7.0 WETLANDS, WILDLIFE, AND FISHERIES

7.1 PROJECT AREA CONTEXT

The Applicant proposes to construct the Project, a solar energy generation facility in Benton, Clinton, and Unity Twp. in Kennebec County, Maine. In addition to solar arrays, the Project will include access roads that will range between 24-ft-wide primary roads and 16-ft-wide as roads reach the periphery of the network and anticipated vehicle use decreases. To allow access to several outparcels located interior to the Project, the Applicant is constructing 12-ft-wide access roads. The solar power generated from the Project will be transmitted through a series of Collector lines, the majority of the which will run underground in a trench adjacent to the Project access roads or interior to proposed solar arrays, though approximately 1.3 miles of above-ground Collector line is proposed between the eastern and central array areas. Power from the Collector will be transmitted to the proposed collection substation to "step up" the voltage from 34.5-kV to 115-kV and transmit it to the CMP Albion Road substation via an approximately 5.2-mile-long Genlead.

The Project area primarily consists of mixed forests predominantly managed for commercial timber production. Small portions of the Project area adjacent to Palmer Road in Unity Twp. consist of agricultural land. The Project PV arrays will be constructed on unnamed rises north of Unity Road. Topography within the Project array areas generally consists of elevations between 170 and 275 ft above sea level. Topography along the proposed Genlead includes gentle to moderate slopes with elevations between 130 and 275 ft above sea level.

7.2 AGENCY CONSULTATION

The Maine Natural Areas Program (MNAP), Maine Department of Inland Fisheries and Wildlife (MDIFW), and U.S. Fish and Wildlife Service (USFWS) were contacted to request information regarding sensitive natural resources, including Essential Habitat, Significant Wildlife Habitat (SWH) and records of rare, threatened, and endangered wildlife and rare and exemplary botanical features that have been documented in the vicinity of the Project. Consultation responses from the MDIFW and USFWS are included as Exhibit 7-1. The MNAP agency response letter is included in Section 9, Exhibit 9-1.

The Applicant initially met with MDEP and U.S. Army Corps of Engineers (Corps) staff on August 1, 2018, to discuss the Project and associated potential natural resource impacts. Additional pre-application meetings were held with MDEP and the Corps on December 6 and 16, 2021.

MDIFW commented on potential impacts to six wildlife resources: rare bat habitat, inland waterfowl wading bird and great blue heron (*Ardea herodias*) habitat, deer wintering areas (DWA), vernal pools, rare mussels, and eastern ribbon snake (*Thamnophis sauritus*). These resources are discussed further below.

• Rare Bats: MDIFW indicated there is potential presence of three state-listed bat species within the Project area: little brown bat (Myotis lucifugus; State Endangered), northern long-eared bat (Myotis septentrionalis; State Endangered), and eastern small-footed bat (Myotis leibii; State Threatened). No rare bat species maternity roost trees or hibernacula are known within 0.25 miles of the Project. Additionally, no talus slopes or rocky outcrops that may provide overwintering habitat for rare bat species were observed within the Project area during natural resource surveys. Project clearing is

MDEP Site Location of Development Act Permit Application

SECTION 7: WETLANDS, WILDLIFE, AND FISHERIES

anticipated from late summer 2022 through early winter 2023, outside of the pup rearing season. The Applicant does not anticipate any undue adverse effects on bat species as a result of Project construction or operation. This conclusion is a result of the absence of known hibernacula or maternity roost trees within the vicinity, the absence of other bat overwintering habitat (e.g., talus slopes, exposed rock faces), and the anticipated timing of Project clearing.

• Inland Waterfowl Wading Bird Habitat (IWWH) and Great Blue Heron: MDIFW indicated that several mapped IWWH areas are located in the vicinity of the Project. The Project has been designed to avoid and minimize mapped IWWH areas to the maximum extent practicable. The Genlead will cross one IWWH (IWWH ID 204095) south of Route 139. The Project limits of disturbance coincides with 1.1 acres of this mapped IWWH, only 1.2% of the total area of the IWWH. This includes 0.45 acres associated with an existing logging road. Forested wetland clearing within the IWWH totals approximately 0.03 acres.

In 2018, MDIFW indicated there is potential presence of great blue heron, a state species of special concern, to the west of the Genlead and within the mapped IWWH described above. The colony was observed to be active during natural resource surveys in the summer of 2020. However, proposed clearing and construction along this portion of the Genlead are anticipated to occur during winter 2022/2023, outside the sensitive nesting period (April 1 to August 15). Additionally, operations and maintenance activities will not occur within this mapped IWWH during the sensitive nesting period. Genlead ROW clearing will include retaining or topping existing dead or dying trees of capable species to provide nesting habitat (snags) for waterfowl, provided the snags do not present a safety hazard for operation of the line. Due to small impact area, clearing practices, and adherence to timing restrictions, the Applicant does not anticipate undue adverse effects on this mapped IWWH or the great blue heron colony as a result of the Project.

- Deer Wintering Areas: The Deer Wintering Areas (DWAs) within the Project area are mapped as indeterminate and, therefore, are not considered SWH under the NRPA.¹ However, the Applicant has been consulting with MDIFW regarding Project associated impacts to mapped DWAs since 2018. The Project area coincides with 159 acres of mapped DWA. Based on site visits with MDIFW (see Exhibit 7-2), MDIFW determined that suitable cover to provide winter shelter for deer is lacking from 89.1 acres of DWA area occurring within the portion of the Project area that contains an array area near Bessey Lane (DWA ID 020323). The Applicant is currently consulting with MDIFW to determine appropriate mitigation for Project related impacts to the moderate-quality DWA (DWA IDs 020322 and 021043) within this area, which totals approximately 69.9 acres.
- Vernal Pools: MDIFW noted that no known significant vernal pools (SVPs) occur within the proposed Project area. During vernal pool and potential vernal pool surveys, eight SVPs and five potential significant vernal pools (PSVPs) were identified that have critical terrestrial habitat (CTH) located within 250 ft of the Project limits of disturbance. The Project has been designed to avoid ground disturbance to SVP/PSVP vernal pool depressions and to minimize impacts to the 250-ft CTH buffer of SVP/PSVP depressions. Vernal pool impacts are addressed further in Section 7.5 below.

¹ Per the NRPA (38 M.R.S.A. §480-B.10), only high and moderate value DWAs and travel corridors as defined by the MDIFW are considered SWH.

SECTION 7: WETLANDS, WILDLIFE, AND FISHERIES

- Rare Mussels: MDIFW noted that several species of rare freshwater mussels have been documented within the search area including yellow lampmussel (Lampsilis cariosa; State Threatened), tidewater mucket (Leptodea ochracea; State Threatened), and creeper (Strophitus undulatus; Special Concern). Four temporary stream crossings are proposed via timber mat bridging for access to and along the Genlead. No temporary or permanent in-stream impacts are proposed, and a minimum 25-ft setback buffer of reduced clearing (minimum 8- to 10-ft remaining vegetation height) along Genlead stream crossing will facilitate a scrub-shrub stream buffer following construction. As such, no adverse impacts to rare mussels are anticipated as a result of the Project.
- Eastern Ribbon Snake (Thamnophis sauritus): Eastern ribbon snake (Special Concern) has been
 documented within the vicinity of the Project. Eastern ribbon snake is a slender, semiaquatic snake
 often observed near the edges of emergent marshes, wet meadows, scrub-shrub wetlands, beaver
 impoundments, bogs, river and stream floodplains, and vegetated shorelines of ponds and lakes.
 Eastern ribbon snakes were not observed during field surveys of the Project area between 2019
 and 2021. As such, no impacts to eastern ribbon snakes are anticipated as a result of the Project.

Consultation with USFWS was initiated through the Information for Planning and Consultation (IPaC) online service in 2020. Two federally listed species were noted within proximity of the Project. These include potential presence of northern long-eared bat (NLEB) and Atlantic salmon (Salmo salar). No critical habitat is designated for northern long-eared bat, and the Project area does not occur within mapped critical habitat designated for Atlantic salmon. Project clearing is anticipated from late summer 2022 through early winter 2023, outside of the NLEB pup rearing season (June 1 through July 31). The Applicant does not anticipate any undue adverse effects on NLEB as a result of Project construction or operation. This conclusion is a result of the absence of known hibernacula or maternity roost trees within the vicinity, the absence of other bat overwintering habitat, and the anticipated timing of Project clearing. Four temporary stream crossings are proposed via timber mat bridging for access to and along the Genlead. No temporary or permanent instream impacts are proposed and no adverse impacts to Atlantic salmon are anticipated as a result of the Project. Limited clearing (e.g., maintaining a scrub-shrub stream buffer) is anticipated adjacent to Genlead stream crossings. Buffers are discussed further in Section 10.0. Additionally, monarch butterfly (Danaus plexippus) is currently being considered for listing under the Endangered Species Act and may occur in the Project area. However, there are generally no Endangered Species Act Section 7 requirements for candidate species.

7.3 WETLAND AND WATERCOURSE DELINEATIONS AND VERNAL POOL SURVEYS

Wetland and watercourse delineations were conducted for the Project area in 2020 and 2021 by Boyle Associates, BRI, and Stantec. Additionally, vernal pool surveys were completed separately in 2019 and 2020 by Kleinschmidt for the solar array areas and select portions of the Genlead. Potential vernal pool surveys were conducted for portions of the Genlead outside of the spring amphibian breeding period concurrent with Stantec's wetland and watercourse delineation in 2020. Wetland delineation and vernal pool data were used to modify Project designs to minimize resource impacts.

SECTION 7: WETLANDS, WILDLIFE, AND FISHERIES

7.4 SURVEY RESULTS

A brief overview of the natural resources present in the Project area is provided below and depicted on Figure 7-1. 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 (Exhibit 7-3) and the Wetland and Watercourse Delineation and Potential Vernal Pool Survey Report for the Genlead (Exhibit 7-4). The vernal pool data submission to MDIFW is included as Exhibit 7-5.

7.4.1 Wetlands

The following is a summary of all wetland resources identified within the Project area. Complete reports of the wetland and watercourse delineations are included as Exhibit 7-3 (Solar Array Area) and Exhibit 7-4 (Genlead).

7.4.1.1 Solar Array Area

A total of 57 wetlands were identified 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 Wetlands of Special Significant (WOSS) as they either contain an SVP, a delineated stream, over 20,000 square feet (sf) of emergent wetland habitat, and/or are located within mapped IWWH.

7.4.1.2 Genlead

A total of 62 wetlands were identified 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). Three wetlands are considered potential WOSS as they contain PSVPs.

7.4.1.3 Wetland Impacts

As proposed, the Project will result in approximately 0.53 acres (23,066 sf) of direct wetland impacts, primarily due to access road wetland crossings. Indirect wetland impacts associated with access road clearing limits, overhead Collector/Genlead ROWs, and vegetation clearing in wetlands to prevent trees from shading panels will total approximately 18.63 acres (811,242 sf). Impacts proposed in WOSS are associated with Project access road crossings or Collector and Genlead ROW clearing. Wetland impacts are detailed further in Section 7.5 below.

7.4.2 Vernal Pools

A total of 80 vernal pools were identified within the solar array delineation area and portions of the Genlead delineation areas. 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

MDEP Site Location of Development Act Permit Application

SECTION 7: WETLANDS, WILDLIFE, AND FISHERIES

significant based on state criteria. Additionally, 10 potential vernal pools were identified within the Genlead delineation area. 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, these pools are considered PSVPs and have been assumed to be significant for permitting purposes. Potential vernal pools identified by Stantec are detailed further in the Wetland and Watercourse Delineation and Potential Vernal Pool Survey Report for the Genlead (Exhibit 7-4). Vernal pools identified by Kleinschmidt within the Project solar array delineation area and Genlead delineation area are detailed further in the vernal pool data submission to MDIFW is included as Exhibit 7-5.

The Project has been designed to avoid ground disturbance to SVP/PSVP depressions and to minimize impacts to the 250-ft CTH buffer associated with SVPs/PSVPs. Vernal pool impacts are addressed further in Section 7.5 below.

7.4.3 Streams and Fisheries

Four streams were identified within the Project solar array area and eleven streams were identified within the Project Genlead area. No temporary or permanent in-stream impacts are associated with the Project. Four temporary access road stream crossings (i.e., temporary timber mat bridge spans) spanning the full width of delineated streams are proposed for access to and along the Genlead. The Genlead ROW will span seven streams. Limited clearing (e.g., maintaining a scrub-shrub stream buffer) is anticipated for construction of Genlead ROW stream crossings. Complete reports of the wetland and watercourse delineations are included as Exhibit 7-3 (Solar Array Area) and Exhibit 7-4 (Genlead).

7.4.4 Wildlife Habitat

Upland forests within the Project area 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), eastern arborvitae (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 red raspberry (Rubus idaeus). The upland herb stratum varies widely in composition and coverage throughout the Project area and includes Canadian bunchberry (Cornus canadensis), false lily-of-the-valley (Maianthemum canadense), bracken fern (Pteridium aquilinum), hay scented fern (Dennstaedtia punctilobula), and lowbush blueberry (Vaccinium angustifolium).

Characteristic wetland vegetation within the Project area includes tree species such as red maple, eastern arborvitae, eastern hemlock, yellow birch, balsam fir, black ash (*Fraxinus nigra*), and eastern white pine. Shrub communities often include balsam fir, black ash, speckled alder (*Alnus incana*), broad-leaved meadowsweet (*Spiraea latifolia*), and common winterberry (*Ilex verticillata*). Herbaceous vegetation often includes sensitive fern (*Onoclea sensibilis*), cinnamon fern (*Osmunda cinnamomea*), eastern marsh fern (*Thelypteris palustris*), three-leaf goldthread (*Coptis trifolia*), creeping snowberry (*Gaultheria hispidula*), Canadian bunchberry, dwarf red raspberry (*Rubus pubescens*), common marsh bedstraw (*Galium palustre*), northern water-horehound (*Lycopus uniflorus*), bluejoint (*Calamagrostis canadensis*), meadow horsetail (*Equisetum pratense*), bog dewberry (*Rubus hispidoides*), greater bladder sedge (*Carex*

MDEP Site Location of Development Act Permit Application

SECTION 7: WETLANDS, WILDLIFE, AND FISHERIES

intumescens), fowl manna grass (*Glyceria striata*), uptight sedge (*Carex stricta*), and royal fern (*Osmunda spectabilis*).

Large portions of the Project area have been actively logged and forested uplands and wetlands are interspersed with many haul roads and skidder trails. Based on the proximity of residential development and working forest, wildlife present are likely habitat generalists, which are accustomed to disturbance. 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 Project area. Given the intact forested habitat surrounding the Project area, it is likely that larger mammals including moose (*Alces alces*) and black bear (*Ursus americanus*) also occur in the Project area. Large areas of open water and emergent marshes likely provide habitat for beaver (*Castor canadensis*) and muskrat (*Ondatra zibethicus*). Amphibians observed within the Project area include wood frog (*Lithobates sylvatica*), spotted salamander (*Ambystoma maculata*), blue-spotted salamander (*Ambystoma laterale*), green frog (*Lithobates clamitans*), and American toad (*Bufo americanus*). Reptiles within Project area include common species such as the common garter snake (*Thamnophis sirtalis*), which are likely in forested areas and edge habitats. 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 black-capped chickadee (*Poecile atricapillus*), European starling (*Sturnus vulgaris*), red-winged blackbird (*Agelaius phoeniceus*), white-throated sparrow (*Zonotrichia albicollis*), downy woodpecker (*Picoides pubescens*), ruffed grouse (*Bonasa umbellus*), black-throated green warbler (*Setophaga virens*), winter wren (*Troglodytes hiemalis*), ovenbird (*Seiurus aurocapilla*), wild turkey (*Meleagris gallopavo silvestris*), barred owl (*Strix varia*), and American woodcock (*Scolopax minor*). Within the large areas of emergent and open water marsh, dabbling ducks such as mallard (*Anas platyrhynchos*) and wood duck (*Aix sponsa*), as well as other waterfowl, are likely.

These wetland and upland habitats are likely used by a variety of wildlife, though most wildlife present are likely habitat generalists. The construction and operation of the Project is not expected to impact habitat for federally or state-listed threatened or endangered species. The construction and maintenance of the Project will result in a permanent change in cover type and habitat associated with the solar array area, access roads, and Genlead. As such, there may be a shift in wildlife use from those species with affinities for forested habitat to those with affinities for open shrub and herb-dominated habitat. The conversion of forested habitat is likely to increase the vegetation diversity and shrub cover due to the increased sunlight availability and could provide a greater diversity of food sources and availability of shelter/edge habitat. The majority of the surrounding forest will remain in its present condition, and no further development is expected in the immediate vicinity beyond the current level of forest management activities. Terrestrial wildlife is not expected to be unreasonably affected by Project operation and maintenance activities once construction is complete.

7.5 PROJECT IMPACTS

Based on the information gathered from the surveys identified above, the Project layout and footprint was designed to optimize engineering and solar resource conditions while avoiding and/or minimizing environmental impacts to the extent practicable. Environmental resource impacts as a result of construction and operation of the Project are summarized in Table 7-1. As designed, approximately 18.63 acres of indirect wetland impacts are proposed as a result of vegetation clearing in wetlands, and approximately 0.53 acres of direct wetland impacts are proposed as a result of fill or grading in wetlands, thereby requiring

MDEP Site Location of Development Act Permit Application

SECTION 7: WETLANDS, WILDLIFE, AND FISHERIES

a permit from the MDEP pursuant to the NRPA. To address the proposed impacts, an Individual NRPA permit application has been completed for the Project.

Table 7-1. Summary of Environmental Impacts Resulting from the Project

Environmental Resource	Estimated or Potential Impact
Vegetation and Habitat	The Project area is dominated by regenerating forests, upland and wetland forests, and small areas of agricultural land. One state listed rare plant species was identified outside of the Project area during botanical surveys. No federally listed rare, threatened, or endangered plant species were identified by USFWS or during field surveys (see Section 9.0).
Wetlands	Direct wetland impacts associated with grading to install the solar arrays and the access road wetland crossings will be approximately 0.53 acres. Indirect wetland impacts associated with vegetation clearing in wetlands to prevent trees from shading panels and for overhead Collector and Genlead ROWs will be approximately 18.63 acres. No grubbing will be conducted within wetlands where only vegetation clearing is proposed, and measures to minimize soil disturbance will be implemented (e.g., clearing during dry or winter conditions).
Vernal Pools	There are eight SVPs and five PSVPs within the Project area. Vegetation clearing, PV panels, and/or access roads are proposed in the CTH within 250 ft of seven SVPs. Vegetation clearing for the Genlead ROW is proposed in the CTH within 250 ft of one SVP and five PSVPs. Proposed clearing will not exceed 25% of the CTH within a 250-foot radius of the vernal pool depressions. Impacts to vernal pool CTH area addressed in the Project's Individual NRPA application.
IWWH	The Genlead crosses the edge of one IWWH (IWWH ID 204095) south of Route 139 (Exhibit 1-2, Sheet 5). The Project limits of disturbance coincides with 1.1 acres of the mapped IWWH, which includes 0.45 acres that are associated with temporary edge clearing along an existing logging road. Clearing for the Genlead ROW totals approximately 0.66 acres within this IWWH and within that total there will be 0.03 acres of forested wetland clearing.
DWA	Project development and clearing are proposed within approximately 69.9 acres of field determined moderate-quality DWA (DWA IDs 020322 and 021043). The Applicant is currently consulting with MDIFW to determine appropriate mitigation for impacts to moderate-quality DWA.
Waterbodies	Four temporary access road stream crossings (i.e., temporary timber mat bridge spans) spanning the full width of delineated streams are proposed for access to or along the Genlead. The Genlead ROW will cross seven streams. Limited clearing (e.g., maintaining a scrub-shrub stream buffer) is anticipated for construction of Genlead ROW stream crossings. Additionally, no impacts are anticipated to potential occurrences of rare mussels as the Project will not result in any temporary or permanent in-stream impacts.
Bats	The Project will require approximately 906 acres of tree clearing. The Project has been designed to minimize tree removal to the extent possible. Tree clearing will occur within the footprint of the solar arrays and access roads and where necessary to prevent trees from shading panels. Clearing is anticipated to occur from late summer 2022 to early winter 2023. No adverse impacts to listed bats are expected due to the absence of known hibernacula or maternity roost trees within the vicinity and the absence of other bat overwintering habitat (e.g., talus slopes, exposed rock faces).

7.5.1 Impacts to Wetlands

A total of 30 wetlands are anticipated to be impacted by Project construction resulting in approximately 18.67 acres of proposed indirect wetland impacts from vegetation clearing in wetlands and approximately 0.59 acres of proposed direct wetland impacts from fill or grading in wetlands. Impacts proposed in WOSS are associated with Project access road crossings or Collector and Genlead ROW clearing. Wetland impacts for the solar array areas and Genlead are summarized in Tables 7-2 and 7-3, respectively. The locations of fill, grading, and vegetation cutting in wetlands proposed for the Project are shown on the civil site plans (Exhibit 1-1 and Exhibit 1-2). After initial clearing, areas of forested wetlands outside the fence line will be maintained as scrub-shrub wetlands. Further discussion of vegetation maintenance and resource buffers is provided in Section 10.0.

Table 7-2. Summary of Wetland Impacts, Solar Array Areas

Wetland ID	woss¹	Wetland Type ²	Project Component	Direct Impact from Fill / Grading (square feet [sf])	Indirect Impact Vegetation Clearing (sf) ³	Temporary Construction Mats (sf) ⁴
W-CF-11	No	PFO	Shade Clearing 0		24,006	0
W-CF-14	No	PFO	Shade Clearing	Shade Clearing 0 890		0
W-NS-10	No	PFO	Shade Clearing 0 37,911		0	
W-NS-11	No	PFO	Shade Clearing 0 31,593		0	
W-NS-16	No	PFO	Shade Clearing 0 31,462		0	
W-CF-07	No	PFO	Array Grading	4,189	0	0
W-MR-27	No	PFO	Array Grading	1,911	0	0
W-MR-01	Yes	PFO	Access Road Fill/Grading/Clearing, Collector Trenching, ROW Clearing, Pole 16,917 32,352		1,442	
W-SK-05	Yes	PFO	Pole, ROW Clearing	7 31,437		1,540
W-NS-01	No	PFO	ROW Clearing	0	1,458	70
	Totals (sf)			23,024	191,109	3,052
	Totals (acres)				4.39	0.07

¹Wetlands containing SVPs, SWH, or more than 20,000 sf of emergent marsh are considered WOSS.

² Wetland type based on Federal Geographic Data Committee. 2013. Classification of wetlands and deepwater habitats of the United States. PFO = Palustrine Forested Wetland. Wetland type is based on the existing conditions within the proposed impact area.

³ No stumping or grubbing is proposed and cleared areas will be allowed to revert to scrub-shrub wetlands following initial clearing.

⁴ Temporary construction mat impacts occur within proposed wetland clearing limits. It is the Applicant's understanding that temporary construction mats are not considered a jurisdictional impact by the MDEP.

Table 7-3. Summary of Wetland Impacts, Genlead

Wetland ID	WOSS ¹	Wetland Type ²	Direct Impact Poles (sf)	Indirect Impact Vegetation Clearing (sf) ³	Temporary Construction Mats (sf) ⁴
W07	No	PFO	0	2,941	566
W09	Yes, in part	PFO/PSS/PEM	35	215,001	3,859
W14	No	PSS	0	6,159	6,142
W15	No	PFO	0	7,754	1,133
W16	Yes, in part	PFO	0	6,794	1,002
W22	No	PFO	0	25,759	3,703
W27	Yes, in part	PSS/PFO	0	17,119	566
W28	No	PFO	7	56,846	12,197
W32	Yes	PFO	0	45,851	4,835
W35	Yes	PFO	0	13,669	0
W36	Yes, in part	PFO	0	32,921	6,447
W42	Yes	PFO	0	13,246	1,133
W43	Yes	PFO/PSS	0	40,405	5,750
W50	Yes	PFO	0	3,314	0
W51	Yes	PFO	0	65,283	6,273
W52	Yes	PFO	0	7,591	0
W56	Yes	PFO	0	15,086	0
W57	Yes	PFO	0	115	0
W58	Yes	PFO	0	14,200	1,699
W59	Yes	PFO	0	30,079	2,222
		Totals (sf)	42	620,133	57,525
		Totals (acres)	0.001	14.24	1.32

¹ Portions of wetlands within 25 ft of delineated streams that meet NRPA definitions are considered WOSS. Wetlands containing SVPs, SWH, or more than 20,000 sf of emergent marsh are considered WOSS.

7.5.2 Impacts to Streams

As detailed above, no temporary or permanent in-stream impacts are anticipated as a result of the Project. No streams occur within the Project solar array areas, including the collection substation and O&M building. Four temporary access road stream crossings (streams S01, S02, S05, and S06) utilizing temporary timber mat bridges to span the full width of delineated streams are proposed for access to or along the Genlead. The Genlead ROW will span seven streams—streams S01, S02, S05, S07, S08, S09, and S11. Limited clearing (i.e., maintaining a minimum 25-ft-wide scrub-shrub stream buffer) is anticipated for construction of Genlead ROW stream crossings.

² Wetland type based on Cowardin Classification System (Federal Geographic Data Committee. 2013. Classification of wetlands and deepwater habitats of the United States). PFO = Palustrine Forested Wetland; PSS = Palustrine Scrub Shrub Wetland; PEM = Palustrine Emergent Wetland. Wetland type is based on the existing conditions within the proposed impact area.

³ No stumping or grubbing is proposed and cleared areas will be allowed to revert to scrub-shrub wetlands following initial clearing.

⁴ Temporary construction mat impacts occur within proposed clearing limits in PFO or PSS wetlands. It is the Applicants

understanding that temporary construction mats are not considered a jurisdictional impact by the MDEP.

SECTION 7: WETLANDS, WILDLIFE, AND FISHERIES

7.5.3 Impacts to Significant Wildlife Habitat

Proposed impacts to SWH, as defined by the NRPA, include Project development or clearing within mapped IWWH and the 250-ft CTH of SVPs/PSVPs. Impacts to SWH are detailed below and addressed in the Project's Individual NRPA permit application. Please refer to Section 10.0 (Exhibit 10-1) for details regarding vegetation management restrictions to further minimize impacts to SWH.

7.5.3.1 Significant Vernal Pools

The Project was designed to avoid impacts to SVP and PSVP depressions and proposed CTH disturbance within 250 ft of SVPs and PSVPs was avoided and minimized to the greatest extent practicable while considering the other constraints on the Project site. Project development and/or clearing is proposed within the 250-ft CTH of eight SVPs and five PSVPs. The proposed development (i.e., vegetation clearing, access roads, or PV arrays) in CTH within 250 ft of the SVPs/PSVPs depressions will not exceed 25% of the CTH, resulting in more than 75% of undeveloped CTH for the SVPs/PSVPs maintained in its current state following Project construction. Project vernal pool data have been submitted to the MDIFW and the Applicant will continue to consult with MDIFW regarding vernal pools.

The Genlead is proposed to cross over one SVP depression (SAD-VP-3) (Exhibit 1-2, Sheet 2). Complete avoidance of the SVP depression was not feasible due to landowner restrictions on the Genlead alignment at this location. However, impacts to this SVP will be minimized through the use of taller poles to either side of the SVP and associated CTH buffer. By increasing the pole heights, the SVP and associated habitats will remain intact, with only select tree cutting and tree topping.

Further discussion and analysis of SVP and PSVP impacts is included in Attachment 2, Section 2.6 of the Project's Individual NRPA permit application.

7.5.3.2 IWWH

The Genlead will cross one IWWH (IWWH ID 204095) south of Route 139 (Exhibit 1-2, Sheet 5). The Project limits of disturbance coincides with 1.1 acres of this mapped IWWH, only 1.2% of the total area of the IWWH. This includes 0.45 acres associated with an existing logging road. Forested wetland clearing within the IWWH totals approximately 0.03 acres. Proposed clearing and construction along this portion of the Genlead are anticipated to occur during winter 2022/2023, outside the sensitive nesting period (April 1 to August 15). Additionally, operations and maintenance activities will not occur within the IWWH during the sensitive nesting period. Genlead ROW clearing will include retaining or topping existing dead or dying trees of capable species to provide nesting habitat (snags) for waterfowl, provided the snags do not present a safety hazard for operation of the line. Due to small impact area, clearing practices, and adherence to timing restrictions, the Applicant does not anticipate undue adverse effects on IWWH as a result of the Project.

7.5.3.3 DWA

The DWAs within the Project area are mapped as indeterminate and, therefore, are not considered SWH under the NRPA. Although the DWAs are not SWH, the Project siting avoided and minimized impacts to the DWAs to the extent practicable, as well as other resources regulated under the NRPA. Therefore, the impacts to DWAs are included here for context. The Applicant has been consulting with MDIFW regarding Project associated impacts to mapped DWAs since 2018. The Project area coincides with approximately

MDEP Site Location of Development Act Permit Application

SECTION 7: WETLANDS, WILDLIFE, AND FISHERIES

159 acres of mapped DWA. Based on site visits with MDIFW (see Exhibit 7-2), MDIFW determined that suitable cover to provide winter shelter for deer is lacking from approximately 89.1 acres of DWA area occurring within the array area near Bessey Lane (DWA ID 020323). Due to various constraints, the Project cannot be wholly located outside of mapped DWA that, based on site visits, provide suitable cover (DWA IDs 021043 and 020322), while also meeting the contractual requirements for solar energy generation capacity. Primary site constraints to avoidance of these DWAs include:

- Large WOSS complexes surrounding the proposed arrays;
- SVPs adjacent to the western and central arrays, adjacent to the Collector, and along the Genlead;
 and
- IWWH to the west and east of the central array and west of the Genlead.

The Applicant has minimized impacts to the DWA collocated with the array areas through an iterative design process. This includes the use of existing logging roads for proposed array area access roads within DWA and consolidating the array layout to avoid use of several areas within the DWA, totaling over 18 acres, that were included in the Project's 2019 zoning application to the Land Use Planning Commission (LUPC). Additionally, the Genlead alignment is designed to avoid DWA to the extent practicable. The Genlead ROW impacts a total of 5.2 acres along the periphery of DWA. This represents only 0.4% of the total area of this DWA (DWA ID 020322). Additionally, the Applicant will institute restrictive vegetation maintenance practices (i.e., maintaining scrub-shrub vegetation and selective cutting to favor softwood species) to preserve cover. These vegetation maintenance practices are further detailed in Exhibit 10-1 (Section 10.0). The Applicant is currently consulting with MDIFW to determine appropriate mitigation for Project related impacts to field determined moderate-quality DWA (DWA IDs 020322 and 021043), which totals approximately 69.9 acres.

7.5.4 Bat Impacts

The Applicant does not anticipate undue adverse effects on bat species as a result of Project construction. This conclusion is a result of the absence of known hibernacula or maternity roost trees within the vicinity and the lack of observed alternate bat overwintering habitat (e.g., talus slopes, exposed rock faces) within the Project area. Therefore, necessary tree clearing will adhere to the protection guidelines for bats within the MDIFW Endangered Species Rules.² Additionally, Project clearing is anticipated from late summer 2022 through early winter 2023, outside of the pup rearing season.

² MDIFW Endangered Species Rule, Chapter 8.06. Available online at:

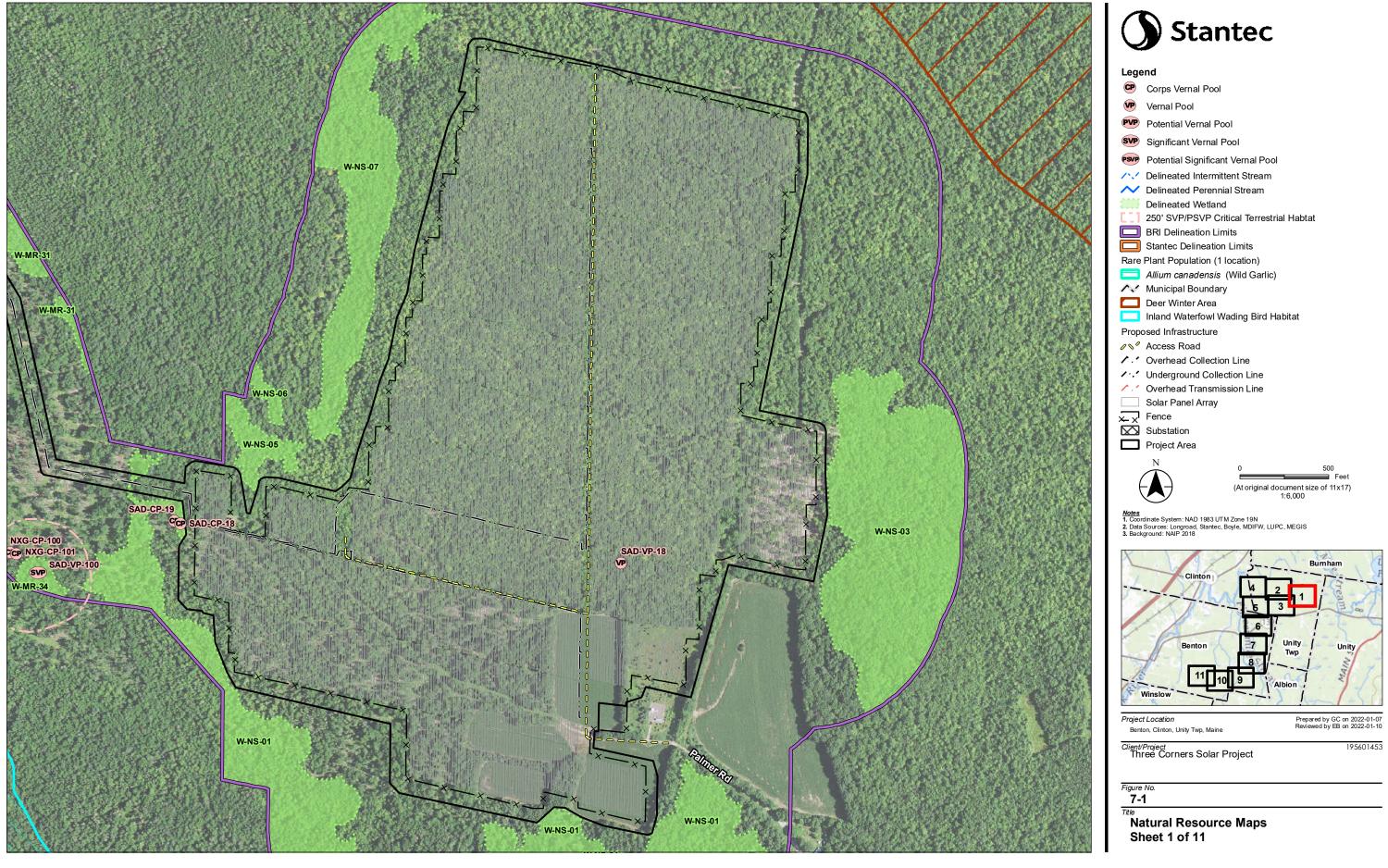
http://www.maine.gov/sos/cec/rules/09/137/137c008.docx. Accessed January 19, 2022.

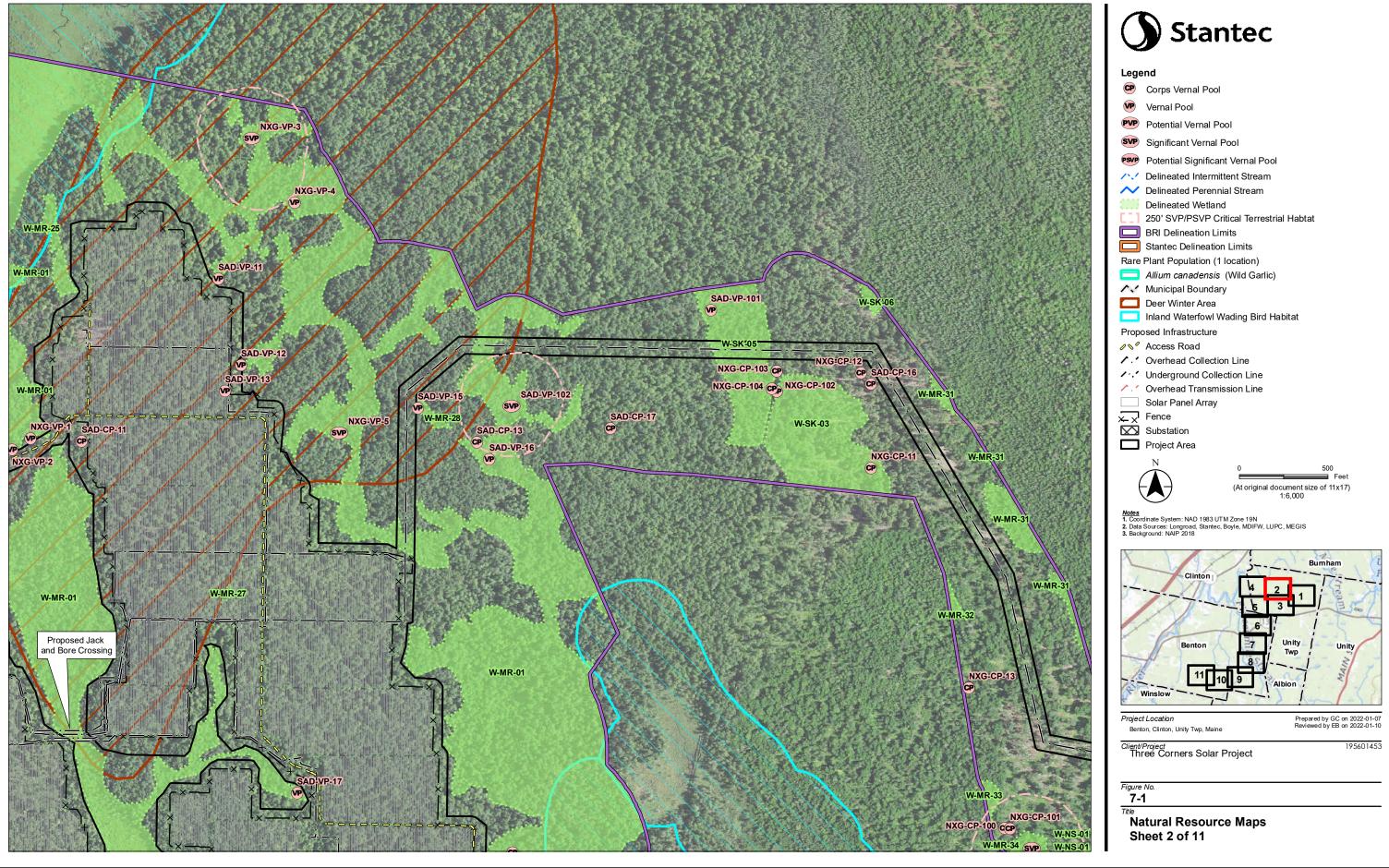
MDEP Site Location of Development Act Permit Application

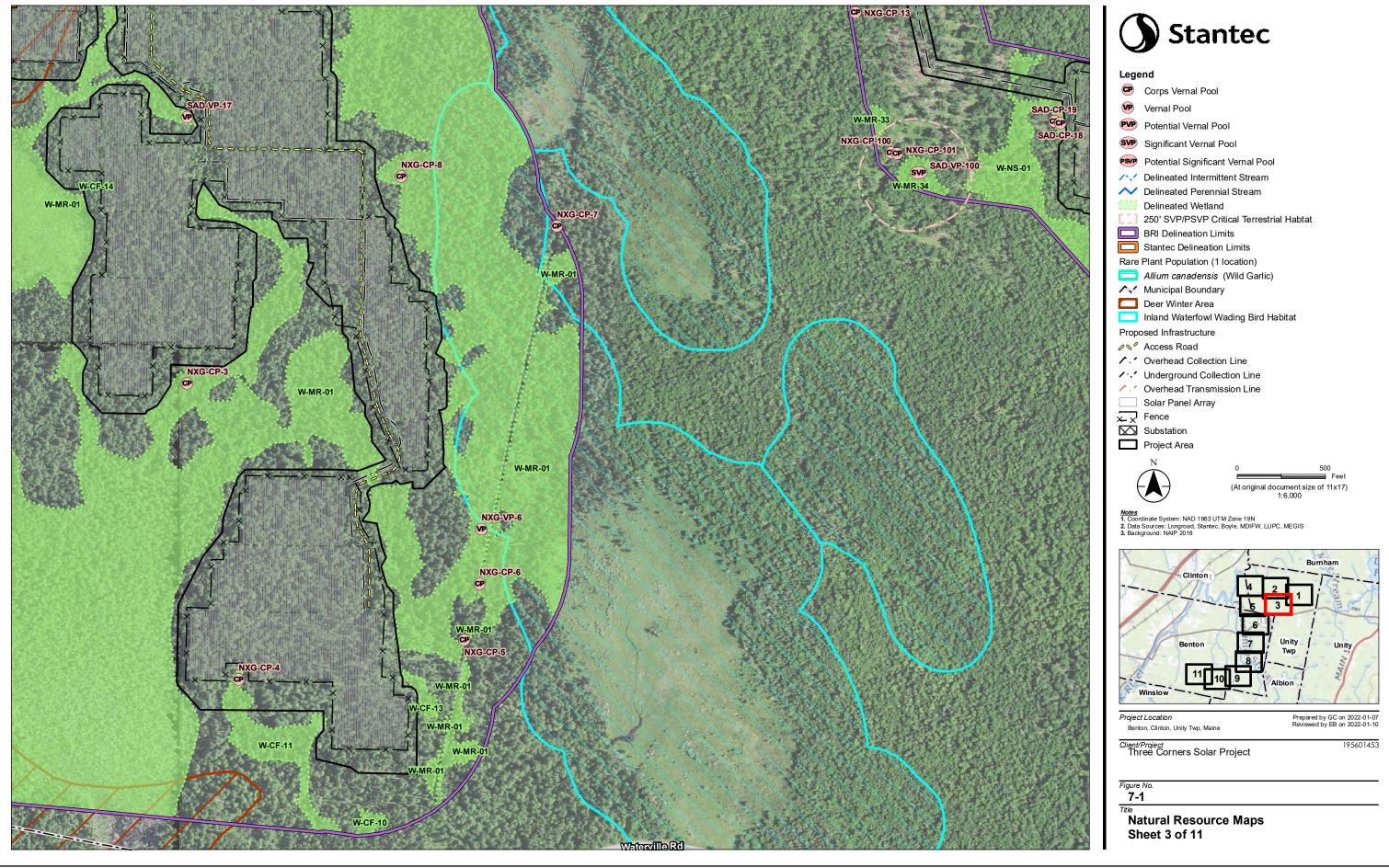
SECTION 7: WETLANDS, WILDLIFE, AND FISHERIES

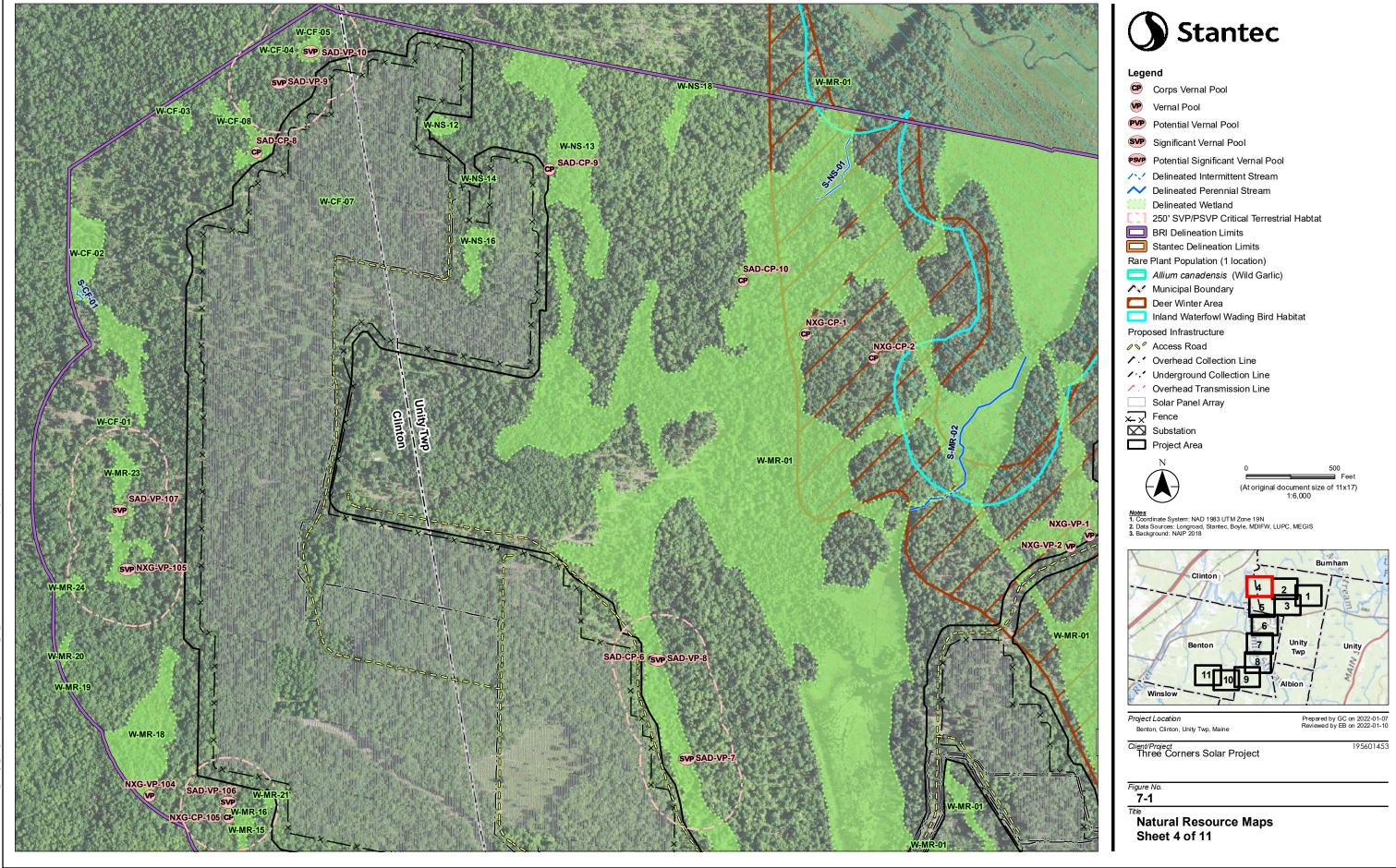
Figure 7-1

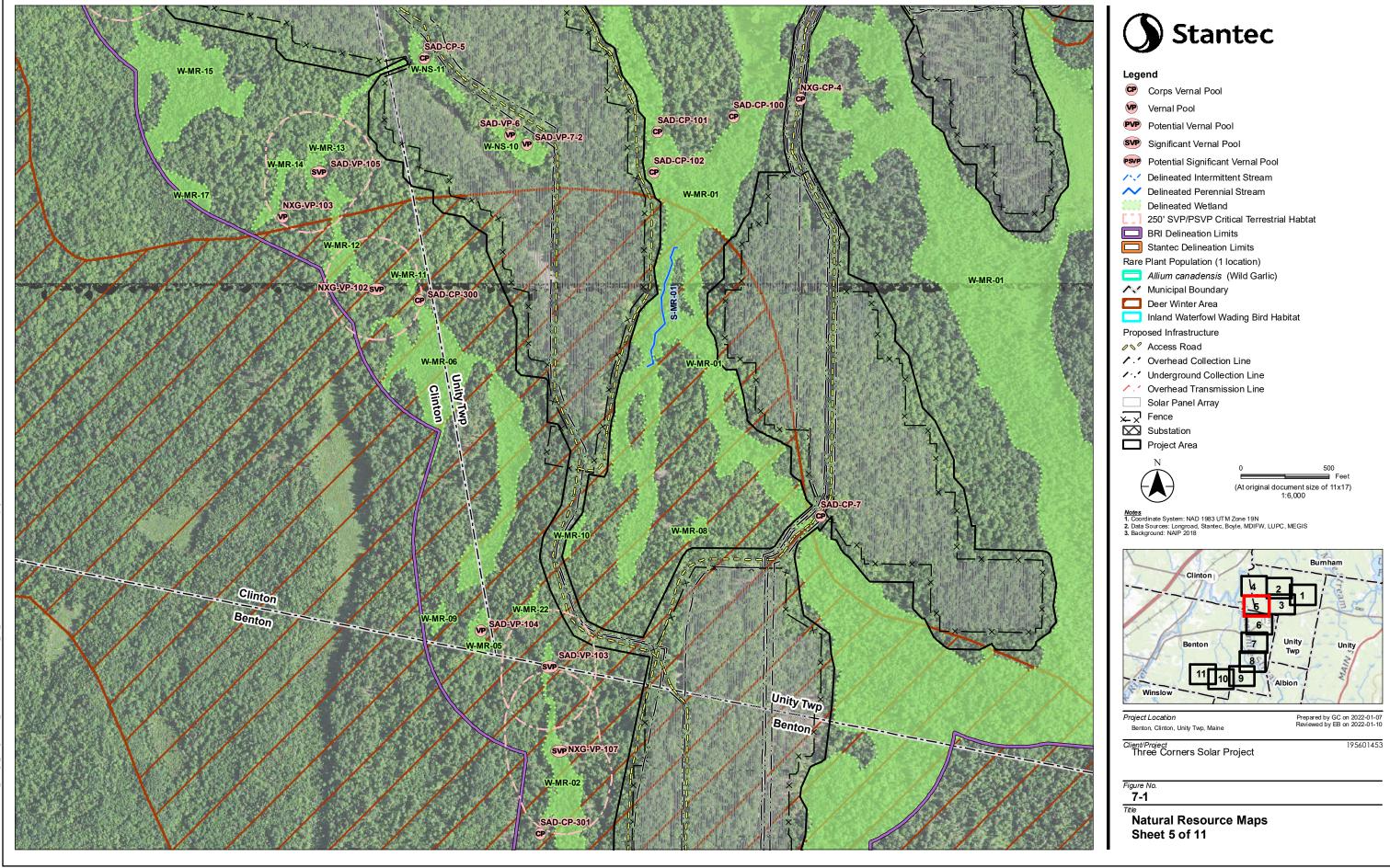
Natural Resources Overview Maps

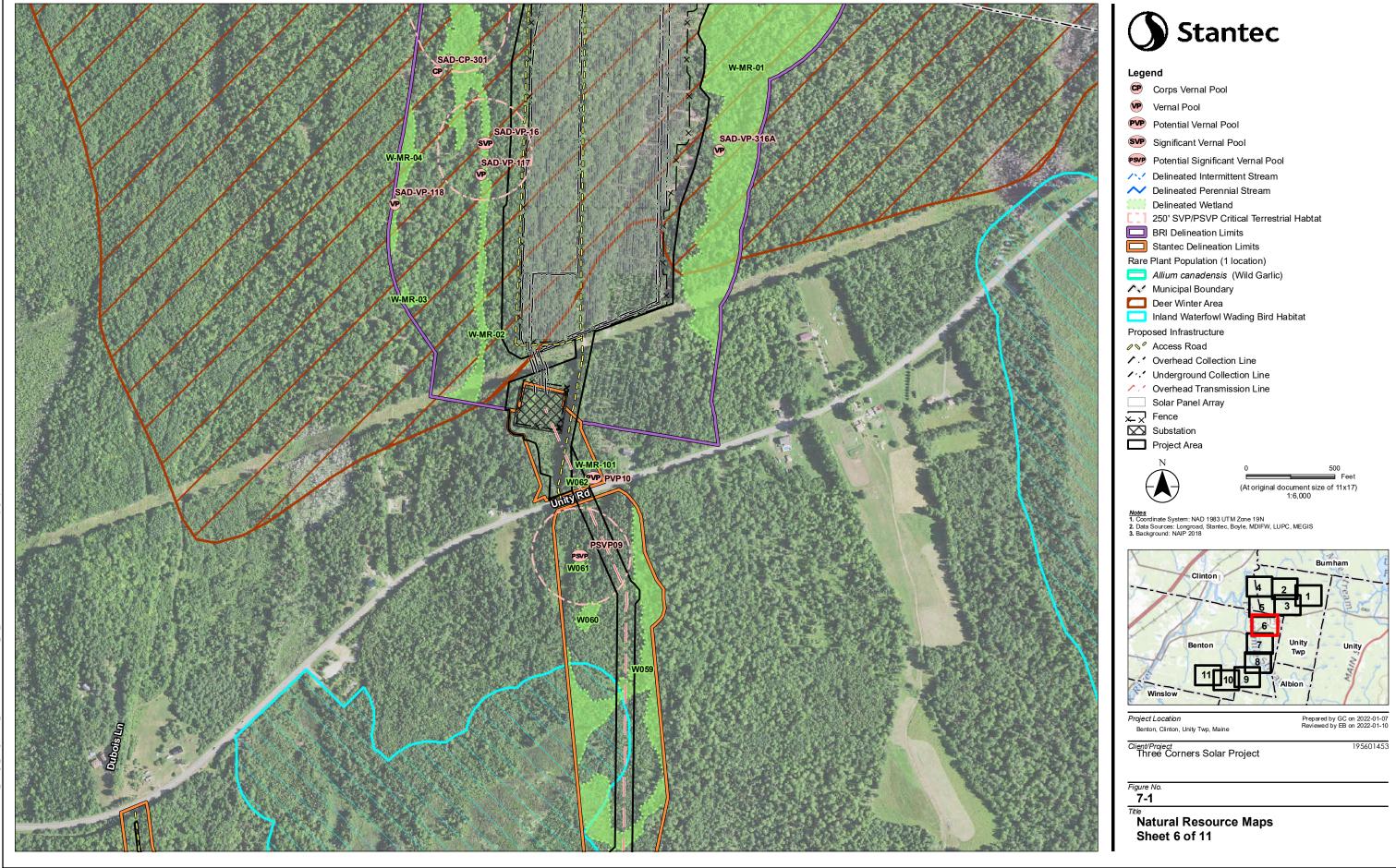


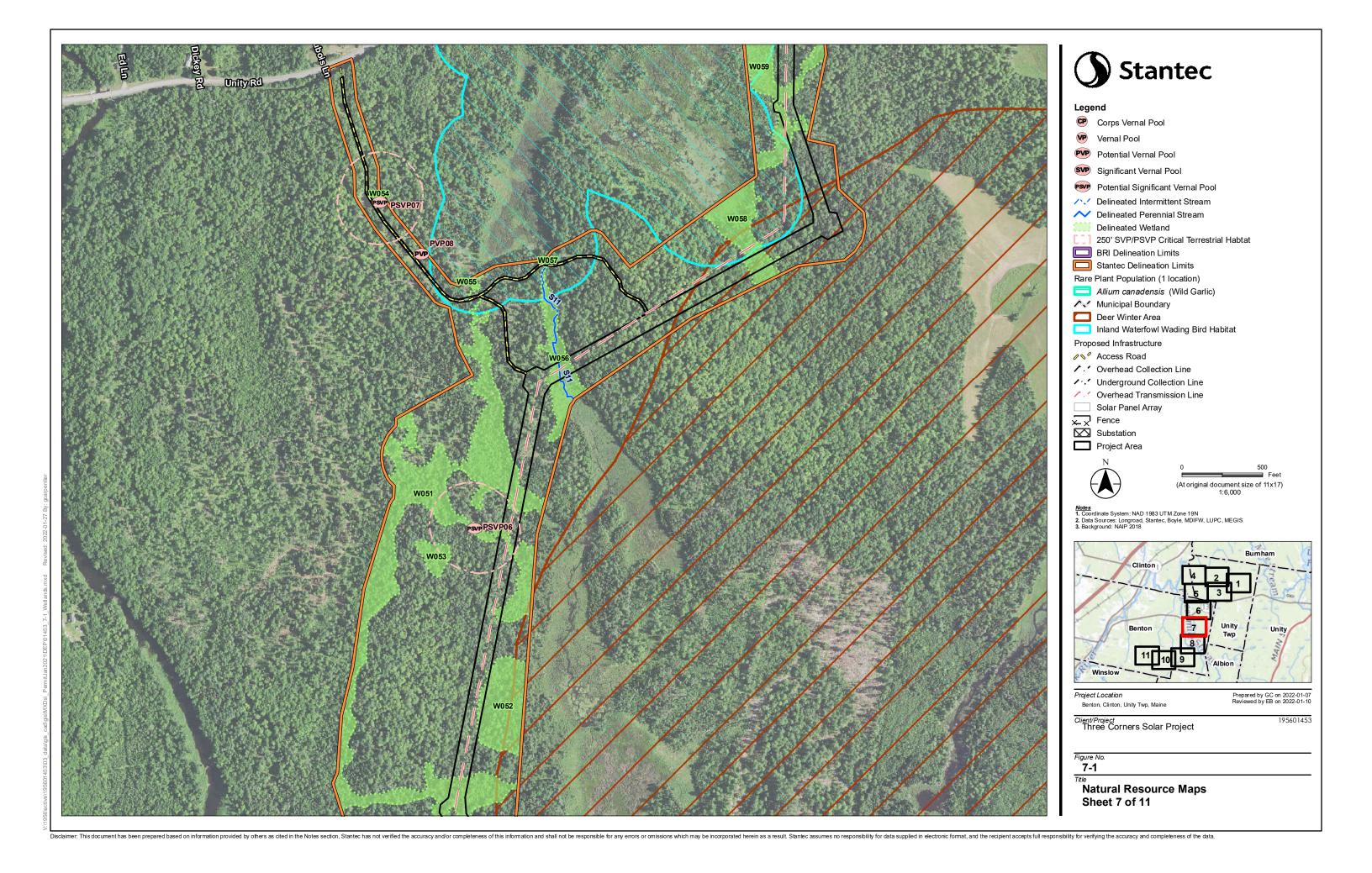


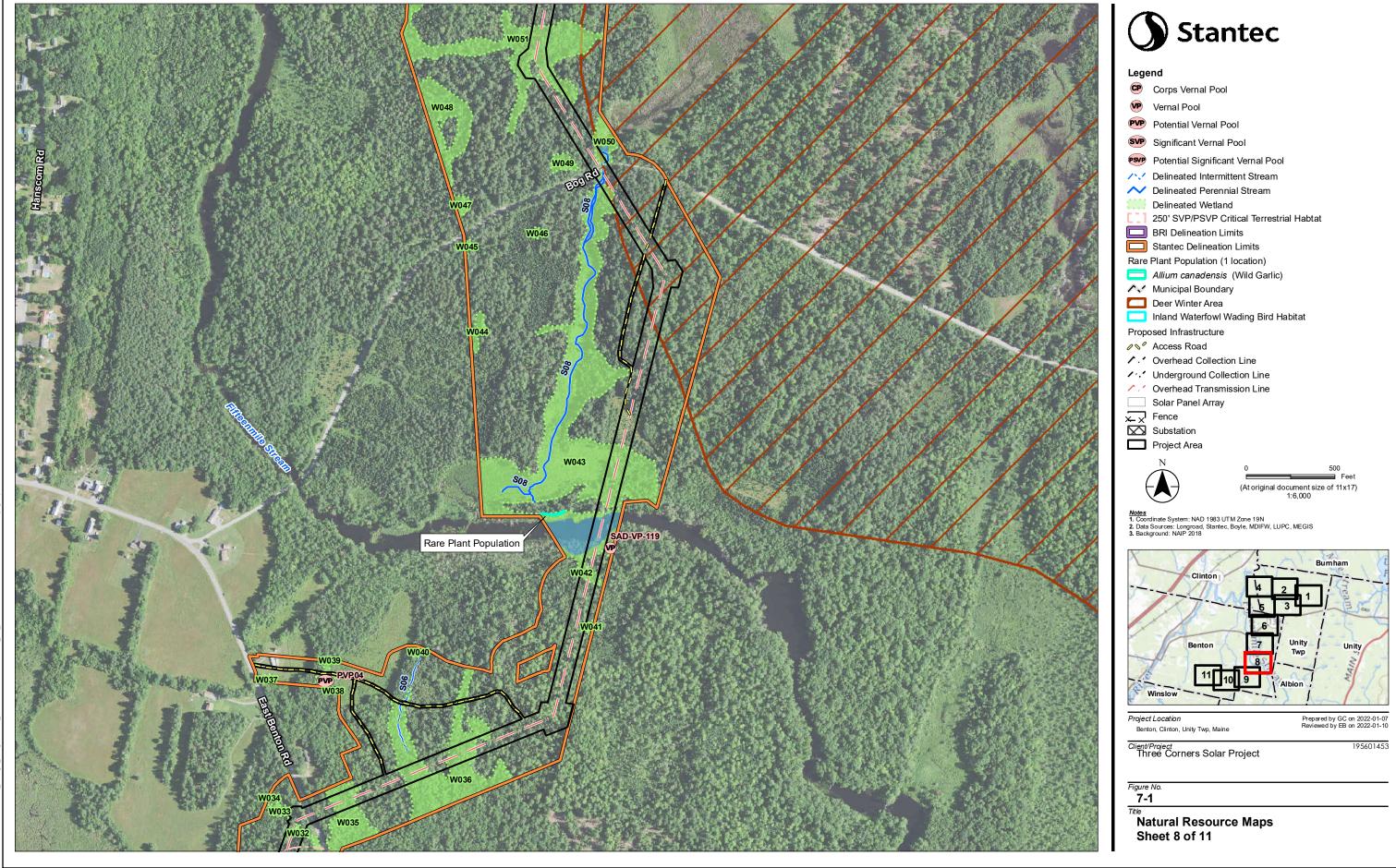


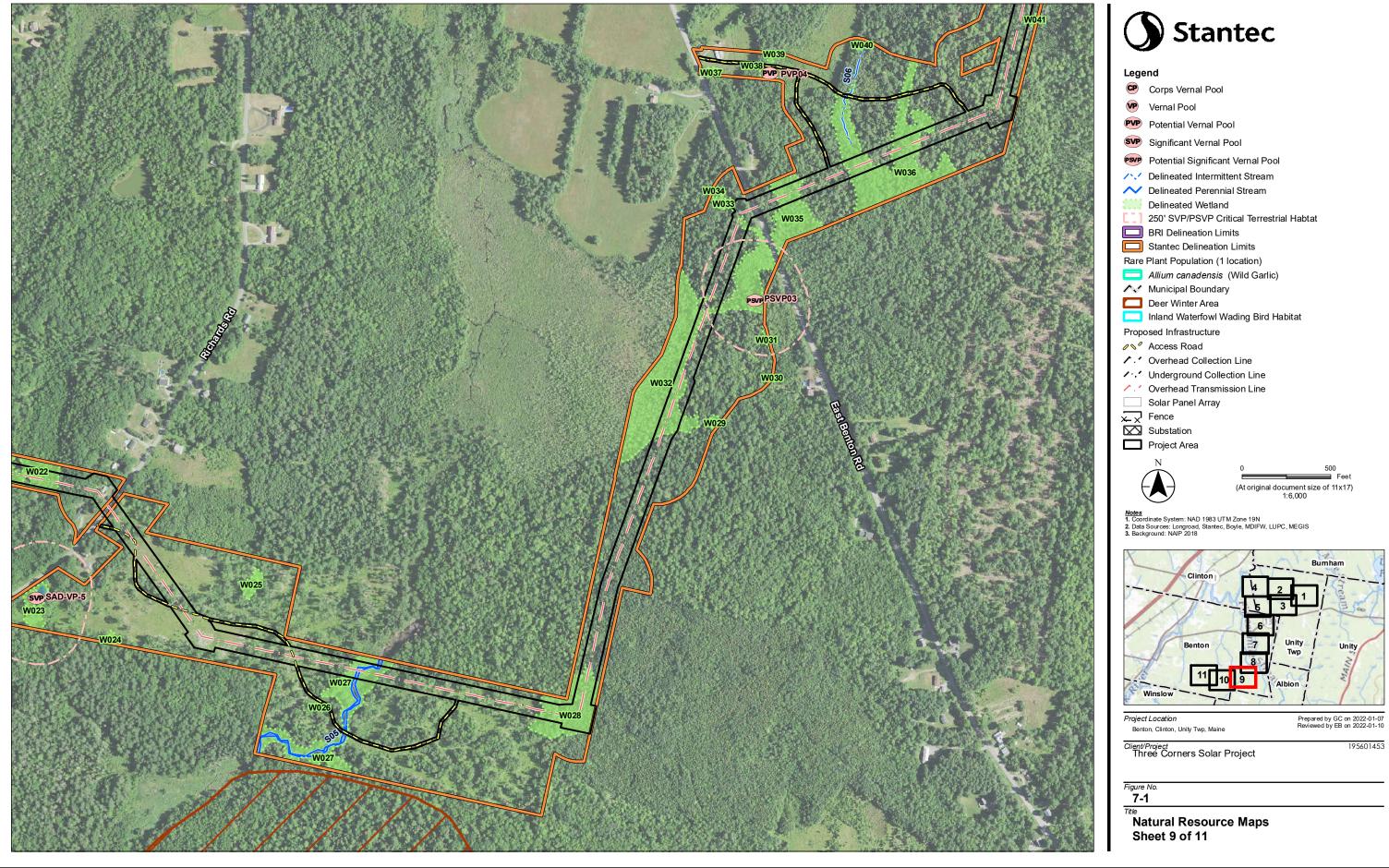


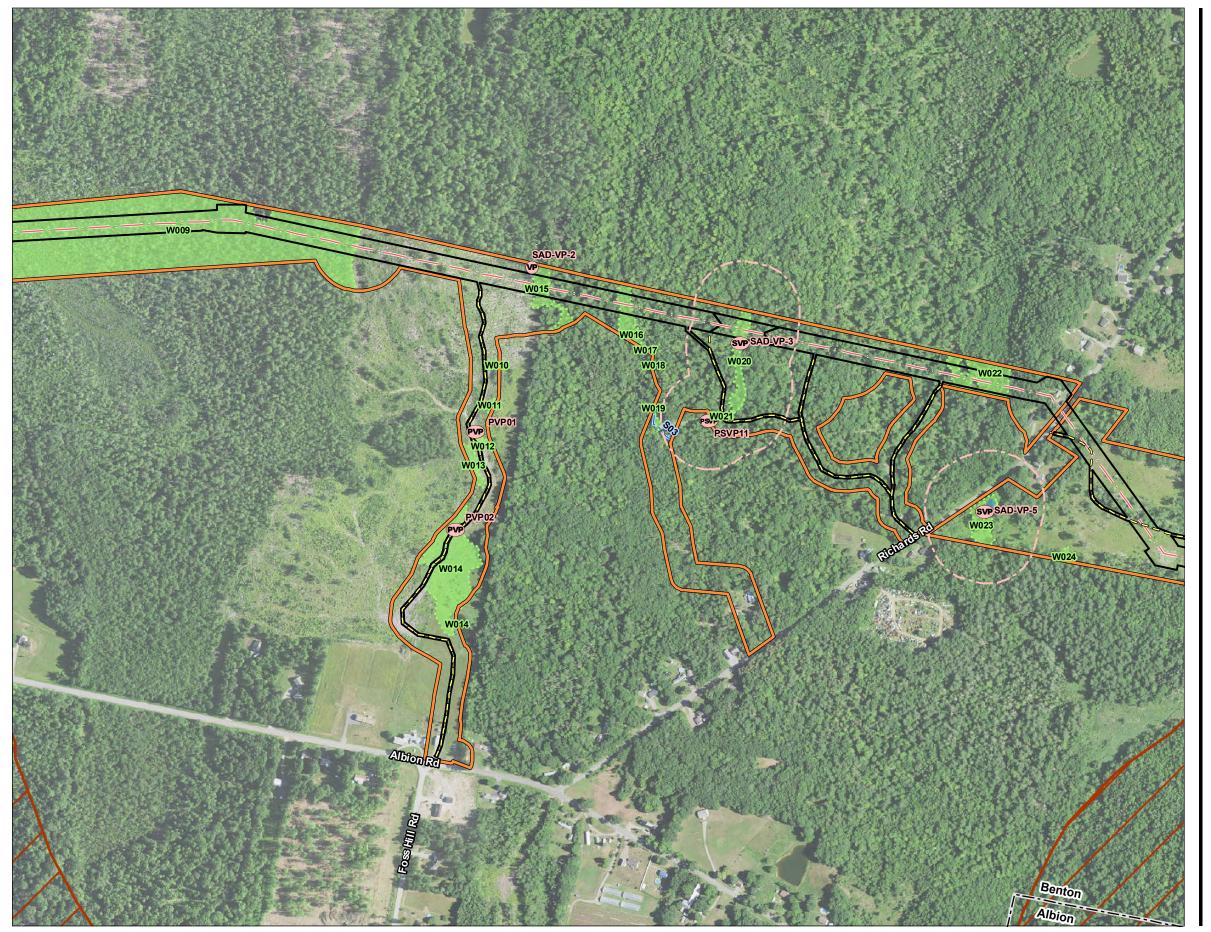














Legend

Corps Vernal Pool

VP Vernal Pool

PVP Potential Vernal Pool

SVP Significant Vernal Pool

Povential Significant Vernal Pool

/ Delineated Intermittent Stream Delineated Perennial Stream

Delineated Wetland

250' SVP/PSVP Critical Terrestrial Habtat

BRI Delineation Limits

Stantec Delineation Limits

Rare Plant Population (1 location)

Allium canadensis (Wild Garlic)

Municipal Boundary

Deer Winter Area

Inland Waterfowl Wading Bird Habitat

Proposed Infrastructure

/ . Overhead Collection Line

Underground Collection Line

Overhead Transmission Line

Solar Panel Array

——
✓ Fence

Substation

Project Area



(At original document size of 11x17)

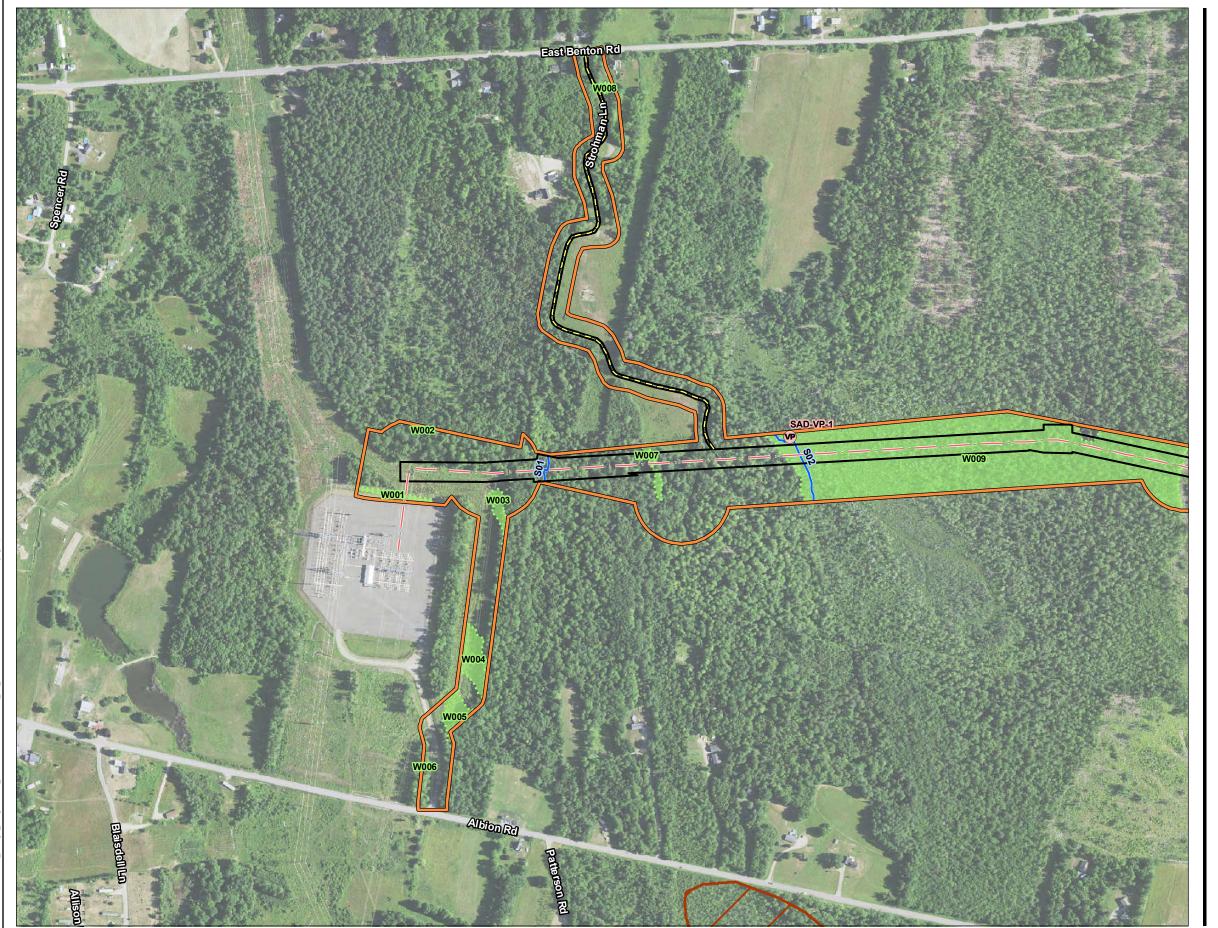
Notes
1. Coordinate System: NAD 1983 UTM Zone 19N
2. Data Sources: Longroad, Stantec, Boyle, MDIFW, LUPC, MEGIS
3. Background: NAIP 2018

Project Location Benton, Clinton, Unity Twp, Maine Prepared by GC on 2022-01-07 Reviewed by EB on 2022-01-10

Client/Project
Three Corners Solar Project

7-1

Natural Resource Maps Sheet 10 of 11





Legend

Corps Vernal Pool

VP Vernal Pool

PVP Potential Vernal Pool

Significant Vernal Pool

Potential Significant Vernal Pool

Delineated Intermittent StreamDelineated Perennial Stream

Delineated Wetland

250' SVP/PSVP Critical Terrestrial Habtat

BRI Delineation Limits

Stantec Delineation Limits

Rare Plant Population (1 location)

Allium canadensis (Wild Garlic)

Municipal Boundary

Deer Winter Area

Inland Waterfowl Wading Bird Habitat

Proposed Infrastructure

/ . Overhead Collection Line

/ ... Underground Collection Line

✓ ✓ Overhead Transmission Line

Solar Panel Array

—× Fence

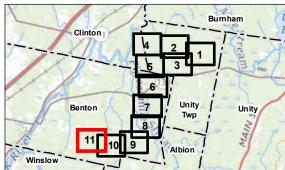
Substation

Project Area



0 500 Feet (At original document size of 11x17) 1:6,000

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



Project Location
Benton, Clinton, Unity Twp, Maine

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

Client/Project
Three Corners Solar Project

195601453

Figure N

7-1

Natural Resource Maps Sheet 11 of 11

MDEP Site Location of Development Act Permit Application

SECTION 7: WETLANDS, WILDLIFE, AND FISHERIES

Exhibit 7-1

MDIFW and USFWS Consultation Responses



STATE OF MAINE DEPARTMENT OF INLAND FISHERIES & WILDLIFE 284 STATE STREET 41 STATE HOUSE STATION AUGUSTA ME 04333-0041

CHANDLER E. WOODCOCK

September 7, 2018

Steve Knapp Kleinschmidt PO Box 650 Pittsfield, ME 04967

RE: Information Request - Three-Corners Solar, Unity and Benton

Dear Steve:

Per your request received August 13, 2018, we have reviewed current Maine Department of Inland Fisheries and Wildlife (MDIFW) information for known locations of Endangered, Threatened, and Special Concern species; designated Essential and Significant Wildlife Habitats; and fisheries habitat concerns within the vicinity of the *Three-Corners Solar Project* in Unity and Benton. Note that as project details are lacking, and due to the general nature and scale of the map that was provided, our comments are non-specific and should be considered preliminary.

Our Department has not mapped any Essential Habitats that would be directly affected by your project.

Endangered, Threatened, and Special Concern Species

Bats

Of the eight species of bats that occur in Maine, the three *Myotis* species are protected under Maine's Endangered Species Act (MESA) and are afforded special protection under 12 M.R.S §12801 - §12810. The three *Myotis* species include little brown bat (State Endangered), northern long-eared bat (State Endangered), and eastern small-footed bat (State Threatened). The five remaining bat species are listed as Special Concern: big brown bat, red bat, hoary bat, silver-haired bat, and tri-colored bat.

While a comprehensive statewide inventory for bats has not been completed, based on historical evidence it is likely that several of these species occur within the project area during migration and/or the breeding season. We recommend that you contact the U.S. Fish and Wildlife Service--Maine Fish and Wildlife Complex (Wende Mahaney, 207-902-1569) for further guidance, as the northern long-eared bat is also listed as a Threatened Species under the Federal Endangered Species Act. Otherwise, our Agency does not anticipate significant impacts to any of the bat species as a result of this project.

Rare mussels

PHONE: (207) 287-5254

Several species of rare freshwater mussels have been documented within the search area including yellow lampmussel (State Threatened), tidewater mucket (State Threatened), and creeper (Special

Letter to Steve Knapp Comments RE: Unity and Benton, Three-Corners Solar September 7, 2018

Concern). These rare animals have experienced declines throughout their ranges, with populations being extirpated due to low population densities, fragmented distributions, and limited or no evidence of recruitment. Freshwater mussels are especially vulnerable to impacts from pollution, sedimentation, dams, and surrounding land use practices that degrade or alter aquatic habitat.

Great Blue Herons

Great blue heron colonies, a State Species of Special Concern, have been documented in the search area. Great blue herons build large stick nests in live, dead, or dying trees 8-100 feet or more above the ground, and may nest in uplands, wetlands, or on islands. Great blue herons nest in groups and generally occupy colonies from April 1st thru August 15th (known as the Sensitive Nesting Period). During this time the birds can be extremely sensitive to disturbances caused by human intrusion, noise, and predators, and may even abandon a colony as a result. Not all great blue heron colonies have been mapped in Maine; please contact wildlife biologist Danielle D'Auria (207- 941-4478) with the Bird Group at our Bangor Headquarters for further guidance.

Eastern ribbon snake

Eastern ribbon snake, a state Species of Special Concern, have been documented within the search area. This rare species is a slender, semiaquatic snake often observed near the edges of emergent marshes, wet meadows, scrub-shrub wetlands, beaver impoundments, bogs, river and stream floodplains, and vegetated shorelines of ponds and lakes.

Bald Eagle

Until recently, bald eagles were listed as a Species of Special Concern in Maine. However, eagles continue to be protected under the federal Bald Eagle and Golden Eagle Protection Act ("Eagle Act") as well as other federal laws. Therefore, as there are eagle nests within the search area we recommend that you contact the U.S. Fish and Wildlife Service--Maine Fish and Wildlife Complex ((207)-902-1570) for further guidance. In addition, please refer to the following link for additional information:

Http://www.fws.gov/midwest/midwestbird/eaglepermits/baeatake/step1.html

Significant Wildlife Habitat

Inland Waterfowl and Wading Bird Habitats

This project intersects several Inland Waterfowl and Wading Bird Habitats (IWWHs), which are considered Significant Wildlife Habitat under Maine's Natural Resources Protection Act. These habitats provide important breeding, feeding, migration, staging, and wintering habitat for waterfowl and wading bird species. High and moderate value IWWHs within the study area includes both the wetland complex and a 250-foot upland zone. We recommend that these resources be avoided, including no clearing within the 250-foot undisturbed buffer from the wetland edge. Please continue to work with MDIFW Region B wildlife biologist Keel Kemper (207-547-5319) to discuss methods to avoid or limit impacts to these wildlife resources should any work be planned in or adjacent to these habitats.

Letter to Steve Knapp Comments RE: Unity and Benton, Three-Corners Solar September 7, 2018

Significant Vernal Pools

MDIFW Significant Wildlife Habitat maps indicate the presence of several Significant Vernal Pools in the project search area; however, it is unclear if the search area has been fully surveyed. Therefore, we recommend that surveys for vernal pools be conducted within the project boundary by qualified wetland scientists prior to final project design to determine whether there are Significant Vernal Pools present in the area. These surveys should extend up to 250 feet beyond the anticipated project footprint because of potential performance standard requirements for off-site Significant Vernal Pools, assuming such pools are located on land owned or controlled by the applicant. Once surveys are completed, survey forms should be submitted to our Agency for review well before to the submission of any necessary permits. Our Department will need to review and verify any vernal pool data prior to final determination of significance.

Deer Wintering Areas

Several mapped Deer Winter Areas (DWAs) occur within the project review study area. DWAs contain habitat cover components that provide conditions where deer find protection from deep snow and cold wind, which is important for overwinter survival. Please continue to work with MDIFW Region B wildlife biologist Keel Kemper (207-547-5319) for guidance as this project develops.

Fisheries Habitat

Without details, it is difficult to know what impacts your project may have on the mapped streams within the search area. That being said, MDIFW makes the following general recommendations as they pertain to streams.

We recommend that a 100-foot undisturbed vegetated buffers be maintained along streams. Buffers should be measured from the edge of stream or associated fringe and floodplain wetlands. Maintaining and enhancing buffers along streams that support coldwater fisheries is critical to the protection of water temperatures, water quality, natural inputs of coarse woody debris, and various forms of aquatic life necessary to support conditions required by many fish species. Stream crossings should be avoided, but if a stream crossing is necessary, or an existing crossing needs to be modified, it should be designed to provide full fish passage. Small streams, including intermittent streams, can provide crucial rearing habitat, cold water for thermal refugia, and abundant food for juvenile salmonids on a seasonal basis and undersized crossings may inhibit these functions. Generally, MDIFW recommends that all new, modified, and replacement stream crossings be sized to span at least 1.2 times the bankfull width of the stream. In addition, we generally recommend that stream crossings be open bottomed (i.e. natural bottom), although embedded structures which are backfilled with representative streambed material have been shown to be effective in not only providing habitat connectivity for fish but also for other aquatic organisms. Construction Best Management Practices should be closely followed to avoid erosion, sedimentation, alteration of stream flow, and other impacts as eroding soils from construction activities can travel significant distances as well as transport other pollutants resulting in direct impacts to fish and fisheries habitat. In addition, we recommend that any necessary instream work occur between July 15 and October 1.

Letter to Steve Knapp Comments RE: Unity and Benton, Three-Corners Solar September 7, 2018

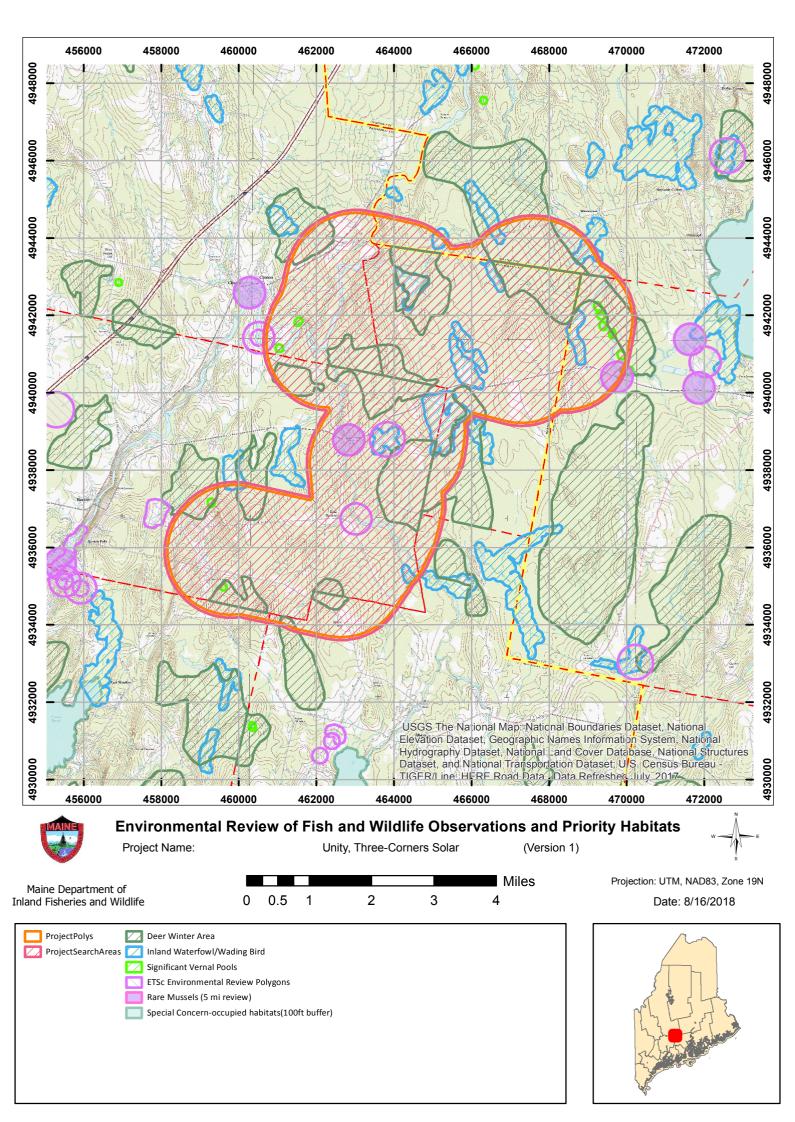
This consultation review has been conducted specifically for known MDIFW jurisdictional features and should not be interpreted as a comprehensive review for the presence of other regulated features that may occur in this area. Prior to the start of any future site disturbance we recommend additional consultation with the municipality, and other state resource agencies including the Maine Natural Areas Program, the Department of Marine Resources, and Maine Department of Environmental Protection in order to avoid unintended protected resource disturbance.

Please feel free to contact my office if you have any questions regarding this information, or if I can be of any further assistance.

Best regards,

John Perry

Environmental Review Coordinator





United States Department of the Interior



FISH AND WILDLIFE SERVICE

Maine Ecological Services Field Office P. O. Box A East Orland, ME 04431

Phone: (207) 469-7300 Fax: (207) 902-1588 http://www.fws.gov/mainefieldoffice/index.html

In Reply Refer To: December 20, 2021

Consultation Code: 05E1ME00-2022-SLI-0390

Event Code: 05E1ME00-2022-E-01421 Project Name: Three Corners Solar

Subject: List of threatened and endangered species that may occur in your proposed project

location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies the threatened, endangered, candidate, and proposed species and designated or proposed critical habitat that may occur within the boundary of your proposed project or may be affected by your proposed project. This species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC Web site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the Endangered Species Consultation Handbook at: http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

This species list also identifies candidate species under review for listing and those species that the Service considers species of concern. Candidate species have no protection under the Act but are included for consideration because they could be listed prior to completion of your project. Species of concern are those taxa whose conservation status is of concern to the Service (i.e., species previously known as Category 2 candidates), but for which further information is needed.

If a proposed project may affect only candidate species or species of concern, you are not required to prepare a Biological Assessment or biological evaluation or to consult with the Service. However, the Service recommends minimizing effects to these species to prevent future conflicts. Therefore, if early evaluation indicates that a project will affect a candidate species or species of concern, you may wish to request technical assistance from this office to identify appropriate minimization measures.

Please be aware that bald and golden eagles are not protected under the Endangered Species Act but are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.). Projects affecting these species may require development of an eagle conservation plan: http://www.fws.gov/windenergy/eagle_guidance.html Information on the location of bald eagle nests in Maine can be found on the Maine Field Office Web site: http://www.fws.gov/mainefieldoffice/Project%20review4.html

Additionally, wind energy projects should follow the wind energy guidelines: http://www.fws.gov/windenergy/ for minimizing impacts to migratory birds and bats. Projects may require development of an avian and bat protection plan.

Migratory birds are also a Service trust resource. Under the Migratory Bird Treaty Act, construction activities in grassland, wetland, stream, woodland, and other habitats that would result in the take of migratory birds, eggs, young, or active nests should be avoided. Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm and at:

http://www.towerkill.com; and at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Maine Ecological Services Field Office P. O. Box A East Orland, ME 04431 (207) 469-7300

Project Summary

Consultation Code: 05E1ME00-2022-SLI-0390 Event Code: Some(05E1ME00-2022-E-01421)

Project Name: Three Corners Solar
Project Type: POWER GENERATION

Project Description: The Three Corners Solar Project would provide up to 112 megawatts of

renewable energy to Maine's electrical grid. The proposed solar arrays are located north of Route 139 in Unity Township and the Towns of Clinton and Benton. The solar array will include associated vegetation clearing to

minimize solar array shading. The solar array will be made up of photovoltaic panels mounted on single axis trackers to maximize solar energy production during the course of the year. The Project will connect to the Central Maine Power transmission system at the Albion substation located approximately 5 miles to the southwest of the Project via a new 115-kilovolt generator lead transmission line. The proposed transmission route and Project substation are entirely located in the town of Benton.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@44.623075,-69.41655038408656,14z



Counties: Kennebec County, Maine

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME STATUS

Northern Long-eared Bat Myotis septentrionalis

Threatened

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045

Fishes

NAME

Atlantic Salmon Salmo salar

Endangered

Population: Gulf of Maine DPS

There is **final** critical habitat for this species. The location of the critical habitat is not available.

Species profile: https://ecos.fws.gov/ecp/species/2097

Insects

NAME STATUS

Monarch Butterfly Danaus plexippus

Candidate

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Three Corners Solar Project

MDEP Site Location of Development Act Permit Application

SECTION 7: WETLANDS, WILDLIFE, AND FISHERIES

Exhibit 7-2

Deer Wintering Area Site Visits Correspondence

From: Kemper, Keel

To: Steve Knapp; Deron Lawrence
Cc: edbthree; Ethan Bessey
Subject: RE: DWA winter visit

Date: Thursday, February 07, 2019 9:00:51 AM

Attachments: <u>image001.jpg</u>

Steve as usual you have a done a job of encapsulating the essence of our site visit. To summarize, the law requires you to avoid and minimize as best you can. That is the primary reason that the southern alignment that avoids the DWA all together is preferable, the applicant demonstrates avoidance of protected natural resources. In the north we have two areas. One area is not as critical because the cover type is not appropriate and thus the impacts would be occurring in an area that is not functioning as DWA. The most northern area will be the most problematic. The development in this area will have impacts to the DWA that has appropriate cover type and is likely functioning as a DWA. Deer trails were readily observed in that area during this most recent site visit. So there will be some DWA impacts in one area that will likely have to mitigated or compensated. One might consider a package of mitigation options to include some amount of preservation of existing DWA with a management plan, in-lieu fee. Let me know if I may be of assistance.

Keel

G. Keel Kemper Regional Wildlife Biologist

270 Lyons Road Sidney, ME 04330 207-287-5369

https://www.maine.gov/ifw/ https://www.facebook.com/mefishwildlife/https://twitter.com/mefishwildlife?lang=en

Correspondence to and from this office is considered a public record and may be subject to a request under the Maine Freedom of Access Act. Information that you wish to keep confidential should not be included in email correspondence.

From: Steve Knapp [mailto:Steve.Knapp@KleinschmidtGroup.com]

Sent: Wednesday, February 06, 2019 4:30 PM

To: Deron Lawrence <deron.lawrence@longroadenergy.com>

Cc: Kemper, Keel <Keel.Kemper@maine.gov>; edbthree <edb3@edbessey.com>; Ethan Bessey

<ethan@besseylumber.com>
Subject: DWA winter visit

EXTERNAL: This email originated from outside of the State of Maine Mail System. Do not click links or open attachments unless you recognize the sender and know the content is safe. Afternoon Deron,

Yesterday's visit went well. Weather was excellent for February!

Keel, please feel free to jump in with any additional information (or if I have misrepresented anything from our conversations). I will start from the North-East DWA and work south.

The northern most DWA is likely moderate DWA. Based on the discussion with Keel this area is not a "no build" zone given that we are trying to avoid wetland impacts and keep the panels in uplands. However, rather than spend the money to conduct a study confirming the DWA is moderate we should assume it is. Given that, it is likely that the DEP will require some level of compensation for this impact, that being said it may be worth looking into areas of preservation that could be identified in the township (but still harvested within the constraints of a management plan).

The center DWA (near the existing T-line and Bessey Lane) is not an issue. This area is dominated by beech and maple, and is not functioning as a DWA.

The southern section (where the ROW is currently located adjacent to the DWA). After walking the existing ROW, both Keel and I think that if the wetland impacts are less in the existing alignment it might be best to continue to avoid the DWA. From DEP's perspective this would fall into their avoidance/minimization approach. I think the initial idea was to avoid potential wetland impacts on the ROW, but from the section we walked the existing alignment crosses through a fair bit of upland area. That being said, if the wetland delineations identify significant wetlands (or lots of vernal pools) we can move the alignment into the DWA with input from Keel.

The important thing to note is that the Keel feels the project is moving in the right direction, in which we are looking at avoiding as many impacts as we can while still keeping the project viable. Keel also passed along his thanks for the early/often pre app visits which have allowed his guidance/input on the approach.

Best-Steve Steve Knapp, PWS Project Scientist Ecological Services

Office: 207.416.1233 Cell: 207.570.9462

www.KleinschmidtGroup.com

Providing practical solutions for complex problems affecting energy, water, and the environment

Three Corners Solar Project

MDEP Site Location of Development Act Permit Application

SECTION 7: WETLANDS, WILDLIFE, AND FISHERIES

Exhibit 7-3

Natural Resources Report: Solar Array Area

Natural Resources Report

Three Corners Solar Project



Prepared by BRI Environmental

December 2021







Contents

O Introduction	
J Methods	
3.1 Wetland Delineation	3
3.2 Stream Identification	3
3.3 Function and Values	3
O Results	
4.1 Upland Habitats	2
4.2 Wetland Habitats	(
4.3 Streams and Aquatic Habitats	10
4.5 Wildlife	11
9 Functions and Values	12
O Agency Consultation	13
D Discussion	13
	Geographic Setting

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

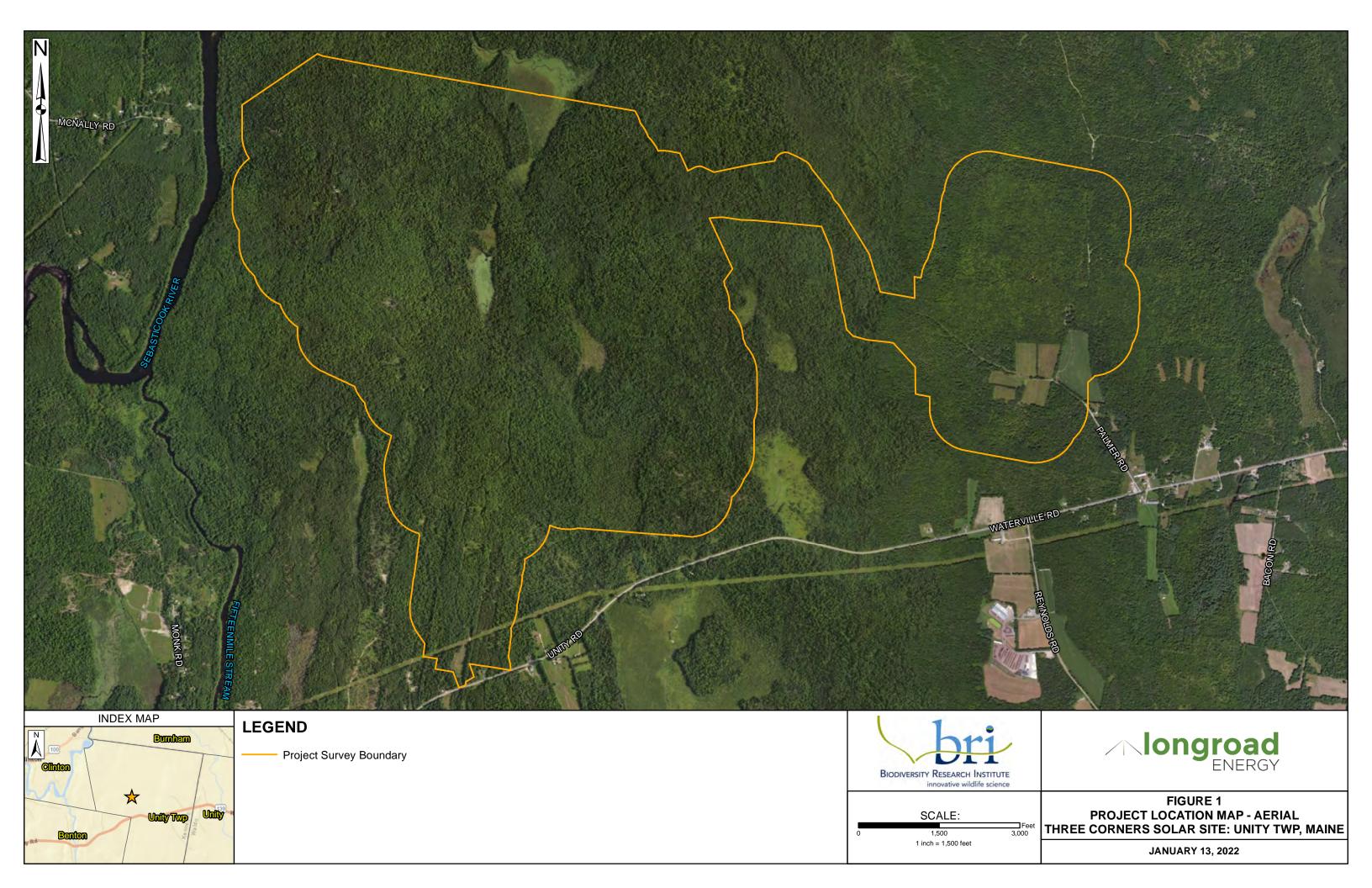
The Site is generally characterized by regenerating uplands and wetlands that are actively managed for timber. The Site is surrounded by limited residential development and more working forest. The nearest waterbody is the Sebasticook River, which is approximately 0.4 miles to the north, and Unity Pond, 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 reached here. Transition hardwoods, northern hardwoods, northern hardwoods, northern hardwoods, spruce forests are major forest types. The ecoregion has a relatively high population density for Maine, with an extensive pattern of settlement and roads.¹

_

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





3.0 Methods

Prior to the initial site visit, the field team conducted a desktop review of publicly available data, which included the National Wetlands Inventory (NWI)², Natural Resources Conservation Service (NRCS) Web Soil Survey³, Beginning with Habitat data (BWH)⁴, topographic maps, and aerial photos. Following this initial assessment, field work was completed to formally map resources on Site using the methodologies described below. These methods represent the current standard of practice for the delineation of regulated natural resources.

3.1 Wetland Delineation

Wetlands on the Site were delineated according to the survey techniques described in the 1987 US Army Corps of Engineers Wetland Delineation Manual⁵ and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, v2.0⁶. In areas where evidence of hydrology or hydrophytic plants were observed, samples of the soil profile were observed to further investigate evidence of saturated conditions within the upper part of the soil profile. Survey flags are hung along the wetland-upland boundaries. The flags are labeled with a unique alpha-numeric code and sequence denoting the wetland identification number and flag number (e.g., W-MR-01, W-MR-02 etc.).

3.2 Stream Identification

The survey area was reviewed for conditions that meet the definition of river, stream, or brook. Features mapped meet the definition described in Article 5-A of the Natural Resource Protection Act (NRPA)⁷. Where streams are identified less than 6 feet in width survey flags were hung along the centerline of the stream, for streams mapped that are wider than 6 feet both banks (i.e., the ordinary high-water mark) of the stream were flagged. Flags are labeled with a unique 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 Methodology⁸. 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.

https://www.nae.usace.army.mil/Portals/74/docs/regulatory/Forms/HighwaySupplement6Apr2015.pdf

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

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

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

⁵ US Army Corps of Engineers Wetland Delineation Manual (1987)

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

⁶ US Army Corps of Engineers Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, v2.0

https://www.nae.usace.army.mil/Portals/74/docs/regulatory/JurisdictionalLimits/RegionalSupplement2012.pdf

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

⁸ USACE Highway Method



4.0 Results

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

4.1 Upland Habitats

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

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



Table 1. NRCS Soil Summary Table

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

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





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

4.2 Wetland Habitats

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

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



Table 2. Wetland Summary Table

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

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

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



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

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



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



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

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





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

4.3 Streams and Aquatic Habitats

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





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

Table 2. Stream Summary Table

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

4.5 Wildlife

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

-

¹¹ Title 38 §480-B. Definitions



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

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

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

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

5.0 Functions and Values

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

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



6.0 Agency Consultation

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

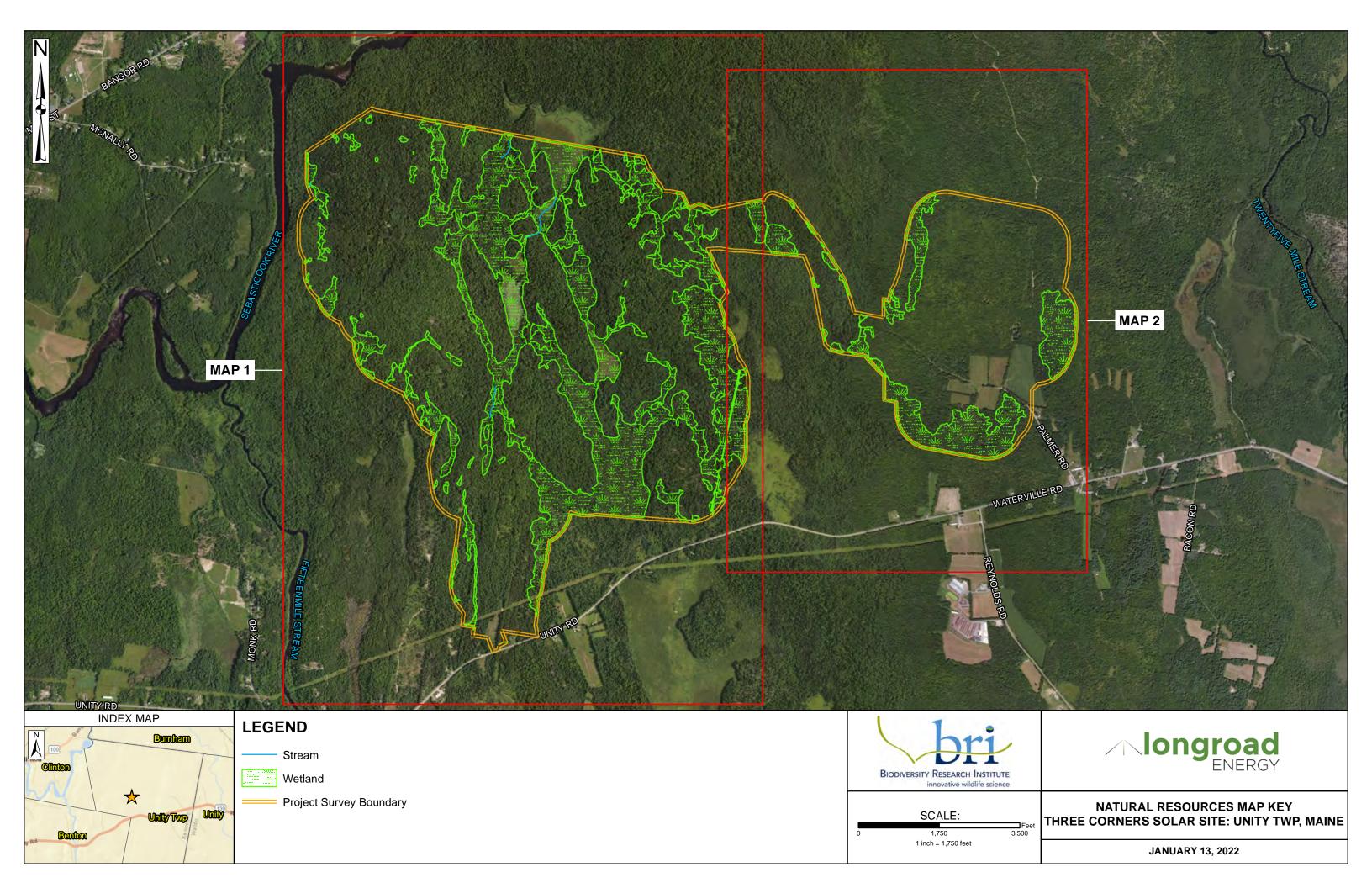
7.0 Discussion

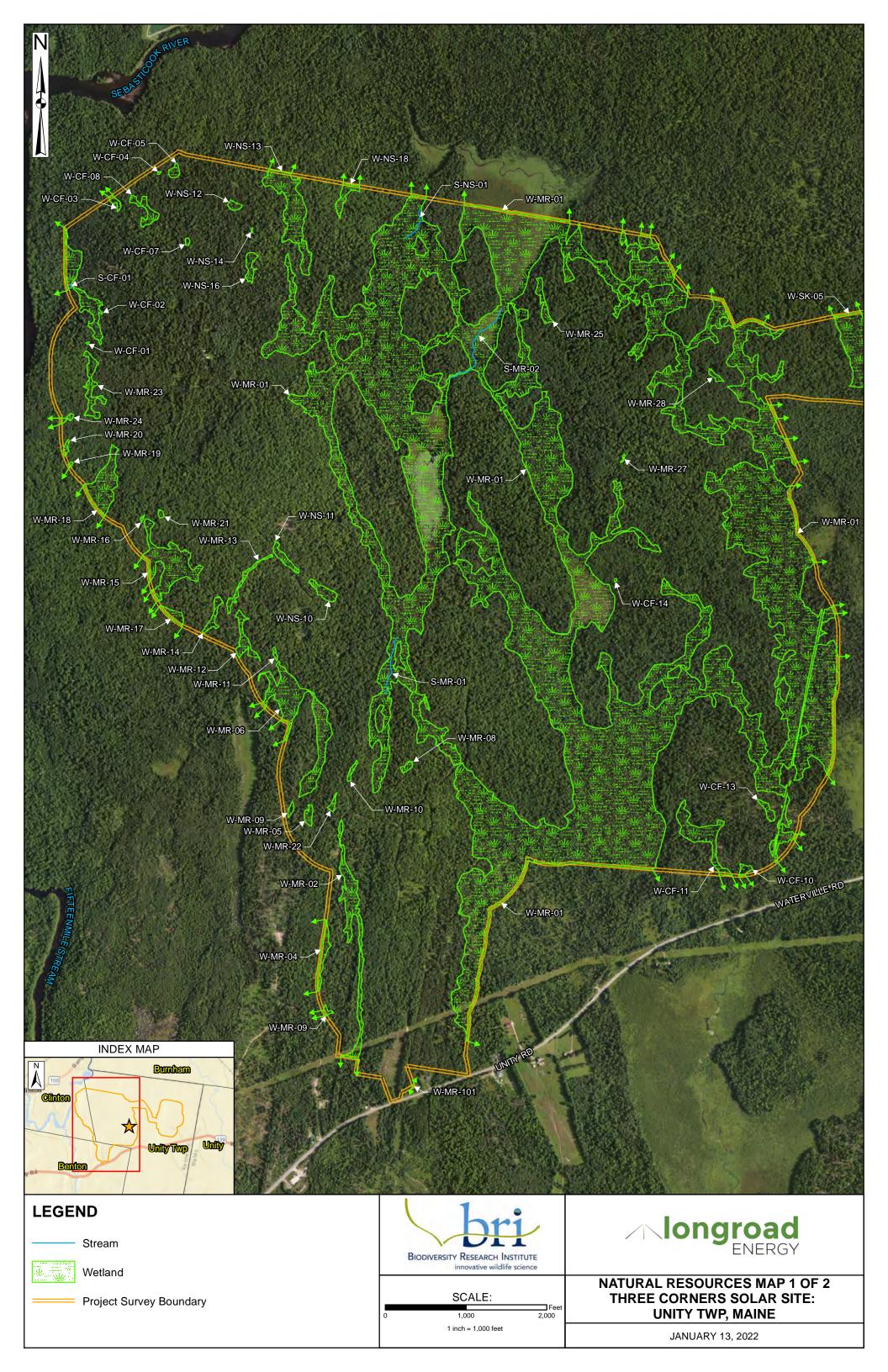
The Site has been actively logged for some time, and forested uplands and wetlands are interspersed with many haul roads and skidder trails. Currently there are several gravel access roads that traverse the Site as well as an old narrow-gauge rail bed which bisects a portion of wetland W-MR-01 along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

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

Exhibit A:

Resources Map





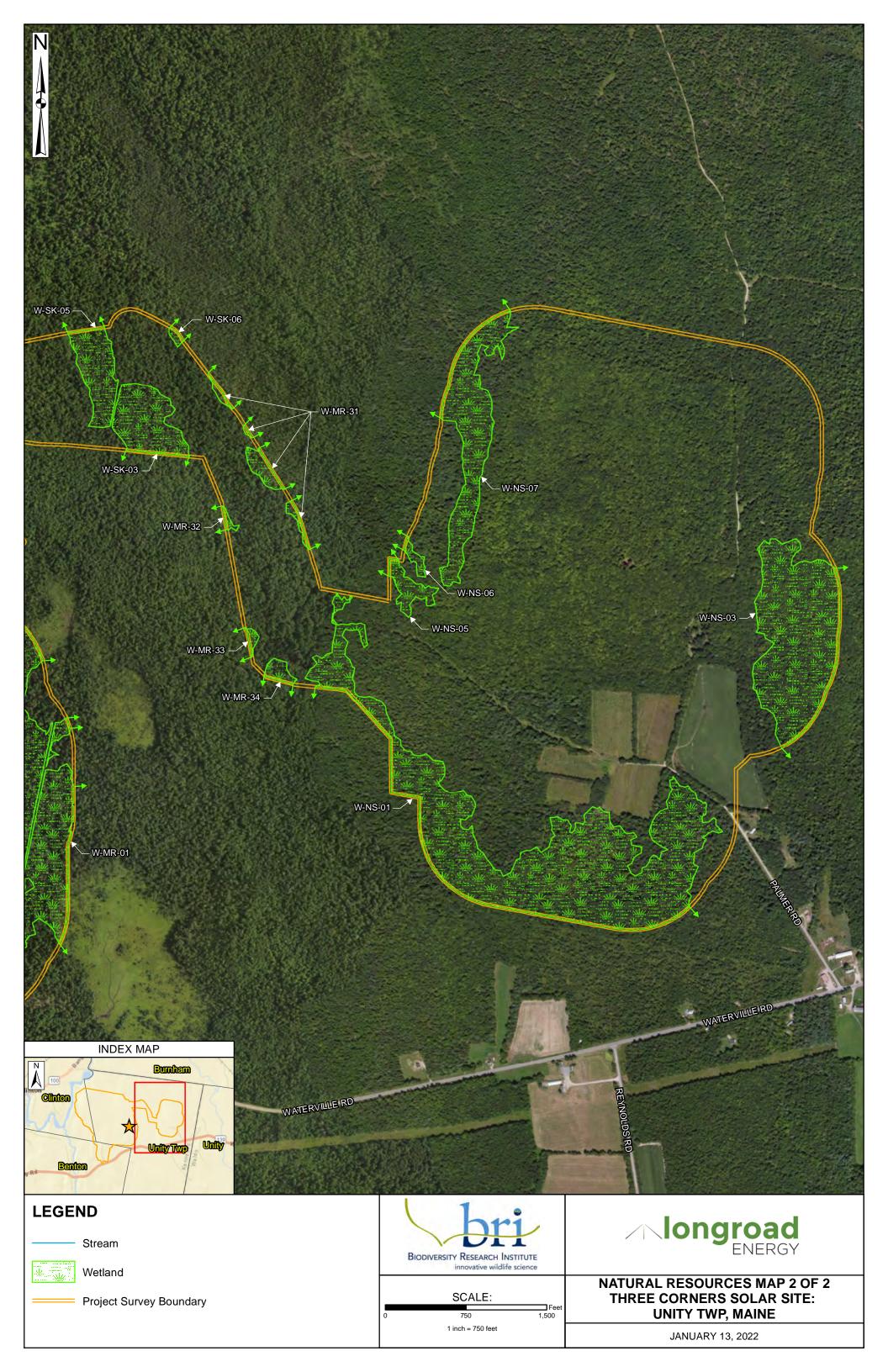


Exhibit B:

Resources Photos



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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

Exhibit C:

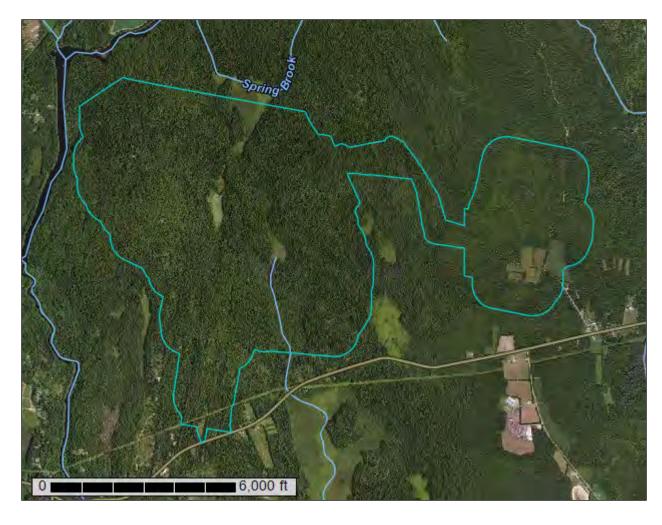
NRCS Soil Map



NRCS

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

Custom Soil Resource Report for Kennebec County, Maine



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.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Preface	2
How Soil Surveys Are Made	
Soil Map	
Soil Map	
Legend	10
Map Unit Legend	
Map Unit Descriptions	11
Kennebec County, Maine	14
HrB—Lyman-Tunbridge complex, 0 to 8 percent slopes, rocky	14
HrC—Lyman-Tunbridge complex, 8 to 15 percent slopes, rocky	16
MoA—Monarda silt loam, 0 to 3 percent slopes	19
MrA—Monarda silt loam, 0 to 3 percent slopes, very stony	20
PdB—Paxton-Charlton fine sandy loams, 3 to 8 percent slopes	22
PeB—Paxton-Charlton very stony fine sandy loams, 3 to 8 percent	
slopes	24
PeC—Paxton-Charlton very stony fine sandy loams, 8 to 15 percent	
slopes	27
RF—Rifle mucky peat	29
ScA—Scantic silt loam, 0 to 3 percent slopes	31
TO—Togus fibrous peat	33
WrB—Woodbridge fine sandy loam, 3 to 8 percent slopes	34
WsB—Woodbridge very stony fine sandy loam, 3 to 8 percent slopes	36
References	39

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.

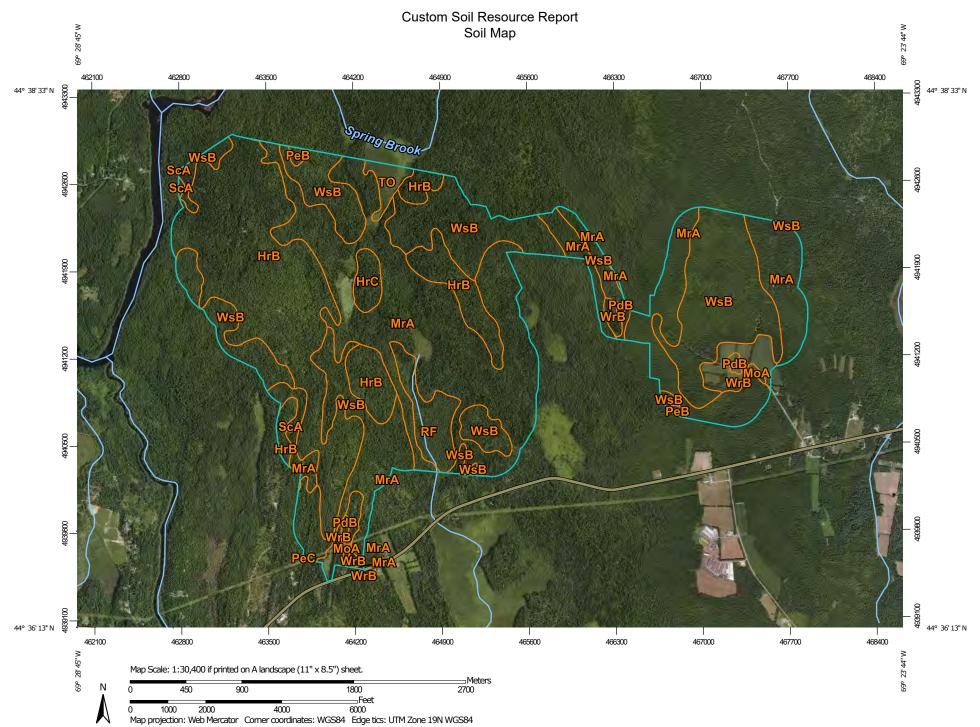
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree 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

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

 \odot

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Sodic Spot

Slide or Slip

Spoil Area



Stony Spot

Very Stony Spot

Ŷ

Wet Spot Other

Δ

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

 \sim

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20.000.

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

Source of Map: Natural Resources Conservation Service Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

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

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

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

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HrB	Lyman-Tunbridge complex, 0 to 8 percent slopes, rocky	559.0	26.0%
HrC	Lyman-Tunbridge complex, 8 to 15 percent slopes, rocky	23.0	1.1%
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 pondina: 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 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

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2 053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2 053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2 053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Exhibit D:

USACE Forms

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: _Three corners priority 3	City/County: Kennebec Sampling Date: 07/15/2020 3:12 PM
Applicant/Owner: Longroad	State: Maine Sampling Point: PLOT-W-MR-1-UP
Investigator(s): Chad Flinkstrom	
Landform (hillslope, terrace, etc.): Hillslope	Local relief (Concave, convex, none): Concave
Slope (%): 2 Lat: 44.61688	Long:69.44562
Soil Map Unit Name: Wood ridge very stony fine sandy loam	NWI Classification: PFO
Are climatic/hydrologic conditions on the site typical for this time of year?	
Are Vegetation , Soil , or Hydrology significantly	
Are Vegetation , Soil , or Hydrology naturally pro	
SUMMARY OF FINDINGS – Attach site map showing samp	oling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wes	Is the Sampled Area within a Wetland Yes No If yes, optional Wetland Site ID:
Wetland Hydrology Present? Yes U No Memarks: (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	<u> </u>
High Water Table (A2) Aquatic Fauna (B	
Saturation (A3)	
☐ Water Marks (B1) ☐ Hydrogen Sulfide	
	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Red	<u> </u>
	uction in Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface	
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes □ No ✓ Depth (inches):	
Surface Water Present? Yes \(\subseteq\) No \(\supseteq\) Depth (inches): \(\supseteq\) Water Table Present? Yes \(\supseteq\) No \(\supseteq\) Depth (inches): \(\supseteq\)	
Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	previous inspections), if available:
Remarks:	

<u>Tree Stratum</u> (Plot size: <u>30 foot radius</u>)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:		
Betula alleghaniensis (Yellow Birch) (FAC) Pinus strobus (Eastern White Pine) (FACU) Fagus grandifolia (American Beech) (FACU) Picea rubens (Red Spruce) (FACU) Acer rubrum (Red Maple) (FAC)	30 20 5 5 10	YES YES NO NO NO	FAC FACU	Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A) Total Number of Dominant Species Across All Strata: 6 (B) Percent of Dominant Species		
	70 =	= Total Cov	er	That Are Obl, FACW, or FAC: 50% (A/B)		
Sapling/Shrub Stratum (Plot size: 15 foot radius) Acer rubrum (Red Maple) (FAC)	<u>10</u>	YES	<u>FAC</u>	Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 ×1 = 0		
Fagus grandifolia (American Beech) (FACU) Picea rubens (Red Spruce) (FACU)	10 5 25 =	YES YES = Total Cov	FACU FACU	FACW species 0 x2 = 0 FAC species 3 x3 = 9 FACU species 3 x4 = 12		
Herb Stratum (Plot size: 5 foot radius) Cornus canadensis (Canadian Bunchberry) (FAC) Medeola virginiana (Indian Cucumber-Root) (FACU)	8 <u>5</u>	YES NO	<u>FAC</u>	UPL species $0 \times 5 = 0$ Column Totals: $6 \times 6 \times 6 = 0$ Prevalence Index = B/A = 3.5		
Woody Vine Stratum (Plot size:)	<u>87</u> = Total Cover			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) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.		
				Hydrophytic Vegetation Present? Yes No		
Remarks: (Include photo numbers here or on a separate s	sheet.)					

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

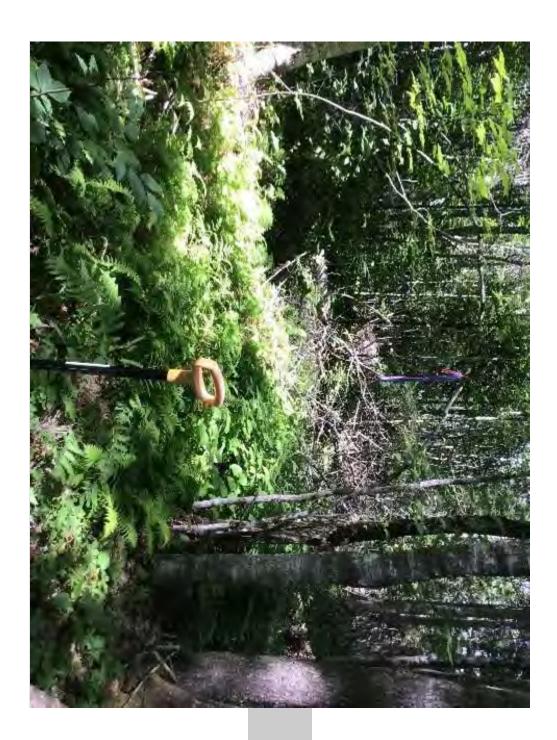
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth	Matrix		Redox Feat		 ,		5 .
(inches)	Color (moist)	% Color (me	oist) %	Type ¹ Loc ²	<u>T</u> exture		Remarks
0-10	10YR 5/3				L	Refusal at 10 inches	S
¹ Type: C:	=Concentration, D=De	epletion, RM=Reduce	ed Matrix, CS=Cov	ered or Coated Sa	nd Grains.	² Location: PL=P	ore Lining, M=Matrix.
Histo	pil Indicators: psol (A1) c Epipedon (A2) k Histic (A3) rogen Sulfide (A4) tified Layers (A5) leted Below Dark Surfak k Dark Surface (A12) dy Mucky Mineral (S1) dy Gleyed Matrix (S4) dy Redox (S5) leted Matrix (S6) s Surface (S7) (LRR R	, MLRA 149B)	MLRA 149B) Thin Dark Surface Loamy Mucky M Loamy Gleyed M Depleted Matrix Redox Dark Surf Depleted Dark S Redox Depression	(F3) face (F6) urface (F7) ons (F8)	R R,	2 cm Muck (A10 Coast Prairie Re 5 cm Mucky Pea Dark Surface (S' Polyvalue Below Thin Dark Surface Iron-Manganese Piedmont Floodp Mesic Spodic (T. Red Parent Mate Very Shallow Da Other (Explain in	Surface (S8) (LRR K, L) ce (S9) (LRR K, L) Masses (F12) (LRR K, L, R) plain Soils (F19) (MLRA 149B) A6) (MLRA 144A, 145, 149B) erial (TF2) ark Surface (TF12)
	e Layer (if observed):	tation and wettand ny	yarology mast be p	Teserit, uriless dist		iemano.	
Type:_	Rock					dric Soil esent? Yes	No
Remarks:							
Refusal a	t 10 inches on rock						

Location:

Photo:

Earthstar Geographics

Powered by Esri



WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: _Three corners priority 3	City/County: Kennebec Sampling Date: 07/15/2020 3:32 PM
Applicant/Owner: Longroad	State: Maine Sampling Point: PLOT-W-MR-1-WET
Investigator(s): Chad Flinkstrom	
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?	
Are Vegetation, Soil, or Hydrology significantly of	
Are Vegetation , Soil , or Hydrology naturally prol	
SUMMARY OF FINDINGS – Attach site map showing samp	oling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No No No No No No No No No N	Is the Sampled Area within a Wetland Yes No If yes, optional Wetland Site ID:
Wetland Hydrology Present? Yes ✓ No ☐ Remarks: (Explain alternative procedures here or in a separate report.)	
HYDROLOGY	
Wetland Hydrology Indicators:	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) Aquatic Fauna (B	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B ²	15) Dry-Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide	
☐ Sediment Deposits (B2) ☐ Oxidized Rhizosphe	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Redu	uced Iron (C4) Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Redu	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)
☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes Van No Depth (inches):	10 2 Wetland Hydrology Present? Yes Ves No
Saturation Present? Yes ✓ No □ Depth (inches): (includes capillary fringe)	2 Wetland Hydrology Present? Yes Ves No V
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	revious inspections), if available:
	' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '
Remarks:	

Sampling Po	int: PLOT-W-MR-1-WE	т

<u>Tree Stratum</u> (Plot size: <u>30 foot radius</u>)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
Acer rubrum (Red Maple) (FAC)	<u>5</u>	YES	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
Thuja occidentalis (Eastern Arborvitae) (FACW)	<u>3</u>	<u>YES</u>	<u>FACW</u>	Total Number of Dominant
	<u>8</u> =	: Total Cov	er	Species Across All Strata:5 (B)
Sapling/Shrub Stratum (Plot size: 15 foot radius)				Percent of Dominant Species
Acer rubrum (Red Maple) (FAC) Alnus incana (Speckled Alder) (FACW)	<u>5</u>	<u>YES</u> <u>YES</u>	<u>FAC</u> <u>FACW</u>	That Are Obl, FACW, or FAC:100% (A/B)
Picea mariana (Black Spruce) (FACW)	<u>5</u> <u>2</u>	NO	<u>I ACW</u>	Prevalence Index worksheet:
		: Total Cov	er	Total % Cover of: Multiply by: OBL species ×1 =
Herb Stratum (Plot size: 5 foot radius)		· rotal cov	OI .	FACW species ×2 =
Impatiens capensis (Spotted Touch-Me-Not) (FACW)	2	NO		FAC species ×3 =
Onoclea sensibilis (Sensitive Fern) (FACW)	<u>3</u> <u>5</u>	NO NO		FACU species ×4 =
Calamagrostis canadensis (Bluejoint) (OBL)	<u>១</u> <u>10</u>	NO		UPL species ×5 = Column Totals: (A) (B)
Carex stricta (Uptight Sedge) (OBL)	<u>100</u>	YES	<u>OBL</u>	
	118 =	: Total Cov	er	Prevalence Index = B/A =
Woody Vine Stratum (Plot size:)				Hydrophytic Vegetation Indicators:
				Rapid Test for Hydrophytic Vegetation
	=	Total Cov	er	
				Prevalence Index is ≤3.0 ¹
				☐ 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.
				Hydrophytic
				Vegetation Present? Yes ✓ No □
Remarks: (Include photo numbers here or on a separate s	heet.)			

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

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth	Matrix		Redox Feat				
(inches) Col	or (moist) %	Color (moist)	%	Type ¹ Loc ²	<u>T</u> exture		Remarks
0-20 10YR	2/1					Organics	
¹ Type: C=Cond	centration, D=Depletio	on, RM=Reduced M	∕latrix, CS=Cov	ered or Coated S	and Grains.	² Location:	PL=Pore Lining, M=Matrix.
Stratified L Depleted E Thick Dark Sandy Mu Sandy Gle Sandy Rec Stripped M	A1) Dedon (A2) Dedon (A2) Dedon (A4) Dedon (A4) Dedon (A5) Delow Dark Surface (A5) Description (A12) Decky Mineral (S1) Devod Matrix (S4) Dedon (A2) Dedon (A2) Dedon (A3) Dedon (A4) Dedon (A4) Dedon (A4) Dedon (A4) Dedon (A4) Dedon (A4) Dedon (A5)	A11)	ILRA 149B) hin Dark Surfac	(F3) face (F6) surface (F7)	RRR,	2 cm Muck Coast Prai 5 cm Muck Dark Surfa Polyvalue Thin Dark Iron-Mang Piedmont I Mesic Spo Red Parer Very Shall	oblematic Hydric Soils ³ : (A10) (LRR K, L, MLRA 149B) rie Redox (A16) (LRR K, L, R) ry Peat or Peat (S3) (LRR K, L, I) rice (S7) (LRR K, L) Below Surface (S8) (LRR K, L) Surface (S9) (LRR K, L) anese Masses (F12) (LRR K, L, I) rloodplain Soils (F19) (MLRA 14 dic (TA6) (MLRA 144A, 145, 144 th Material (TF2) ow Dark Surface (TF12) olain in Remarks)
	ydrophytic vegetation	and wetland hydro	logy must be p	resent, unless dis	turbed or proble	ematic.	
Restrictive Laye	er (if observed):						
Type:						ric Soil sent?	Yes No
Depth (inche	es):						
Remarks:							

Location:

Photo:

Earthstar Geographics

Powered by Esri



WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 3 CORNERS	City/County: UNITY Sampling Date: 07/15/2020 2:11 PM
Applicant/Owner: LONGROAD	State: MAINE Sampling Point: PLOT-W-MR-2-UP
Investigator(s): MERRILL READ	Section, Township, Range:
Landform (hillslope, terrace, etc.): HILL	Local relief (Concave, convex, none): CONCAVE
Slope (%): 2 Lat: 44.61557	Long:69.45591
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 \square , Soil \square , or Hydrology \square significantly	
Are Vegetation $\ \square$, Soil $\ \square$, or Hydrology $\ \square$ naturally pro	oblematic (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 ✓ 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)
☐ Surface Water (A1) ☐ Water-Stained L	
High Water Table (A2) Aquatic Fauna (I	
□ Saturation (A3) □ Marl Deposits (B □ Water Marks (B1) □ Hydrogen Sulfide	
	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Rec	_
	uction in Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surfa	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: Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Pepth (inches):	
Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos,	
33.,	, , , , , , , , , , , , , , , , , , ,
Remarks:	
Nemano.	

<u>Tree Stratum</u> (Plot size: <u>30 foot radius</u>)

Fraxinus americana (White Ash) (FACU)

Sapling/Shrub Stratum (Plot size: 15 foot radius) Fagus grandifolia (American Beech) (FACU)

Acer rubrum (Red Maple) (FAC)

Abies balsamea (Balsam Fir) (FAC)

Abies balsamea (Balsam Fir) (FAC)

Quercus rubra (Northern Red Oak) (FACU)

Pinus strobus (Eastern White Pine) (FACU)

Herb Stratum (Plot size: _____)

Maianthemum canadense (False Lily-of-the-Valley)

Veronica prostrata (Prostrate Speedwell) (FAC)

Woody Vine Stratum (Plot size: _____)

Pteridium aquilinum (Northern Bracken Fern) (FACU)

Acer rubrum (Red Maple) (FAC)

Pinus strobus (Eastern White Pine) (FACU)

Absolute Dominant Indicator

% Cover Species? Status

YES

YES

<u>NO</u>

<u>NO</u>

<u>NO</u>

YES

<u>NO</u>

<u>NO</u>

NO

YES

<u>NO</u>

<u>NO</u>

_ = Total Cover

40 = Total Cover

= Total Cover

95 = Total Cover

<u>40</u>

10

10

15

<u>55</u>

3

5

<u>30</u>

<u>7</u>

3

<u>5</u>

FACU

FAC

FAC

FACU

Sampling Point: PLOT-W-MR-2-UP										
Dominance Test	workshee	t:								
Number of Dom That Are OBL, F			2	_ (A)						
Total Number of Species Across			4	(B)						
Percent of Domi That Are Obl, F			50	(A/B)						
Prevalence Inde	x workshe	et:								
Total % Cov	er of:		/lultiply by	<u> </u>						
OBL species	0	_								
FACW species	×2 =	0								
FAC species	× 3 =	6								
FACU species	2	_	8							
UPL species	0 4	_	5	(D)						
Column Totals:	4	_ (A)	19	(B)						
Prevalence Index = B/A =4.75										
Hydrophytic Veg										
Rapid Test fo		, ,	etation							
□ Dominance □	Γest is >50°	%								
☐ Prevalence I	ndex is ≤3.	0 ¹								
☐ Morphologic	al Adaptatio	ons¹ (Pro	ovide supp	orting						
data in Remarks			,							
☐ Problematic	Hydrophyti	c Vegeta	ation¹ (Exp	olain)						
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 – Wand greater than			nan 3 in. D	ВН						
Herb – All herbac of size, and wood				ardless						

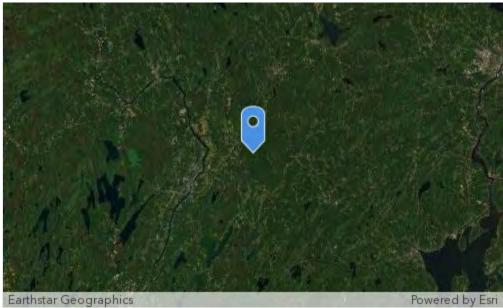
Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Yes No Present?

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

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

Profile De	scription:	(Describe t	o the depth	needed to	document	the indic	cator or c	onfirm th	e abser	nce of indicators.)
Depth (inches)	Color (r	Matrix		Color (mois		ox Featu %	res Type ¹	Loc ²	 Textu	ure Remarks
0-2	10YR	4/1	70	COIOI (IIIOI	St)	70	1 <u>ype</u>		SL	ure inemains
0-2	1011	-1 / <u>-</u> 1							JL	
2-18	7.5YR	5/8							SL	
2 20	7.5	5, 5							02	
¹ Type: C=	=Concent	ration, D=D	epletion, RM	1=Reduced	d Matrix, C	S=Cove	red or Co	oated Sar	nd Grain	ns. ² Location: PL=Pore Lining, M=Matrix.
Histic Histic Black Hydre Strati Deple Thick Sand Sand Strip Dark	osol (A1) c Epipedo k Histic (A ogen Sulf ified Laye eted Belo k Dark Su dy Mucky dy Gleyed dy Redox ped Matrix Surface (n (A2) 3) ide (A4) rs (A5) w Dark Surf rface (A12) Mineral (S1) Matrix (S4) (S5) x (S6) S7) (LRR R) R, MLRA 149	Д Д Д Д Д	Polyvalue MLRA 14 Thin Dark Loamy M Loamy Gl Depleted Redox Da Depleted Redox Da	9B) Surface Ucky Mir eyed Ma Matrix (F Urk Surfa Dark Su P P P P P P P P P P P P P P P P P P P	e (S9) (LF leral (F1) leral (F2) strix (F2) F3) ce (F6) rface (F7 ns (F8)	RR R, ML (LRR K, ')	.RA L)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 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)
	-			retiand nyo	irology mu	st be pre	ssem, un	iess disti	irbed of	problematic.
	e Layer (if	observed):								Harlis Oatl
Type:_										Hydric Soil Present? Yes \(\sigma\) No \(\surset\)
Remarks:										



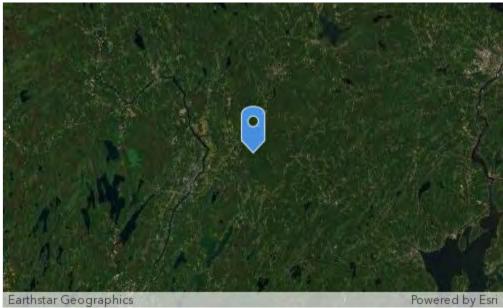


Project/Site: 3 CORNERS	City/County: UNITY Sampling Date: 07/15/2020 1:39 PM
Applicant/Owner: LONGROAD	State: MAINE Sampling Point: PLOT-W-MR-2-WET
Investigator(s): MERRILL READ	Section, Township, Range:
Landform (hillslope, terrace, etc.): BASIN	Local relief (Concave, convex, none): CONCAVE
Slope (%): _0	Long:69.45613
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 $\ \ \ \ \ \ \ \ \ \ \ \ \ $	
Are Vegetation $\ \ \ \ \ \ \ \ \ \ \ \ \ $	oblematic (If needed, explain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map showing same	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes ✓ No □ No □	Is the Sampled Area within a Wetland Yes 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	
High Water Table (A2) Aquatic Fauna (E	
✓ Saturation (A3) ☐ Marl Deposits (B ☐ Water Marks (B1) ☐ Hydrogen Sulfide	
Ocalisacet Banacite (B0)	e Odor (C1) Crayfish Burrows (C8) eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3) ☐ Oxidized Rnizosph ☐ Oxidized Rnizosph ☐ Oxidized Rnizosph	<u> </u>
	uction in Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surfa	· /
☐ 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 Von Depth (inches): Water Table Present? Yes No Depth (inches):	0 0
Saturation Present? Yes V No Depth (inches):	0 Wetland Hydrology Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos,	province interestings) if evallables
Describe Recorded Data (stream gauge, monitoring well, aeriai priotos,	Dievious inspections), il avaliable.
Remarks:	

<u>Tree Stratum</u> (Plot size: <u>30 foot radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
Tsuga canadensis (Eastern Hemlock) (FACU) Acer rubrum (Red Maple) (FAC) Betula alleghaniensis (Yellow Birch) (FAC) Abies balsamea (Balsam Fir) (FAC) Fraxinus nigra (Black Ash) (FACW) Pinus strobus (Eastern White Pine) (FACU)	10 25 5 2 10 3	YES YES YES YES YES YES YES	FACU FAC FAC FAC FACW FACU	Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A) Total Number of Dominant Species Across All Strata: 9 (B) Percent of Dominant Species That Are Obl, FACW, or FAC: 77.8% (A/B)
	55 =	: Total Cov	er	Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 15 foot radius) Acer rubrum (Red Maple) (FAC) Abies balsamea (Balsam Fir) (FAC) Ilex verticillata (Common Winterberry) (FACW) Herb Stratum (Plot size: 5 foot radius)	20 30 15	YES YES NO 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) (B)
Trientalis borealis (Maystar) (FAC) Osmundastrum cinnamomeum (Cinnamon Fern) Osmunda spectabilis (Royal Fern) (OBL) Onoclea sensibilis (Sensitive Fern) (FACW)	2 20 5 2	NO YES NO NO	FACW	Prevalence Index = B/A = Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation
Woody Vine Stratum (Plot size:)	= Total Cover = Total Cover			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) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				Definitions of Vegetation Strata:
				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
				Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
				Woody vines – All woody vines greater than 3.28 ft in height.
				Hydrophytic Vegetation Present? Yes No
Remarks: (Include photo numbers here or on a separate s	heet.)			

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

Profile De	escription:	(Describe	to the depth	needed to	document the	e indicator or	confirm th	ne absence d	of indicators.)
Depth		Matri				Features			
(inches)	Color (m	noist)	%	Color (mois	st) %	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-7	10YR	2/1						L	ORGANIC
7-14	10YR	2/2						CL	ORGANIC
14-20	10YR	3/2						С	
20-30	Gley 1	4/10y						SiL	
¹ Type: C	=Concentr	ation, D=l	Depletion, RN	M=Reducec	I Matrix, CS=	Covered or C	oated Sai	nd Grains.	² Location: PL=Pore Lining, M=Matrix.
Histo Histi Histi Histi Hydr Strat Comparison Hydr Histo Hist Histo Hist Hist Hist Hist Hist Hist Hist Hist	k Dark Sur dy Mucky I dy Gleyed dy Redox (ped Matrix Surface (n (A2) 3) de (A4) rs (A5) w Dark Su face (A12 Mineral (S Matrix (S4 (S5) c (S6) S7) (LRR	1) 4) R, MLRA 149	— — — — — — — — — — —	MLRA 149B Thin Dark Si Loamy Muck Loamy Gley Depleted Ma Redox Dark Depleted Da Redox Depre	urface (S9) (L ky Mineral (F1 ed Matrix (F2) atrix (F3) Surface (F6) ark Surface (F	RR R, ML) (LRR K,	RR,	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)
								· 	
	e Layer (if ROCK	observed).					н	ydric Soil
		00						Pr	resent? Yes No
Depth Remarks:	(inches):_	30							



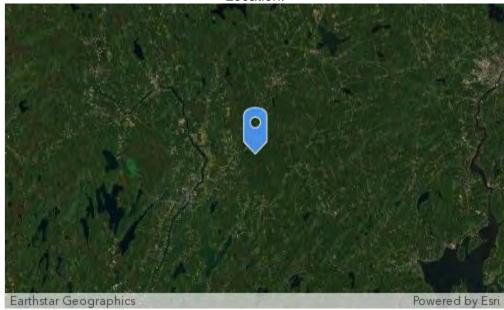


Project/Site: 3 CORNERS	City/County: UNITY Sampling Date: 07/16/2020 12:46 PM
Applicant/Owner: LONGROAD	State: MAINE Sampling Point: PLOT-W-MR-7-UP-1
Investigator(s): MERRILL READ	Section, Township, Range:
Landform (hillslope, terrace, etc.): HILLSLOPE	Local relief (Concave, convex, none): CONCAVE
Slope (%): _4	Long:69.44814
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 \square , Soil \square , or Hydrology \square significantly	
Are Vegetation $\ \ \ \ \ \ \ \ \ \ \ \ \ $	oblematic (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 ✓ Hydric Soil Present? Yes □ No ✓ Wetland Hydrology Present? Yes □ No ✓	Is the Sampled Area within a Wetland Yes 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)
☐ Surface Water (A1) ☐ Water-Stained L	
High Water Table (A2) Aquatic Fauna (E	
□ Saturation (A3) □ Marl Deposits (B □ Water Marks (B1) □ Hydrogen Sulfide	
	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Red	<u> </u>
_ 	uction in Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surfa	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:	
Surface Water Present? Yes No Depth (inches): No No Depth (inches): 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,	provious inspections), if available:
Describe Recorded Data (stream gauge, monitoring well, aerial photos,	nevious inspections), il available.
Remarks:	

				-
<u>Tree Stratum</u> (Plot size: 30 foot radius)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
Acer rubrum (Red Maple) (FAC) Tsuga canadensis (Eastern Hemlock) (FACU)	<u>10</u> 60	NO YES	<u>FACU</u>	Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
Pinus strobus (Eastern White Pine) (FACU) Picea mariana (Black Spruce) (FACW)	15 3	<u>NO</u> <u>NO</u>		Total Number of Dominant Species Across All Strata:4 (B)
Abies balsamea (Balsam Fir) (FAC) Acer rubrum (Red Maple) (FAC)	7 2	NO NO		Percent of Dominant Species That Are Obl, FACW, or FAC:
	97	= Total Cov	/er	Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 15 foot radius)				Total % Cover of: Multiply by:
· · · · · · · · · · · · · · · · · · ·		NO		OBL species ×1 =
Acer rubrum (Red Maple) (FAC) Fagus grandifolia (American Beech) (FACU)	<u>2</u>	<u>NO</u> YES	FACU	FACW species × 2 =
Tsuga canadensis (Eastern Hemlock) (FACU)	<u>3</u>	YES	FACU	FAC species ×3 =
Abies balsamea (Balsam Fir) (FAC)	<u>5</u> <u>3</u>	YES	FAC	FACU species ×4 =
. 12.55 Edicamou (20150111 11), (17.16)		= Total Cov		UPL species
Herb Stratum (Plot size: 5 foot radius)	10	= 10tai 00	76 1	
(Flot of attain)				Prevalence Index = B/A =
		= Total Cov	/er	Hydrophytic Vegetation Indicators:
Woody Vine Stratum (Plot size:)				Rapid Test for Hydrophytic Vegetation
		= Total Cov	ver .	☐ 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.
				Hydrophytic
				Hydrophytic Vegetation Present? Yes No
Remarks: (Include photo numbers here or on a separate si	neet.)			

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

Profile De	escription:	(Describe	e to the depti	n needed to	document	the indic	cator or c	onfirm th	e absence of	indicators.)
Depth		Matr				ox Featu	res			
(inches)	Color (m	noist)	%	Color (moi	st)	%	Type ¹	_Loc ²	<u>Texture</u>	Remarks
11-16	7.5YR	2.5/3							L	
1-2.5	10YR	4/4							SL	
	20	., .							02	
25425	401/0	F. / C							61	
2.5-13.5	10YR	5/6							SL	
13.5-22	10YR	4/6							SL	
¹ Type: C=	=Concentr	ation, D=	Depletion, R	M=Reduced	i Matrix, C	S=Cove	red or Co	oated Sar	nd Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric So		ors:								ators for Problematic Hydric Soils ³ :
	osol (A1)	- (AO)			Polyvalue		Surface (S8) (LRR		-
	c Epipedoi k Histic (A:				MLRA 14 Thin Dark		(S9) (LF	RR MI	.RA □	
	rogen Sulfi			-	Loamy M					D 1 0 ((OT) (I DD 1(1)
	tified Laye			立	Loamy G					
			urface (A11)		Depleted					
	k Dark Sur				Redox Da					
	dy Mucky I				Depleted			')		
	dy Gleyed dy Redox (04)	Ш	Redox De	epression	ns (F8)			Deal Descript Meterial (TEO)
	ped Matrix									_ ,,
			R, MLRA 14	19B)						- 0.1 (- 1.1.5
	,	, ,	,	,						_
³ Indicators	s of hydro	phytic ve	getation and	wetland hyd	Irology mu	st be pre	esent, unl	less distu	irbed or probl	ematic.
Restrictive	e Layer (if	observed	d):							
Type:_									Hyd	ric Soil
Depth	(inches):_								Pres	sent? Yes \(\square\) No \(\sqrt{\sq}}}}}}}}}}}} \signt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sq}}}}}}}}}} \end{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sq}}}}}}}}}} \end{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sq}}}}}}}}}} \end{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sq}}}}}}}} \end{\sqrt{\sqrt{\sqrt{\sq}}}}}}}} \sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\
Remarks:										
Nemaiks.										



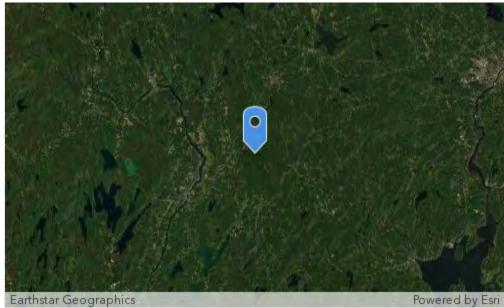


Project/Site: _3 CORNERS	City/County: UNITY Sampling Date: 07/22/2020 2:11 PM
Applicant/Owner: LONGROAD	State: MAINE Sampling Point: PLOT-W-MR-7-UP-2
Investigator(s): MERRILL READ	Section, Township, Range:
Landform (hillslope, terrace, etc.): HILLSLOPE	Local relief (Concave, convex, none): CONCAVE
Slope (%): _1	Long:69.44184
Soil Map Unit Name: WOODBRIDGE	NWI Classification: PFO
Are climatic/hydrologic conditions on the site typical for this time of year?	
Are Vegetation , Soil , or Hydrology significantly	
Are Vegetation , Soil , or Hydrology naturally pro	
SUMMARY OF FINDINGS – Attach site map showing samp	oling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No No I	Is the Sampled Area No
Hydric Soil Present? Yes No V	within a Wetland Yes No No If yes, optional Wetland Site ID:
Wetland Hydrology Present? Yes U No Memarks: (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	<u> </u>
High Water Table (A2) Aquatic Fauna (B	
☐ Saturation (A3) ☐ Marl Deposits (B	
☐ Water Marks (B1) ☐ Hydrogen Sulfide	
	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Red	
_ 	uction in Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface	_
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in	
☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes U No Depth (inches): User Table Present? Yes No Depth (inches): Depth (inches): User Table Present?	
Saturation Present? Yes No V Depth (inches):	Wetland Hydrology Present? Yes No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	previous inspections), if available:
Remarks:	
NO HYDRO	

<u>Tree Stratum</u> (Plot size: <u>30 foot radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
Acer rubrum (Red Maple) (FAC)		NO		Number of Dominant Species
Tsuga canadensis (Eastern Hemlock) (FACU)	<u>15</u> <u>20</u>	YES	FACU	That Are OBL, FACW, or FAC:6 (A)
Abies balsamea (Balsam Fir) (FAC)	<u>20</u> <u>17</u>	YES	FAC	Total Number of Dominant
Thuja occidentalis (Eastern Arborvitae) (FACW)	<u>5</u>	NO		Species Across All Strata:11 (B)
Pinus strobus (Eastern White Pine) (FACU)	<u>25</u>	<u>YES</u>	<u>FACU</u>	Percent of Dominant Species
Betula populifolia (Gray Birch) (FAC)	<u>3</u>	<u>NO</u>		That Are Obl, FACW, or FAC: 54.5% (A/B)
	85	= Total Cov	er	Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 15 foot radius)				Total % Cover of: Multiply by:
· · · · · · · · · · · · · · · · · · ·		\/=0	=10	OBL species 0 ×1 = 0
Abies balsamea (Balsam Fir) (FAC)	<u>20</u>	YES	<u>FAC</u>	FACW species 0 × 2 = 0
Picea rubens (Red Spruce) (FACU)	<u>2</u>	<u>NO</u>		FAC species 6 ×3 = 18
	22	= Total Cov	er	FACU species 5 ×4 = 20
Herb Stratum (Plot size: 5 foot radius)				UPL species 0 ×5 = 0
Lycopodium clavatum (Running Ground-Pine) (FAC)	<u>2</u>	YES	FAC	Column Totals:11 (A)38 (B)
Spinulum annotinum (Interrupted Club-Moss) (FAC)	<u> 5</u>	YES	FAC	Prevalence Index = B/A = 3.45
Maianthemum canadense (False Lily-of-the-Valley)	<u>5</u>	YES	FACU	
Clintonia borealis (Yellow Bluebead-Lily) (FAC)	<u> </u>	<u>YES</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators:
Trientalis borealis (Maystar) (FAC)	<u>5</u>	<u>YES</u>	<u>FAC</u>	Rapid Test for Hydrophytic Vegetation
Pteridium aquilinum (Northern Bracken Fern) (FACU)	<u>8</u>	<u>YES</u>	<u>FACU</u>	☐ Dominance Test is >50%
Aralia nudicaulis (Wild Sarsaparilla) (FACU)	<u>3</u>	YES	<u>FACU</u>	☐ Prevalence Index is ≤3.0 ¹
	35	= Total Cov	er	☐ Morphological Adaptations¹ (Provide supporting
Woody Vine Stratum (Plot size:)				data in Remarks or on a separate sheet)
, , , , , , , , , , , , , , , , , , , ,				☐ Problematic Hydrophytic Vegetation¹ (Explain)
		= Total Cov	er	¹ Indicators of hydric soil and wetland hydrology must
				be present, unless disturbed or problematic.
				Definitions of Vegetation Strata:
				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
				at breast height (DBH), regardless of height.
				Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
				Woody vines – All woody vines greater than 3.28 ft in
				height.
				Hydrophytic
				Vegetation
				Present? Yes U No V
Remarks: (Include photo numbers here or on a separate s	heet.)			

SOIL Sampling Point: PLOT-W-MR-7-UP-2

Profile Descri	iption: (D	escribe to	the depth	needed to	document t	he indica	tor or c	onfirm th	ie absei	nce of indicators.)
Depth	olor (moi	Matrix	%	Color (mois		x Feature %		Loc ²	Text	ture Remarks
		/6	70	COIOI (IIIOI:	51)	70	_Type ¹	LUC	SL	uie Remarks
0-2 10	in 3	70							JL	
2-22 10	YR 6	/6							SL	Gravelly
2 2 2 10	711C 0	, 0							JL	Graveny
¹ Type: C=Co	oncentrati	on, D=De	pletion, RM	∕l=Reduced	d Matrix, CS	S=Covere	ed or Co	ated Sar	nd Grair	ns. ² Location: PL=Pore Lining, M=Matrix.
Black Hi Hydroge Stratified Depleted Thick Da Sandy M Sandy G Sandy R Stripped Dark Su	I (A1) pipedon (istic (A3) en Sulfide d Layers (d Below E ark Surfac Mucky Mir Gleyed Ma Redox (S5 d Matrix (S1 Irface (S7	(A4) (A5) Dark Surfa ce (A12) neral (S1) atrix (S4) (S6) (LRR R,	MLRA 149	Д Д Д Д Д	Polyvalue MLRA 149 Thin Dark Loamy Mu Loamy Gle Depleted N Redox Dar Depleted E Redox Dep	B) Surface (cky Mine eyed Matri Matrix (F3 k Surface Dark Surf pressions	(S9) (LF eral (F1) rix (F2) 3) e (F6) ace (F7 6 (F8)	RR R, ML (LRR K,	.RA , L)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) 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)
		_	ation and v	vetianu nyu	irology irius	t be pies	ent, un	ess dist	aibeu oi	n problematic.
Restrictive La	ayer (if ob	served):								
Type:										Hydric Soil Present? Yes
Depth (inc	ches):									<u> </u>
Remarks:										



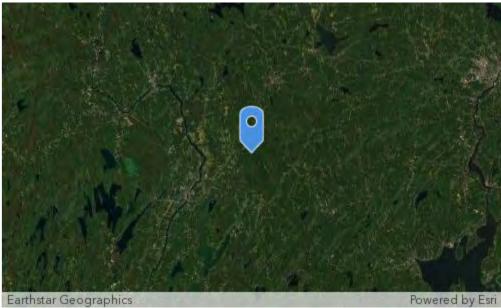


Project/Site: 3 CORNERS	City/County: UNITY Sampling Date: 07/16/2020 1:30 PM
Applicant/Owner: LONGROAD	State: MAINE Sampling Point: PLOT-W-MR-7-WET-1
Investigator(s): MERRILL READ	Section, Township, Range:
Landform (hillslope, terrace, etc.): _FLOOD PLAIN	Local relief (Concave, convex, none): CONCAVE
Slope (%): 0 Lat: 44.63315	Long:69.44884
Soil Map Unit Name: _TOGUS	NWI Classification: PSS
Are climatic/hydrologic conditions on the site typical for this time of year?	Yes No (If no, explain in Remarks.)
Are Vegetation $\ \ \ \ \ \ \ \ \ \ \ \ \ $	disturbed? Are "Normal Circumstances" present? Yes Vo D
Are Vegetation $\ \square$, Soil $\ \square$, or Hydrology $\ \square$ naturally pro	oblematic (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 □ Hydric Soil Present? Yes ✓ No □ Wetland Hydrology Present? Yes ✓ No □	Is the Sampled Area within a Wetland Yes 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)
□ Surface Water (A1) □ Water-Stained L	
High Water Table (A2) Aquatic Fauna (E	
✓ Saturation (A3) ☐ Marl Deposits (B ✓ Water Marks (B1) ☐ Hydrogen Sulfide	
	e Odor (C1) Crayfish Burrows (C8) eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Red	<u> </u>
_ 	uction in Tilled Soils (C6)
☐ Iron Deposits (B5) ☐ Thin Muck Surfa	
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): No No Depth (inches): Depth (inches):	
Saturation Present? Yes V No Depth (inches):	0 Wetland Hydrology Present? Yes Ve No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos,	provious inspections), if available:
Describe Recorded Data (stream gauge, monitoring well, aerial priotos,	Dievious inspections), il avaliable.
Remarks:	

<u>Tree Stratum</u> (Plot size: <u>30 foot radius</u>)	Absolute Dominant Species?		Dominance Test worksheet:
	= Total Cov	ver	Number of Dominant Species That Are OBL, FACW, or FAC:3 (A)
Sapling/Shrub Stratum (Plot size: 15 foot radius)			Total Number of Dominant Species Across All Strata: 3 (B)
Alnus incana (Speckled Alder) (FACW) Salix pedicellaris (Bog Willow) (OBL)	35 YES 15 YES	FACW OBL	Percent of Dominant Species
	50 = Total Cov	/er	That Are Obl, FACW, or FAC: 100% (A/B)
Horb Strotum (Dietoine E feet redice	<u>-00</u>		Prevalence Index worksheet:
Herb Stratum (Plot size: <u>5 foot radius</u>)			Total % Cover of: Multiply by:
Spiraea tomentosa (Steeplebush) (FACW)	<u>50</u> <u>YES</u>	<u>FACW</u>	OBL species x1 =
Rubus idaeus (Common Red Raspberry) (FACU)	<u>2</u> <u>NO</u>		FACW species ×2 =
Lysimachia terrestris (Swampcandles) (OBL)	<u>5</u> <u>NO</u>		FAC species ×3 =
	57 = Total Cov	ver .	FACU species ×4 =
Woody Vine Stratum (Plot size:)			UPL species ×5 =
,			Column Totals: (A) (B)
	= Total Cov	/er	Prevalence Index = B/A =
			Hydrophytic Vegetation Indicators:
			Rapid Test for Hydrophytic Vegetation
			Dominance Test is >50%
			☐ Prevalence Index is ≤3.0¹
			Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
			Problematic Hydrophytic Vegetation ¹ (Explain)
			Troblematic Hydrophytic Vegetation (Explain)
			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
			Definitions of Vegetation Strata:
			Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
			Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
			Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
			Woody vines – All woody vines greater than 3.28 ft in height.
			Hydrophytic Vegetation
			Present? Yes Vo No
Remarks: (Include photo numbers here or on a separate s	sheet.)		

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

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Color (n	Matrix	%	Color (moi		dox Featu %	<u>res</u> Type ¹	Loc ²	Textu	re Remarks
0-4	10YR	2/1	70	COIOI (IIIOI	<u> </u>	70	<u>ypc</u>		L	ORGANIC
		,								
4-13	Gley 1	5/5 GY		7.5YR	5/8	5	С	М	С	
13-23	Gley 1	5/5 GY		10YR	5/8	35	С	M	С	
¹ Type: C	=Concentr	ration, D=D	epletion, R	M=Reduced	d Matrix, (CS=Cove	red or Co	ated Sar	nd Grain	s. ² Location: PL=Pore Lining, M=Matrix.
Histor Hi	k Dark Sui dy Mucky I dy Gleyed dy Redox (pped Matrix c Surface (n (A2) 3) ide (A4) rs (A5) w Dark Surfface (A12) Mineral (S1 Matrix (S4) (S5) c (S6) S7) (LRR R) R, MLRA 14		MLRA 14 Thin Dar Loamy M Loamy O Depleted Redox D Depleted Redox D	49B) rk Surface Mucky Mir Gleyed Ma d Matrix (I Dark Surfa d Dark Su	F3) ace (F6) ırface (F7 ns (F8)	RR R, ML (LRR K,	_RA , L)	Indicators for Problematic Hydric Soils³: 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)
									1	
Type:_	e Layer (II	observed):								Hydric Soil
• • •	(inches):_									Present? Yes Vo No
Remarks:				_						



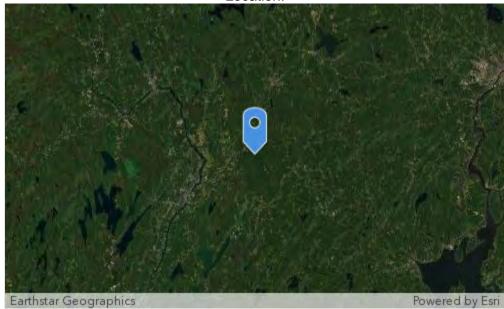


Project/Site: 3 CORNERS	City/County: UNITY Sampling Date: 07/22/2020 2:46 PM
Applicant/Owner: LONGROAD	State: MAINE Sampling Point: PLOT-W-MR-7-WET-2
Investigator(s): MERRILL READ	Section, Township, Range:
Landform (hillslope, terrace, etc.): BASIN	Local relief (Concave, convex, none): CONCAVE
Slope (%): 0 Lat: 44.63349	Long:69.44129
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 $\ \ \ \ \ \ \ \ \ \ \ \ \ $	
Are Vegetation $\ \square$, Soil $\ \square$, or Hydrology $\ \square$ naturally pro	oblematic (If needed, explain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map showing same	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: (Explain alternative procedures here or in a separate report.)	Is the Sampled Area within a Wetland Yes 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)
☐ Surface Water (A1) ☐ Water-Stained L	
High Water Table (A2) Aquatic Fauna (I	
✓ Saturation (A3) □ Marl Deposits (B ✓ Water Marks (B1) □ Hydrogen Sulfide	
	e Odor (C1) Crayfish Burrows (C8) eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Rec	<u> </u>
	uction in Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surfa	· /
☐ 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): Water Table Present? Yes No Depth (inches):	12
Saturation Present? Yes V No Depth (inches):	0 Wetland Hydrology Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos,	provious inspections), if available:
Describe Recorded Data (Stream gauge, monitoring well, aerial photos,	previous inspections), il avaliable.
Remarks:	
Nomano.	

<u>Tree Stratum</u> (Plot size: <u>30 foot radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
Thuja occidentalis (Eastern Arborvitae) (FACW) Betula papyrifera (Paper Birch) (FACU) Acer rubrum (Red Maple) (FAC) Abies balsamea (Balsam Fir) (FAC) Pinus strobus (Eastern White Pine) (FACU)	10 8 35 20 3	NO NO YES YES NO	FAC FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A) Total Number of Dominant Species Across All Strata: 6 (B) Percent of Dominant Species That Are Obl, FACW, or FAC: 100% (A/B)		
	<u>76 </u>	Total Cov	/er			
Sapling/Shrub Stratum (Plot size: 15 foot radius)				Prevalence Index worksheet: Total % Cover of: Multiply by:		
Alnus incana (Speckled Alder) (FACW) Ilex verticillata (Common Winterberry) (FACW) Abies balsamea (Balsam Fir) (FAC)	35 35 20	YES YES YES	FACW FACW FAC	OBL species ×1 = FACW species ×2 = FAC species ×3 =		
Harb Chroture (Distained Figure 1)	90 =	= Total Cov	/ei	FACU species ×4 = UPL species ×5 =		
Herb Stratum (Plot size: 5 foot radius) Onoclea sensibilis (Sensitive Fern) (FACW) Thelypteris palustris (Eastern Marsh Fern) (FACW) Rubus pubescens (Dwarf Red Raspberry) (FACW)	<u>50</u> <u>5</u> <u>3</u>	YES NO NO	FACW	Column Totals: (A) (B) Prevalence Index = B/A =		
Galium palustre (Common Marsh Bedstraw) (OBL) Lycopus virginicus (Virginia Water-Horehound) (OBL)	<u>2</u> <u>2</u>	NO NO		Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Dominance Test is >50%		
Woody Vine Stratum (Plot size:)		= Total Cov = Total Cov		 □ 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.		
				Hydrophytic Vegetation Present? Yes No □		
Remarks: (Include photo numbers here or on a separate s	heet.)					

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

☐ Hydrogen Sulfide (A4) ☐ Loamy Mucky Mineral (F1) (LRR K, L) ☐ Dark Surface (S7) (LRR K, L) ☐ Stratified Layers (A5) ☐ Loamy Gleyed Matrix (F2) ☐ Polyvalue Below Surface (S8) (LRR K, L) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thin Dark Surface (S9) (LRR K, L) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Iron-Manganese Masses (F12) (LRR K, L, R) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Piedmont Floodplain Soils (F19) (MLRA 149)	Profile De	escription:	(Describe to	o the depth ne	eded to	documer	t the indi	cator or c	onfirm th	e absence	e of indicators.)
Hydric Soil Indicators:	•	Calar (a			-1/:				12		- Demonto
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: DEGRADED BeDROCK WITHIN		•		% C0	JIOI (IIIOI	St)	70	ıype	LUC		
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. **Location: PL=Pore Lining, M=Matrix.** **Indicators for Problematic Hydric Soils*: Histosol (A1)	0-11	TOTK	2/2							L	ORGANIC
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. **Location: PL=Pore Lining, M=Matrix.** **Indicators for Problematic Hydric Soils*: Histosol (A1)	11 20	Clay 1	F/F CV							1.0	EDACMENTED DEDDOCK WITHIN
Hydric Soil Indicators: Histosol (A1) Histosol (A2) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Surface (F1) Sandy Redox (A12) Sandy Redox (A13) Redox Depressions (F8) Sandy Redox (A18) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149I Red Present; Type: DEGRADED BEDROCK Depth (inches): 28	11-20	Gley 1	3/3 01							L3	FRAGINIENTED BEDROCK WITHIN
Histosol (A1) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Coast Prairie Redox (A16) (LRR K, L, R) Friin Dark Surface (S9) (LRR R, MLRA Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Hopeleted Matrix (F3) Histic Epipedon (A2) Hydrogen Sulfide (A4) Coast Prairie Redox (A16) (LRR K, L, R) Coast Prairie Redox (A16	¹ Type: C:	=Concentr	ration, D=D	epletion, RM=	Reduced	d Matrix, (CS=Cove	ered or Co	pated Sar	nd Grains.	. ² Location: PL=Pore Lining, M=Matrix.
Dark Surface (S7) (LRR R, MLRA 149B) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: DEGRADED BEDROCK Depth (inches): 28 Other (Explain in Remarks) Hydric Soil Present? Yes No Description:	Histo	osol (A1) c Epipedo k Histic (A rogen Sulfi tified Laye leted Belov k Dark Sur dy Mucky I dy Gleyed dy Redox (n (A2) 3) ide (A4) rs (A5) w Dark Surf face (A12) Mineral (S1) Matrix (S4))		MLRA 1. Thin Dan Loamy M Loamy C Depleted Redox D Depleted	49B) rk Surfac Jucky Mir Gleyed M d Matrix (Dark Surfa d Dark Su	e (S9) (LF neral (F1) atrix (F2) F3) ace (F6) urface (F7	RR R, ML (LRR K,	R R,	□ 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 149I) □ Mesic Spodic (TA6) (MLRA 144A, 145, 149I) □ Red Parent Material (TF2)
Type: DEGRADED BEDROCK Depth (inches): 28 Hydric Soil Present? Yes Ves No	Dark	Surface (S7) (LRR R			łrology m	ust be pr	esent, un	less distu	_	Other (Explain in Remarks)
Depth (inches): 28 Present? Yes Ves No	Restrictive	e Layer (if	observed):								
Deput (inches). 20	Type:_	DEGRAD	ED BEDRO	OCK						!	Hydric Soil Present? Ves Ves No
	Depth	(inches):_	28								rieseit! Tes NO
	remans.										



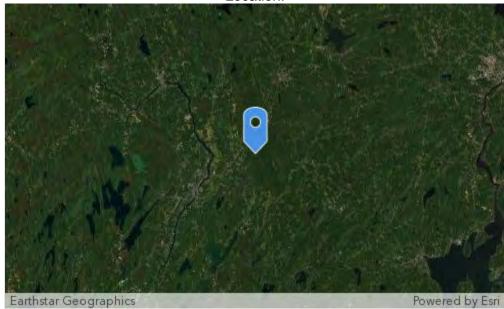


Project/Site: <u>3 CORNERS</u>	City/County: UNITY Sampling Date: 07/14/2020 12:03 PM
Applicant/Owner: LONGROAD	State: MAINE Sampling Point: PLOT-W-MR-15-UP
Investigator(s): MERRILL READ	Section, Township, Range:
Landform (hillslope, terrace, etc.): HILL	Local relief (Concave, convex, none): CONCAVE
Slope (%): 2 Lat: 44.62475	Long:69.46495
Soil Map Unit Name: WOODBRIDGE	NWI Classification: PFO
Are climatic/hydrologic conditions on the site typical for this time of year?	
Are Vegetation , Soil , or Hydrology significantly	
Are Vegetation , Soil , or Hydrology naturally pro	
SUMMARY OF FINDINGS – Attach site map showing samp	oling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes	Is the Sampled Area within a Wetland Yes No 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)
	Surface Soil Cracks (B6)
Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Le	 _
☐ High Water Table (A2) ☐ Aquatic Fauna (B	<u> </u>
☐ Saturation (A3) ☐ Marl Deposits (B	
☐ Water Marks (B1) ☐ Hydrogen Sulfide	
_ 	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Red	_
_ 	uction in Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface	
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):	
Water Table Present? Yes ☐ No ☑ Depth (inches): Saturation Present? Yes ☐ No ☑ Depth (inches): Yes ☐ No ☑ Depth (inches):	Wetland Hydrology Present? Yes No
(includes capillary fringe)	Wetland Hydrology Hesent: Tes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	previous inspections), if available:
Remarks:	
Noniairo.	

<u> </u>				I
<u>Tree Stratum</u> (Plot size: <u>30 foot radius</u>)	Absolute <u>% Cover</u>	Dominant Species?	Indicator Status	Dominance Test worksheet:
Tsuga canadensis (Eastern Hemlock) (FACU) Betula populifolia (Gray Birch) (FAC)	<u>60</u>	YES YES	FACU FAC	Number of Dominant Species That Are OBL, FACW, or FAC:3 (A)
Thuja occidentalis (Eastern Arborvitae) (FACW)	<u>20</u> <u>8</u>	NO NO	<u>I'AC</u>	Total Number of Dominant
	88	= Total Cov	er er	Species Across All Strata: 6 (B)
Sapling/Shrub Stratum (Plot size: 15 foot radius)				Percent of Dominant Species That Are Obl, FACW, or FAC: 50% (A/B)
Fagus grandifolia (American Beech) (FACU)	<u>10</u>	YES	<u>FACU</u>	Prevalence Index worksheet:
Abies balsamea (Balsam Fir) (FAC)	<u>8</u>	YES	FAC	Total % Cover of: Multiply by:
	18	= Total Cov	ver	OBL species 0 ×1 = 0
Herb Stratum (Plot size: 5 foot radius)				FACW species 0 × 2 = 0
· · · · · · · · · · · · · · · · · · ·		VEC	FACIL	FAC species3 ×3 =9
Maianthemum canadense (False Lily-of-the-Valley) (FACU)	<u>3</u>	<u>YES</u>	<u>FACU</u>	FACU species 3 × 4 = 12
Clintonia borealis (Yellow Bluebead-Lily) (FAC)	2	<u>YES</u>	<u>FAC</u>	UPL species
		= Total Cov	er	Column Totals:6 (A)21 (B)
Woody Vine Stratum (Plot size:)	<u> </u>	= 10tai 00v	· Ci	Prevalence Index = B/A =3.5
		= Total Cov	or.	Hydrophytic Vegetation Indicators:
		= Total Cov	rei	Rapid Test for Hydrophytic Vegetation
				☐ Dominance Test is >50%
				☐ Prevalence Index is ≤3.0 ¹
				☐ 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.
				Hardward at 1
				Hydrophytic Vegetation Present? Yes No V
Remarks: (Include photo numbers here or on a separate s	heet.)			I

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

Profile De	escription:	(Describe to	the depth ne	eded to	document th	ne indicat	or or co	onfirm the	e absence of indicators.)
Depth	0-1	Matrix	0/	-1 (Features		12	
(inches)	Color (n		% Co	olor (mois	it) 9	<u>′6 </u>	Type ¹	Loc ²	<u>T</u> exture Remarks
0-7	2.5Y	2.5/2							L
7-11	10YR	7/1							SL
11-16	7.5YR	2.5/3							L
¹ Type: C	=Concentr	ation, D=De	epletion, RM=	Reduced	Matrix, CS	=Covered	d or Co	ated San	nd Grains. ² Location: PL=Pore Lining, M=Matrix.
Histo	oil Indicat osol (A1) c Epipedo k Histic (A	n (A2) 3)			Polyvalue E MLRA 149E Thin Dark S	3) Surface (S	S9) (LR	R R, MLI	Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
	rogen Sulfi tified Laye				Loamy Muc Loamy Gley			(LKK K,	
	-	w Dark Surfa	ace (A11)		Depleted M				☐ Polyvalue Below Surface (S8) (LRR K, L) ☐ Thin Dark Surface (S9) (LRR K, L)
Thic		face (A12)			Redox Dark				☐ Iron-Manganese Masses (F12) (LRR K, L, R)
		Mineral (S1)			Depleted Da)	Piedmont Floodplain Soils (F19) (MLRA 149B)
	dy Redox (Matrix (S4)			Redox Dep	162210112	(1-0)		Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (TF2)
	ped Matrix								Very Shallow Dark Surface (TF12)
☐ Dark	Surface (S7) (LRR R,	MLRA 149B)					Other (Explain in Remarks)
³ Indicator	s of hydro	phytic veget	ation and we	land hyd	rology must	be prese	ent, unl	ess distu	urbed or problematic.
Restrictive	e Layer (if	observed):							
Type:_	ROCKS								Hydric Soil Present? Yes ☐ No ✓
Depth	(inches):_	16							Tresent: Tes No
Remarks:									





Project/Site: 3 CORNERS	City/County: UNITY Sampling Date: 07/14/2020 11:34 AM
Applicant/Owner: LONGROAD	State: MAINE Sampling Point: PLOT-W-MR-15-WET
Investigator(s): MERRILL READ	Section, Township, Range:
Landform (hillslope, terrace, etc.): FLOOD PLAIN	Local relief (Concave, convex, none): CONCAVE
Slope (%): 0 Lat: 44.625	Long:69.46521
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	
Are Vegetation , Soil , or Hydrology naturally pro	blematic (If needed, explain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map showing same	oling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: (Explain alternative procedures here or in a separate report.)	Is the Sampled Area within a Wetland Yes 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)
☐ Surface Water (A1) ☐ Water-Stained Lo	
High Water Table (A2) Aquatic Fauna (E	
✓ Saturation (A3) ☐ Marl Deposits (B ☐ Water Marks (B1) ☐ Hydrogen Sulfide	
_ ' ' ' '	e Odor (C1) Crayfish Burrows (C8) eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Red	<u> </u>
	uction in Tilled Soils (C6) Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface	
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in	Remarks)
☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes V No Depth (inches): Water Table Present? Yes No Depth (inches):	0 0
Saturation Present? Yes V No Depth (inches):	0 Wetland Hydrology Present? Yes Ves No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, page 1.5)	orevious inspections) if available:
besombe recorded bata (stream gauge, monitoring wen, acrial priotos, j	nevious inspections), ii available.
Remarks:	
Inditiality.	

<u>Tree Stratum</u> (Plot size: <u>30 foot radius</u>)

Betula alleghaniensis (Yellow Birch) (FAC)

Abies balsamea (Balsam Fir) (FAC)

Fraxinus nigra (Black Ash) (FACW)

Abies balsamea (Balsam Fir) (FAC)

Fraxinus nigra (Black Ash) (FACW)

Herb Stratum (Plot size: _____)

Thuja occidentalis (Eastern Arborvitae) (FACW)

Sapling/Shrub Stratum (Plot size: 15 foot radius)

Osmundastrum cinnamomeum (Cinnamon Fern)

Gaultheria hispidula (Creeping-Snowberry) (FACW)

Rubus pubescens (Dwarf Red Raspberry) (FACW)

Cornus canadensis (Canadian Bunchberry) (FAC)

Woody Vine Stratum (Plot size: _____)

Coptis trifolia (Three-Leaf Goldthread) (FACW)

Aralia nudicaulis (Wild Sarsaparilla) (FACU)

Trientalis borealis (Maystar) (FAC)

Absolute Dominant Indicator

% Cover Species? Status

YES

NO

<u>NO</u>

<u>NO</u>

<u>YES</u>

NO

__ = Total Cover

YES

YES

NO

NO

<u>NO</u>

<u>NO</u>

= Total Cover

80 = Total Cover

____ = Total Cover

<u>65</u>

<u>3</u>

7

25

<u>30</u>

20

10

5

5

10

<u>7</u>

FACW

FAC

FACW

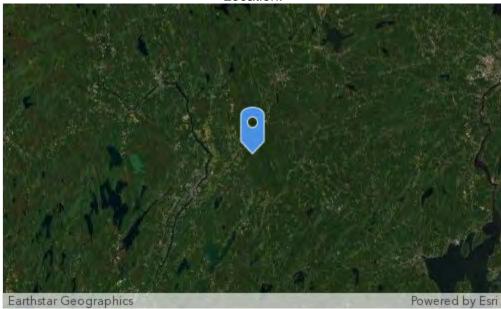
FACW

vdrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation					
Dominance Test is >50%					
Prevalence Index is ≤3.0 ¹					
Morphological Adaptations ¹ (Provide supporting ta in Remarks or on a separate sheet)					
Problematic Hydrophytic Vegetation ¹ (Explain)					
dicators of hydric soil and wetland hydrology must present, unless disturbed or problematic.					
efinitions 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.					
erb – All herbaceous (non-woody) plants, regardless size, and woody plants less than 3.28 ft tall.					
oody vines – All woody vines greater than 3.28 ft in ight.					
ydrophytic egetation esent? Yes ✓ No □					

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

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

Profile De	scription:	(Describe t	the depth n	eeded to				onfirm the	e absend	e of indicators.)	
Depth (inches)	Color (n	Matrix		Color (moi		ox Featu %	res Type ¹	Loc ²	 Textur	Φ.	Remarks
0-24	10YR	2/2		ZOIOI (IIIOI	st)	/0	r <u>ype</u>		L	ORGANIC	Itemarks
0 24	1011	2/2							-	ONGANIC	
24-29+	Gley 1	4/N							С		
		7							-		
¹ Type: C=	-Concenti	ration, D=D	epletion, RM:	=Reduced	d Matrix, C	S=Cove	red or Co	pated San	d Grains	Location:	PL=Pore Lining, M=Matrix.
Histic Black Hydre Strat Deple	sol (A1) Epipedo Histic (A ogen Sulf ified Laye eted Belo	n (A2) 3) ide (A4)	ace (A11)	-	Polyvalue MLRA 14 Thin Dark Loamy M Loamy G Depleted Redox Da	9B) c Surface lucky Mir leyed Ma Matrix (F	e (S9) (LF neral (F1) atrix (F2) F3)	RR R, ML	R, RA L)	2 cm Muck Coast Prai 5 cm Muck Dark Surfa Polyvalue Thin Dark	oblematic Hydric Soils ³ : ((A10) (LRR K, L, MLRA 149B) irie Redox (A16) (LRR K, L, R) (xy Peat or Peat (S3) (LRR K, L, R) ace (S7) (LRR K, L) Below Surface (S8) (LRR K, L) Surface (S9) (LRR K, L) anese Masses (F12) (LRR K, L, R)
Sand Sand Sand Stripp Dark	ly Mucky l ly Gleyed ly Redox ped Matrix Surface (Mineral (S1 Matrix (S4) (S5) x (S6) (S7) (LRR R			Depleted Redox De	Dark Su epression	urface (F7 ns (F8)		•	Piedmont Mesic Spo Red Parer Very Shall Other (Exp	Floodplain Soils (F12) (LRR R, L, R Floodplain Soils (F19) (MLRA 1498) dic (TA6) (MLRA 144A, 145, 1498) at Material (TF2) ow Dark Surface (TF12) olain in Remarks)
Restrictive	Layer (if	observed):									
Type:_										Hydric Soil	Yes No
Depth	(inches):_									Present?	Yes <u> </u>
Remarks:											





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	
Landform (hillslope, terrace, etc.): Pit/Mound	Local relief (Concave, convex, none): Concave/convex
Slope (%): 0 Lat: 44.63151	Long:69.41923
Soil Map Unit Name: Monarda silt loam	NWI Classification: PFO
Are climatic/hydrologic conditions on the site typical for this time of year?	
Are Vegetation , Soil , or Hydrology significantly	
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally pro	
SUMMARY OF FINDINGS – Attach site map showing same	
Hydrophytic Vegetation Present? Yes ✓ No □	Is the Sampled Area
Hydric Soil Present? Yes No	within a Wetland Yes No
Wetland Hydrology Present?	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) Aquatic Fauna (E	Moss Trim Lines (B16)
☐ Saturation (A3) ☐ Marl Deposits (B	
☐ Water Marks (B1) ☐ Hydrogen Sulfide	
<u> </u>	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Red	
_ 	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	
☐ Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes U No Depth (inches): User Table Present? Yes No Depth (inches): Depth (inches): User Table Present?	
Saturation Present? Yes No Pepth (inches):	Wetland Hydrology Present? Yes No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	previous inspections), if available:
Remarks:	

<u>Tree Stratum</u> (Plot size: <u>30 foot radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
Fagus grandifolia (American Beech) (FACU) Acer rubrum (Red Maple) (FAC) Quercus rubra (Northern Red Oak) (FACU)	50 15 20	YES YES YES	FACU FAC FACU	Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant
Abies balsamea (Balsam Fir) (FAC) Thuja occidentalis (Eastern Arborvitae) (FACW) Pinus strobus (Eastern White Pine) (FACU) Tsuga canadensis (Eastern Hemlock) (FACU)	10 10 2	YES YES YES YES	FAC FACU FACU	Species Across All Strata: 12 (B) Percent of Dominant Species That Are Obl, FACW, or FAC: 50% (A/B)
TSuga Carraderisis (Lasteri Fremiock) (FACO)	<u>15</u>			Prevalence Index worksheet:
	122 =	= Total Cov	er	Total % Cover of: Multiply by: OBL species 0 ×1 = 0
Sapling/Shrub Stratum (Plot size: 15 foot radius)				OBL species 0 ×1 = 0 FACW species 1 ×2 = 2
Corylus cornuta (Beaked Hazelnut) (FACU)	<u>1</u>	NO NEO	EAGU	FAC species 5 ×3 = 15
Aralia nudicaulis (Wild Sarsaparilla) (FACU) Abies balsamea (Balsam Fir) (FAC)	<u>3</u>	YES YES	<u>FACU</u> <u>FAC</u>	FACU species6 × 4 =24
Abics balsamea (balsam Fili) (FAO)	<u>10</u>			UPL species $0 \times 5 = 0$
11. 1. 2	<u>14</u> =	= Total Cov	er	Column Totals:(A)(B)
Herb Stratum (Plot size: 5 foot radius)				Prevalence Index = B/A = 3.4
Huperzia lucidula (Shining Fir-Moss) (FAC) Pteridium aquilinum (Northern Bracken Fern) (FACU) Trientalis borealis (Maystar) (FAC) Maianthemum canadense (False Lily-of-the-Valley)	5 10 2 2	YES YES NO NO	<u>FAC</u> <u>FACU</u>	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Dominance Test is >50%
	<u>19 </u>	= Total Cov	er	Prevalence Index is ≤3.0¹
Woody Vine Stratum (Plot size: 30 foot radius)				Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
Toxicodendron radicans (Eastern Poison Ivy) (FAC)	<u>2</u>	<u>YES</u>	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
	2 =	= Total Cov	er	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				Definitions of Vegetation Strata:
				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
				Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
				Woody vines – All woody vines greater than 3.28 ft in height.
				Hydrophytic Vegetation Present? Yes NoX
Remarks: (Include photo numbers here or on a separate s	sheet.)			

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

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
Depth (inches)	Color (n	Matrix	%	Color (mo		edox Feat %	ures Type ¹	Loc ²	Text	tture Remarks		
0-3	10YR	ioistj	/0	Color (IIIo	151)	/0	ı <u>ype</u>		<u>Text</u>	Organic		
0-3	1011									Organic		
3-16	10YR	4/6		7.5YR	5/8	10	С	М	SL			
3 10	20111	., 0		7.0	5, 5	10	· ·		02			
¹ Type: C	=Concentr	ration, D=De	epletion, RI	M=Reduce	d Matrix	, CS=Cove	ered or Co	pated Sa	and Grai	ins. ² Location: PL=Pore Lining, M=Matrix.		
Histri Histri Blace Hydd Stra Dep Thice Sand Sand Strip Dark	k Dark Sui dy Mucky I dy Gleyed dy Redox (pped Matrix x Surface (n (A2) 3) ide (A4) rs (A5) w Dark Surf- face (A12) Mineral (S1) Matrix (S4) (S5) c (S6) S7) (LRR R	, MLRA 14		MLRA Thin Di Loamy Loamy Deplete Redox Deplete Redox	ark Surfac Mucky Mi Gleyed Med Matrix Dark Surfed Dark S Depression	ce (S9) (Liferal (F1) flatrix (F2) (F3) face (F6) frace (F7) fons (F8)	RR R, M I (LRR K ')	LRA (, L)	Indicators for Problematic Hydric Soils³: ☐ 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)		
mulcator	s of flydio	priytic vege	ialion and	welland nyt	urology i	nust be p	resent, un	iess dist	luibeu o	ы рговієтнанс.		
Restrictiv	e Layer (if	observed):										
Type:_										Hydric Soil Present? Yes No V		
Depth Remarks:												

Location: Control of the control of

Photo:

Earthstar Geographics

Powered by Esri



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	
Landform (hillslope, terrace, etc.): Basin	Local relief (Concave, convex, none): Concave
Slope (%): _1	Long:69.41923
Soil Map Unit Name: Monarda silt loam	NWI Classification: PFO
Are climatic/hydrologic conditions on the site typical for this time of year?	
Are Vegetation, Soil, or Hydrology significantly of	
Are Vegetation □ , Soil □ , or Hydrology □ naturally pro	
SUMMARY OF FINDINGS – Attach site map showing samp	
SOWWART OF FINDINGS – Attach site map showing same	
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area
Hydric Soil Present? Yes ✓ No □	within a Wetland Yes No 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	 _ _
☐ High Water Table (A2) ☐ Aquatic Fauna (B	
Saturation (A3)	15) Dry-Season Water Table (C2)
✓ Water Marks (B1)	Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizosphe	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3)	
_ 	uction in Tilled Soils (C6)
☐ Iron Deposits (B5) ☐ Thin Muck Surface	_
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in	
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): Depth (inches):	
Saturation Present? Yes No Pepth (inches):	Wetland Hydrology Present? Yes No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	orevious inspections), if available:
Remarks:	

<u>Tree Stratum</u> (Plot size: <u>30 foot radius</u>)

Sampling Po	oint: <u>PLC</u>	T-W-NS-7-WE	T						
Dominance Test workshee	et:								
Number of Dominant Spec That Are OBL, FACW, or F		5	(A)						
Total Number of Dominant Species Across All Strata:5(B)									
Percent of Dominant Speci That Are Obl, FACW, or FA		100%	(A/B)						
Prevalence Index workshe Total % Cover of:		Multiply by:							
OBL species	×1 =								
FACW energies	_								
FAC species	-								
FACU species									
UPL species			_						
Column Totals:			(B)						
Prevalence Index = B/			<u>—</u>						
Hydrophytic Vegetation In	dicators	s:							
Rapid Test for Hydroph	ytic Veg	etation							
☐ Dominance Test is >50	%								
— Prevalence Index is ≤3.	O ¹								
 ☐ 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									

Acer rubrum (Red Maple) (FAC) Abies balsamea (Balsam Fir) (FAC) Thuja occidentalis (Eastern Arborvitae) (FACW)	35 10 1	YES YES NO	FAC FAC	Number of Dominant Speci That Are OBL, FACW, or F Total Number of Dominant	AC: <u>5</u> (A)
Fraxinus nigra (Black Ash) (FACW)	<u>3</u>	<u>NO</u>		Species Across All Strata:	5 (B)
Continue/Charle Charters (Charles 45 (as a disc)	<u>49</u>	= Total Co	/er	Percent of Dominant Speci That Are Obl, FACW, or FA	
Sapling/Shrub Stratum (Plot size: 15 foot radius)				Prevalence Index workshe	et:
Alnus incana (Speckled Alder) (FACW)	<u>25</u>	YES	<u>FACW</u>	Total % Cover of:	Multiply by:
Spiraea alba (White Meadowsweet) (FACW)	<u>3</u>	<u>NO</u>			×1 =
Ilex verticillata (Common Winterberry) (FACW)	<u>1</u>	NO			× 2 =
	29	= Total Co	/er	· · · · · · · · · · · · · · · · · · ·	×3 =
Harb Otrations (DL)		. 0.0			× 4 =
Herb Stratum (Plot size: 5 foot radius)					× 5 =
Calamagrostis canadensis (Bluejoint) (OBL)	<u>5</u>	NO		Column Totals:	(A) (B)
Osmundastrum cinnamomeum (Cinnamon Fern)	<u>7</u>	NO			, , ,
Equisetum pratense (Meadow Horsetail) (FACW)	<u>15</u>	<u>NO</u>		Prevalence Index = B/	A =
Onoclea sensibilis (Sensitive Fern) (FACW)	<u>10</u>	NO			
Rubus hispidoides (Bog Dewberry) (FACW)	<u></u>	NO		Hydrophytic Vegetation Inc	dicators:
Carex hystericina (Porcupine Sedge) (OBL)	<u>2</u>	NO		☐ Rapid Test for Hydrophy	ytic Vegetation
Carex intumescens (Greater Bladder Sedge) (FACW)	<u>1</u>	<u>NO</u>		Dominance Test is >50°	%
Glyceria striata (Fowl Manna Grass) (OBL)	<u>1</u>	<u>NO</u>		Prevalence Index is ≤3.	\cap^1
Scirpus expansus (Woodland Bulrush) (OBL)	80	<u>YES</u>	<u>OBL</u>		
	122	= Total Co	ror.	data in Remarks or on a sep	ons ¹ (Provide supporting
	122	= 10tal C0	/ei	Problematic Hydrophytic	•
Woody Vine Stratum (Plot size: 30 foot radius)				Problematic Hydrophytic	3 vegetation (Explain)
Toxicodendron radicans (Eastern Poison Ivy) (FAC)	<u>2</u>	YES	FAC	¹ Indicators of hydric soil and be present, unless disturbed	
	2	= Total Co	ver .	Definitions of Vegetation S	trata:
				Tree – Woody plants 3 in. (7	
				at breast height (DBH), regard	diess of neight.
				Sapling/shrub – Woody plant and greater than 3.28 ft (1 m	
				Herb – All herbaceous (non- of size, and woody plants les	
				Woody vines – All woody vin height.	es greater than 3.28 ft in
				Hydrophytic Vegetation Present? Yes] No
Remarks: (Include photo numbers here or on a separate s	sheet.)			1	

Absolute Dominant Indicator

% Cover Species? Status

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

Profile De	scription:	(Describe to	the depth n	eeded to	documer	nt the indi	cator or c	onfirm th	he absence	of indicators.)
Depth	0-1: (Matrix	0/	-11		dox Featu		12	<u></u>	Description
(inches)	Color (r		% C	olor (mo	ist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-2	10YR	2/1							SL	
2-16	10YR	4/1		7.5YR	5/8	10	С	М	SL	
2-10	TOTK	4/1		7.511	3/6	10	C	IVI	JL .	
¹ Type: C:	=Concent	ation, D=De	epletion, RM-	-Reduce	d Matrix,	CS=Cove	red or Co	ated Sa	and Grains.	² Location: PL=Pore Lining, M=Matrix.
Histin Black Hydr Strat Pepl Pepl Pepl Pepl Pepl Pepl Pepl Pepl	osol (A1) c Epipedo k Histic (A rogen Sulf ified Laye eted Belo k Dark Su dy Mucky dy Gleyed dy Redox ped Matri: Surface (n (A2) 3) ide (A4) rs (A5) w Dark Surfa rface (A12) Mineral (S1) Matrix (S4) (S5) x (S6) S7) (LRR R		,	MLRA 1 Thin Da Loamy N Loamy O Depleted Redox D Depleted Redox D	rk Surface Mucky Mir Gleyed Ma d Matrix (I Dark Surfa d Dark Su Depression	e (S9) (LF neral (F1) atrix (F2) F3) ace (F6) urface (F7 ns (F8)	RR R, MI (LRR K	R R,	dicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Dark Surface (S7) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
	e Layer (if	observed):							Π.	outsta On the
Type:_	(incha=\									ydric Soil resent? Yes 🔽 No 🔲
Depth Remarks:	(inches):_									

Location:

Photo:

Earthstar Geographics

Powered by Esri





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

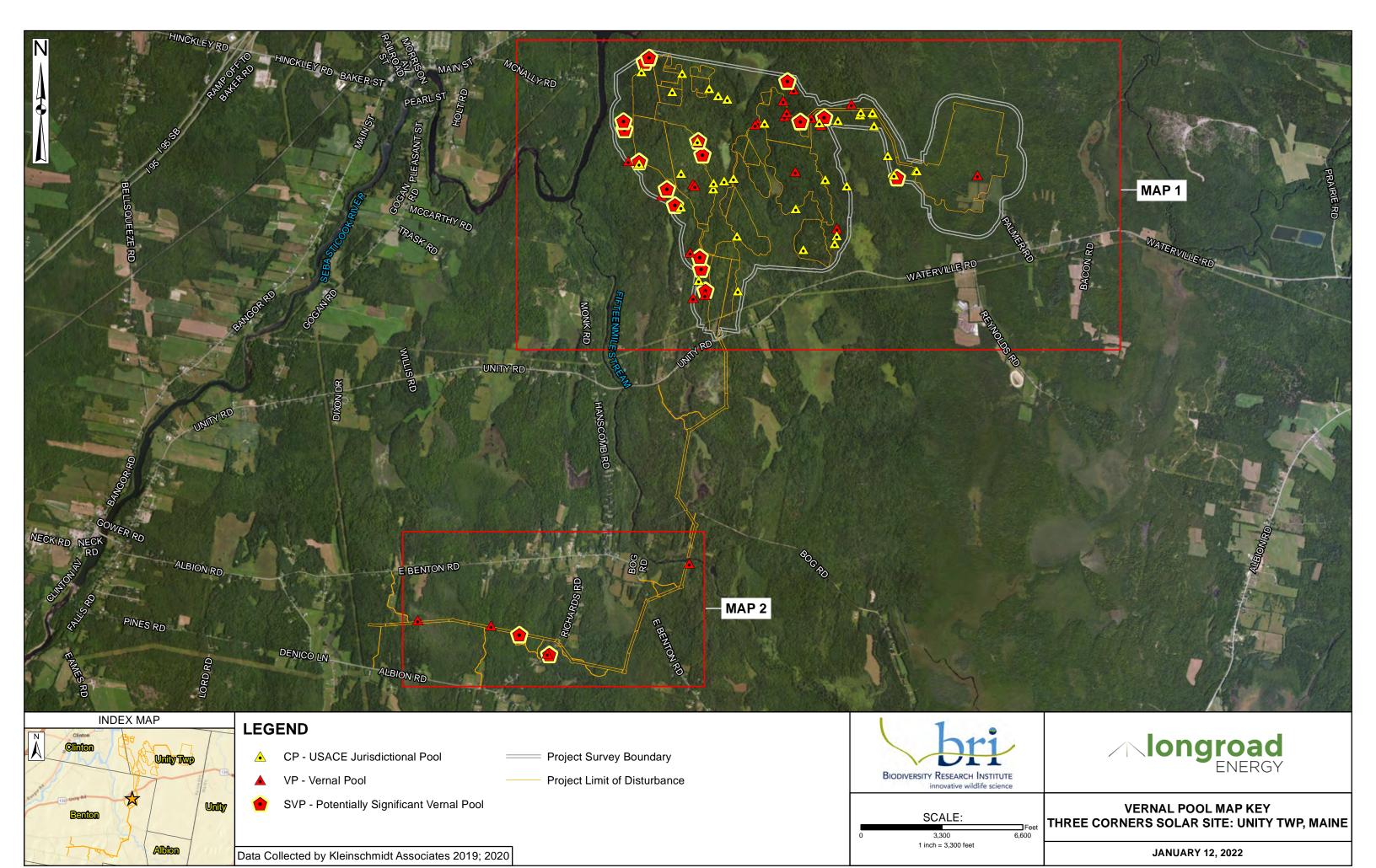
Senior Environmental Scientist

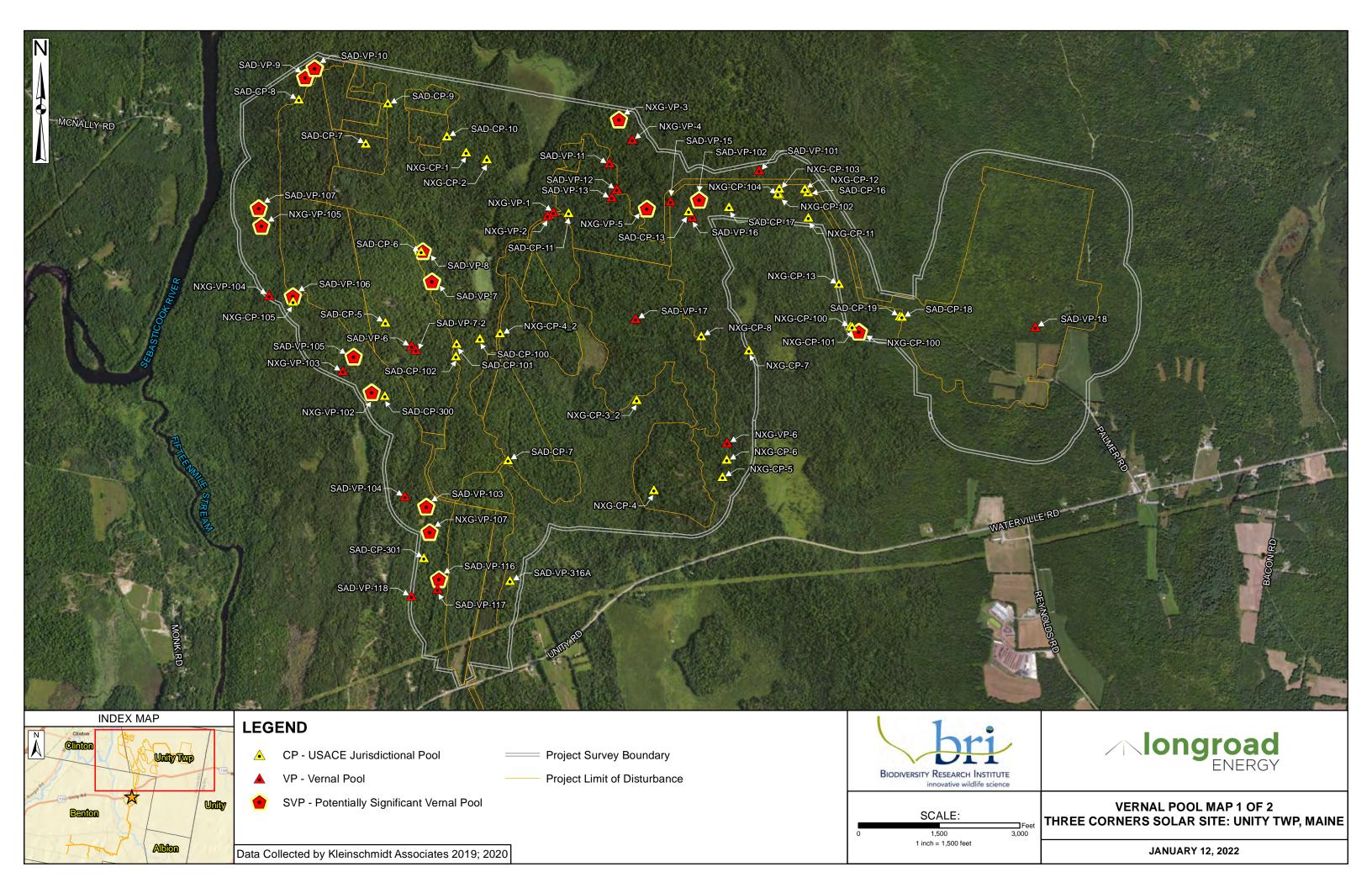
BRI Environmental

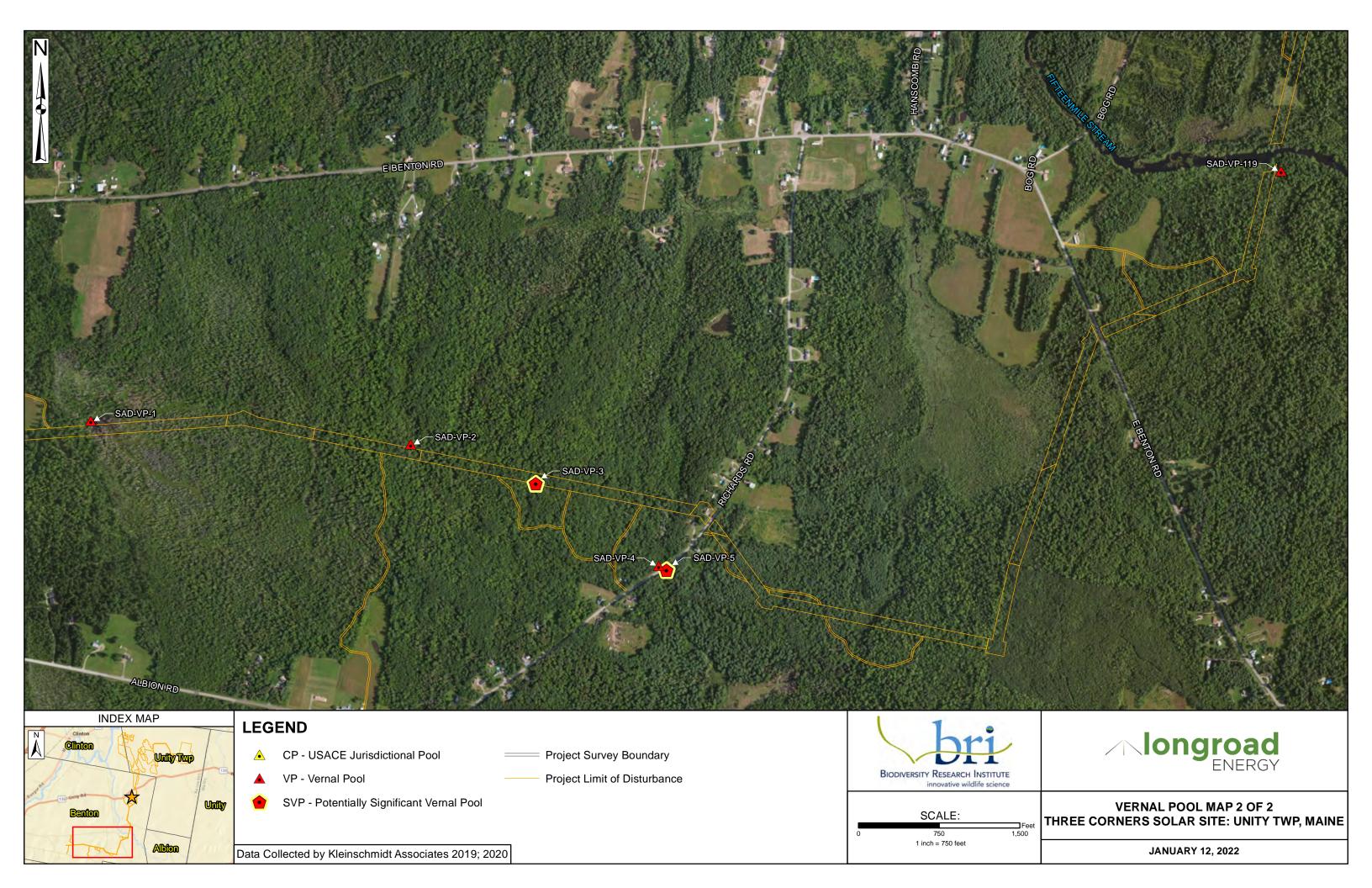
CC: Jason Czapiga



ATTACHMENT A: OVERVIEW MAP









ATTACHMENT B: SUMMARY TABLE



				Egg Mass Counts											
		Dried by	1	Wood Fro	g	93	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	
NXG-CP-1	U	Yes		6				4							No
NXG-CP-100	U	Yes		3				4							No
NXG-CP-101	U	Yes		1				2							No
NXG-CP-102	U	Yes		32											No
NXG-CP-103	U	Yes						2							No
NXG-CP-104	U	Yes		60				17							No
NXG-CP-105	U	Yes		4				81							No
NXG-CP-11	U	Yes		10											No
NXG-CP-12	U	Yes		30				4							No
NXG-CP-13	U	Yes		15				3							No
NXG-CP-2	U	Yes						2							No
NXG-CP-3_2	U	Yes		1											No
NXG-CP-4	U	No		4				5							No
NXG-CP-4_2	U	No						2							No
NXG-CP-5	U	No		5				3							No
NXG-CP-6	U	Yes		5				3							No
NXG-CP-7	U	Yes		1											No
NXG-CP-8	U	Yes						1							No
NXG-VP-1	NM	No		2				2							No
NXG-VP-102	N	Yes		52				28							Potentially
NXG-VP-103	N	No						8	9						No
NXG-VP-104	NM	Yes		4	1			16	17						No
NXG-VP-105	N	Yes		38										Yes	Potentially



Pool ID	Origin	Dried by					Egg	Mass Co	unts				SVP
NXG-VP-107	N	Yes		31				22				Pot	entially
NXG-VP-2	NM	No		3				3			3		No
NXG-VP-3	N	Yes		46				5				Pot	entially
NXG-VP-4	N	Yes						1	3				No
NXG-VP-5	N	Yes						4	19			Pot	entially
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			1		No
SAD-CP-7	U	No				2					1		No
SAD-CP-8	U	NA				2							No
SAD-CP-9	U	No		14		9					1		No
SAD-CP-9a	U	NA				30							No



Pool ID	Origin	Dried by					Egg	Mass Cou	unts					SVP
SAD-VP-1	N	No	6					4	3	7				No
SAD-VP-10	N	Yes	6	26		31		35				20		Potentially
SAD-VP-100	N	Yes		82										Potentially
SAD-VP-101	N	Yes		6					2					No
SAD-VP-102	N	Yes		42										Potentially
SAD-VP-103	N	Yes		25	1			5	9				25	Potentially
SAD-VP-104	N	Yes		17	1			10	8					No
SAD-VP-105	N	No		22				89						Yes
SAD-VP-106	NM	Yes		1				37						Potentially
SAD-VP-107	N	Yes		48				73						Potentially
SAD-VP-11	N	Yes	6	11	12	7		5	15		4			No
SAD-VP-116	N	No		0				37						Yes
SAD-VP-117	N	No		0	2			2	1					No
SAD-VP-118	NM	No		0				1						No
SAD-VP-119	N	No						16	14					No
SAD-VP-12	N	Yes	1	0		4		4						No
SAD-VP-13	N	No		0		1								No
SAD-VP-15	N	Yes	5	8				2						No
SAD-VP-16	N	No	1						1					No
SAD-VP-17	NM	Yes	3	1	2	1			8					No
SAD-VP-18	N	Yes	10	3				11	18					No
SAD-VP-2	N	No					4	1	9	10				No
SAD-VP-3	N	No	27		1		24		25					Yes
SAD-VP-4	N	No	10	1	1		5			3				No
SAD-VP-5	NM	No	67		40		7	3	26	11				Yes
SAD-VP-6	N	No				2	1							No
SAD-VP-7	N	No		1	1	12	6	23	26		1			Yes
SAD-VP-7-2	NM	No				2								No
SAD-VP-8	NM	No	36	2		49		59						Yes



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

Three Corners Solar Project

MDEP Site Location of Development Act Permit Application

SECTION 7: WETLANDS, WILDLIFE, AND FISHERIES

Exhibit 7-4

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



Table of Contents

1.0	INTRODU	CTION	1
2.0 2.1 2.2 2.3	WETLAND POTENTIA	S O AND WATERCOURSE DELINEATION	1 2
2.3	DATACO	LLECTION	2
3.0 3.1 3.2	GENERAL WETLAND	SITE DESCRIPTION D/WATERCOURSE DELINEATION AND POTENTIAL VERNAL POOL	3
4.0	REGULAT	ORY DISCUSSION	17
4.1	FEDERAL 4.1.1 4.1.2	AND STATE WETLANDS AND WATERCOURSESFederal Wetland and Watercourse RegulationsMaine Wetland and Watercourse RegulationsAND STATE VERNAL POOLS	17 17 17
4.3		EGULATIONS	
LIST	OF TABLES	S	
Table	2. Summar	y of Delineated Wetlands y of Delineated Watercourses y of Potential Vernal Pools	15
LIST	OF APPENI	DICES	
APPE	NDIX A	FIGURES	
APPE	NDIX B	REPRESENTATIVE PHOTOGRAPHS	
APPE	NDIX C	CORPS PAIRED DATA PLOT FORMS	



i

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 Act¹. Wetland boundaries were determined using the technical criteria described in the United States Army Corps of Engineers (Corps) Corps of Engineers Wetlands Delineation Manual² and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)³. Wetland communities were classified according to the Classification of Wetlands and Deepwater Habitats of the United States⁴. Hydric soil determinations were made in accordance with the Corps wetland delineation manuals and the Field Indicators for Identifying Hydric Soils in New England (Version 4)⁵. Wetlands of Special Significance (WoSS) were identified based on criteria in Chapter 310

⁵ New England Hydric Soils Technical Committee. 2017. Field Indicators for Identifying Hydric Soils in New England (Version 4).



¹ Title 38: Waters and Navigation, Chapter 3: Protection and Improvement of Waters, Subchapter 1: Environmental Protection Board, Article 5-a: Natural Resources Protection Act

² Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1. U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS.

³ U.S. Army Corps of Engineers. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0),* ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

⁴ Federal Geographic Data Committee. 2013. Classification of Wetlands and Deepwater Habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC.

of the Maine Natural Resources Protection Act (NRPA)⁶ and Chapter 335 Significant Wildlife Habitat⁷. Identification of WoSS was limited to observable conditions within the Project Site. Wetland delineations were conducted under seasonally appropriate conditions.

Delineated watercourses (e.g., river, stream, or brook) were identified based on the technical guidance available from the Corps on the identification of an Ordinary High Water Mark (OHWM)⁸, definition of a tributary as described in the Clean Water Act (CWA)⁹, and as detailed in the Maine Department of Environmental Protection (MDEP) watercourse identification guidance document¹⁰. 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.

¹⁰ Danielson, T. J. 2018. Natural Resource Protection Act Streams, Rivers, and Brooks. Maine Department of Environmental Protection, Augusta, ME.



2

⁶ Maine Department of Environmental Protection. 26 January 2009. Natural Resources Protection Act Chapter 310: Wetlands and Waterbodies Protection Rules. Bureau of Land and Water Quality, DEPLW0297-D2009.

⁷ Maine Department of Environmental Protection. 7 January 2014. Natural Resources Protection Act Chapter 335: Significant Wildlife Habitat.

⁸ U.S. Army Corps of Engineers. 2005. Regulatory Guidance Letter: Ordinary High Water Mark Identification. December 8, 2005. No. 05-05.

⁹ U.S. Army Corps of Engineers. 2015. 33 Code of Federal Regulations, Part 328, Waters of the United States. June 29, 2015.

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, Maine¹¹ depicts 13 map units within the Project Site. Soil consistent and/or similar to these map units were observed on-site.

3.2 WETLAND/WATERCOURSE DELINEATION AND POTENTIAL VERNAL POOL SURVEY

The wetland and watercourse delineation was conducted in July and October 2020 and November 2021. The ground was free of snow and frost and late season vegetation was identifiable during the October 2020 and November 2021 field efforts. During the on-site delineation fieldwork, Stantec wetland scientists delineated 62 wetlands, 11 watercourses, and 10 PVPs within the Project Site. These results are characterized in Tables 1, 2, and 3, respectively. Delineated wetlands, watercourse, and PVPs are

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



3

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) ¹	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W01	01CFA	PEM	Trees: none Shrub/Saplings: gray willow (Salix bebbiana) Herbs: broad-leaf cat-tail (Typha latifolia), fringed sedge (Carex crinita), common fox sedge (Carex vulpinoidea), Canadian goldenrod (Solidago canadensis), lamp rush (Juncus effusus)	A1: Histosol	Surface Water (A1), High Water Table (A2), Saturation (A3)	No	Small, man-made ditch located north of the Albion Road substation. The wetland extends offsite into large wetland complex to the west.
W02	01CFB	PFO	Trees: balsam fir (Abies balsamea), eastern hemlock (Tsuga canadensis), red maple (Acer rubrum), green ash (Fraxinus pennsylvanica) Shrub/Saplings: balsam fir, Morrow's honeysuckle (Lonicera morrowii) Herbs: sensitive fern (Onoclea sensibilis), interrupted fern (Osmunda claytonia), royal fern (Osmunda spectabilis)	F3: Depleted Matrix	Saturation (A3), Drainage Patterns (B10)	No	Small portion of larger wetland complex located north of the Albion Road substation.
W03	01RKD/01CFC	PFO/PEM	Trees: balsam fir, red maple, green ash Shrub/Saplings: balsam fir Herbs: sensitive fern, evergreen wood fern (<i>Dryopteris intermedia</i>), broad-leaf cat-tail, pointed broom sedge (<i>Carex scoparia</i>), yellow green sedge (<i>Carex flava</i>), fowl manna grass (<i>Glyceria striata</i>), common marsh bedstraw (<i>Galium palustre</i>), lamp rush, spotted touch-me-not (<i>Impatiens capensis</i>), bluejoint (<i>Calamagrostis canadensis</i>), simpler's joy (<i>Verbena hastata</i>), eastern poison ivy (<i>Toxicodendron radicans</i>), interrupted fern	A11a: Depleted Below Dark Surface	Water Stained Leaves (B9), Drainage Patterns (B10), Geomorphic Position (D2), Microtopographic Relief (D4)	No	The wetland is located east of the Albion Road substation and is bisected by an existing transmission line. The wetland is forested in the natural setting and primarily PEM in the cleared section, with small pockets of shrubs.
W04	01RKC	PFO/PEM	Trees: balsam fir, red maple, green ash Shrub/Saplings: balsam fir Herbs: sensitive fern, evergreen wood fern, broad-leaf cattail, pointed broom sedge, yellow green sedge, fowl manna grass, common marsh bedstraw, lamp rush, spotted touchme-not, bluejoint, simpler's joy, eastern poison ivy, Interrupted fern	A11a: Depleted Below Dark Surface	Water Stained Leaves (B9), Drainage Patterns (B10), Geomorphic Position (D2), Microtopographic Relief (D4)	No	The wetland is located east of the Albion Road substation access road and is bisected by an existing transmission line. The wetland is forested in the natural setting and primarily PEM in the cleared section, with small pockets of shrubs.
W05	01RKB	PFO/PEM	Trees: balsam fir, red maple, green ash Shrubs/Saplings: balsam fir Herbs: sensitive fern, evergreen wood fern, broad-leaf cattail, pointed broom sedge, yellow green sedge, fowl manna grass, common marsh bedstraw, lamp rush, spotted touchme-not, bluejoint, simpler's joy	A11a: Depleted Below Dark Surface	Water Stained Leaves (B9), Drainage Patterns (B10), Geomorphic Position (D2), Microtopographic Relief (D4)	No	The wetland is located east of the Albion Road substation access road and is bisected by an existing transmission line. The wetland is forested in the natural setting and primarily PEM in the cleared section, with small pockets of shrubs.
W06	01RKA	PFO	Trees: balsam fir, red maple Shrub/Saplings: balsam fir Herbs: sensitive fern, evergreen wood fern	A11a: Depleted Below Dark Surface	Water Stained Leaves (B9), Drainage Patterns (B10), Geomorphic Position (D2), Microtopographic Relief (D4)	No	Small, isolated, forested wetland located between the Albion Road substation access road and an existing transmission line to the west. The wetland is upslope of and connects to the access road constructed drainage ditch.



Figure Identifier	Wetland Field Designation	Wetland Classification(s) ¹	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W07	01CFD	PFO	Trees: balsam fir, red maple, green ash Shrub/Saplings: balsam fir, red maple, green ash, speckled alder (<i>Alnus incana</i>) Herbs: sensitive fern, cinnamon fern (<i>Osmundastrum cinnamomeum</i>), fringed sedge, three-seed sedge (<i>Carex trisperma</i>)	F3: Depleted Matrix	Saturation (A3), Drainage Patterns (B10)	No	Linear wetland drainage extends north off-site.
W08	01CFE	PSS/PEM	Trees: red maple Shrub/Saplings: red maple, gray willow, common winterberry (Ilex verticillata), broad-leaved meadowsweet (Spiraea latifolia) Herbs: sensitive fern, reed canary grass (Phalaris arundinacea)	F3: Depleted Matrix	Saturation (A3)	No	Isolated wetland located along proposed access road off East Benton Road.
W09	01RKE	PFO/PSS/PEM	Trees: balsam fir, red maple, black ash, (Fraxinus nigra), yellow birch, eastern arborvitae Shrub/Saplings: balsam fir, speckled alder, common winterberry, alternate-leaf dogwood (Cornus alterniflora), broad-leaved meadowsweet, steeplebush (Spiraea tomentosa) Herbs: sensitive fern, evergreen wood fern, broad-leaf cattail, pointed broom sedge, yellow green sedge, fowl manna grass, common marsh bedstraw, lamp rush, spotted touchme-not, bluejoint, simpler's joy, eastern poison ivy, interrupted fern, three-seed sedge, late goldenrod, (Solidago gigantia), eastern marsh fern (Thelypteris palustris), cottongrass bulrush (Scirpus cyperinus), pickerelweed (Pontederia cordata), northern water-horehound (Lycopus uniflorus), European bur-reed (Sparganium emersum), common duckweed (Lemna minor), rice cut grass (Leersia oryzoides), arrow-leaf tearthumb (Persicaria sagittata), coon's-tail (Ceratophyllum demersum), three-leaf goldthread (Coptis trifolia), bristly dewberry (Rubus hispidus), wrinkleleaf goldenrod (Solidago rugosa), royal fern	A11a: Depleted Below Dark Surface	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Marks (B1), Sediment Deposits (B2), Inundation Visible on Aerial Imagery (B7), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Saturations Visible on Aerial Imagery (C9), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: portions within 25-feet (ft) of a watercourse	This is a large wetland that is a complex of interspersed pockets of emergent, forest and dense shrub thickets, fringed by forested wetland. The wetland contains S02 which flows northerly across the western edge and contains VP01.
W10	01CFI	PSS	Trees: none Shrub/Saplings: red maple, gray willow, quaking aspen (Populus tremuloides), gray birch Herbs: broad-leaf cat-tail, fringed sedge	S5: Sandy Redox	Saturation (A3)	No	Wetland is dominated by shrubs on-site within an area recently harvested by logging operations and located along proposed access road north of Albion Road.
W11, W12	01CFH	PSS	Trees: red maple, American larch (<i>Larix laricina</i>) 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 (<i>Scirpus atrovirens</i>), shallow sedge (<i>Carex lurida</i>), Canadian rush (<i>Juncus canadensis</i>)	S5: Sandy Redox	Saturation (A3), Water Stained Leaves (B9)	No	Wetland is dominated by shrubs on-site within an area recently harvested by logging operations and located along proposed access road north of Albion Road. Contains PVP01.



Figure Identifier	Wetland Field Designation	Wetland Classification(s) ¹	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W13, W14	01CFG/01GPA	PSS/PUB	Trees: red maple, American larch Shrub/Saplings: red maple, American larch, gray birch, gray willow, quaking aspen, broad-leaved meadowsweet Herbs: broad-leaf cat-tail, fringed sedge, dark green bulrush, shallow sedge, Canadian rush	S5: Sandy Redox	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Stained Leaves (B9), Presence of Reduced Iron (C4)	No	Wetland is dominated by shrubs on-site within an area recently harvested by logging operations and located along proposed access road north of Albion Road. A portion of the wetland contains PVP02. Wetland extends northeast across the corridor into large complex. A farm pond (PUB component) has been created in the field along the eastern edge of the wetland just outside the survey area.
W15	01RKF	PFO	Trees: balsam fir, red maple, black ash, yellow birch, eastern arborvitae Shrub/Saplings: speckled alder Herbs: sensitive fern, broad-leaf cat-tail, eastern poison ivy, three-seed sedge, cottongrass bulrush, common red raspberry (<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	This is a forested swale that extends across the site from south to north. The wetland contains a VP02.
W16, W17, W18, W19	01RKG	PFO	Trees: balsam fir, red maple, black ash, yellow birch, eastern arborvitae Shrub/Saplings: speckled alder Herbs: sensitive fern, three-seed sedge, dwarf red raspberry (<i>Rubus pubescens</i>), royal fern, cinnamon fern, eastern marsh fern, yellow green sedge, woodland horsetail (<i>Equisetum 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	This is a forested swale that extends across the site from south to north. The wetland contains S03.
W20	01RKH	PFO	Trees: balsam fir, red maple, black ash Shrub/Saplings: common winterberry Herbs: cinnamon fern, eastern marsh fern, eastern poison ivy, stinging nettle (<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 LInes (B16), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC- Neutral Test (D5)	Yes: contains SVP03	This is a forested swale that extends across the site from south to north. The wetland contains SVP03.
W21	01EBA	PFO	Trees: eastern arborvitae, balsam fir, black ash Shrub/Saplings: balsam fir, broad-leaved meadowsweet Herbs: sensitive fern, parasol white top (<i>Doelingeria 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	Wetland depression extending south off-site and containing PSVP11.



Figure Identifier	Wetland Field Designation	Wetland Classification(s) ¹	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W22	01RKI	PFO	Trees: balsam fir, yellow birch, American elm (<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	This is a forested swale that extends across the site from south to north; located west of Richards Road.
W23	01RKJ	PFO/PUB	Trees: balsam fir, red maple, black ash, yellow birch Shrub/Saplings: speckled alder, smooth arrow-wood (<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), FACNeutral Test (D5)	Yes: contains SVP05	This is a forested wetland located along the east side of Richards Road and extends off-site to the south. The wetland contains an apparently man-made pond, S04.
W24	01CFM	PSS	Trees: none Shrub/Saplings: quaking aspen, balsam fir Horbs: consitive form fringed codes, breed loof cet tail	F3: Depleted Matrix	Saturation (A3)	No	Isolated wetland on south side of survey area east of Richards Road.
W25	01CFJ	PFO	Herbs: sensitive fern, fringed sedge, broad-leaf cat-tail Trees: red maple, balsam fir Shrub/Saplings: red maple, balsam fir, quaking aspen Herbs: sensitive fern, royal fern, interrupted fern, fringed sedge, wrinkle-leaf goldenrod	F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9)	No	Isolated forested wetland located east of Richards Road.
W26	01CFL	PSS	Trees: none Shrub/Saplings: green ash, quaking aspen, balsam fir, speckled alder Herbs: sensitive fern, dark green bulrush, reed canary grass	F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9)	No	Isolated wetland along old roadbed to an existing camp located east of Richards Road.
W27	01CFK	PSS/PFO	Trees: red maple, balsam fir, yellow birch, eastern arborvitae Shrub/Saplings: red maple, balsam fir, yellow birch, eastern arborvitae, speckled alder Herbs: bluejoint, shallow sedge, lakebank sedge (<i>Carex 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	Wetland complex containing S05.



Figure Identifier	Wetland Field Designation	Wetland Classification(s) ¹	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W28	01CFN	PFO	Trees: eastern arborvitae, black ash, gray birch, yellow birch, quaking aspen, balsam fir, red maple Shrub/Saplings: eastern arborvitae, black ash, gray birch, yellow birch, quaking aspen, balsam fir, red maple		Saturation (A3), Water Stained Leaves (B9), Drainage Patterns (B10)	No	Portion of large forested wetland complex that extends off-site to the northeast and southwest.
			Herbs: sensitive fern, interrupted fern, fringed sedge, three- seed sedge, fowl manna grass Trees: balsam fir, red maple, black ash, yellow birch, eastern		Surface Water (A1), High Water Table		
W29, W30, W31, W32	01RKL	PFO/PSS/PEM	arborvitae Shrub/Saplings: balsam fir, speckled alder, common winterberry Herbs: dwarf red raspberry, three-seed sedge, northern water-horehound, sensitive fern, interrupted fern, woodland horsetail, fowl manna grass, swamp candles (<i>Lysimachia terrestris</i>), bluejoint, broad-leaf cat-tail, royal fern, broad-leaved meadowsweet, yellow green sedge	A2: Histic Epipedon	(A2), Saturation (A3), Sediment Deposits (B2), Algae Mat or Crust (B4), Inundation Visible on Aerial Imagery (B8), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry- Season Water Table (C2), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC- Neutral Test (D5)	Yes: contains >20,000 square feet (sf) of emergent marsh and PSVP03	This is a large wetland that is a complex of interspersed pockets of emergent, forest and dense shrub thickets, fringed by forested wetland. The wetland begins along the west side of East Benton Road and extends westerly to the large wetland complex off-site. Also contains PSVP03. Note: Two portions of this wetland are small isolated wetlands along the eastern edge of the survey area.
W33, W34	01RKK	PFO	Trees: balsam fir, red maple, black ash Shrub/Saplings: balsam fir Herbs: sensitive fern, eastern poison ivy, dwarf red raspberry, interrupted fern	A11a: Depleted Below Dark Surface	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	No	This is a forested wetland located east of East Benton Road. Small portion of wetland that extends off-site to the east.
W35	01RKM	PFO	Trees: balsam fir, red maple, black ash, green ash, eastern arborvitae Shrub/Saplings: balsam fir, speckled alder, common winterberry Herbs: sensitive fern, royal fern, broad-leaf cat-tail, eastern poison ivy	F3: Depleted Matrix	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FACNeutral Test (D5)	No	This is a large forested wetland with areas of dense shrub understory. The wetland is located along the east side of East Benton Road and extends off-site to the north and south. Connected to W36 off-site to the south.
W36	01RKN/01RKO/ 01CFU/01CFQ/ 01CFS/01CFT	PFO	Trees: balsam fir, red maple, black ash, green ash, eastern arborvitae Shrub/Saplings: balsam fir, speckled alder, common winterberry Herbs: sensitive fern, royal fern, broad-leaf cat-tail, eastern poison ivy	F3: Depleted Matrix	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FACNeutral Test (D5)	Yes, portions within 25-ft of a watercourse	This is a large forested wetland with areas of dense shrub understory. The wetland is located east of East Benton Road and extends off-site to the north and south. Contains S06.
W37	01CFO	PSS	Trees: none Shrub/Saplings: speckled alder, broad-leaved meadowsweet, gray willow, red osier dogwood (<i>Cornus alba</i>) Herbs: sensitive fern, common fox sedge, wrinkled-leaf goldenrod	F3: Depleted Matrix, F6: Redox Dark Surface	Saturation (A3)	No	Portion of wetland located east of East Benton Road along proposed access road.



Figure Identifier	Wetland Field Designation	Wetland Classification(s) ¹	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments	
W38	01CFP	PFO	Trees: red maple, green ash Shrub/Saplings: red maple, green ash, black ash, common winterberry		Saturation (A3), Water Stained Leaves (B9)	No	Wetland is located east of East Benton Road along south side of proposed access road and contains PVP04.	
W39	01CFQ	PFO	Herbs: sensitive fern 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	Wetland is located east of East Benton Road along north side of proposed access road.	
W40	01CFR	PFO	Herbs: sensitive fern Trees: black ash, balsam fir, quaking aspen Shrub/Saplings: black ash, balsam fir, speckled alder Herbs: sensitive fern, common fox sedge, fringed sedge	A2: Histic Epipedon, F3: Depleted Matrix	Saturation (A3), Drainage Patterns (B10)	Yes, portions within 25-ft of a watercourse	Wetland is located east of East Benton Road along proposed access road and contains S06.	
W41	01RKP	PFO	Tree: balsam fir, yellow birch, green ash Shrub/Saplings: balsam fir, yellow birch Herbs: sensitive fern, wrinkle-leaf goldenrod, three-seed sedge, late goldenrod, woodland horsetail	F3: Depleted Matrix	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FACNeutral Test (D5)	No	This as narrow side slope groundwater discharge swale that is a portion of a larger wetland that extends off-site to the east.	
W42, W43	01RKQ/01RKR/ 01CFV/01CFW	PFO/PSS/PEM/PUB	Trees: balsam fir, red maple, black ash, American elm, yellow birch, eastern arborvitae, gray birch (<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	This is a large wetland complex riparian to Fifteenmile Stream (S07) and another perennial stream (S08). It is connected to W50 and S09 by a culvert at Bog Road. These are large complexes of interspersed emergent and open water, forested patches, dense shrub thickets, and fringed by forested wetland. The wetland extends off-site to the east and west along Fifteenmile Stream. This wetland contains VP06, south of Fifteenmile Stream.	
W44	01RKS	PFO/PSS	Trees: balsam fir, gray birch Shurb/Saplings: speckled alder Herbs: sensitive fern, dwarf red raspberry, fringed sedge	A11a: Depleted Below Dark Surface	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	No	This wetland is a portion of a larger wetland complex that extends off-site to the west; located east of Bog Road. This a groundwater discharge wetland situated at the base of a slope.	



Figure Identifier	Wetland Field Designation	Wetland Classification(s) ¹	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W45	01RKT	PSS/PFO	Trees: balsam fir, gray birch Shurb/Saplings: speckled alder Herbs: sensitive fern, dwarf red raspberry, fringed sedge	A11a: Depleted Below Dark Surface	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FACNeutral Test (D5)	No	This wetland is a portion of a larger wetland complex that extends off-site to the west; located along the east side of Bog Road.
W46	01RKU	PSS	Trees: none Shrub/Saplings: speckled alder Herbs: sensitive fern	A11a: Depleted Below Dark Surface	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FACNeutral Test (D5)	No	This wetland is a small, isolated wetland in a saddle at the top of a slope, located east of Bog Road.
W47	02CFA	PFO	Trees: balsam fir, red maple, gray birch, eastern white pine Shrub/Saplings: balsam fir, red maple, gray birch, speckled alder Herbs: sensitive fern, fowl manna grass	F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9), Drainage Patterns (B10)	No	Portion of larger wetland complex along west side of survey area north of Bog Road. Wetland extends northwest off-site.
W48	02CFA	PFO	Trees: balsam fir, red maple, gray birch, eastern white pine Shrub/Saplings: balsam fir, red maple, gray birch, speckled alder Herbs: sensitive fern, fowl manna grass	F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9), Drainage Patterns (B10)	No	Portion of larger wetland complex along west side of survey area north of Bog Road. Wetland extends northwest off-site.
W49	01CFZ	PFO	Trees: balsam fir, gray birch, eastern white pine Shrub/Saplings: balsam fir, speckled alder Herbs: sensitive fern, dwarf red raspberry, evergreen wood fern	F6: Redox Dark Surface	Oxidized Rhizospheres on Living Roots (C3), Drainage Patterns	No	Isolated wetland located north of Bog Road.
W50	02CFY	PFO/PEM/PUB	Trees: balsam fir, red maple, yellow birch, gray birch Shrub/Saplings: balsam fir, red maple, yellow birch, gray birch, speckled alder Herbs: broad-leaf cat-tail, bluejoint, sensitive fern, fringed sedge, lakebank sedge, royal fern	A1: Histosol	Surface Water (A1), High Water Table (A2), Saturation (A3), Inundation Visible on Aerial Imagery (B7), Drainage Patterns (B10)	Yes, contains >20,000 sf of emergent marsh; and portions within 25-ft of a watercourse	Wetland is located north of Bog Road and contains S09 and area of open water and emergent vegetation that extends off-site to the northeast.



Figure Identifier	Wetland Field Designation	Wetland Classification(s) ¹	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W51	02RKA/02RKB/ 02RKC/02RKD/ 02RKE/02RKF/ 02RKG/02CFB/ 02CFD	PFO/PSS/PEM	Trees: balsam fir, red maple, black ash, American elm, yellow birch, eastern arborvitae, gray birch Shrub/Saplings: speckled alder, common winterberry Herbs: sensitive fern, broad-leaf cat-tail, pointed broom sedge, yellow green sedge, fowl manna grass, common marsh bedstraw, lamp rush, spotted touch-me-not, bluejoint, eastern poison ivy, interrupted fern, broad-leaved meadowsweet, three-seed sedge, late goldenrod, steeplebush, eastern marsh fern, cottongrass bulrush, pickerelweed, northern water-horehound, European bur-reed, common duckweed, rice cut grass, arrow-leaf tearthumb, coon's-tail, three-leaf goldthread, bristly dewberry, wrinkle-leaf goldenrod, stinging nettle, royal fern, slender wood reed, three-way sedge, lesser bladder sedge, shallow sedge, variegated scouring rush, fringed sedge	A2: Histic Epipedon	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Marks (B1), Sediment Deposits (B2), Inundation Visible on Aerial Imagery (B7), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Saturation Visible on Aerial Imagery (C9), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains >20,000 sf of emergent marsh and PSVP06	This is a large wetland complex that is located north of Bog Road and extends off-site to the east and west. It is primarily forested 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 off-site to continue southerly to where it connects to S08/S09 and ultimately Fifteenmile Stream.
W52	02CFB	PFO/PSS/PEM	Trees: balsam fir, red maple, black ash, American elm, yellow birch, eastern arborvitae, gray birch Shrub/Saplings: speckled alder, common winterberry Herbs: sensitive fern, broad-leaf cat-tail, pointed broom sedge, yellow green sedge, fowl manna grass, common marsh bedstraw, lamp rush, spotted touch-me-not, bluejoint, eastern poison ivy, interrupted fern, broad-leaved meadowsweet, three-seed sedge, late goldenrod, steeplebush, eastern marsh fern, cottongrass bulrush, pickerelweed, northern water-horehound, European bur-reed, common duckweed, rice cut grass, arrow-leaf tearthumb, coon's-tail, three-leaf goldthread, bristly dewberry, wrinkle-leaf goldenrod, stinging nettle, royal fern, slender wood reed, three-way sedge, lesser bladder sedge, shallow sedge, variegated scouring rush, fringed sedge	A2: Histic Epipedon	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Marks (B1), Sediment Deposits (B2), Inundation Visible on Aerial Imagery (B7), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Saturation Visible on Aerial Imagery (C9), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains >20,000 sf of emergent marsh (off-site)	This is a portion of a large wetland complex that is located north of Bog Road and extends off-site to the east and west. It is primarily forested on-site.
W53	02CFE	PFO	Trees: balsam fir, red maple Shrub/Saplings: balsam fir, red maple Herbs: cinnamon fern	A2: Histic Epipedon, F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9)	No	Isolated wetland located north of Bog Road surrounded by area of recent logging activities.
W54	01RKV	PEM/PSS	Trees: none Shrub/Saplings: common winterberry, broad-leaved meadowsweet Herbs: cinnamon fern	A11a: Depleted Below Dark Surface	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Moss Trim Lines (B16), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Potentially, contains PSVP07	This wetland is a small, isolated wetland in a saddle near the top of a slope. It is located south of Unity Road and adjacent to an aggregate base timber harvest road within a proposed access road area. This feature is also the boundary of PSVP07.



Figure Identifier	Wetland Field Designation	Wetland Classification(s) ¹	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments
W55	01RKW	PFO	Trees: balsam fir, red maple Shrub/Saplings: speckled alder, broad-leaved meadowsweet Herbs: bluejoint, dwarf red raspberry, cottongrass bulrush, cinnamon fern, pointed broom sedge, broad-leaf cat-tail, woodland horsetail, sensitive fern	F3: Depleted Matrix	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Presence of Reduced Iron (C4), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains >20,000 sf of emergent marsh	This wetland is a portion of a large wetland complex that extends off-site to the north. It is located south of Unity Road and adjacent to an aggregate base timber harvest road within a proposed access road area. A timber harvest road separates this wetland from W51.
W56	01RKZ/01RKY	PFO/PSS/PEM	Trees: balsam fir, red maple, black ash, American elm, yellow birch, eastern arborvitae, gray birch Shrub/Saplings: speckled alder, common winterberry, broadleaved meadowseet, steeplebush Herbs: sensitive fern, broad-leaf cat-tail, pointed broom sedge, yellow green sedge, fowl manna grass, common marsh bedstraw, lamp rush, spotted touch-me-not, bluejoint, eastern poison ivy, interrupted fern, three-seed sedge, late goldenrod, eastern marsh fern, cottongrass bulrush, pickerelweed, northern water-horehound, European bur-reed, common duckweed, rice cut grass, arrow-leaf tearthumb, coon's-tail, three-leaf goldthread, bristly dewberry, wrinkle-leaf goldenrod, stinging nettle, royal fern, slender wood reed, three-way sedge, lesser bladder sedge, shallow sedge, variegated scouring rush, fringed sedge	A1: Histosol, F2: Loamy Gleyed Matrix	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Marks (B1), Sediment Deposits (B2), Inundation Visible on Aerial Imagery (B7), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Saturation Visible on Aerial Imagery (C9), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains >20,000 sf of emergent marsh; and portions within 25-ft of a watercourse	This is a large wetland complex riparian to S11. On aerial photos it is observed to continue off-site southerly to where it connects to watercourse S08/S09 and ultimately Fifteenmile Stream. These are large complexes of interspersed emergent and open water, forested patches, dense shrub thickets, and fringed by forested wetland. A timber harvest road separates this wetland from W57.
W57	01RKX	PFO	Trees: balsam fir, red maple Shrub/Saplings: speckled alder, broad-leaved meadowsweet Herbs: bluejoint, dwarf red raspberry, cottongrass bulrush, cinnamon fern, pointed broom sedge, broad-leaf cat-tail, woodland horsetail, sensitive fern	F3: Depleted Matrix	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Marks (B1), Sediment Deposits (B2), Drift Deposits (B3), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains >20,000 sf of emergent marsh; and portions within 25-ft of a watercourse	This riparian wetland is a small portion of a large wetland complex that extends off-site to the north. It is located south of Unity Road and adjacent to an aggregate base timber harvest road within a proposed access road area. The timber harvest road separates this wetland from W56. S10 flows from the large emergent marsh complex southerly through this wetland, under the timber harvest road through culverts and through wetland W56 as watercourse S11.



Figure Identifier	Wetland Field Designation	Wetland Classification(s) ¹	Dominant Vegetation	Hydric Soil Criteria and Indicator	Evidence of Hydrology	Wetland of Special Significance (WoSS)	Additional Comments	
W58, W59	02RKH/02RKI/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, broadleaved meadowsweet, steeplebush Herbs: sensitive fern, broad-leaf cat-tail, pointed broom sedge, yellow green sedge, fowl manna grass, common marsh bedstraw, lamp rush, spotted touch-me-not, bluejoint, eastern poison ivy, interrupted fern, three-seed sedge, late goldenrod, eastern marsh fern, cottongrass bulrush, pickerelweed, northern water-horehound, European bur-reed, common duckweed, rice cut grass, arrow-leaf tearthumb, coon's-tail, three-leaf goldthread, bristly dewberry, wrinkle-leaf goldenrod, stinging nettle, royal fern, slender wood reed, three-way sedge, lesser bladder sedge, shallow sedge, variegated scouring rush, fringed sedge	F2: Loamy Gleyed Matrix, F3: Depleted Matrix	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Marks (B1), Sediment Deposits (B2), Inundation Visible on Aerial Imagery (B7), Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Drainage Patterns (B10), Dry-Season Water Table (C2), Presence of Reduced Iron (C4), Saturation Visible on Aerial Imagery (C9), Stunted or Stressed Plants (D1), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Yes: contains >20,000 sf of emergent marsh	This is a large wetland complex that is located south of Unity Road and extends off-site to the northeast and southwest. It is primarily forested on-site, however these are large complexes of interspersed emergent and open water, forested patches, dense shrub thickets, and fringed by forested wetland. Also contains a heron rookery.	
W60	02CFI	PFO	Trees: balsam fir, red maple Shrub/Saplings: balsam fir, red maple, gray birch, speckled alder Herbs: broad-leaf cat-tail, fringed sedge, sensitive fern, fowl manna grass	F3: Depleted Matrix	Saturation (A3), Water Stained Leaves (B9), Drainage Patterns (B10)	No	Isolated wetland south side of Unity Road.	
W61	02RKJ	PSS	Trees: red maple, gray birch Shrub/Saplings: common winterberry, broad-leaved meadowsweet Herbs: sensitive fern, royal fern	F3: Depleted Matrix	Sparsely Vegetated Concave Surface (B8), Water Stained Leaves (B9), Presence of Reduced Iron (C4), Geomorphic Position (D2), Shallow Aquitard (D3), Microtopographic Relief (D4), FAC-Neutral Test (D5)	Potentially, contains PSVP09	Small, isolated wetland located south of Unity Road. Contains PSVP09.	
W62	02CFF	PFO	Trees: balsam fir, red maple, quaking aspen, gray birch Shrub/Saplings: red maple, green ash, common winterberry Herbs: sensitive fern, dwarf red raspberry	F6: Redox Dark Surface	Algal Mat or Crust (B4), Water Stained Leaves (B9), Oxidized Rhizospheres on Living Roots (C3)	No	Isolated wetland depression located north side of Unity Road. Contains a PVP10.	

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



Table 2. Summary of Delineated Watercourses

Figure Identifier	Watercourse /Waterbody Field Designation	Flow Type	Bankfull Width (ft)	Ordinary High Water Mark Width (ft)	Dominant Substrates	Jurisdiction	Additional Comments
S01	S01RK	Perennial	8	8	Bedrock, stones, sand	MDEP, Corps	Located east of the Albion Road Substation and flows northerly across the site. Not associated with a wetland on-site. Water striders observed.
S02	S02RK	Perennial	4	4	Sand, stone	MDEP, Corps	Located east of the Albion Road Substation and flows northerly through the western side of wetland W09. Water striders observed.
S03	S03RK	Intermittent	4	4	Stone, gravel	MDEP, Corps	Located east of the Albion Road Substation and flows northerly across a proposed access road into wetland W19.
S04	S04RK	Pond	50	40	Muck, sand	MDEP, Corps	Apparent man-made pond adjacent to the east side of Richards Road. Located in wetland W23 (01RKJ).
S05	S01CF	Perennial	12-24	8-16	Boulder, cobble, gravel, sand	MDEP, Corps	Located east of Richards Road and flows northeast across survey area within wetland W27. Fish and invertebrates were observed within the watercourse at the time of the survey.
S06	S02CF	Intermittent	4-8	3-6	Cobble, gravel, sand	MDEP, Corps	Located east of East Benton Road along proposed access road. Watercourse flows north across survey area from wetland W36 (01CFR) through wetland (01CFS). Invertebrates observed at time of survey.
S07	none	Perennial	50-60	50-60	Silt, boulder	MDEP, Corps	Fifteenmile Stream flows west to east across site through wetlands W42 and W43. Fish observed.
S08	S04RK S03CF	Perennial	5-12	8	Sand, stone, gravel, muck	MDEP, Corps	Begins as a culvert outlet on the north side of Bog Road, flowing southerly within wetland W43. Becomes diffuse in open water habitat along Fifteenmile Stream. Water striders observed.
S09	S03CF	Perennial	6-8	4-6	Muck, gravel, boulder	MDEP, Corps	Perennial stream segment flowing south from ponded area created by beaver activity within watercourse. Open water and emergent wetland W50 extends northeast off-site.
S10	S05RK	Perennial	8	5	Silt, stone	MDEP, Corps	Located southeast of Unity Road and crosses under the existing timber harvest road, and through a proposed access road area. Flows southerly from a large open water/emergent marsh wetland through wetland W57 and into a culvert inlet. The culvert outlet is watercourse S11 and wetland W56. Water striders observed.
S11	S06RK S07RK	Perennial	8-10	4-5	Silt, stone, muck	MDEP, Corps	Located southeast of the Unity Road and crosses under the existing timber harvest road, and through a proposed access road area. Flows southerly from a culvert outlet. The culvert inlet is watercourse S10 and the stream flows through wetland W56. Water striders and fish observed.



Table 3. Summary of Potential Vernal Pools

Figure Identifier	Potential Vernal Pool Field Designation	MDEP Significant Vernal Pool	Origin	Hydrology	Additional Comments
PVP01	PVP02CF	No	Non-natural	Ephemeral	Depression created by logging activities. Located north of Albion Road along proposed access road in wetland W12.
PVP02	PVP01CF	No	Non-natural	Ephemeral	Depression created by logging activities. Located north of Albion Road along proposed access road in wetland W14.
PSVP03	PSVP01RK	Potentially	Natural	Ephemeral	Natural depression located in forested and scrub shrub wetland W32. Considered potentially significant due to natural origin, and ponded water and frog species were observed during the survey.
PVP04	PVP03CF	No	Non-natural	Ephemeral	Impounded by field road. Located within wetland W37 along proposed access road off East Benton Road.
PSVP06	PSVP04RK	Potentially	Natural	Ephemeral	Natural, isolated wetland depression situated. Located south of Unity Road. Also mapped in wetland W51. Considered potentially significant due to natural origin.
PSVP07	PSVP02RK	Potentially	Natural	Ephemeral	Natural, isolated wetland depression situated in forested upland. Located adjacent to timber harvest road in a potential access area south of Unity Road. The pool basin is predominantly devoid of vegetation. Also mapped as wetland W54. Considered potentially significant due to natural origin.
PVP08	PVP03RK	No	Non-natural: borrow pit/excavation	Permanent	Old borrow pit excavation situated in forested upland. Located adjacent to timber harvest road in a potential access area south of Unity Road. Not considered potentially significant due to non-natural origin.
PSVP09	PSVP05RK	Potentially	Natural/Modified	Ephemeral	Isolated wetland depression located in wetland W61 that has been modified by logging activities.
PVP10	PVP05CF	No	Non-natural	Ephemeral	Impounded depression next to Unity Road.
PSVP11	PSVP01EB	Potentially	Natural	Ephemeral	Natural depression located in forested wetland W21. Considered potentially significant due to natural origin and ponded water. No inlet or outlet.



4.0 REGULATORY DISCUSSION

4.1 FEDERAL AND STATE WETLANDS AND WATERCOURSES

The Corps and MDEP regulate the wetlands and watercourses (e.g., streams) identified within the Project Site under the provisions of Section 404 of the CWA. The Corps (Federal Register 1982) and the U.S. Environmental Protection Agency (EPA; Federal Register 1980) jointly define wetlands as:

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

The diagnostic environmental characteristics that are used to identify a wetland are encompassed by a three-factor system: including predominance of hydrophytic vegetation, hydric soil and evidence of wetland hydrology. In Maine, both the Corps and the MDEP utilize this approach to define and identifying wetlands.

4.1.1 Federal Wetland and Watercourse Regulations

On April 21, 2020, the EPA and the Corps published the Navigable Waters Protection Rule to define "waters of the United States" (WoTUS) in the *Federal Register*, which took effect on June 22, 2020. This Rule excludes federal jurisdiction to regulate impact to isolated wetlands, wetlands that do not have a surficial connection to a navigable water (adjacent), or ephemeral watercourses. The Corps regulates dredging or filling of WoTUS, which include Traditional Navigable Waters (TNW) and their tributaries, wetlands abutting TNW and their tributaries, and other waters or wetlands where degradation or destruction could affect interstate or foreign commerce. The Corps issued a GP for the State of Maine that merges the federal and state permit review process for many applications. The delineated wetlands are assumed to be within the Corps jurisdiction however that status can be verified by submitting a formal Jurisdictional Determination to the Corps for individual wetlands.

Under the Corps GP, wetland alterations less than 15,000 square feet (sf) may be eligible for a Corps Category 1 Self Verification Notification Form (SVNF) submittal, provided the project meets the conditions of the GP for SVNF eligibility. If there are wetland impacts and tree clearing is required as part of the project, a Corps Category 2 Pre-Construction Notification (PCN) under the GP will likely be required due to potential impact to northern long-eared bat (*Myotis septentrionalis*), a species listed under the federal Endangered Species Act. Alterations that affect between 15,000 and 43,560 sf (1 acre) of freshwater wetlands are typically eligible for a Corps PCN and require wetland compensation. Projects that do not meet the conditions of the Corps GP may require an Individual Corps Permit.

4.1.2 Maine Wetland and Watercourse Regulations

In Maine, wetlands and waterbodies, as well as other protected natural resources, are regulated by the MDEP under 38 M.R.S.A. §§ 480-A – 480-JJ, the NRPA. Regulated activities include impacts that are in, over, and in some cases adjacent to wetlands, watercourses, and waterbodies. Activities that do not



impact a wetland or that impact less than 4,300 sf of wetland are usually exempt from NRPA Tier permitting requirements. This exemption does not apply if the impact is:

- 1. In, on, or over a coastal wetland, great pond, river, stream, or brook;
- 2. Within 25 ft of those resources identified above, or is more than 25 ft and no erosion control is used;
- 3. In a shoreland zone or a wetland protected by the shoreland zone;
- 4. Part of a wetland with more than 20,000 sf of open water or emergent vegetation, except artificial impoundments;
- 5. In a peatland;
- 6. Part of a larger project; or
- 7. In Significant Wildlife Habitat.

Typically, projects with cumulative impacts to freshwater wetlands between 4,300 but less 15,000 sf are eligible for review under the NRPA Tier 1 process. Alterations that affect between 15,000 and 43,560 sf (1 acre) of freshwater wetlands are eligible for the NRPA Tier 2 review process, and Projects within this Tier that result in direct wetland impact typically require wetland compensation. Direct impacts do not include shading or indirect impacts. Cumulative freshwater wetland impacts that exceed 1 acre typically require a NRPA Tier 3 review. Impacts to WoSS, rivers, streams and brooks, great ponds, and Significant Wildlife Habitat typically require an Individual NRPA Permit.

4.2 FEDERAL AND STATE VERNAL POOLS

Maine NRPA Chapter 335, Significant Wildlife Habitat, regulates Significant Vernal Pools (SVPs) as Significant Wildlife Habitat. Chapter 335 details specific definitions and standards regarding characterization and protection of SVPs in Maine. Based on KA's data, there are two SVPs, SVP03 and SVP05, located within the Project Site. Four Potentially Significant Vernal Pools (PSVP03, PSVP06, PSVP07, and PSVP09) were identified by Stantec within the Project Site. All SVPs and PSVPs are preliminarily presumed to be SVPs and portions of the associated 250-foot Critical Terrestrial Habitat, as defined by the NRPA, are located within the Project Site. Final determination of significance status will require formal vernal pool season surveys for the PSVPs and submission of Maine State Vernal Pool Assessment forms to MDIFW (PSVPs and SVPs).

Certain development projects in Maine may also be regulated under Chapter 375, Site Location of Development (Site Law). Under Site Law, MDEP may regulate vernal pools that are ecologically significant on a landscape level but do not meet the definition of a SVP. Under some circumstances, MDEP will review and possibly limit development within or beyond 250 feet of these high-functioning vernal pools.

The Corps update to the Maine GP, which went into effect in October 2020, indicates that the Corps would only regulate impacts to vernal pools if the pool is (a) located within a jurisdictional wetland and (b) there is a discharge of dredged or fill material proposed for the vernal pool depression. Only in the case that both (a) and (b) are met would compensatory mitigation potentially be required.

Based on Stantec's vernal pool survey, the identified potential vernal pools meet the Corps' definition of a vernal pool. Pending seasonally appropriate vernal pool surveys, the Corps may regulate impacts to



these potential vernal pools if the vernal pool depression is impacted by dredge or fill activities and the wetland is determined to be a WoTUS.

4.3 LOCAL REGULATIONS

Stantec reviewed the list of ordinances on the municipal website on September 25, 2020 and determined the environmental protection related Town of Benton ordinances is limited to the "Shoreland Zoning Ordinance for the Town of Benton". Watercourses and some wetlands delineated on-site meet the definitions of a "freshwater wetland" and/or "stream" that have a shoreland zone, and therefore, meet the local permitting requirements specific to environmental resources located in mapped shoreland zones.

The Town of Benton Shoreland Zone Ordinance "applies to all land areas within 250 feet, horizontal distance, of the normal high-water line of great ponds; within 250 feet, horizontal distance, of the normal high-water line of rivers; within 250 feet, horizontal distance, of the upland edge of a freshwater wetland; and within 75 feet, horizontal distance, of the normal high-water line of a stream. This Ordinance also applies to any structure built on, over or abutting a dock, wharf or pier, or other structure extending or located below the normal high-water line of a water body or within a wetland."

Transmission lines may be allowable as an "Essential Service". Once a transmission layout is established, Stantec recommends further consultation with the Town Code Enforcement Officer to determine what restrictions would be placed on the proposed development within the Project Site.

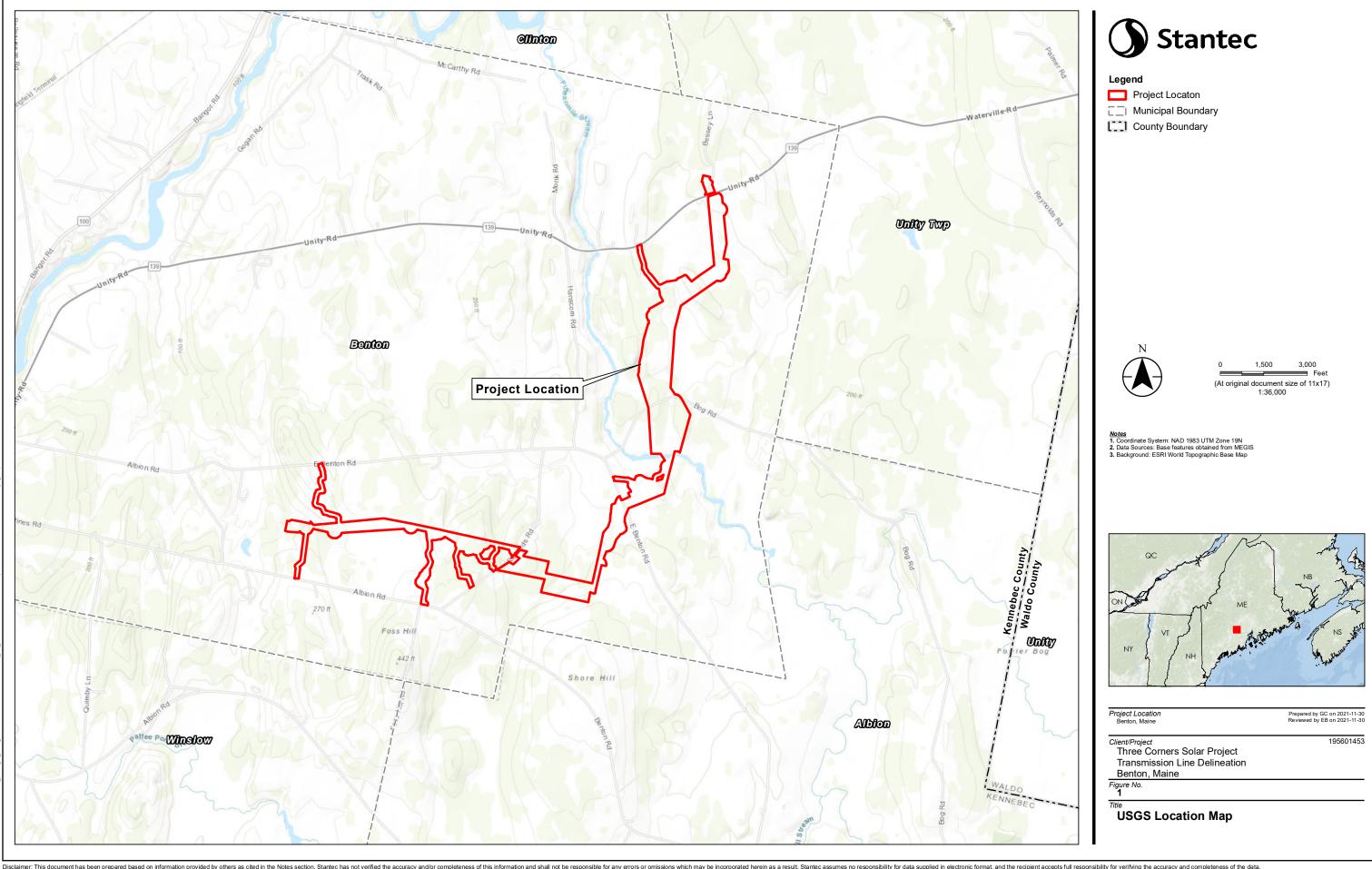


APPENDICES

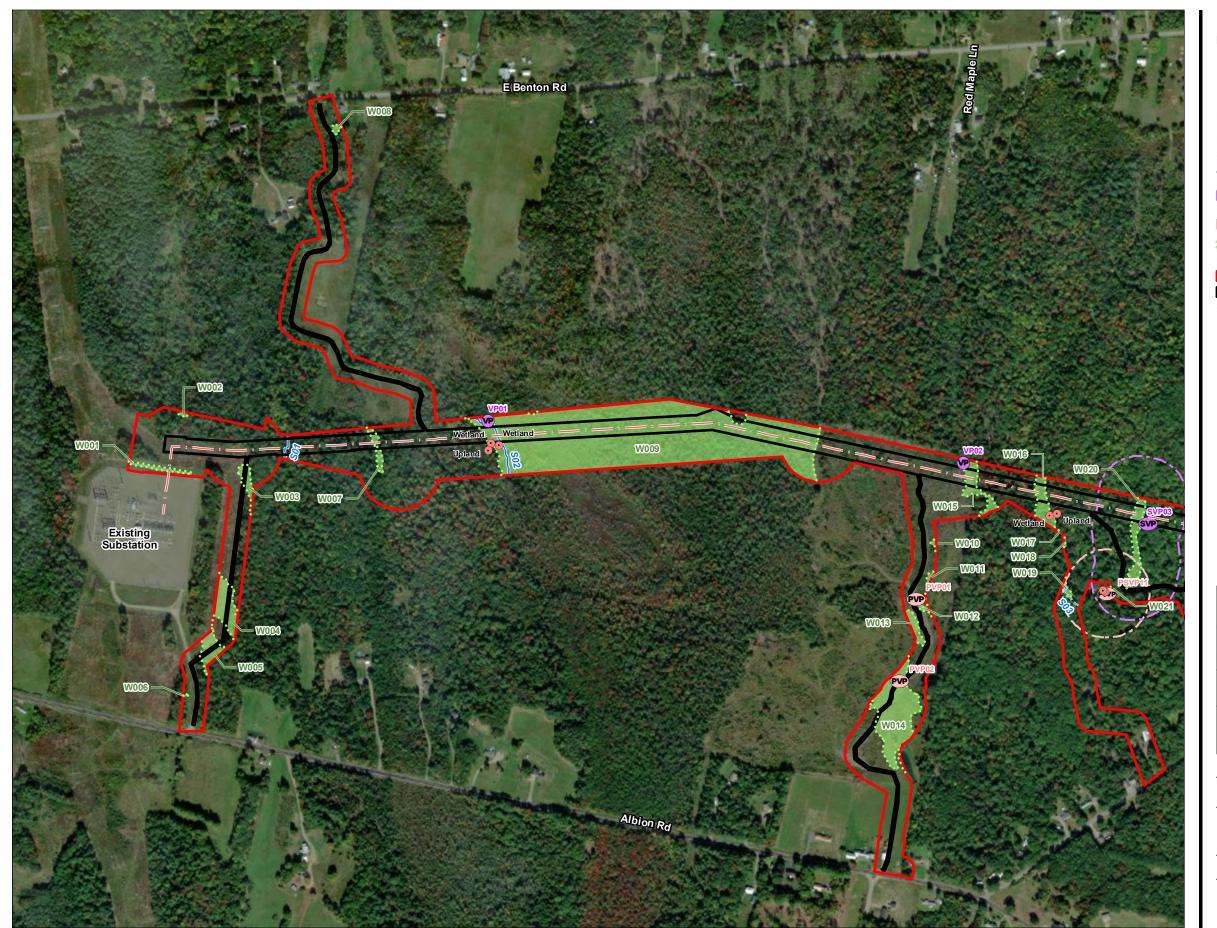


APPENDIX A FIGURES





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.





Army Corps Location Plot

Potential Significant Vernal Pool

PVP Potential Vernal Pool

Delineated Intermittent Stream

Delineated Perennial Stream

250' Significant Vernal Pool Critical Terrestrial Habtat

250' Potential Significant Vernal Pool Critical Terrestrial Habtat

Delineated Wetland

Open Water Feature

Delineation Limits

Limit of Disturbance

Overhead Transmission Line



(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 CPS data is within 1 meter of actual position.

3. Coordinate System: NAD 1983 UTM Zone 19N FT

4. Data Sources: Base features obtained from MEGIS.

5. Vernal pool data collected by Kleinschmidt and Associates, 2019 and 2020.

6. Background: Aerial imagery provided by ArcGIS Online World Imagery Mapping Services.



Project Location Benton, Maine

Prepared by GC on 2021-12-16 Reviewed by EB on 2021-12-16

195601453

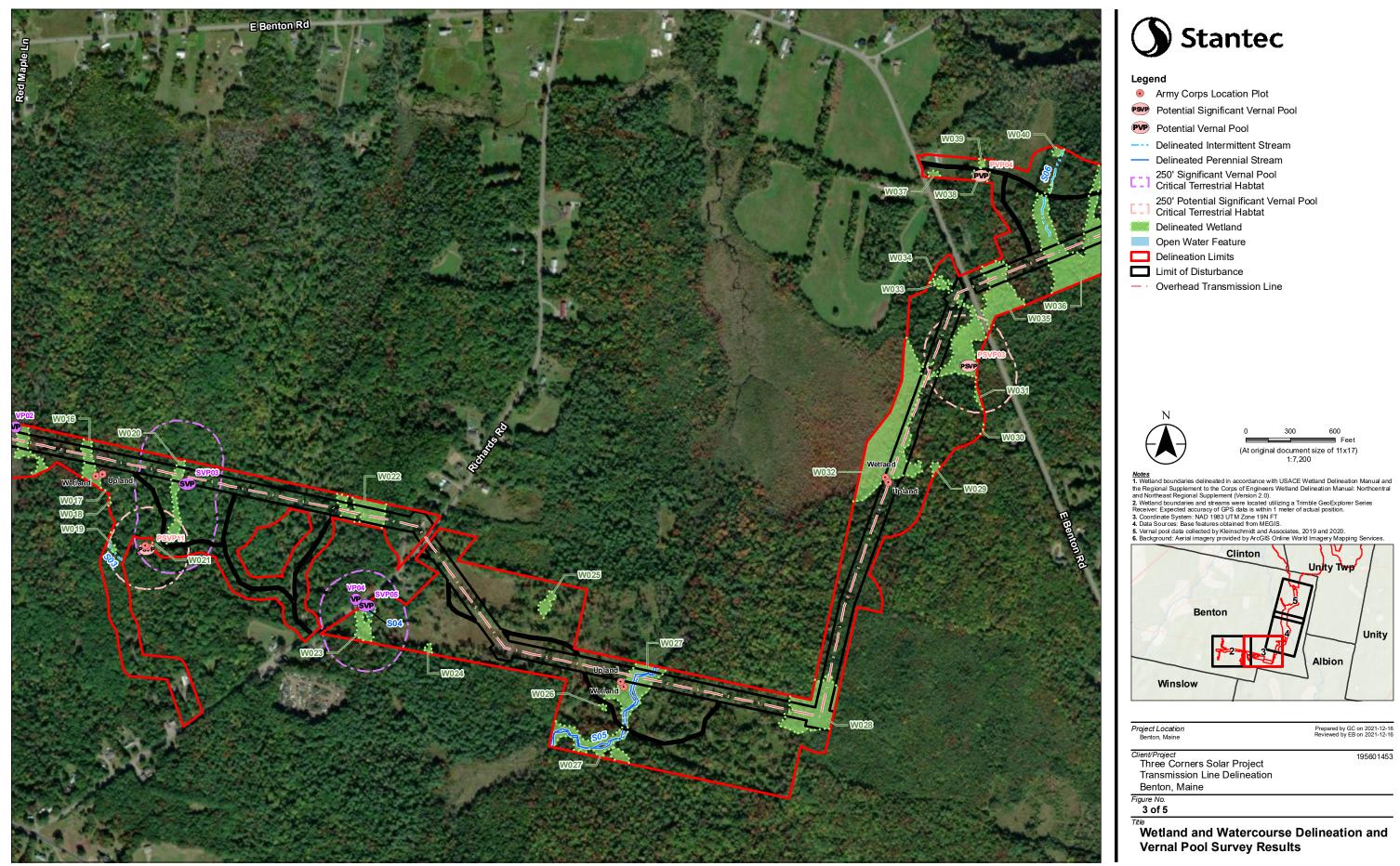
Client/Project
Three Corners Solar Project Transmission Line Delineation Benton, Maine

Figure No.

2 of 5

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.





Army Corps Location Plot

Potential Significant Vernal Pool

Delineated Intermittent Stream

Delineated Perennial Stream

Critical Terrestrial Habtat

250' Potential Significant Vernal Pool Critical Terrestrial Habtat

Delineated Wetland

Open Water Feature

Delineation Limits

Limit of Disturbance

Overhead Transmission Line

(At original document size of 11x17) 1:7,200

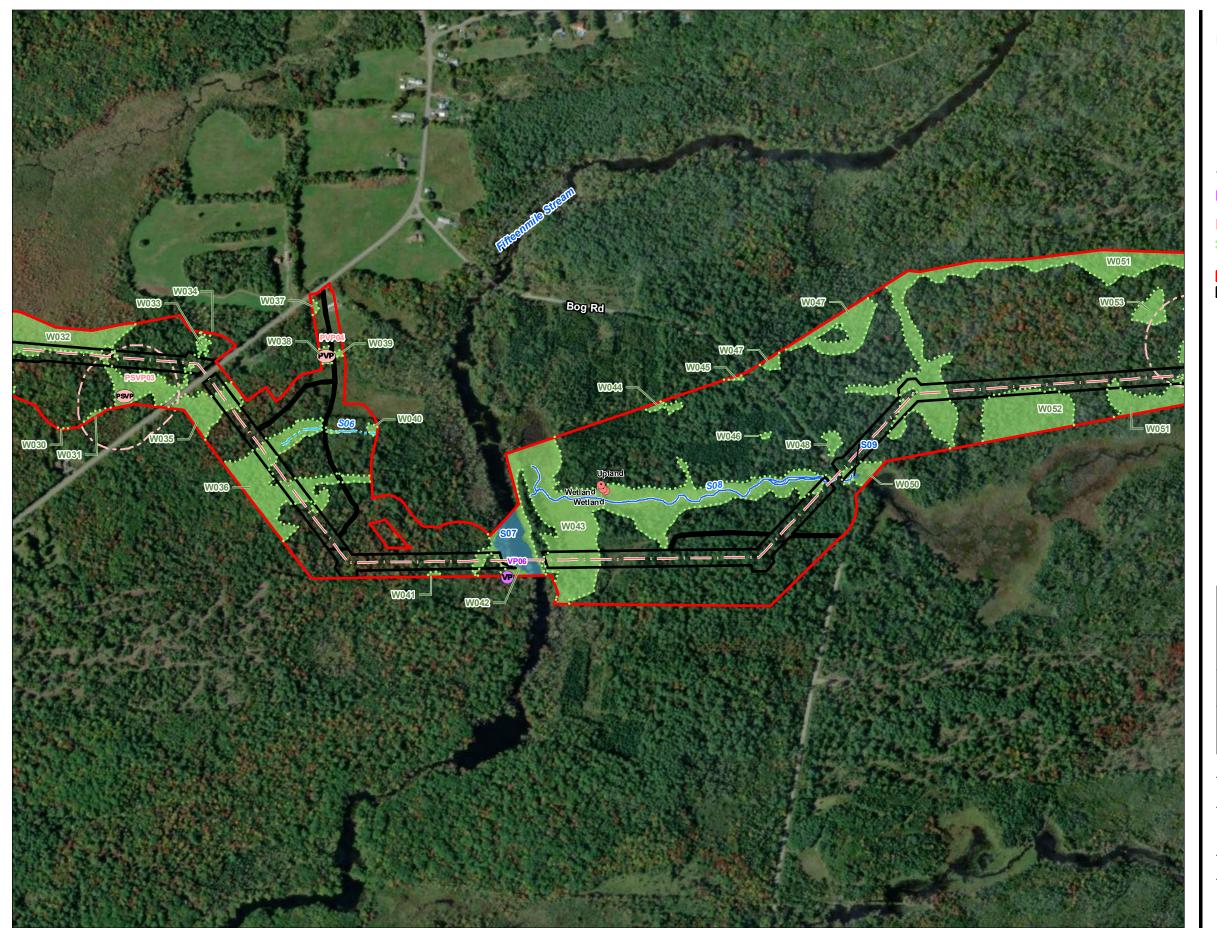


Prepared by GC on 2021-12-16 Reviewed by EB on 2021-12-16

195601453

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.





Legend

Army Corps Location Plot

Potential Significant Vernal Pool

PVP Potential Vernal Pool

--- Delineated Intermittent Stream

Delineated Perennial Stream

250' Significant Vernal Pool Critical Terrestrial Habtat

250' Potential Significant Vernal Pool Critical Terrestrial Habtat

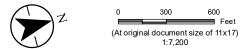
Delineated Wetland

Open Water Feature

Delineation Limits

Limit of Disturbance

Overhead Transmission Line



Notes

1. Wetland boundaries delineated in accordance with USACE Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Regional Supplement (Version 2.0).

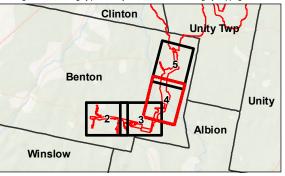
2. Wetland boundaries and streams were located utilizing a Trimble GeoExplorer Series Receiver. Expected accuracy of GPS data is within 1 meter of actual position.

3. Coordinate System: NAD 1983 UTM Zone 19N FT

4. Data Sources: Base features obtained from MEGIS.

5. Vernal pool data collected by Kleinschmidt and Associates, 2019 and 2020.

6. Background: Aerial Imagery provided by ArcGIS Online World Imagery Mapping Services.



Project Location Benton, Maine

Prepared by GC on 2021-12-16 Reviewed by EB on 2021-12-16

195601453

Client/Project
Three Corners Solar Project Transmission Line Delineation

Benton, Maine

Figure No. 4 of 5

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.





Legend

Army Corps Location Plot

Potential Significant Vernal Pool

PVP Potential Vernal Pool

--- Delineated Intermittent Stream

Delineated Perennial Stream

250' Significant Vernal Pool Critical Terrestrial Habtat

250' Potential Significant Vernal Pool Critical Terrestrial Habtat

Delineated Wetland

Open Water Feature

Delineation Limits

Limit of Disturbance

Overhead Transmission Line



(At original document size of 11x17) 1:7,200

Notes
1. Wetland boundaries delineated in accordance with USACE Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Regional Supplement (Version 2.0).
2. Wetland boundaries and streams were located utilizing a Trimble GeoExplorer Series Receiver. Expected accuracy of GPS data is within 1 meter of actual position.
3. Coordinate System: NAD 1983 UTM Zone 19N FT
4. Data Sources: Base features obtained from MEGIS.
5. Vernal pool data collected by Kleinschmidt and Associates, 2019 and 2020.
6. Background: Aerial imagery provided by ArcGIS Online World Imagery Mapping Services.



Project Location Benton, Maine

Prepared by GC on 2021-12-16 Reviewed by EB on 2021-12-16

195601453

Client/Project
Three Corners Solar Project Transmission Line Delineation Benton, Maine

Figure No.

5 of 5

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.





Photo 15: Intermittent stream S06. View upstream of channel. Stantec. July 29, 2020.



Photo 16: Perennial stream S08. View downstream from Bog Road. Stantec. July 29, 2020.





Photo 17: Fifteenmile Stream (S07). Looking south across stream channel. Stantec. July 29, 2020.



Photo 18: Fifteeenmile Stream (S07). View east from north side. Stantec. July 29, 2020.





Photo 19: Potential Vernal Pool PVP03, within Wetland W29. Stantec. July 29, 2020.



Photo 20: Looking south along perennial watercourse S02. Stantec. July 27, 2020.





Photo 21: Looking north within the forested (PFO) wetland W20. Stantec. July 28, 2020.



Photo 22: Looking south within the emergent (PEM) and scrub shrub (PSS) wetland W54 and potential significant vernal pool PSVP07. Stantec. July 30, 2020.





Photo 23: Looking south within wetland W51 with recent timber harvest. Stantec. July 30, 2020.



Photo 24: Looking north within the scrub shrub (PSS) portion of wetland W56. Stantec. July 31, 2020.





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



APPENDIX C REPRESENTATIVE CORPS PAIRED DATA PLOT FORMS



WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project	City/County: Benton/Kennebec Sampling Date: 7/27/2020
Applicant/Owner: Three Corners Solar, LLC	State: ME Sampling Point: Upland-W09
Investigator(s): Rodney Kelshaw	Section, Township, Range:
Landform (hillslope, terrace,etc.): Footslope Loc	al relief (concave, convex, none): Concave Slope (%) 3 - 8
Subregion (LRR or MLRA): LRR R Lat: 44.57	5404 Long: <u>-69.500771</u> Datum: <u>NAD83</u>
Soil Map Unit Name:	NWI Classification: UPL
Are climatic / hyrologic conditions on the site typical for this time	e of year? Yes X No (if no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysignificantly	disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally pro	oblematic? (if needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sampl	ling point locations transacts important features atc
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area within a Wetland? Yes NO X
Hydric Soil Present? Yes NoX	16510X
Wetland Hydrology Present? Yes NoX	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	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 Sulfi	de Odor (C1) Crayfish Burrows (C8)
	spheres on Living Roots (C3) Saturation Visible in Aerial Imagery (C9)
	educed Iron (C4) Stunted or Stressed Plants (D1)
	duction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surf	
Inundation Visible on Aerial Imagery (B7) Other (Explain	
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 No _ X
Saturation Present? Yes No X Depth (inches)	
Describe Recorded Data (stream gauge, monitoring well, aerial)	photos previous inspections) if available:
Describe Necorded Data (stream gauge, monitoring well, aeriai j	priotos, previous inspections), ii available.
Remarks:	

VEGETATION - Use scientific names of plantsSampling Point: **Upland-W09**

Tree Stratum	(Plot Size:	30'radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet: Number of Dominant Species
Abies balsamea		<u>.</u>	50	Χ	FAC	That Are OBL, FACW, or FAC: 3 (A)
Acer rubrum			30	Χ	FAC	Total Number of Dominant
Thuja occidentalis			10		FACW	Species Across All Strata: 6 (B)
Betula alleghaniensis			10		FAC	· ———
			100	_= Total Cov	rer	Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)
						Prevalence Index Worksheet:
Should Stratum	(Plot Size:	15'radius \	Absolute % Cover	Dominant Species?	Indicator Status	OBL species 0 x 1 0 FACW species 10 x 2 20
Shrub Stratum	(FIOL SIZE.					· — — —
Abies balsamea			25	Х	FAC	FAC species 117 x 3 351
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)
						Prevalence Index = B/A = 3
						Hydrophytic Vegetation Indicators:
				Dominant		1- Rapid Test For Hydrophytic Vegetation
Herb Stratum	(Plot Size:	5'radius)	% Cover	Species?	Status	2- Dominance Test is > 50%
Maianthemum canade	ense		5	Χ	FACU	X 3- Prevalence Index is =< 3.0
Aralia nudicaulis			3	Χ	FACU	X 3- Prevalence Index is =< 3.0
Dendrolycopodium ob	scurum		2	Х	FACU	4- Morphological Adaptations
			10	_= 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	ver	Hydrophytic Vegetation Present? Yes X No
Remarks: (Include photo nu	ımbers here	or on a sep	arate shee	t.)		

SOIL Sampling Point: Upland-W09

DIL								Sampling Point: Upland-W09	
Depth	Matrix				Redo	x Featur	es		
inches	Color	%	Color	%	Type	Loc	Texture	Remarks	
0-2	7.5YR 2.5/2	100					Peat		
2-3	7.5YR 5/2	100					Sandy Loam	Stony	
3-12	7.5YR 3/4	100					Sandy Loam	Stony	
12-16	10YR 4/6	100					Sandy Loam	Stony	
16-18	2.5Y 4/4	100					Sandy Loam	Stony	
18-20	2.5Y 4/4	98	10YR 4/6	2	С	M	Sandy Loam	Stony	
Hydric Se	oil Indicators:							Indicators for Problematic Soils:	
	stosol (A1)				Polyvalu	e Below S	urface (B15)	2 cm Muck (A10)	
Histic Epipedon (A2)					Thin Dar	k Surface	(S9)	Coast Prarie Redox (A16)	
Bla	Black Histic (A3) Loamy Mucky Mineral (F1)					eral (F1)	5 cm Mucky Peat or Peat (S3)		
Ну	drogen Sulfide	(A4)	Loamy Gleyed Matric (F2)				tric (F2)	Dark Surface (S7)	
Stratified Layers (A5)					Depleted	d Matrix (f	=3)	Polyvalue Below Surface (S8)	
Depleted Below Dark Surface (A11)						ark Surfac		Thin Dark Surface (S9)	
	Thick Dark Surface (A12)					d Dark Sur		Iron-Manganese Masses (F12)	
	ndy Mucky Mir	-		Redox Depressions (F8)			s (F8)	Piedmont Floodplain Soils (F19)	
	ndy Gleyed Ma	-)					Mesic Spodic (TA6)	
	ndy Redox (S5)							Red Parent Material (F21)	
	Stripped Matrix (S6)							Very Shallow Dark Surface (TF12)	
Da	rk Surface (S7)							Other (Explain in Remarks)	
Restricti	ve Layer (if obs	erved):							
		Type:					Hydrid	Soil Present? Yes No X	
	Depth (in	ches):							
Remark	s·								

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project	City/Co	ounty: <u>Benton/Kenn</u>	iebec	Sampling Date: 7/2	7/2020		
Applicant/Owner: Three Corners Solar, LLC			State: ME	Sampling Point: \(\)	Wetland-W09		
Investigator(s): Rodney Kelshaw	Section	on, Township, Range:					
Landform (hillslope, terrace,etc.): Floodplai	none): <u>Linear</u>	Slope (%) _(0 - 3				
Subregion (LRR or MLRA): LRR R	Lat: 44.575502	Long:6	69.500534	Datum: NA	D83		
Soil Map Unit Name:			NWI Classif	fication: PEM			
Are climatic / hyrologic conditions on the site	e typical for this time of ye	ear? Yes <u>X</u> No	(if no, e	explain in Remarks.)			
Are Vegetation, Soil, or Hydrolog	gysignificantly distu	rbed? Are "Normal	Circumstances'	" present? Yes X	No		
Are Vegetation, Soil, or Hydrolog	gynaturally problem	atic? (if needed, exp	olain any answers	s in Remarks.)			
SUBMANDY OF FINIDINGS. Attack site w	an shawing samuling n	sint lesstions tues		tant factures ats			
SUMMARY OF FINDINGS - Attach site m				iani reatures, etc.			
	X No	Is the Sampled Area within a Wetland?		, v, N			
Hydric Soil Present? Yes	XNo			es X No	_		
Wetland Hydrology Present? Yes	X No	if yes, optional Wet	tland Site ID: W10				
Remarks: (Explain alternative procedures here or in a s	separate report.)						
HYDROLOGY							
Wetland Hydrology Indicators:			Secondary India	cators (minimum of tw	o required)		
Primary Indicators (minimum of one is required:	check all that apply)		Surface So	oil Cracks (B6)			
Surface Water (A1)	Water-Stained Leaves	s (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 Odd	or (C1)	Crayfish Burrows (C8)				
Sediment Deposits (B2)	Oxidized Rhizosphere	es 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 Reductio	n in Tilled Soils (C6)	X Geomorphic Position (D2)				
Iron Deposits (B5)	Thin Muck Surface (C	7)	Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Rem	•	Microtopographic Relief (D4)				
Sparsley Vegetated Concave Surface (B8)	Other (Explain in Neil	iarkoj	FAC-Neutral Test (D5)				
			IAC-Neut	Tai Test (D3)			
Surface Water Present? Yes NoX	Depth (inches)	_					
Water Table Present? Yes No X	(Depth (inches)	Wetland H	Hydrology Prese	ent? Yes X No)		
Saturation Present? Yes X No	Depth (inches) 0	_					
Describe Recorded Data (stream gauge, mo	nitoring well aerial photo	s previous inspection	ns) if available				
Describe Recorded Data (stream gauge, mor	mitoring wen, derial photos	s, previous inspection	is, ii availabie.	•			
Remarks:							

VEGETATION - Use scientific names of plantsSampling Point: **Wetland-W09**

Tree Stratum Abies balsamea Fraxinus nigra	(Plot Size:	30'radius)	Absolute % Cover 10 2 12	Dominant Species? X = Total Cov	Status FAC FACW	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A) Total Number of Dominant Species Across All Strata: 6 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Shrub Stratum Ilex verticillata	(Plot Size:	15'radius)	Absolute % Cover 5	Dominant Species? X = Total Cov	Status FACW	Prevalence Index Worksheet: OBL species 43 x 1 43 FACW species 87 x 2 174 FAC species 10 x 3 30 FACU species 0 x 4 0
Herb Stratum	(Plot Size:	5'radius)	Absolute % Cover	Dominant Species?	Indicator Status	UPL species 0 x 5 0 Column Totals 140 (A) 247 (B) Prevalence Index = B/A = 1.76 Hydrophytic Vegetation Indicators: 1- Rapid Test For Hydrophytic Vegetation
Spiraea latifolia Solidago gigantea Carex trisperma Spiraea tomentosa Glyceria striata Thelypteris palustris			25 25 20 20 15	X X X	FACW FACW OBL FACW OBL FACW	X 2- Dominance Test is > 50% X 3- Prevalence Index is =< 3.0 4- Morphological Adaptations 5- Problematic Hydrophytic Vegetation
Carex lurida Scirpus cyperinus Typha latifolia			3 3 2 123	_= Total Cov	OBL OBL	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.
Woody Vine Stratum	(Plot Size:	30'radius)	Absolute % Cover	Dominant Species? = Total Cov	Status	Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall. Woody Vines- All woody vines greater than 3.28ft in height. Hydrophytic
Remarks: (Include photo nu	umbers here	or on a sep	arate shee	t.)		Vegetation Present? Yes X No

IL								Sampling Point: Wetland-W09
Depth	Matrix			0.4		x Featur		
inches		<u>%</u>	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	M	Sandy Loam	Very Stony
His His Bla Hy Str X De Th Sai	oil Indicators: stosol (A1) stic Epipedon (A) ack Histic (A3) drogen Sulfide ratified Layers (pleted Below E ick Dark Surfac andy Mucky Mir andy Gleyed Ma	(A4) A5) Dark Sur e (A12) Deral (S ttrix (S4	1)		Thin Dar Loamy N Loamy G Depleted Redox D Depleted	e Below S k Surface Aucky Mir ileyed Ma d Matrix (I ark Surfac d Dark Sur epression	neral (F1) tric (F2) F3) ce (F6) face (F7)	Indicators for Problematic Soils: 2 cm Muck (A10) Coast Prarie Redox (A16) 5 cm Mucky Peat or Peat (S3) Dark Surface (S7) Polyvalue Below Surface (S8) Thin Dark Surface (S9) Iron-Manganese Masses (F12) Piedmont Floodplain Soils (F19) Mesic Spodic (TA6) Red Parent Material (F21)
	ipped Matrix (S rk Surface (S7)	56)						Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
Restricti	ive Layer (if obse	erved):						
		Туре:	Stony				Hydrid	Soil Present? Yes X No
	Depth (in	ches):	14					
Remark	s:							

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Ihree Corners Solar Project	City/Co	ounty: <u>Benton/Kenn</u>	ebec	_Sampling Date: _/	/2//2020		
Applicant/Owner: Three Corners Solar, LLC			State: ME	Sampling Point:	: Wetland-W09		
Investigator(s): Rodney Kelshaw		on, Township, Range:	-				
Landform (hillslope, terrace,etc.): Footslop	Lat: 44.575534	ef (concave, convex, i					
Subregion (LRR or MLRA): LRR R	Long:6	69.500712	Datum: N	NAD83			
Soil Map Unit Name:				ification: PFO			
Are climatic / hyrologic conditions on the sit	•			explain in Remarks	•		
Are Vegetation, Soil, or Hydrolo	-· - ·	rbed? Are "Normal			X_NO		
Are Vegetation, Soil, or Hydrolo	gynaturally problem	atic? (if needed, exp	olain any answer	's in Remarks.)			
SUMMARY OF FINDINGS - Attach site m	nap showing sampling po	oint locations, trar	sects. impor	tant features. et	c.		
	X No	Is the Sampled Area					
		within a Wetland?		Yes X No			
	X No						
Wetland Hydrology Present? Yes	XNo	if yes, optional Wet	and Site ID:	W10			
Remarks: (Explain alternative procedures here or in a	separate report.)						
HYDROLOGY							
Wetland Hydrology Indicators:			Secondary Ind	icators (minimum of	two required)		
Primary Indicators (minimum of one is required	: check all that apply)		Surface S	Soil Cracks (B6)			
Surface Water (A1)	Water-Stained Leaves	s (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 Odd	or (C1)	Crayfish Burrows (C8)				
Sediment Deposits (B2)	Oxidized Rhizosphere		Saturation Visible in Aerial Imagery (C9)				
Drift Deposits (B3)	X Presence of Reduced		Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4)	Recent Iron Reduction	` ,	X Geomorphic Position (D2)				
Iron Deposits (B5)	Thin Muck Surface (C		Shallow Aquitard (D3)				
		,					
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Rem	larks)	Microtopographic Relief (D4) FAC-Neutral Test (D5)				
Sparsley Vegetated Concave Surface (B8)			FAC-Neu	trai Test (D5)			
Surface Water Present? Yes No 2	X Depth (inches)						
Water Table Present? Yes No 2	X Depth (inches)	Wetland I	Hydrology Pres	sent? Yes X	No		
Saturation Present? Yes X No	Depth (inches) 0	_					
Describe Described Data (streets assessed							
Describe Recorded Data (stream gauge, mo	initoring well, aerial photos	, previous inspection	is), if available	/I			
Remarks:							

VEGETATION - Use scientific names of plantsSampling Point: **Wetland-W09**

Tree Stratum	(Plot Size:	30'radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
Abies balsamea			50	Х	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)
Fraxinus nigra			15	X	FACW	·
Acer rubrum			<u>5</u>		FAC	Total Number of Dominant
Betula alleghaniensis			5		FAC	Species Across All Strata:7 (B)
			75	= Total Cov		Percent of Dominant Species
						That Are OBL, FACW, or FAC: 85.7% (A/B)
						Prevalence Index Worksheet:
			Absolute	Dominant	Indicator	OBL species x 1 10
Shrub Stratum	(Plot Size:	15'radius)	% Cover	Species?	Status	FACW species 47 x 2 94
Abies balsamea			15	X	FAC	FAC species 95 x 3 285
Cornus alternifolia			5	Х	FACU	FACU species 5 x 4 20
			20	_= Total Cov	ver .	UPL species 0 x 5 0
						' — — — — — — — — — — — — — — — — — — —
						Column Totals 157 (A) 409 (B)
						Prevalence Index = B/A =2.61
						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%
Solidago rugosa			20	Χ	FAC	
Rubus hispidus			15	Χ	FACW	X 3- Prevalence Index is =< 3.0
Coptis trifolia			15	Х	FACW	4- Morphological Adaptations
Osmunda spectabilis			10		OBL	5- Problematic Hydrophytic Vegetation
Spiraea latifolia			2		FACW	
			62	_= Total Cov	/er	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	ver	Hydrophytic Vegetation
						Present? Yes X No
Remarks: (Include photo no	imbers here	or on a sep	arate shee	t.)		

Nydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Stratified Layers (A5) Stratified Layers (A12) Sandy Mucky Mineral (F1) Sandy Mucky Mineral (F2) Sandy Mucky Mineral (F3) Polyvalue Below Surface (F6) Thin Dark Surface (F6) Thin Dark Surface (F7) Stratified Layers (A5) Sandy Mucky Mineral (F1) First Dark Surface (A11) Sandy Mucky Mineral (F2) Sandy Mucky Mineral (F2) Sandy Mucky Mineral (F3) Piedmont Floodplain Soi Sandy Mucky Mineral (S1) Sandy Redox (S5) Stripped Matrix (F4) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Coast Problematic Soils: Indicators for Problematic Soils: Indicators in Problematic Soils: Indicators for Problematic Soils: Indicators in Problematic Soils: Indicators for Problematic Soils: Indicators in Indicator	<u> </u>					
Aydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Stratified Layers (A5) Sandy Mucky Mineral (F1) Stratified Layers (A12) Sandy Mucky Mineral (F2) Depleted Below Dark Surface (A11) Thic Dark Surface (F6) Thic Dark Surface (A12) Sandy Mucky Mineral (F7) Stratified Layers (A5) Sandy Mucky Mineral (F1) Thic Dark Surface (A12) Sandy Mucky Mineral (F2) Sandy Mucky Mineral (F1) Thic Dark Surface (A12) Sandy Gleyed Matrix (F3) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (F4) Sandy Gleyed Matrix (F4) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (F4) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Restrictive Layer (if observed):	nches Color % Color % Type	lox Features				
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Thin Cark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Mucky Mineral (S1) Redox Dark Surface (F7) Thick Dark Surface (A12) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Restrictive Layer (if observed):		Loc Texture	Remarks			
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Extractified Layers (A5) Thin Dark Surface (F2) Depleted Matrix (F3) Thick Dark Surface (A11) Sandy Mucky Mineral (F1) Depleted Matrix (F3) Polyvalue Below Surface (F7) Thin Dark Surface (F6) Thin Dark Surface (F7) Thin Dark Surface (F7) Thin Dark Surface (F7) Thin Dark Surface (F7) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (F7) Coast Problematic Soils: 2 cm Muck (A10) Coast Prarie Redox (A16) Sand Mucky Peat or Peat Operation of Peat Operation of Mucky Peat or Peat Operation of P	0-5 10YR 2.5/1 100	Muck	Very Stony			
Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (B15) Histosol (A2) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Thick Dark Surface (A11) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Thick Dark Surface (A12) Depleted Depleted Derk Surface (F7) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (F3) Polyvalue Below Surface (S9) Thick Dark Surface (A12) Depleted Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Wery Shallow Dark Surface (F8) Pother (Explain in Remark) Restrictive Layer (if observed):	5-14 2.5Y 4/2 95 10YR 4/6 5 C	M Sandy Loam	Very Stony			
Histosol (A1) Polyvalue Below Surface (B15) Plistic Epipedon (A2) Thin Dark Surface (S9) Coast Prarie Redox (A16) Black Histic (A3) Loamy Mucky Mineral (F1) Stratified Layers (A5) Depleted Matrix (F2) Dark Surface (S7) Stratified Layers (A5) Depleted Matrix (F3) Polyvalue Below Surface (S9) Thick Dark Surface (A12) Depleted Dark Surface (F6) Thin Dark Surface (S9) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Redox Depressions (F8) Piedmont Floodplain Soi Sandy Redox (S5) Stripped Matrix (S4) Dark Surface (S7) Stripped Matrix (S6) Dark Surface (S7) Restrictive Layer (if observed):						
Black Histic (A3) Hydrogen Sulfide (A4) Loamy Gleyed Matric (F2) Stratified Layers (A5) Depleted Matrix (F3) Polyvalue Below Surface X Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Loamy Mucky Mineral (F1) Depleted Matrix (F3) Polyvalue Below Surface (S9) Thin Dark Surface (S9) Iron-Manganese Masses Piedmont Floodplain Soi Mesic Spodic (TA6) Red Parent Material (F2: Very Shallow Dark Surface Other (Explain in Remark Restrictive Layer (if observed):		lue Below Surface (B15)	Indicators for Problematic Soils: 2 cm Muck (A10)			
Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Polyvalue Below Surface X Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Polyvalue Below Surface (S9) Thin Dark Surface (S9) Iron-Manganese Masses Piedmont Floodplain Soi Mesic Spodic (TA6) Red Parent Material (F2: Very Shallow Dark Surface Other (Explain in Remark Restrictive Layer (if observed):	Histic Epipedon (A2) Thin Da	ark Surface (S9)	Coast Prarie Redox (A16)			
Stratified Layers (A5) Depleted Matrix (F3) Polyvalue Below Surface Redox Dark Surface (F6) Thin Dark Surface (S9) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Restrictive Layer (if observed):	Black Histic (A3) Loamy	Mucky Mineral (F1)	5 cm Mucky Peat or Peat (S3)			
XDepleted Below Dark Surface (A11)Redox Dark Surface (F6)Thin Dark Surface (S9)Thick Dark Surface (A12)Depleted Dark Surface (F7)Iron-Manganese MassesSandy Mucky Mineral (S1)Redox Depressions (F8)Piedmont Floodplain SoiSandy Gleyed Matrix (S4)Mesic Spodic (TA6)Sandy Redox (S5)Red Parent Material (F22)Stripped Matrix (S6)Very Shallow Dark SurfaceDark Surface (S7)Other (Explain in Remark Restrictive Layer (if observed):	Hydrogen Sulfide (A4) Loamy	Gleyed Matric (F2)	Dark Surface (S7)			
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Redox Depressions (F8) Piedmont Floodplain Soi Mesic Spodic (TA6) Red Parent Material (F2: Very Shallow Dark Surface Other (Explain in Remark	Stratified Layers (A5) Deplete	ed Matrix (F3)	Polyvalue Below Surface (S8)			
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Redox Depressions (F8) Mesic Spodic (TA6) Red Parent Material (F2: Very Shallow Dark Surface Other (Explain in Remark	X Depleted Below Dark Surface (A11) Redox I	Dark Surface (F6)	Thin Dark Surface (S9)			
Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Red Parent Material (F2: Very Shallow Dark Surface Other (Explain in Remark	Thick Dark Surface (A12) Deplete	ed Dark Surface (F7)	Iron-Manganese Masses (F12)			
Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Red Parent Material (F2: Very Shallow Dark Surface Other (Explain in Remark Restrictive Layer (if observed):	Sandy Mucky Mineral (S1) Redox I	Depressions (F8)	Piedmont Floodplain Soils (F19)			
Stripped Matrix (S6) Dark Surface (S7) Restrictive Layer (if observed): Very Shallow Dark Surface Other (Explain in Remark	Sandy Gleyed Matrix (S4)					
Dark Surface (S7) Other (Explain in Remark Restrictive Layer (if observed):	Sandy Redox (S5)		Red Parent Material (F21)			
Restrictive Layer (if observed):	Stripped Matrix (S6)		Very Shallow Dark Surface (TF12)			
	Dark Surface (S7)		Other (Explain in Remarks)			
Type: Rock/Till Hydric Soil Present? Yes X No	estrictive Layer (if observed):					
	Type: Rock/Till	Hvd	ric Soil Present? Yes X No			
Depth (inches): 14	Depth (inches): 14					
Remarks:	emarks:					

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project	City/Co	unty: <u>Benton/Kennebe</u>	<u>c</u> San	npling Date: <u>7/28/2020</u>			
Applicant/Owner: Three Corners Solar, LLC	State: ME Sampling Point: Upland-W16						
Investigator(s): Rodney Kelshaw	Section, Township, Range:						
Landform (hillslope, terrace,etc.): Side Slope	Local relief	(concave, convex, none	e): Convex	Slope (%) <u>8 - 15</u>			
Subregion (LRR or MLRA): LRR R	Lat: 44.574370	Long: -69.4	87125	Datum: NAD83			
Soil Map Unit Name:			NWI Classificat	ion: UPL			
Are climatic / hyrologic conditions on the site type	oical for this time of yea	r? Yes X No	(if no, expl	ain in Remarks.)			
Are Vegetation, Soil, or Hydrology _	significantly disturb	oed? Are "Normal Circ	umstances" pre	esent? Yes X No			
Are Vegetation, Soil, or Hydrology _	naturally problema	tic? (if needed, explain	any answers in F	Remarks.)			
			_	_			
SUMMARY OF FINDINGS - Attach site map s	showing sampling po	int locations, transec	ts, important	features, etc.			
Hydrophytic Vegetation Present? Yes		Is the Sampled Area					
Hydric Soil Present? Yes	No_X	within a Wetland?	Yes	NoX			
Wetland Hydrology Present? Yes	No X	f yes, optional Wetland	Site ID:				
Remarks: (Explain alternative procedures here or in a separ	rate report.)						
HYDROLOGY							
Wetland Hydrology Indicators:		Sec	ondary Indicator	rs (minimum of two required)			
Primary Indicators (minimum of one is required: che	ck all that apply)		Surface Soil C				
Surface Water (A1)	Water-Stained Leaves	 (B9)	Drainage Patterns (B10)				
High Water Table (A2)							
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		Saturation Visible in Aerial Imagery (C9)				
Drift Deposits (B3)	Presence of Reduced II		Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4)	Recent Iron Reduction		Geomorphic Position (D2)				
Iron Deposits (B5)	Thin Muck Surface (C7	` ,	Shallow Aquitard (D3)				
	Other (Explain in Rema						
	Other (Explain in Kema		Microtopographic Relief (D4) FAC-Neutral Test (D5)				
Sparsley Vegetated Concave Surface (B8)			FAC-Neutral I	est (D5)			
Surface Water Present? Yes No X	Depth (inches)						
Water Table Present? Yes No _ X	Depth (inches)	Wetland Hydr	ology Present?	? Yes No X			
Saturation Present? Yes No X	Depth (inches)						
Describe Recorded Data (stream gauge, monito	ring well periol photos	nrovious inspections) i	f available.				
Describe Recorded Data (stream gauge, monito	ring weii, aeriai priotos,	previous inspections), i	i avallable:				
Remarks:							

VEGETATION - Use scientific names of plantsSampling Point: **Upland-W16**

Tree Stratum	(Plot Size:	30'radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet: Number of Dominant Species
Abies balsamea			45	Х	FAC	That Are OBL, FACW, or FAC: 3 (A)
Acer rubrum			25	X	FAC	· · ·
Fagus grandifolia			20	X	FACU	Total Number of Dominant
Populus tremuloides			10		FACU	Species Across All Strata: 8 (B)
			100	= Total Cov		Percent of Dominant Species
					.	That Are OBL, FACW, or FAC: 37.5% (A/B)
						Prevalence Index Worksheet:
Shareh Streetere	(Plot Size:	15'radius \	Absolute % Cover	Dominant Species?	Indicator Status	OBL species 0 x 1 0 FACW species 0 x 2 0
Shrub Stratum	(FIUL SIZE.	13 180103				· — — —
Abies balsamea			25	X	FAC	FAC species 95 x 3 285
Fagus grandifolia			10	X	FACU	FACU species 50 x 4 200
			35	_= Total Cov	er	UPL species 0 x 5 0
						Column Totals 145 (A) 485 (B)
						Prevalence Index = B/A = 3.34
						Hydrophytic Vegetation Indicators:
				Dominant		1- Rapid Test For Hydrophytic Vegetation
Herb Stratum	(Plot Size:	5'radius)	% Cover	Species?	Status	2- Dominance Test is > 50%
Maianthemum canade	ense		4	Χ	FACU	3- Prevalence Index is =< 3.0
Aralia nudicaulis			3	X	FACU	
Maianthemum racemo	osum		3	X	FACU	4- Morphological Adaptations
			10	_= 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 Vegetation Present? Yes NoX
Remarks: (Include photo nu	umbers here	or on a sep	arate shee	t.)		

SOIL								Sampling Point: Upland-W16		
Depth	Matrix				Redo	x Featu	res			
(inches	Color	%	Color	%	Туре	Loc	Texture	Remarks		
0-2	7.5YR 2.5/2	100					Peat			
2-3	7.5YR 3/4	100					Fine Sandy Loam			
3-14	7.5YR 4/4	100					Fine Sandy Loam			
14-24	10YR 4/6	100					Sandy Loam			
24-30	10YR 4/6	100					Loamy Sand			
Hydric So	oil Indicators:							Indicators for Problematic Soils:		
Histosol (A1)					Polyvalu	e Below S	Surface (B15)	2 cm Muck (A10)		
Histic Epipedon (A2)					Thin Dar	k Surface	e (S9)	Coast Prarie Redox (A16)		
Black 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)		
Stratified Layers (A5)					Depleted	d Matrix ([F3)	Polyvalue Below Surface (S8)		
Depleted Below Dark Surface (A11)				-	Redox D	ark Surfa	ce (F6)	Thin Dark Surface (S9)		
Thick Dark Surface (A12)			Depleted Dark Surface (F7)				Iron-Manganese Masses (F12)			
Sar	ndy Mucky Mir	neral (S	1)	Redox Depressions (F8)			ns (F8)	Piedmont Floodplain Soils (F19)		
Sar	ndy Gleyed Ma	trix (S4)	<u> </u>			-	Mesic Spodic (TA6)		
Sar	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	ve Layer (if obse	erved):								
		Type:					Hydric S	Soil Present? Yes No X		
	Depth (in	ches):								
Remark	s:									

Project/Site: Three Corners Solar Project	City/County: Benton/Kennebec Sampling Date: 7/28/2020
Applicant/Owner: Three Corners Solar, LLC	State: ME Sampling Point: Wetland-W16
Investigator(s): Rodney Kelshaw	Section, Township, Range:
Landform (hillslope, terrace,etc.): Depression Lo	cal relief (concave, convex, none): Convex Slope (%) 0 - 3
Subregion (LRR or MLRA): LRR R Lat: 44.57	74336 Long: <u>-69.487306</u> Datum: <u>NAD83</u>
Soil Map Unit Name:	NWI Classification: PFO
Are climatic / hyrologic conditions on the site typical for this tim	ne of year? Yes X No (if no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysignificantl	y disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrologynaturally p	roblematic? (if needed, explain any answers in Remarks.)
CURANA DV OF FINIDINGS. Attack site was a shawing a same	
SUMMARY OF FINDINGS - Attach site map showing samp	
Hydrophytic Vegetation Present? Yes X No No	Is the Sampled Area within a Wetland?
Hydric Soil Present? Yes X No No No	163 <u>X</u> 110
Wetland Hydrology Present? Yes X No No	if yes, optional Wetland Site ID: W15
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) X Water-Stained	d Leaves (B9) X Drainage Patterns (B10)
X High Water Table (A2) Aquatic Fauna	X Moss Trim Lines (B16)
X Saturation (A3) Marl Deposits	5 (B15) Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sul	fide Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhiz	ospheres on Living Roots (C3) Saturation Visible in Aerial Imagery (C9)
Drift Deposits (B3) X Presence of R	educed Iron (C4) X Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron R	eduction in Tilled Soils (C6) X Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Su	rface (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain	n in Remarks) X Microtopographic Relief (D4)
X 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)	Wetland Hydrology Present? Yes X No
Saturation Present? Yes X No Depth (inches)	
Describe Recorded Data (stream gauge, monitoring well, aerial	photos, previous inspections), if available:
Remarks:	

VEGETATION - Use scientific names of plantsSampling Point: **Wetland-W16**

Betula alleghaniensis Abies balsamea Fraxinus nigra Acer rubrum Thuja occidentalis			30 25 15 15 10 95	X	FAC FACW FAC FACW	Number of Domin That Are OBL, FA Total Number Species Acr Percent of Dom	CW, or FA r of Domin oss All Stra ninant Spe	C: ant ata:	4	(A) (B)
Abies balsamea Fraxinus nigra Acer rubrum			25 15 15 10	X	FAC FACW	Total Numbe Species Acr Percent of Dom	r of Domin oss All Stra ninant Spe	ant ata:	<u> </u>	_
Fraxinus nigra Acer rubrum			15 15 10		FACW FAC	Species Acr Percent of Dom	oss All Stra ninant Spe	ata:	4	_(B)
Acer rubrum			10	.	FAC	Percent of Dom	ninant Spe		4	_(D)
<u> </u>			10	T : ! C			•	cies		
			95	T						(- (-)
				_= Total Cov	er	That Are OBL, F	ACW, or F	AC:	100%	(A/B)
						Prevalence Index V	Vorksheet	:		
			Absolute	Dominant	Indicator	OBL species	53	x 1	53	
Shrub Stratum (PI	ot Size:	15'radius)	% Cover	Species?	Status	FACW species	74	x 2	148	
Abies balsamea			25	Χ	FAC	FAC species	98	x 3	294	
Thuja occidentalis			5		FACW	EACH species	0		0	
Betula alleghaniensis			3		FAC	FACU species	0	_ x 4	0	
Fraxinus nigra			2		FACW	UPL species	0	x 5	0	
			35	= Total Cov	er	Column Totals	225	(A)	495	(B)
						Prevalence	e Index = E	B/A =	2.2	
						Hydrophytic Veget	tation Indi	cators	5 :	
			Absolute	Dominant	Indicator	1- Rapid Test	For Hydro	ophyti	c Vegetat	tion
Herb Stratum (PI	lot Size:	5'radius)	% Cover	Species?	Status		•			
Carex trisperma			50	X	OBL	X 2- Dominano	e rest is >	30%		
Rubus pubescens			15		FACW	X 3- Prevalence	e Index is :	=< 3.0		
Osmundastrum cinnamom	neum		13		FACW	4- Morpholo	gical Adap	tation	S	
Thelypteris palustris			7		FACW	<u> </u>				
Onoclea sensibilis			5		FACW	5- Problematic Hydrophytic Vegetation			n	
Carex lurida			3		OBL	Definitions of Vegetation Strata:				
Equisetum sylvaticum			2		FACW					
			95	_= Total Cov	er	Tree- Woody plants 3 breast height (DBH),				eter at
						Sapling/Shrub- Wood greater than or equal				and
						Herb- All herbaceous size, and woody plan	•			less of
Woody Vine Stratum (Pl	ot Size:	30'radius)	Absolute % Cover	Dominant Species?	Indicator Status	Woody Vines- All woo height.	ody vines gr	eater t	han 3.28f	t in
				_= Total Cov	rer	Hydroph Vegeta	-	V	No	

SOIL Sampling Point: Wetland-W16

SUIL								Sampling Point. Wetland-W16		
Depth			Redo	x Featur	es					
(inches	Color	%	Color	%	Type	Loc	Texture	Remarks		
0-8	7.5YR 2.5/1	100					Muck			
8-11	2.5Y 5/1	100					Loamy Sand			
11-24	5Y 5/1	100					Loamy Sand			
24-30	5Y 5/1	100					Sand			
Hydric Soil Indicators:							ı	ndicators for Problematic Soils:		
Histosol (A1)					Polyvalu	e Below S	urface (B15)	2 cm Muck (A10)		
X Histic Epipedon (A2)					Thin Dar	k Surface	(S9)	Coast Prarie Redox (A16)		
Black Histic (A3)					Loamy N	lucky Mir	neral (F1)	5 cm Mucky Peat or Peat (S3)		
Нус	drogen Sulfide	(A4)			Loamy G	ileyed Ma	tric (F2)	Dark Surface (S7)		
Stratified Layers (A5)				Depleted	d Matrix (I	F3)	Polyvalue Below Surface (S8)			
Depleted Below Dark Surface (A11)				Redox D	ark Surfac	ce (F6)	Thin Dark Surface (S9)			
Thick Dark Surface (A12)				Depleted	d Dark Sur	face (F7)	Iron-Manganese Masses (F12)			
Sandy Mucky Mineral (S1)			Redox Depressions (F8)				Piedmont Floodplain Soils (F19)			
Sar	ndy Gleyed Ma	itrix (S4	.)				_	Mesic Spodic (TA6)		
Sar	ndy Redox (S5)						_	Red Parent Material (F21)		
Str	ipped Matrix (S6)					_	Very Shallow Dark Surface (TF12)		
Daı	rk Surface (S7)						_	Other (Explain in Remarks)		
Restricti	ve Layer (if obse	erved):								
		Type:					Hydric So	oil Present? Yes X No		
	Depth (in	ches):		_				<u> </u>		
Remarks	S:									

Project/Site: Three Corners Solar Project	City/County:	Benton/Kennebec	Sampling Date: <u>7/28/2020</u>					
Applicant/Owner: Three Corners Solar, LLC	State: ME Sampling Point: Upland-W							
Investigator(s): Charles Ferris	Section, Township, Range:							
Landform (hillslope, terrace,etc.): Side Slope	Local relief (conca	ave, convex, none): Conve	slope (%) <u>0 - 2</u>					
Subregion (LRR or MLRA): LRR R	Lat: 44.570590	Long: -69.473700	Datum: NAD83					
Soil Map Unit Name:		NWI Classi	ification: UPL					
Are climatic / hyrologic conditions on the site ty			explain in Remarks.)					
Are Vegetation, Soil, or Hydrology								
Are Vegetation, Soil, or Hydrology	naturally problematic?	(if needed, explain any answer	rs in Remarks.)					
SUMMARY OF FINDINGS - Attach site map	showing sampling point los	rations transacts impo	tant features etc					
·			tant leatures, etc.					
Hydrophytic Vegetation Present? Yes X	within	Sampled Area a Wetland?	W N- V					
Hydric Soil Present? Yes	_ NO _ A		Yes NoX					
Wetland Hydrology Present? Yes	_ NoX if yes, o	optional Wetland Site ID:						
Remarks: (Explain alternative procedures here or in a sep	arate report.)							
HYDROLOGY								
Wetland Hydrology Indicators:		Secondary Ind	icators (minimum of two required)					
Primary Indicators (minimum of one is required: ch	eck all that apply)	Surface S	Soil Cracks (B6)					
Surface Water (A1)	Water-Stained Leaves (B9)	Drainage	Patterns (B10)					
High Water Table (A2)	Aquatic Fauna (B13)	Moss Tri	m Lines (B16)					
Saturation (A3)	Marl Deposits (B15)	Dry-Seas	on Water Table (C2)					
Water Marks (B1)	Hydrogen Sulfide Odor (C1)		Burrows (C8)					
Sediment Deposits (B2)	Oxidized Rhizospheres on Livir		on 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		Geomorphic Position (D2)					
Iron Deposits (B5)	Thin Muck Surface (C7)		Shallow Aquitard (D3)					
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)							
	Other (Explain in Kemarks)		Microtopographic Relief (D4) FAC-Neutral Test (D5)					
Sparsley Vegetated Concave Surface (B8)		FAC-Neu	trai lest (D5)					
Surface Water Present? Yes No X	Depth (inches)							
Water Table Present? Yes No X	Depth (inches)	Wetland Hydrology Pres	sent? Yes No X					
Saturation Present? Yes No X	Depth (inches)							
Describe Recorded Data (stream gauge, monitor	oring wall parial photos provio	us inspections) if available						
Describe Recorded Data (stream gauge, month	oring well, aerial photos, previo	us inspections), ii available						
Remarks:								

VEGETATION - Use scientific names of plants Sampling Point: Upland-W27 Absolute Dominant Indicator **Dominance Test Worksheet:** (Plot Size: 30'radius) % Cover Species? Status **Tree Stratum Number of Dominant Species** Х FAC That Are OBL. FACW. or FAC: (A) Acer rubrum 45 4 Abies balsamea 15 FAC Х **Total Number of Dominant** 60 = Total Cover Species Across All Strata: 5 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B) **Prevalence Index Worksheet: OBL** species x 1 0 Absolute Dominant Indicator 0 **Shrub Stratum** (Plot Size: 15'radius) % Cover Species? Status **FACW** species x 2 Abies balsamea Χ FAC 30 FAC species 105 х3 315 Χ Acer rubrum 15 FAC **FACU** species x 4 0 45 = Total Cover **UPL** species 40 x 5 200 **Column Totals** (B) 145 (A) 515 Prevalence Index = B/A = 3.55 **Hydrophytic Vegetation Indicators:** Absolute Dominant Indicator 1- Rapid Test For Hydrophytic Vegetation (Plot Size: 5'radius) % Cover Species? Status **Herb Stratum** X 2- Dominance Test is > 50% Dennstaedtia punctilobula 40 Χ UPL 3- Prevalence Index is =< 3.0 = Total Cover 40 4- Morphological Adaptations 5- Problematic Hydrophytic Vegetation **Definitions of Vegetation Strata:** Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall. Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall. Absolute Dominant Indicator Woody Vines- All woody vines greater than 3.28ft in (Plot Size: 30'radius) % Cover Species? Status **Woody Vine Stratum** height. = Total Cover Hydrophytic Vegetation Present? Yes X No___ Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: Upland-W27

Depth	· · · · · · · · · · · · · · · · · · ·										
(inches	Color	%	Color	%	Туре	Loc	Textu	ire	Remarks		
0-10	10YR 5/4	100					Fine Sand	y Loam			
10-20	10YR 5/3	100					Fine Sand	y Loam			
Hydric So	il Indicators:							Inc	dicators for Problematic Soils:		
Histosol (A1)					Polyvalu	e Below	Surface (B15)		2 cm Muck (A10)		
Histic Epipedon (A2)					Thin Dar	k Surfac	e (S9)		Coast Prarie Redox (A16)		
Black Histic (A3)				Loamy Mucky Mineral (F1)					5 cm Mucky Peat or Peat (S3)		
Hydrogen Sulfide (A4)				Loamy Gleyed Matric (F2)					Dark Surface (S7)		
Stratified Layers (A5)					Depleted				Polyvalue Below Surface (S8)		
Depleted Below Dark Surface (A11)					Redox D				Thin Dark Surface (S9)		
Thick Dark Surface (A12)				-		urface (F7)	Iron-Manganese Masses (F12)				
Sandy Mucky Mineral (S1)			Redox Depressions (F8)					Piedmont Floodplain Soils (F19)			
	idy Gleyed Ma	-	·)		_				Mesic Spodic (TA6)		
	idy Redox (S5)								Red Parent Material (F21)		
	pped Matrix (k Surface (S7)							Very Shallow Dark Surface (TF12) Other (Explain in Remarks)			
Dai	K Surface (S7)	,							Other (Explain in Kemarks)		
Restrictiv	ve Layer (if obs	erved):									
		Type:						Hydric Soil	Present? Yes No X		
	Depth (in	_						riyane son	110 X		
	' '										
Remarks	s:										

Project/Site: Three Corners Solar Project	City/Cou	nty: Benton/Kenn	ebec	Sampling Date: 7/28	/2020		
Applicant/Owner: Three Corners Solar, LLC	State: ME Sampling Point: Wetland-W						
Investigator(s): Charles Ferris	Section, Township, Range:						
Landform (hillslope, terrace,etc.): Floodplain	Local relief (concave, convex, none): Concave Slope (%) 1 - 1						
Subregion (LRR or MLRA): LRR R	Lat: 44.570500	Long: -6	9.473600	Datum: NAD	83		
Soil Map Unit Name:			NWI Classi	fication: PSS			
Are climatic / hyrologic conditions on the site ty	pical 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 problemat	ic? (if needed, exp	lain any answer	s in Remarks.)			
SUMMARY OF FINDINGS - Attach site map	chowing compling poi	nt locations tran	casts impar	tant foatures etc			
Hydrophytic Vegetation Present? Yes X		the Sampled Area	•	tant leatures, etc.			
		vithin a Wetland?		Yes X No			
Hydric Soil Present? Yes X	_ INO						
Wetland Hydrology Present? Yes X	_ No "	yes, optional Wetl	and Site ID:	W22			
Remarks: (Explain alternative procedures here or in a sepa	rate report.)						
HYDROLOGY							
Wetland Hydrology Indicators:			Secondary Indi	icators (minimum of two	required)		
Primary Indicators (minimum of one is required: che	eck all that apply)		Surface S	oil Cracks (B6)			
Surface Water (A1)	Water-Stained Leaves (I	39)	Drainage	Patterns (B10)			
High Water Table (A2)	Aquatic Fauna (B13)		Moss Tri	m Lines (B16)			
X Saturation (A3)	Marl Deposits (B15)		Dry-Seas	on Water Table (C2)			
Water Marks (B1)	Hydrogen Sulfide Odor	(C1)		Burrows (C8)			
Sediment Deposits (B2)	Oxidized Rhizospheres		Saturation Visible in Aerial Imagery (C9)				
X Drift Deposits (B3)	Presence of Reduced Iro		Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4)	Recent Iron Reduction i		X Geomorphic Position (D2)				
Iron Deposits (B5)	Thin Muck Surface (C7)	11 Timed 30113 (CO)					
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remar	·kc)	Shallow Aquitard (D3) Microtopographic Police (D4)				
		K5)	Microtopographic Relief (D4)				
Sparsley Vegetated Concave Surface (B8)			FAC-Neu	tral Test (D5)			
Surface Water Present? Yes No X	Depth (inches)						
Water Table Present? Yes No _ X	Depth (inches)	Wetland H	lydrology Pres	sent? Yes X No			
Saturation Present? Yes X No	Depth (inches) 0						
Describe Recorded Data (stream gauge, monito	oring well perial photos	nrevious inspection	s) if available				
Describe Recorded Data (stream gauge, monito	ing wen, aenai photos,	previous inspection	s, ii available	•			
Remarks:							

VEGETATION - Use scientific names of plants Sampling Point: Wetland-W27 Absolute Dominant Indicator **Dominance Test Worksheet:** (Plot Size: 30'radius) % Cover Species? Status **Tree Stratum Number of Dominant Species** Х FAC That Are OBL. FACW. or FAC: (A) Acer rubrum 15 4 Abies balsamea 10 FAC Х **Total Number of Dominant** 25 = Total Cover Species Across All Strata: (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) **Prevalence Index Worksheet: OBL** species 93 x 1 93 Absolute Dominant Indicator **Shrub Stratum** (Plot Size: 15'radius) % Cover Species? Status **FACW** species 40 x 2 80 **FACW** Alnus incana 40 Χ FAC species 25 х3 75 = Total Cover 40 **FACU** species x 4 0 **UPL** species 0 x 5 **Column Totals** 248 (B) 158 (A) Prevalence Index = B/A = 1.57 **Hydrophytic Vegetation Indicators:** Absolute Dominant Indicator 1- Rapid Test For Hydrophytic Vegetation (Plot Size: 5'radius) % Cover Species? Status **Herb Stratum** 2- Dominance Test is > 50% Carex lacustris 90 Χ OBL X 3- Prevalence Index is =< 3.0 OBL Lycopus americanus 3 4- Morphological Adaptations 93 = Total Cover 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. Absolute Dominant Indicator Woody Vines- All woody vines greater than 3.28ft in (Plot Size: 30'radius) % Cover Species? Status **Woody Vine Stratum** height. = Total Cover Hydrophytic Vegetation Present? Yes X No___ Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: Wetland-W27

								Sampling Fourt. Wetland-W27
Depth	Matrix				Redo	x Featu		
(inches	Color	%	Color	%	Type	Loc	Texture	Remarks
0-4	10YR 2/1	100					Loam	
4-12	10YR 5/2	95	7.5YR 5/6	5	RM	PL	Fine Sandy Loam	
12-20	10Y 5/10Y	90	7.5YR 5/6	10	С	М	Sandy Loam	
Hydric Soil Indicators:								Indicators for Problematic Soils:
Histosol (A1)					Polyvalu	e Below	Surface (B15)	2 cm Muck (A10)
Histic Epipedon (A2)					Thin Dar	k Surface	e (S9)	Coast Prarie Redox (A16)
Black Histic (A3)					-	-	neral (F1)	5 cm Mucky Peat or Peat (S3)
Hydrogen Sulfide (A4)							atric (F2)	Dark Surface (S7)
Stratified Layers (A5)					Depleted			Polyvalue Below Surface (S8)
X Depleted Below Dark Surface (A11)					Redox D			Thin Dark Surface (S9)
Thick Dark Surface (A12)					-		ırface (F7)	Iron-Manganese Masses (F12)
Sandy Mucky Mineral (S1)					Redox D	epressio	ns (F8)	Piedmont Floodplain Soils (F19)
Sandy Gleyed Matrix (S4)							Mesic Spodic (TA6)	
	ndy Redox (S5)							Red Parent Material (F21)
	ipped Matrix (Very Shallow Dark Surface (TF12)
Dai	rk Surface (S7)							Other (Explain in Remarks)
Restricti	ve Layer (if obs	erved):						
		Туре:					Hydric	Soil Present? Yes X No
	Depth (in	ches):						_ _
Remark	s:							

Project/Site: Three Corners Solar Project	City/County: Benton/Kennebec Sampling Date: 7/29/2020
Applicant/Owner: Three Corners Solar, LLC	State: ME Sampling Point: Upland-W32
Investigator(s): Rodney Kelshaw	Section, Township, Range:
Landform (hillslope, terrace,etc.): Side Slope	Local relief (concave, convex, none): Linear Slope (%) 3 - 8
Subregion (LRR or MLRA): LRR R Lat: 45.	
Soil Map Unit Name:	NWI Classification: UPL
Are climatic / hyrologic conditions on the site typical for this t	
	ntly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrologynaturally	problematic? (if needed, explain any answers in Remarks.)
CLINANA DV OF FINDINGS. Attack site men showing som	auling naint lagations, transports, immortant factures, etc.
· · · · · · · · · · · · · · · · · · ·	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No No	Is the Sampled Area within a Wetland? Yes NO X
Hydric Soil Present? Yes No X	
Wetland Hydrology Present? Yes NoX	if yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	-
HYDROLOGY Webland Undralage Indicators	Cocondary Indicators (minimum of two required)
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required: check all that apply	
	ned Leaves (B9) Drainage Patterns (B10) Mana Tring Mana (B16)
High Water Table (A2) Aquatic Fau	
Saturation (A3) Marl Depos	· i
	ulfide Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rh	nizospheres on Living Roots (C3)Saturation Visible in Aerial Imagery (C9)
Drift Deposits (B3) Presence of	F 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 S	Surface (C7)Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explanation Control of the Contr	ain in Remarks) Microtopographic Relief (D4)
Sparsley Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Surface Water Present? Yes No X Depth (inches	s)
Water Table Present? Yes No X Depth (inches	·
	· — — — — —
Saturation Present? Yes No X Depth (inches	<u>,, </u>
Describe Recorded Data (stream gauge, monitoring well, aeri	al photos, previous inspections), if available:
Remarks:	

VEGETATION - Use scientific names of plantsSampling Point: **Upland-W32**

Tree Stratum	(Plot Size:	30'radius \	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
	(1 101 3126.			·		Number of Dominant Species
Tsuga canadensis			30	X	FACU	That Are OBL, FACW, or FAC:5 (A)
Thuja occidentalis			25	X X	FACW	Total Number of Dominant
Betula alleghaniensis Abies balsamea			<u>20</u> 10		FAC FAC	Species Across All Strata: 7 (B)
Acer rubrum			10		FAC	Percent of Dominant Species
Acertabram			95	= Total Cov		That Are OBL, FACW, or FAC: 71.4% (A/B)
				10tai cov	CI	
						Prevalence Index Worksheet:
			Absolute	Dominant	Indicator	OBL species x 1 0
Shrub Stratum	(Plot Size:	15'radius)	% Cover	Species?	Status	FACW species 55 x 2 110
Abies balsamea			40	X	FAC	FAC species 100 x 3 300
Betula alleghaniensis			5		FAC	FACU species 60 x 4 240
			45	_= Total Cov	ver .	UPL species 0 x 5 0
						Column Totals 215 (A) 650 (B)
						Prevalence Index = B/A = 3.02
						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%
Coptis trifolia			30	Χ	FACW	
Maianthemum canade	ense		25	Χ	FACU	3- Prevalence Index is =< 3.0
Trientalis borealis			15	Χ	FAC	4- Morphological Adaptations
Aralia nudicaulis			5		FACU	5- Problematic Hydrophytic Vegetation
			75	_= Total Cov	er er	
						Definitions of Vegetation Strata:
						Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.
						Souther (Should Ward and release beauther 2 in DRU and
						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	ver	Hydrophytic
						Vegetation Present? Yes X No
Remarks: (Include photo nu	ımbers here	or on a sep	arate shee	t.)		

SOIL								Sampling Point: Upland-W32		
Depth Matrix					Redo	ox Featur	es			
(inches	Color	%	Color	%	Type	Loc	Texture	Remarks		
0-1	7.5YR 2.5/2	100					Peat			
1-2	10YR 5/2	100					Sandy Loam	Very Stony		
2-8	10YR 4/4	100					Sandy Loam	Very Stony		
8-12	2.5Y 4/4	95	2.5Y 5/2	5	D	M	Sandy Loam	Very Stony		
Hydric So	oil Indicators:							Indicators for Problematic Soils:		
Histosol (A1)					Polyvalu	e Below S	Surface (B15)	2 cm Muck (A10)		
Histic Epipedon (A2)					-	k Surface		Coast Prarie Redox (A16)		
Black Histic (A3)					-	∕lucky Mir		5 cm Mucky Peat or Peat (S3)		
Hydrogen Sulfide (A4)					-	ileyed Ma		Dark Surface (S7)		
Stratified Layers (A5)					-	d Matrix (•	Polyvalue Below Surface (S8)		
Depleted Below Dark Surface (A11)					-	ark Surfac		Thin Dark Surface (S9)		
Thick Dark Surface (A12)					-	d Dark Sur		Iron-Manganese Masses (F12)		
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)					Redox D	epression	S (F8)	Piedmont Floodplain Soils (F19)		
	ndy Gleyed Ma ndy Redox (S5)	-	·)					Mesic Spodic (TA6) Red Parent Material (F21)		
	ipped Matrix (Very Shallow Dark Surface (TF12)		
	rk Surface (S7)	-						Other (Explain in Remarks)		
	rk surrace (57)							Other (Explain in Remarks)		
Restricti	ve Layer (if obs	erved):								
		Type:					Hydric	Soil Present? Yes No X		
	Depth (in	ches):					,	_		
Remark	s:									

Project/Site: Three Corners Solar Pro	oject	City/Co	ounty: <u>Benton/Kenr</u>	sampling Date: //29/2020				
Applicant/Owner: Three Corners Sol	ar, LLC			State: ME Sampling Point: Wetland-W32				
Investigator(s): Rodney Kelshaw		Sectio	on, Township, Range:					
Landform (hillslope, terrace,etc.): <u>F</u>	ootslope	Local relie	ef (concave, convex,	none): <u>Linear</u> Slope (%) <u>0 - 3</u>				
Subregion (LRR or MLRA): LRR R	Long:	59.466934 Datum: NAD83						
Soil Map Unit Name:				NWI Classification: PFO				
Are climatic / hyrologic conditions on	the site ty	pical for this time of ye	ear? Yes X No	(if no, explain in Remarks.)				
	Hydrology		rbed? Are "Normal	Circumstances" present? Yes X No				
Are Vegetation, Soil, or F	lydrology	naturally problem	atic? (if needed, exp	plain any answers in Remarks.)				
SUMMARY OF FINDINGS - Attach	site man	showing sampling n	oint locations tran	osacts important features atc				
Hydrophytic Vegetation Present?	Yes X	No	Is the Sampled Area					
			within a Wetland?	Yes X No				
Hydric Soil Present?	Yes X	No						
Wetland Hydrology Present?	Yes X	No	No if yes, optional Wetland Site ID: W24					
Remarks: (Explain alternative procedures her	re or in a sepa	arate report.)						
HYDROLOGY								
Wetland Hydrology Indicators:				Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is r	equired: ch	eck all that apply)		Surface Soil Cracks (B6)				
Surface Water (A1)		Water-Stained Leaves	s (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 Odo	or (C1)	Crayfish Burrows (C8)				
Sediment Deposits (B2)	_	Oxidized Rhizosphere	es 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		X Geomorphic Position (D2)				
Iron Deposits (B5)	_	Thin Muck Surface (C		X Shallow Aquitard (D3)				
Inundation Visible on Aerial Image	-rv (B7)	Other (Explain in Rem	,	X Microtopographic Relief (D4)				
Sparsley Vegetated Concave Surfa		Other (Explain in Rein	iarksy	X FAC-Neutral Test (D5)				
Sparsiey vegetated Concave Surfa				A PAC-Neutral Test (D3)				
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 gau	ugo monit	oring wall parial photos	s provious inspection	as) if available:				
Describe Recorded Data (stream gat	ige, illolliu	ornig wen, aeriai priotos	s, previous irispectioi	is), ii available.				
Remarks:								

VEGETATION - Use scientific names of plantsSampling Point: **Wetland-W32**

Tree Stratum (Plot Size: 30'radius) Thuja occidentalis Fraxinus nigra Betula alleghaniensis	Absolute % Cover 45 25 20 90	Dominant Species? X X X = Total Cov	FACW FACW FAC	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Shrub Stratum (Plot Size: 15'radius) Alnus incana	Absolute % Cover 15 15	Dominant Species? X = Total Cov	Status FACW	Prevalence Index Worksheet: OBL species 25 x 1 25 FACW species 135 x 2 270 FAC species 45 x 3 135 FACU species 0 x 4 0 UPL species 0 x 5 0 Column Totals 205 (A) 430 (B)
Herb Stratum (Plot Size: 5'radius) Onoclea sensibilis Osmunda claytoniana Equisetum sylvaticum Carex trisperma Lycopus uniflorus	% Cover 35 25 15 10 10	Dominant Species? X X	FACW FAC FACW OBL OBL	Hydrophytic Vegetation Indicators: 1- Rapid Test For Hydrophytic Vegetation X 2- Dominance Test is > 50% X 3- Prevalence Index is =< 3.0 4- Morphological Adaptations 5- Problematic Hydrophytic Vegetation
Glyceria striata Lysimachia terrestris Woody Vine Stratum (Plot Size: 30'radius)	3 2 100 Absolute % Cover	= Total Cov Dominant Species?		Definitions of Vegetation Strata: Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall. Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall. Woody Vines- All woody vines greater than 3.28ft in height.
Remarks: (Include photo numbers here or on a sep	parate shee	_= Total Cov	ver	Hydrophytic Vegetation Present? Yes X No

SOIL								Sampling Point: Wetland-W32
Depth	Matrix	(Redo	ox Featu	res	
(inches	Color	%	Color	%	Type	Loc	Texture	Remarks
0-8	7.5YR 2.5/1	100					Muck	
8-12	5G 5/1	100					Silt Loam	
12-16	5GY 5/1	100					Loamy Fine Sand	
16-20	5GY 5/1	100					Silty Clay Loam	
Hydric S	oil Indicators:							Indicators for Problematic Soils:
His	stosol (A1)				Polyvalu	e Below	Surface (B15)	2 cm Muck (A10)
	stic Epipedon ((A2)			- '	k Surface		Coast Prarie Redox (A16)
Bla	ack Histic (A3)				Loamy N	/lucky Mi	neral (F1)	5 cm Mucky Peat or Peat (S3)
Hydrogen Sulfide (A4)					Loamy G	leyed M	atric (F2)	Dark Surface (S7)
Stratified Layers (A5)				Depleted	d Matrix	(F3)	Polyvalue Below Surface (S8)	
X Depleted Below Dark Surface (A11)				Redox D	ark Surfa	ice (F6)	Thin Dark Surface (S9)	
	ick Dark Surfac				- '		ırface (F7)	Iron-Manganese Masses (F12)
	ndy Mucky Mi	-	•	Redox Depressions (F8)				Piedmont Floodplain Soils (F19)
	ndy Gleyed Ma	-)	<u> </u>				Mesic Spodic (TA6)
	ndy Redox (S5)							Red Parent Material (F21)
	ripped Matrix (. ,						Very Shallow Dark Surface (TF12)
Da	rk Surface (S7))						Other (Explain in Remarks)
Restrict	ive Layer (if obs	erved):						
		Type:					Hydric S	Soil Present? Yes X No
	Depth (in	nches):						<u> </u>
Remark	ζς.							
Keman								

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: Upland-W43			
Investigator(s): Rodney Kelshaw	Section, Township, Range	:			
Landform (hillslope, terrace, etc.): Side Slope	Local relief (concave, convex,	none): Linear Slope (%) 3 - 8			
Subregion (LRR or MLRA): LRR R	Lat: 44.583980 Long:	69.459841 Datum: NAD83			
Soil Map Unit Name:		NWI Classification: UPL			
Are climatic / hyrologic conditions on the site					
Are Vegetation, Soil, or Hydrology	' <u> </u>	Circumstances" present? Yes X No			
Are Vegetation, Soil, or Hydrology	y naturally problematic? (if needed, ex	plain any answers in Remarks.)			
		accete impostant factures at			
SUMMARY OF FINDINGS - Attach site ma					
Hydrophytic Vegetation Present? Yes	No X Is the Sampled Are within a Wetland?				
Hydric Soil Present? Yes	NOX	105 <u>X</u>			
Wetland Hydrology Present? Yes	No X if yes, optional Wes	tland Site ID:			
Remarks: (Explain alternative procedures here or in a se	eparate report.)				
HYDROLOGY Westernd Under Landington					
Wetland Hydrology Indicators:	ah a di allah at awah A	Secondary Indicators (minimum of two required)			
Primary Indicators (minimum of one is required: o		Surface Soil Cracks (B6) Drainage Patterns (B10)			
Surface Water (A1)	Water-Stained Leaves (B9)				
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 X	Depth (inches)				
Water Table Present? Yes No X	— i i i — —	Hydrology Present? Yes No X			
Saturation Present? Yes No X	<u> </u>				
Jatulation Flesent: TesNO_X					
Describe Recorded Data (stream gauge, mon	itoring well, aerial photos, previous inspectio	ns), if available:			
Remarks:					

VEGETATION - Use scientific names of plants

Sampling Point: Upland-W43

Tree Stratum Abies balsamea Pinus strobus Prunus serotina Acer rubrum	(Plot Size: 30'radius		Dominant Species? X X	FACU FACU FACU	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)
Shrub Stratum Abies balsamea	(Plot Size: 15'radius		Dominant Species? X = Total Cov	Status FAC	Prevalence Index Worksheet: OBL species 0 x 1 0 FACW species 0 x 2 0 FAC species 62 x 3 186 FACU species 53 x 4 212 UPL species 0 x 5 0 Column Totals 115 (A) 398 (B)
Herb Stratum Veronica officinalis Maianthemum canado Acer rubrum	(Plot Size: 5'radius	Absolute) % Cover 8 5 2 15	Dominant Species? X X = Total Cov	FACU FACU FAC	Column Totals 115 (A) 398 (B) Prevalence Index = B/A = 3.46 Hydrophytic Vegetation Indicators: 1- Rapid Test For Hydrophytic Vegetation 2- Dominance Test is > 50% 3- Prevalence Index is =< 3.0 4- Morphological Adaptations 5- Problematic Hydrophytic Vegetation
Woody Vine Stratum	(Plot Size: 30'radius			Status	Definitions of Vegetation Strata: Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall. Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall. Woody Vines- All woody vines greater than 3.28ft in height.
Remarks: (Include photo n	umbers here or on a s	eparate shee	= Total Cover.)	ver	Hydrophytic Vegetation Present? Yes NoX

IL								Sampling Point: Upland-W43
Depth	Matrix				Redo	ox Feature	es	
inches	Color	%	Color	%	Type	Loc	Texture	Remarks
0-1	10YR 2.5/1	100					Peat	
1-8	2.5Y 5/3	100					Silt Loam	
8-14	5Y 6/2	95	2.5Y 4/6	5	С	М	Silt Loam	
	·		·					
-	oil Indicators:						6 (5.5)	Indicators for Problematic Soils:
	stosol (A1)	۸۵۱			-		ırface (B15)	2 cm Muck (A10)
_	stic Epipedon (A2)			-	k Surface (Jucky Mine	•	Coast Prarie Redox (A16) 5 cm Mucky Peat or Peat (S3)
Black Histic (A3) Hydrogen Sulfide (A4)					-	ileyed Mat		Dark Surface (S7)
Stratified Layers (A5)					-	d Matrix (F		Polyvalue Below Surface (S8)
Depleted Below Dark Surface (A11)					-	ark Surface		Thin Dark Surface (S9)
Thick Dark Surface (A12)					-	d Dark Surf		Iron-Manganese Masses (F12)
Sandy Mucky Mineral (S1)					-	epressions		Piedmont Floodplain Soils (F19)
Sa	ndy Gleyed Ma	atrix (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: I	Bedrock				Hydr	ic Soil Present? Yes No X
	Depth (in	ches):	14					
Remark	KS:							

Project/Site: Three Corners Solar Project	City/County: Benton/Kennebec Sampling Date: 7/29/2020
Applicant/Owner: Three Corners Solar, LLC	State: ME Sampling Point: Wetland-W43
Investigator(s): Rodney Kelshaw	Section, Township, Range:
Landform (hillslope, terrace,etc.): Floodplain	Local relief (concave, convex, none): Linear Slope (%) 0 - 3
Subregion (LRR or MLRA): LRR R Lat:	44.584041 Long: <u>-69.459674</u> Datum: <u>NAD83</u>
Soil Map Unit Name:	NWI Classification: PEM
Are climatic / hyrologic conditions on the site typical for	
	ificantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrologynatu	rrally problematic? (if needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site man showing	sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
	within a Wetland? Yes X No
	if yes, optional Wetland Site ID: W35
Wetland Hydrology Present? Yes X No	
Remarks: (Explain alternative procedures here or in a separate report	.)
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required: check all that	apply) Surface Soil Cracks (B6)
X Surface Water (A1) Water	Stained Leaves (B9) X Drainage Patterns (B10)
X High Water Table (A2) Aquat	ic Fauna (B13) Moss Trim Lines (B16)
X Saturation (A3) Marl E	Deposits (B15) Dry-Season Water Table (C2)
Water Marks (B1) Hydro	gen Sulfide Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidiz	ed Rhizospheres on Living Roots (C3) X Saturation Visible in Aerial Imagery (C9)
Drift Deposits (B3) X Preser	nce of Reduced Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recen	t Iron Reduction in Tilled Soils (C6) X Geomorphic Position (D2)
	Muck Surface (C7) X Shallow Aquitard (D3)
	(Explain in Remarks) Microtopographic Relief (D4)
Sparsley Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
 `_``	
Surface Water Present? Yes X No Depth (i	
Water Table Present? Yes X No Depth (i	· · · · · · · · · · · · · · · · · · ·
Saturation Present? Yes X No Depth (i	nches) 0
Describe Recorded Data (stream gauge, monitoring well	, aerial photos, previous inspections), if available:
Remarks:	

VEGETATION - Use scientific names of plantsSampling Point: **Wetland-W43**

Tree Stratum (Plot Size: 30'radius Betula populifolia Abies balsamea	Absolute % Cover 10 10 20	Dominant Species? X X = Total Cov	Status FAC FAC	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Shrub Stratum (Plot Size: 15'radius Alnus incana		Dominant Species? X = Total Cov	Status FACW	Prevalence Index Worksheet: OBL species 105 x 1 105 FACW species 50 x 2 100 FAC species 20 x 3 60 FACU species 0 x 4 0 UPL species 0 x 5 0 Column Totals 175 (A) 265 (B)
Herb Stratum (Plot Size: 5'radius Equisetum laevigatum Carex vesicaria Dulichium arundinaceum Pontederia cordata Typha latifolia	Absolute % Cover 40 40 30 15	Dominant Species? X X	Indicator Status FACW OBL OBL OBL	Prevalence Index = B/A = 1.51 Hydrophytic Vegetation Indicators: 1- Rapid Test For Hydrophytic Vegetation X 2- Dominance Test is > 50% X 3- Prevalence Index is =< 3.0 4- Morphological Adaptations 5- Problematic Hydrophytic Vegetation
Carex lurida Woody Vine Stratum (Plot Size: 30'radius		= Total Cov Dominant Species?		Definitions of Vegetation Strata: Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall. Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall. Woody Vines- All woody vines greater than 3.28ft in height.
Remarks: (Include photo numbers here or on a se	parate shee	_= Total Cov	ver	Hydrophytic Vegetation Present? Yes X No

SOIL Sampling Point: Wetland-W43

Depth	Matrix				Redo	x Featu	res		
(inches	Color	%	Color	%	Type	Loc	Text	ure	Remarks
0-14	7.5YR 2.5/1	100					Mu	ck	
14-20	10Y 5/1	100					Silty Cla	y Loam	
Hydric So	oil Indicators:							Inc	dicators for Problematic Soils:
His	tosol (A1)				Polyvalu	e Below S	Surface (B15)		2 cm Muck (A10)
X His	tic Epipedon (A2)			Thin Dar	k Surface	e (S9)		Coast Prarie Redox (A16)
Bla	ck Histic (A3)				Loamy N	lucky Mi	neral (F1)		5 cm Mucky Peat or Peat (S3)
Ну	drogen Sulfide	(A4)			Loamy G	leyed Ma	atric (F2)		Dark Surface (S7)
Str	atified Layers ((A5)			Depleted	d Matrix ((F3)		Polyvalue Below Surface (S8)
De	pleted Below [Dark Su	ırface (A11)	Redox Dark Surface (F6)					Thin Dark Surface (S9)
Thi	ick Dark Surfac	e (A12)		Depleted	d Dark Su	rface (F7)		Iron-Manganese Masses (F12)
	ndy Mucky Mir		· ē		Redox D	epressior	ns (F8)		Piedmont Floodplain Soils (F19)
	ndy Gleyed Ma	-	1)						Mesic Spodic (TA6)
	ndy Redox (S5)								Red Parent Material (F21)
	ipped Matrix (Very Shallow Dark Surface (TF12)
Da	rk Surface (S7)								Other (Explain in Remarks)
Restricti	ve Layer (if obse	erved):							
		Type:							
		=						Hydric Soil	Present? Yes X No No
	Depth (in	ches):							
Remark	c·								
Kemark	3.								

Project/Site: Three Corners Solar Project	City/Co	ounty: <u>Benton/Kenn</u>	sampling Date: 7/29/2020		
Applicant/Owner: Three Corners Solar, LLC	<u> </u>		State: ME Sampling Point: Wetland-W4		
Investigator(s): Rodney Kelshaw	Section	n, Township, Range:			
Landform (hillslope, terrace,etc.): Floodpl	ain Local relie	f (concave, convex, r	none): <u>Linear</u> Slope (%) <u>0 - 3</u>		
Subregion (LRR or MLRA): LRR R	Lat: 44.584003	Long:6	59.460418 Datum: NAD83		
Soil Map Unit Name:			NWI Classification: PSS		
Are climatic / hyrologic conditions on the si	•				
Are Vegetation, Soil, or Hydrol			Circumstances" present? Yes X No		
Are Vegetation, Soil, or Hydrol	ogynaturally problema	atic? (if needed, exp	plain any answers in Remarks.)		
SUMMARY OF FINDINGS - Attach site r	man chawing campling no	aint locations tran	osocts important features etc		
Hydrophytic Vegetation Present? Yes_		Is the Sampled Area within a Wetland?			
Hydric Soil Present? Yes_	<u> </u>		Yes X No		
Wetland Hydrology Present? Yes_	X No	if yes, optional Wetl	land 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	d: check all that apply)		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 Odo				
Sediment Deposits (B2)	Oxidized Rhizospheres		X Saturation Visible in Aerial Imagery (C9)		
Drift Deposits (B3)	X Presence of Reduced I				
			Stunted or Stressed Plants (D1)		
Algal Mat or Crust (B4)	Recent Iron Reduction		X Geomorphic Position (D2)		
Iron Deposits (B5)	Thin Muck Surface (C7	•	X Shallow Aquitard (D3)		
X Inundation Visible on Aerial Imagery (B7)		arks)	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 F	Hydrology Present? Yes X No		
Saturation Present? Yes X No	Depth (inches) 0	-			
		_			
Describe Recorded Data (stream gauge, m	onitoring well, aerial photos	, previous inspection	ıs), if available:		
Remarks:					
nemarks.					

VEGETATION - Use scientific names of plants

Absolute Demineral Indicator

Sampling Point: Wetland-W43

Tree Stratum	(Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
Abies balsamea	<u> </u>	20	Х	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A	۹)
Betula populifolia		10	X	FAC		',
		30	= Total Cov		Total Number of Dominant Species Across All Strata: 5 (E	В)
			=		·	٥,
					Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A	4/B)
					That Are Obt, FACW, OF FAC. 100% (A	7, 0,
					Prevalence Index Worksheet:	
		ما دا ما د	Daminant	la di saka a	OBL species 77 x 1 77	
Shrub Stratum	(Plot Size: 15'radius)	% Cover	Dominant Species?	Status	FACW species 48 x 2 96	
Alnus incana		45	X	FACW	FAC species 50 x 3 150	<u>—</u>
- Milas Meana		45	= Total Cov		· — — —	<u>—</u>
			_		' <u></u>	_
					UPL species x 5 0	_
					Column Totals <u>175</u> (A) <u>323</u>	(B)
					Prevalence Index = B/A = 1.85	
					Hydrophytic Vegetation Indicators:	
		Absolute	Dominant	Indicator	1- Rapid Test For Hydrophytic Vegetation	n
Herb Stratum	(Plot Size: 5'radius)	% Cover	Species?	Status		••
Carex vesicaria		75	Χ	OBL		
Urtica dioica		20	Χ	FAC	X 3- Prevalence Index is =< 3.0	
Spiraea latifolia		3		FACW	4- Morphological Adaptations	
Glyceria canadensis		2		OBL	5- Problematic Hydrophytic Vegetation	
		100	_= Total Cov	ver .		
					Definitions of Vegetation Strata:	
					Tree- Woody plants 3 in. (7.6cm) or more in diameter	er at
					breast height (DBH), regardless of height.	
					Sapling/Shrub- Woody plants less than 3 in. DBH and	d
					greater than or equal to 3.28ft (1m) tall.	
					Herb- All herbaceous (non-woody) plants, regardless	s of
		Absolute	Dominant	Indicator	size, and woody plants less than 3.28ft tall.	
Woody Vine Stratum	(Plot Size: 30'radius)	% Cover	Species?	Status	Woody Vines- All woody vines greater than 3.28ft in height.	ı
			= Total Cov	ver	Hydrophytic	
			_		Vegetation	
					Present? Yes X No	
Remarks: (Include photo nu	imbers here or on a sepa	arate shee	t.)			

SOIL Sampling Point: Wetland-W43

JOIL								Sampling Fornt. Wetland-W43
Depth	Matrix				Redo	x Featu		
(inches	Color	%	Color	%	Type	Loc	Texture	Remarks
0-3	7.5YR 2.5/1	100					Muck	
3-10	10Y 5/1	100					Silty Clay Loam	
10-15	10Y 5/1	90	10YR 4/6	10	С	M	Silty Clay Loam	
Hydric So	oil Indicators:							Indicators for Problematic Soils:
His	tosol (A1)				Polyvalu	e Below S	Surface (B15)	2 cm Muck (A10)
His	tic Epipedon (A2)			Thin Dar	k Surface	e (S9)	Coast Prarie Redox (A16)
Bla	ck Histic (A3)				Loamy N	lucky Mi	neral (F1)	5 cm Mucky Peat or Peat (S3)
Hydrogen Sulfide (A4)					Loamy G	ileyed Ma	atric (F2)	Dark Surface (S7)
Stratified Layers (A5)						d Matrix (Polyvalue Below Surface (S8)
Depleted Below Dark Surface (A11)						ark Surfa		Thin Dark Surface (S9)
Thick Dark Surface (A12)							rface (F7)	Iron-Manganese Masses (F12)
Sandy Mucky Mineral (S1)					Redox D	epressior	ns (F8)	Piedmont Floodplain Soils (F19)
	ndy Gleyed Ma	-)					Mesic Spodic (TA6)
	ndy Redox (S5)							Red Parent Material (F21)
	ipped Matrix (Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
Da	rk Surface (S7)							Other (Explain in Remarks)
Restricti	ve Layer (if obs	erved):						
		Type:					Hydric	Soil Present? Yes X No
	Depth (in	ches):					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	· · · · · · · · · · · · · · · · · · ·
Remark	s:							

Project/Site: Three Corners Solar Project	City/County: Benton/Kennebec Sampling Date: 7/31/2020
Applicant/Owner: Three Corners Solar, LLC	State: ME Sampling Point: Upland-W50
Investigator(s): Rodney Kelshaw	Section, Township, Range:
Landform (hillslope, terrace,etc.): Side Slope Lo	cal relief (concave, convex, none): Convex Slope (%) 8 - 15
Subregion (LRR or MLRA): LRR R Lat: 44.59	96821 Long: <u>-69.456920</u> Datum: <u>NAD83</u>
Soil Map Unit Name:	NWI Classification: UPL
Are climatic / hyrologic conditions on the site typical for this \lim	ne of year? Yes X No (if no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysignificantl	y disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrologynaturally p	roblematic? (if needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing samp	oling point locations transacts important features atc
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
	within a Wetland? Yes No X
Hydric Soil Present? Yes No X	16310X
Wetland Hydrology Present? Yes NoX	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-Stainer	d Leaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna	a (B13) Moss Trim Lines (B16)
Saturation (A3) Marl Deposits	
Water Marks (B1) Hydrogen Sul	fide Odor (C1) Crayfish Burrows (C8)
	ospheres on Living Roots (C3) Saturation Visible in Aerial Imagery (C9)
	Reduced Iron (C4) Stunted or Stressed Plants (D1)
	reduction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Su	
Inundation Visible on Aerial Imagery (B7) Other (Explain	
Sparsley Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Surface Water Present? Yes NoX Depth (inches)	
Water Table Present? Yes NoX Depth (inches)	Wetland Hydrology Present? Yes No X
Saturation Present? Yes No X Depth (inches)	
Describe Recorded Data (stream gauge, monitoring well, aerial	nhotos previous inspections) if available
Describe Recorded Data (Stream gauge, monitoring wen, denai	priotos, previous inspections), il available.
Remarks:	

VEGETATION - Use scientific names of plants Sampling Point: Upland-W56 Absolute Dominant Indicator **Dominance Test Worksheet:** (Plot Size: 30'radius) % Cover Species? Status **Tree Stratum Number of Dominant Species** 50 Χ FAC That Are OBL. FACW. or FAC: (A) Acer rubrum 5 Abies balsamea 40 Χ FAC **Total Number of Dominant** Populus tremuloides 5 **FACU** Species Across All Strata: (B) 6 Betula populifolia 5 FAC Percent of Dominant Species 100 = Total Cover That Are OBL, FACW, or FAC: 83.3% (A/B) **Prevalence Index Worksheet: OBL** species x 1 0 Absolute Dominant Indicator 0 **Shrub Stratum** (Plot Size: 15'radius) % Cover Species? Status **FACW** species x 2 FAC Acer rubrum 15 Χ FAC species 135 х3 405 = Total Cover 15 **FACU** species 25 x 4 100 **UPL** species 0 x 5 0 Column Totals 505 (B) 160 (A) Prevalence Index = B/A = 3.16 **Hydrophytic Vegetation Indicators:** Absolute Dominant Indicator 1- Rapid Test For Hydrophytic Vegetation (Plot Size: 5'radius) % Cover Species? Status **Herb Stratum** X 2- Dominance Test is > 50% Maianthemum canadense 15 Χ **FACU** 3- Prevalence Index is =< 3.0 Trientalis borealis Χ FAC 15 Parathelypteris noveboracensis 10 Χ FAC 4- Morphological Adaptations Gymnocarpium dryopteris 5 **FACU** 5- Problematic Hydrophytic Vegetation 45 = Total Cover **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. Absolute Dominant Indicator Woody Vines- All woody vines greater than 3.28ft in (Plot Size: 30'radius) % Cover Species? Status **Woody Vine Stratum** height. = Total Cover Hydrophytic Vegetation

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

Present? Yes X No___

SOIL								Sampling Point: Upland-W56
Depth Matrix					Redo	x Featu	res	
(inches	Color	%	Color	%	Type	Loc	Texture	Remarks
0-1	7.5YR 2.5/1	100					Peaty Muck	
1-4	7.5YR 5/2	100					Sandy Loam	Very Stony
4-10	10YR 4/3	100					Sandy Loam	Very Stony
10-12	2.5Y 5/3	98	10YR 4/4	2	С	M	Sandy Loam	Very Stony
W. J. J. G	-11 to 45 o 45 o 50							La disabasa fan Barklana eta Caller
-	oil Indicators:				D = l = l	- D-I	5f (D45)	Indicators for Problematic Soils:
	stosol (A1)	۸ ۵ ۱			-		Surface (B15)	2 cm Muck (A10)
	stic Epipedon (ack Histic (A3)	A2)		Thin Dark Surface (S9)				Coast Prarie Redox (A16) 5 cm Mucky Peat or Peat (S3)
	drogen Sulfide	(04)		Loamy Mucky Mineral (F1) Loamy Gleyed Matric (F2)				Dark Surface (S7)
	atified Layers (Depleted Matrix (F3)				Polyvalue Below Surface (S8)
	pleted Below [rface (A11)	Redox Dark Surface (F6)				Thin Dark Surface (S9)
	ick Dark Surfac			Depleted Dark Surface (F7)				Iron-Manganese Masses (F12)
	ndy Mucky Mir			Redox Depressions (F8)				Piedmont Floodplain Soils (F19)
					<u> </u>			Mesic Spodic (TA6)
Sandy Gleyed Matrix (S4) Sandy Redox (S5)								Red Parent Material (F21)
Stripped Matrix (S6)								Very Shallow Dark Surface (TF12)
Dark Surface (S7)								Other (Explain in Remarks)
Restricti	ive Layer (if obse	erved):						
Туре:							Hydric	Soil Present? Yes No X
Depth (inches):							,	<u> </u>
Remark	S:							

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date: 7/31/2020						
Applicant/Owner: Three Corners Solar, LLC	State: ME Sampling Point: Wetland-W56					
Investigator(s): Rodney Kelshaw Section, Township, Range:						
Landform (hillslope, terrace,etc.): Floodplain	Local relief (concave, convex, none): Linear Slope (%) 0 - 3					
Subregion (LRR or MLRA): LRR R Lat:	44.596620 Long:69.457286 Datum: NAD83					
Soil Map Unit Name:	NWI Classification: PEM					
Are climatic / hyrologic conditions on the site typical for the	nis time of year? Yes X No (if no, explain in Remarks.)					
Are Vegetation , Soil , or Hydrology signif	icantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation , Soil , or Hydrology natur	ally problematic? (if needed, explain any answers in Remarks.)					
SLIMMARY OF FINDINGS - Attach site man showing	sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area					
	within a Motland?					
Hydric Soil Present? Yes X No						
Wetland Hydrology Present? 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: check all that a						
	Stained Leaves (B9) Drainage Patterns (B10)					
	Fauna (B13) Moss Trim Lines (B16)					
	eposits (B15) X Dry-Season Water Table (C2)					
	en Sulfide Odor (C1) Crayfish Burrows (C8)					
Sediment Deposits (B2) Oxidize	d Rhizospheres on Living Roots (C3) X Saturation Visible in Aerial Imagery (C9)					
Drift Deposits (B3) X Presence	te 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 Mo	uck 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 (in	·					
Water Table Present? Yes X No Depth (in	·					
Saturation Present? Yes X No Depth (in	ches) <u>0</u>					
Describe Recorded Data (stream gauge, monitoring well,	aerial photos previous inspections) if available:					
a cost the mean and a cost cost of the same and a cost of the cost	actival process, processor inspection, in available.					
Remarks:						

VEGETATION - Use scientific names of plants Sampling Point: Wetland-W56 Absolute Dominant Indicator **Dominance Test Worksheet:** (Plot Size: 30'radius) % Cover **Tree Stratum** Species? Status **Number of Dominant Species** That Are OBL. FACW. or FAC: (A) 2 = 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) **Prevalence Index Worksheet: OBL** species 90 x 1 90 Absolute Dominant Indicator **Shrub Stratum** (Plot Size: 15'radius) % Cover Species? Status **FACW** species 15 x 2 30 **FACW** Alnus incana 15 Χ FAC species 10 х3 30 15 = Total Cover **FACU** species x 4 0 **UPL** species 0 x 5 **Column Totals** 150 (B) 115 (A) Prevalence Index = B/A = 1.3 **Hydrophytic Vegetation Indicators:** Absolute Dominant Indicator X 1- Rapid Test For Hydrophytic Vegetation (Plot Size: 5'radius) % Cover Species? Status **Herb Stratum** 2- Dominance Test is > 50% Calamagrostis canadensis 90 Χ OBL X 3- Prevalence Index is =< 3.0 Urtica dioica 10 FAC 100 4- Morphological Adaptations = Total Cover 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. Absolute Dominant Indicator Woody Vines- All woody vines greater than 3.28ft in (Plot Size: 30'radius) % Cover Species? Status **Woody Vine Stratum** height. = Total Cover Hydrophytic Vegetation Present? Yes X No___ Remarks: (Include photo numbers here or on a separate sheet.)

Sampling Point: Wetland-W56

Depth Matrix Redox Features inches Color % Color % Type Loc Texture Re	emarks
inches Color % Color % Type Loc Texture Re	marke
	enidiks
0-3 10YR 2.5/1 100 Muck	
3-9 5Y 5/1 90 10YR 4/4 10 C M Silt Loam	
9-15 5GY 5/1 80 7.5YR 4/6 20 C M Silty Clay Loam	
•	ors for Problematic Soils:
	cm Muck (A10)
	past Prarie Redox (A16)
	cm Mucky Peat or Peat (S3)
	ark Surface (S7)
	olyvalue Below Surface (S8) nin Dark Surface (S9)
	on-Manganese Masses (F12)
 -	edmont Floodplain Soils (F19)
	esic Spodic (TA6)
 -	ed Parent Material (F21)
 -	ery Shallow Dark Surface (TF12)
	ther (Explain in Remarks)
	mer (Explain in Nemarko)
Restrictive Layer (if observed):	
	ent? Yes X No No
Depth (inches):	
Remarks:	

Project/Site: Three Corners Solar Project (City/County: Benton/Kennebec Sampling Date: 7/31/2020
Applicant/Owner: Three Corners Solar, LLC	State: ME Sampling Point: Wetland-W56
Investigator(s): Rodney Kelshaw	Section, Township, Range:
Landform (hillslope, terrace,etc.): Footslope Loc	al relief (concave, convex, none): Linear Slope (%) 0 - 3
Subregion (LRR or MLRA): LRR R Lat: 44.59	5799 Long: <u>-69.457070</u> Datum: <u>NAD83</u>
Soil Map Unit Name:	NWI Classification: PFO
Are climatic / hyrologic conditions on the site typical for this time	e of year? Yes X No (if no, explain in Remarks.)
	disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrologynaturally pr	oblematic? (if needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sampl	ing point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	if yes, optional Wetland Site ID: 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: check 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 Sulfi	de Odor (C1)Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizo	spheres on Living Roots (C3)Saturation Visible in Aerial Imagery (C9)
Drift Deposits (B3) X Presence of Re	duced Iron (C4) X Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)Recent Iron Re	duction in Tilled Soils (C6) X Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surf	face (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, monitoring well, aerial	photos, previous inspections), if available:
Domarko	
Remarks:	

VEGETATION - Use scientific names of plantsSampling Point: **Wetland-W56**

Tree Stratum Abies balsamea Acer rubrum Betula populifolia Picea mariana	(Plot Size:	30'radius)	Absolute % Cover 50 30 17 3 100	Dominant Species? X X	FAC FAC FAC FACW	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7% (A/B)
Shrub Stratum Acer rubrum Abies balsamea	(Plot Size:	15'radius)	Absolute % Cover 15 10 25	Dominant Species? X X = Total Cov	Status FAC FAC	Prevalence Index Worksheet: OBL species 0 x 1 0 FACW species 40 x 2 80 FAC species 130 x 3 390 FACU species 25 x 4 100 UPL species 0 x 5 0
Herb Stratum	(Plot Size:	5'radius)	Absolute % Cover	Dominant Species?	Indicator Status	Column Totals 195 (A) 570 (B) Prevalence Index = B/A = 2.92 Hydrophytic Vegetation Indicators: 1- Rapid Test For Hydrophytic Vegetation
Maianthemum canad Cinna latifolia Equisetum sylvaticum Parathelypteris noveb Trientalis borealis	25 20 17 5 3	X X X	FACU FACW FAC FAC	X 2- Dominance Test is > 50% X 3- Prevalence Index is =< 3.0 4- Morphological Adaptations 5- Problematic Hydrophytic Vegetation		
Woody Vine Stratum	(Plot Size:	30'radius)	70	= Total Cov Dominant Species?	ver	Definitions of Vegetation Strata: Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall. Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall. Woody Vines- All woody vines greater than 3.28ft in height
				_= Total Cov	ver	Hydrophytic Vegetation Present? Yes X No
Remarks: (Include photo n	umbers here	or on a sep	arate shee	t.)		

SOIL Sampling Point: Wetland-W56

JOIL								Jamping Font. Wetland-W30
Depth	epth Matrix				Redo	x Featur		
(inches	Color	%	Color	%	Type	Loc	Texture	Remarks
0-3	7.5YR 2.5/1	100					Loam	Stony
3-9	10YR 5/1	100					Silt Loam	
9-12	5Y 5/1	100					Silty Clay Loam	
Hydric So	oil Indicators:							Indicators for Problematic Soils:
His	stosol (A1)				Polyvalu	e Below S	Surface (B15)	2 cm Muck (A10)
His	stic Epipedon (A2)			Thin Dar	k Surface	(S9)	Coast Prarie Redox (A16)
Bla	ick Histic (A3)				Loamy N	lucky Mir	neral (F1)	5 cm Mucky Peat or Peat (S3)
	drogen Sulfide					ileyed Ma		Dark Surface (S7)
	atified Layers (-				d Matrix (•	Polyvalue Below Surface (S8)
	pleted Below [ark Surfac		Thin Dark Surface (S9)
	ick Dark Surfac						rface (F7)	Iron-Manganese Masses (F12)
	ndy Mucky Mir	-	-		Redox D	epression	is (F8)	Piedmont Floodplain Soils (F19)
	ndy Gleyed Ma	-	·)					Mesic Spodic (TA6)
Sandy Redox (S5)								Red Parent Material (F21) Very Shallow Dark Surface (TF12)
Stripped Matrix (S6)								Other (Explain in Remarks)
Dark Surface (S7)								Other (Explain in Remarks)
Restricti	ve Layer (if obse	erved):						
Type:							Hydric	Soil Present? Yes X No
Depth (inches):							rryuric	3011 Tesent: Tes
	-1 (
Remark	s:							

Project/Site: Inree Corners Solar Project	City/County: Benton/Kennebec Sampling Date: _//31/2020
Applicant/Owner: Three Corners Solar, LLC	State: ME Sampling Point: Wetland-W56
Investigator(s): Rodney Kelshaw	Section, Township, Range:
Landform (hillslope, terrace,etc.): Floodplain	Local relief (concave, convex, none): Linear Slope (%) 0 - 3
	at: <u>44.596711</u> Long: <u>-69.456948</u> Datum: <u>NAD83</u>
Soil Map Unit Name:	NWI Classification: PSS
Are climatic / hyrologic conditions on the site typical for	
	gnificantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrologyna	aturally problematic? (if needed, explain any answers in Remarks.)
SLIMMARY OF FINDINGS - Attach site man showi	ng sampling point locations, transects, important features, etc.
	Is the Sampled Area
<u> </u>	within a Watland?
Hydric Soil Present? Yes X No_	
Wetland Hydrology Present? Yes X No_	if yes, optional Wetland Site ID: W50
Remarks: (Explain alternative procedures here or in a separate repo	ort.)
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required: check all th	nat apply) Surface Soil Cracks (B6)
	ter-Stained Leaves (B9) Drainage Patterns (B10)
	matic Fauna (B13) Moss Trim Lines (B16)
	Tl Deposits (B15) X Dry-Season Water Table (C2)
	lrogen Sulfide Odor (C1) Crayfish Burrows (C8)
	dized Rhizospheres on Living Roots (C3) X Saturation Visible in Aerial Imagery (C9)
	sence of Reduced Iron (C4) Stunted or Stressed Plants (D1)
	ent Iron Reduction in Tilled Soils (C6) X Geomorphic Position (D2)
	Muck Surface (C7) X Shallow Aquitard (D3)
	er (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, monitoring w	ell, aerial photos, previous inspections), if available:
Remarks:	

VEGETATION - Use scientific names of plants Sampling Point: Wetland-W56 Absolute Dominant Indicator **Dominance Test Worksheet:** (Plot Size: 30'radius) % Cover Species? Status **Tree Stratum Number of Dominant Species** 5 Х FACW That Are OBL. FACW. or FAC: (A) Picea mariana 5 Abies balsamea 5 Χ FAC **Total Number of Dominant** Acer rubrum 5 **FAC** Species Across All Strata: 5 (B) = Total Cover 15 Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) **Prevalence Index Worksheet: OBL** species 83 x 1 83 Absolute Dominant Indicator **Shrub Stratum** (Plot Size: 15'radius) % Cover Species? Status **FACW** species 65 x 2 130 **FACW** Alnus incana 60 Χ FAC species 17 х3 51 = Total Cover 60 **FACU** species x 4 0 **UPL** species 0 x 5 **Column Totals** 264 (B) 165 (A) Prevalence Index = B/A = 1.6 **Hydrophytic Vegetation Indicators:** Absolute Dominant Indicator 1- Rapid Test For Hydrophytic Vegetation (Plot Size: 5'radius) % Cover Species? Status **Herb Stratum** 2- Dominance Test is > 50% Calamagrostis canadensis 80 Χ OBL X 3- Prevalence Index is =< 3.0 Urtica dioica FAC 7 Lysimachia terrestris 3 OBL 4- Morphological Adaptations 90 = Total Cover 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. Absolute Dominant Indicator Woody Vines- All woody vines greater than 3.28ft in (Plot Size: 30'radius) % Cover Species? Status **Woody Vine Stratum** height. = Total Cover Hydrophytic Vegetation Present? Yes X No___

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

SOIL							Sampling Point: Wetland-W56				
Depth	Matrix	(Redo	x Featur	es				
(inches	Color	%	Color	%	Type	Loc	Texture	Remarks			
0-3	10YR 2/1	100					Muck				
3-6	10YR 2/1	100					Silt Loam				
6-16	5G 5/1	100					Silty Clay Loam				
Hydric So	oil Indicators:							ndicators for Problematic Soils:			
-	tosol (A1)				Polyvalu	e Below S	urface (B15)	2 cm Muck (A10)			
	tic Epipedon (A2)			•	k Surface		Coast Prarie Redox (A16)			
	ck Histic (A3)	,				lucky Mir	· ′ —	5 cm Mucky Peat or Peat (S3)			
Hydrogen Sulfide (A4)						ileyed Ma	=	Dark Surface (S7)			
Stra	Stratified Layers (A5)					d Matrix (F3)	Polyvalue Below Surface (S8)			
Depleted Below Dark Surface (A11)					Redox D	ark Surfac	e (F6)	Thin Dark Surface (S9)			
Thi	ck Dark Surfac	ce (A12)			Depleted	d Dark Sur	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	pped Matrix ((S6)					_	Very Shallow Dark Surface (TF12)			
Dar	k Surface (S7))					_	Other (Explain in Remarks)			
Restrictiv	ve Layer (if obs	erved):									
		Type:					Hydric So	oil Present? Yes X No			
	Depth (in	nches):									
Remarks	5:										

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project City/County: Benton/Kennebec Sampling Date:									
Applicant/Owner: Three Corners Solar, LLC	State: ME Sampling Point: Upland-W59								
Investigator(s): Charles Ferris Section Sectio	ection, Township, Range:								
Landform (hillslope, terrace,etc.): Side Slope Local	relief (concave, convex, none): Convex Slope (%) 0 - 3								
Subregion (LRR or MLRA): LRR R Lat: 44.604	514 Long: <u>-69.452082</u> Datum: <u>NAD83</u>								
Soil Map Unit Name:	NWI Classification: UPL								
Are climatic / hyrologic conditions on the site typical for this time $\boldsymbol{\alpha}$	of year? Yes X No (if no, explain in Remarks.)								
Are Vegetation, Soil, or Hydrologysignificantly d	listurbed? Are "Normal Circumstances" present? Yes X No								
Are Vegetation, Soil, or Hydrologynaturally prob	plematic? (if needed, explain any answers in Remarks.)								
SUMMARY OF FINDINGS - Attach site map showing samplir	ng noint locations transects important features etc								
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area								
	within a Watland?								
Hydric Soil Present? Yes No X	16516 <u>X</u>								
Wetland Hydrology Present? Yes NoX	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									
High Water Table (A2) Aquatic Fauna (B									
Saturation (A3) Marl Deposits (B									
Water Marks (B1) Hydrogen Sulfide									
	pheres on Living Roots (C3) Saturation Visible in Aerial Imagery (C9)								
Drift Deposits (B3) Presence of Redu									
	uction in Tilled Soils (C6) Geomorphic Position (D2)								
 ·									
Iron Deposits (B5) Thin Muck Surface Out (5-1):									
Inundation Visible on Aerial Imagery (B7) Other (Explain in									
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 No X								
Saturation Present? Yes No X Depth (inches)									
Describe Described Data /streets assume magnifesting well assistable									
Describe Recorded Data (stream gauge, monitoring well, aerial ph	notos, previous inspections), ir available:								
Remarks:									

VEGETATION - Use scientific names of plants Sampling Point: Upland-W59 Absolute Dominant Indicator **Dominance Test Worksheet:** (Plot Size: 30'radius) % Cover Species? Status **Tree Stratum Number of Dominant Species** 10 FAC That Are OBL. FACW. or FAC: (A) Acer rubrum 5 5 FACW Fraxinus pennsylvanica Х **Total Number of Dominant** 15 = Total Cover Species Across All Strata: (B) Percent of Dominant Species (A/B) That Are OBL, FACW, or FAC: 71.4% **Prevalence Index Worksheet: OBL** species x 1 0 Absolute Dominant Indicator **Shrub Stratum** (Plot Size: 15'radius) % Cover Species? Status **FACW** species 32 x 2 64 Χ **FACU** Ostrva virginiana 35 FAC species 17 х3 51 Χ Fraxinus pennsylvanica 25 **FACW FACU** species 52 x 4 208 Lonicera morrowii 15 **FACU UPL** species 0 x 5 0 5 Abies balsamea FAC 80 = Total Cover Column Totals 323 (B) 101 (A) Prevalence Index = B/A = 3.2 **Hydrophytic Vegetation Indicators:** Absolute Dominant Indicator 1- Rapid Test For Hydrophytic Vegetation (Plot Size: 5'radius) % Cover Species? Status **Herb Stratum** X 2- Dominance Test is > 50% Fraxinus pennsylvanica 2 Χ **FACW** 3- Prevalence Index is =< 3.0 Solidago rugosa Χ FAC 2 Polystichum acrostichoides 2 Х **FACU** 4- Morphological Adaptations 6 = Total Cover 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. Absolute Dominant Indicator Woody Vines- All woody vines greater than 3.28ft in (Plot Size: 30'radius) % Cover Species? Status **Woody Vine Stratum** height. = Total Cover Hydrophytic Vegetation Present? Yes X No___

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

SOIL Sampling Point: Upland-W59

									- Camping Common opinion				
Depth	Matrix					x Featu							
(inches	Color	%	Color	%	Type	Loc	Textu	ire	Remarks				
0-1	10YR 2/2	100					Loar	n					
1-12	10YR 5/3	100					Fine Sandy	y Loam					
Hydric So	il Indicators:							Ind	licators for Problematic Soils:				
His	tosol (A1)				Polyvalu	e Below S	Surface (B15)		2 cm Muck (A10)				
His	tic Epipedon ((A2)			Thin Dar	k Surface	(S9)		Coast Prarie Redox (A16)				
Bla	ck Histic (A3)				Loamy N	lucky Mi	neral (F1)		5 cm Mucky Peat or Peat (S3)				
Нус	drogen Sulfide	e (A4)			Loamy G	ileyed Ma	atric (F2)		Dark Surface (S7)				
Stra	atified Layers	(A5)			Depleted	d Matrix (F3)		Polyvalue Below Surface (S8)				
Dep	oleted Below	Dark Su	rface (A11)		Redox D	ark Surfa	ce (F6)		Thin Dark Surface (S9)				
Thi	ck Dark Surfac	ce (A12)		Depleted	d Dark Su	rface (F7)		Iron-Manganese Masses (F12)				
San	idy Mucky Mi	neral (S	1)		Redox D	epressior	ns (F8)		Piedmont Floodplain Soils (F19)				
San	idy Gleyed Ma	atrix (S4	1)						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:	Rock/Till					Hydric Soil	Present? Yes No X				
	Depth (in	-						nyuric 30ii	Present? Yes No X				
	Depth (ii	iciies).	12										
Remarks	•												
Remarks	,.												

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Three Corners Solar Project	City/County: Benton/Kennebec Sampling Date: 7/31/2020
Applicant/Owner: Three Corners Solar, LLC	State: ME Sampling Point: Wetland-W59
Investigator(s): Charles Ferris	Section, Township, Range:
Landform (hillslope, terrace,etc.): Side Slope	Local relief (concave, convex, none): Concave Slope (%) 1 - 3
,	at: 44.604336 Long: -69.451880 Datum: NAD83
Soil Map Unit Name:	NWI Classification: PFO
Are climatic / hyrologic conditions on the site typical fo	r this time of year? Yes X No (if no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysig	nificantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrologyna	turally problematic? (if needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showin	ng sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	if yes, optional Wetland Site ID: W55
Remarks: (Explain alternative procedures here or in a separate repo	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required: check all th	Surface Soil Cracks (B6)
Surface Water (A1) X Wat	zer-Stained Leaves (B9) X Drainage Patterns (B10)
High Water Table (A2)Aqu	atic Fauna (B13) Moss Trim Lines (B16)
X Saturation (A3) Mar	Dry-Season Water Table (C2)
Water Marks (B1) Hyd	rogen Sulfide Odor (C1)Crayfish Burrows (C8)
Sediment Deposits (B2) Oxio	dized Rhizospheres on Living Roots (C3)Saturation Visible in Aerial Imagery (C9)
	sence of Reduced Iron (C4) Stunted or Stressed Plants (D1)
<u> </u>	ent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2)
	Muck Surface (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other	er (Explain in Remarks)Microtopographic Relief (D4)
Sparsley Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Surface Water Present? Yes NoX Depth	(inches)
Water Table Present? Yes NoX Depth	(inches) Wetland Hydrology Present? Yes X No No
Saturation Present? Yes X No Depth	(inches) <u>0</u>
Describe Recorded Data (stream gauge, monitoring we	ell, aerial photos, previous inspections), if available:
Remarks:	
Remarks.	

VEGETATION - Use scientific names of plantsSampling Point: **Wetland-W59**

itic names		Absoluto	Dominant	Indicator	Sampling Point: Wetland-W59
(Plot Size:	30'radius)			Status	Dominance Test Worksheet:
(* ************************************			•		Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
	 ,	15	X	FAC	Total Number of Dominant
		10	Χ	FACU	Species Across All Strata: 7 (B)
		45	= Total Cov	ver .	Percent of Dominant Species
					That Are OBL, FACW, or FAC: 71.4% (A/B
					Prevalence Index Worksheet:
		A la a a la de a	D t	localita a tara	OBL species 30 x 1 30
(Plot Size:	15'radius)	% Cover	Species?	Status	FACW species 60 x 2 120
		15	Χ	FAC	FAC species 60 x 3 180
		10	X	FAC	FACU species 20 x 4 80
					UPL species 0 x 5 0
		35	_= rotarcov	er er	
					Prevalence Index = B/A = 2.41
					Hydrophytic Vegetation Indicators:
					1- Rapid Test For Hydrophytic Vegetation
(Plot Size:	5'radius)	% Cover	Species?	Status	X 2- Dominance Test is > 50%
		60	X	FACW	X 3- Prevalence Index is =< 3.0
		-			4- Morphological Adaptations
			= Total Cov		
			_		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.
					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.
		Absolute	Dominant	Indicator	
(Plot Size:	30'radius)	% Cover	Species?	Status	Woody Vines- All woody vines greater than 3.28ft in height.
			= Total Cov	ver	
			10ta1 cov		Hydrophytic
			10tal cov		Hydrophytic Vegetation Present? Yes X No
	(Plot Size:	(Plot Size: 30'radius) (Plot Size: 5'radius)	(Plot Size: 30'radius) % Cover 20 15 10 45 (Plot Size: 15'radius) % Cover 15 10 10 35 (Plot Size: 5'radius) % Cover 60 15 15 90	(Plot Size: 30'radius) % Cover Species? 20 X 15 X 10 X 45 = Total Cov (Plot Size: 15'radius 15 X 10 X 10 X 35 = Total Cov (Plot Size: 5'radius 60 X 15 15 90 = Total Cov Absolute Dominant	20

SOIL								Sampling Point: Wetland-W59
Depth	Matrix	(_		Redo	ox Featu	res	
(inches	Color	%	Color	%	Type	Loc	Texture	Remarks
0-12	10YR 2/2	100					Silt Loam	
12-20	10YR 5/2	95	7.5YR 5/6	5	С	M	Sandy Loam	
Hydric So	oil Indicators:							Indicators for Problematic Soils:
His	tosol (A1)				Polyvalu	e Below S	Surface (B15)	2 cm Muck (A10)
His	tic Epipedon ((A2)			Thin Dar	k Surface	e (S9)	Coast Prarie Redox (A16)
Black Histic (A3)					Loamy N	/lucky Mi	neral (F1)	5 cm Mucky Peat or Peat (S3)
Hydrogen Sulfide (A4)					Loamy G	ileyed Ma	atric (F2)	Dark Surface (S7)
Stratified Layers (A5)					Depleted	d Matrix ((F3)	Polyvalue Below Surface (S8)
Depleted Below Dark Surface (A11)					-	ark Surfa		Thin Dark Surface (S9)
	ck Dark Surfac				-		rface (F7)	Iron-Manganese Masses (F12)
	ndy Mucky Mi				Redox D	epressior	ns (F8)	Piedmont Floodplain Soils (F19)
	ndy Gleyed Ma	-	1)					Mesic Spodic (TA6)
	ndy Redox (S5)							Red Parent Material (F21)
	ipped Matrix (Very Shallow Dark Surface (TF12)
Dar	rk Surface (S7))						Other (Explain in Remarks)
Restrictiv	ve Layer (if obs	erved):						
		Type:					Hvdric	Soil Present? Yes X No
	Depth (in	nches):					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	· · · · · · · · · · · · · · · · · · ·
		_						
Remarks	s:							

Three Corners Solar Project

MDEP Site Location of Development Act Permit Application

SECTION 7: WETLANDS, WILDLIFE, AND FISHERIES

Exhibit 7-5

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

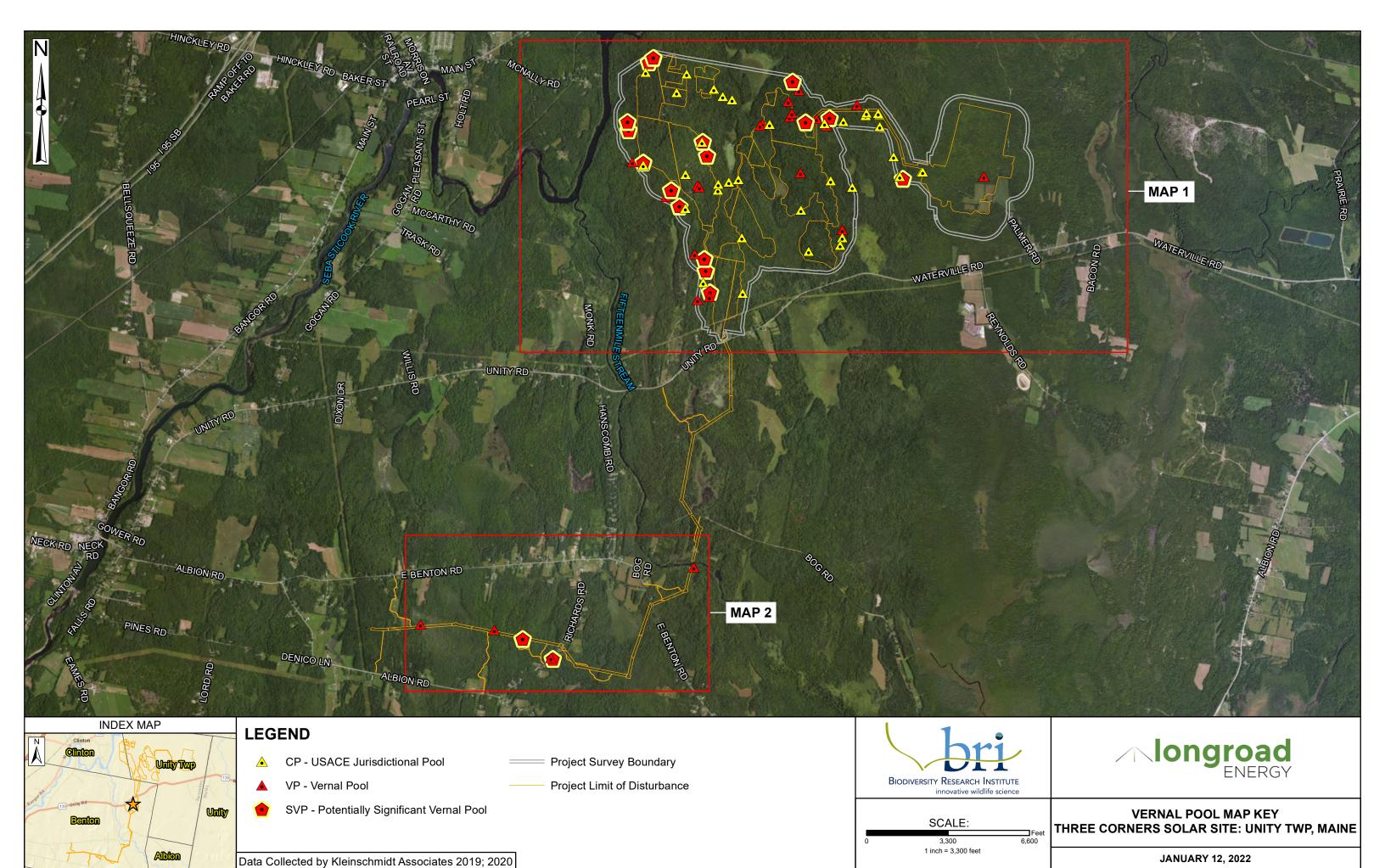
Senior Environmental Scientist

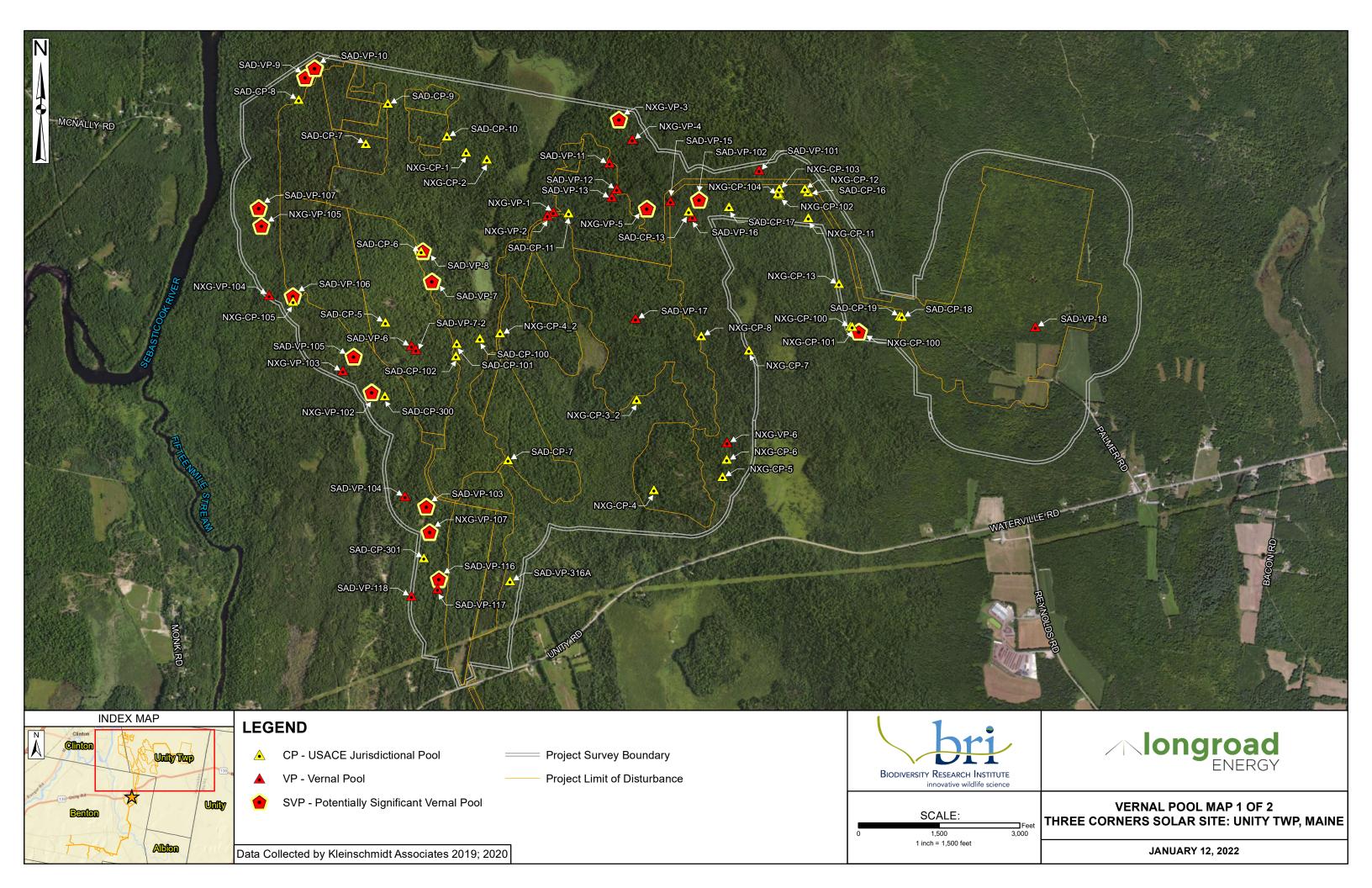
BRI Environmental

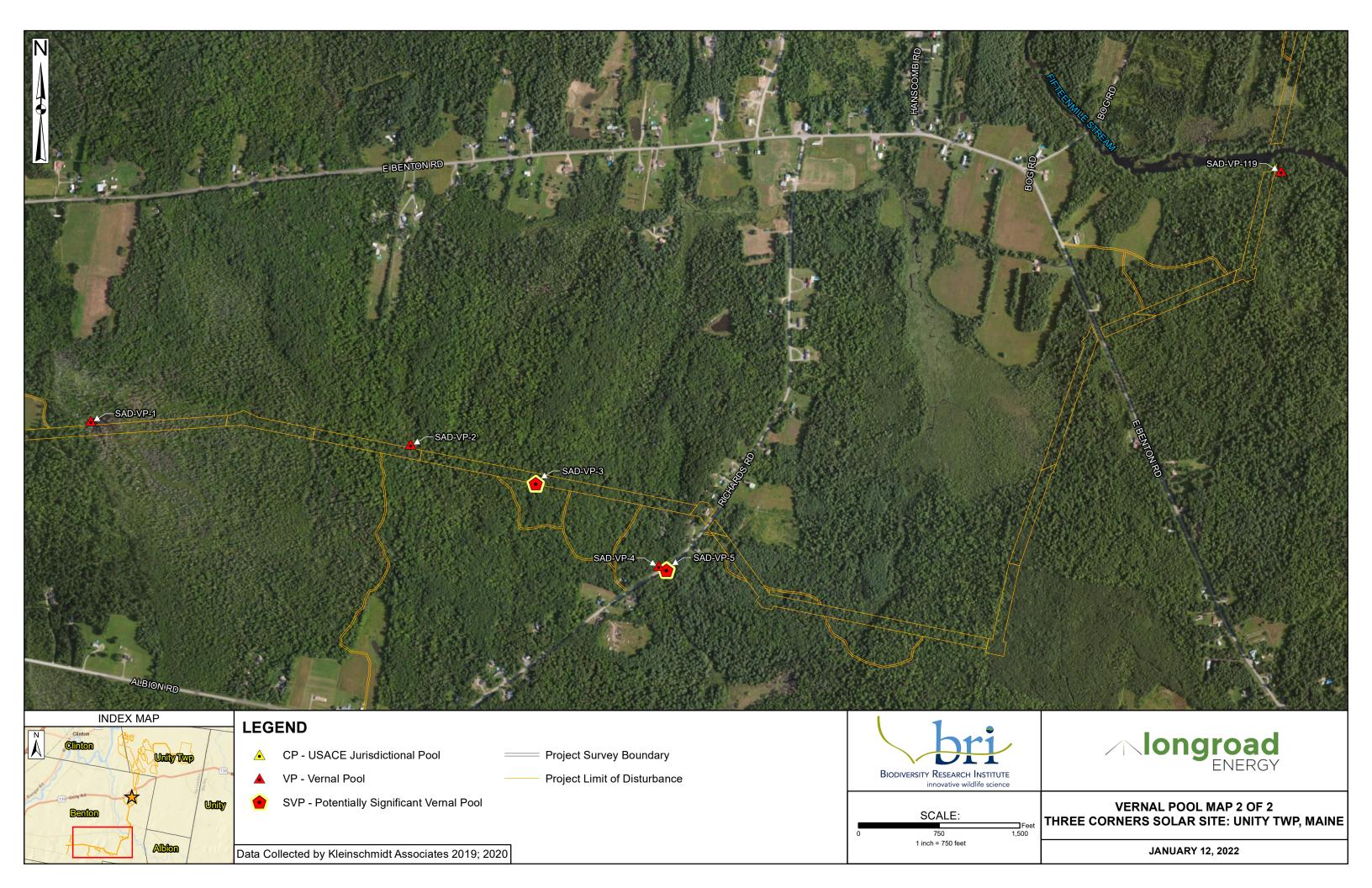
CC: Jason Czapiga



ATTACHMENT A: OVERVIEW MAP









ATTACHMENT B: SUMMARY TABLE



			Egg Mass Counts												
		Dried by	1	Nood 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	J	No						2							No
NXG-CP-5	J	No		5				3							No
NXG-CP-6	C	Yes		5				3							No
NXG-CP-7	C	Yes		1											No
NXG-CP-8	C	Yes						1							No
NXG-VP-1	NM	No		2				2							No
NXG-VP-102	N	Yes		52				28							Potentially
NXG-VP-103	N	No						8	9						No
NXG-VP-104	NM	Yes		4	1			16	17						No
NXG-VP-105	N	Yes		38										Yes	Potentially



Pool ID	Origin	Dried by					Egg	Mass Co	unts			SVP
NXG-VP-107	N	Yes		31				22				Potentially
NXG-VP-2	NM	No		3				3			3	No
NXG-VP-3	N	Yes		46				5				Potentially
NXG-VP-4	N	Yes						1	3			No
NXG-VP-5	N	Yes						4	19			Potentially
NXG-VP-6	NM	Yes		32	1				6			No
SAD-CP-10	U	Yes		30								No
SAD-CP-100	U	Yes				3						No
SAD-CP-101	U	No				5		1				No
SAD-CP-102	U	No				2		3				No
SAD-CP-11	U	Yes				2						No
SAD-CP-13	U	Yes		8		3		11				No
SAD-CP-16	U	Yes	3	39				30				No
SAD-CP-17	U	Yes				1		1				No
SAD-CP-18	U	NA	3									No
SAD-CP-19	U	NA				3						No
SAD-CP-19a	U	NA				6						No
SAD-CP-2	U	No				3		11				No
SAD-CP-300	U	No		16				26				No
SAD-CP-301	U	No		1				16				No
SAD-CP-												
316A	U	No		0				5				No
SAD-CP-5	U	Yes		21				5				No
SAD-CP-6	U	No		1				20				No
SAD-CP-7	U	No				2						No
SAD-CP-8	U	NA				2						No
SAD-CP-9	U	No		14		9						No
SAD-CP-9a	U	NA	<u> </u>]	30						No



Pool ID	Origin	Dried by					Egg	Mass Co	unts					SVP
SAD-VP-1	N	No	6					4	3	7				No
SAD-VP-10	N	Yes	6	26		31		35				20		Potentially
SAD-VP-100	N	Yes		82										Potentially
SAD-VP-101	N	Yes		6					2					No
SAD-VP-102	N	Yes		42										Potentially
SAD-VP-103	N	Yes		25	1			5	9				25	Potentially
SAD-VP-104	N	Yes		17	1			10	8					No
SAD-VP-105	N	No		22				89						Yes
SAD-VP-106	NM	Yes		1				37						Potentially
SAD-VP-107	N	Yes		48				73						Potentially
SAD-VP-11	N	Yes	6	11	12	7		5	15		4			No
SAD-VP-116	N	No		0				37						Yes
SAD-VP-117	N	No		0	2			2	1					No
SAD-VP-118	NM	No		0				1						No
SAD-VP-119	N	No						16	14					No
SAD-VP-12	N	Yes	1	0		4		4						No
SAD-VP-13	N	No		0		1								No
SAD-VP-15	N	Yes	5	8				2						No
SAD-VP-16	N	No	1						1					No
SAD-VP-17	NM	Yes	3	1	2	1			8					No
SAD-VP-18	N	Yes	10	3				11	18					No
SAD-VP-2	N	No					4	1	9	10				No
SAD-VP-3	N	No	27		1		24		25					Yes
SAD-VP-4	N	No	10	1	1		5			3				No
SAD-VP-5	NM	No	67		40		7	3	26	11				Yes
SAD-VP-6	N	No				2	1							No
SAD-VP-7	N	No		1	1	12	6	23	26		1			Yes
SAD-VP-7-2	NM	No				2								No
SAD-VP-8	NM	No	36	2		49		59						Yes



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





INSTRUCTIONS:

- Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.
- <u>Clear photographs</u> of a) the pool AND b) the indicators (one example of each species egg mass) are <u>required</u> for all observers.

egg mass) are <u>required</u> for all observers.
Observer's Pool ID: NXG - VP-3 MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: Sava h Drahavza 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 ♥No If no, was landowner permission obtained for survey? OYes ONo
b. Landowner's contact information (required)
Name: ED Bessey & Sm Phone: (207) 453-9388 Street Address: 779 Skowham Rd. City: Hnck/Lg State: ME Zip: <u>M444</u>
Street Address: 779 Skowham Rd. City: Hnck/Cg State: ME Zip: 14944
c. 🔲 Large Projects: check if separate project landowner data file submitted
4. VERNAL POOL LOCATION INFORMATION
a. Location Township: <u>Unity Township</u> Brief site directions to the pool (using mapped landmarks):
See a thicked 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>-69.45-83-25</u> Latitude/Northing: <u>44.582045</u>
Coordinate system: 1/165 24
Check one: OGIS 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 of degrees from the above GPS point. (Acceptable)





5. VERNAL POOL HABITAT INF										
a. Habitat survey date (<u>only if different</u> from indicator survey dates on page 3):										
b. Wetland habitat character										
Choose the best descriptor fIsolated depressionFloodplain depression		ociated with larger wetland compl	lex							
Shrub swamp Peatland (fen or bog) Emergent marsh	☐ Wet meadow ☐ Lake or pond cove ☐ Abandoned beaver flowag ☐ Active beaver flowage		☐ Dug pond or borrow pit ☐ Roadside ditch ☐ Other:							
c. Vernal pool status under t	the Natural Resources Pro O Natural-Modified O Uni	· · · ·								
z /		ern or historic human impacts to t	the pool (required):							
O Permanent O Sen (dry	mi-permanent ying partially in all years and mpletely in drought years)	rationale in box (required): Éphemeral (drying out completely in most years)	O Unknown							
 Approximate size of pool Predominate substrate in Mineral soil (bare, leaf mosses present) 	(at spring highwater): Width order of increasing hydrope f-litter bottom, or upland	O Organic matter (peat/muck) restricted to deepest portion	O m O ft) shallow or							
O Mineral soil (sphagnur	,	O Organic matter (peat/muck)	deep and widespread							
 ☐ Terrestrial nonvascular moss, lycopodium spp ☐ Dry site ferns (e.g. sp lady fern, bracken fer ☐ Moist site ferns (e.g. fern, interrupted fern, ☐ Moist site vasculars (e.g. jewelweed, blue flag in Sphagnum moss (and 	ar spp. (e.g. haircap p.) binulose wood fern, rn) sensitive fern, cinnamon New York fern) e.g. skunk cabbage, iris, swamp candle) chored or suspended)	operiod (check all that apply): Wet site ferns (e.g. royal fern, Wet site shrubs (e.g. highbusl 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, blad	ch blueberry, maleberry, e-joint grass, tussock ckerelweed, arrowhead) ics (e.g. water lily,							
■ Faunal indicators (check a ☐ Fish ☐ Bullfrog o		Other:								
iii. Inlet/Outlet Flow Permar Type of inlet or outlet (a se	nency easonal or permanent chann	nel providing water flowing into or (channel with well-defined banks								
N=1		iin):								



NXG-VP-3



Indicator survey dates:	RNAL POOL INI	DICATOR	RINFORM	ATION,										
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? ② Yes ○ No; what % of entire pool surveyed?	Indicator survey	dates:_	41	122/2	2020	17								
■ Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No ■ Was the entire pool surveyed for egg masses? ② Yes ○ No; what % of entire pool surveyed?				,		1								
■ Was the entire pool surveyed for egg masses? ②Yes ○ 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 Egg Masses (or adult Fairy Shrimp) Tadpoles/Larvae⁴	■ Is pool depress	ion bised	ted by 2 ov	wnerships	s (strado	ller pool			_					
determination, and egg mass maturity. Separate cells are provided for separate survey dates. INDICATOR Egg Masses (or adult Fairy Shrimp) Tadpoles/Larvae ⁴	■ Was the entire	pool surv	eyed for e	gg masse	es? 🌣	Yes O	No; w	√hat %	of ent	ire pool	sur	veye	d?	_
INDICATOR SPECIES	■ For each indica	itor speci	es, indicate	e the exa	ct numb	er of eg	g mas	ses, c	onfider	nce leve	el fo	r spe	cies	
Visit Visit #2 #3 Confidence Level Egg Mass Maturity Observed Confidence Level Wood Frog 4	determination,	and egg	mass matu	rity. Sep	arate ce	ells are p	rovide	ed for	separa	te surve				
Visit #1	INDICATOR				s (or adu	ult Fairy	Shrimp)	******			Tadp		
Spotted Salamander Blue-spotted Salamander Fairy Shrimp³ 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 Note any rare species associated with vernal pools. Observations should be accompanied by photographs. SPECIES Method of Verification* P H S Blanding's Turtle Spotted Turtle Spotted Turtle Ribbon Snake Ringed Boghaunter Ringed R	11.1		1		ļ	dence Le	evel ¹	Egg N	lass Ma	aturity ²	Ok	serve	M	4
Salamander Blue-spotted Salamander Fairy Shrimp³ 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 4-Tadpoles/larvae: X = present 8 Note any rare species associated with vernal pools. Observations should be accompanied by photographs. SPECIES Method of Verification* P H S Blanding's Turtle Spotted Tu		46			2			\mathcal{M}						
Blue-spotted Salamander Fairy Shrimp³ 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 Note any rare species associated with vernal pools. Observations should be accompanied by photographs. SPECIES Method of Verification* CL** SPECIES Method of Verification* P H S Wood Turtle Spotted Turtle D D D Other: *Method of verification: P = Photographed, H = Handled, S = Seen ***CL - Confidence level in species determination: 1 = <60%, 2 = 60-95%, 3 = >95% Optional observer recommendation: General vernal pool comments and/or observations of other wildlife:		5			2			NA						
Salamander Fairy Shrimp³ 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 Rarity criteria Note any rare species associated with vernal pools. Observations should be accompanied by photographs. SPECIES Method of Verification* P H S Blanding's Turtle D D Ribbon Snake Ringed Boghaunter Ringed Boghaunter Ringed Boghaunter Ringed Boghaunter Cl-** *Method of verification: P = Photographed, H = Handled, S = Seen ***CL - Confidence level in species determination: 1 = <60%, 2 = 60-95%, 3 = >95% Optional observer recommendation: SVP Potential SVP Non Significant VP Indicator Breeding Area General vernal pool comments and/or observations of other wildlife:					-			141				\vdash	+-	
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 Rarity criteria Note any rare species associated with vernal pools. Observations should be accompanied by photographs. SPECIES Method of Verification* CL** SPECIES P H S CL** Blanding's Turtle														
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 Rarity criteria Note any rare species associated with vernal pools. Observations should be accompanied by photographs. SPECIES Method of Verification* CL** SPECIES P H S CL** Blanding's Turtle	Fairy Shrimp ³													
Note any rare species associated with vernal pools. Observations should be accompanied by photographs. SPECIES	2-Egg mass maturi Hatching 3-Fairy shrimp: X =	ty: F= Fres	sh (<24 hrs), I	3 = >95% M= Mature (round em	bryos), A=	= Advar	nced (loc	ose matr	ix, curvec	i emi	oryos),	H= Hato	ched or
SPECIES Method of Verification* CL** SPECIES Method of Verification* P	-													
SPECIES P	Note any rare sp	ecies as	sociated wi	ith vernal	pools. 9	<u>Observa</u>	tions s	should	be acc	compan	ied	by ph	otogra	phs.
Blanding's Turtle	ODECIES	Method o	of Verification	* CL**	C DECIE	•		***		Met	hod		1	CL**
Spotted Turtle		Р	H S											
Ringed Boghaunter	Blanding's Turtle				Wood T	urtle				L		Ц		
*Method of verification: P = Photographed, H = Handled, S = Seen **CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95% Optional observer recommendation: SVP Potential SVP Non Significant VP Indicator Breeding Area General vernal pool comments and/or observations of other wildlife:	Spotted Turtle				Ribbon S	Snake]			
**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95% Optional observer recommendation: SVP Potential SVP Non Significant VP Indicator Breeding Area General vernal pool comments and/or observations of other wildlife:	Ringed Boghaunter				Other:					[□			
Pool dried up by 7/13/2020	Optional observ ⊠SVP □ Po General vernal p	er reconotential S	nmendatio VP □ N nments and	on: on Signifi d/or obse	cant VP	o ∏ir	ndicato	or Bree	eding A	area				
pool is: Significant Potentially Significant Not Significant due to: Odoes not meet biological criteria.	pool is: Significar		ut lacking criti			.g.mioani		_		eet MDEF				





INSTRUCTIONS:

- Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.
- <u>Clear photographs</u> of a) the pool AND b) the indicators (one example of each species egg mass) are <u>required</u> for all observers.

egg mass) are <u>required</u> for all observers.	
Observer's Pool ID: 1/1XG - VP -4 MDIFW Pool ID:	187 187
1. PRIMARY OBSERVER INFORMATION a. Observer name: Swah Dwhwal Nick Gaboteda b. Contact and credentials previously provided? O No (submit Addendum 1) Yes	
2. PROJECT CONTACT INFORMATION	
a. Contact name: Same as observer O other	
b. Contact and credentials previously provided? No (submit Addendum 1) Yes	
c. Project Name: Three Corners Solv Projet	
3. LANDOWNER CONTACT INFORMATION	
a. Are you the landowner? OYes No If no, was landowner permission obtained for survey? Yes ON	0
by I am also a make a binde are a binde are a binde are able to the major of the state of the st	
Name: ED Bessey 2 Son Phone: (207) 453-9388 Street Address: 7/9 Skowhygan Rd City: Hinckley State: ME Zip: 01	
Street Address: 779 Skowhegan Rd City: Hinckley State: ME Zip: 09	<u> 1</u> 14
c. 🔲 Large Projects: check if separate project landowner data file submitted 🥒	
4. VERNAL POOL LOCATION INFORMATION	
a. Location Township: On to Trap	
Brief site directions to the pool (using mapped landmarks):	
See a fechal 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:	
Coordinate system: WG < 84	
Check one: GIS shapefile - send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)	
 The pool perimeter is delineated by multiple GPS points. (Excellent) Include map or spreadsheet with coordinates. 	
The above GPS point is at the center of the pool. (Good)	
○ The center of the pool is approximately m ○ ft ○ in the compass direction of degrees from the above GPS point. (Acceptable)	





. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicator	r survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting: ○ Isolated depression ○ Floodplain depression ○ Other:	sociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Shrub swamp ☐ Lake or pond cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage	☐ Slow stream ☐ Dug pond or ☐ borrow pit age ☐ Mostly unvegetated pool ☐ Roadside ditch ☐ ATV or skidder rut ☐ Other:
c. Vernal pool status under the Natural Resources Pi	rotection Act (NRPA)
i. Pool Origin: Natural O Natural-Modified O U	•
ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provid</u> O Permanent Semi-permanent (drying partially in all years an completely in drought years) Explain:	O Ephemeral O Unknown
■ Maximum depth at survey: ○0-12" (0-1 ft.) ○12 ■ Approximate size of pool (at spring highwater): Wid ■ Predominate substrate in order of increasing hydrop	lth: Om Oft Length: Om Oft
O Mineral soil (bare, leaf-litter bottom, or upland mosses present) O Mineral soil (sphagnum moss present)	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 hyd	
☐ 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) Moist site ferns (e.g. sensitive fern, cinnamon	 Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
fern, interrupted fern, New York fern) Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	 ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead) ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) ☐ No vegetation in pool
■ Faunal indicators (check all that apply):	
☐ Fish ☐ Bullfrog or Green Frog tadpoles	☐ Other:
iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent char	nnel providing water flowing into or out of the pool): It (channel with well-defined banks and permanent flow)
Intermittent inlet O Other or Unknown (expl	





. VER	RNAL POOL IND	JICATO!		,	7	±	£									
a. In	dicator survey	dates:	4	1221	2020;	5/13	3/202	<u>) </u>								
	ndicator abunda															
=	Is pool depressi	ion bise	cted b	y 2 ow	/nership៖	ક (strado	dler poo	اد)? 🔘) Yes	O No						•
	Was the entire p															•
	For each indicat															!
	determination, a	and egg	mass							separa	te surv	ey c			A	
l	INDICATOR				gg Masse	s (or ad	ult Fairy	Shrim	p)			<u> </u>	Tadpo	oles/La		
	SPECIES	Visit #1		/isit #2	Visit #3	Confi	idence L	_evel ¹	Egg N	Mass Ma	aturity ²	0	bserve		onfider Level ¹	
!	Wood Frog							ļ	<u> </u>	 			1-1		11	 '
ļ	Spotted Salamander		1	3		3	3	ĺ	M	M						i = 1
,	Blue-spotted		+-			+-	1	i	1	+//		I			+	<u>, </u>
!	Salamander					<u> </u>		l								<u>-</u>
ļ	Fairy Shrimp ³		7	_		T										
1	1-Confidence level:	1 = <60%	 6.2=6	i0-95%, :	3 = >95%											
	2-Egg mass maturit	ty: F= Fre	∍sh (<2/	4 hrs), M	i= Mature ((round en	nbryos), <i>F</i>	۱= Adva	inced (lo	ose matr	ix, curve	d em	ıbryos),	, H= Hato	ched o	r !
	Hatching	•														1
	3-Fairy shrimp: X = 4-Tadpoles/larvae: 3		-nt													1
	•	Λ μ	/16													,
	larity criteria			. A section	` al	.اـ		"	i ulz	· · · · · · · · · · · · · · · · · · ·		;~4	' nk	-to are	ha	1
■ N	Note any rare spe					pools.	Observe	ations	should	l be acc						
	SPECIES	—		ification*	CL**	SPECIE	FS.							ification*	CL*	**
-		Р	Н	S								P	H	S	-	
-	Blanding's Turtle			<u> </u>		Wood T	~									_
ļ	Spotted Turtle					Ribbon S	Snake								 	
	Ringed Boghaunter	┆┖			<u> </u>	Other:					!					
	*Method of verifica **CL - Confidence								۹= >95°	۸,						
	*CL - Comidence	levernic	peuc	S Ucion	ППацоп.	1- ~~~	0, 4- 00	~30 70, C)	/0						
d. O	optional observe	er recor	mmer	ıdatior	ภ:											
Γ	SVP Po	otential S	ŝVΡ	□Nc	on Signifi	icant VF	P 🗆	Indicat	tor Bre	eding A	∖rea					
					•											
e. G	eneral vernal p									*						
	POOL ASS.	arich	and	111	laner	Foresk	ted b	wella.	-nd	_						
	fool now	DE Fores.	Ç	101 1	My 1	1 was the	.\$474	Com a y	F ;							
L																
-	-									-	<u> </u>	-	_			
Sen	nd completed forr	m and s	uppor	ting do	cumenta	ation to:					neries :	and	Wildli	fe		
								Vernal			5.4E 0/	• • • • •				
							65U S	tate Si	ireet, ⊏	Bangor,	ME U4	14∪ ı	l			
OTE	: Digital submis	ssion (t	o Jas	on.Cz	apiqa@r	maine.ç	o (vor	verna	loog li	field fo	orms a	nd p	photo	graph	s is c	nly
	acceptable for	projec	ts wit	h 3 or	fewer as	ssesse	d pools	; <u>larq</u> e	<u>er pro</u>	<u>iects m</u>	<u>ıust be</u>	<u>ma</u>	iled a	is hard	i cop	<u>ies</u> .
	-								-	tion of the		9000000				
or MDI	<u>PIFW use only</u> R	Reviewed b	oy MDIF	FW Dat	(e:		Initials:									
his por	ol is: 🔲 Significan	Control of the Contro		ially Sign		☐ Not §	Significa	nt due to				District Services				
		<u></u>	Jut lack	ding critica	al data				Odo	es not m	eet MDE	Pve	rnal poo	ol criteria	Å.	
Comme	ints:															
		45000000000000000000000000000000000000	AND CONTRACTOR OF THE PARTY OF	20200000000000	20000000000000000000000000000000000000	AND CONTRACTOR OF STREET			APPENDICT CONTRACT	STATE OF THE STATE	Section of the sectio		ACCOUNT OF THE PARTY OF THE PAR			





INSTRUCTIONS:

- Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.
- <u>Clear photographs</u> of a) the pool AND b) the indicators (one example of each species egg mass) are <u>required</u> for all observers.

ogg maco, are <u>required</u> for an ebeciverer	
Observer's Pool ID: 11/16 - VP - 6 MDIFW Pool ID	
1. PRIMARY OBSERVER INFORMATION	
a. Observer name: Sarah Dr. Lara	
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:	
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)	Solution out out of the
` · ·	
Name: Phone: Street Address: City:	State: 7in:
c. Large Projects: check if separate project landowner data file submittee	
c. Large Projects, check it separate project landowner data life submitter	u
4. VERNAL POOL LOCATION INFORMATION	
a. Location Township: Unity Township	
Brief site directions to the pool (using mapped landmarks):	
(using mapped annumb).	440000000000000000000000000000000000000
b. Mapping Requirements	
USGS topographic map OR aerial photograph with pool clearly marked	L
ii. GPS location of vernal pool (use Datum NAD83 / WGS84)	
Longitude/Easting: Latitude/Northing:	
Coordinate system:	
Check one: O GIS shapefile	
- send to Jason.Czapiga@maine.gov; observer has reviewe	ed shape accuracy (Best)
O The pool perimeter is delineated by multiple GPS point	s. (Excellent)
- Include map or spreadsheet with coordinates.	
O The above GPS point is at the center of the pool. (Goo	•
O The center of the pool is approximately mO ft degrees from the above GPS point. (Acceptable	O in the compass direction of e)





S. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicato	r survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting: O Isolated depression O Floodplain depression O Other:	sociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Shrub swamp ☐ Lake or pond cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage	☐ 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 i. Pool Origin: Natural O Natural-Modified O U If modified, unnatural or unknown, describe any mo	· , ,
ii. Pool Hydrology	
■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> O Permanent O Semi-permanent (drying partially in all years and completely in drought years)	© Ephemeral O Unknown
Explain:	
leaf like	
■ Maximum depth at survey: O 0-12" (0-1 ft.) Q12 ■ Approximate size of pool (at spring highwater): Wide	
	
 Predominate substrate in order of increasing hydrop Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	Organic matter (peat/muck) shallow or restricted to deepest portion
	O Organic matter (peat/muck) deep and widespread
 Pool vegetation indicators in order of increasing hyd Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) 	Wet site ferns (e.g. royal fern, marsh fern)
 Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern) Moist site ferns (e.g. sensitive fern, cinnamon 	Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) Wet site graminoids (e.g. blue-joint grass, tussock
fern, interrupted fern, New York fern) Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)	sedge, cattail, bulrushes) Aquatic vascular spp. (e.g. pickerelweed, arrowhead) 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. 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 Intermittent inlet Other or Unknown (export or outlet) 	et (channel with well-defined banks and permanent flow)





6. VEI	RNAL POOL IN	DICATO	RINF	ORMA	ATION											
a. lı	ndicator survey	dates:		4/2	2/202	0	······································									
b. I	ndicator abunda	ance cri	teria	and p	ool surv	ey effo	t									
	Is pool depress									ONo						
	Was the entire															
•	ı For each indica	-														
	determination,	and egg	mass							separa	te surv	ey d				
	INDICATOR	17. 11			gg Masse	1							Tad	ooles	/Larva	
	SPECIES	Visit #1	- 1	/isit #2	Visit #3	Confi	dence l	.evel ¹	Egg N	lass Ma	aturity ²	OŁ	serv	ed	Confid Lev	
	Wood Frog															
	Spotted Salamander	4	1	1		1	1		M	A						
	Blue-spotted Salamander															
	Fairy Shrimp ³															
	1-Confidence level: 2-Egg mass maturil Hatching 3-Fairy shrimp: X = 4-Tadpoles/larvae:	ty: F= Fre present	sh (<2			round em	bryos), A	∖= Advai	nced (loc	se matri	ix, curved	d eml	bryos)	, H= I	Hatched	lor
	tarity criteria															
= 1	Note any rare sp	ecies as	socia	ted wit	h vernal	pools. <u>C</u>)bserv	ations	should	be acc	ompan	ied	by p	<u>hoto</u>	graphs	<u>§</u> .
	SPECIES	Method		1	- CL**	SPECIE	S						of Ver	1	on* C	:L**
	Blanding's Turtle	P	<u>H</u>	s		Wood Tu	ırtle			,	F			S]	
	Spotted Turtle					Ribbon S	nake]	
1	Ringed Boghaunter					Other:]]	
	Method of verifica **CL - Confidence								= >95%	ı						
	ptional observe															
l	□SVP □Po	tential S	VP	□No	on Signifi	cant VP		ndicat	or Bree	ding A	rea					
e. G	eneral vernal p	ool con	ımen	ts and	or obse	ervation	s of of	her wi	ildlife:							
Γ	D	<i>!</i> ,		7		C 1	1 1	h so	· 1							
	Pool 2550 ciá	Hed	W	10	vge t	111	y 34. som - nom	and the second	1 50							
L	1001 B	and.	<u>up</u>	<u> </u>	<i></i>	<u> 115 /</u>	204)								
	d completed forr						Maine Attn: \	Dept. 'ernal l	of Inlar Pools		eries a ME 044		∕Vildli	fe		
NOTE	: Digital submis acceptable for						ov) of	/ernal	pool f	ield fo	rms an	ıd pl				
For MD	IFW use only Re	eviewed by	y MDIF	W Dat	e:	lr	itials:		·	1 10						
This poo	ol is: Significant		otentia		nificant	☐ Not S	gnificar	t due to	_		et biolog et MDEF				eria.	
Comme	nts:			·								. 511				





INSTRUCTIONS: ■ Complete all 3 pages of form thoroughly. Most fields are required for pool registration. ■ Clear photographs of a) the pool AND b) the indigeness (one example of each species egg mass) are required for all observers. Observer's Pool ID: 1/1/6-1/P-6 MDIFW Foc 1. PRIMARY OBSERVER INFORMATION a. Observer name: Sorah Dechovza! b. Contact and credentials previously provided? O No (submit Adendum 1) C 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) 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: E.D. Bessey & Son Phone: (207) 453-9388 Street Address: 779 Showhean Rd. City: Hinckley State: ME Zip: 04944 c. Large Projects: check if separate project landowner data file submitted 4. VERNAL POOL LOCATION INFORMATION a. Location Township: Uh, to township Brief site directions to the pool (using mapped landmarks): See alloched 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:

- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)

○ The center of the pool is approximately ____ m○ ft ○ in the compass direction of degrees from the above GPS point. (Acceptable)

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)





5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicato	r survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting: O Isolated depression O Floodplain depression O Cther:	sociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Shrub swamp ☐ Lake or pond cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flow ☐ Emergent marsh ☐ Active beaver flow ☐ 3	age Mostly unvegetated pool Roadside ditch
c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)
i. Pool Origin: ONatural Matural-Modified OL	
•	dern or historic human impacts to the pool (required):
Pool impounded by woods ros	d
ii. Pool Hydrology	
■ Select the pool's <u>estimated</u> hydroperiod AND <u>provide</u> O Permanent (drying partially in all years are completely in drought years) Explain:	O Ephemeral O Unknown (drying out completely
,	
■ Maximum depth at survey: O 0-12" (0-1 ft.)	2-36" (1-3 ft.)
■ Approximate size of pool (at spring highwater): Wid	dth: O m O ft Length: O m O ft
■ Predominate substrate in order of increasing hydro	period:
 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)	O Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hyd	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	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
fern, interrupted fern, New York fern) 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. Inlet/Outlet Flow Permanency	and arounding contact floreign into an act of the mostly.
Type of inlet or outlet (a seasonal or permanent cha	et (channel with well-defined banks and permanent flow)
Intermittent inlet O Other or Unknown (exp	,



NXG - VP-6 Maine State Vernal Pool Assessment Form



G.P.			***											-11 (A Mr.
	AL POOL IND													
a. Indi	cator survey	dates:_	4/23/	<u> 2020</u>	; 5/1	3/20	20							
	cator abunda		, ,											
■ Is	pool depressi	ion bisec	ted by 2 ov	vnerships	s (strado	ller poo	ol)? O	Yes	Ø No					
	as the entire													
	or each indicat												8	
de	etermination, a	and egg r							separa	te surv			n ==10	4
II.	IDICATOR	Visit	Visit I	gg Masse Visit				T		2			s/Larva	
SI	PECIES	#1	#2	#3	Confi	dence L	.evel'	Egg N	/lass Ma	aturity ²	Obse	rved	Lev	4 1
W	lood Frog	32		1		2		M						
	potted	18	6			2								
	alamander lue-spotted	$-\gamma$				famous.			<u> </u>					\top
	alamander 2													
ــــــا	airy Shrimp ³ Confidence level:			<u> </u>										
2-E 3-F	Egg mass maturit Hatching Fairy shrimp: X = Fadpoles/larvae: X	y: F= Fres present	h (<24 hrs), N		(round em	bryos), A	∖= Adva	nced (lo	ose matri	x, curve	d embryc	os), H=	Hatched	l or
c. Rari	ity criteria													
	e any rare spe	ecies ass	ociated wit	th vernal	pools. C) bserva	ations	should	be acc	ompan	ied by	photo	graphs	<u>3</u> .
			f Verification*								hod of V		ion*	CL**
	ECIES	P	H S		SPECIES						> Н		}	
Blaı	nding's Turtle				Wood Tu	ırtle]	
Spc	otted Turtle				Ribbon S	nake]	
	ged Boghaunter				Other:						⊐ ⊏]	
	thod of verifica							050	<i>L</i>					
""Gl	L - Confidence	ievei in sp	ecies deteri	mination:	1= <00%	, 2= 60-	95%, 3	i= 2907	0					
	ional observe													
	SVP Pot	tential SV	′P □No	n Signifi	cant VP		ndicat	or Bre	eding A	rea				
a Gen	eral vernal p	ool comi	ments and	l/or obse	ervation	s of ot	her w	ildlife:						
	large poo Pool de	, , , ,	101 15	ripare	j ,	39 1	JUU	3 FC	es es					
	Pool de	red U	p bu	7/	13/2	020								
										_				
Send c	completed forn	n and sup	porting do	cumenta		Attn: \	/ernal	Pools	nd Fish angor,			dlife		
)TE: Di ac	igital submis ceptable for	sion (to projects	Jason.Cza with 3 or	apiga@n fewer as	naine.ge ssessed	ov) of v pools	vernal ; <u>large</u>	pool i er proj	field fo ects m	rms ar ust be	nd pho mailed	togra I as h	phs is ard co	only pies.
MDIFW	/ use only Re	eviewed by	MDIFW Dat	ie:	In	itials:								
s pool is:	: Significant		tentially Sigi tlacking critic		☐ Not Si	gnificar	t due to		es not me es not me				teria.	
mments:														





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 egg mass) are required for all observers.
Observer's Pool ID: MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: Swale Dahovzz 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) You 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 Bessey & Son</u> Phone: <u>(207) 453-9388</u> Street Address: <u>779 Skowneg an Rel</u> , City: <u>Huckly</u> State: <u>ME</u> Zip: <u>0494</u>
Street Address: 779 Skownegan Rd. City: Huckly State: ME Zip: 04944
c. 🗌 Large Projects: check if separate project landowner data file submitted
4. VERNAL POOL LOCATION INFORMATION
a. Location Township: Vin fan
Brief site directions to the pool (using mapped landmarks):
Kehnen Fiftenmile Stram + Bessey Ln, just west of
Berry Ln, Unity
b. Mapping Requirements
i. USGS topographic map OR aerial photograph with pool clearly marked.
ii. GPS location of vernal pool (use Datum NAD83 / WGS84)
Longitude/Easting: <u>-69, 46667-7</u> Latitude/Northing: <u>44, 622 13 7</u>
Coordinate system: <u>W65 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)
○ The center of the pool is approximately m○ ft ○ in the compass direction of degrees from the above GPS point. (Acceptable)



ZASA SZ SZ SZ Maine State Vernal Pool Assessment Form



. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indica	tor survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting Isolated depression Open Other	associated with larger wetland complex
■ Check all wetland types that best apply to this pool: Forested swamp	☐ Slow stream ☐ Dug pond or ☐ Floodplain borrow pit Dwage ☐ Mostly unvegetated pool ☐ Roadside ditch
c. Vernal pool status under the Natural Resources	Protection Act (NRPA)
i. Pool Origin: Natural O Natural-Modified	·
ii. Pool Hydrology	
■ Select the pool's <u>estimated</u> hydroperiod AND <u>pro</u> O Permanent (drying partially in all years completely in drought year	O Ephemeral O Unknown and (drying out completely
Explain:	· · · · · · · · · · · · · · · · · · ·
Not particularly deep, isolal	led from ether wellands
	•
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	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, cinnamo fern, interrupted fern, New York fern) 	 ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) ☐ 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) ☐ 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 of	channel providing water flowing into or out of the pool):
No inlet or outlet Permanent inlet or o	utlet (channel with well-defined banks and permanent flow)
 Intermittent inlet Other or Unknown (e or outlet 	explain):





	NAL POOL INI					`										
a. In	dicator survey	dates:		112	1/20	<u>ZO</u>										
	dicator abund															
=	Is pool depress	sion bise	cted l	oy 2 ov	vnership	s (strad	dler pod	ol)? O	Yes	Ø No		_				
	Was the entire															
	For each indica															
	determination,	and egg	mass							separa 	te surv	rey o				
	INDICATOR	Visit	- 	Lisit I	gg Masse Visit				· · · · · · · · · · · · · · · · · · ·			-	таар	oles/L	arvae onfide	
	SPECIES	#1		#2	#3	Conf	idence L	.evel'	Egg N	/lass Ma	aturity ²	0	bserve	ed C	Leve	
	Wood Frog	25										<u> </u>				
	Spotted Salamander	28														
	Blue-spotted Salamander															
	Fairy Shrimp ³	****													<u> </u>	
	1-Confidence level	: 1 = <60%	6, 2 = 6	<u>. </u>	3 = >95%		1									
	2-Egg mass maturi Hatching	ty: F= Fre	esh (<2	4 hrs), N	l= Mature ((round en	nbryos), A	= Adva	nced (lo	ose matri	ix, curve	d em	bryos),	H= Ha	tched c	r
	3-Fairy shrimp: X =	•														
	4-Tadpoles/larvae:	X = prese	ent													
	arity criteria															
■ N	lote any rare sp				h vernal	pools.	Observa	tions	should	be acc						
	SPECIES	<u> </u>		fication*	CL**	SPECIE	S					thod P		fication S	* CL	**
	Blanding's Turtle	P	<u>H</u>	_ S		Wood T	urtle]	<u>н</u>			
;	Spotted Turtle					Ribbon	Snake]				
	Ringed Boghaunter					Other:						J				
	Method of verifica *CL - Confidence								- >050/	4	'	.'				·
			-			1 \007	0, 2- 00-	9370, 3	- /30%	U						
`	ptional observ								_							
9	X(SVP □ Po	tential S	SVP	∐No	n Signifi	cant VF	, UI	ndicate	or Bree	eding A	rea					
e. G	eneral vernal p	ool cor	nmen	ts and	or obse	ervatio	ns of ot	her wi	ldlife:							
Г	Far from	Pain	Le el	la a u S	L Da	es C	MA C. PIA	0.10	1	A 03	1000	0.0	<u>. L.</u>	*	2	
	C della	ch	nort.	\$ 0 (0 3	Drice),	, 4700 Vac-	CATO	- 10	rt () i	. ~ .	1 6	(1)00	•		
L	19 19 19 19 19 19 19 19 19 19 19 19 19 1	(1	2001	f.	Drice	<u>d up</u>	k	9	F/1	5/20	160					
Seno	d completed forr					,		60								
00110	_ 30piotod 1011	und o	p p o i (Attn: \	'ernal l	⊃ools							
							650 St	ate Sti	eet, B	angor,	ıvı∟ 04	401				
	Digital submis															
	acceptable for	project	s with	n 3 or 1	rewer as	sesse	poois	<u>iarge</u>	r proje	ects m	ust be	ma	nea a	<u>s nar</u>	u cop	ies.
For MDI	FW use only R	eviewed b	y MDIF	W Dat	e:	ı	nitials:									
This poo	l is: Significan	_		ally Sigr		☐ Not S	ignifican	t due to		s not me s not me					a.	
Commer	nts:			-		·		·		- not me	OL MIDE	, vCI	, iai pot	, GILGII	٠.	\neg
	L															





INSTRUCTIONS:

- Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.
- <u>Clear photographs</u> of a) the pool AND b) the indicators (one example of each species egg mass) are <u>required</u> for all observers.

-33
Observer's Pool ID: MDIFW Pool ID:
a. Observer name: Michael Caluzda Sarah Dahoval 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? No (submit Addendum 1) Yes c. Project Name: Three Corners Star 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 Bosseq & Sin</u> Phone: (207) 453-93 88
Name: <u>ED Bosseg z Sin</u> Phone: <u>(207) 453-93 88</u> Street Address: <u>779 Skowhegon Rd.</u> City: <u>Hinckley</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: Clip for Brief site directions to the pool (using mapped landmarks):
Between fifteennile stream & Bessey Un. Tust west of Bessey Un Land Clinks
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. 462.643</u> Latitude/Northing: <u>44, 623204</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 of degrees from the above GPS point. (Acceptable)





VERNAL POOL HABITAT INFORMATION
a. Habitat survey date (only if different from indicator survey dates on page 3):
b. Wetland habitat characterization
■ Choose the best descriptor for the landscape setting: Solated depression O Pool associated with larger wetland complex OFloodplain depression O Other:
■ Check all wetland types that best apply to this pool: Forested swamp
c. Vernal pool status under the Natural Resources Protection Act (NRPA) i. 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 estimated hydroperiod AND provide rationale in box (required): O Permanent O Ephemeral O Unknown (drying partially in all years and (drying out completely completely in drought years) in most years) Explain:
Small in size & deeth, isolated from wellow &
■ 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 ft Length:
• •
 ■ 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 □ Other: □ Other: □ Other:
iii Inlat/Outlet Flow Permanency
iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool): No inlet or outlet O Permanent inlet or outlet (channel with well-defined banks and permanent flow) O Intermittent inlet or outlet





	NAL POOL INI			4 - 1				-1. 1									
	a. Indicator survey dates: 4/2 / 2020, 5/12/2020																
b. Indicator abundance criteria and pool survey effort																	
	Is pool depress									No.)						
	Was the entire															-	
	For each indica														i		
	determination,	and egg	mas					<u> </u>		separa	te surv	ey d					
	INDICATOR	VC	Egg Masses (or adult Fairy Shrimp) Tadpoles/Larvae ⁴														
	SPECIES	Visit #1		Visit #2	Visit #3	Conf	idence l	_evel ¹	Egg N	lass Ma	aturity ²	Ok	oserv I	ed		nder evel ¹	ice
L	Wood Frog						<u> </u>								_		
	Spotted Salamander	Š		9													
Ī	Blue-spotted Salamander			,													
Ī	Fairy Shrimp ³																
3	1-Confidence level: 2-Egg mass maturii Hatching 3-Fairy shrimp: X = 4-Tadpoles/larvae: arity criteria	ty: F= Fre	esh (<2			(round en	nbryos), <i>F</i>	∖= Advar	nced (loc	ose matr	ix, curve	d eml	bryos)), H= ∣	Hatch	ed or	
■ No	■ Note any rare species associated with vernal pools. <u>Observations should be accompanied by photographs</u> .																
	SPECIES	Method	of Veri	fication*	CL**	SPECIE	· c				Me	thod	of Ve	ificati	on*	CL**	
-		P	Н	S		-					F		Н	S			
	Blanding's Turtle			igdots		Wood T						_		ļE	J		
S	Spotted Turtle					Ribbon	Snake				L	┚┆		L]		
	Ringed Boghaunter					Other:]		[]		
** d. Op □	*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. Ge	eneral vernal p	ool con	nmen	ts and	or obse	ervation	is of ot	her wi	ld life:								1
1	Relatively	ςν	/4 <u> </u>	, W	k stoo		····										
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																
For MDIF	W use only Re	eviewed b	y MDIF	-W Date	ə:	li	nitials:										
This pool	is: Significant			ally Sign ing critica		☐ Not S	ignifican	t due to:	Ξ		et biolog et MDEF				eria.		
Comment	ts:					····											7





- 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 egg mass) are required for all observers.

Observer's Pool ID: MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION
a. Observer name: Nicholas Gabuzla / Swah Dahova
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 Corners Solve Projet
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? OYes XNo If no, was landowner permission obtained for survey? XYes ONo
b. Landowner's contact information (required)
Name: ED Bissel & San Phone: (207) 453-9388 Street Address: 779 Skowlegge Rd. City: Hinckley State: ME Zip: 04944
Street Address: 779 Skowheaga Rd City: Hinckley State: ME Zip: 04944
c. 🔲 Large Projects: check if separate project landowner data file submitted
4. VERNAL POOL LOCATION INFORMATION a. Location Township: Clin for
Brief site directions to the pool (using mapped landmarks):
Between Bessey Ln and Selasticook 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. 627//3</u>
Coordinate system: <u>W65 84</u>
Check one: OGIS 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)





. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicator	survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting: ○ Isolated depression ○ Floodplain depression ○ Other:	sociated with larger wetland complex
■ Check all wetland types that best apply to this pool: Forested swamp Shrub swamp Lake or pond cove Peatland (fen or bog) Active beaver flowage	☐ Slow stream ☐ Dug pond or ☐ Floodplain ☐ borrow pit ge ☐ Mostly unvegetated pool ☐ Roadside ditch
c. Vernal pool status under the Natural Resources Pr	otection Act (NRPA)
i. Pool Origin: ONatural X Natural-Modified OU	nnatural OUnknown
If modified, unnatural or unknown, describe any mod	dern or historic human impacts to the pool (required):
ii. Pool Hydrology	
■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> O Permanent Semi-permanent (drying partially in all years and completely in drought years) Explain:	O Ephemeral O Unknown
■ Maximum denth at survey: ○ 0-12" (0-1 ft) Ø 12	-36" (1-3 ft)
■ Maximum depth at survey: ○ 0-12" (0-1 ft.) 12 ■ Approximate size of pool (at spring highwater): Wid	" ("-5 ii.)
 Approximate size of pool (at spring nighwater): vvid Predominate substrate in order of increasing hydrop 	
Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present)	Organic matter (peat/muck) shallow or restricted to deepest portion
, ,	O Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hyd	
Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)	☐ Wet site ferns (e.g. royal fern, marsh fern)
Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	 Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) Wet site graminoids (e.g. blue-joint grass, tussock
 Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) 	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. Inlet/Outlet Flow Permanency	
Type of inlet or outlet (a seasonal or permanent char	nnel providing water flowing into or out of the pool):
No inlet or outlet Permanent inlet or outle	t (channel with well-defined banks and permanent flow)
O Intermittent inlet O Other or Unknown (explor or outlet	





	NAL POOL IND															
a. Inc	dicator survey	dates:		1/2	8120	105C	5/12	1/20.	6							
	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 🔾 No; what % of entire pool surveyed?															
	For each indicat															
(determination, and egg mass maturity. Separate cells are provided for separate survey dates.															
	INDICATOR	Egg Masses (or adult Fairy Shrimp) Tadpoles/Larvae ⁴ Visit Visit Visit Confidence														
-	SPECIES	Visit #1	1	√isit #2	Visit #3	Confid	lence L	evel ¹	Egg N	lass Ma	aturity ²	Ol	oserv	ed		evel ¹
L	Wood Frog	<u> </u>	$\perp \!\!\!\! \perp$	4											_	
	Spotted Salamander	16	/	7		1				:						
Ī	Blue-spotted	<u>' V</u>	 	1		1									\top	\top
-	Salamander					∔					<u></u>					
L	Fairy Shrimp ³									:						
2	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	4-Tadpoles/larvae: 2	X = prese	nt													
c. Ra	arity criteria															
■ No	■ Note any rare species associated with vernal pools. <u>Observations should be accompanied by photographs</u> .															
		Method	of Veri	fication*	CL**	ODEC!ES					Met	thod	of Ver	rificatio	วก*	CL**
	SPECIES	Р	H	S		SPECIES						2	<u>H</u>	S		
	Blanding's Turtle					Wood Tur	tle				<u> </u>					
	Spotted Turtle					Ribbon Sn	ıake]				
	Ringed Boghaunter					Other:										
**(d. Op	Method of verificat CL - Confidence I otional observe SVP Pot	level in s	species mmen	s detern	mination:	1= <60%,	2= 60-9			ding A	ırea					
e. Ge	eneral vernal po	ool con	nmen	ts and	or obse	ervations	s of ot	her wi	ldlife:							
	Pool d									uyya-						
	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															
For MDIF	W use only Re	eviewed b	y MDIF	·W Date	ə:	Init	tials:									
This pool	is: Significant	_		ally Sign ing critica		☐ Not Sig	ınifican	t due to:	~		et biolog et MDEF				eria.	
Comment	s:		<u></u>													
	1															





- 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 segg mass) are required for all observers.	species
Observer's Pool ID: MDIFW Pool ID:	
1. PRIMARY OBSERVER INFORMATION a. Observer name: Michalds Gabuzda Sweh Dahard b. Contact and credentials previously provided? O No (submit Addendum 1) OYes	
2. PROJECT CONTACT INFORMATION a. Contact name: Same as observer of other b. Contact and credentials previously provided? No (submit Addendum 1) c. Project Name: Corners Solar Project	
3. LANDOWNER CONTACT INFORMATION	4
a. Are you the landowner? OYes No If no, was landowner permission obtained for survey?	Yes ONo
b. Landowner's contact information (required)	
Name: Phone: Street Address: City: State:	
Street Address: City: State:	
4. VERNAL POOL LOCATION INFORMATION a. Location Township: Clin for Brief site directions to the pool (using mapped landmarks):	
East of Sebusticoch River, just northwest of Bessey Ln	An isosofi 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: Latitude/Northing:	
Coordinate system:	
Check one: OGIS 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 direct degrees from the above GPS point. (Acceptable)	ion of





. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicato	r survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting: O Isolated depression O Floodplain depression O Other:	ssociated with larger wetland complex
■ Check all wetland types that best apply to this pool: Forested swamp Wet meadow Shrub swamp Lake or pond cove Peatland (fen or bog) Emergent marsh Active beaver flowage	☐ 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 If modified, unnatural or unknown, describe any mo	Innatural OUnknown dern or historic human impacts to the pool (required):
ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> O Permanent O Semi-permanent (drying partially in all years ar completely in drought years)	O Ephemeral O Unknown (drying out completely
Explain:	
VAN Welland like, behaves much	e like a welland, very Shallow
 Maximum depth at survey: 0-12" (0-1 ft.) 0 12 Approximate size of pool (at spring highwater): Wind Predominate substrate in order of increasing hydromology Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	dth: <u>♂</u> Om X ft Length: <u></u> ZØ Om X ft
■ Pool vegetation indicators in order of increasing hydrological	droperiod (check all that apply):
 ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern) ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) ☐ Sphagnum moss (anchored or suspended) 	 Wet site ferns (e.g. royal fern, marsh fern) Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes) Aquatic vascular spp. (e.g. pickerelweed, arrowhead) Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool
☐ 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): et (channel with well-defined banks and permanent flow)





	AL POOL IN			ORMA		202	D)										
	b. Indicator abundance criteria and pool survey effort ■ Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes No																
										7		cur	VOVO	42			
	as the entire																
	or each indica etermination,																
r—	termination, a	and egg	IIIass							Schara	ic suiv				// 00/0	-4	
1	IDICATOR	Visit	1 1	ے ∕isit ا	gg Masse Visit	-			F						oles/Larvae		
SI	PECIES	#1		#2	#3	Conf	idence l	.evel'	Egg N	lass Ma	aturity*	Ok	serv	ed	Lev		
	lood Frog																
	potted alamander	38															
BI	lue-spotted alamander			İ													
Fa	airy Shrimp ³	\overline{X}															
1-C 2-E 3-F	Confidence level: Egg mass maturit Hatching Fairy shrimp: X = Fadpoles/larvae:	ty: F= Fre	sh (<2			(round en	nbryos), /	= Advar	nced (loc	ose matri	ix, curve	d eml	bryos)	, H= I	Hatched	l or	
	•	∧ = prese	:nL														
	ity criteria			4			3 b		أماني ماما	h		لم ما:	امدنما		~~~ ~ h ~	_	
■ Not	e any rare sp				n vernai	pools. <u>(</u>	Jpserv	ations	snoula	be acc						š.	
SP	ECIES	Method	of Veri	fication*	CL**	SPECIE	S					inoa (of Ver H	S	on c	CL**	
Bla	nding's Turtle					Wood T	urtle				1 _]]		
Spo	otted Turtle					Ribbon 8	Snake		100]		
Rin	ged Boghaunter					Other:						ן כ]		
**Cl	ethod of verificate L - Confidence ional observe SVP	level in s	specie: mmer	s deterr ndation	nination:	1= <60%	5, 2= 60-	95%, 3		s eding A	rea						
e. Gen	eral vernal p	ool cor	nmen	ts and	or obse	ervation	s of of	her wi	ldlife:						100		
Send c	ompleted forr	m and s	upport	ting do	cumenta	tion to:	Attn: \	ernal l	Pools		eries a ME 04		∕∕ildli	fe			
	igital submis ceptable for																
or MDIFW	use only R	eviewed b	y MDIF	W Date	e:	li	nitials:										
This pool is	: Significant			ally Sign ing critica		☐ Not S	ignificar	t due to	_		et biolog et MDEF				eria.		
Comments:																	





- 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

egg mass) are <u>required</u> for all observers.
Observer's Pool ID: MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION
a. Observer name: Sorch Dahovzel Wick Gabuzda
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 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: (209) 453-9388
Name: ED Bessey is Son Phone: (207) 453-9388 Street Address: 779 Skouhegan Rd. City: Hinck Id. State: ME Zip: 04944
c. 🔲 Large Projects: check if separate project landowner data file submitted
A VERNAL POOL LOCATION INFORMATION
4. VERNAL POOL LOCATION INFORMATION
a. Location Township: Ben for
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: <u>-69.456038</u> Latitude/Northing: 44.6/4979
Coordinate system: <u>u)65 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 of degrees from the above GPS point. (Acceptable)





. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicator	r survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting: O Isolated depression O Floodplain depression O Other:	sociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Shrub swamp ☐ Lake or pond cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage ☐ Emergent marsh ☐ Active beaver flowage	age Mostly unvegetated pool Roadside ditch ATV or skidder rut Other:
i. Pool Origin: ONatural O Natural-Modified O U If modified, unnatural or unknown, describe any mod	•
 ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> O Permanent O Semi-permanent (drying partially in all years an completely in drought years) Explain: 	© Ephemeral O Unknown
■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12 ■ Approximate size of pool (at spring highwater): Wide ■ Prodominate substrate in order of increasing hydrol	dth: O m O ft Length: O m O ft
 Predominate substrate in order of increasing hydrop Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	Organic matter (peat/muck) shallow or restricted to deepest portion Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hyd ☐ 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 form interpreted form New York ferm)	Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
fern, interrupted fern, New York fern) Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	 ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead) ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) ☐ No vegetation in pool
■ Faunal indicators (check all that apply): ☐ Fish ☐ Bullfrog or Green Frog tadpoles iii. Inlet/Outlet Flow Permanency	Other:
Type of inlet or outlet (a seasonal or permanent cha	et (channel with well-defined banks and permanent flow)





	RNAL POOL INI							·								
a. Indicator survey dates: 4/28/2020																
b. Indicator abundance criteria and pool survey effort																
=	Is pool depress	ion bise	cted b	y 2 ov	vnership:	s (strad	djer po	ol)? O	Yes	₩ No						
=	Was the entire	pool sui	veyed	d for eg	gg masse	es? 🎖	Yes (⊃No; v	vhat %							
=	For each indica															
	determination, and egg mass maturity. Separate cells are provided for separate survey dates.															
	INDICATOR Egg Masses (or adult Fairy Shrimp) Tadpoles/Larvac						ae ⁴ idence									
	SPECIES	Visit #1		/isit #2	Visit #3	Conf	idence T	_evel ¹	Egg N	∕lass Ma	aturity ²	0	bserv	ed		vel ¹
	Wood Frog	22				M					<u> </u>	<u> </u>				
	Spotted Salamander	31				M										
	Blue-spotted		+			†						T				
	Salamander		_				<u> </u>	<u> </u>								
	Fairy Shrimp ³		$oldsymbol{ol}}}}}}}}}}}}}}}}}$				<u> </u>									
۰. ۵	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															
	arity criteria Note any rare sp	anina ar	naaia	tad wit	h vornal	noole (Obconi	atione (should	l ha acc	omna	nied	l hv n	hoto	aranh	ns
■ [vote any rare sp					pools. <u>s</u>	DDSeiv	auons	Silvuiu	De acc			of Ve		on*	
	SPECIES	Method P	of Veri	s s	CL**	SPECIE	S				IVIE	P	H	S		CL**
	Blanding's Turtle					Wood T	urtle				l]	
	Spotted Turtle					Ribbon	Snake]	
	Ringed Boghaunter					Other:									ן נ	
d. O	Method of verificate *CL - Confidence ptional observ	level in s	species mmen	s deterr	mination:	1= <60%	%, 2= 60 	-95%, 3								
ļ	X SVP □ Po	tential S	SVP	□No	on Signifi	cant VF	, П	Indicate	or Bre	eding A	rea					
e. G	eneral vernal p	ool cor	nmen	ts and	or obse	ervation	ns of o	ther wi	ildlife:							
	Dried 0															
Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife Attn: Vernal Pools 650 State Street, Bangor, ME 04401																
NOIE	: Digital submis acceptable for	ssion (t projec	b Jase ts with	on.Gza 1 3 or	apiga@n fewer as	naine.g ssessec	d pools	vernal ; <u>large</u>	r proj	ects m	ust be	ma	iled a	as h	ard c	opies.
For MD	IFW use only R	eviewed b	y MDIF	-W Dat	:e:	ı	nitials:							•		
This poo	ol is: 🔲 Significan			ally Sigr	nificant al data	☐ Not S	ignifica	nt due to		es not me es not me					eria.	
Comme	nts:						,		-				-			





- Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.
- <u>Clear photographs</u> of a) the pool AND b) the indicators (one example of each species egg mass) are <u>required</u> for all observers.

,				
Observer's Pool ID: SAD-		MDIFW Pool ID:		
1. PRIMARY OBSERVER INFO	RMATION			
a. Observer name: Sarah	Dahovza 1			
b. Contact and credentials pre	viously provided? O No	(submit Addendum 1)	O Yes	
2. PROJECT CONTACT INFOR	MATION			
a. Contact name: 🔘 same as	observer O other			
b. Contact and credentials pre	viously provided? O No (submit Addendum 1)	Yes	
c. Project Name: <u>Longre</u>	ad (3 Corners			
3. LANDOWNER CONTACT INF	ORMATION			
a. Are you the landowner? O	Yes O√No Ifno, was la	ndowner permission ob	tained for survey? 🤇	Yes ()No
b. Landowner's contact information	ation (required)			
Name:		_ Phone:		
Street Address:		City:	State:	Zip:
c. Large Projects: check if				
4. VERNAL POOL LOCATION I	NFORMATION			
a. Location Township: B_{ℓ}	n ton			
Brief site directions to the po	ool (using mapped landma	arks):		
See a Hachw	map			
b. Mapping Requirements				
i. USGS topographic map C	PR aerial photograph with	pool clearly marked.		
ii. GPS location of vernal p	nool (use Datum NAD83	/ WGS84)		
Longitude/Easting: <u>-69</u> ,			922	
Coordinate system:			. , 40	
•	Project Control of the Control of th			
Check one: O GIS shap			de anno accompany (Doot)	
_	Jason.Czapiga@maine.gov			
•	perimeter is delineated b map or spreadsheet with co		(Excellent)	
	e GPS point is at the cen			
	er of the pool is approxim		in the compass direc	tion of
	egrees from the above GI		•	





VERNAL POOL HABITAT INFORMATION
a. Habitat survey date (only if different from indicator survey dates on page 3):
b. Wetland habitat characterization
■ Choose the best descriptor for the landscape setting: O Isolated depression O Floodplain depression O Other:
□ 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 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 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 estimated hydroperiod AND provide rationale in box (required): ○ Permanent
■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.) ■ Approximate size of pool (at spring highwater): Width: □ ○ m ② ft Length: ② ○ m ② ft ■ Predominate substrate in order of increasing hydroperiod: ○ Mineral soil (bare, leaf-litter bottom, or upland mosses present) ○ Organic matter (peat/muck) shallow or restricted to deepest portion
 ○ Mineral soil (sphagnum moss present) ○ Organic matter (peat/muck) deep and widespread ■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):
 ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern) ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) ☐ Sphagnum moss (anchored or suspended) ☐ Wet site ferns (e.g. royal fern, marsh fern) ☐ Wet site ferns (e.g. highbush blueberry, maleberry, winterberry, mountain holly) ☐ Wet site ferns (e.g. royal fern, marsh fern) ☐ Wet site ferns (e.g. highbush blueberry, maleberry, winterberry, mountain holly) ☐ Wet site ferns (e.g. highbush blueberry, maleberry, winterberry, mountain holly) ☐ Wet site ferns (e.g. royal fern, marsh fern) ☐ Wet site ferns (e.g. highbush blueberry, maleberry, mountain holly) ☐ Wet site ferns (e.g. royal fern, marsh fern) ☐ Wet site ferns (e.g. highbush blueberry, maleberry, mountain holly) ☐ Wet site ferns (e.g. highbush blueberry, maleberry, mountain holly) ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, mountain holly) ☐ Wet site shrubs (e.g. highbush blueberry, mountain holly) ☐ Wet site ferns (e.g. royal fern, marsh fern) ☐ Wet site ferns (e.g. highbush blueberry, mountain holly) ☐ Wet site ferns (e.g. highbush blueberry, mountain holly) ☐ Wet site shrubs (e.g. highbush blueberry, mountain holly) ☐ Wet site shrubs (e.g. highbush blueberry, mountain holly) ☐ Wet site shrubs (e.g. highbush blueberry, mountain holly) ☐ Wet site shrubs (e.g. highbush blueberry, mountain holly) ☐ Wet site shrubs (e.g. highbush blueberry, mountain holly) ☐ Wet site shrubs (e.g. highbush blueberry, mountain holly) ☐ Wet site shrubs (e.g. highbush blueber
■ Faunal indicators (check all that apply): ☐ Fish ☐ Bullfrog or Green Frog tadpoles ☐ Other: iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):
O No inlet or outlet Intermittent inlet O or outlet



SAD-VP-/ Maine State Vernal Pool Assessment Form



S. VER	NAL POOL IN	DICATO	R INF													
	a. Indicator survey dates: 4 29 2019; 5 22 20 4 b. Indicator abundance criteria and pool survey effort															
			iteria	1 "	#		,	ı								
	■ Is pool depression bisected by 2 ownerships (straddler pool)?															
[99								•					rvae ⁴	\neg
	INDICATOR SPECIES	Visit #1		isit #2	Visit #3	1	dence L		·	lass Mat	urity ²	Ob	serv	I C	onfide Leve	nce
	Wood Frog 6 3 M Ø I Spotted 4 3 A I															
•																
	Blue-spotted Salamander															
	Fairy Shrimp ³ 1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%															
c. Ra	3-Fairy shrimp: X = 4-Tadpoles/larvae: arity criteria ote any rare sp	X = prese	socia		h vernal	pools. <u>(</u>	<u>Observ</u> a	ations :	should	be acco						
5	SPECIES	Method P	of Veri	fication* S	CL**	SPECIE	.s				Met		of Ver	ification*	CL	**
E	Blanding's Turtle					Wood T	urtle]				
3	Spotted Turtle					Ribbon S	Snake]				
	Ringed Boghaunter Method of verifica					Other:]				
d. O	*CL - Confidence ptional observ SVP Po eneral vernal p	er reco	mmer SVP nmen	ndation	n: on Signifi //or obse	cant VF	o □i	Indicat	or Bree	eding Ar		3	'5 53	EM EM		
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: O does not meet biological criteria.																
Commer	: 1 <u></u>		out lack	ing critic	al data				⊖do∈	s not mee	et MDEI	⊃ ver	nal po	ol criteria	a.	





- Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.
- <u>Clear photographs</u> of a) the pool AND b) the indicators (one example of each species egg mass) are <u>required</u> for all observers.

Observer's Pool ID: <u>5AO-VP</u> -	MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATIO	ON
a. Observer name: Sarah Dr.	nhov z
	provided? O No (submit Addendum 1) O Yes
2. PROJECT CONTACT INFORMATION	N
a. Contact name: 🔯 same as observe	er O other
b. Contact and credentials previously	provided? O No (submit Addendum 1) O Yes
c. Project Name: Langroad	(3 Corners)
B. LANDOWNER CONTACT INFORMAT	TION
a. Are you the landowner? OYes OY	No If no, was landowner permission obtained for survey? OYes ON
b. Landowner's contact information (red	quired)
Name:	Phone:
Street Address:	
a. Location Township: Brief site directions to the pool (using)ri
See a Hacked 1	
b. Mapping Requirements	
	ll photograph with pool clearly marked.
i. USGS topographic map OR aerial	
i. USGS topographic map OR aerial ii. GPS location of vernal pool (us	se Datum NAD83 / WGS84)
i. USGS topographic map OR aerial ii. GPS location of vernal pool (us Longitude/Easting:	se Datum NAD83 / WGS84) Latitude/Northing:
i. USGS topographic map OR aerial ii. GPS location of vernal pool (us Longitude/Easting: Coordinate system: Check one: GIS shapefile	Latitude/Northing:
i. USGS topographic map OR aerial ii. GPS location of vernal pool (us Longitude/Easting: Coordinate system: Check one: GIS shapefile - send to Jason Ca	Latitude/Northing: zapiga@maine.gov; observer has reviewed shape accuracy (Best)
i. USGS topographic map OR aerial ii. GPS location of vernal pool (us Longitude/Easting: Coordinate system: Check one: GIS shapefile - send to Jason Ca O The pool perimete	Latitude/Northing:
i. USGS topographic map OR aerial ii. GPS location of vernal pool (us Longitude/Easting: Coordinate system: Check one: GIS shapefile - send to Jason Ca The pool perimete - Include map or sp	Latitude/Northing: Latitude/Northing: Ezapiga@maine.gov; observer has reviewed shape accuracy (Best) ter is delineated by multiple GPS points. (Excellent)





SAP-VP- 2 Maine State Vernal Pool Assessment Form

. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicato	r survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting:	ssociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Shrub swamp ☐ Lake or pond cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flow ☐ Emergent marsh ☐ Active beaver flowage	☐ ATV or skidder rut ☐ Other:
i. Pool Origin: O Natural O Natural-Modified O L If modified, unnatural or unknown, describe any mo Pool boated on the edge of Cecent clay out	Innatural OUnknown
ii. Pool Hydrology	
■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> O Permanent O Semi-permanent (drying partially in all years are completely in drought years) Explain: Paol Part of forested weford	© Ephemeral O Unknown od (drying out completely in most years)
 Maximum depth at survey: O 0-12" (0-1 ft.) O 12 Approximate size of pool (at spring highwater): Wide Predominate substrate in order of increasing hydron O Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	dth:O m
 ■ Pool vegetation indicators in order of increasing hyder the control of the contr	777
iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent char	nnel providing water flowing into or out of the pool): et (channel with well-defined banks and permanent flow)



48

Maine State Vernal Pool Assessment Form

5AD-VP-2



										***************************************				**		
VERNA	L POOL IND	DICATO	R INF	ORM				,								
a. Indic	ator survey	dates:		4/	29/2	019;	. 57	22/	120k	n \$						
b. Indic	cator abunda	ance cr	iteria	and p		/		/	f							
	pool depress			-		-		ol)? C) Yes	Ø No)					
■ Wa	■ Was the entire pool surveyed for egg masses?															
de	termination, a	and egg	mass	matu	rity. Sep	arate ce	lls are	provid	led for	separa	te surv	ey d	lates	. ,		
IN	DICATOR				gg Masse	es (or adu	ult Fairy	/ Shrim	p)				Tadı	poles/L		
SF	PECIES	Visit #1		/isit #2	Visit #3	Confi	dence l	_evel ¹	Egg N	lass Ma	aturity ²	OI	oserv	ed	onfide Level	
	Wood Frog Spotted A A A															
	Salamander 4 / 3 3 M A Blue-spotted															
	Blue-spotted . Salamander															
Fa	Fairy Shrimp ³ 1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%															
3-F	gg mass maturil Hatching airy shrimp: X = adpoles/larvae:	present		, , 10	· ·	(, 00/, /	. , , , , , , ,			, ٧ ٠	•1111	,,	,,		,
c. Rari	ty criteria								•		wl					
■ Note	any rare sp	ecies as	socia	ted wit	h vernal	pools. C	<u>Dbserv</u>	ations	<u>should</u>	be acc	ompar	nied	by p	hotogra	<u>aphs</u> .	
e D E	ECIES	Method	of Veri	fication*	CL**	SPECIE	9					thod		rification	CL*	*
	nding's Turtle	P	H	s		Wood Tu		`		*		P	H	<u>s</u> 		\dashv
	tted Turtle					Ribbon S	inake									-
Ring	ged Boghaunter					Other:										
**Cl	thod of verification - Confidence onal observe VP Po	level in s	specie: mmer	s deteri ndatio	mination:	1= <60%	, 2= 60·	-95%, 3	3= >95% or Bre∈		rea					
e. <u>Gen</u>	eral vernal p	ool con	nmen	ts and	l/or obse	ervation	s of o	ther w	ildlife:	· · · · · · · · · · · · · · · · · · ·	4					
	Pool four	no! in	. 50	mag	Nen	on	Me	eld;	ge c	of F	orisk	rd	W	clay	d	
ŀ	Pool four 2020 K	levis//	J.'	5/4	: Ø 4	VFEM	955t	-M	5/19	<u>.</u> Ø	WF57	m	10	SSEN	1	
Send c	ompleted form	m and s	uppor	ting do	cumenta	ition to:	Maine Attn: \ 650 S	Dept. /ernal tate St	of Inlar Pools reet, B	nd Fish angor,	eries a ME 04	and \ 401	∕Vildli	ife		
OTE: Di ac	igital submis ceptable for	ssion (to project	o Jas ts wit	on.Cza h 3 or	apiga@r fewer as	maine.g ssessed	ov) of I pools	vernal ; <u>large</u>	l pool f er proje	ield fo ects m	rms al	nd p <u>m</u> ai	hoto iled a	ograph as har	s is o	nly <u>ies</u> .
	<u>′use only</u> R :	t 🗆 F	otenti	ally Sig		lr ☐ N ot S	nitials: _ ignifica	nt due to	=							
omments:		C	out lack	ing critic	ai dala	<u> </u>	· ·	<u></u>	⊖doe	s not me	et MDE	P ver	nai po	ol criteri	a.	$\overline{\Box}$
										<u> </u>						
	Programme and the contract of	<u> </u>														

SAD- VP -3



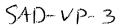


Maine State Vernal Pool Assessment Form



- 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.

		A STATE OF THE STA	The second secon
Observer's Pool II	D: <u>SAD-VP3</u>	MDIFW Pool ID:	
1. PRIMARY OBSE	ERVER INFORMATION	٠	
a. Observer nam	ne: Sarah Drahas	130	
		ded? O No (submit Addendum 1)	O Yes
2. PROJECT CON	TACT INFORMATION		
a. Contact name	e: 😿 same as observer 🔾 o	other	
b. Contact and c	redentials previously provid	ded? ◯ No (submit Addendum 1)	O Yes
c. Project Name	: Longroad (3	3 (ornus)	
3. LANDOWNER C	CONTACT INFORMATION		
a. Are you the la	ndowner? OYes ONo I	f no, was landowner permission ob	otained for survey? OYes ONo
b. Landowner's c	contact information (required	d)	
Name:		Phone:	State: Zip:
Street Address	s:	City:	State: Zip:
c. 🗌 Large Proj	ects: check if separate proje	ect landowner data file submitted	
	LOCATION INFORMATION		
	wnship: <u>Bon lon</u>		
	tions to the pool (using map	oped landmarks):	
See .	Altochad Mups		
	ý		
b. Mapping Req	uirements	4.20	
		tograph with pool clearly marked.	
1. 0000 topog	grapine map Ort achar phot	with poor olearry marked.	
ii. GPS locatio	on of vernal pool (use Dat		
Longitude/E	Easting:	Latitude/Northing:	
Coordinate	system:		
Check one:	GIS shapefile	a@maine.gov; observer has reviewed s	shape accuracy (Best)
	· -	delineated by multiple GPS points.	
	, ,	is at the center of the pool. (Good)	
	O The center of the pool i	is approximately mO ft C he above GPS point. (Acceptable)) in the compass direction of







5. VERNAL POOL HABITAT I	NFORMATION		
a. Habitat survey date (<u>onl</u>	<u>y if different</u> from indicato	r survey dates on page 3):	
b. Wetland habitat charact	erization		
■ Choose the best descripton © Isolated depression / © Floodplain depression		ssociated with larger wetland comp	llex
	nat best apply to this pool: Wet meadow Lake or pond cove Abandoned beaver flows Active beaver flowage	☑ Slow stream ☐ Floodplain age ☐ Mostly unvegetated pool ☐ ATV or skidder rut	□ Dug pond or borrow pit □ Roadside ditch □ Other:
c. Vemal pool status unde	r the Natural Resources P	rotection Act (NRPA)	
	al ONatural-Modified OL	•	
		dern or historic human impacts to	the pool (required):
ii. Pool Hydrology			
O Permanent Ø S (d	<u>ited</u> hydroperiod AND <u>provid</u> emi-permanent Irying partially in all years an completely in drought years)	e rationale in box (required): © Ephemeral d (drying out completely in most years)	O Unknown
Explain:		iii iiiost years)	
~ 3 f/ @	deepest prd		
Approximate size of poorPredominate substrate	ol (at spring highwater): Wic		<u>9</u> Øm Oft
	af-litter bottom, or upland	Organic matter (peat/muck) restricted to deepest portio	n
	•	O Organic matter (peat/muck)	deep and widespread
Terrestrial nonvascumoss, lycopodium sports, lycopodium sports ferns (e.g. sports) lady fern, bracken for Moist site ferns (e.g. fern, interrupted fern Moist site vasculars jewelweed, blue flag	ular spp. (e.g. haircap pp.) spinulose wood fern, ern) g. sensitive fern, cinnamon n, New York fern) (e.g. skunk cabbage, g iris, swamp candle) nchored or suspended)	Iroperiod (check all that apply): Wet site ferns (e.g. royal fern, Wet site shrubs (e.g. highbusl winterberry, mountain holly) Wet site graminoids (e.g. blue sedge, cattail, bulrushes) Aquatic vascular spp. (e.g. pic Floating or submerged aquatic water shield, pond weed, blad No vegetation in pool	h blueberry, maleberry, e-joint grass, tussock ckerelweed, arrowhead) cs (e.g. water lily,
•	or Green Frog tadpoles	Other: New !	
iii. Inlet/Outlet Flow Perma	anency seasonal or permanent char	nnel providing water flowing into or	• •
Intermittent inlet or outlet	O Permanent met or outle	t (channel with well-defined banks ain): <u>(200)</u> graced oc	and permanent flow) 15 id a harmod re



SAD-VP-3



<u> </u>												***	
VERNAL POOL IN		1											
a. Indicator survey	dates:_	4/	29/201	19			<u></u>						
b. Indicator abund		,			t								
■ Is pool depress	ion bised	ted by 2 o	wnership	s (strado	ller po	ol)? 🗖	Yes	O No					~7.0
Was the entire	pool surv	eyed for e	gg masse	es? 🔘	Yes 🤇	⊉No; ν	what %	of enti	re poo	l sur	veye	d? <u>~~</u> ?	70
■ For each indica	ıtor speci	es, indicate	e the exa	ct numb	er of e	gg ma	sses, c	onfiden	ice lev	el fo	rspe	cies	
determination,	and egg							separa	e surv	rey c			4
INDICATOR	Visit	Visit	gg Masse Visit	-T			T			-		oles/La	nfidence
SPECIES	#1	#2	#3	Confi	dence l	_evel'	Egg N	/lass Ma	aturity [*]	OI	bserve		Level ¹
Wood Frog	27			1	İ		M			10			
Spotted	21			/			M						
Salamander Blue-spotted	24						111			 	\vdash		
Salamander													
Fairy Shrimp ³													
2-Egg mass matur Hatching 3-Fairy shrimp: X = 4-Tadpoles/larvae:	present		wi= Mature	(round em	pryos), A	⊣= ₩dVa	псеа (10	ose matri	ix, GUIVE	a em	ibi yus),	, i - Fidu	GIEGO
c. Rarity criteria	•	: . 4	4h	naola ()haani	otiona	choule	l ho acc	nomna	niad	hy nh	otoara	inhs
■ Note any rare sp				pools. <u>u</u>	Dserv	auons	Should	be acc				fication*	
SPECIES	Method o	of Verification	CL**	SPECIE	s				-	P	H	S	CL**
Blanding's Turtle				Wood T	urtle								
Spotted Turtle				Ribbon S	Snake								
Ringed Boghaunter				Other:									
o Gonoral varnal i	e level in some reconstant S	pecies deter	rmination: on: on Signif	1= <60%	5, 2= 60	-95%, 3	tor Bre	eding A					
Internition through fire,	d in the	led on land in	Southly by bp	n Sicon	se s unacl	5 y	Dy	Slav Wand	7 - 11% 7	n 2	tų rž	Part Ling	,
Send completed for IOTE: Digital submi acceptable fo	ssion (to	o Jason.Ca	zapiga@i	maine.g	۱ :Attn 650 S ov) of	vernal tate Si verna	Pools treet, E I pool	Bangor, field fo	ME 04	1401 nd p	ohoto	graph	s is only I copies.
or MDIFW use only finite pool is: Signification	nt 🗆 P	y MDIFW Da otentially Si ut lacking crit	gnificant		nitials: Significa	and the state of the state of	o: O do	es not me	eet biolo	gical P vei	criteria rnal pod	ol criteria	
omments:													





- 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.

cgg mass, ar	e <u>reddired</u> for all observer	J.
Observer's Pool II	D: SAD-VP-4	MDIFW Pool ID:
1. PRIMARY OBSE	ERVER INFORMATION	
a. Observer nam	e: Sarah Drahovzal	
b. Contact and c	redentials previously provided? C	No (submit Addendum 1) Yes
2. PROJECT CON	TACT INFORMATION	
a. Contact name	: ₭ same as observer ♠ other _	
b. Contact and c	redentials previously provided? 🔿	No (submit Addendum 1) Ø Yes
c. Project Name:	: Lorgroad (3 (orners Solve Projet)
3. LANDOWNER C	ONTACT INFORMATION	
a. Are you the lar	ndowner? OYes ØNo If no, w	ras landowner permission obtained for survey? OYes ONo
b. Landowner's c	ontact information (required)	E.
Name:		Phone: State: Zip:
Street Address	s:	City: State: Zip:
c. 🔲 Large Proje	ects: check if separate project land	
Brief site direct	vnship: <u>Benfon</u> tions to the pool (using mapped la a Hached Map	ndmarks):
b. Mapping Requ	uirements	
i. USGS topog	graphic map OR aerial photograph	ı with pool clearly marked.
ii. GPS locatio	on of vernal pool (use Datum NA	AD83 / WGS84)
Longitude/E	asting: <u>- 69, 4804/3</u> Lati	itude/Northing: 44, 57 2347
	system:	
Check one:	·	ne gov; observer has reviewed shape accuracy (Best) ted by multiple GPS points. (Excellent) ith coordinates.
	O The above GPS point is at the	•
	O The center of the pool is appr	roximately mO ft O in the compass direction of ve GPS point. (Acceptable)



54D-VP-4



Maine State Vernal Pool Assessment Form 5. VERNAL POOL HABITAT INFORMATION a. Habitat survey date (only if different from indicator survey dates on page 3): b. Wetland habitat characterization ■ Choose the best descriptor for the landscape setting: Olsolated depression Pool associated with larger wetland complex Floodplain depression ■ Check all wetland types that best apply to this pool: Forested swamp ☐ Wet meadow ☐ Slow stream ☐ Dug pond or borrow pit ☐ Shrub swamp ☐ Lake or pond cove ☐ Floodplain ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage ☐ Mostly unvegetated pool ☐ Roadside ditch ☐ Emergent marsh ☐ Active beaver flowage ☐ ATV or skidder rut ☐ Other: c. Vernal pool status under the Natural Resources Protection Act (NRPA) i. Pool Origin: ONatural Matural-Modified OUnnatural OUnknown If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (**required**): Forested wetland impounded by Food ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provide rationale</u> in box (**required**): O Permanent Semi-permanent O Unknown (drying partially in all years and (drying out completely completely in drought years) in most years) Explain: Shallow hollows tilled wil worker - impounded by ■ Maximum depth at survey: ②0-12" (0-1 ft.) ○12-36" (1-3 ft.) ○36-60" (3-5 ft.) ○>60" (>5 ft.) ■ Approximate size of pool (at spring highwater): Width: 30 Øm Oft Length: 80 Øm Oft ■ Predominate substrate in order of increasing hydroperiod: Mineral soil (bare, leaf-litter bottom, or upland Organic matter (peat/muck) shallow or mosses present) restricted to deepest portion O Mineral soil (sphagnum moss present) Organic matter (peat/muck) deep and widespread ■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply): ☐ Terrestrial nonvascular spp. (e.g. haircap Wet site ferns (e.g. royal fern, marsh fern) moss, lycopodium spp.) Wet site shrubs (e.g. highbush blueberry, maleberry, Dry site ferns (e.g. spinulose wood fern, winterberry, mountain holly) lady fern, bracken fern) ☐ Wet site graminoids (e.g. blue-joint grass, tussock Moist site ferns (e.g. sensitive fern, cinnamon sedge, cattail, bulrushes) fern, interrupted fern, New York fern) Aquatic vascular spp. (e.g. pickerelweed, arrowhead) Moist site vasculars (e.g. skunk cabbage, 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): ☐ Bullfrog or Green Frog tadpoles ☐ Fish Other: iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool): No inlet or outlet O Permanent inlet or outlet (channel with well-defined banks and permanent flow) Intermittent inlet O Other or Unknown (explain):

or outlet





	RNAL POOL IN					,								
a. Ir	ndicator survey	dates:	4/2	9/2019	; 5	122	120	9_						
	ndicator abund													
	ls pool depress	sion bise	cted by 2 ov	wnership	s (strado	ller po	ǫΙ)? 🕅) Yes	O No			projection of the second	/%	
	Was the entire												<u> </u>	
	For each indica	-												
	determination,	and egg							separate	surve				1
	INDICATOR	Visit		gg Masse Visit				1		- -		10	_arvae ⁴ Confide	
	SPECIES	#1	#2	#3	Confi	dence l	_evel'	Egg	Mass Mati	urity*	Observe	ed	Leve	
	Wood Frog	10	Ø		/	/		M						
	Spotted Salamander	5	Ø		/	1		M						
	Blue-spotted Salamander									:		*		
	Fairy Shrimp ³											,		
. F	1-Confidence level 2-Egg mass matur Hatching 3-Fairy shrimp: X = 4-Tadpoles/larvae:	ity: F= Fre present	sh (<24 hrs), N		round em	bryos), /	\= Adva	nced (lo	ose matrix,	curved	embryos)	, H= H:	atched c	ir
	R <mark>arity criteria</mark> Note any rare sp	ecies as	sociated wi	th vernal	pools. <u>C</u>	Observ	ations	should	l be acco	mpani	ied by pł	notog	raphs.	
	CDECIEC .	Method	of Verification'	CL**	SPECIE					Met	hod of Ver	ification	n* CL	**
-	SPECIES	P	H S							P		S		
	Blanding's Turtle				Wood Tu									
	Spotted Turtle				Ribbon S	nake				L_E				
	Ringed Boghaunter				Other:									
d. C	*Method of verifica ***CL - Confidence Pptional observ □ SVP □ Po	level in seer recor	pecies deter nmendatio	mination: n:	1= <60%	, 2= 60	-95%, 3			ea				
	eneral vernal p													
	Pool w/ . inlet fram	ia fo deain	rest wa age from	elland. n ke	I land,	m pgi	inde	d'b	y 100		W/ I	inter	en Her	7 4
OTE	: Digital submi	ssion (to project	o Jason.Cz	apiga@n fewer as	naine.g ssessed	Attn: \ 650 S ov) of	/ernal tate St vemal ; <u>large</u>	Pools reet, E I pool	Bangor, M field forr	IE 044 ns an	i01 d photo	grapl		
his po	ol is: Significan	t 🔲 P	otentially Sig	nificant		Mark Mark	er in sues en		es not meel es not meet				ia.	
Comme	ents:													





- Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.
- <u>Clear photographs</u> of a) the pool AND b) the indicators (one example of each species egg mass) are <u>required</u> for all observers.

Observer's Pool I	D: <u>SAD-VP-5</u> (5.	MDIFW Pool ID:	
1. PRIMARY OBS	ERVER INFORMATION		
a. Observer nan	me: Sarah Drehovz	<u>/</u>	
b. Contact and	credentials previously provided	d? O No (submit Addendum 1)	⊘ Yes
2. PROJECT CON	ITACT INFORMATION		
a. Contact name	e: 放 same as observer 🔘 oth	er	
b. Contact and	credentials previously provided	d? O No (submit Addendum 1)	O Yes
c. Project Name	:: Longroad (3	Corners)	
3. LANDOWNER (CONTACT INFORMATION		
a. Are you the la	andowner? OYes 🕅 No 🛮 If n	o, was landowner permission ol	otained for survey? Yes ONo
b. Landowner's	contact information (required)		
Name:		Phone:	
Street Addres	s:	City:	State: Zip:
	jects: check if separate project		
Brief site direc	wnship: <u>Benton</u> ctions to the pool (using mappe a Hached map	ed landmarks):	
b. Mapping Req	uirements		
i. USGS topo	graphic map OR aerial photog	raph with pool clearly marked.	
		n NAD83 / WGS84) Latitude/Northing: <u>44.57/8</u>	3 <u>88</u>
ͺ Check one:	 The pool perimeter is deli Include map or spreadshe The above GPS point is a The center of the pool is a 	maine.gov; observer has reviewed ineated by multiple GPS points. set with coordinates. at the center of the pool. (Good) approximately m O ft Cabove GPS point. (Acceptable)	(Excellent)



SAD-VP-5 (5A)





. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicator	r survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting: ③ Isolated depression ○ Pool as ○ Floodplain depression ○ Other:	sociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Shrub swamp ☐ Lake or pond cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage	☐ 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: ONatural 🔯 Natural-Modified OU	Innatural OUnknown
1	dern or historic human impacts to the pool (required):
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)	O Ephemeral O Unknown d (drying out completely in most years)
Explain:	,
. Deep pool ~ 4 feet @ max de	ptn
■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12 ■ Approximate size of pool (at spring highwater): Wide ■ Predominate substrate in order of increasing hydrogen	lth: <u>40</u> O m Ø ft Length: <u>30</u> O m Ø ft
 Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	Organic matter (peat/muck) shallow or restricted to deepest portion Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hyd	•
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 fems (e.g. foyal fem, maish fem) ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) ☐ Wet site graminoids (e.g. blue-joint grass, tussock
	sedge, cattail, bulrushes)
	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)☐ No vegetation in pool
■ Faunal indicators (check all that apply):	140 Vegetation in poor
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent char	
	et (channel with well-defined banks and permanent flow)

SAD-UP-5 (5A)





6. VER	RNAL POOL IND	OCATO	R INF	FORM/	ATION		1 . /									
a. In	dicator survey	dates:_		4/29	19	;_5	122/:	2019								
b. In	b. Indicator abundance criteria and pool survey effort ■ Is pool depression bisected by 2 ownerships (straddler pool)? ○ Yes ○ No ■ Was the entire pool surveyed for egg masses? ○ Yes ○ No; what % of entire pool surveyed?															
	For each indicate	=														
	determination, a	and egg r	nass							separa	te surv					
l	INDICATOR	5.40_0a.	 ;		gg Masse	es (or adı	ult Fairy	Shrim	T				Tadp	oles/L		
	SPECIES	Visit #1		Visit #2	Visit #3	Confi	idence l	_evel ¹	Egg M	lass Ma	aturity ²	Ok	serve	ed C	Lev	lence el ¹
	Wood Frog	67(32		ı	<u> </u>	12	2		A							$\perp \perp$
	Spotted Salamander	7(!	10-50	1)30	up-5)	12	2		M	A						
	Blue-spotted Salamander															
	1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%															
	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															Oi
	3-Fairy shrimp: X =	•	•													
	4-Tadpoles/larvae: 2	X = presen	Ε.													
	arity criteria															
■ N	lote any rare spe	ecies ass	ocia	ted wit	h vernal	pools. C	<u>Dbserva</u>	ations s	should	be acc						:•
ſ,	SPECIES	Method o		1	CL**	SPECIES	<u> </u>							ification	* c	L**
F		P	H	S	 						F		H	S	-	
	Blanding's Turtle		<u> </u>		<u> </u>	Wood Tu									_	
-	Spotted Turtle					Ribbon S	inake	*				_				
	Ringed Boghaunter				<u> </u>	Other:	<u> </u>] [
	Method of verificat *CL - Confidence								·= >95%	•						
		•				100	',	90 /0, -		,						
-	ptional observe						_									
L]SVP ☐ Pot	tential S\	/P	⊠ Nc	on Signifi	cant VP	, П	ndicate	or Bree	ding A	rea					
e Go	eneral vernal po	ool com	men	te and	lar obse	≏rvatior	e of of	har wi	ildlife:							
υ. <u>υ</u> .	-										-					
	Deep pool VP:	m	2007	la cos	29	V ORDI				*	, ,		,			1
	VP	5 -	VP	'5A	Con	inuted	hy.	rtolog	910 lly	169	dite	h	alox	79 1	'0×0'	/
P		***************************************	,					***************************************								
Send	d completed form	n and sur	pport	ting do	cumenta					nd Fish	eries a	nd V	Vildlit	fe		
							Attn: V		Pools reet, Ba	a^r	*4⊏ ∩4 /	404				
									•							
	Digital submis															
•	acceptable for	projects	with	13 or 1	lewer as	sessed	pools	; <u>large</u>	r proje	ects m	ust be	mail	led a	s har	d co	<u>oies</u> .
or MDII	FW use only Re	eviewed by	MDII	-W Dat	re:		nitials:									
26 No. 201	l is: ☐ Significant	t 🔲 Po	otentia	ally Sigr	nificant	 ☐ Not Si		t due to								
		DU	. lacki	ing critica	al data				Odoes	s not me	et MDEP	vern	al pod	ol criteri	а.	
Commen	its:															





■ Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.
■ <u>Clear photographs</u> of a) the pool AND b) the indicators (one example of each species egg mass) are <u>required</u> for all observers.
Observer's Pool ID: SAD VP-C MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: Such Drahov 21 b. Contact and credentials previously provided? O No (submit Addendum 1) Yes
2. PROJECT CONTACT INFORMATION
a. Contact name;
b. Contact and credentials previously provided? No (submit Addendum 1) Yes c. Project Name: Longroad (3 Corners Solar Proje +)
c. Project Name: Longrand (3 Corners 30/W Proje +)
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: $E, D, Bessey = 300$ Phone: $(207) 453 - 9385$
Name: <u>E, D, Brssey & Son</u> Phone: (207) 453-9388 Street Address: <u>779 Skowhegen Rd</u> City: <u>Hinck/eg</u> State: <u>ME</u> Zip:04944
c. Large Projects: check if separate project landowner data file submitted
4. VERNAL POOL LOCATION INFORMATION
a. Location Township: Unity Twp
a. Location Township: Unity Twp Brief site directions to the pool (using mapped landmarks):
See attrohed 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, 457 /29</u> Latitude/Northing: <u>44, 6245 /5</u>
Coordinate system:
Check one: OS 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)



SAD-UP-6



VERNAL POOL HABITAT INFORMATION									
a. Habitat survey date (<u>only if different</u> from indicator survey dates on page 3):b. Wetland habitat characterization									
■ Choose the best descriptor for the landscape setting:	sociated with larger wetland complex								
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Shrub swamp ☐ Lake or pond cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage	☐ 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 i. Pool Origin: O Natural O Natural-Modified O U If modified, unnatural or unknown, describe any mo Pool located in Wetland in Vercein	Innatural OUnknown dern or historic human impacts to the pool (required):								
ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> ○ Permanent ○ Semi-permanent (drying partially in all years and completely in drought years) Explain: Sha llow forest pool	© Ephemeral ○ Unknown								
■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12 ■ Approximate size of pool (at spring highwater): Wide ■ Predominate substrate in order of increasing hydrogon in Mineral soil (bare, leaf-litter bottom, or upland	lth: <u>30 </u>								
mosses present) Mineral soil (sphagnum moss present)	restricted to deepest portion O Organic matter (peat/muck) deep and widespread								
■ Pool vegetation indicators in order of increasing hyd	roperiod (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) → Moist site ferns (e.g. sensitive fern, cinnamon 	 ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) ☐ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes) 								
fern, interrupted fern, New York fern) Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead) ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) ☐ No vegetation in pool								
■ Faunal indicators (check all that apply): ☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:								
iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent chan No inlet or outlet Intermittent inlet or outlet Other or Unknown (explored)	et (channel with well-defined banks and permanent flow)								



SAD -VP-6



6. VE	6. VERNAL POOL INDICATOR INFORMATION															
a. Indicator survey dates: 5/1/20/9; 5/22/20/9																
b. I	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. Egg Masses (or adult Fairy Shrimp) Tadpoles/Larvae ⁴															
	INDICATOR	Visit	Т ,	/isit	gg Masse Visit	T								I Cc	rvae* onfide	
	SPECIES	#1		#2	#3	Conf	idence	_evel ¹	Egg N	lass Ma	aturity²	Obs	erved	Ľ	Level	4
	Wood Frog	N.		0									ŀ			
	Spotted	2		1		3	3		M	A						
	Salamander Blue-spotted	10	-	l			-		///	/ 1					╁	
	Salamander	Ø														
	Fairy Shrimp ³															
	1-Confidence level									•						
	2-Egg mass maturi Hatching	ty: F= Fre	esh (<2	4 hrs), N	1= Mature ((round en	nbryos), <i>i</i>	4= Adva	nced (loc	se matri	ix, curve	d embr	yos), H	= Hato	ched o	r
	3-Fairy shrimp: X =	-														
	4-Tadpoles/larvae:	X = prese	ent							•						
c. F	Rarity criteria															
	Note any rare sp	ecies as	socia	ted wit	:h vernal	pools.	<u>Observ</u>	ations	<u>should</u>	be acc	ompan	ied by	y pho	togra	<u>phs</u> .	
	SPECIES	Method	of Veri	fication*	CL**	SPECIE	:0				Met	thod of	Verific	ation*	CL,	*
		P	H	S							F		4	S		
	Blanding's Turtle		Ш	Ш	ļ	Wood T						<u> </u>]			
	Spotted Turtle				<u> </u>	Ribbon	Snake									
	Ringed Boghaunter				<u> </u>	Other:							┚╽			
	*Method of verifica **CL - Confidence								= >95%)						
							-,									
	Optional observ								_							
	□SVP □Po	tential S	SVP	I⊠ No	on Signifi	cant VF	, П	Indicat	or Bree	eding A	rea					
e. 0	eneral vernal p	ool cor	nmen	ts and	/or obse	ervation	ns of o	her w	ildlife:							
Γ																
	Poul 139	MIJOU	1	WIL	11/6/	y de	9 0	0 17	a. j	es.	ineer	S				
L																
														۴		
Ser	id completed for	n and s	uppor	ting do	cumenta	tion to:				nd Fish	eries a	nd Wi	ildlife			
								/ernal tate St		angor.	ME 044	401				
		. ,,		_												
NOTE	: Digital submis acceptable for															
	describic for	project	.5 ****		icirci as	303300	. poors	, <u>idiqe</u>	i proje	.013 111	uot bu				<u> </u>	
For MD	IFW use only R	eviewed b	y MDII	W Dat	e:	11	nitials:									
This po	ol is: 🔲 Significan				nificant	☐ Not S	ignificar	nt due to								
			ut lack	ing critic	aı data				Odoes	s not me	et MDEF	vernal	l pool c	riteria		
Comme	ents:															





- Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.
- <u>Clear photographs</u> of a) the pool AND b) the indicators (one example of each species egg mass) are <u>required</u> for all observers.

Observer's Pool ID: SAD - VP - 7 @ MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: Sanh Donhov & 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) c. Project Name: Solar Project
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? Yes ONo If no, was landowner permission obtained for survey? Yes ONo b. Landowner's contact information (required) Name: E.D. Bessey Son
b. Mapping Requirements i. USGS topographic map OR aerial photograph with pool clearly marked. ii. GPS location of vernal pool (use Datum NAD83 / WGS84) Longitude/Easting:69, 455584 Latitude/Northing:44.62759 Coordinate system:\varphi\subseteq \Sigma 84
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) O The center of the pool is approximately mO ft O in the compass direction of degrees from the above GPS point. (Acceptable)





5. VERNAL POOL HABITAT INFORMATION	r aumieu detee en nege 2);
a. Habitat survey date (only if different from indicato b. Wetland habitat characterization	r survey dates on page 3):
■ Choose the best descriptor for the landscape setting: O Isolated depression O Floodplain depression O Other:	sociated with larger wetland complex
	☐ 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 Natural-Modified OL	
ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provio</u> ○ Permanent ○ Semi-permanent (drying partially in all years ar completely in drought years) Explain:	Ø Ephemeral ○ Unknown
Shallow water	
JVVIIOW WATER	
 Maximum depth at survey: Q 0-12" (0-1 ft.) Q 12 Approximate size of pool (at spring highwater): Wide Predominate substrate in order of increasing hydron Q Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	dth:OmOft Length:OmOft
■ Pool vegetation indicators in order of increasing hyd	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) 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) ☐ Sphagnum moss (anchored or suspended) 	 ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead) ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) ☐ No vegetation in pool
■ Faunal indicators (check all that apply): ☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
iii. Inlet/Outlet Flow Permanency	
Type of inlet or outlet (a seasonal or permanent 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 Other or Unknown (export outlet) 	



SAD-VP-7-: Maine State Vernal Pool Assessment Form



6. VERNAL POOL INDICATOR INFORMATION												
a. Indicator survey dates: 5/1/20/9 ; 5/22/20/9												
b. Indicator abundance criteria and pool survey effort												
Is pool depressWas the entireFor each indica determination, a	pool sur tor spec	veyed for e ies, indicate	gg masse the exa	es? OYect number	es ONo; v	what % sses, c	onfiden	re pool ice leve	el for	specie		
	- 00	****			Fairy Shrim				-	Fadpole:	s/Larva	ae^4
SPECIES	INDICATOR Lead to the last transfer of the last tra									idence		
Wood Frog												
Spotted Salamander	12	6		2		M	A					
Blue-spotted Salamander	<u> </u>	1		2			M					
Fairy Shrimp ³												
3-Fairy shrimp: X = 4-Tadpoles/larvae: c. Rarity criteria ■ Note any rare spe	X = presei		th vernal	pools. Ob	servations	should	be acc	ompan	ied b	y photo	ograph	<u>IS</u> .
		of Verification*	. [-		f Verificat	ion*	CL**
SPECIES Blanding's Turtle	Р	H S	CL**	SPECIES Wood Turtle	9			F		н s	}	CL
Spotted Turtle				Ribbon Snal							_	
				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 Mon Significant VP Indicator Breeding Area												
e. General vernal pool comments and/or observations of other wildlife: Could have wood frags calling in New by Wetland. Still Some snow on the edge of the Wetland												
Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife Attn: Vernal Pools 650 State Street, Bangor, ME 04401 NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies. For MDIFW use only Reviewed by MDIFW Date:												
This pool is: Significant	his pool is: Significant Potentially Significant											

5/AD-VP-7-2



Maine State Vernal Pool Assessment Form

No eggs in



- Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.
- <u>Clear photographs</u> of a) the pool AND b) the indicators (one example of each species egg mass) are <u>required</u> for all observers.

Observer's Pool ID: SAD-VP-7-2 MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION
a. Observer name: Sanch Dry hours
b. Contact and credentials previously provided? ONo (submit Addendum 1) OYes
b. Contact and Groundary provides, provides of the Contact and Con
A DECLECT CONTACT INFORMATION
2. PROJECT CONTACT INFORMATION
a. Contact name: Same as observer Oother
b. Contact and credentials previously provided? No (submit Addendum 1) Yes
c. Project Name:
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? OYes ONo Hr no, was landowner permission obtained for survey? OYes ONo
b. Landowner's contact information (required)
Name: Phone:
Name:
c. Large Projects: check if separate project landowner data file submitted
C. Large Projects. Check it separate project landowner data life submitted
4. VERNAL POOL LOCATION INFORMATION
a. Location 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.
ii. GPS location of vernal pool (use Datum NAD83 / WGS84)
Longitude/Easting: <i>69, 456 7 75</i> Latitude/Northing: <u>44, 624376</u>
Coordinate system:
Check one: 🧭 GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)
The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.
The above GPS point is at the center of the pool. (Good)
O The center of the pool is approximately mO ft O in the compass direction of
degrees from the above GPS point. (Acceptable)



SAD-40-3-2



. VERNAL POOL HABITAT INFORMATION									
a. Habitat survey date (<u>only if different</u> from indicator survey dates on page 3):									
b. Wetland habitat characterization									
■ Choose the best descriptor for the landscape settin O Isolated depression O Floodplain depression O Other	l associated with larger wetland complex								
■ Check all wetland types that best apply to this pool ☐ Forested swamp ☐ Wet meadow ☐ Shrub swamp ☐ Lake or pond cove ☐ Peatland (fen or bog) ☐ Abandoned beaver fl ☐ Emergent marsh ☐ Active beaver flowage	☐ Slow stream ☐ Dug pond or ☐ Floodplain borrow pit owage ☐ Mostly unvegetated pool ☐ Roadside ditch								
c. Vernal pool status under the Natural Resource	s Protection Act (NRPA)								
i. Pool Origin: ONatural 🕲 Natural-Modified (
If modified unnatural or unknown, describe any	modern or historic human impacts to the pool (required): 1. Pool even possibly caused by								
ii. Pool Hydrology									
■ Select the pool's <u>estimated</u> hydroperiod AND <u>pro</u>	ovide rationale in box (required):								
O Permanent O Semi-permanent	© Ephemeral O Unknown								
(drying partially in all years completely in drought yea									
Explain:	,								
Shallow pool col leaf litter									
■ Maximum depth at survey: *◎ 0-12" (0-1 ft.)) 12-36" (1-3 ft.)								
,	Width: <u>3 ≤ O m Ø</u> ft Length: <u>/</u> ≤ O m Øft								
■ Predominate substrate in order of increasing hyd									
Mineral soil (bare, leaf-litter bottom, or upland mosses present)	·								
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, cinnamo fern, interrupted fern, New York fern)	on 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. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent or	channel providing water flowing into or out of the pool):								
/	utlet (channel with well-defined banks and permanent flow)								
	explain):								



5AD- VP-7-2 Maine State Vernal Pool Assessment Form



6. VERNAL POOL INDICATOR INFORMATION													
a. Indicator survey dates: 5 / 1 / 20 h ; 5 / 22 / 20 19													
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 ⁴												
	INDICATOR Locality Lo												
	SPECIES	#1		#2	#3	Confi	dence	Level'	Egg Mass Matur	ity C)bserve	d	Level ¹
	Wood Frog												
	Spotted Salamander	2	1	X		3	3		M				
	Blue-spotted		+	/		1-							
	Salamander					-					ŀ	:	
	Fairy Shrimp ³												
	1-Confidence level:		•			round em	hrvos)	A= Adva	nced (loose matrix, c	urved er	mbrvos)	H= Hat	ched or
	Hatching		7011 (·2	+ 1110 <i>)</i> , 11	i wataro	(round on	5. 3 00), .	. ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			,,,		
	3-Fairy shrimp: X = 4-Tadpoles/larvae:		nt										
_	Rarity criteria	, , p, 000											
	Note any rare sp	ecies as	encia	ted wit	h vernal	nools (hsen	ations	should be accom	nanieo	d hy ph	otoara	inhs
_	Twote any rare sp	Method			1	pools. <u>s</u>	ZDOCI V	auono	onodia be decon		d of Veri		
	SPECIES	Р	Н	S	CL**	SPECIE	S			Р	Н	S	CL**
	Blanding's Turtle					Wood Tu	ırtle						
	Spotted Turtle					Ribbon S	nake						
	Ringed Boghaunter					Other:							
	*Method of verifica)_ > 0E0/		,		, ,
	**CL - Confidence	ievei in s	specie	s deter	mination:	1= <60%	, ∠= 60	-90%, 3	5= >95%				
d.	Optional observ			\ /									
	SVP Po	tential S	VP	/ZI No	on Signifi	cant VP	П	Indicat	or Breeding Area	1			
e .	General vernal p	ool con	nmen	ts and	l/or obse	ervation	s of o	ther w	ildlife:				:
٥.													
													
0 -				h:		4: 4	Maina	Dant	of Inland Fisheri		\ \ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	:_	
Se	end completed for	n and si	nppor	ting ao	cumenta	tion to:		e Dept. ∕ernal		es and	vviidili	е	
									reet, Bangor, ME	04401	1		
NOT	E: Digital submis	sion (to	o Jas	on.Cz	apiga@n	naine.a	ov) of	vernal	pool field form	s and i	photo	graphs	s is only
	acceptable for	project	s wit	h 3 or	fewer as	sessed	pools	; <u>large</u>	er projects must	be ma	iled a	s hard	copies.
For M	DIFW use only R	aviavad b	v MDII	34/ Dat	e:	\$13. S. 1. 1. 1.	itiala:						
93 (8%)							itials: anifica	adverse a color	: Odoes not meet b	iological	criteria		
11118 P	ool is: Significan			ing critic			gud		Odoes not meet N				
Comn	nents:												
										医有些医 计选择	- 1 T	2	







- Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.
- <u>Clear photographs</u> of a) the pool AND b) the indicators (one example of each species egg mass) are <u>required</u> for all observers.

Observer's Pool ID:	SAD-VP8 MDIFW Pool ID:
	VER INFORMATION Sora h Dra hov る / Identials previously provided? O No (submit Addendum 1)
2. PROJECT CONTA	
a. Contact name: 🕻	as ame as observer on ther
	lentials previously provided? O No (submit Addendum 1) O Yes
c. Project Name:	Longroad (3 Corners)
3. LANDOWNER COM	NTACT INFORMATION
a. Are you the lando	wner? OYes ONo If no, was landowner permission obtained for survey? OYes ONo
b. Landowner's conf	act information (required)
Name: <u>E, D.</u>	Bessey & Son Phone: (207) 453-9388 779 Skowhegen Rd. City: Hinck/cy State: ME Zip: 0494
Street Address:	779 Skowheagn Rd. City: Hinck/ky State: ME Zip: 04994
c. Large Project	s: check if separate project landowner data file submitted
a. Location Towns Brief site direction	chip: Unity Twp. Institute to the pool (using mapped landmarks): Huched map
b. Mapping Require	ements
i. USGS topogra	phic map OR aerial photograph with pool clearly marked.
Longitude/East	of vernal pool (use Datum NAD83 / WGS84) ing: <u>69, 45 604</u> Latitude/Northing: <u>44, (28853</u> item:
C	GIS shapefile - send to Jason Czapiga@maine.gov; observer has reviewed shape accuracy (Best) The pool perimeter is delineated by multiple GPS points. (Excellent) - Include map or spreadsheet with coordinates. The above GPS point is at the center of the pool. (Good) The center of the pool is approximately m O ft O in the compass direction of
_	degrees from the above GPS point. (Acceptable)

SAD-VP-8





S. VERNAL POOL HABITAT INFORMAT			
a. Habitat survey date (<u>only if differe</u>	<u>nt</u> from indicator su	rvey dates on page 3):	
b. Wetland habitat characterization			
 Choose the best descriptor for the land land land land land land land land		ated with larger wetland comp	ex
Peatland (fen or bog) Abando	eadow r pond cove	☐ Slow stream ☐ Floodplain ☐ Mostly unvegetated pool ☐ ATV or skidder rut	□ Dug pond or borrow pit □ Roadside ditch □ Other:
c. Vernal pool status under the Natu	ral Resources Prote	ction Act (NRPA)	
i. Pool Origin: O Natural O Natur			•
If modified, unnatural or unknown, Road at N eva z	describe any modern	or historic human impacts to t	he pool (required):
ii. Pool Hydrology			
■ Select the pool's <u>estimated</u> hydrop	eriod AND provide ra	tionale in box (required):	
O Permanent O Semi-perma (drying partia completely i		© Ephemeral (drying out completely in most years)	O Unknown
Explain:	The same of the same		
■ Maximum depth at survey: 💢 0-1	2" (0-1 ft.)	' (1-3 ft.) 0 36-60" (3-5 ft.)	O >60" (>5 ft.)
■ Approximate size of pool (at spring		_	
■ Predominate substrate in order of	_		<u> </u>
O Mineral soil (bare, leaf-litter bot		o. O Organic matter (peat/muck)	shallow or
mosses present)	ioni, or upland	restricted to deepest portio	
O Mineral soil (sphagnum moss p	resent)	Organic matter (peat/muck)	
■ Pool vegetation indicators in order	-	•	
☐ Terrestrial nonvascular spp. (e		√Wet site ferns (e.g. royal fern	marsh fern)
moss, lycopodium spp.)	\ <u>\</u>	Wet site shrubs (e.g. highbus	
Dry site ferns (e.g. spinulose v	vood fern,	winterberry, mountain holly)	r bidobotry, maiobotry,
lady fern, bracken fern) ☐ Moist site ferns (e.g. sensitive fern, interrupted fern, New Yor	•		e-joint grass, tussock
☐ Moist site vasculars (e.g. skun		Aquatic vascular spp. (e.g. pi	ckerelweed, arrowhead)
jewelweed, blue flag iris, swam		Floating or submerged aquati	cs (e.g. water lily,
Sphagnum moss (anchored or	suspended)	water shield, pond weed, blac No vegetation in pool	
■ Faunal indicators (check all that ap	ply):	-	
☐ Fish ☐ Bullfrog or Green F	rog tadpoles	Other:	-
iii. Inlet/Outlet Flow Permanency			
Type of inlet or outlet (a seasonal of	or permanent channel	providing water flowing into or	out of the pool):
<u> </u>	•	nannel with well-defined banks	• •
_/		:	- · · · · · · · · · · · · · · · · · · ·
		· ·	





ATOR ATOR Frog Adhander Apotted Ander Apotte	dates: ance crite ion bisect pool surv tor specie and egg r Visit #1 36 49 1 = <60%, y: F= Fresh present X = present ecies ass	eria and ted by 2 reyed for es, indice mass mass mass mass mass mass mass mas	d pool sure 2 ownersh or egg mass cate the enaturity. SEgg Mass with the sure of the sure	purvey efforming (strade isses? & exact numb Separate consist Configure (round email pools. Conf	dler po Yes (per of e ells are ult Fairy idence hbryos), Observ	No; No; No; No; No; No; No; No; No; No;	what % sses, co ded for s lip) Egg Ma	eparat ass Ma	re pool ace leve te surve aturity² x, curveo mempan Met	el for spey date Ta Obse d embryo hied by thod of V	photolegical photo	es/Lar Cor L	nfiden _evel ¹ hed or	
or abunda Il depressione entire pach indicaton, a ATOR IES Frog ed lander spotted lander Shrimp ³ dence level: lanss maturit hing shrimp: X = loles/larvae: riteria ly rare specific services g's Turtle	visit #1 36 1 = <60%, y: F= Fresh Present X = present ecies ass	visit #2 2 = 60-95 h (<24 hrs	d pool su 2 ownersh or egg mas cate the e aturity. S Egg Mas t Visi #3 5%, 3 = >95 s), M= Matu	turvey efformation in all pools. Questions of the control of the c	dler po Yes (per of e ells are ult Fairy idence hbryos), Observ	No; No; No; No; No; No; No; No; No; No;	what % sses, co ded for s lip) Egg Ma	of entionfidenteparate	re pool ace leve te surve aturity² x, curveo mempan Met	el for spey date Ta Obse d embryo hied by thod of V	photolegical photo	es/Lar Cor L = Hatcl	hed or	
ach indicate inination, a ATOR IES Frog ed inander inpotted inander inspetted in indicate in ining ining ining in ining ining in	tor species and egg r Visit #1 36 49 1 = <60%, y: F= Frest X = present Ecies ass Method of P □ □	ted by 2 reyed for es, indice mass mass mass mass mass mass mass mas	ownersh or egg mas cate the e aturity. S Egg Mas t Visi #3 5%, 3 = >95 s), M= Matu I with vern	hips (strade sizes? & exact numb Separate cesses (or addit Confile Con	dler po Yes (per of e ells are ult Fairy idence hbryos), Observ	No; No; No; No; No; No; No; No; No; No;	what % sses, co ded for s lip) Egg Ma	of entionfidenteparate	re pool ace leve te surve aturity² x, curveo mempan Met	el for spey date Ta Obse d embryo hied by thod of V	photolegical photo	es/Lar Cor L = Hatcl	hed or	
he entire pach indicate inination, a ATOR IES Frog ed lander spotted lander shrimp ander shrimp and shrimp: X = soles/larvae: 3 riteria y rare specific spec	visit #1 36 1 = <60%, y: F= Fresh Present X = present ecies ass	veyed for es, indice mass mass mass mass mass mass mass mas	or egg masscate the eleaturity. S Egg Masst Visi #3 5%, 3 = >95 s), M= Matu	exact numb Separate ce sses (or addit Confi 2 2 2 5% ure (round em specie Specie Wood To	Yes (per of ealls are ult Fair idence habryos), and observes serves serv	No; No; No; No; No; No; No; No; No; No;	what % sses, co ded for s lip) Egg Ma	of entionfidenteparate	re pool ace leve te surve aturity² x, curveo mempan Met	el for spey date Ta Obse d embryo hied by thod of V	photolegical photo	es/Lar Cor L = Hatcl	hed or	
ATOR ATOR ATOR ATOR ATOR ATOR ATOR ATOR	visit #1 36 49 1 = <60%, y: F= Frest present x = present ecies ass Method of P	Visit #2 2 = 60-95 h (<24 hrs	cate the exact triangle attribute. S Egg Mast Visi #3 5%, 3 = >95 5%, 3 = >95 s), M= Matu I with vern CL**	exact numb Separate ce sses (or add it Confi 2 2 5% ure (round em specie Specie Wood To	per of e ells are ult Fair idence habryos), and bryos), are bryos), and bryos), are bryos), and bryos), are bryos), and bryos), are bryos), and bryos), are bryos), are bryos), are bryos), and bryos), are bryos), are bryos), are bryos), are bryos), are bryos), are bryos), are bryos), are bryos), are bryos), are bryos)	egg mas e provid y Shrim Level ¹	sses, coded for sapple Egg Ma	eparat ass Ma	aturity ² x, curved	el for spey date Ta Obse d embryo hied by thod of V	photolegical photo	es/Lar Cor L = Hatcl	hed or	
ATOR IES Frog ed hander spotted hander Shrimp ³ dence level: hass maturit hing shrimp: X = poles/larvae: X riteria hy rare species g's Turtle	Visit #1 36 49 1 = <60%, y: F= Fresh x = present ecies ass Method of P	Visit #2 2 = 60-95 h (<24 hrs	aturity. S Egg Mas t Visi #3 5%, 3 = >95 s), M= Matu I with vern tion* CL**	Separate cesses (or addit Confile Conf	ells are ult Fain idence hbryos), Observ	e provid y Shrim Level A= Adva	Egg Ma	ass Ma	x, curved	obse Tale Obse Indicate Obse Indicate Obse Indicate Observation of No. 12 Indicate Observatio	es. dpole rved phot derifica	es/Lar Cor L Hatcl ograp ation*	hed or	
ATOR IES Frog ed lander spotted lander Shrimp ³ dence level: lass maturit hing shrimp: X = loles/larvae: 3 riteria y rare spe	Visit #1 36 49 1 = <60%, y: F= Fresh x = present ecies ass Method of P	Visit #2 2 = 60-95 h (<24 hrs t cociated f Verificat H S	Egg Mas t V(si #3 5%, 3 = >95 s), M= Matu I with vern tion* CL**	sses (or additional control co	ult Fairy idence hbryos),	y Shrim Level ¹ A= Adva	Egg Ma	ass Ma	x, curved	Obsed embryo	dpole rved photo derifica	Cor L	hed or	
Frog ed lander spotted lander Shrimp ³ dence level: lass maturit hing shrimp: X = bles/larvae: X riteria ly rare specific specif	#1 36 49 1 = <60%, y: F= Fresh present X = present eciles ass Method of P	#2 2 = 60-95 h (<24 hrs t cociated f Verificat H C	5%, 3 = >95 s), M= Matu I with vern tion* S	Confi	Observurtle	Level ¹ A= Adva	Egg Ma	se matri	x, curved	obsed dembryo	photo (erifica	Cor L	hed or	
Frog ed ed eander spotted eander Shrimp ³ dence level: eass maturit hing shrimp: X = bles/larvae: X riteria y rare spe	#1 36 49 1 = <60%, y: F= Fresh present X = present eciles ass Method of P	#2 2 = 60-95 h (<24 hrs t cociated f Verificat H C	#3 5%, 3 = >95 s), M= Matu I with vern tion* S CL**	2 2 2 5% ure (round em	Observurtle	A= Adva	M M	se matri	x, curved	nied by	photo	e Hatch	hed or	
ed lander spotted lander Shrimp ³ dence level: lands maturithing shrimp: X = loles/larvae: X riteria y rare specific S	1 = <60%, y: F= Fresh present X = present eciles ass Method of P	t cociated f Verificat H C	I with vern	5% ure (round em	Observ s urtle		M anced (loos		ompan Met	nied by thod of V	photo erifica	ograp	ohs.	
ander spotted sander Shrimp³ dence level: nass maturit hing shrimp: X = oles/larvae: X riteria y rare spe	1 = <60%, y: F= Fresh present X = present eciles ass Method of P	t cociated f Verificat H C	I with vern	nal pools. © * SPECIE	Observ s urtle		anced (loos		ompan Met	nied by thod of V	photo erifica	ograp	ohs.	
sander Shrimp ³ dence level: nass maturithing shrimp: X = oles/larvae: X riteria y rare spe	y: F= Fresh present X = present eciles ass Method of P	t cociated f Verificat H C	I with vern	nal pools. (* SPECIE Wood Ti	Observ s urtle				ompan Met	nied by thod of V	photo erifica	ograp	ohs.	
dence level: nass maturit hing shrimp: X = oles/larvae: \(\) riteria y rare spe S y's Turtle	y: F= Fresh present X = present eciles ass Method of P	t cociated f Verificat H C	I with vern	nal pools. (* SPECIE Wood Ti	Observ s urtle				ompan Met	nied by thod of V	photo erifica	ograp	ohs.	
dence level: nass maturit hing shrimp: X = oles/larvae: \(\) riteria y rare spe S y's Turtle	y: F= Fresh present X = present eciles ass Method of P	t cociated f Verificat H C	I with vern	nal pools. (* SPECIE Wood Ti	Observ s urtle				ompan Met	nied by thod of V	photo erifica	ograp	ohs.	
j's Turtle	P	H S	s CL**	Wood To	urtle				F	> Н		s	CL**	
j's Turtle]	Wood To	urtle									\dashv
Turtle]	Ribbon S	Snake				[ן ⊏	' '		$\overline{}$	
]			
Boghaunter			_	Other:]			
onfidence I observe	level in sp er recom tential SV	ecies de i menda /P	eterminatio I tion:] Non Sigr	Handled, Son: 1= <60% Inificant VP	5, 2= 60 P)-95%, 3 Indicat	tor Breed			unt i	(om	ples	45.	Sa <u>r</u>
'impo vater in	unded road	by w/	road 27 5	Separa S & 5	ted Ou	by VF &	Sm. 15 M	11 b 1135e	erna.	n Still Coverin	50 50 2 Ph	3" me	snow Fope	w
oleted forn	n and sup	oporting	j documer	ntation to:	Maine Attn: \ 650 S	e Dept. Vernal State St	of Inlan Pools treet, Ba	d Fish Ingor, I	eries a ME 044	ind Wild 401	dlife	Wh.	ter	
only Re				TO 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1								riteria.		
3	leted forn I submis table for	leted form and sup Il submission (to table for projects only Reviewed by	leted form and supporting Il submission (to Jason, table for projects with 3 Only Reviewed by MDIFW	leted form and supporting docume Il submission (to Jason.Czapiga table for projects with 3 or fewer only Reviewed by MDIFW Date:	Il submission (to Jason.Czapiga@maine.gtable for projects with 3 or fewer assessed only Reviewed by MDIFW Date: In Significant Potentially Significant Not S	leted form and supporting documentation to: Maine Attn: 650 S Il submission (to Jason.Czapiga@maine.gov) of table for projects with 3 or fewer assessed pools only Reviewed by MDIFW Date: Initials: Significant ☐ Potentially Significant ☐ Not Significa	Aleted form and supporting documentation to: Maine Dept. Attn: Vernal 650 State Stat	leted form and supporting documentation to: Maine Dept. of Inlan Attn: Vernal Pools 650 State Street, Ba Il submission (to Jason.Czapiga@maine.gov) of vernal pool fi table for projects with 3 or fewer assessed pools; larger proje only Reviewed by MDIFW Date: Significant Potentially Significant Not Significant due to: Odoes	leted form and supporting documentation to: Maine Dept. of Inland Fish Attn: Vernal Pools 650 State Street, Bangor, Il submission (to Jason.Czapiga@maine.gov) of vernal pool field fo table for projects with 3 or fewer assessed pools; larger projects mi only Reviewed by MDIFW Date: Significant Potentially Significant Not Significant due to: Odoes not me	Attn: Vernal Pools 650 State Street, Bangor, ME 04 Il submission (to Jason.Czapiga@maine.gov) of vernal pool field forms ar table for projects with 3 or fewer assessed pools; larger projects must be only Reviewed by MDIFW Date: Initials: Significant Potentially Significant Not Significant due to: Odoes not meet biology	Attn: Vernal Pools 650 State Street, Bangor, ME 04401 Il submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photable for projects with 3 or fewer assessed pools; larger projects must be mailed only Reviewed by MDIFW Date:	Attn: Vernal Pools 650 State Street, Bangor, ME 04401 Il submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photogratable for projects with 3 or fewer assessed pools; larger projects must be mailed as long. Only Reviewed by MDIFW Date: Significant Potentially Significant Not Significant due to: Odoes not meet biological criteria.	Attn: Vernal Pools 650 State Street, Bangor, ME 04401 Il submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs table for projects with 3 or fewer assessed pools; larger projects must be mailed as hard only Reviewed by MDIFW Date: Significant Potentially Significant Not Significant due to: Odoes not meet biological criteria.	Attn: Vernal Pools 650 State Street, Bangor, ME 04401 Il submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is on table for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copie







ı	N	IS	т	D	1	ı	\sim	т	l	n	ĸ	ı	C	
ı	1			\mathbf{r}	L	,	u		ľ	v	ľ	u	J	

- 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

egg mass) are <u>required</u> for all observers.
Observer's Pool ID: 5AD -VP - 9 MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION
a. Observer name: SER/SAD
b. Contact and credentials previously provided? O No (submit Addendum 1) 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: Longroad (3 Corners)
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: E.D. Bessey & Son Phone: (207) 453-9388 Street Address: 779 Skowhegan Rd City: Hick/ca State: Mt Zip: 04944
Street Address: 779 Skowhegan Rd City: Hick lea State: Mr. Zip: 04944
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):
See allached map
b. Mapping Requirements
i. USGS topographic map OR aerial photograph with pool clearly marked.
ii CDC la action of versal mod (vers Detum NAD02 (N/CS04)
ii. GPS location of vernal pool (use Datum NAD83 / WGS84) Longitude/Easting: — 6.464547 Latitude/Northing: 44.638/6/
Coordinate system: <u>NG 5 84</u>
Check one: OGIS 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.
$ ot\!$
The center of the pool is approximately m O ft O in the compass direction of degrees from the above GPS point. (Acceptable)



$\leq AD - VP - 9$ Maine State Vernal Pool Assessment Form



5. VERNAL POOL HABITAT INFORMATION						
a. Habitat survey date (only if different from indi	cator survey dates on page 3): $\frac{5/2}{}$					
b. Wetland habitat characterization						
■ Choose the best descriptor for the landscape set						
Isolated depressionFloodplain depressionOt	Pool associated with larger wetland complex Other:					
■ Check all wetland types that best apply to this po	ol:					
Forested swamp ☐ Wet meadow	☐ Slow stream ☐ Dug pond or					
	☐ Floodplain borrow pit					
☐ Peatland (fen or bog)☐ Abandoned beaver☐ Emergent marsh☐ Active beaver flows	· · · · · · · · · · · · · · · · · · ·					
c. Vernal pool status under the Natural Resourc	es Protection Act (NRPA)					
i. Pool Origin: Natural O Natural-Modified	O Unnatural O Unknown					
If modified, unnatural or unknown, describe an	y modern or historic human impacts to the pool (required):					
ii. Pool Hydrology	and the matter als in how the surface of the					
Select the pool's <u>estimated</u> hydroperiod AND p						
O Permanent O Semi-permanent (drying partially in all yea	•					
completely in drought ye						
Explain:						
	◎ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.)					
■ Approximate size of pool (at spring highwater)	: Width: 50 Om \odot ft Length: $1/\delta$ Om \odot ft					
■ Predominate substrate in order of increasing h	ydroperiod:					
Mineral soil (bare, leaf-litter bottom, or upla						
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 increasin	g hydroperiod (check all that apply):					
Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)						
Dry site ferns (e.g. spinulose wood fern,	Wet site shrubs (e.g. highbush blueberry, maleberry,					
lady fern, bracken fern)	winterberry, mountain holly)					
Moist site ferns (e.g. sensitive fern, cinnar	non Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)					
fern, interrupted fern, New York fern)	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)					
 Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) 	☐ Floating or submerged aquatics (e.g. water lily,					
Sphagnum moss (anchored or suspended)						
	☐ No vegetation in pool					
■ Faunal indicators (check all that apply):						
☐ Fish ☐ Bullfrog or Green Frog tadpole	s Other:					
iii. Inlet/Outlet Flow Permanency						
	t 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 or outlet	(explain):					



SAD-VP-9



. VERNAL POOL INI															
a. Indicator survey	dates:	5/2	12	019											
b. Indicator abund					ey effo	rt									
■ Is pool depress	sion bise	ected by	y 2 ow	nerships	s (strad	dler pod	ol)? O	Yes	No)					
■ Was the entire		-		-	-	-			of ent	ire poo	sur	veyed	l?		
■ For each indica	tor spe	cies, ind	dicate	the exac	ct numb	er of eq	g mas	sses, c	onfider	nce leve	el for	rspec	ies		
determination,	and egg	mass	matur	ity. Sep	arate c	ells are	provid	ed for	separa	te surv					
INDICATOR				g Masse	s (or ad	ult Fairy	Shrim	p)				Tadpo		arvae ⁴	
SPECIES	Visit #1	Vi #	sit 2	Visit #3		idence L	.evel [†]	Egg N	/lass Ma	aturity ²	Ob	serve	d C	onfide <u>Leve</u>	
Wood Frog	20				3		·	A							
Spotted Salamander	20				3			F/m							
Blue-spotted Salamander	Ø														
Fairy Shrimp ³	Ø														
2-Egg mass maturi Hatching 3-Fairy shrimp: 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														
4-Tadpoles/larvae:	X = prese	ent													
c. Rarity criteria	■ Note any rare species associated with vernal pools. <u>Observations should be accompanied by photographs</u> .														
■ Note any rare sp	ecies as	ssociate	ed with	n vernal	pools.	<u>Observa</u>	tions	should	be acc	ompan	ied l	by pho	otogr	aphs.	
SPECIES		of Verific		CL**	SPECIE	S						of Verifi		CL,	r*
Blanding's Turtle	P	<u> </u>	s		Wood T	urtle				F		Н	s		
Spotted Turtle	Spotted Turtle														
Ringed Boghaunter	Ringed Boghaunter														
*Method of verifica **CL - Confidence								= >95%	6						
		•			1- 4007	J, Z 00	0070, 0	, , , , ,	v						
d. Optional observ								_							
■ SVP □ Po	tential S	SVP	∐ No	n Signifi	cant VF	, LII	ndicat	or Bree	eding A	rea					
e. General vernal p						ıs of ot	her w	ldlife:							
Caddis fly's	Bullana	& age	Pas	257 1	1. 9552.5.										
Caddis fly's Dered U	p bei	7/	15/2	2026											
/	read														
Send completed for	m and s	upportii	ng dod	cumenta	tion to:	Attn: V	ernal	Pools		eries a		Vildlife	•		
OTE: Digital submis acceptable for															
or MDIFW use only	eviewed l	y MDIFV	V Date	: :::::::::::::::::::::::::::::::::::	riệ sa sh	nitials:	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				y 10,27				
his pool is: Significan	t 🔲 F		ly Sign	ificant	☐ Not S	ignifican	t due to	-		et biolog			criteri	a	
omments:			<u> </u>	<u> </u>	<u> </u>		<u> </u>	- Jude	O HOLHIE	OL MIDET	ACIII	iai puul	OHOTE	u.	1







- Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.

	required for all obse	ND b) the indicators (one example of each species rvers.
Observer's Pool ID:	SAD-VP-10	MDIFW Pool ID:
a. Observer name:		ed? O No (submit Addendum 1) Yes
2. PROJECT CONTA		
a. Contact name:	same as observer O ot	ther
		Corners Solar Project
3. LANDOWNER CO	NTACT INFORMATION	
a. Are you the land	lowner? OYes QNo If r	no, was landowner permission obtained for survey? 🏚Yes ONo
	ntact information (required)	
Name: E.D.	Bessey & Son	Phone: (207) 453 - 9388 City: Hrck/en State: ME Zip: 04944
Street Address:	779 Skowynes an	<u> City: Hickelen</u> State: <u>ME</u> Zip: <u>04944</u>
		ct landowner data file submitted
	OCATION INFORMATION uship:(\line\text{for})	Chapter Section 1997
	ons to the pool (using mapp	ped landmarks):
	achel map	
b. Mapping Requir		graph with pool clearly marked.
Longitude/Eas	n of vernal pool (use Datu sting: <u>~ Ø. 463877</u> estern: <u>W6</u> 5 <u>84</u>	Latitude/Northing: 44.[386]
Check one: (◯ GIS shapefile - send to Jason.Czapiga@	றுmaine.gov; observer has reviewed shape accuracy (Best)
(The pool perimeter is de - Include map or spreadsho	elineated by multiple GPS points. (Excellent) leet with coordinates.
Ò	The above GPS point is	at the center of the pool. (Good)
C		approximately m O ft O in the compass direction of above GPS point. (Acceptable)



5AD- VP-10



5. VERNAL POOL HABITAT INFORMATION					
a. Habitat survey date (only if different from indicato	r survey dates on page 3):				
b. Wetland habitat characterization					
 Choose the best descriptor for the landscape setting: Isolated depression Floodplain depression Other: 	sociated with larger wetland complex				
■ Check all wetland types that best apply to this pool: I Forested swamp	☐ 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 Natural-Modified OL If modified, unnatural or unknown, describe any mo	Innatural OUnknown dern or historic human impacts to the pool (required):				
 ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provio</u> O Permanent	O Ephemeral O Unknown				
 Maximum depth at survey: O 0-12" (0-1 ft.) 0 12 Approximate size of pool (at spring highwater): Wid Predominate substrate in order of increasing hydro Mineral soil (bare, leaf-litter bottom, or upland 	tth: 100 Om ⊚ft Length: 160 Om ⊚ft				
mosses present) O Mineral soil (sphagnum moss present)	restricted to deepest portion O Organic matter (peat/muck) deep and widespread				
■ Pool vegetation indicators in order of increasing hyd	droperiod (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) 	 Wet site ferns (e.g. royal fern, marsh fern) Wet site shrubs (e.g. highbush blueberry, maleberry winterberry, mountain holly) Wet site graminoide (e.g. blue joint graps, tugged) 				
 Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended) 	 Aquatic vascular spp. (e.g. pickerelweed, arrowhead) Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool 				
■ Faunal indicators (check all that apply): ☐ Fish ☐ Bullfrog or Green Frog tadpoles	☐ Other:				
.	et (channel with well-defined banks and permanent flow)				
O Intermittent inlet Other or Unknown (export or outlet	lain):				



SAD - VP- 10 Maine State Vernal Pool Assessment Form



criteria and sected by 2 curveyed for ecies, indicating mass mate to the control of the control	pool survive pownership egg massete the examinity. Sep Egg Massete Visit #3 o, 3 = >95% M= Mature	rey effort s (straddles? Yey not numbe parate cell Confide 3 3 (round embi	ler pool)? (les O No er of egg muls are provoted Fairy Shring ence Level 3 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	O Yes ; what % asses, c ided for mp) Egg N F M ranced (loc	onfiden separat flass Ma	re pool ace leve te surve aturity ² x, curve	el for ey da de mbi	ryos), I	bles/La	aphs.
sected by 2 curveyed for ecies, indicating mass mater and the sected by 2 curveyed for ecies, indicating mass mater and the sected by 2 curveyed for ecies, indicating mass mater and sected by 2 curveyed for each curveyed for ecies and sected by 2 curveyed for ecies, indicating and sected by 2 curveyed for ecies, indicating and sected by 2 curveyed for ecies, indicating and sected by 2 curveyed for ecies, indicating and sected by 2 curveyed for ecies, indicating and sected by 2 curveyed for ecies, indicating and sected by 2 curveyed for ecies, indicating and sected by 2 curveyed for ecies, indicating and sected by 2 curveyed for ecies, indicating and sected by 2 curveyed for ecies, indicating and sected by 2 curveyed for ecies, indicating and sected by 3 curveyed for	bownership egg massete the exa urity. Sep Egg Masse Visit #3 Visit #3 M= Mature	s (straddles?	ler pool)? (/es	; what % asses, c ided for mp) Egg N F/M vanced (loc	of entional of ent	nce pool nce leve te surve aturity² x, curvec ompan	el for ey da de mbi	ryos), I	bles/La d Co H= Hat	ched or
urveyed for elecies, indical gg mass mat to the visit with the vis	egg massite the exacurity. Sep Egg Masse Visit #3 , 3 = >95% M= Mature	es? Yes Yes Inch number or and the parate cell es (or adult or adu	ryos), A= Adv	; what % asses, c ided for mp) Egg N F/M vanced (loc	of entional of ent	nce pool nce leve te surve aturity² x, curvec ompan	el for ey da de mbi	ryos), I	bles/La d Co H= Hat	ched or
t Visit #2 24 3 / 3 / 0%, 2 = 60-95% Fresh (<24 hrs), t sent associated was dof Verification H S	Visit #3 , 3 = >95% M= Mature	Confide 3 3 3 (round embrance) pools. Other species Wood Turk	ence Level ¹ 3 3 nyos), A= Adv	Egg N F M vanced (loc	ose matrix	ompan	d embi	ryos), I	H= Hate	ched or
#2 24 3 / 3 / 0%, 2 = 60-95% Fresh (<24 hrs), t sent associated was dof Verification H S	#3 ,, 3 = >95% M= Mature	(round embi	3 3 ryos), A= Adv	F F M	ose matrix	ompan	d embi	ryos), l by pho f Verific H	H= Hat	ched or
3 / D%, 2 = 60-95% Fresh (<24 hrs), t sent associated w d of Verification H S	M= Mature	pools. Ot	ryos), A= Adv	F/M		ompan Met	thod of	oy pho f Verific H	otogra cation*	aphs.
20%, 2 = 60-95% Fresh (<24 hrs), tsent associated ward of Verification H S	M= Mature	pools. Ot	nyos), A= Adv	vanced (loc		ompan Met	thod of	oy pho f Verific H	otogra cation*	aphs.
20%, 2 = 60-95% Fresh (<24 hrs), tsent associated ward of Verification H S	M= Mature	pools. Ot	<u>bservations</u> tte	·		ompan Met	thod of	oy pho f Verific H	otogra cation*	aphs.
Down, 2 = 60-95% Fresh (<24 hrs), t ssent associated w od of Verification H S	M= Mature	pools. Ot	<u>bservations</u> tte	·		ompan Met	thod of	oy pho f Verific H	otogra cation*	aphs.
t sent (<24 hrs), t sent associated wad of Verification H S	M= Mature	pools. Ot	<u>bservations</u> tte	·		ompan Met	thod of	oy pho f Verific H	otogra cation*	aphs.
H S	CL**	Wood Turt	tle			Р	•	Н	S	CL**
	OL	Wood Turt	tle							OL .
]			
		Ribbon Sna	ake							1
		1	***************************************							
│		Other:	*]			
ommendation SVP Note: Note: The comments and the comments are comments and the comments and the comments and the comments are comments and the comments and the comments are comments.	lon Signifi	ervations	☐ Indica		eding Ar	rea				
to Jason.Cz cts with 3 or	zapiga@n r fewer as ate: gnificant	A 6 naine.gov ssessed p	Attn: Verna 650 State S v) of verna bools; <u>larg</u>	I Pools Street, Ba al pool fi ger proje	angor, Nield for ects mu	ME 044 ms an ust be i	401 Id ph maile	otog ed as	raphs hard	copies
	supporting d to Jason.Cz cts with 3 or by MDIFW Da Potentially Sig	supporting documenta to Jason.Czapiga@r cts with 3 or fewer as	supporting documentation to: Make to Jason.Czapiga@maine.gocts with 3 or fewer assessed processed by MDIFW Date: Init	supporting documentation to: Maine Dept Attn: Verna 650 State S to Jason.Czapiga@maine.gov) of verna cts with 3 or fewer assessed pools; large by MDIFW Date:	supporting documentation to: Maine Dept. of Inlar Attn: Vernal Pools 650 State Street, Ba to Jason.Czapiga@maine.gov) of vernal pool fe ets with 3 or fewer assessed pools; larger proje by MDIFW Date:	supporting documentation to: Maine Dept. of Inland Fisher Attn: Vernal Pools 650 State Street, Bangor, I to Jason.Czapiga@maine.gov) of vernal pool field for the with 3 or fewer assessed pools; larger projects must by MDIFW Date:	supporting documentation to: Maine Dept. of Inland Fisheries a Attn: Vernal Pools 650 State Street, Bangor, ME 044 to Jason.Czapiga@maine.gov) of vernal pool field forms and sts with 3 or fewer assessed pools; larger projects must be by MDIFW Date: Initials: Potentially Significant Not Significant due to: O does not meet biolog	supporting documentation to: Maine Dept. of Inland Fisheries and WAttn: Vernal Pools 650 State Street, Bangor, ME 04401 to Jason.Czapiga@maine.gov) of vernal pool field forms and phots with 3 or fewer assessed pools; larger projects must be mailed by MDIFW Date: Initials:	supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife Attn: Vernal Pools 650 State Street, Bangor, ME 04401 to Jason.Czapiga@maine.gov) of vernal pool field forms and photogets with 3 or fewer assessed pools; larger projects must be mailed as by MDIFW Date: Initials: Potentially Significant Not Significant due to: O does not meet biological criteria.	supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife Attn: Vernal Pools 650 State Street, Bangor, ME 04401 to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs cts with 3 or fewer assessed pools; larger projects must be mailed as hard by MDIFW Date: Initials: Potentially Significant





- Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.
- <u>Clear photographs</u> of a) the pool AND b) the indicators (one example of each species egg mass) are <u>required</u> for all observers.

Observer's Pool II	D: <u>SAD-VP-11</u>	MDIFW Pool ID:	
1. PRIMARY OBSI	ERVER INFORMATION		
a. Observer nam	ne: Such Drcharal		
b. Contact and c	credentials previously provided? O No (submit Addendum 1) 🏻 🎉 Ye	s
2. PROJECT CON	ITACT INFORMATION		
a. Contact name	e: 🏿 same as observer 🔿 other		•
b. Contact and c	credentials previously provided? O No (submit Addendum 1) O Ye	s
c. Project Name	: Longroad (3 Corner.	s Solar Project)	
3. LANDOWNER C	CONTACT INFORMATION		
a. Are you the lar	ndowner? OYes ONo If no, was lar	ndowner permission obtained fo	or survey? OYes ONo
b. Landowner's c	contact information (required)	,	
Name: <i></i>	0. Bessey & Son s: 779 Skowhegan Rd.	Phone: (207) 453-	9388
Street Address	s: 779 Skowhegen Rd.	City: Hickley	State: <u>ME</u> Zip: <u>049.44</u>
	jects: check if separate project landown		
	LOCATION INFORMATION		
a. Location Toy	wnship: <u>Un, ty</u> <u>fwp</u> stions to the pool (using mapped landma	<u> </u>	
		rks):	
See	altached map		
	V		
b. Mapping Req			
i. USGS topog	graphic map OR aerial photograph with	pool clearly marked.	
ii. GPS locatio	on of vernal pool (use Datum NAD83	/ WGS84)	
	Easting: <u>- 69. 44 2918</u> Latitude/	and the second s	
	system: <u>WSS 84</u>	<u> </u>	
	•		
Check one:	O GIS shapefile	ahaansar haa rasiissaad ahana aas	oursey (Post)
	- send to Jason Czapiga@maine.gov	· ·	· · · · · · · · · · · · · · · · · · ·
	 The pool perimeter is delineated by Include map or spreadsheet with cool 	· · · · · · · · · · · · · · · · · · ·	iii)
	☑ The above GPS point is at the cen		
	O The center of the pool is approxima degrees from the above GF	ately mO ft O in the c	ompass direction of



SAD-VP-11



S. VERNAL POOL HABITAT INFORMATION					
a. Habitat survey date (only if different from indicator	r survey dates on page 3):				
b. Wetland habitat characterization		-			
■ Choose the best descriptor for the landscape setting: ○ Isolated depression ○ Floodplain depression ○ Other:	sociated with larger wetland comp	lex			
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Shrub swamp ☐ Lake or pond cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage	☐ Slow stream ☐ Floodplain age ☐ Mostly unvegetated pool ☐ ATV or skidder rut	□ Dug pond or borrow pit □ Roadside ditch □ Other:			
c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)				
i. Pool Origin: Natural Natural-Modified OU If modified, unnatural or unknown, describe any mod	nnatural OUnknown	the pool (required):			
ii. Pool Hydrology					
Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> O Permanent O Semi-permanent (drying partially in all years an completely in drought years) Explain:	© Ephemeral	O Unknown			
Leaf litter					
 Maximum depth at survey: O 0-12" (0-1 ft.) O 12 Approximate size of pool (at spring highwater): Wice Predominate substrate in order of increasing hydrogomy Mineral soil (bare, leaf-litter bottom, or upland 	lth: Om Oft Length:	O m O ft			
mosses present) O Mineral soil (sphagnum moss present)	restricted to deepest portio Organic matter (peat/muck)	n			
■ Pool vegetation indicators in order of increasing hyd	,	, ,			
Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern) Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	 ☐ Wet site ferns (e.g. royal fern, marsh fern) ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) 				
■ 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 char No inlet or outlet Permanent inlet or outlet		and permanent flow)			
or outlet					





	RNAL POOL INI	DICATOR	RINFORM	IATION											
a. Indicator survey dates: 5/6/20/9 ; 5/22/20/9															
b. I	b. Indicator abundance criteria and pool survey effort														
	Is pool depress Was the entire For each indica determination,	pool surv tor speci	eyed for e	egg masse te the exa	es? O	Yes O erofegg	No; w g mass	hat % ses, c	onfider	ire poo ice lev	el fo	or spe	ecies		
	INDICATOR			Egg Masse	es (or adu	ılt Fairy S	Shrimp))			Ī	Tad	poles	/Larva	e^4
	INDICATOR SPECIES	Visit #1	Visit #2	Visit #3		dence Le			lass Ma	aturity ²	0	bserv	—Т		dence
	Wood Frog	10			3			M							
	Spotted Salamander	7			3			Μ							
	Blue-spotted Salamander		4			3			M						
	Fairy Shrimp ³														
	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.														
Ī	Method of Verification* Method of Verification*														
	SPECIES P H S SPECIES P H S Blanding's Turtle														
ŀ															
-															
	Ringed Boghaunter														
d. C	**CL - Confidence Optional observe SVP	er recom tential S\	nmendatio /P ဩ´N ments an	on: Ion Signifi d/or obse	cant VP	□lne	dicato	r Bree	eding A	rea			-		
Sen	d completed forr	m and suן				Maine D Attn: Ve 650 Stat	rnal P te Stre	ools eet, B	angor, l	ME 04	4 01			£ - :-	only





- Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.
- <u>Clear photographs</u> of a) the pool AND b) the indicators (one example of each species egg mass) are <u>required</u> for all observers.

Observer's Pool I	D: <u>SAD-VP-12</u>	MDIFW Pool ID:
a. Observer nan	ERVER INFORMATION ne: <u>Sarah Drahov & (</u> credentials previously provided?	
a. Contact name b. Contact and o	TACT INFORMATION Solve the second se	O No (submit Addendum 1) O Yes
a. Are you the late b. Landowner's of Name: <u>E, D</u> Street Addres c. □ Large Project 4. VERNAL POOL a. Location Total	contact information (required)	D
ii. GPS locati Longitude/E Coordinate	graphic map OR aerial photogra on of vernal pool (use Datum Easting:	NAD83 / WGS84) atitude/Northing: 44, 63 24/9 aine.gov; observer has reviewed shape accuracy (Best) eated by multiple GPS points. (Excellent) with coordinates.





S. VERNAL POOL HABITAT INFORMATION		
a. Habitat survey date (only if different from indicato	r survey dates on page 3):	
b. Wetland habitat characterization		
■ Choose the best descriptor for the landscape setting:	sociated with larger wetland comp	lex
■ Check all wetland types that best apply to this pool: □ Forested swamp □ Wet meadow □ Shrub swamp □ Lake or pond cove □ Peatland (fen or bog) □ Abandoned beaver flowage	-	□ Dug pond or borrow pit □ Roadside ditch □ Other:
c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)	
i. Pool Origin: Natural Natural-Modified O U		the pool (required):
ii. Pool Hydrology	, , , , , , , , , , , , , , , , , , , ,	
■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> O Permanent O Semi-permanent (drying partially in all years and completely in drought years) Explain:	© Ephemeral	O Unknown
Leaf litter bottom	17 18 17 18 18 18 18 18 18 18 18 18 18 18 18 18	
Let 1 1110 Someth		
■ Maximum depth at survey: Ø 0-12" (0-1 ft.) 12	226" (1 2 ft)	○ >60" (>5 ft)
■ Approximate size of pool (at spring highwater): Wice	lth:OmOft Length:_	
 Predominate substrate in order of increasing hydrop Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	Organic matter (peat/muck) restricted to deepest portio	n
,		deep and widespread
■ Pool vegetation indicators in order of increasing hyd Terrestrial nonvascular spp. (e.g. haircap		
moss, lycopodium spp.)	☐ Wet site ferns (e.g. royal fern	•
☐ Dry site ferns (e.g. spinulose wood fern,	Wet site shrubs (e.g. highbus) winterberry, mountain holly)	n blueberry, maleberry,
lady fern, bracken fern) ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	☐ Wet site graminoids (e.g. blue sedge, cattail, bulrushes)	e-joint grass, tussock
☐ Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pi	ckerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	☐ Floating or submerged aquati water shield, pond weed, blac☐ No vegetation in pool	
■ Faunal indicators (check all that apply):	☐ No vegetation in poor	et e
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:	
iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent char		
O No inlet or outlet O Permanent inlet or outlet O Other or Unknown (explored)	et (channel with well-defined banks ain):	





6. VER	NAL POOL IND	DICATO	R INF	ORMA	ATION											
a. In	dicator survey	dates:		5/	6/2019	; 5	122/	204								
b. In	dicator abunda	ance cr	iteria	and po	ool surv	ey effo	rt	,								
•	Is pool depress Was the entire For each indica determination, a	pool sui tor spec	veyed ies, ir	d for eg ndicate	g masse the exa	es? O	Yes C er of eg	No; \ g mas	what % sses, c	onfide	ire poo nce leve	el fo	r spe	cies		
Ī							-								.arvae	4
	INDICATOR - SPECIES	Visit #1		/isit #2	it Visit		ses (or adult Fairy Shrimp) t Confidence Level ¹ Egg Mass Matur					0	bserve		Confide Leve	eņce
	Wood Frog	1		0		3	3		M							
	Spotted Salamander	4		4		3	3		M			·				
	Blue-spotted Salamander		_													
	Fairy Shrimp ³															
c. Ra	Hatching 3-Fairy shrimp: X = 4-Tadpoles/larvae: 3 arity criteria lote any rare spe	X = prese		ted witt	h vernal	pools. (Observa	tions :	should	be acc	compar	nied	bv pt	notogi	aphs	
	ote any rare spe	Method				poolo. <u>s</u>	<u>JDOCI VA</u>		bilouiu	DC GO			of Veri		*	
8	SPECIES	Р	H	S	CL**	SPECIE	S					>	Н	s	CI	-**
E	Blanding's Turtle					Wood T	Wood Turtle				1					
8	Spotted Turtle					Ribbon S	Snake				<u></u>]				
- 1	Ringed Boghaunter Method of verifica					Other:					[
" d. O _l	*CL - Confidence ptional observe	level in s er recor	species mme r	s detern idation ⊠No	nination: 1: n Signifi	1= <60% cant V P	o, 2= 60-9 2 □ Ir	ndicat	or Bree		ırea					
e. Ge	Price V			***************************************		****	is of ou	iei wi	idille.							
NOTE:	d completed forn Digital submis acceptable for	sion (to	o Jase	on.Cza	ıpiga@n	naine.g	Attn: Ve 650 Sta ov) of v	ernal l ite Str ernal	Pools reet, B pool f	angor, ï eld fo	ME 04	401 nd p	hoto	grapł		
	l is: ☐ Significant		otentia	W Date	ificant		nitials: ignificant				et biolog et MDEF				a.	



100 egg 3

Maine State Vernal Pool Assessment 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 egg mass) are required for all observers.

Observer's Pool ID: SAD-VP-13 MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION
a. Observer name: Sara h Dra hov Za
b. Contact and credentials previously provided? O No (submit Addendum 1) Yes
A common and or other processing processing to the (common and the common and the
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 Cornes Solar Doject
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: E, D, Bessey & Son Phone: (207) 453-9388
Street Address: 779 Skowheren Rd. City: Hincklen State: Mt Zip: 04944
b. Landowner's contact information (required) Name: E, D, Bessey & Son Phone: (207) 453-7388 Street Address: 779 Skowheyen Rd. City: Hinckley State: Mt. Zip: 04944. c. Large Projects: check if separate project landowner data file submitted
4. VERNAL POOL LOCATION INFORMATION
a. Location Township: Unity Twp
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 / WGS84)
Longitude/Easting: <u>-69, 442443</u> Latitude/Northing: <u>44, 632626</u>
Coordinate system: W6584
,
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)





. VERNAL POOL HABITAT INFORMATION									
a. Habitat survey date (only if different from indicator survey dates on page 3):									
b. Wetland habitat characterization									
■ Choose the best descriptor for the landscape setting: O Isolated depression O Floodplain depression O Other:	sociated with larger wetland complex								
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Shrub swamp ☐ Lake or pond cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage	☐ 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 Problem i. Pool Origin: Natural O Natural-Modified O Under the Natural O Natural O Natural-Modified O Under the Natural Problem is not only the Natural Problem in Problem in Problem is not only the Natural Problem in Problem	• •								
ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> ○ Permanent	© Ephemeral O Unknown								
 Maximum depth at survey: O 0-12" (0-1 ft.) Q 12 Approximate size of pool (at spring highwater): Wice Predominate substrate in order of increasing hydrog Mineral soil (bare, leaf-litter bottom, or upland mosses present) O Mineral soil (sphagnum moss present) 	hth: O m O ft Length: O m O ft period: 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 hyder 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)	Iroperiod (check all that apply): Wet site ferns (e.g. royal fern, marsh fern) Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes) Aquatic vascular spp. (e.g. pickerelweed, arrowhead) Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool								
■ Faunal indicators (check all that apply): ☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:								
iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent cha No inlet or outlet Permanent inlet or outlet Intermittent inlet or outlet	et (channel with well-defined banks and permanent flow)								





a. Indicator survey			OITIVIA	TION			. VERNAL POOL INDICATOR INFORMATION										
	dates:		5/4	2019	, 5	122	1201	2_									
b. Indicator abunda			•		1	,	, — —	, 									
 Is pool depress Was the entire For each indicadetermination, a 	ion bise pool sur tor spec	cted l veyed cies, in	oy 2 ov d for eq ndicate	vnership gg masse the exa	s (strad es? C	dler po Yes (er of e	◯ No; v gg ma	what % sses, c	onfider	ire pool nce leve	el fo	or spe	cies				
WIDIO ATOD	INDICATOR Egg Masses (or adult Fairy Shrimp) Tadpoles/Larvae ⁴																
SPECIES	Visit #1	i i	/isit #2	Visit #3	<u> </u>	Confidence Level Egg Mass Maturi					Oi	bserve		Confidence Level ¹			
Wood Frog																	
Spotted Salamander Blue-spotted Salamander		Ć)		3	3		M									
Fairy Shrimp ³																	
3-Fairy shrimp: X = 4-Tadpoles/larvae: 2 C. Rarity criteria ■ Note any rare spe	X = prese		ted wit	h vernal	pools. (<u>Observ</u>	<u>ations</u> :	<u>shoul</u> d	be acc	<u>ompa</u> n	<u>ied</u>	by ph	<u>noto</u> a	raphs			
- Note any rare ope	Method					JD0011						of Veri		n*			
SPECIES	Р	Н	S	CL**	SPECIE	S				P		Н	S	<u> </u>	L**		
Blanding's Turtle					Wood Turtle					٦Ţ							
												ㅡ	_				
Spotted Turtle					Ribbon S						_						
Ringed Boghaunter *Method of verifica	tion: P =	Photo	graphe		Ribbon S Other:	enake = Seer]						
Ringed Boghaunter *Method of verificat **CL - Confidence	tion: P = level in ser recortential S	Photospecies	graphe s deterr	mination: n: on Signifi	Ribbon S Other: andled, S 1= <60% cant VF	= Seer	-95%, 3 Indicat	or Bree	eding A]						





- Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.
- <u>Clear photographs</u> of a) the pool AND b) the indicators (one example of each species egg mass) are <u>required</u> for all observers.

Observer's Pool II	D: <u>SAD-VP-15</u>	MDIFW Pool ID:
1. PRIMARY OBSI	ERVER INFORMATION	
a. Observer nam	ne: Sarah Drahovz	./
	credentials previously provided?	-
2. PROJECT CON	TACT INFORMATION	
a. Contact name	≘ ⊠ same as observer ⊘ other _	
b. Contact and c	redentials previously provided?	No (submit Addendum 1) Yes
c. Project Name	: Longroad (3	Cornus)
3. LANDOWNER C	CONTACT INFORMATION	
a. Are you the la	ndowner? OYes 🏿 No 🔝 If no, w	/as landowner permission obtained for survey?
	contact information (required)	
Name:		Phone: State: Zip:
Street Address	s:	City: State: Zip:
	ects: check if separate project lan	
Brief site direc	vnship: <u>Unity</u> Twi tions to the pool (using mapped la a Hacked map	andmarks):
b. Mapping Req		a with neel clearly marked
i. USGS topog	graphic map OR aerial photograpl	i with pool dearly marked.
	on of vernal pool (use Datum Na asting: <u>- (A. 4385</u> Lat system: <u>IWG S 84</u>	
Check one:	_	e center of the pool. (Good)





5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicato	r survey dates on page 3):
b. Wetland habitat characterization	·
■ Choose the best descriptor for the landscape setting: ♥ Isolated depression O Pool as ♥ Floodplain depression Other:	sociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Shrub swamp ☐ Lake or pond cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage	☐ 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 i. Pool Origin: Natural Natural-Modified OL If modified, unnatural or unknown, describe any mo	
ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provio</u> ○ Permanent ○ Semi-permanent (drying partially in all years ar completely in drought years) Explain:	© Unknown
■ Maximum depth at survey: O 0-12" (0-1 ft.) ■ Approximate size of pool (at spring highwater): Wide ■ Predominate substrate in order of increasing hydrology ☑ Mineral soil (bare, leaf-litter bottom, or upland mosses present) ☑ Mineral soil (sphagnum moss present)	dth: O m O ft Length: O m O ft
■ Pool vegetation indicators in order of increasing hyder 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	droperiod (check all that apply): Wet site ferns (e.g. royal fern, marsh fern) Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes) Aquatic vascular spp. (e.g. pickerelweed, arrowhead) Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool
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): et (channel with well-defined banks and permanent flow)





VERNAL POOL IN	DICATOR				,	,							
a. Indicator survey dates: 5/6/2011; 5/22/2019													
b. Indicator abundance criteria and pool survey effort													
■ Is pool depression bisected by 2 ownerships (straddler pool)?													
■ 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 Egg Masses (of adult Fairy Shrimp) Tadpoles/Larvae ⁴													
SPECIES	INDICATOR Visit Visit Visit Confidered Land 1 For Man Maturity 2 Observed Confidered									nfidence			
	#1	#2	#3	Com	r r	-evei	Lgg N	I	r	+	703011		Level ¹
Wood Frog	5	10		\			M						
Spotted		7					7						
Salamander Blue-spotted				_									
Salamander													
Fairy Shrimp ³													
1-Confidence leve	l: 1 = <60%	2 = 60-95%	1 3 = >95%	1		L							
2-Egg mass matu				(round em	bryos), A	\= Advai	nced (lo	ose matri	ix, cur	/ed en	nbryos)	, H= Hate	ched or
Hatching													•
3-Fairy shrimp: X 4-Tadpoles/larvae	•	st.											
•	. A – preser	ıL											
c. Rarity criteria													
■ Note any rare sp	oecies ass	sociated wi	th vernal	pools. C	<u>Observ</u>	ations :	<u>should</u>	be acc	comp	anied	l by pl	<u>notogra</u>	phs.
OPEOLEO	Method o	of Verification	CL**	ODE CIE	^				V	/lethod	of Ver	ification*	CL**
SPECIES	Р	H S	02	SPECIE	S 					Р	Н	S	
Blanding's Turtle				Wood Tu	Wood Turtle								
Spotted Turtle				Ribbon S	nake								
Ringed Boghaunter				Other:									
*Method of verific							050	,					
**CL - Confidence	e level in sp	pecies deter	mination:	1= <60%	, 2= 60-	.95%, 3	= >95%	D					
d. Optional observ	ver recon	nmendatio	n:										
SVP P	otential S\	VP ÌÌ N	on Signifi	cant VP		ndicat	or Bree	eding A	rea				
		گسخ											
e. General vernal	pool com	ments and	l/or obse	ervation	s of of	her w	ildlife:						
Re Visit Dried	e	a o a ·	4/2:	2 · Q1	NEFIN	1 2	55E	M	5/1	3.' X	Ŝ		
Le VISIT	> 26	169.	1/	O V	VI Com VV	. C.	the solite con your	- 7 7	- //		-		
Dried	UN 5	u 71	15/20	20									
	7	,	,										
Send completed for	rm and su	pporting do	cumenta	tion to:				nd Fish	eries	and	Wildli	fe	
						/ernal			NAT 0	4404			
					000 5	iate St	ieet, B	angor,	ıvı⊏ U	144UT			
DTE: Digital submi	ission (to	Jason.Cz	apiga@n	naine.g	ov) of	vernal	pool 1	ield fo	ms	and p	ohoto	graphs	is only
acceptable fo	r projects	s with 3 or	fewer as	sessed	pools	; <u>large</u>	r proje	ects m	<u>ust b</u>	e ma	iled a	<u>is hard</u>	copies.
<u> </u>	<u>.</u> Notation	sanga takan	and the second of		Timeto e		#8350V1			ija, No die		XXXXX	.554,455, 859,65
		MDIFW Da	1 V 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		iitials:								
is pool is: 🔲 Significa		otentially Sig		∐ Not Si	gnificar	it due to							
	DL	n lackling Citil	aı uala				∪doe	s not me	et MD	EP vei	rnal po	ol criteria	
mments:													





- 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 egg mass) are required for all observers.

egg mass, are	required for all observers) •	
Observer's Pool ID	:_SAD-VP-16	MDIFW Pool ID:	
a. Observer name	RVER INFORMATION E: <u>Sara h Dre har 24</u> edentials previously provided? O	No (submit Addendum 1)	O Yes
2. PROJECT CONT	ACT INFORMATION		
a. Contact name:			
b. Contact and cre	edentials previously provided? O	No (submit Addendum 1)	O Yes
c. Project Name:	Longroad (3)	Corners)	
	ONTACT INFORMATION		
a. Are you the land	downer? OYes QNo If no, wa	s landowner permission ob	otained for survey? Yes ONo
	ontact information (required)		15
Name: E, D	Ressen & Sm	Phone: (207)	4S3_9388
Street Address:	779 Skowhern R	d City: Hinckel	453-9388 State: <u>Mr.</u> Zip: 04944
c. ☐ Large Proje	cts: check if separate project land	owner data file submitted	
a. Location Town	nship: Unity Twp ons to the pool (using mapped land	dmarks):	
b. Mapping Requ	irements raphic map OR aerial photograph	with pool clearly marked.	
ii. GPS location	n of vernal pool (use Datum NA) asting: -69.437059 Latiti ystem: WGS 84	D83 / WGS84)	87 _
	O GIS shapefile - send to Jason.Czapiga@maine O The pool perimeter is delineate - Include map or spreadsheet wit O The above GPS point is at the O The center of the pool is approdegrees from the above	ed by multiple GPS points. h coordinates. center of the pool. (Good)	(Excellent)





5. VERNAL POOL HABITAT IN	NFORMATION						
a. Habitat survey date (only	<u>/ if different</u> from indicator	survey dates on page 3):	· Attonson				
b. Wetland habitat characte	erization						
Choose the best descriptorO Isolated depressionO Floodplain depression		ociated with larger wetland comp	lex				
• • • • • • • • • • • • • • • • • • • •	☐ Wet meadow☐ Lake or pond cove	☐ Slow stream ☐ Floodplain Ge ☐ Mostly unvegetated pool ☐ ATV or skidder rut	☐ Dug pond or borrow pit ☐ Roadside ditch ☐ Other:				
c. Vernal pool status unde	r the Natural Resources Pro	otection Act (NRPA)					
	al ONatural-Modified OUr						
•		ern or historic human impacts to	the pool (required):				
ii. Pool Hydrology							
O Permanent Q So	ted hydroperiod AND <u>provide</u> emi-permanent Irying partially in all years and ompletely in drought years)	O Ephemeral (drying out completely	O Unknown				
Explain:							
leaf lifter	be Hom						
 Approximate size of poor Predominate substrate Mineral soil (bare, le mosses present) 		Organic matter (peat/muck restricted to deepest portion	Om Oft) shallow or				
		-					
☐ Terrestrial nonvascumoss, lycopodium s ☐ Dry site ferns (e.g. s ☐ lady fern, bracken f ☐ Moist site ferns (e.g. fern, interrupted fern ☐ Moist site vasculars ☐ jewelweed, blue flag ☐ Sphagnum moss (and	ular spp. (e.g. haircap pp.) spinulose wood fern, fern) g. sensitive fern, cinnamon n, New York fern) s (e.g. skunk cabbage, g iris, swamp candle) nchored or suspended)	ydroperiod (check all that apply): Wet site ferns (e.g. royal fern, marsh fern) Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes) Aquatic vascular spp. (e.g. pickerelweed, arrowhead) Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool					
■ Faunal indicators (check		□ 0 #					
☐ Fish ☐ Bullfrog	or Green Frog tadpoles	U Other:					
**	seasonal or permanent char	nnel providing water flowing into o					
O No inlet or outlet		t (channel with well-defined banks	s and permanent flow)				
Intermittent inlet or outlet	Other or Unknown (expl	ain):					





/ERNAL POOL INDICATOR INFORMATION															
a. Indicator survey	dates:		5/8/	20 A;	5	122,	1201	7_							
b. Indicator abunda	nce cr	iteria	and po	ool surv	ey effor	t									
 Is pool depression Was the entire properties For each indicated determination, and 	oool su or spec	rveyed cies, ir	d for eg ndicate	gg masse the exac	es? O	Yes (er of e	∫No; v gg mas	what % sses, c	onfider	ire poo nce leve	el fo	r spe lates.	cies		
INDICATOR															
SPECIES	Visit #1		Visit Visit Confidence Level Egg Mass Maturity Observed Level Level								4				
Wood Frog													_		
Spotted Salamander Blue-spotted Salamander			Z		3	3		M							
Fairy Shrimp ³															
2-Egg mass maturity Hatching 3-Fairy shrimp: X = p 4-Tadpoles/larvae: X C. Rarity criteria ■ Note any rare spe	present < = prese	ent													
	Method	of Verif	ication*	CL**	2250151					Me	thod	of Veri	fication	* CL	**
SPECIES	Р	Н	s		SPECIES		-				>	H	S		
Blanding's Turtle					Wood Tu	ırtle					┚╽				
Spotted Turtle					Ribbon S	nake]				
Ringed Boghaunter					Other:						」				
. General vernal po	er recor ential S	species mmen SVP mmen	determindation No ts and	mination: 1 1: on Signific /or obse	1= <60%, cant VP	, 2= 60⋅ □ □ s of ot	-95%, 3 Indicat	or Bree	eding A						
Revisits	ZD ZC	2;	4/22	2/2020	0;6	4	\$5/	13/20	20 '	/55E	,m				
Send completed form TE: Digital submiss acceptable for p	sion (to	o Jaso	on.Cza	upiga@m	naine.go	Attn: \ 650 S ov) of	/ernal tate St vernal	Pools reet, B pool 1	angor, ïeld fo	ME 044 rms ar	401 n d p	hoto	graph		
MDIFW use only Responsions: Significant		otentia	FW Date	nificant	In ☐ Not Si	itials: gnificar	nt due to		s not me					a.	





INSTRUCTIONS:

■ Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.

• • •	of a) the pool AND b) the indic red for all observers.	ators (one example of each	species
Observer's Pool ID:	4D-VP-17 MDIF	FW Pool ID:	
PRIMARY OBSERVER I a. Observer name: b. Contact and credentia		Addendum 1) Yes	
b. Contact and credentia	FORMATION The as observer O other The previously provided? O No (submit A corners)	Addendum 1) O Yes	
b. Landowner's contact in Name: <u>E.D. Be</u> Street Address: 7	POYes WNo If no, was landowner	one: <u>(207) 453 - 1388</u> y: <u>Hick/ley</u> State: <u>Mc</u>	. 7
4. VERNAL POOL LOCATI a. Location Township: Brief site directions to t	Vhi hy Twp ne pool (using mapped landmarks):		
ii. GPS location of ve	nap OR aerial photograph with pool cle nal pool (use Datum NAD83 / WGS8 - (A, 44 //3 / Latitude/Northing	(4)	
O The - Inc Q The	shapefile nd to Jason.Czapiga@maine.gov; observer pool perimeter is delineated by multiple lude map or spreadsheet with coordinates. above GPS point is at the center of the center of the pool is approximately degrees from the above GPS point.	e GPS points. (Excellent) e pool. (Good) m	•





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:	ssociated with larger wetland complex
■ Check all wetland types that best apply to this pool: □ Forested swamp □ Wet meadow □ Shrub swamp □ Lake or pond cove □ Peatland (fen or bog) □ Abandoned beaver flow □ Emergent marsh □ Active beaver flowage	☐ Slow stream ☐ Dug pond or ☐ Floodplain ☐ borrow pit ☐ Roadside ditch ☐ ATV or skidder rut ☐ Other:
c. Vernal pool status under the Natural Resources F	Protection Act (NRPA)
i. Pool Origin: O Natural Matural-Modified O I If modified, unnatural or unknown, describe any modified.	Unnatural OUnknown odern or historic human impacts to the pool (required):
ii. Pool Hydrology	
■ Select the pool's <u>estimated</u> hydroperiod AND <u>provious</u> O Permanent O Semi-permanent (drying partially in all years all completely in drought years) Explain:	© Ephemeral O Unknown
·	
 Maximum depth at survey: 0-12" (0-1 ft.) 01. Approximate size of pool (at spring highwater): Wi Predominate substrate in order of increasing hydro 0 Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	dth:OmOft Length:OmOft
■ Pool vegetation indicators in order of increasing hy	
Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern,	☐ Wet site ferns (e.g. royal fern, marsh fern) ☐ Wet site shrubs (e.g. highbush blueberry, maleberry,
lady fern, bracken fern) Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	winterberry, mountain holly) 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) ☐ Sphagnum moss (anchored or suspended) 	 ☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead) ☐ 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):
and the second s	et (channel with well-defined banks and permanent flow)
Other or Unknown (exp	,





VERNAL POOL INI														
a. Indicator survey	dates:	5/6	1201	9 / 5	722	[201	<u></u>							
b. Indicator abunda		,	,	•	,									
■ Is pool depress		-		-		ol)? O	Yes	O No	1					
■ Was the entire								of enti	ire poo	l sur	rveye	d?		
■ For each indica	tor speci	ies, indicate	the exa	ct numb	er of eq	g mas	sses, c	onfider	ice lev	el fo	r spe	cies		
determination,	and egg	mass matur	rity. Sep	arate ce	ells are	provid	ed for	separa	te surv	ey d				
INDICATOR			gg Masse	s (or ad	ult Fairy	Shrim	p)				Tadp	oles/La		
SPECIES	Visit #1	Visit #2	#3									ed Co	onfidend Level ¹	æ
Wood Frog	3_	0		12	2		4			<u> </u>				_
Spotted Salamander	1	Ø		2	2		M							
Blue-spotted Salamander														
Fairy Shrimp ³			i											
1-Confidence level: 2-Egg mass maturil Hatching 3-Fairy shrimp: X = 4-Tadpoles/larvae:	ty: F= Fres	sh (<24 hrs), M		round em	ibryos), A	.= Advar	nced (lo	o s e matri	x, curve	d em	bryos),	H= Hat	ched or	
c. Rarity criteria														
■ Note any rare sp	ecies ass	sociated wit	h vernal	pools. 🤇	<u> Dbserva</u>	<u>itions s</u>	should	be acc	ompar	nied	by ph	<u>iotogra</u>	iphs.	
	Method of	of Verification*	CL**	· 	_				Ме	thod	of Veri	fication*	CL**	
SPECIES	Р	нѕ		SPECIE	S 					Р	Н	S		4
Blanding's Turtle				Wood Tu	urtle				[
Spotted Turtle				Ribbon S	Snake				[
Ringed Boghaunter				Other:					[┚┆				
*Method of verifica **CL - Confidence Optional observe SVP Po General vernal p	level in sper recontential S\	pecies deterr nmendation VP \[\] No	mination: 1 n: on Signific	1= <60% icant VP	5, 2= 60- P 🔲 I	95%, 3	or Bre	eding A	rea					
									2 41		n 8	SSET	ท	7
Reusits Dried	, y	11	,, ~, ~	1 11 1000	n pomoka))	11011	Live ense	رب سے	Title	1-1-	The Control of the Control		
Uried a	112 be	4 7/15	5/2020											
end completed forr E: Digital submis acceptable for	ssion (to	Jason.Cza	apiga@m	maine.g	Attn: V 650 St ov) of v	'ernal l ate Str /ernal	Pools reet, B pool 1	angor, field fo	ME 04 rms ar	401 nd p	hotog	graphs		
ADIEM										- : :				_
pool is: Significant	t 🗆 Po	y MDIFW Date otentially Sign ut lacking critica	nificant		nitials: Ignifican	t due to	-	s not me					ı.	<u></u>
nments:														





- 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

egg mass) ar	e <u>required</u> for all observ	vers.
Observer's Pool II	D: <u>SAD-VP-18</u>	MDIFW Pool ID:
a. Observer nam	ERVER INFORMATION e: <u>Skrah Drahovzel</u> redentials previously provided?	- ? O No (submit Addendum 1)
2. PROJECT CON	FACT INFORMATION	
a. Contact name	same as observer O othe	r
		O No (submit Addendum 1) O Yes Orners Solar Project)
3. LANDOWNER C	ONTACT INFORMATION	
a. Are you the lar	ndowner? OYes 🕅 No If no	, was landowner permission obtained for survey? Yes ONo
b. Landowner's c	ontact information (required)	
Name:	D. Bessy & Son	Phone: (207) 453-9388 Rd. City: Hinckey State: ME Zip: 04944
Street Address	: 179 Skownegen	Rd, City: Hinckley State: ME Zip: 09944
c. 🗌 Large Proje	ects: check if separate project l	andowner data file submitted
4 VERNAL BOOL	LOCATION INFORMATION	
Rrief site direct	nship: <u> </u>	landmarks):
	Hached map	a differentiation.
b. Mapping Requ	uirements	
i. USGS topog	raphic map OR aerial photogra	aph with pool clearly marked.
Longitude/E	on of vernal pool (use Datum asting: <u>- 69. 4/2606</u> L system: <u>WG & 84</u>	NAD83 / WGS84) _atitude/Northing: 44, 625/42
	GIS shapefile	naine.gov; observer has reviewed shape accuracy (Best)
		neated by multiple GPS points. (Excellent)
	The above GPS point is at	the center of the pool. (Good)
	O The center of the pool is ap	<u> </u>





5. VERNAL POOL HABITAT IN			
a. Habitat survey date (only		survey dates on page 3):	
b. Wetland habitat characte			
 Choose the best descriptor Isolated depression Floodplain depression 		ociated with larger wetland comp	lex
☐ Shrub swamp ☐ Peatland (fen or bog) ☐ Emergent marsh c. Vernal pool status under	 Wet meadow Lake or pond cove Abandoned beaver flowa Active beaver flowage the Natural Resources Property	☐ ATV or skidder rut otection Act (NRPA)	□ Dug pond or borrow pit □ Roadside ditch □ Other:
,	I O Natural-Modified O Urunknown, describe any mod	ern or historic human impacts to t	the pool (required):
O Permanent O Se (d c Explain:	ted hydroperiod AND provided the provided the permanent the rying partially in all years and the provided the permanent the provided the permanent the permanent that the permanent the permanent that the permanent the permanent that the perma	in most years)	O Unknown
 Approximate size of poor Predominate substrate in the poor Mineral soil (bare, le mosses present) 	ol (at spring highwater): Widin order of increasing hydrop af-litter bottom, or upland	Organic matter (peat/muck) restricted to deepest portio	O m O ft) shallow or
O Mineral soil (sphagn	um moss present)	O Organic matter (peat/muck)) deep and widespread
Terrestrial nonvascumoss, lycopodium sumoss, lycopodium sumoss, lycopodium sumoss, lady ferns (e.g. sumoss site ferns (e.g. fern, interrupted fernumoss) Moist site vasculars jewelweed, blue flagumoss (au Sphagnum moss (au moss) (au moss	lar spp. (e.g. haircap pp.) spinulose wood fern, ern) g. sensitive fern, cinnamon n, New York fern) (e.g. skunk cabbage, g iris, swamp candle) nchored or suspended)	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, black	h blueberry, maleberry, e-joint grass, tussock ckerelweed, arrowhead) ics (e.g. water lily,
■ Faunal indicators (check			
☐ Fish ☐ Bullfrog	or Green Frog tadpoles	Other:	
iii. Inlet/Outlet Flow Perm Type of inlet or outlet (a	seasonal or permanent char	nnel providing water flowing into o t (channel with well-defined banks ain):	





ndicator survey ndicator abunda Is pool depressi Was the entire procession was the entire procession of the survey For each indicated determination, and INDICATOR SPECIES Wood Frog Spotted Salamander Blue-spotted Salamander Fairy Shrimp ³ 1-Confidence level: 2-Egg mass maturity Hatching 3-Fairy shrimp: X = 4-Tadpoles/larvae: 2 Rarity criteria Note any rare specific spotted Turtle Spotted Turtle	visit #1 1 = <60%, by: F= Fres	teria arcted by veyed fies, ind mass n Vis #2 , 2 = 60-9 sh (<24 h	rnd po / 2 ow for egg dicate maturi Eg sit 2 -95%, 3 hrs), M=	merships g masse the exact ity. Sep g Masse Visit #3	ct number considered for additional confinence for additional confinen	ort Idler pool Yes (Idler pool Yes (Idler pool Yes (Idler pool	ol)? O) No; v gg mas provide Shrimp evel	what % sses, coed for so) Egg M	eparate lass Mat	ce level e surve urity ² , curved	ed by proof of Vertical Proof	ecies s. dpoles ved s), H=	Confi Le Hatche	dence vel ¹
Is pool depressing was the entire progressing was the entire progressing with the entire progression was the entire progression with the entir	visit #1 1 = <60%, by: F= Fres present X = present Method of the control of the	teria arcted by veyed fies, ind mass n Vis #2 , 2 = 60-9 sh (<24 h	rnd po / 2 ow for egg dicate maturi Eg sit 2 -95%, 3 hrs), M=	merships g masse the exact ity. Sep g Masse Visit #3 = >95% Mature	ct number considered for additional confinence for additional confinen	ort Idler pool Yes (Idler pool Yes (Idler pool Yes (Idler pool	No; vogg mas provide Shrimp evel 1	what % sses, coed for so) Egg M	of entire confidence separate lass Mat	ce level e surve urity² , curved mpanie	ed by proof of Vertical Proof	ecies s. dpoles ved s), H=	Confi Le Hatche	dence vel dence
Is pool depressi Was the entire procession was the entire procession of	visit #1 1 = <60%, by: F= Fres Present X = present Method c	veyed fies, ind mass n Vis #2 Vis 42 Vis control of Verificate of Verificate control	for eggdicate maturi Eggsit 2 -95%, 3 hrs), M=	merships g masse the exact ity. Sep g Masse Visit #3 = >95% Mature of	s (strade es? Oct numberarate ces (or additional confine confi	dler pool Yes (per of eg ells are ult Fairy dence l abryos), A	No; vgg mas provide Shrimp evel 1	what % sses, coed for so) Egg M	of entire confidence separate lass Mat	ce level e surve urity² , curved mpanie	ed by proof of Vertical Proof	ecies s. dpoles ved s), H=	Confi Le Hatche	dence vel dence
INDICATOR SPECIES Wood Frog Spotted Salamander Blue-spotted Salamander Fairy Shrimp ³ 1-Confidence level: 2-Egg mass maturity Hatching 3-Fairy shrimp: X = 4-Tadpoles/larvae: 3 Rarity criteria Note any rare specials SPECIES Blanding's Turtle	Visit #1 1 = <60%, ty: F= Fres present X = preser ecies ass Method c	Vis #22 , 2 = 60-9 sh (<24 h	ed with	y Masse Visit #3 = >95% = Mature	confi	dence I 3 hbryos), A	Shrimp Level ¹	Egg M	lass Mat	urity ² , curved	Obsertion of Vendor of Ven	s), H=	Confi Le Hatche	dence vel dence
SPECIES Wood Frog Spotted Salamander Blue-spotted Salamander Fairy Shrimp ³ 1-Confidence level: 2-Egg mass maturit; Hatching 3-Fairy shrimp: X = 4-Tadpoles/larvae: 3 Rarity criteria Note any rare specified specifies SPECIES Blanding's Turtle	#1 / () 1 = <60%, by: F= Fres present X = preser ecies ass Method c	#2 , 2 = 60-9 sh (<24 h	ed with	Visit #3 = >95% = Mature	(round em	dence I	_evel ¹	Egg M	ese matrix	, curved	embryos ed by p	s), H=	Hatche	d or
Spotted Salamander Blue-spotted Salamander Fairy Shrimp ³ 1-Confidence level: 2-Egg mass maturity Hatching 3-Fairy shrimp: X = 4-Tadpoles/larvae: 3 Rarity criteria Note any rare specified specifi	1 = <60%, ty: F= Fres present X = preser ecies ass	nt sociate	ed with	= Mature (pools. 9	Observa		nced (loc		ompanio Meth	ed by p	ohoto erificati	graph	<u>\$</u> .
Salamander Blue-spotted Salamander Fairy Shrimp ³ 1-Confidence level: 2-Egg mass maturit; Hatching 3-Fairy shrimp: X = 4-Tadpoles/larvae: X Rarity criteria Note any rare special species SPECIES Blanding's Turtle	1 = <60%, ty: F= Fres present X = preser ecies ass	nt sociate	ed with	= Mature (pools. 9	Observa		nced (loc		ompanio Meth	ed by p	ohoto erificati	graph	<u>\$</u> .
Salamander Fairy Shrimp ³ 1-Confidence level: 2-Egg mass maturity Hatching 3-Fairy shrimp: X = 4-Tadpoles/larvae: X Rarity criteria Note any rare specific	present X = preser ecies ass	sh (<24 h	ed with	= Mature (pools. (Observa S				ompanio Meth	ed by p	ohoto erificati	graph	<u>\$</u> .
1-Confidence level: 2-Egg mass maturity Hatching 3-Fairy shrimp: X = 4-Tadpoles/larvae: X Rarity criteria Note any rare special SPECIES Blanding's Turtle	present X = preser ecies ass	sh (<24 h	ed with	= Mature (pools. (Observa S				ompanio Meth	ed by p	ohoto erificati	graph	<u>\$</u> .
2-Egg mass maturity Hatching 3-Fairy shrimp: X = 4-Tadpoles/larvae: X Rarity criteria Note any rare specific sp	present X = preser ecies ass	sh (<24 h	ed with	= Mature (pools. (Observa S				ompanio Meth	ed by p	ohoto erificati	graph	<u>\$</u> .
SPECIES Blanding's Turtle	Method o	of Verifica	sation*		SPECIE	S	2001.0	01100	00 000	Meth	nod of Ve	erificat	ion*	
Blanding's Turtle	—	Н	S	CL**										CL**
											_ п			
Spotted Turtle					Wood T	urtle] 🔲]	Name of the last o
					Ribbon S	Snake								
Ringed Boghaunter *Method of verifica					Other:] 🗆]	
**CL - Confidence **Optional observe SVP Pot General vernal pot Remarks 2020: Dried	er recon tential S	nmend VP	dation	ı: n Signifi	icant VF	· 🗆	ndicate	or Bree	eding Are		3 55 £	m W		
: Digital submis acceptable for of the control of t	ssion (to	Jasor s with	on.Cza 3 or f W Date	piga@r fewer as e:	naine.g ssessec	Attn: \ 650 S (ov) of the pools	/ernal tate Str vernal ; <u>large</u>	Pools reet, Ba pool f r proje	angor, N ield for ects mu	ME 044 ms and st be n	01 d phot nailed	ogra as h	ard c	s only opies.





- 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

egg mass) are <u>required</u> for all observer	S.
Observer's Pool ID: SAD-VP-100	MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: Swah Drahdura / b. Contact and credentials previously provided? C	No (submit Addendum 1) O Yes
2. PROJECT CONTACT INFORMATION	
a. Contact name∶	
b. Contact and credentials previously provided?	
c. Project Name: Three Corners Sol	
3. LANDOWNER CONTACT INFORMATION	
a. Are you the landowner? OYes ONo If no, w	ras landowner permission obtained for survey? OYes ONo
b. Landowner's contact information (required)	
Name: E.D. Bessey & Son	Phone: (207) 453-9388 City: Hinch leg State: MF Zip: 0494
Street Address: 779 Stor hegan Re	City: Hinckley State: ME Zip: 0494
c. Large Projects: check if separate project land	downer data file submitted
4. VERNAL POOL LOCATION INFORMATION a. Location Township: Unify Township Brief site directions to the pool (using mapped la	undmarks):
See altacked map	
b. Mapping Requirements	
i. USGS topographic map OR aerial photograph	n with pool clearly marked.
ii. GPS location of vernal pool (use Datum NA	AD83 / WGS84)
Longitude/Easting: <u>-64, 432 21</u> Lati	itude/Northing: 44,633 25 7
Coordinate system: <u>W65 84</u>	
Check one: GIS shapefile	ne.gov; observer has reviewed shape accuracy (Best)
	ated by multiple GPS points. (Excellent)
- Include map or spreadsheet w	
O The above GPS point is at the	
O The center of the pool is appr degrees from the above	roximately m O ft O in the compass direction of ove GPS point. (Acceptable)





S. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicate	r survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting:	ssociated with larger wetland complex
■ Check all wetland types that best apply to this pool: □ Forested swamp □ Wet meadow □ Shrub swamp □ Lake or pond cove □ Peatland (fen or bog) □ Abandoned beaver flow □ Emergent marsh □ Active beaver flowage	☐ Slow stream ☐ Dug pond or ☐ 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 ※Natural-Modified ○ U	
If modified, unnatural or unknown, describe any mo	dern or historic human impacts to the pool (required): adjacent to recently out orem
ii. Pool Hydrology	
 Select the pool's <u>estimated</u> hydroperiod AND <u>provio</u> O Permanent	O Ephemeral O Unknown
completely in drought years) Explain:	in most years)
lend life & but both	
Total Transfer of the State of	
 Maximum depth at survey: O 0-12" (0-1 ft.)	dith: O m O ft Length: O m O ft period: Organic matter (peat/muck) shallow or restricted to deepest portion Organic matter (peat/muck) deep and widespread droperiod (check all that apply): Wet site ferns (e.g. royal fern, marsh fern) Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes) Aquatic vascular spp. (e.g. pickerelweed, arrowhead) Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent char No inlet or outlet Intermittent inlet Or outlet Other or Unknown (expl	t (channel with well-defined banks and permanent flow)
· · · · · · · · · · · · · · · · · · ·	



SAD-VP-190





	RNAL POOL INI			,										
a. Ir	ndicator survey	dates:	4	/24/	2020									
b. Ir	ndicator abund	ance cr	iteria	and p	ool surv	ey effoi	-t							
	Is pool depress Was the entire For each indica determination,	pool sui itor spec	veyed dies, in	d for eg ndicate	g masse the exac	es? 🔌 ct numb	Yes ○No; v er of egg mas	vhat % o sses, cor	nfidence l	evel f	or spe	ecies		
							ult Fairy Shrim		1	T			/Larva	e ⁴
	INDICATOR SPECIES	Visit #1		/isit #2	Visit #3		dence Level ¹		ss Maturit	y ²	Observ		Confid Lev	dence
	Wood Frog Spotted	82				2		M						+
	Salamander Blue-spotted Salamander													
	Fairy Shrimp ³			I										
	2-Egg mass maturii Hatching 3-Fairy shrimp: X = 4-Tadpoles/larvae: carity criteria Note any rare sp	present X = prese	nt											
Γ		Method			CL**						d of Ve		nn*	:L**
-	SPECIES Blanding's Turtle	P	H	s		SPECIE			-	P	Н	S		
-	Spotted Turtle					Ribbon Snake								
-	Ringed Boghaunter		H			Other:						1 -		
d. O	*Method of verifica **CL - Confidence *Potional observer SVP Po	level in s	specie: mmer	s deterr idation	mination:	1= <60%	, 2= 60-95%, 3		ing Area				<u> </u>	
e. G	eneral vemal p Dred up						s of other wi	ldlife:						
	d completed forr : Digital submis	ssion (te	o Jas	on.Cza	apiga@n	naine.g	Attn: Vernal I 650 State State State Ov) of vernal	⊃ools eet, Ban pool fie	igor, ME Id forms	0440′ and	i photo	grap	ohs is	only <u>pies</u> .
	IFW use only R	eviewed b	y MDIF		e:	In	nitials:	: Odoes r		ologicai	criteria	1.		
													-	





- 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

egg mass) are <u>required</u> for all observers.
Observer's Pool ID: SAD-VP-(0) MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name:
2. PROJECT CONTACT INFORMATION
a. Contact name: Same as observer O other
b. Contact and credentials previously provided? No (submit Addendum 1) Yes c. Project Name: 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: E, D. Bessey 3, Son Phone: (207) 453 - 9388 Street Address: 779 Skowhegan Rd. City: Hick leg State: ME Zip: 04942
Street Address: 779 Skowheg an Ra. City: Hick Ica State: ME Zip: 04942
c. 🔲 Large Projects: check if separate project landowner data file submitted 🦳
4. VERNAL POOL LOCATION INFORMATION
a. Location Township: 1/2 Township Brief site directions to the pool (using mapped landmarks):
See a Hoched 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: —6.4322/ Latitude/Northing: 44,633257 Coordinate system: W45 84
Check one: GIS shapefile - send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best) The pool perimeter is delineated by multiple GPS points. (Excellent) - Include map or spreadsheet with coordinates. The above GPS point is at the center of the pool. (Good) The center of the pool is approximately mO ft O in the compass direction of degrees from the above GPS point. (Acceptable)





. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicato	or survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting:	ssociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or pond cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flow ☐ Emergent marsh ☐ Active beaver flowage	☐ Slow stream ☐ Dug pond or ☐ Floodplain borrow pit rage ☐ Mostly unvegetated pool ☐ Roadside ditch ☐ ATV or skidder rut ☐ Other:
c. Vernal pool status under the Natural Resources P i. Pool Origin: Natural Natural-Modified OL If modified, unnatural or unknown, describe any mo	,
 ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> O Permanent O Semi-permanent (drying partially in all years are completely in drought years) Explain: 	© Ephemeral O Unknown
■ Maximum depth at survey: Ø 0-12" (0-1 ft.) Ø 12 ■ Approximate size of pool (at spring highwater): Wide ■ Predominate substrate in order of increasing hydrogen	dth: O m O ft Length: O m O ft
Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present)	 Organic matter (peat/muck) shallow or restricted to deepest portion Organic matter (peat/muck) deep and widespread
 Pool vegetation indicators in order of increasing hyder 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 	 ✓ Wet site ferns (e.g. royal fern, marsh fern) ✓ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) ✓ Wet site graminoids (e.g. blue-joint grass, tussock
fern, interrupted fern, New York fern) Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	sedge, cattail, bulrushes) Aquatic vascular spp. (e.g. pickerelweed, arrowhead) Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool
■ Faunal indicators (check all that apply): ☐ Fish ☐ Bullfrog or Green Frog tadpoles iii. Inlet/Outlet Flow Permanency	Other:
Type of inlet or outlet (a seasonal or permanent cha	et (channel with well-defined banks and permanent flow)

SAD-VP-101





. VER	NAL POOL IN	DICATO	R INF	ORMA	TION											
a. Indicator survey dates: 4/24/2020 , 5//2/2026																
b. In	b. Indicator abundance criteria and pool survey effort															
	■ Is pool depression bisected by 2 ownerships (straddler pool)? OYes ⊗No															
	■ Was the entire pool surveyed for egg masses? Yes ONo; what % of entire pool surveyed?										Æ:					
	■ 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 ⁴															
	INDICATOR			Eg	g Masse	s (or adı	ult Fairy	Shrim	p)				Tadp			
	SPECIES	Visit #1		isit #2	Visit #3	Confi	dence L	_evel ¹		Mass Ma	aturity ²	01	bserve	ed C	onfide Level	
	Wood Frog	6	0)		3			M							
	Spotted	0		2			3			M	٠.					
	Salamander Blue-spotted Salamander	<u> </u>)									
	Fairy Shrimp ³															
	1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95% 2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching 3-Fairy shrimp: X = present 4-Tadpoles/larvae: X = present										r					
	arity criteria						Sh = = =	.4:	املند ما ما	h	amna	ماما	h, c n h	otoar	nho	
	lote any rare sp	,			n vernai	pools. <u>C</u>	oserva	auons	snouia	be acc				fication		
1	SPECIES	Method P	of Verif	ication* S	CL**	SPECIE	s					einoa P	or ven	S	CL*	*
	Blanding's Turtle					Wood Tu	urtle									
	Spotted Turtle					Ribbon S	nake				. [
	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% . Optional observer recommendation: SVP Potential SVP Non Significant VP Indicator Breeding Area															
e. G	eneral vernal p	pool con	nment り	ts and	or obse	26	is of of	ther w	ildlife:						***	
	d completed for						Attn: \ 650 S	/ernal tate St	Pools reet, B	angor,	ME 04	1401			e ie o	nlv
OTE:	Digital submis acceptable for	ssion (to project	o Jaso ts with	on.Cza n 3 or i	ipiga@r fewer as	naine.g sessed	ov) of I pools	vernal ; <u>large</u>	poor er proj	ects m	ust be	ma	iled a	s hard	d cop	ies.
or MDI	FW use only	eviewed b	y MDIF	W Dat	e:	Ir	nitials:									
his poc	ol is: Significan			ally Sigr ng critic		☐ Not S	ignificaı	nt due to	~	es not me es not me					а.	
omme	nts:															





- Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.
- <u>Clear photographs</u> of a) the pool AND b) the indicators (one example of each species egg mass) are <u>required</u> for all observers.

Observer's Pool ID: SAD - VP - 102 MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION
a. Observer name: Sarah Drahouza
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 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: E.D. Bessey & Son Phone: (207) 453-9388 Street Address: 779 Skowhegen Rd. City: Hickley State: ME Zip: 04944
Street Address: 779 Skowhegen Rd. City: Hickley State: ME Zip: 04944
c. 🔲 Large Projects: check if separate project landowner data file submitted
4. VERNAL POOL LOCATION INFORMATION
a. Location Township: Un, hy Twp
Brief site directions to the pool (using mapped landmarks):
See alteched 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, 43658/</u> Latitude/Northing: <u>44, 63/79</u> 7
Coordinate system: WG 5 8 4
Check one: GIS shapefile
 send to Jason Czapiga@maine.gov; observer has reviewed shape accuracy (Best) The pool perimeter is delineated by multiple GPS points. (Excellent)
- Include map or spreadsheet with coordinates.
The above GPS point is at the center of the pool. (Good)
O The center of the pool is approximately mO ft O in the compass direction of
degrees from the above GPS point. (Acceptable)





S. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicator survey dates on page 3):	
b. Wetland habitat characterization	<u> </u>
■ Choose the best descriptor for the landscape setting: O Isolated depression O Floodplain depression O Other:	
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Slow stream ☐ Dug p ☐ Shrub swamp ☐ Lake or pond cove ☐ Floodplain borro ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage ☐ Mostly unvegetated pool ☐ Roads ☐ Emergent marsh ☐ Active beaver flowage ☐ ATV or skidder rut ☐ Other	ow pit side ditch
c. Vernal pool status under the Natural Resources Protection Act (NRPA)	
i. 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 estimated hydroperiod AND provide rationale in box (required): ○ Permanent ○ Semi-permanent ○ Cephemeral ○ Unk ○ (drying partially in all years and ○ Completely in drought years) ○ Unk	nown
completely in drought years) in most years) Explain:	,
haf litter	,
■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (> ■ Approximate size of pool (at spring highwater): Width: ○ m ○ ft Length: ○ ■ Predominate substrate in order of increasing hydroperiod:	m O ft
 Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) Organic matter (peat/muck) shallow or restricted to deepest portion Organic matter (peat/muck) deep and 	
	1 Widespiedd
■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply): ☐ Terrestrial nonvascular spp. (e.g. haircap ☐ What site ferms (e.g. royal ferm marsh ferm)	
moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern) Moist site ferns (e.g. sensitive fern cinnamon) Wet site shrubs (e.g. highbush bluebern winterberry, mountain holly) Wet site graminoids (e.g. blue-joint grasses)	ry, maleberry,
fern, interrupted fern, New York fern) Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended) sedge, cattail, bulrushes) Aquatic vascular spp. (e.g. pickerelwee in the properties of the properti	
☐ No vegetation in pool Faunal indicators (check all that apply): ☐ Fish ☐ Bullfrog or Green Frog tadpoles ☐ Other:	
iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the O_No inlet or outlet O_Permanent inlet or outlet (channel with well-defined banks and permanent inlet)	
Intermittent inlet O Other or Unknown (explain):	



SAD-VP-102 Maine State Vernal Pool Assessment Form



6. VERNAL F	POOL INDICAT	OR INFORM	ATION								
a. Indicato	or survey dates	: 4/24	12020								
	or abundance o	11	*								
	I depression bis	·		•	ol)? 🔘	Yes ON)				
-	he entire pool s	=	=	•	•		ire pool	surveye	ed?		
■ For ea	ich indicator sp	ecies, indicate	e the exa	ct number of e	g mas	ses, confider	nce leve	el for spe	cies		
deterr	nination, and eg	ıg mass matu	rity. Sep	arate cells are	provid	ed for separa	te surv	ey dates			
INDIC	ATOR	Egg Masses (or adult Fairy Shrimp) Tadpoles/Larvae									4
SPEC		t Visit #2	Visit #3	Confidence L	.evel ¹	Egg Mass Ma	aturity ²	Observ	ed (Confide Leve	
Wood				2		\mathcal{N}					
Spotte Salam											
	potted								-	+-	
Salam	ander										
Fairy S	Shrimp ³										
2-Egg n Hatc 3-Fairy 4-Tadpo	shrimp: X = present bles/larvae: X = pres	resh (<24 hrs), N		(round embryos), A	= Advar	aced (loose matri	ix, curvec	i embryos)	, H= H:	atched o	or
c. Rarity c		ann aintad wi	th warmal	neels Observe	tions -	hould be seen		المريحا أمما	4		
■ Note an	y rare species a			pools. <u>Observa</u>	เนอกรร	snould be acc					
SPECIE		d of Verification*	- CL**	SPECIES			Met	hod of Ver	Ification	CL	**
Blanding				Wood Turtle							
Spotted	Turtle			Ribbon Snake							
Ringed B	oghaunter 🔲			Other:			Г				
**CL - C	of verification: Ponfidence level in l observer reco Potential	species deter	mination:	1= <60%, 2= 60-		= >95% or Breeding A	rea				
e. General	vernal pool co			····	her wil	dlife:					
V) Associ	ited W)	fore	shed wed		v latin					
Send comp	leted form and s	supporting do	cumenta	Attn: V	ernal F				fe		
	l submission (table for projec										
For MDIFW use	only Reviewed	by MDIFW Dat	e:	Initials:							
This pool is:		Potentially Sign but lacking critic		☐ Not Significan		Odoes not mee				ia.	
Comments:											





INSTRUCTIONS:

Complete all 3 pages of form thoroughly. Most fields are required for pool registration.
 Clear photographs of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.

egg mass) are <u>required</u> for all observers.
Observer's Pool ID: SAD-VP-103 MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION
a. Observer name: Saca h Dea hava /
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 Coiners Solar Proje ts
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? OYes OYes If no, was landowner permission obtained for survey? OYes ONo
b. Landowner's contact information (required)
Name: E, D. Bessey & So Phone: (297) 45 3-93 88 Street Address: 771 Skowbegen Rd. City: Heteloy State: ME Zip: D495
Street Address: 779 Skowbergen Rd. City: Hick/en State: ME Zip: 0494
c. Large Projects: check if separate project landowner data file submitted
a. Location Township: Beaton Units Brief site directions to the pool (using mapped landmarks): Sec a Hickel 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: Latitude/Northing:
Check one: GIS shapefile - send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best) The pool perimeter is delineated by multiple GPS points. (Excellent) - Include map or spreadsheet with coordinates. The above GPS point is at the center of the pool. (Good) The center of the pool is approximately mO ft O in the compass direction of degrees from the above GPS point. (Acceptable)





VERNAL POOL HABITAT INFORMATION
a. Habitat survey date (only if different from indicator survey dates on page 3):
b. Wetland habitat characterization
■ Choose the best descriptor for the landscape setting: ○ Isolated depression ○ Pool associated with larger wetland complex ○ Floodplain depression ○ Other:
■ Check all wetland types that best apply to this pool: Forested swamp
c. Vernal pool status under the Natural Resources Protection Act (NRPA)
i. 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 estimated hydroperiod AND provide rationale in box (required): ○ Permanent ○ Semi-permanent ○ (drying partially in all years and completely in drought years) Explain: ○ Unknown ○ Unknown ○ in most years)
Lenf litter
 ■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.) ■ Approximate size of pool (at spring highwater): Width: ○ m ○ ft Length: ○ m ○ ft ■ Predominate substrate in order of increasing hydroperiod: ○ Mineral soil (bare, leaf-litter bottom, or upland ○ Organic matter (peat/muck) shallow or
mosses present) Mineral soil (sphagnum moss present) Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):
 □ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) □ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern) □ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) □ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) □ Sphagnum moss (anchored or suspended) □ Wet site ferns (e.g. royal fern, marsh fern) □ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) □ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes) □ Aquatic vascular spp. (e.g. pickerelweed, arrowhead) □ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) □ No vegetation in pool
■ Faunal indicators (check all that apply):
☐ Fish ☐ Bullfrog or Green Frog tadpoles ☐ Other:
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):



SAD- VP - 103 Maine State Vernal Pool Assessment Form



	L POOL IND		3	1										
a. Indic	ator survey	dates:_	4/28/	2020) 5	114/2	020							
b. Indic	ator abunda	ance crite	eria and po	ool surv	ey effor	t								
	pool depress								O No					
	as the entire													
	r each indica												cies	
det	termination, a	and egg n							separa	te sur	vey o			4
INI	DICATOR) f: 't			es (or adu			T				Tadp	oles/Lar	vae '
SF	PECIES	Visit #1	Visit #2	Visit #3		dence L	.evel ¹	.	lass Ma	aturity [*]	10	bserve T	1 N	_evel ¹
W	ood Frog	25			2			M			_	$\perp \perp$		
Sa	ootted lamander ue-spotted	5	9		2			M			_			
	ilamander iry Shrimp ³										J			
3-F 4-T c. Rari	Hatching fairy shrimp: X = fadpoles/larvae: ty criteria e any rare sp	X = present		h vernal	pools. <u>C</u>)bserv	ations	should	be acc	compa	anied	by pł	notogra	oh <u>s</u> .
			Verification*	1									fication*	CL**
SPE	ECIES	Р	H S	CL**	SPECIE	S					Р	Н	S_	OL.
Blar	nding's Turtle				Wood Tu	ırtle								
Spo	tted Turtle	- -			Ribbon S	nake								
1	ged Boghaunter thod of verifica	1 - 1		d U = U	Other:	- Spar	<u> </u>							
**Cl d. Opti □ S	Confidence onal observ SVP □ Po	level in sp er recom tential SV	ecies deteri mendation P	mination: n: on Signif	1= <60% icant VP	, 2= 60·	-95%, 3	tor Bre	eding <i>F</i>	∖rea				
	eral vemal p Drieck v		*		ervation	S OT O	iner w	'lla lire:			****			
	ompleted for					Attn: \ 650 S	/ernal tate Si	Pools treet, E	angor,	ME 0	4401			
OTE: Di ac	igital submis	ssion (to projects	Jason.Cz with 3 or	apiga@ı fewer as	maine.g ssessed	ov) of I pools	verna ; <u>larg</u>	i pool er proj	field fo ects m	orms lust b	and e ma	photo iled a	graphs is hard	copies.
	/ use only R :	t 🗆 Po	MDIFW Dar tentially Sig	nificant	□NotS	nitials: _ ignifica	nt due te						ol criteria	
omments:		, , , , , , , , , , , , , , , , , , ,						<u> </u>	SS HOLITIC	CG! IAID	LF VE	mai po	o, Gileila	•





INSTRUCTIONS:

- Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.
- <u>Clear photographs</u> of a) the pool AND b) the indicators (one example of each species egg mass) are <u>required</u> for all observers.

egg mass) are <u>required</u> for all observers.
Observer's Pool ID: SAD-VP-104 MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: Save La Des hoves 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 Cornes 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: E, D. Bessen & Son Phone: (207) 453-9388 Street Address: 779 Skowhegan Rd. City: Hickley State: ME Zip: 04944
Street Address: 779 Skowhegan Rd. City: Hickley State: ME Zip: 04944
c. 🔲 Large Projects: check if separate project landowner data file submitted
4 VEDNAL BOOK LOGATION INFORMATION
4. VERNAL POOL LOCATION INFORMATION
a. Location Township: Clin for
Brief site directions to the pool (using mapped landmarks):
See allached mores
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, 45 7718 Latitude/Northing: 44, 616 83 3
Coordinate system: WGS 84
Check one: OGIS 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)
○ The center of the pool is approximately m○ ft ○ in the compass direction of degrees from the above GPS point. (Acceptable)





5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicato	r survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting: ○ Isolated depression ○ Floodplain depression ○ Other:	sociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ∠ Forested swamp	☐ 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 If modified, unnatural or unknown, describe any mo	Innatural OUnknown dern or historic human impacts to the pool (required):
ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> O Permanent O Semi-permanent (drying partially in all years ar	Ephemeral O Unknown d (drying out completely
completely in drought years) Explain:	in most years)
leaf lither	
■ Maximum depth at survey: ○ 0-12" (0-1 ft.)	2-36" (1-3 ft)
■ Approximate size of pool (at spring highwater): Wid	dth: O m O ft Length: O m O ft
 Predominate substrate in order of increasing hydrol 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)	O Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hyd	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) 	
☐ 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 pool):
○ No inlet or outlet ○ Permanent inlet or outle	et (channel with well-defined banks and permanent flow)
Intermittent inlet Other or Unknown (export or outlet	



SAD-VP-109



6. VERNA	L POOL INI	DICATO	R INF	ORMA	ATION											
a. Indic	ator survey	dates:	41	29/2	2020	5/15	1/200	ð _								
	cator abunda		•	6		,										
	pool depress									O No						
	as the entire															
	r each indica													ies		
de	termination,	and egg	mass							separa	te surv				1	1
IN	DICATOR	\ /i:4	1 3	Eg /isit	gg Masse Visit	s (or adult Fairy Shrimp) Tadpoles/L								rvae" onfiden		
SF	PECIES	Visit #1	i	#2	#3	I Confidence Loyal' Eag Macc Maturity' Obcaryod							Level ¹			
	ood Frog	17	ALCO AND AND AND AND AND AND AND AND AND AND			2	2		M	A						
	ootted Ilamander	10		3		2	2		M	M						
Blu	ue-spotted		1 '													
	lamander iry Shrimp³		_													
L	Confidence level	· 1 = <60%	2=6	n_95% ′	3 = >95%											
3-F 4-T	Hatching airy shrimp: X = adpoles/larvae: ty criteria		nt													
■ Note	e any rare sp	ecies as	socia	ted wit	h vernal	pools. C	Observa	tions	should	be acc	ompan	ied b	y pho	otogra	phs.	
SPE	ECIES	Method		1	CL**	SPECIE	S				Me		f Verifi	cation* S	CL**	
Blar	nding's Turtle	P	<u>H</u>	S		Wood Tu	urtle									
Spo	tted Turtle					Ribbon S	inake				C]				
Ring	ged Boghaunter					Other:]				
	thod of verifica Confidence							05% 3	l− >05%					184		
d. Opti	onal observ	er recor	mmer SVP	ndation □ No	n: on Signifi	cant VP		ndicat	or Bree		rea					
e. Gene	eral vernal p				*		s of ot	her w	ildlife:							 -
	Dried	op	by	a fina	15/	2020										
	ompleted for			-			Attn: \ 650 St	ernal ate St	Pools reet, Ba	angor,	ME 04	401				
NOTE: Di ac	gital submis ceptable for	ssion (to project	o Jase ts with	on.Cza h 3 or	apiga@n fewer as	naine.g	ov) of v I pools	/ernal <u>large</u>	pool t er proje	eld fo	rms ar ust be	id ph mail	otog ed as	raphs hard	copie	11y <u>9s</u> .
For MDIFW	use only R	eviewed b	y MDIF	W Dat	.e:	lr	nitials:									
	Significan			ally Sigr ing critic		☐ Not S	ignificar	t due to			et biolog et MDEF			criteria	•	_,
Comments:																





INSTRUCTIONS:

- Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.
- <u>Clear photographs</u> of a) the pool AND b) the indicators (one example of each species egg mass) are required for all observers.

egg mass) are <u>required</u> for all observers.
Observer's Pool ID: MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: Samu Drahoval 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? No (submit Addendum 1) 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. Bessey & Son</u> Phone: (207) 453-9388
Name: E, D, Bessey & Son Phone: (207) 453-9388 Street Address: 779 Skowhasan Rd. City: Hick kg State: ME Zip: 24944
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):
See a Hacheld 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, 46/326</u> Latitude/Northing: <u>44, 624046</u>
Coordinate system: W65 84
Check one: GIS shapefile - send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)
 The pool perimeter is delineated by multiple GPS points. (Excellent) Include map or spreadsheet with coordinates.
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)





5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicato	or survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting: O landscape setting: O Pool as O Floodplain depression O Other:	ssociated with larger wetland complex
☐ Emergent marsh ☐ Active beaver flowage	☐ Slow stream ☐ Dug pond or ☐ borrow pit ☐ Boadside ditch ☐ ATV or skidder rut ☐ Other:
c. Vernal pool status under the Natural Resources P	,
i. Pool Origin: 🗖 Natural O Natural-Modified 🔘 U	
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>provio</u> O Permanent O Semi-permanent (drying partially in all years ar completely in drought years)	© Ephemeral O Unknown
Explain:	in most years)
Led litter	
■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12	2-36" (1-3 ft.)
■ Approximate size of pool (at spring highwater): Wid	dth: O m O ft Length: O m O ft
 Predominate substrate in order of increasing hydro Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	period: 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 hyd	
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, jewelweed, blue flag iris, swamp candle) 	☐ Aquatic vascular spp. (e.g. pickerelweed, arrowhead) ☐ 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. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent cha	onel providing water flowing into or out of the nool):
O No inlet or outlet Permanent inlet or outle	et (channel with well-defined banks and permanent flow)
Intermittent inlet Other or Unknown (export or outlet	iain):



SAD-VP-/OS Maine State Vernal Pool Assessment Form



VERNA	L POOL IND	DICATO	R INF	ORM <i>P</i>	TION											
a. Indicator survey dates: 4 28 2020																
b. Indicator abundance criteria and pool survey effort																
■ Is i	pool depress	ion bise	ected b	y 2 ov	nerships	s (strado	ller po	ol)? C) Yes	ONG						
	as the entire														<u></u>	
	r each indica													cies		
determination, and egg mass maturity. Separate cells are provided for separate survey dates.																
INI	DICATOR					s (or adu	s (or adult Fairy Shrimp) Tadpoles/L								.arvae⁴ Confide	
SF	PECIES	Visit #1		isit #2	Visit #3	Confidence Level Egg Mass Maturity Observed							Leve			
W	ood Frog	22				2			4		ļ	<u> </u>				
	ootted alamander	87				2			M							
	ue-spotted alamander	1														
Fa	niry Shrimp ³															
3-F 4-T	gg mass maturi Hatching airy shrimp: X = adpoles/larvae:	present		1 hrs), M	1= Mature (round em	bryos), <i>l</i>	A= Adva	anced (lo	ose mati	rix, curve	ed em	bryos),	H= Ha	atched o	r
	ty criteria e any rare sp	ecies a	ssocia	ted wit	h vernal	pools. <u>C</u>	Observ	ations	should	be ac	compa	nied	by ph	otogı	aphs.	
		Method	of Veri	ication*	CL**	SPECIE					Me	ethod	of Verit	fication	T* CL	**
	ECIES	P	Н	s								Р <u> </u>	H	s		
	nding's Turtle					Wood Tu										
Spo	otted Turtle					Ribbon S	nake								_	
1 7	ged Boghaunter thod of verifica				<u> </u>	Other:										
**Cl d. Opti	Confidence onal observ	level in er reco tential (species mme r SVP	deterion	mination: n: on Signifi	1= <60% cant VP	, 2= 60	-95%, : Indica	tor Bre	eding A	∖ rea					
e. Gen	erar vernar p			ts and	1701 0030	- Vation							1,000			in.
	ompleted for						Attn: \ 650 S	Vernal tate S	Pools treet, E	Bangor,	ME 04	1401				
OTE: Di ac	igital submis ceptable for	ssion (1 projec	to Jas ts wit	on.Cza h 3 or	apiga@r fewer as	naine.g ssessed	ov) of I pools	verna ; <u>larg</u>	l pool er proj	field fo	orms a nust be	nd p ma	hotog iled a	grapl s har	ns is c rd cop	nly <u>ies</u> .
r MDIFW	use only R	eviewed	by MDIF	W Dat	te:	Ir	nitials: _									
nis pool is:	: Significan		Potentia but lack		nificant al data	☐ Not S	ignifica	nt due t	_		eet biolo eet MDE				ia.	
omments:																





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

egg mass) are <u>required</u> for all observers.
Observer's Pool ID: MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: Sara h Drahoval 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 Corners Solar Project
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? OYes ØNo → If no, was landowner permission obtained for survey? OYes ONo
b. Landowner's contact information (required)
Name: <u>F.D. Bessey & Son</u> Phone: <u>(207) 453-93 88</u> Street Address: <u>779 Skowhegan Rd.</u> City: <u>Hz Frien</u> State: <u>ME</u> Zip: <u>019 4</u>
Street Address: 779 Skowhegan Rd. City: hiz he len State: ME Zip: 0194
c. 🔲 Large Projects: check if separate project landowner data file submitted
4. VERNAL POOL LOCATION INFORMATION
2.1
a. Location Township: Chin for Brief site directions to the pool (using mapped landmarks):
See a Hohed map
See afficial may
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, 44,5555 Latitude/Northing: _44, 626983
Coordinate system: <u>W6S 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 of degrees from the above GPS point. (Acceptable)





VERNAL POOL HABITAT INFORMATION
a. Habitat survey date (only if different from indicator survey dates on page 3):
b. Wetland habitat characterization
■ Choose the best descriptor for the landscape setting: O Isolated depression O Floodplain depression O Other:
□ 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 flowage □ ATV or skidder rut □ Other: □
c. Vernal pool status under the Natural Resources Protection Act (NRPA) i. Pool Origin: ONatural Matural-Modified OUnnatural OUnknown If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required):
Impounded by Woods road Colvert from road froms to pond
ii. Pool Hydrology
■ Select the pool's <u>estimated</u> hydroperiod AND <u>provide rationale</u> in box (required): ○ Permanent ○ Semi-permanent ○ Cphemeral ○ Unknown ○ (drying partially in all years and (drying out completely completely in drought years) ○ in most years)
Explain:
■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.) ■ Approximate size of pool (at spring highwater): Width: ○ m ○ ft Length: ○ m ○ ft ■ Predominate substrate in order of increasing hydroperiod: ○ Mineral soil (bare, leaf-litter bottom, or upland ○ Organic matter (peat/muck) shallow or
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):
 ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern) ☐ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) ☐ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) ☐ Sphagnum moss (anchored or suspended) ☐ Wet site ferns (e.g. royal fern, marsh fern) ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) ☐ Wet site ferns (e.g. royal fern, marsh fern) ☐ Wet site ferns (e.g. royal fern, marsh fern) ☐ Wet site ferns (e.g. royal fern, marsh fern) ☐ Wet site ferns (e.g. royal fern, marsh fern) ☐ Wet site ferns (e.g. royal fern, marsh fern) ☐ Wet site ferns (e.g. royal fern, marsh fern) ☐ Wet site ferns (e.g. royal fern, marsh fern) ☐ Wet site ferns (e.g. royal fern, marsh fern) ☐ Wet site ferns (e.g. royal fern, marsh fern) ☐ Wet site ferns (e.g. royal fern, marsh fern) ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) ☐ Wet site ferns (e.g. royal fern, marsh fern) ☐ Wet site ferns (e.g. royal fern, marsh fern) ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) ☐ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, winterberry, mountain holly) ☐ Wet site shrubs (e.g. highbush blueberry, mou
■ Faunal indicators (check all that apply): ☐ Fish ☐ Bullfrog or Green Frog tadpoles ☐ Other:
iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool): O No inlet or outlet O Intermittent inlet or outlet O Other or Unknown (explain): O Other or Unknown (explain):



SAD-VP 106 Maine State Vernal Pool Assessment Form



VERNAL POOL IN												
a. Indicator survey	dates:	4/2	8/ 202	<u></u>								
b. Indicator abunda			1									
Is pool depressWas the entireFor each indica determination,	pool sur tor spec	veyed for e ies, indicat	egg mass e the exa	es? 〇\ ict numbe	r of egg ma	what % sses, c	onfiden	re pool ice leve	el for sp	ecies		
					t Fairy Shrim		oopara	1			:/Larva	
INDICATOR SPECIES	Visit #1	Visit #2	Visit #3		ence Level ¹		/lass Ma	ıturity ²	Obser		Confid Lev	dence
Wood Frog	- 1 sh.			A								
Spotted	37			M								
Salamander Blue-spotted Salamander				/ * }								
Fairy Shrimp ³												
3-Fairy shrimp: X = 4-Tadpoles/larvae: c. Rarity criteria ■ Note any rare sp	X = preser		ith vernal	pools. <u>O</u>	bservations	should	be acc	ompan	ied by p	hoto	graphs	<u>s</u> .
SPECIES	Method o	of Verification	CL**	SPECIES				Met	hod of Ve	erificati S	(CL**
Blanding's Turtle				Wood Tui	tle]	
Spotted Turtle				Ribbon Sn	ake] 🗆]	
Ringed Boghaunter				Other:							J	
*Method of verifica **CL - Confidence d. Optional observe SVP Po e. General vernal p	level in s e r reco n tential S	pecies dete nmendatio	rmination: on: lon Signif	1= <60%, icant VP	2= 60-95%, 3	or Bree		rea				
Impoure Dried U								ж-іп				
Send completed forr OTE: Digital submis acceptable for	n and su	pporting d	ocumenta zapiga@i	ation to: I	Attn: Vernal 350 State St v) of vern al	Pools reet, B pool f	angor, l ield for	ME 044 rms an	101 d phot	ograj	ohs is ard co	only
MDIFW use only R	eviewed by	MDIFW D	ate:	Inii	ials:							
s pool is: Significant		otentially Sig ut lacking criti	•	☐ Not Sig	nificant due to				ical criteri vernal po		eria.	
mments:		:										

SAD-VP-107





NATE OF WAIT
INSTRUCTIONS:
 Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration. <u>Clear photographs</u> of a) the pool AND b) the indicators (one example of each species egg mass) are <u>required</u> for all observers.
Observer's Pool ID: SAD-VP-167 MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name: Sarah Dahova / b. Contact and credentials previously provided? ○ No (submit Addendum 1)
2. PROJECT CONTACT INFORMATION
a. Contact name: Øsame as observer ⊘ other
b. Contact and credentials previously provided? O No (submit Addendum 1) O Yes c. Project Name: Three Corners Solw Project
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? OYes XNo _ If no, was landowner permission obtained for survey? OYes ONo
b. Landowner's contact information (required)
Name: E.D. Bessey & Son Phone: (207) 453-9388
Name: E.D. Bessey & Son Phone: (207) 453-9388 Street Address: 779 Skowbegan Rd. City: Hick-leg State: ME Zip: 0494
c. Large Projects: check if separate project landowner data file submitted
4. VERNAL POOL LOCATION INFORMATION
a. Location Township: Clin fon
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>-69.46.7-64</u> Latitude/Northing: <u>44.737659</u> Coordinate system: <u>173.5.84</u>
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. The above GPS point is at the center of the pool. (Good)
O The center of the pool is approximately m of to in the compass direction of
degrees from the above GPS point. (Acceptable)





dicator survey dates on page 3):
•
etting: Pool associated with larger wetland complex Other:
Slow stream Dug pond or borrow pit Ter flowage Mostly unvegetated pool Roadside ditch Wage ATV or skidder rut Other:
rces Protection Act (NRPA)
ed O Unnatural OUnknown any modern or historic human impacts to the pool (required):
O provide rationale in box (required): © Ephemeral ears and (drying out completely years) in most years)
o 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 g hydroperiod: bland O Organic matter (peat/muck) shallow or restricted to deepest portion O Organic matter (peat/muck) deep and widespread
winterberry, mountain holly) Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes) Aquatic vascular spp. (e.g. pickerelweed, arrowhead) Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool
Non DOH
oles Other:
ent channel providing water flowing into or out of the pool): or outlet (channel with well-defined banks and permanent flow) vn (explain):





Wood Frog Spotted Salamander Blue-spotted Salamander Fairy Shrimp³ 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= Hatcher 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 photograph.							TION	ORMA	FOR INF	DIC	AL POOL IN	VERNA
■ Is pool depression bisected by 2 ownerships (straddler pool)? O Yes O No ■ Was the entire pool surveyed for egg masses?		_			07	VP-1	SAD-		s:	y da	cator survey	a. Indi
■ Was the entire pool surveyed for egg masses? ■ 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/Larva SPECIES Wood Frog 48 Visit Visi												
INDICATOR Egg Masses (or adult Fairy Shrimp) Tadpoles/Larva SPECIES Visit Visit Visit Visit Wood Frog A A A A A A A A A	evel for species	at % of entire p s, confidence l	what % sses, c	ONo; v egg mas	≬Yes ber of e	es? 🍾 ct numl	g masse the exa	d for eg idicate	surveye ecies, ir	poc ator	las the entire or each indica	■ W ■ Fo
Wood Frog									yy mass	anu I		
Spotted Salamander Blue-spotted Salamander Fairy Shrimp³ 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= Hatcher 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 photograph SPECIES Method of Verification* P H S Blanding's Turtle Spotted Turtle Spotted Turtle Ribbon Snake Ringed Boghaunter 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:	10	gg Mass Maturit	T .	<u> </u>		T .	Visit	'isit		1		
Spotted Salamander Blue-spotted Salamander Fairy Shrimp³ 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= Hatcher 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 photograph SPECIES Method of Verification* SPECIES P H S CL** SPECIES Method of Verification* SPECIES P H S Wood Turtle Spotted Turtle		7	A			2				4	lood Frog	W
Fairy Shrimp3 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= Hatcher Hatching 3-Fairy shrimp: X = present 4-Tadpoles/larvae: X = present		И	M					3	RZ -7	13	alamander lue-spotted	SI SI BI Si
2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatcher 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 photograph. SPECIES Method of Verification* SPECIES P H S Blanding's Turtle Spotted Turtle Spotted Turtle Ribbon Snake Ringed Boghaunter Whethod 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:											airy Shrimp ³	Fa
SPECIES	panied by photographs.	ould be accomp	·		•	`	n vernal	ted wit	nt esent associa	= pres : X =	Hatching Fairy shrimp: X = Tadpoles/larvae: ity criteria	3-F 4-T c. Rari
Spotted Turtle	P H S	,					CL**		H			
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 Non Significant VP Indicator Breeding Area e. General vernal pool comments and/or observations of other wildlife:					Snake	-						
**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:												
	**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95% d. Optional observer recommendation: SVP Potential SVP Non Significant VP Indicator Breeding Area e. General vernal pool comments and/or observations of other wildlife:											
Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife Attn: Vernal Pools 650 State Street, Bangor, ME 04401 OTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard co												
or MDIFW use only Reviewed by MDIFW Date: Initials: Init				nt due to			ificant	ılly Sign] Potentia		: Significan	is pool is:





INSTRUCTIONS:

- Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.
- <u>Clear photographs</u> of a) the pool AND b) the indicators (one example of each species egg mass) are <u>required</u> for all observers.

Observer's Pool ID: SAD -VP-1/4 MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name:
2. PROJECT CONTACT INFORMATION a. Contact name: Same as observer of other b. Contact and credentials previously provided? No (submit Addendum 1) c. Project Name: Three Corners Solar Project
3. LANDOWNER CONTACT INFORMATION
a. Are you the landowner? O'Yes O'No If no, was landowner permission obtained for survey? O'Yes O'No b. Landowner's contact information (required) Name: ED Bessey Son Phone: (207) 453-9388 Street Address: 777 Ston heyer Red. City: Hick leg State: ME Zip: 04944 c. Large Projects: check if separate project landowner data file submitted 4. VERNAL POOL LOCATION INFORMATION a. Location Township: Ben fon 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:
Check one: GIS shapefile - send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best) The pool perimeter is delineated by multiple GPS points. (Excellent) - Include map or spreadsheet with coordinates. The above GPS point is at the center of the pool. (Good) The center of the pool is approximately m O ft O in the compass direction of degrees from the above GPS point. (Acceptable)





5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicator sur	vey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting: O Isolated depression O Floodplain depression O Other:	ated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Shrub swamp ☐ Lake or pond cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage ☐ Emergent marsh ☐ Active beaver flowage ☐ C. Vernal pool status under the Natural Resources Protect	ATV or skidder rut Other:
i. Pool Origin: Natural O Natural-Modified O Unnatural If modified, unnatural or unknown, describe any modern	
ii. Pool Hydrology Select the pool's <u>estimated</u> hydroperiod AND <u>provide rations</u> O Permanent	ionale in box (required): Ephemeral O Unknown (drying out completely in most years)
mosses present)	Om Oft Length: Om Oft d: Organic matter (peat/muck) shallow or restricted to deepest portion
■ Pool vegetation indicators in order of increasing hydroped ☐ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) ☐ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	Organic matter (peat/muck) deep and widespread riod (check all that apply): Wet site ferns (e.g. royal fern, marsh fern) Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) Wet site graminoids (e.g. blue-joint grass, tussock
fern, interrupted fern, New York fern) Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	Seedge, cattail, bulrushes) Aquatic vascular spp. (e.g. pickerelweed, arrowhead) Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool
■ Faunal indicators (check all that apply): ☐ Fish ☐ Bullfrog or Green Frog tadpoles ☐ C iii. Inlet/Outlet Flow Permanency	Other:
Type of inlet or outlet (a seasonal or permanent channel p	providing water flowing into or out of the pool): annel with well-defined banks and permanent flow)





6. VER	NAL POOL INI	DICATO	R IN	ORM	ATION											
a. In	dicator survey	dates:		4/3	0/202	20		***								
	dicator abund			,	,		t									
=	Is pool depress Was the entire For each indica determination,	pool su itor spe	rveye cies, i	d for e	gg masse the exa	es? O ct numb	Yes (erofe	⊃No; v gg mas	what % sses, c	onfider	ire poo nce lev	el fo	or spe	ecies		-
					gg Masse						······································	Τ			/Larv	ae ⁴
	INDICATOR SPECIES	Visit #1	- 1	/isit #2	Visit #3		dence l		r 	lass Ma	aturity ²	0	bserv		Conf	idence evel ¹
	Wood Frog															
	Spotted Salamander	37				2			M							
	Blue-spotted Salamander															
	Fairy Shrimp ³		i :													
c. R	Hatching 3-Fairy shrimp: X = 4-Tadpoles/larvae: arity criteria lote any rare sp	X = prese		ted wit	h vernal	pools. C) bserv	ations :	should	be acc	compar	<u>nie</u> d	by p	hoto	<u>gra</u> pł	<u>1S</u> .
		Method			l	poole: <u>s</u>			<u> </u>	20 400			of Ve		on*	
-	SPECIES	Р	Н	s	CL**	SPECIES						Р	Н	S		CL**
-	Blanding's Turtle		Ш.			Wood Tu]		L	1	
-	Spotted Turtle					Ribbon S	nake]				
	Ringed Boghaunter Method of verifica	<u> </u>	<u> </u>	<u> </u>		Other:					[]]	
d. O	*CL - Confidence ptional observe SVP Po eneral vernal p	er reco i tential S	mmer SVP	ndatio ☐ No	n: on Signifi	cant VP		ndicato	or Bree		геа					
NOTE:	d completed forr Digital submis acceptable for	ssion (te	o Jas	on.Cza	apiga@n	naine.go	Attn: \ 650 St ov) of '	/ernal f ate Str /ernal	Pools reet, Ba pool f	angor, i eld fo		401 nd p	hoto	graį		
	l is: ☐ Significant		otentia		nificant	ln ∐ Not Si	itials: gnifican	t due to:			et biolog et MDEF				eria.	





INSTRUCTIONS:

- Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.
- <u>Clear photographs</u> of a) the pool AND b) the indicators (one example of each species egg mass) are <u>required</u> for all observers.

-99
Observer's Pool ID: SAD-VP-117 MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION a. Observer name:
2. PROJECT CONTACT INFORMATION a. Contact name: Same as observer O other
b. Contact and credentials previously provided? No (submit Addendum 1) Yes c. Project Name: Corners Solar Proje f
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 & Son</u> Phone: <u>(207) 453-9388</u> Street Address: <u>779 Skowhegan Rd.</u> City: <u>Hickley</u> State: <u>Mt.</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: <i>L</i> 9,455367 Latitude/Northing: <u>44, 6/2047</u>
Coordinate system: WGS 84
Check one: GIS shapefile - send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)
 The pool perimeter is delineated by multiple GPS points. (Excellent) Include map or spreadsheet with coordinates.
The above GPS point is at the center of the pool. (Good)
O The center of the pool is approximately mO ft O in the compass direction of degrees from the above GPS point. (Acceptable)





. VERNAL POOL HABITAT INFORMATION						
a. Habitat survey date (only if different from indicator	survey dates on page 3):					
b. Wetland habitat characterization						
■ Choose the best descriptor for the landscape setting: O Isolated depression O Floodplain depression O Other:	sociated with larger wetland complex					
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Shrub swamp ☐ Lake or pond cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage	☐ 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 Pri i. Pool Origin: Natural O Natural-Modified O U	• •					
5 . 7	dern or historic human impacts to the pool (required):					
ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> O Permanent O Semi-permanent (drying partially in all years an completely in drought years)	© Ephemeral O Unknown					
Explain:						
Leaf litter						
 Approximate size of pool (at spring highwater): Wide Predominate substrate in order of increasing hydrog Mineral soil (bare, leaf-litter bottom, or upland mosses present) 	oeriod: 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 hyder □ 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): 	droperiod (check all that apply): Wet site ferns (e.g. royal fern, marsh fern) Wet site shrubs (e.g. highbush blueberry, maleberry winterberry, mountain holly) Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes) Aquatic vascular spp. (e.g. pickerelweed, arrowhead Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool					
☐ Fish ☐ Bullfrog or Green Frog tadpoles	☐ Other;					
iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent char	nnel providing water flowing into or out of the pool): et (channel with well-defined banks and permanent flow)					



SAD-VI-/I7 Maine State Vernal Pool Assessment Form



	NAL POOL INI				*	,	,									
a. In	dicator survey	dates:	4	130	<u> 12020</u>	,5/	14/20	20								
b. In	b. Indicator abundance criteria and pool survey effort															
	ls pool depress									ǾNo						
	Was the entire	pool su	rveye	d for eq	gg masse	es? 🔘	Yes (⊃No; v	what %	6 of ent	ire poo	l sur	veye	d?		
	For each indica	•														
	determination,	and egg	mass	matu	rity. Sep	arate ce	lls are	provid	ed for	separa	te surv					
	INDICATOR		1 .		gg Masse	s (or ad	ult Fairy	Shrim	p)				Tadp		_arvae	
	SPECIES	Visit #1	1	/isit #2	Visit #3	Confi	dence l	_evel ¹	Egg [Mass Ma	aturity ²	Ob	serve	ed (Confide Leve	4
	Wood Frog		-	2												
	Spotted	7		1					M							
	Salamander Blue-spotted	2_	_	{					1 1 1	-			\vdash			+-
	Salamander															
	Fairy Shrimp ³															
	1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95% 2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching 3-Fairy shrimp: X = present 4-Tadpoles/larvae: X = present															
	•	7. p. 000	,,,,,													
	arity criteria		: -	ئئىرى امىلا	h vernel	naala (Shaan.	otiona	ماريمطم	l ho oo	amnar	siad I	hu nh	otoa	ranha	
■ j\	ote any rare sp					pools. <u>C</u>	Doserv	ations	snouic	pe acc						
5	SPECIES	Method	of Ven	fication*	CL**	SPECIE	s				-	tnoa o	of Veri H	iicatioi S	Cr	**
Ī	Blanding's Turtle					Wood Tu	urtle		***]				
:	Spotted Turtle					Ribbon S	inake] [
- 1	Ringed Boghaunter					Other:										
d. O	Method of verifica *CL - Confidence ptional observa SVP □ Po	level in s er reco l	specie: mmer	s deteri idatio	mination:	1= <60%	, 2= 60	-95%, 3			vrea					
				,												
e. Ge	eneral vernal p	ool cor	nmen	ts and	or obse	ervation	s of o	ner w	ııaııte:							\neg

Send	d completed forr	n and s	uppor	ting do	cumenta	tion to:	Attn: \	/ernal	Pools		neries a		Mildli1	e e		
	Digital submis acceptable for															
For MDI	FW use only R	eviewed b	y MDIF	-W Dat	e:	lr	nitials:									
This poo	l is:			ally Sign		∏ Not S	SAPY CALLS	150 100 100 100							i.	
Commer	nts:								∪ αοε	s not me	et MDEF	- vern	iai poo	ı critel	ıd.	
										Aleb Theybride						





INSTRUCTIONS:

- Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.
- <u>Clear photographs</u> of a) the pool AND b) the indicators (one example of each species egg mass) are <u>required</u> for all observers.

Observer's Pool ID: SAD-VP - II MDIFW Pool ID: 1. PRIMARY OBSERVER INFORMATION a. Observer name: Sarah Dahoval	<u>.</u>
a. Observer name: Sarah Dahov 21	
b. Contact and credentials previously provided? O No (submit Addendum 1)	
2. PROJECT CONTACT INFORMATION	
a. Contact name: Same as observer O other	
b. Contact and credentials previously provided? No (submit Addendum 1) Yes	
c. Project Name: Three Corners Solar Project	
3. LANDOWNER CONTACT INFORMATION	
a. Are you the landowner? OYes 🔊 No - If no, was landowner permission obtained for survey? 🔊 Yes - O	No
b. Landowner's contact information (required)	
Name: ED Bessey & Son Phone: (207) 453-9388 Street Address: 779 Skowhegen Rd. City: Hickley State: ME Zip: 0	
Street Address: 779 Skowhegen Rd. City: Hick leg State: ME Zip: 0	<u>194</u> 4
c. 🔲 Large Projects: check if separate project landowner data file submitted	
4. VERNAL POOL LOCATION INFORMATION	
a. Location Township: <u>Ben fon</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>-(09, 45 7367</u> Latitude/Northing: <u>44, (, 1) 5 89</u>	
Coordinate system: WGS 84	
Check one: GIS shapefile - send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (Best)	
 The pool perimeter is delineated by multiple GPS points. (Excellent) Include map or spreadsheet with coordinates. 	
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)	





. 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:	ssociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Shrub swamp ☐ Lake or pond cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flow ☐ Emergent marsh ☐ Active beaver flowage	☐ 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 P	Protection Act (NRPA)
i. Pool Origin: ONatural Natural-Modified O	· · ·
	odern or historic human impacts to the pool (required):
ii. Pool Hydrology	
■ Select the pool's <u>estimated</u> hydroperiod AND <u>provide</u> ○ Permanent	© Ephemeral O Unknown Ind (drying out completely
Lenf litter	
LEAF ITHU	
 Maximum depth at survey: O 0-12" (0-1 ft.) O 12 Approximate size of pool (at spring highwater): With the predominate substrate in order of increasing hydro O Mineral soil (bare, leaf-litter bottom, or upland mosses present) 	dth:OmOft Length:OmOft
O 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)	☐ 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) ☐ No vegetation in pool
■ Faunal indicators (check all that apply):	regenater in poor
☐ Fish ☐ Bullfrog or Green Frog tadpoles	☐ Other:
_	annel providing water flowing into or out of the pool): et (channel with well-defined banks and permanent flow)



SAD-VP-118



	ndicator survey			١.,	ATION		, .									
	nuicator survey	dates:		4/30	1202	0 <u>, 5</u>	14/2	020								
b. II	ndicator abunda	nce cri	iteria	and p	ool surv	ey effo	rt									
	Is pool depressi Was the entire p For each indicate determination, a	oool sur tor spec	veyed ies, ir	d for eg ndicate	g masse the exa	es? C ct numb	Yes (er of e	ÒNo; ∖ gg mas	what % sses, c	onfider	ire poo	el fo	r spe			
	INDICATOR			Εg	gg Masse	s (or ad	ult Fairy	Shrim	o)				Tadp	oles/La	rvae ⁴	
	SPECIES	Visit #1		/isit #2	Visit #3	Confi	dence l	.evel ¹	Egg N	/lass Ma	aturity ²	Ok	serve	\A	nfide Level	4
	Wood Frog			Ø											ļ	
	Spotted Salamander	1		(y		M										
	Blue-spotted Salamander	3														
	Fairy Shrimp ³															
	Hatching 3-Fairy shrimp: X = 4-Tadpoles/larvae: X Rarity criteria Note any rare spe	X = prese		ted wit	h vernal	pools. <u>(</u>	<u>Observa</u>	ations :	should	be acc	compan	nied l	by ph	otogra	<u>phs</u> .	
Γ		Method												fication*	- 	
-	SPECIES	Р	Н	S	CL**	SPECIE	S				F	•	Н	S	CL*	
	Blanding's Turtle				···	Wood Ti]				
	Spotted Turtle					Ribbon S	Snake]				
- 1	Ringed Boghaunter *Method of verificat				-l 11 11-	Other:	0]				
d. C	**CL - Confidence Optional observe	e r reco n ential S	nmen VP	i datio r □ No	ı: n Signifi	cant VP		ndicate	or Bree	eding A	rea					
	Duck no		***	*******												
	d completed form : Digital submis acceptable for	sion (to	Jaso	on.Cza	piga@n	naine.g	Attn: V 650 St ov) of v	ernal f ate Str /ernal	Pools eet, Ba pool f	angor, ï <mark>ield fo</mark>	ME 044 rms an	401 ı d pl	hotog	graphs		
or MD	IFW use only Re	viewed by				ir ∐Not Si	nitials:									





INSTRUCTIONS:

- Complete all 3 pages of form thoroughly. Most fields are <u>required</u> for pool registration.
- <u>Clear photographs</u> of a) the pool AND b) the indicators (one example of each species egg mass) are <u>required</u> for all observers.

egg mass) are i	required for all observers.
Observer's Pool ID:	SAD- VP- 1/9 MDIFW Pool ID:
1. PRIMARY OBSER	VER INFORMATION
a. Observer name:	Sarah Dahar Zel
b. Contact and cred	dentials previously provided? O No (submit Addendum 1) Yes
2. PROJECT CONTA	
a. Contact name: 🗡	same as observer O other
	dentials previously provided? ○ No (submit Addendum 1) ○ Yes
c. Project Name:	Three Corners Sola Projet
	NTACT INFORMATION
a. Are you the land	owner? OYes ONo If no, was landowner permission obtained for survey? OYes ONo
b. Landowner's con	tact information (required)
Name:	Phone: City: State: A Zip: May
Street Address:	City: State: ZIP
c. 🗌 Large Projec	ts: check if separate project landowner data file submitted
4 VEDNAL BOOL I	DCATION INFORMATION
	ship: <u>Ben For)</u> ns to the pool (using mapped landmarks):
s see al	Francol Maps
b. Mapping Requi	
i. USGS topogra	aphic map OR aerial photograph with pool clearly marked.
ii. GPS location	of vernal pool (use Datum NAD83 / WGS84)
Longitude/Eas	sting: <u>-69,458335</u> Latitude/Northing: <u>44,582045</u>
	stem: <u>W65 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.
	The above GPS point is at the center of the pool. (Good)
	The center of the pool is approximately m O ft O in the compass direction of degrees from the above GPS point. (Acceptable)





5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicat	or survey dates on page 3):
b. Wetland habitat characterization	
O Floodplain depression Other:	associated with larger wetland complex
Active beaver flowage	wage ☐ Mostly unvegetated pool ☐ Roadside ditch ☐ ATV or skidder rut ☐ Other:
c. Vernal pool status under the Natural Resources I	Protection Act (NRPA)
i. Pool Origin: Natural O Natural-Modified O	
i mountain an amazorni, accombe any	odern or nistoric numan impacts to trie pool (requireu).
ii. Pool Hydrology	
■ Select the pool's <u>estimated</u> hydroperiod AND <u>provi</u>	ide retionale in her (required).
O Permanent	O Ephemeral O Unknown
(drying partially in all years a	ind (drying out completely
completely in drought years) Explain:	in most years)
	1
■ Maximum depth at survey: ○ 0-12" (0-1 ft.) ○ 1	2-36" (1-3 ff)
■ Approximate size of pool (at spring highwater): Wi	
■ Predominate substrate in order of increasing hydro	
 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)	Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hyd	
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)	
☐ 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) ☐ 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 char	nnel providing water flowing into or out of the pool);
O No inlet or outlet Permanent inlet or outle	mor protioning mater noming mile of the commercial
O 110 milet of odder AX Lettinghenriller of onlie	et (channel with well-defined banks and permanent flow)





ERNAL POOL IND				,	,						,
Indicator survey	dates:_	5/5	/2020,	5/19/	2020	·					
. Indicator abunda	ance crit	teria and	l pool sur	v ey effo i os (strado	rt dler pool)?	OYes	O No			10	
■ Was the entire	pool sur	veyed for	egg mass	es? O	Yes ON	o; what %	of entire	pool s	surveye	a?	
■ For each indica	tor speci	ies, indic	ate the exa	act numb	er of egg r	nasses, c	onfidence	e level	tor spe	cies	
determination,	and egg	mass ma					Separate —————	Survey	Tada	ooles/Lar	24004
INDICATOR		7.00			ult Fairy Sh			2		Co	nfidence
SPECIES	Visit #1	Visit #2	Visit #3	Confi	dence Leve	el' Egg l	Mass Matu	urity ²	Observ	~~! I	Level ¹
Wood Frog							-				
Spotted Salamander	16	14		2		M	A				
Blue-spotted Salamander											
Fairy Shrimp ³											
2-Egg mass maturi Hatching 3-Fairy shrimp: X = 4-Tadpoles/larvae:	present		s), M= Mature	e (round en	nbryos), A= A	Auvanced (10	oose mainx,	, curved	Cilibiyus,	,, 11- Hatt	,,,ou 01
. Rarity criteria ■ Note any rare sp	ecies as	sociated	l with verna	al pools.	Observatio	ons should	d be acco	mpani	ed by p	hotogra	phs.
		of Verificat						Meth	nod of Ve	rification*	CL**
SPECIES	Р	н :	S CL	SPECIE	ES			P	<u>H</u>	S	<u> </u>
Blanding's Turtle]	Wood 7	urtle						-
Spotted Turtle]	Ribbon	Snake						<u> </u>
Ringed Boghaunter *Method of verific			□	Other:							
**CL - Confidence Optional observ SVP Pe General vernal Part of Were about	v er reco o	mmenda SVP [ation: Non Sign	ificant V	P Inc	dicator Bro	eeding Ar		he e	gg m	*55es
Send completed fo TE: Digital submacceptable for MDIFWuse only spool is: Signification	ission (1 or projec	to Jason ets with :	. Czaniga <i>l</i>	⊋maine. assesse	Attn: Vel 650 Stat	ernal Pools te Street, ernal pool arger pro	Bangor, I I field for Diects mu	ME 044 rms an ust be	401 Id phot mailed	ograph as har	
nments:		but lacking	critical data			Od	oes not me	et MDEF	o vernal p	ool criteri	a.



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.

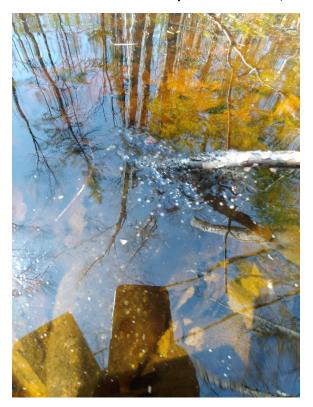


Photo 10. Wood frog egg masses in unnatural vernal pool NXG-CP-11, 4/23/20.



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.

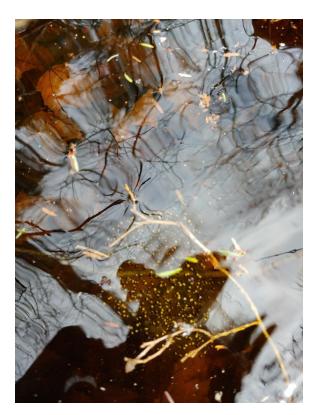


Photo 21. Wood frog egg masses in natural vernal pool NXG-VP-3, 4/22/20.



Photo 22. Wood frog egg masses in natural vernal pool NXG-VP-3, 4/22/20.

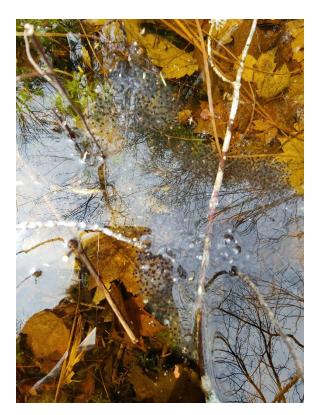


Photo 23. Wood frog egg masses in natural vernal pool NXG-VP-3, 4/22/20.



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.

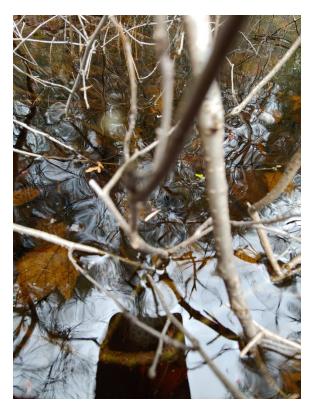


Photo 29. Spotted salamander egg mass in natural vernal pool NXG-VP-5, 4/22/20.



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.

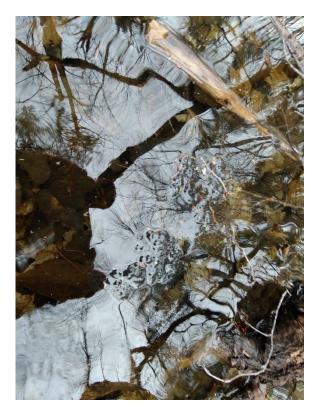


Photo 41. Wood frog egg masses in unnatural vernal pool SAD-CP-13, 4/22/20.



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.

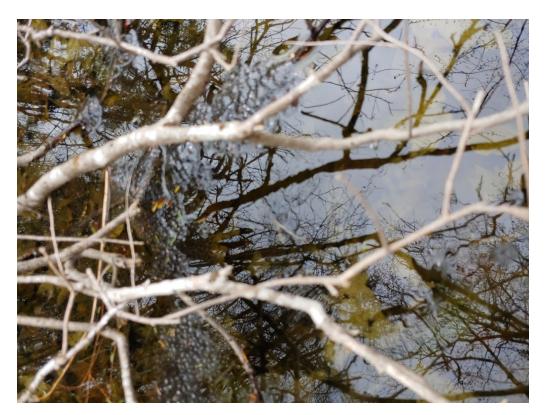


Photo 55. Wood frog egg masses in natural vernal pool SAD-VP-9, 4/28/20.

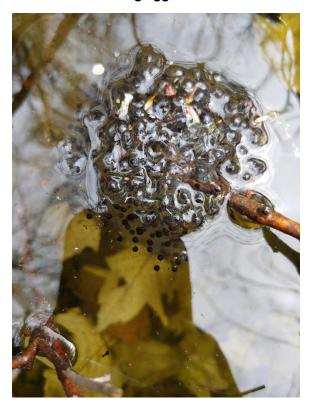


Photo 56. Wood frog egg mass in natural vernal pool SAD-VP-9, 4/28/20.



Photo 57. Spotted salamander egg masses in natural vernal pool SAD-VP-9, 4/28/20.

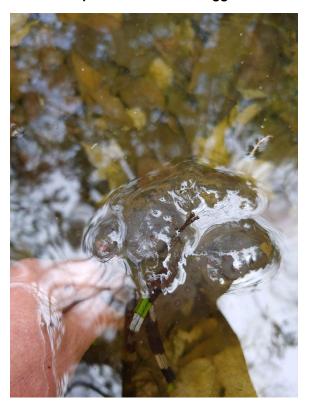


Photo 58. Spotted salamander egg mass in natural vernal pool SAD-VP-9, 4/28/20.



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.

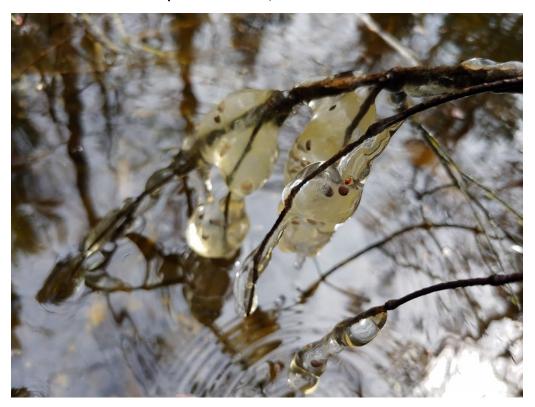


Photo 64. Blue spotted salamander (*Ambystoma laterale*) egg masses in natural vernal pool SAD-VP-10, 4/28/20.



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.

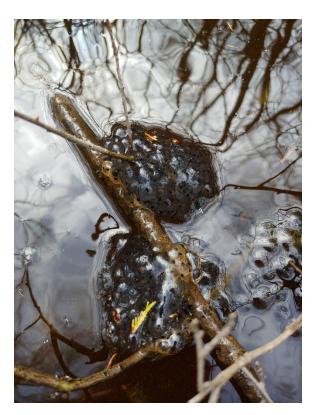


Photo 83. Wood frog egg masses in natural vernal pool SAD-VP-102, 4/25/20.



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.

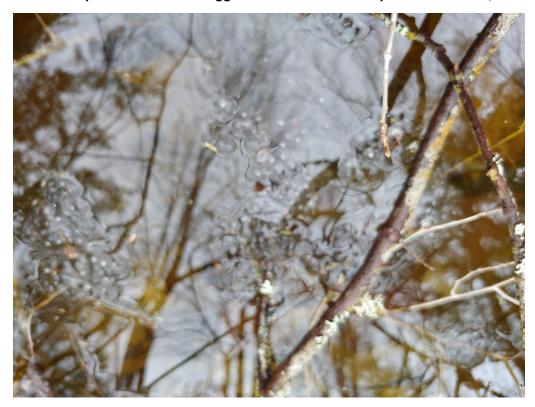


Photo 90. Wood frog egg masses in natural vernal pool SAD-VP-104, 4/28/20.



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.

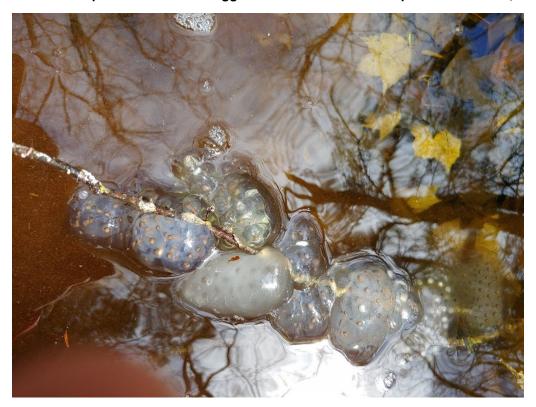


Photo 108. Spotted salamander egg masses in natural vernal pool SAD-VP-107, 4/28/20.



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.

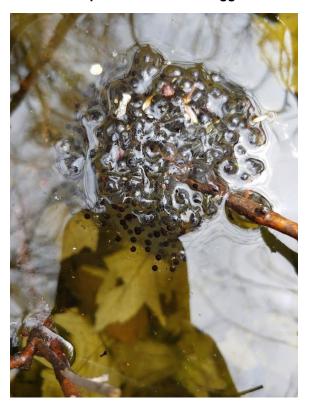


Photo 128. Wood frog egg mass in natural vernal pool SAD-VP-9, 4/28/20.



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.

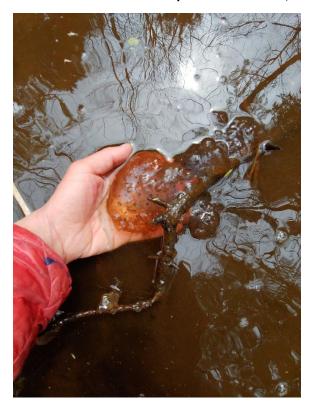


Photo 132. Spotted salamander egg masses in natural vernal pool SAD-VP-116, 4/30/20.



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.