly unvegetated pool ☐ Roadside ditch
c. Vernal pool status under the Natural Resources P	Protection Act (NRPA)
i. Pool Origin: ONatural 🖉 Natural-Modified O l	Jnnatural OUnknown
If modified, unnatural or unknown, describe any mo	odern or historic human impacts to the pool ( <b>required</b> ):
Woods road running through 1	1P
ii. Pool Hydrology	
Select the pool's <u>estimated</u> hydroperiod AND provides the pool is <u>estimated</u> .	<u>de rationale</u> in box ( <b>required</b> ):
O Permanent O Semi-permanent (drying partially in all years ar completely in drought years)	Ephemeral O Unknown d (drying out completely in most years)
Explain:	
Leaf lifter	
■ Maximum depth at survey: O 0-12" (0-1 ft.) O(12	2-36" (1-3 ft.) O 36-60" (3-5 ft.) O >60" (>5 ft.)
Approximate size of pool (at spring highwater): Wie	dth:OmOft Length:OmOft
Predominate substrate in order of increasing hydro	period:
O Mineral soil (bare, leaf-litter bottom, or upland	O Ørganic matter (peat/muck) shallow or
Mineral soil (sphagpum moss procent)	restricted to deepest portion
	O organic matter (pearmuck) deep and widespread
Pool vegetation indicators in order of increasing hydrogenergy and the second secon	droperiod (check all that apply):
moss, lycopodium spp.)	Wet site ferns (e.g. royal fern, marsh fern)
Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	winterberry, mountain holly)
Moist site ferns (e.g. sensitive fern, cinnamon	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle)	☐ Floating or submerged aquatics (e.g. water lily,
Sphagnum moss (anchored or suspended)	water shield, pond weed, bladderwort)  No vegetation in pool
■ Faunal indicators (check all that apply): □ Fish □ Bullfrog or Green Frog tadpoles	☐ Other:
iii Inlot/Outlet Elevy Permanenar	
Type of inlet or outlet (a seasonal or permanent cha	nnel providing water flowing into or out of the pool)
○ No inlet or outlet	et (channel with well-defined banks and permanent flow)
Intermittent inlet O Other or Unknown (exp or outlet	lain):



# 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 **O**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 <sup>4</sup>				
	Visit #1	Visit #2	Visit #3	Confidence Level <sup>1</sup> Egg I			Egg Mass Maturity <sup>2</sup>			Observed			Confidence Level <sup>1</sup>			
Wood Frog		Ď														
Spotted Salamander	1	Ø		М												
Blue-spotted Salamander																
Fairy Shrimp <sup>3</sup>																

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

DE

Note any rare species associated with vernal pools. <u>Observations should be accompanied by photographs</u>.

Γ	SPECIES	Method of Verification*					Method of Verification*			CI **
		Р	Н	S		SPECIES	Р	Н	S	UL
	Blanding's Turtle					Wood Turtle				
	Spotted Turtle					Ribbon Snake				
	Ringed Boghaunter					Other:				
4 0 ,	*Method of verificat **CL - Confidence I	tion: P = evel in	= Photo species	graphe s deterr	d, H = Ha nination:	andled, S = Seen 1= <60%, 2= 60-95%, 3= >95%				
SVP Potential SVP Non Significant VP Indicator Breeding Area										
Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife Attn: Vernal Pools 650 State Street, Bangor, ME 04401										
	: Digital submis acceptable for	sion (t projec	o Jaso ts with	on.Cza n 3 or 1	piga@n ewer as	naine.gov) of vernal pool field form sessed pools; <u>larger projects mus</u>	s and ı t be ma	ohotog iiled a	graphs <u>s hard</u>	is only <u>copies</u> .
Initial:       Initial:       Initial:         This pool is:       Significant       Potentially Significant       Not Significant due to:       O does not meet biological criteria.         but lacking critical data       O does not meet MDEP vernal pool criteria.										
Comme	nts:									
EPLW	0897-82008 04/18	3/2017					Print Fo	orm	le contraction de la contracti	Page 3 of




INSTRUCTIONS:
<ul> <li>Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.</li> <li><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.</li> </ul>
Observer's Pool ID: <u>SAD-VP-1/9</u> MDIFW Pool ID:
<ul> <li><b>1. PRIMARY OBSERVER INFORMATION</b></li> <li>a. Observer name: <u>Swah</u> <u>Dahw zuf</u></li> <li>b. Contact and credentials previously provided? O No (submit Addendum 1) Yes</li> </ul>
2. PROJECT CONTACT INFORMATION a. Contact name: Same as observer O other b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes c. Project Name:
<ul> <li>3. LANDOWNER CONTACT INFORMATION <ul> <li>a. Are you the landowner? OYes ONo</li> <li>b. Landowner's contact information (required)</li> <li>Name:</li></ul></li></ul>
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:      61,459335

	Maine State Vernal	Pool Assessment Form				
5. VERNAL POOL HABIT	AT INFORMATION					
a. Habitat survey date	(only if different from indicat	or survey dates on page 3):				
b. Wetland habitat cha	racterization					
<ul> <li>Choose the best desc</li> <li>Isolated depression</li> <li>Floodplain depress</li> </ul>	riptor for the landscape setting O Pool a ion O Other:	: associated with larger wetland comp	lex			
<ul> <li>Check all wetland type</li> <li>Forested swamp</li> <li>Shrub swamp</li> <li>Peatland (fen or bo</li> <li>Emergent marsh</li> </ul>	es that best apply to this pool: Wet meadow Lake or pond cove g) Abandoned beaver flow Q 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 u	nder the Natural Resources I	Protection Act (NRPA)				
i. Pool Origin: 🕅 Na	atural ONatural-Modified O	Unnatural OUnknown				
If modified, unnatura	al or unknown, describe any m	odern or historic human impacts to t	he pool ( <b>required</b> ):			
<ul> <li>Select the pool's est</li> <li>O Permanent</li> <li>Explain:</li> </ul>	<u>Imated</u> hydroperiod AND <u>provi</u> Semi-permanent (drying partially in all years a completely in drought years)	de rationale in box ( <b>required</b> ): O Ephemeral nd (drying out completely in most years)	O Unknown			
<ul> <li>Maximum depth at s</li> <li>Approximate size of</li> <li>Predominate substrate</li> </ul>	urvey: O 0-12" (0-1 ft.) O 1 pool (at spring highwater): Wi	2-36" (1-3 ft.)	O >60" (>5 ft.) O m O ft			
O Mineral soil (bare mosses present)	e, leaf-litter bottom, or upland	<ul> <li>Period:</li> <li>O Organic matter (peat/muck) restricted to deepest portior</li> </ul>	shallow or 1			
	agnum moss present)	Organic matter (peat/muck)	deep and widespread			
Pool vegetation indic	ators in order of increasing hy	droperiod (check all that apply):				
moss, lycopodiur	scular spp. (e.g. naircap n spp.)	🔲 Wet site ferns (e.g. royal fern,	marsh fern)			
Dry site ferns (e. lady fern, bracke	g. spinulose wood fern, n fern)	Wet site shrubs (e.g. highbush winterberry, mountain holly)	blueberry, maleberry,			
Moist site ferns ( fern, interrupted f	e.g. sensitive fern, cinnamon fern, New York fern)	Wet site graminoids (e.g. blue- sedge, cattail, bulrushes)	joint grass, tussock			
Moist site vascula	ars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pic	kerelweed, arrowhead)			
Sphagnum moss	lag Iris, swamp candle) (anchored or suspended)	Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)				
Faunal indicators (chemicators)	eck all that apply);	☐ No vegetation in pool				
🗌 Fish 🛛 🗌 Bullfr	og or Green Frog tadpoles	🗋 Other:				
iii Inlot/Outlat Flam Da						
Type of inlet or outlet	(a seasonal or permanent char	nnel providing water flowing inter-	out of the manths			
O No inlet or outlet	Ø Permanent inlet or outle	t (channel with well defined horizon	out of the pool):			
O Intermittent inlet	O Other or Unknown (evol	ain).	and permanent flow)			
or outlet	(ovb)					



# **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)? O Yes O<sub>No</sub>
- Was the entire pool surveyed for egg masses? OYes ONo; 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.

	Egg Masses (or adult Fairy Shrimp)									Tadpoles/Larvae⁴				
INDICATOR SPECIES	Visit #1	Visit #2	Visit #3	Confide	Confidence Level <sup>1</sup>		Egg Mass Maturity <sup>2</sup>			Observed			Confidence Level <sup>1</sup>	
Wood Frog		1114												
Spotted Salamander	16	14		2		M	A							
Blue-spotted Salamander														
Fairy Shrimp <sup>3</sup>														

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.

Г		Method of Verification*		Method	CI **						
:	SPECIES	P	H S CL**		CL**	SPECIES	Р	Н	S		
	Blanding's Turtle					Wood Turtle					
	Spotted Turtle					Ribbon Snake					
	Ringed Boghaunter					Other:					
⊷ * d. O	*Method of verification: P = Photographed, H = Handled, S = Seen **CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%										
[ e G	SVP Pot	tential : ool co	SVP mmen	⊡ No ts and	on Signif	icant VP Indicator Breeding Area	a				
	Part of active beaver flowage. Several \$5) of the egg masses Were above waterline (5/5/2020)										
Sen	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 submis acceptable for	ssion ( projec	to Jas ts wit	h 3 or	fewer a	ssessed pools; <u>larger projects mus</u>	t be m	ailed a	as harc	<u>l copies</u> .	
For MD	IFW use only R	eviewed	by MDI	FW Da	te:	_ Initials:					
This po	ol is: 🔲 Significan	t 🛛	Potent but laci	ially Sig	nificant al data	Not Significant due to: O does not meet	biologica MDEP v	I criteria ernal po	a. Iol criteria	2.	
Comme	ents:										
DEPLW	/0897-82008 04/	18/2017	7	<u></u>	<u></u>	and and the second s	Print F	orm		Page 3 of 3	



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.



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.



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.



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.



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.



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.



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.



Photo 17. Natural vernal pool NXG-VP-3, 4/22/20.



Photo 18. Natural vernal pool NXG-VP-3, 4/22/20.



Photo 19. Natural vernal pool NXG-VP-3, 4/22/20.



Photo 20. Natural vernal pool NXG-VP-3, 4/22/20.



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.



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.



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.



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.



Photo 27. Natural vernal pool NXG-VP-5, 4/22/20.



Photo 28. Natural vernal pool NXG-VP-5, 4/22/20.



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.



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.



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.



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.



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.



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.



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.



Photo 45. Unnatural vernal pool SAD-CP-17, 4/23/20.



Photo 46. Unnatural vernal pool SAD-CP-18, 4/23/20.



Photo 47. Unnatural vernal pool SAD-CP-19, 4/24/20.



Photo 48. Natural vernal pool SAD-VP-1, 5/6/20.



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.



Photo 51. Natural vernal pool SAD-VP-6, 4/21/20.



Photo 52. Natural vernal pool SAD-VP-7, 4/21/20.



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.



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.



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.



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.



Photo 61. Natural vernal pool SAD-VP-10, 4/28/20.



Photo 62. Natural vernal pool SAD-VP-10, 4/28/20.



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.



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.



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.



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.



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.



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.



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.



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.



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.



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.



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.



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.



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.



Photo 93. Natural vernal pool SAD-VP-105, 4/29/20.



Photo 94. Natural vernal pool SAD-VP-105, 4/29/20.



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.



Photo 99. Natural-modified vernal pool SAD-VP-106, 4/28/20.



Photo 100. Natural-modified vernal pool SAD-VP-106, 4/28/20.



Photo 101. Natural-modified vernal pool SAD-VP-106, 4/28/20.



Photo 102. Natural-modified vernal pool SAD-VP-106, 4/28/20.



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.



Photo 105. Natural vernal pool SAD-VP-107, 4/28/20.



Photo 106. Natural vernal pool SAD-VP-107, 4/28/20.



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.



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.



Photo 111. Natural vernal pool SAD-VP-119, 5/5/20.



Photo 112. Natural vernal pool SAD-VP-119, 5/5/20.



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.



Photo 115. Unnatural vernal pool SAD-CP-102, 4/21/20.



Photo 116. Natural vernal pool SAD-VP-2, 5/6/20.



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.



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.



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.



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.



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.



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.



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.



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.



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.